

**The early development of the Florentine economy,
c. 1100-1275**

(TEXT and APPENDICES)

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Abstract

This thesis examines Florentine demographic and economic expansion during the twelfth and thirteenth centuries. Around the year 1200, Florence was still a second-rate town in Tuscany, overshadowed in terms of size and economic vitality by Pisa, Lucca, and Siena, all of which had grown substantially during the eleventh and twelfth centuries. Florence, by contrast, began to expand appreciably only towards the middle of the twelfth century. Around the beginning of the thirteenth century, the other major Tuscan towns ceased to expand, but Florence was entering its most profound period of growth. Between 1175 and 1275, Florence grew from a second-rate town in Tuscany into the largest and most economically dynamic city in the region. By the early fourteenth century, Florence had become one of the largest cities in all of western Europe. This study addresses both the late development of Florence in relation to other Tuscan towns and its ultimate supersession of these towns, and it examines Florentine development in the context of regional development in Tuscany. It considers the expansion of Florentine urban jurisdiction in the surrounding countryside, demographic growth in the city itself and in the Florentine hinterland, agricultural productivity, the development of urban manufacturing and finance, Florentine trade both within Tuscany and in other Italian regions, the development of an integrated trade infrastructure around the city, and the coordination of local, regional, and supra-regional trade. Before 1100, Florentine growth was constrained by jurisdictional fragmentation within the territory of Florence, but the commune was beginning to assert its jurisdictional authority in the surrounding countryside in the early twelfth century. Jurisdictional fragmentation raised the costs of trade in the territory and compelled Florence to satisfy many of its basic needs by recourse to trade in external markets, but jurisdictional integration in the territory gradually lowered transaction costs and increased the benefits of trade. Reduced trading costs within the territory enabled Florence to coordinate the development of local trading networks with regional and supra-regional trading networks. The growth of Florence was also a result of regional development within Tuscany as a whole. The growth of other Tuscan towns towards their maximum levels of expansion in the twelfth century created both opportunities and pressures for intra-regional trade in Tuscany and for inter-regional trade between Tuscan towns and other trading centres situated beyond the frontiers of Tuscany, which encouraged development at a central location that was favourably situated to articulate supra-regional trade. Florence was by no means the only contender for the role, but geography, politics, the sheer dimensions of its territory, and, paradoxically, the strength of seigniorial power in the territory, ultimately favoured Florence over other possible sites in north-central Tuscany.

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B. Dating, references, terminology, weights and measures, currency

Dating

Until 1749, the Florentine calendar followed the style of the Incarnation, in which the new year began not on the 1st of January but on the 25th of March, the Feast of the Assumption. The Florentine calendar thus corresponds to the modern calendar from the 25th of March until the 31st of December. One year must be added to dates from the 1st of January until the 24th of March, however, to render the modern equivalent to the Florentine dating. The Pisan calendar also followed the style of the Incarnation before the middle of the eighteenth century, but it was precisely one year ahead of the Florentine calendar. As a result, the Pisan calendar corresponds to the modern calendar from the 1st of January until the 24th of March. For the modern equivalent to Pisan dates from the 25th of March until the 31st of December, it is necessary to subtract one year. Among the larger towns and cities in Tuscany, Fiesole, Prato, San Gimignano, and Siena tended to follow the Florentine style, whereas Arezzo and Pistoia tended to follow the Pisan style. At Lucca, the new year began on the 25th of December. This dissertation follows the modern calendar in the text, but footnote references to unpublished sources are given according to the original dating. References to published sources follow the dating originally used by the editors.

References

Footnote references to unpublished sources use the following abbreviations:

ASF = State Archives of Florence (Archivio di Stato di Firenze)

ACF = Archives of the Cathedral Chapter of Florence (Archivio del Capitolo del Duomo di Firenze)

AAF = Archiepiscopal Archives of Florence (Archivio arcivescovile di Firenze)

AVFiesole = Episcopal Archives of Fiesole (Archivio vescovile di Fiesole)

AMRosano = Monastic Archives of Rosano (Archivio monastico di Rosano)

ASPisa = State Archives of Pisa (Archivio di Stato di Pisa)

ASPistoia = State Archives of Pistoia (Archivio di Stato di Pistoia)

ASSiena = State Archives of Siena (Archivio di Stato di Siena)

ACArezzo = Archives the Cathedral Chapter of Arezzo (Archivio del Capitolo di Arezzo)

Citations for most published sources indicate the editor or editors rather than the title. Exceptions are made, however, for references to narrative sources, which are cited either by the name of the author or, in the case of anonymous texts, the title typically ascribed to the source. Because narrative sources have often been published in several editions, the date of publication is not given in footnote references. Complete publication details are given in the bibliography. When more than one edition of a published narrative source is given in the bibliography, the footnote references follow the edition listed first.

Weights and measures

The standard unit of surface measure was the *starium*, or *staio*, twenty-four of which comprised a *modium*, or *moggio*. Each *starium* contained twelve *panora*, and each *panorum* contained twelve *pugnora*. In general, the surface area comprised by these measures was determined by the amount of land that could be sown by a given quantity of seed, though there were also other means for determining surface measures. During the period under investigation in this dissertation, surface measures underwent considerable evolution. By the middle of the fourteenth century, the *starium*, on average, was a measure for approximately 1575 square metres of land, but this was about three times greater than the surface measure of the *starium* in the twelfth century. The standard unit of dry measure was likewise the *starium*, which contained 24.4 litres of grain, or about 18 kilograms, by the middle of the fourteenth century, but this measure had also evolved considerably over the preceding centuries. The evolution of weights and measures in the territory is discussed in greater detail below in Appendix 10.

Currency

The currency used at Florence through much of the period under consideration was based on the Carolingian mono-metallic system of coinage, devised by Charlemagne towards the end of the eighth century. In the Carolingian system, one *libra* of account contained twenty *solidi* of account, and each *solidus* of account contained twelve silver *denarii*. In the Carolingian system, only the *denarius* was an actual coin. Before the later twelfth century, the *denarius* of Lucca was the dominant currency at Florence, but the *denarius* of Pisa began to displace the Lucchese coinage at Florence after 1170. The coinages of both Lucca and Pisa were gradually debased in the later twelfth century, but the debasement of the Lucchese coinage appears to

have been more pronounced. By the beginning of the thirteenth century, Pisan coinage was used almost exclusively at Florence.

Sometime shortly before 1229, the mint at Pisa issued a multiple of the *denarius*, the *grossus*, which was valued at twelve *denarii*, or one *solidus*. Florence and Lucca had issued their own *grossi* by 1236, Siena by 1239, and Arezzo by 1242. The Florentine *grossus* of 1236 is the first known coinage of the city. The *grossi* of these Tuscan mints were certainly equivalent throughout the 1250s, and the *grossi* of Florence, Lucca, Pisa, and Siena were equivalent already by 1245. Florentine *denarii* are not attested until 1255, but the mint at Florence began to strike its famous gold *florenus* in 1252, marking the abandonment of a mono-metallic system of coinage in favour of a new bi-metallic system. The coinages of Tuscany in the twelfth and early thirteenth centuries are discussed further in Appendix 11.

Terminology

For most place names in Italy, this dissertation uses the modern Italian designation rather than the original Latin of the sources, though in the cases of Florence, Milan, Naples, Rome, and Venice, the English designations are used rather than the Italian. The regions Tuscany, Lombardy, Sicily, Sardinia, and Apulia are likewise referred to by their English designations. For place names outside of Italy that have corresponding names in English, names are given in modern English. For other proper names, with the exception of the names of popes and sovereigns, the original Latin is maintained. The names of popes and sovereigns are given in the modern English. English equivalents for Latin terms are used whenever possible, though certain terms that translate poorly into English are rendered in Latin. For example, this dissertation uses the Latin term *castellum* or *castrum*, rather than the English term 'castle', because the English term carries a connotation that does not always apply in medieval Italy. Italian scholars in particular have emphasised the juridical connotations carried by the Latin term, rather than structural homogeneity. The Italian term *incastellamento* is also used rather than the English term 'encastellation' for the same reason, which is to say because the English term carries a connotation that is often inappropriate. Other Latin terms, such as *Humiliates* and *Potestas*, have no English equivalents at all, but because they are well known in the literature by their Italian designations *Umiliati* and *Podestà*, respectively, the Italian terms are used. In general, however, Latin and Italian terms are avoided.

There are a few other specific problems of terminology. The Latin term *comitatus*, which translates into English as 'county', is rendered in this thesis as 'territory'. The Latin equivalent of the term 'territory', *territorium*, is often understood to denote the ecclesiastical jurisdiction of a urban parish. The *territorium* of Florence, in this case, would have referred to the area under the ecclesiastical jurisdiction of the urban parish, which is to say the city itself and its immediately surrounding suburbs. In the evidence for the Florentine countryside, however, the term was also used frequently as a synonym for *comitatus*, though the term *territorium*, used in this sense, was falling out of fashion by the middle of the twelfth century and was being displaced by *comitatus*. Both terms nevertheless were used to refer simply to the dioceses of Florence and Fiesole, and in this thesis, the term 'territory' is used in this sense alone.

The Latin term *districtus* represents a problem of a different sort. The term referred to an area under seigneurial jurisdiction. In the later twelfth century, the Florentine *districtus* was a circumscribed zone within the *comitatus* over which the city exercised more or less complete control. By the early fourteenth century, however, the *districtus* embraced the entire *comitatus* as well as areas outside the *comitatus* that had been subjugated by the city. The meaning of the term, in other words, is contingent upon the date of its usage.

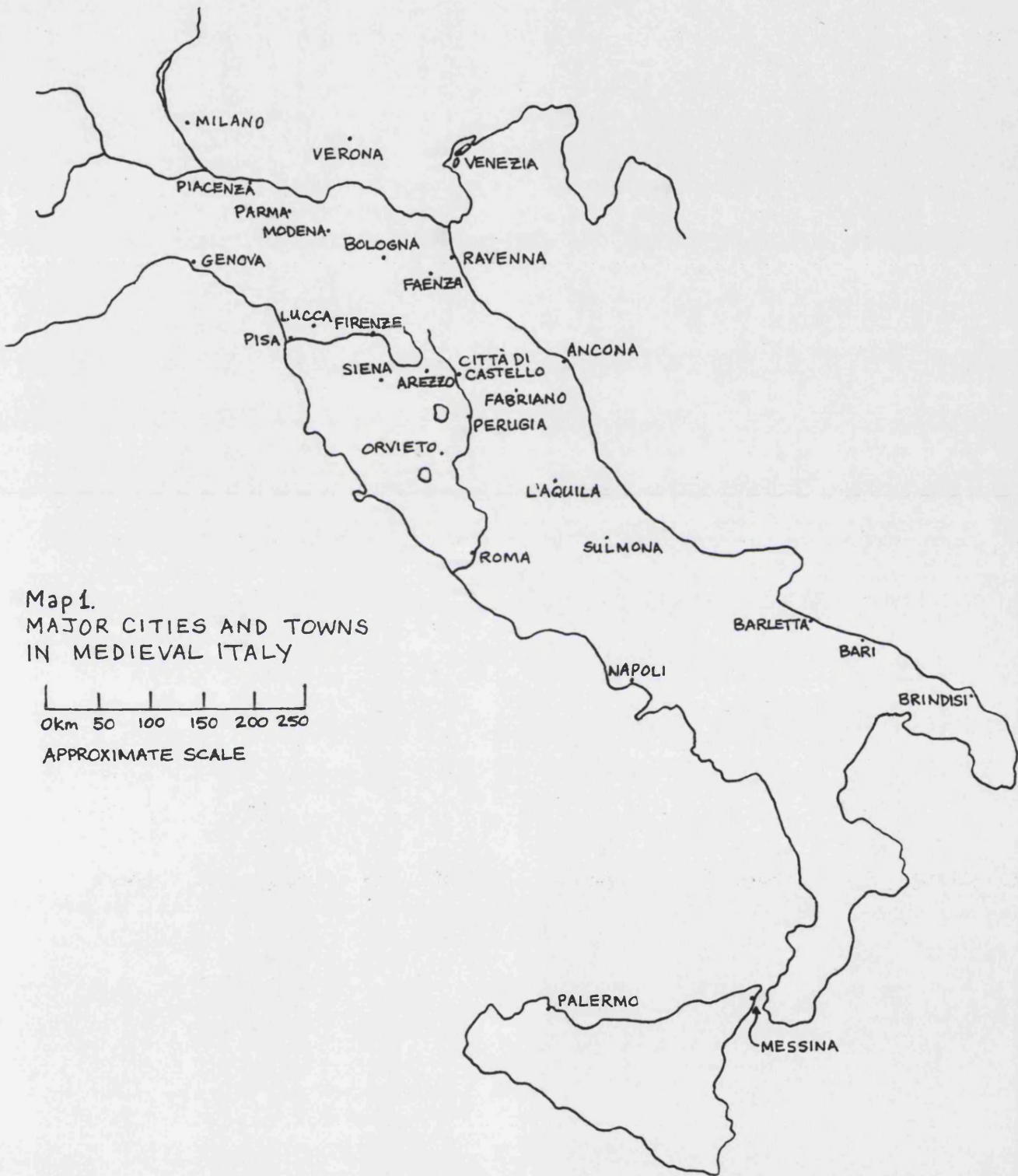
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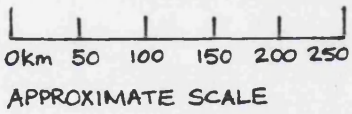
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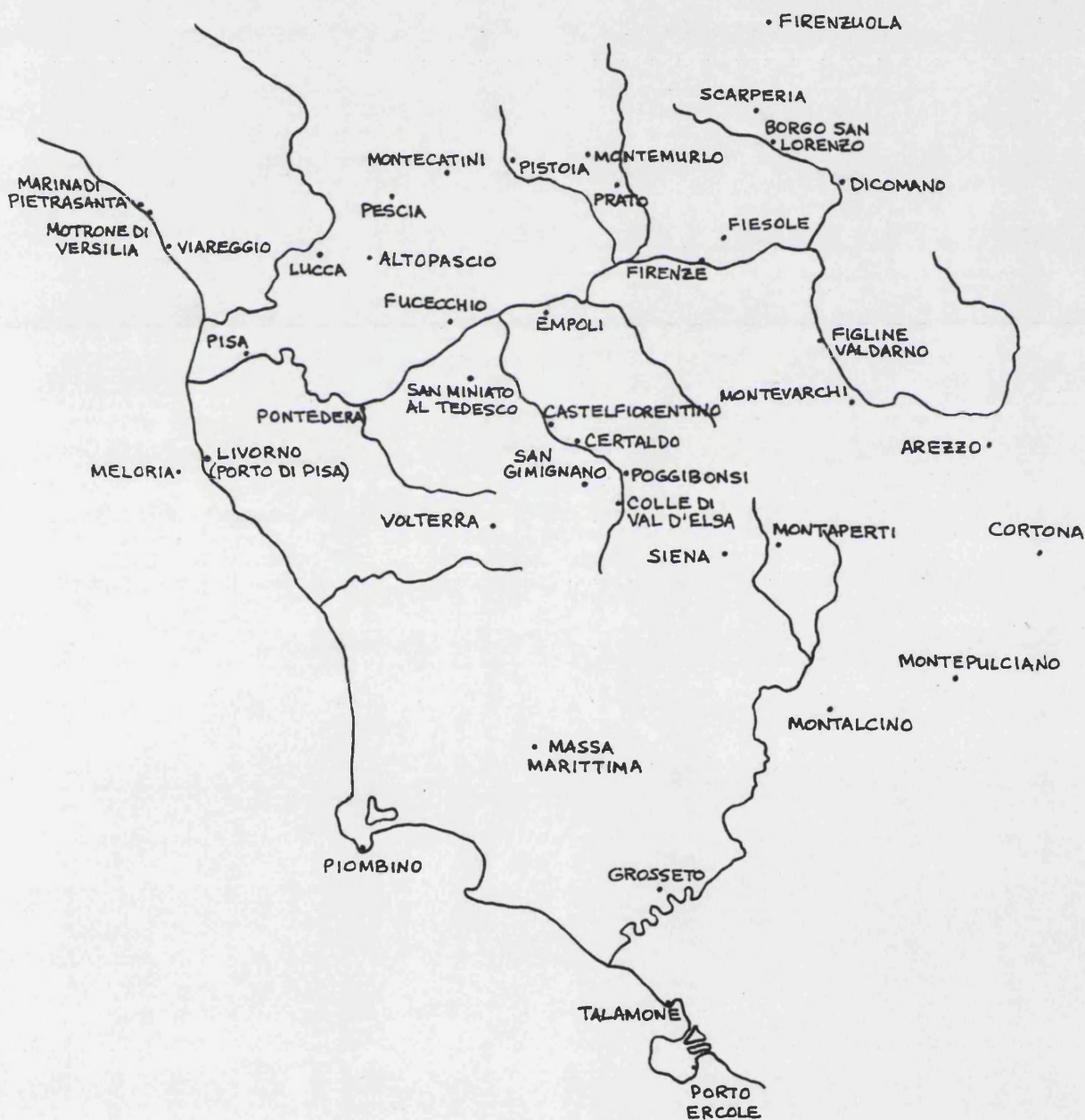
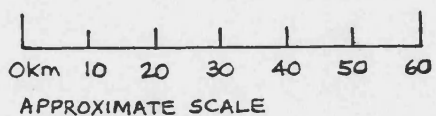
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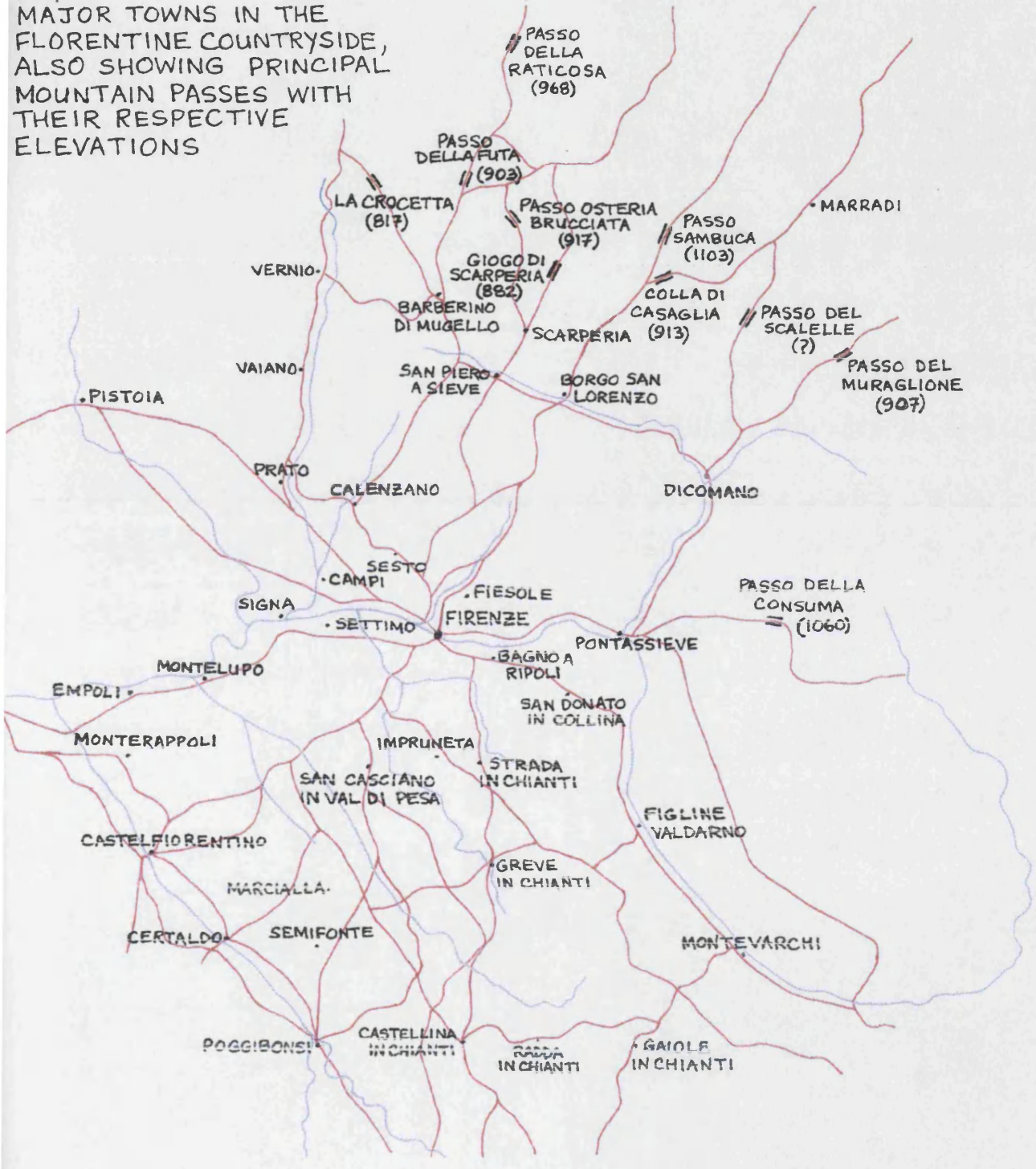
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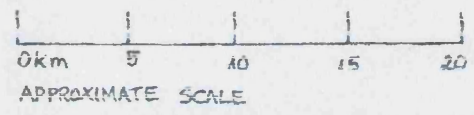
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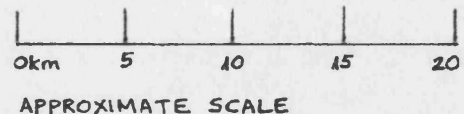
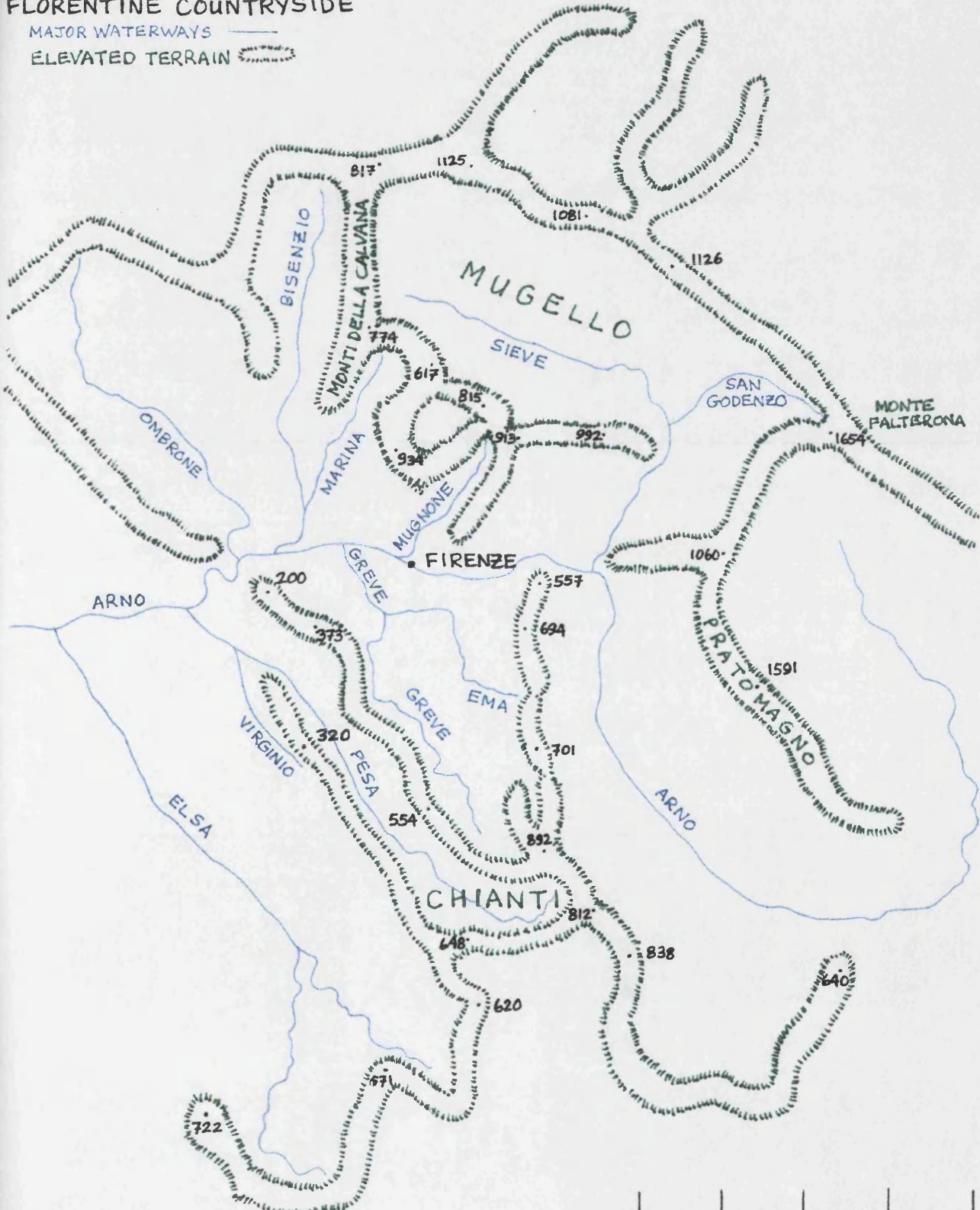


WATERWAYS ———
 PRINCIPAL ROADS ———

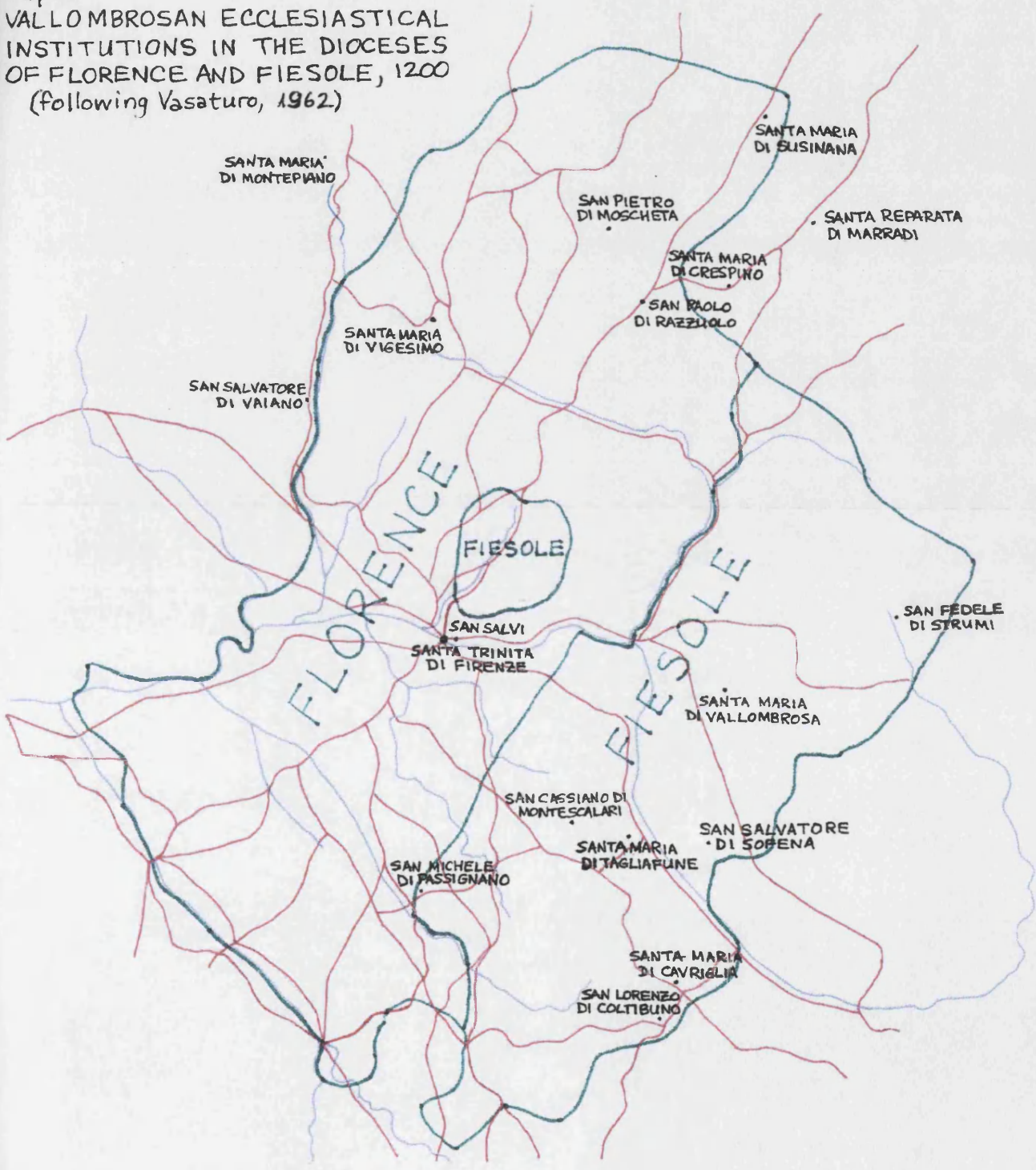


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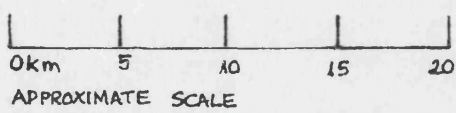
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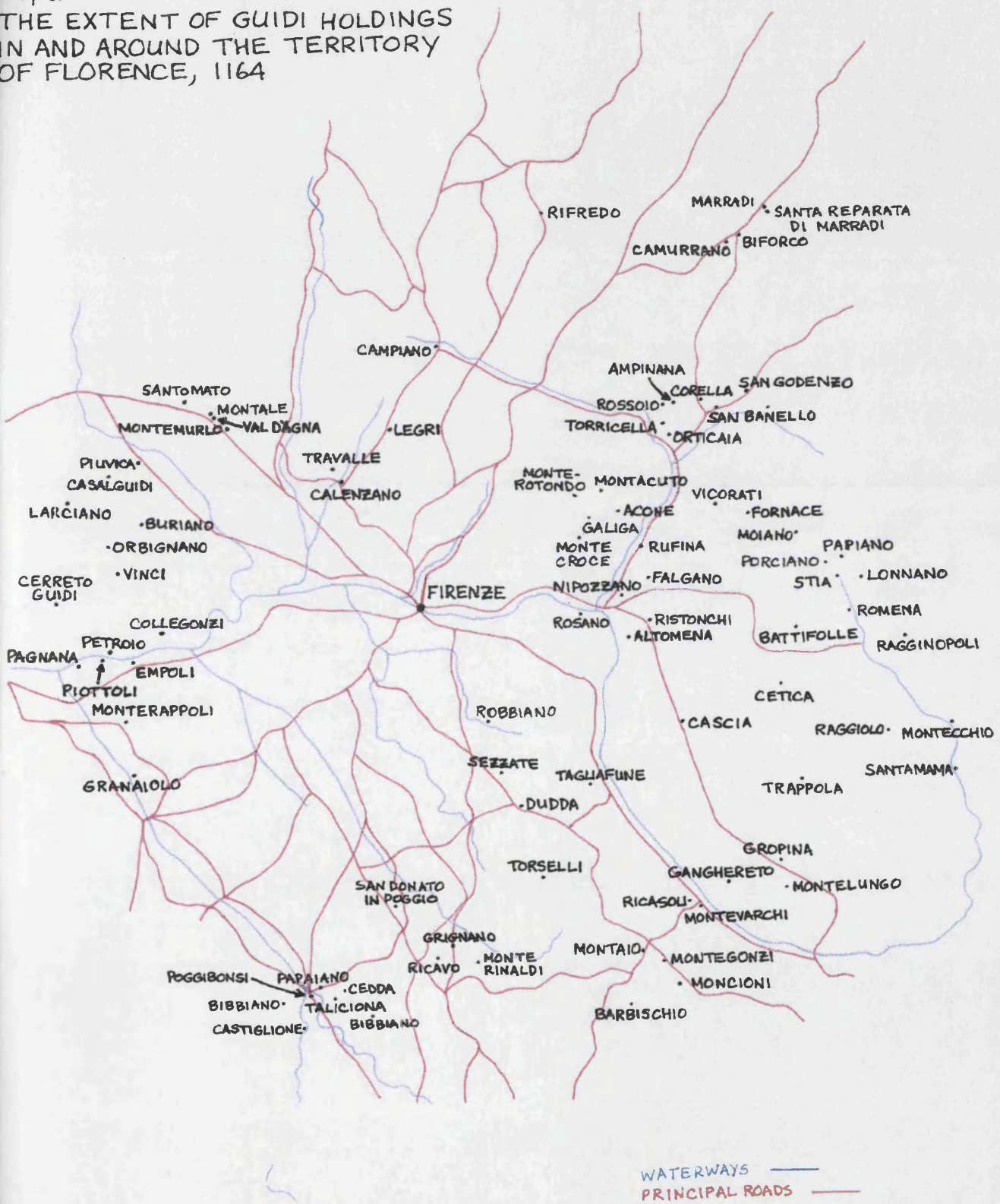


DIOCESAN BOUNDARIES ———
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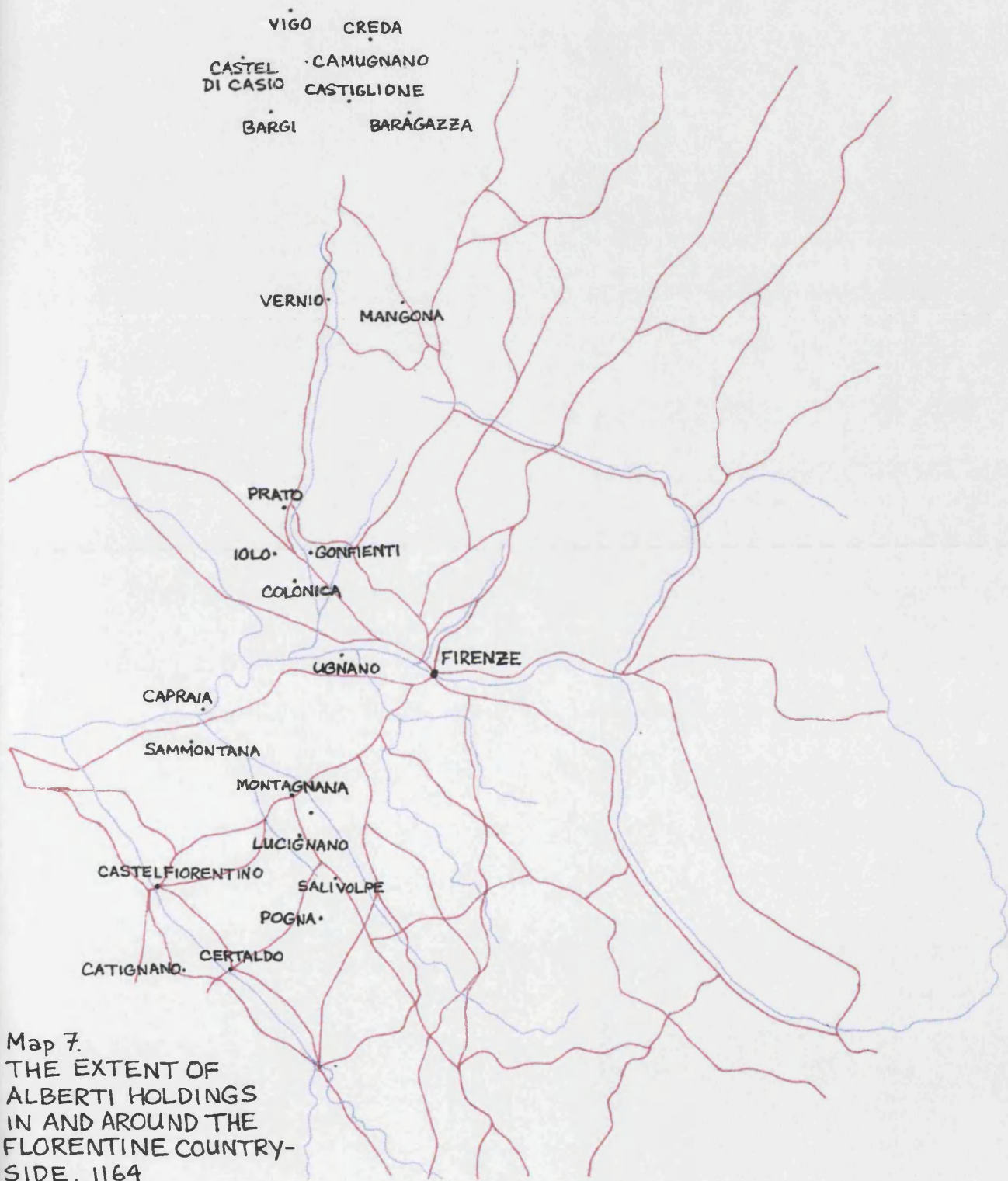
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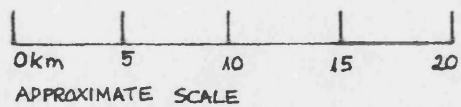
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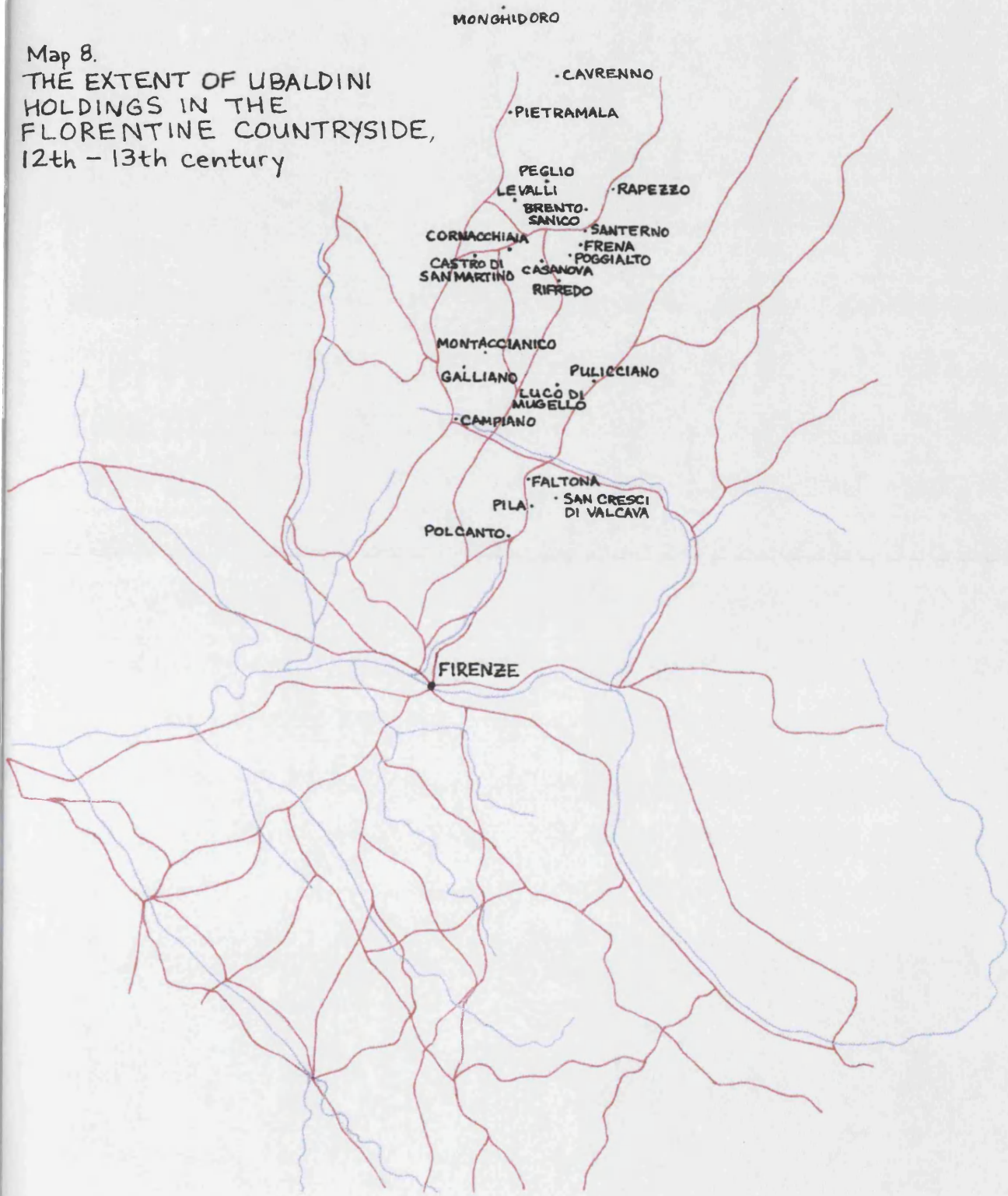


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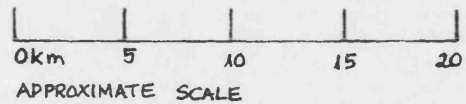
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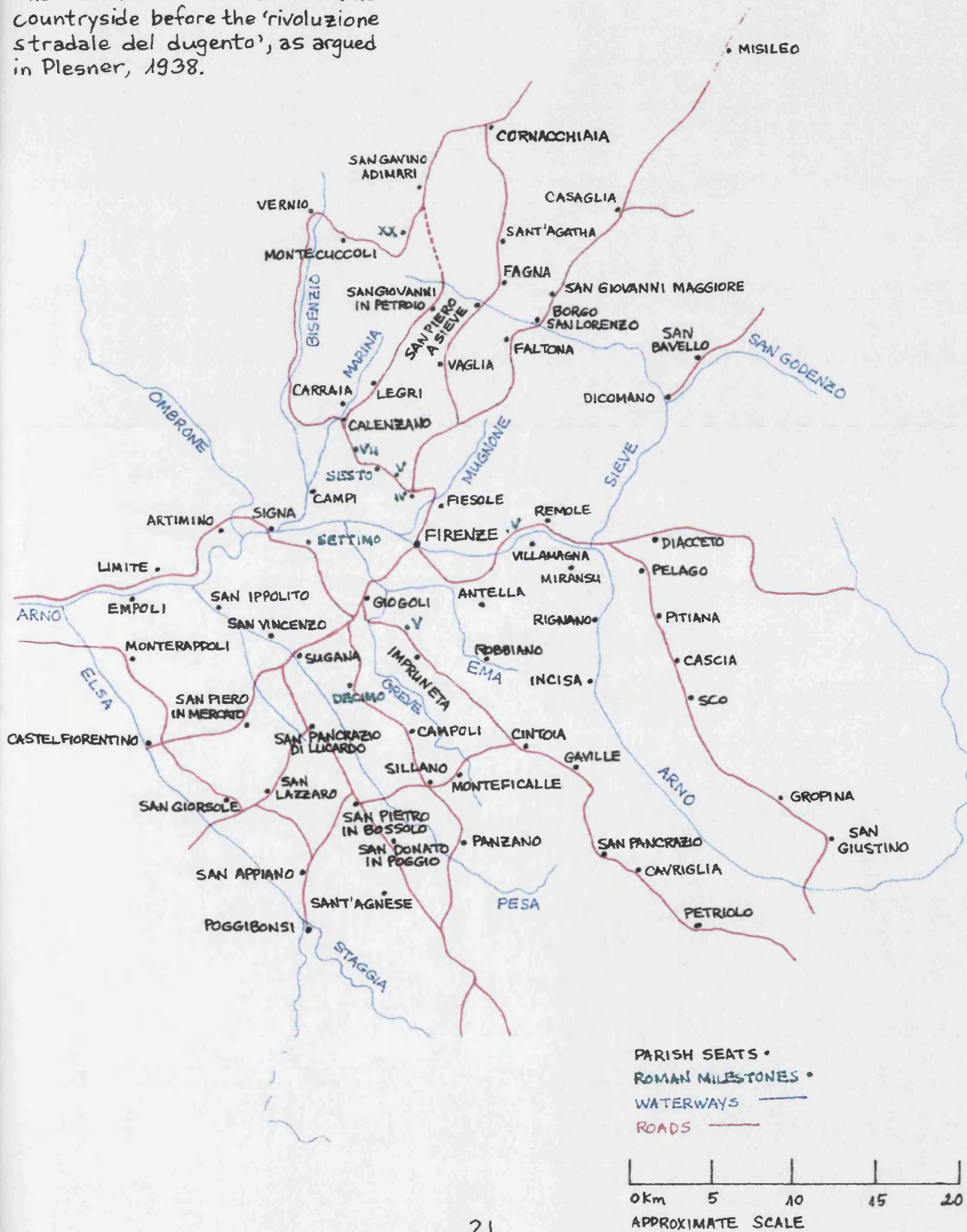
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Map 9.

THE PLESNER THESIS

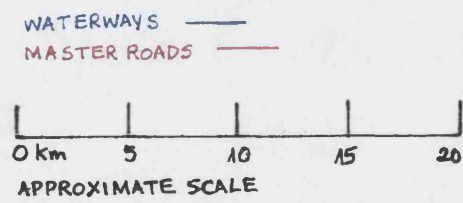
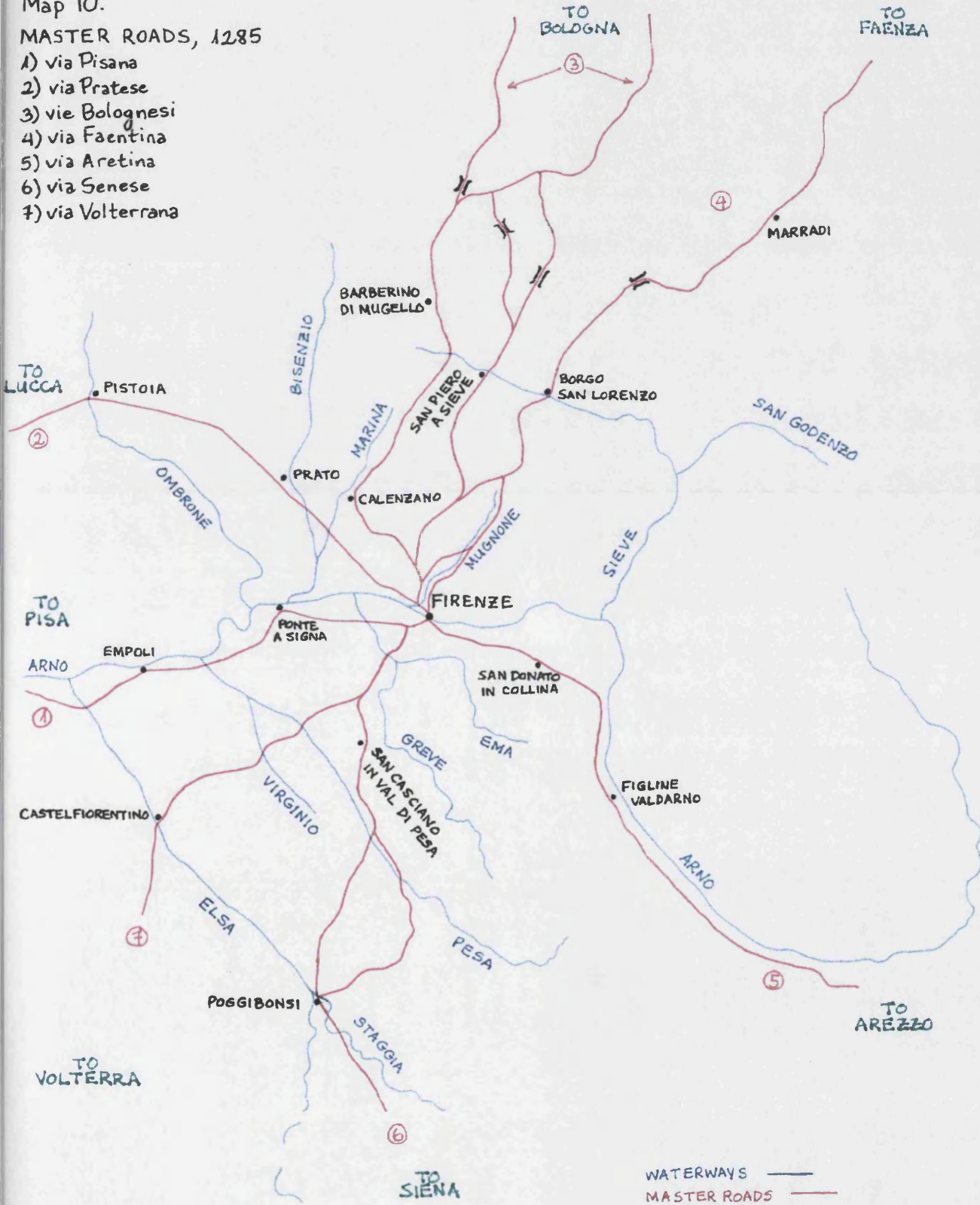
The road network in the Florentine countryside before the 'rivoluzione stradale del dugento', as argued in Plesner, 1938.



Map 10.

MASTER ROADS, 1285

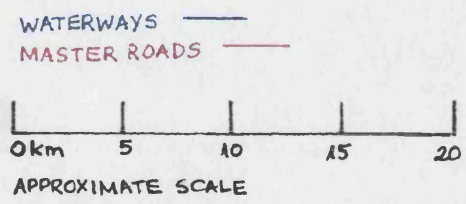
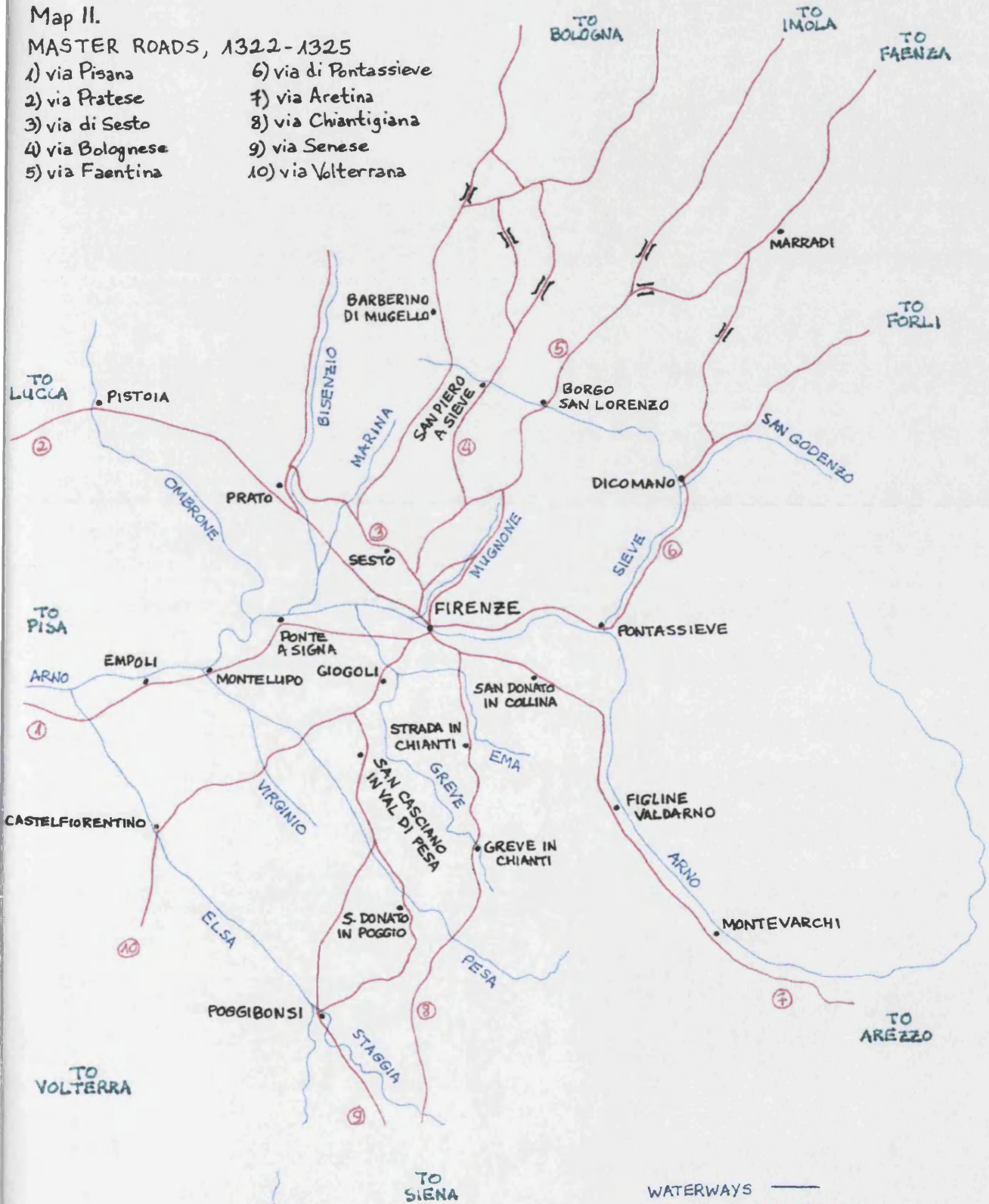
- 1) via Pisana
- 2) via Pratese
- 3) via Bolognesi
- 4) via Faentina
- 5) via Aretina
- 6) via Senese
- 7) via Volterrana



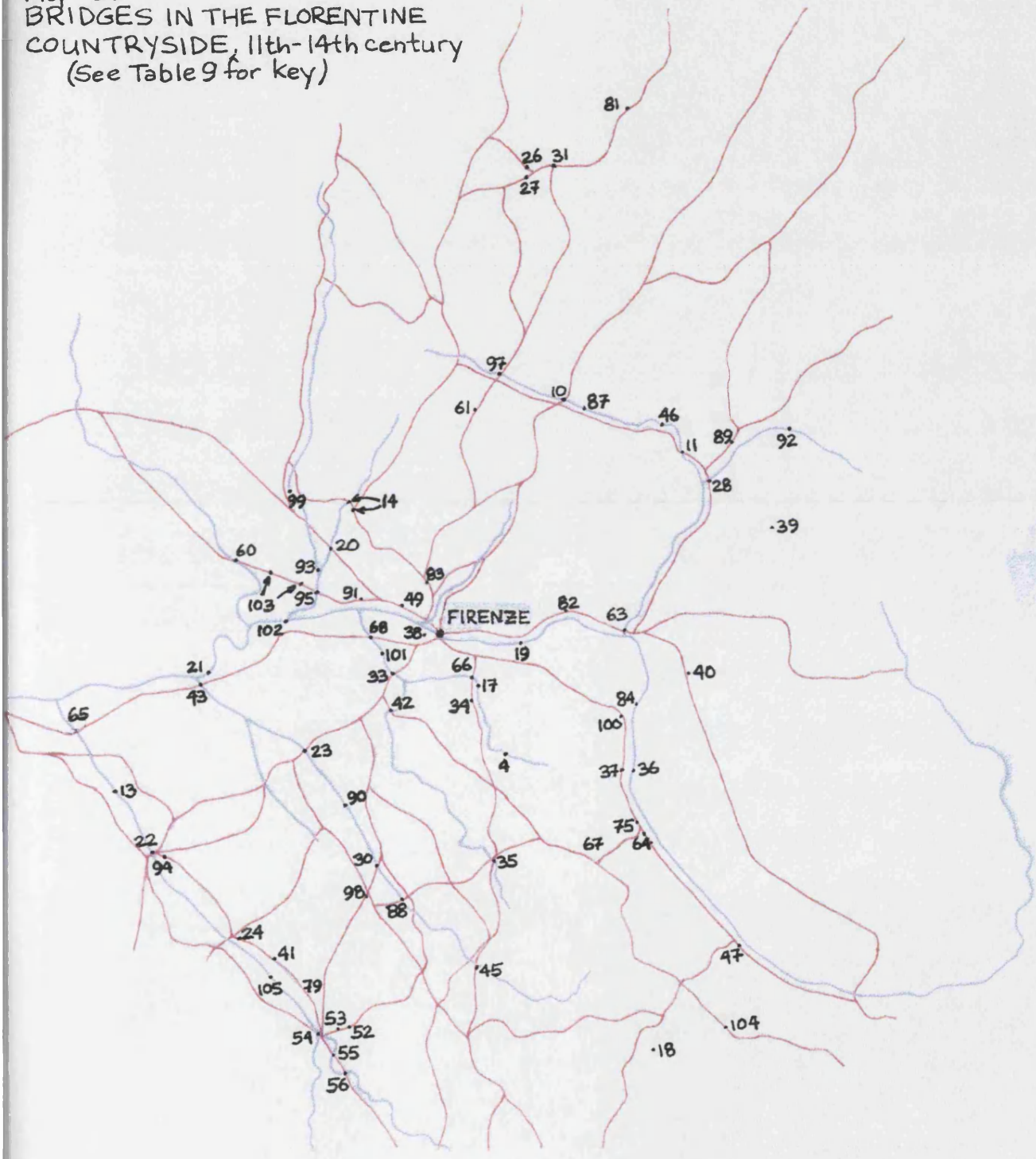
Map II.

MASTER ROADS, 1322-1325

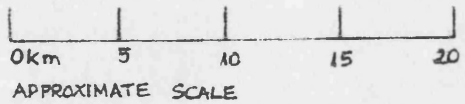
- 1) via Pisana
- 2) via Pratese
- 3) via di Sesto
- 4) via Bolognese
- 5) via Faentina
- 6) via di Pontassieve
- 7) via Aretina
- 8) via Chiantigiana
- 9) via Senese
- 10) via Volterrana



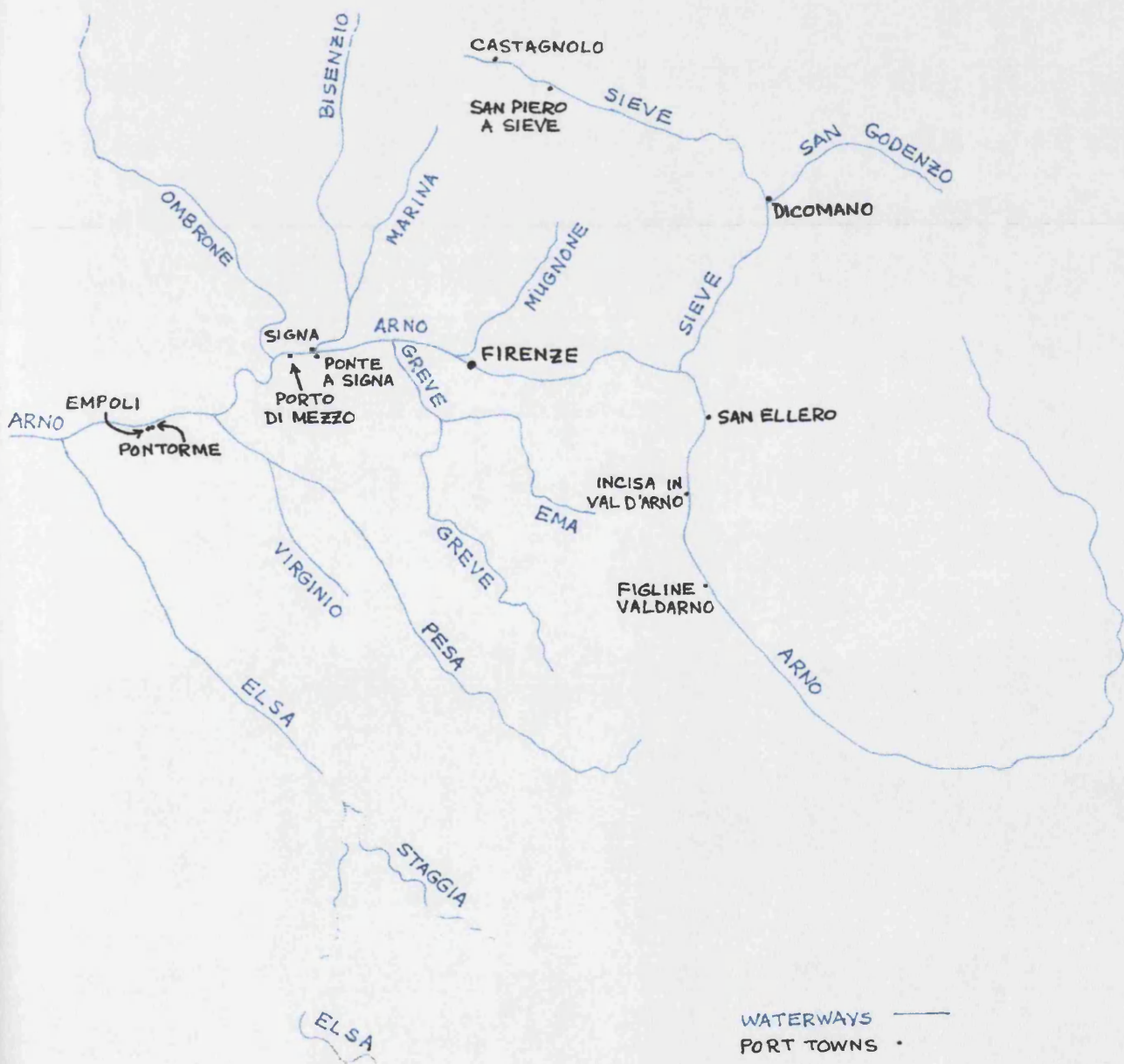
Map 12.
 BRIDGES IN THE FLORENTINE
 COUNTRYSIDE, 11th-14th century
 (See Table 9 for key)



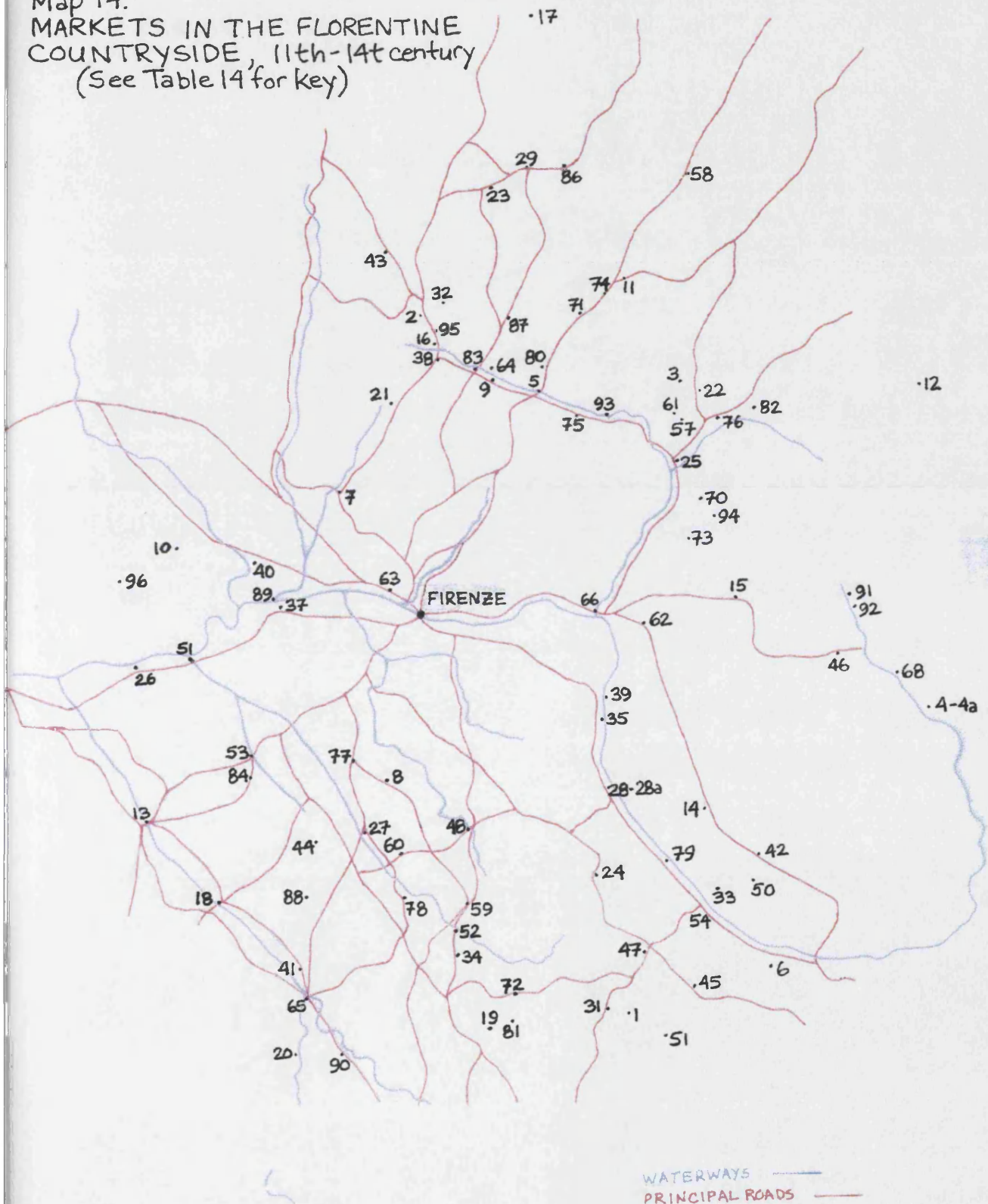
WATERWAYS ———
 PRINCIPAL ROADS ———



Map 13.
 RIVER PORTS IN THE
 FLORENTINE COUNTRYSIDE
 11th - 14th century

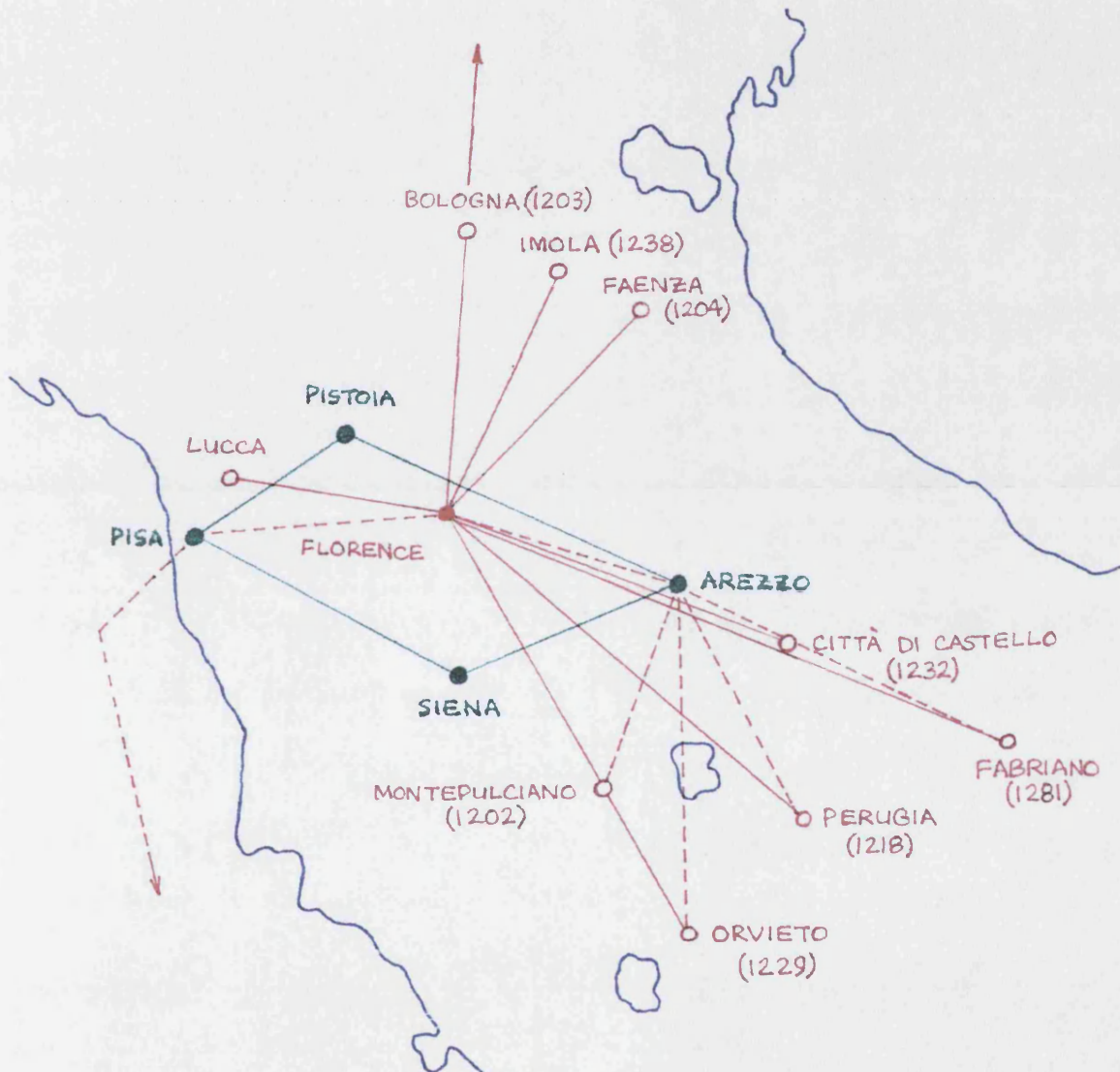


Map 14.
 MARKETS IN THE FLORENTINE
 COUNTRYSIDE, 11th-14th century
 (See Table 14 for key)



WATERWAYS ———
 PRINCIPAL ROADS ———

0km 5 10 15 20
 APPROXIMATE SCALE



Map 15.
FLORENTINE REGIONAL AND SUPRA-REGIONAL
TRADING RELATIONS

- Ghibelline cities in Tuscany
- Florentine trading partners (date first attested)
- Lines of Florentine trade (hypothetical)
- - - - - Lines of Florentine trade (actual)

1. Introduction

The following dissertation examines Florentine demographic and economic expansion in the twelfth and thirteenth centuries. This chapter states the problem at hand and introduces the principal lines of research on which the thesis subsequently dwells. The integration of the city with its surrounding countryside, population growth in both the city and the countryside, manufacturing and urban development, and supra-regional trade, and infrastructure are all briefly considered. The chapter then articulates a working hypothesis.

1.1. The problem

In the thirteenth century, the city of Florence underwent a transformation of extraordinary proportions. In the later twelfth century, certainly in economic terms at least, Florence was still a relatively minor town in Tuscany. The city itself, enclosed within a newly built circuit of walls, comprehended an area of little more than a square kilometre. A few stone churches and perhaps a smattering of Roman remains punctuated the urban enclosure, but the city was mostly composed of unpaved roads and crude wooden buildings. The population of the city and its immediately surrounding environs at the beginning of the thirteenth century has been estimated variously to have been anywhere from as little as fifteen or twenty thousand to something as great as fifty thousand. The more generous of these estimates are excessive, however, and the most credible among them tend towards the lower margin. In terms of both size and economic vitality, at any rate, Florence no doubt was overshadowed by such other Tuscan towns as Pisa and Lucca, and probably also Siena.

After about the middle of the twelfth century, however, the rate of growth in the city of Florence appears to have accelerated dramatically. A new circuit of walls was constructed towards the end of the third quarter of the century to accommodate the sudden accretion, but continued growth soon rendered even these new walls obsolete, and construction on yet another much larger circuit of walls was begun in 1284. By about the end of the first quarter of the fourteenth century, Florence had reached its apex. The urban population in the city of Florence itself

had assumed a figure perhaps as great as 120,000, while the population in the territory as a whole probably exceeded 300,000. Moreover, the profound demographic expansion of both the city and the surrounding countryside was accompanied by sustained economic growth that was sufficiently robust to transform the city of Florence from a second-rate town in Tuscany into one of the most economically dynamic urban centres in all of western Europe by the early fourteenth century.

The rapid growth of Florence from the later twelfth century through the first quarter of the fourteenth century has never been satisfactorily explained, and indeed there have been rather few really substantial efforts to address the matter. Florentine demographic and economic expansion typically has been taken for granted, and the notion of an investigation designed specifically to explicate the underlying processes has been regarded, presumably, as a task too difficult and too enormous to undertake. The questions nevertheless merit consideration. Why was Florence so slow to develop relative to other Tuscan cities? Under what impetus had the pace of development quickened after about the middle of the twelfth century, and especially after the beginning of the thirteenth century? What pushed Florentine growth beyond the dimensions achieved at other Tuscan cities? What made Florence so different?

The overwhelming presence of the renaissance in Florence and the attendant attraction that it holds for scholars has relegated the study of the early demographic and economic expansion of the city in the twelfth and thirteenth centuries to the shadows. Historians of renaissance Florence often summarise the early demographic and economic growth of the city in a few introductory statements in works devoted to the period after 1350. Scholars of medieval Florence typically have been more concerned with the political dimensions of Florentine growth, which is to say the birth of the commune, the development of government institutions, and the ontogenesis of the territorial state. On the rare occasions when the matter of Florentine demographic and economic growth has been broached in greater detail, the supposition typically has been that the expansion of the city was very largely a by-product of commercial activity in general and the long-distance trading activities undertaken by the great merchant-banking companies of the city in particular.¹ Florentine merchant-bankers no doubt were crucial to the economic

¹ On the great merchant-banking companies of Florence, see especially Peruzzi, 1868; Saponi, 1926; Renouard, 1938. For older studies dealing for the most part with single companies, see Saponi, 1932; 1947. See also De Roover, 1958. For more recent studies of single companies, see Borsari, 1994; Hunt, 1994; Kaeuper, 1973b. See also the collected studies in Saponi, 1955.

development of the city, and indeed they have been meticulously studied, but the precise circumstances from which they arose and in which they first began to flourish remain shrouded in a seemingly impenetrable fog.

The scholarly attention devoted to Florence during the renaissance is of course understandable. The city of Florence itself stands as a monument to the renaissance. Its skyline is dominated by the immense cupola of the Duomo, completed by Filippo Brunelleschi in the early fifteenth century. The city contains numerous medieval sites, to be sure, but only a few of these hold much interest for anyone except the Florentines themselves, a handful of scholars, and perhaps the more initiated tourists. In the popular imagination, Florence is a city of the renaissance rather than the middle ages, a city of rusticated stone and glazed terracotta rather than the forgotten timber that fuelled so many conflagrations in the middle ages.² It is a city more of the Medici than the Bardi or the Peruzzi, more of Dante Alighieri than his mentor Brunetto Latini, more of Francesco Guicciardini than his predecessor Giovanni Villani, more of the zealot Girolamo Savonarola than the hermit Giovanni Gualberto, more of Michelozzo Michelozzi and Michelangelo Buonarroti than the mostly anonymous architects and artists of the thirteenth century.

The emphasis that many scholars of the medieval period have placed on the Florentine merchant-bankers and long-distance trade is also understandable. It was, after all, the patronage of wealthy Florentine merchants and bankers that financed the artistic production of the later middle ages and renaissance for which Florence is justifiably famous. The importance attached to the Florentine merchant-banking companies and long-distance trade is also owing to the course on which the historiography of medieval Florence was set by an earlier generation of scholars. Historians of the late nineteenth and early twentieth centuries, perhaps most notably the German scholar Robert Davidsohn, tended to regard the relationship between the city of Florence and its hinterland as one of diametrical opposition in which the mercantile interests of the city struggled to subdue the feudal nobility in the countryside.³

The growing tendency among historians of medieval Florence to emphasise the merchant-bankers and long-distance trade was encouraged by the work of the

² The Florentine chronicler Giovanni Villani reported that Florence was ravaged by fires in 1115, 1117, twice in 1177, in 1233, and again in 1235. See Villani, bk 4, chap. 30; bk. 5, chap. 8; bk. 6, chaps. 9, 12.

³ Davidsohn, 1977.

Belgian historian Henri Pirenne. In the early twentieth century, Pirenne published several major works in which he espoused the theory that the re-emergence of long-distance trade in western Europe invigorated urban life and reawakened the cities from their feudal slumber, thus providing the catalyst for the so-called economic 'take-off' of the eleventh and twelfth centuries.⁴ With respect to Florence itself, the trend was sustained in the numerous works of Armando Sapori, who was maturing as a scholar precisely during the period in which Pirenne was publishing his famous works. Sapori spent his career focussing specifically upon the merchant-banking companies of the city in their more advanced and better documented stages of development.⁵

The nature of the extant documentation also has borne heavily upon the course that the historiography of medieval Florence has taken. The peculiar character of the documentation is discussed at greater length below. For the moment, it is sufficient to note that the surviving evidence for Florence and its surrounding countryside from before about 1275 very largely consists of notarial acts for conveyances of landed property and appertaining rights in the hinterland. The city of Florence itself is more poorly represented in the evidence dating from before the beginning of the last quarter of the thirteenth century, however, and the documentation for the early phases of Florentine demographic and economic growth therefore has tended to draw attention away from the city rather than towards it. Even the surviving evidence for urban ecclesiastical and monastic institutions typically is concerned more with the development of the respective rural estates of these institutions and thus, for the most part at least, also with the conveyance of immovable property in the countryside. It is only in the more abundant and more varied evidence dating from the later thirteenth and early fourteenth centuries that the city begins to figure much more prominently. The propensity among historians towards the study of the city itself thus has favoured the more advanced stages of Florentine growth which are far better served by the extant documentation and in which the city and the long-distance trading activities of its merchant-banking companies played an increasingly more conspicuous part.

Despite the general tendency, there began to emerge in the 1930s a counter-vailing trend in the historiography of medieval Florence which focussed more upon rural developments and particularly upon the relationship between the city

⁴ Pirenne, 1925.

⁵ In addition to the references given above, see Sapori, ed., 1934; 1946; 1952; 1970.

and its surrounding countryside. At about the same time that Sapori was publishing his early studies on Florentine merchant-banking, the Danish historian Johan Plesner published two important contributions to the study of the Florentine countryside. The first of these two works specifically addressed the relationship between the city of Florence and its surrounding hinterland. Plesner observed that the thirteenth century in particular was marked by a profound wave of migration from the countryside and into the city. He further noted that the majority of those who could be seen to be migrating from the countryside and into the city were not landless peasants but middling landowners who tended to maintain their landed possessions in the countryside after removing to the city.⁶

The integration of an urban centre with its surrounding countryside typically is regarded as the essential condition for urban demographic and economic growth in pre-industrial societies.⁷ Several recent studies have indeed emphasised the close relationship between large pre-industrial urban centres and their surrounding countrysides.⁸ In the territory of Florence, however, it is generally thought that the rural and urban sectors were not very well integrated before the later twelfth century. Some doubts about the matter recently have been raised, but the evidence tends to bear out the notion that the rural and urban sectors in the territory of Florence around the middle of the twelfth century were still poorly integrated in comparison to neighbouring Tuscan territories.⁹ In the countryside of Lucca, for example, the city itself provided the principal point of reference for most rural lords, even for many of those far removed from the city in seemingly remote parts of the territory, and the economic interests of these rural lords reflected this urban orientation.¹⁰

Most of the lords in the countryside of Florence before about the middle of the twelfth century probably tended to be more insular, however, and the orientation of their economic interests was likewise for the most part more localised and often in competition with the interests of Florence and other lords in the territory.

⁶ Plesner, 1934.

⁷ Wrigley, 1985; 1990; 1991b.

⁸ On town-country relations in Rome during the classical period, see Morely, 1996. On Byzantine Constantinople, see the collected essays in Mango and Dagron, eds., 1995. On London around the year 1300, see Campbell, *et al.*, 1993.

⁹ For a recent dissenting opinion, see Dameron, 1996. The arguments put forward by Dameron in the regard are discussed below, Chapter 2.1.2.

¹⁰ Wickham, 1988, pp. 131-133.

Accordingly, the networks of distribution and exchange in the Florentine countryside tended to be organised around comparatively small centres that functioned to accommodate the requirements of circumscribed areas. The city itself was the focal point of another such network, albeit one decidedly larger than even the largest of its rural counterparts, but it was neither so large nor sufficiently dynamic that it dominated economic activity in its territory to the same extent as the cities of Lucca or Siena, for example, in their respective territories.

Florence was actively engaged in expanding its influence and control over the immediately surrounding countryside from at least as early as the beginning of the twelfth century, but it was not until the later twelfth century that the balance began to shift decisively in favour of Florence. By about the middle of the thirteenth century, the rural and urban sectors in the territory had become more or less thoroughly integrated, though the process by which the city became more integrated with its surrounding countryside is unclear. The observation of Plesner that rural landowners were migrating from the Florentine countryside and into the city in significant numbers precisely during the thirteenth century nevertheless allowed an interesting conjecture, which was subsequently articulated by Enrico Fiumi. According to Fiumi, the growing interdependence between the rural and urban sectors in the territory of Florence during the thirteenth century was related to the wave of migration observed by Plesner, and particularly to the consequent coalescence of the rural interests of the immigrating landowners with the interests of the city.¹¹

There can be little doubt that the immigration of rural landowners from the Florentine countryside to the city itself facilitated in some measure the increasing interdependence between the rural and urban sectors in the territory as a whole during the thirteenth century, but they were not strictly speaking causal agents. The immigration of rural landowners to the city should be seen not as a catalyst of integration but rather as a phenomenon symptomatic of an already more or less advanced stage of integration. Rural landowners, at least those intent upon maintaining their rural estates, probably were more disinclined to remove to the city during the initial phases of integration than were landless peasants or smallholders, in as much as they had more to lose in so doing. They removed to the city only when the projected benefits of participating more fully in the urban economy began to outweigh any perceived risks involved in becoming absentee

¹¹ Fiumi, 1957-1959; 1977.

landlords in the countryside. In other words, the middling rural landowners of the sort discussed by Plesner tended to immigrate to the city only subsequent to a transitional phase that entailed a much greater and often unacceptable degree of risk and uncertainty. In modern developing economies, for example, rural landowners have tended to be among the last to join the exodus to the cities, following upon a long train of landless migrants.¹²

The circumstances under which rural landowners migrated to the cities in the medieval and modern periods unquestionably were very different, and of course there is an all too obvious danger of anachronism in any comparison. It is likely, nevertheless, that the predominance of landowners among documented immigrants at Florence in the thirteenth century distorts the reality. The notion that the immigration of landowners to the city facilitated the increasing interdependence between the rural and urban sectors in the territory fails to take into account the fact that the evidence in question almost entirely concerns the conveyance of landed property. The bourgeoisie and the more noble classes thus figure prominently in the extant documentation while those at the lower end of the social spectrum are virtually absent. The overwhelming prevalence of the landowning classes among documented immigrants therefore should not be regarded as necessarily indicative of the prevailing migration patterns. In view of the nature of the surviving evidence, it is very likely that poor and dependent cultivators are not adequately represented.¹³

Ultimately, it must be conceded that landless peasants and smallholders at the lower reaches of the social spectrum probably composed the overwhelming proportion of those immigrating from the countryside of Florence and into the city in the thirteenth century. These are precisely the classes from which the city must have drawn the vast majority of the labourers for the heavy work of its burgeoning crafts industries. What is perhaps most notable about this aspect of the immigration is that it probably also entailed a progressive realignment of the labour force in the territory of Florence between the agrarian and non-agrarian sectors throughout the thirteenth century. The majority of those immigrating to the city, particularly in so far as the poorer classes were concerned, probably entered the crafts

¹² Grigg, 1982, pp. 110-113.

¹³ The promulgation of statutes elsewhere in Tuscany in the thirteenth century inhibiting the ability of serfs to acquire citizenship, and thus freedom, suggests that the flight of serfs from their stations on rural estates indeed may have constituted something of a problem for the owners of the affected estates. The issue is discussed below in Chapter 3.

industries, thereby abandoning their former roles as food producers in the hinterland and assuming roles as food consumers in the city.

As a result of rural-urban migration, the urbanisation ratio in the territory of Florence increased from no greater than about ten per cent around 1175 to nearly thirty per cent by the end of the thirteenth century. Increased urban demand for staple foodstuffs helped to stimulate investment in agriculture and in the trade infrastructure in the Florentine countryside. The extension of arable, technological change, greater farm efficiency, the dissemination of rural credit, and changes in tenurial arrangements helped to generate agricultural productivity improvements in the hinterland. The development of a sophisticated transportation network in the countryside and the proliferation of rural markets helped to minimise production costs and facilitated a gradual shift in the orientation of producers in the countryside towards the urban market. Continued population growth and urbanisation generated even greater urban demand for foodstuffs, which outstripped improvements in agricultural productivity and rendered Florence increasingly dependent on trade to satisfy its food supply requirements.

The wave of immigration from the Florentine countryside to the city of Florence itself in the thirteenth century raises questions concerning the interplay of coercion and incentive on rural-urban migrants. The coercive element, the 'push' factor, must have been population pressure in the hinterland and underemployment, but it has thus far proved impossible to estimate the size of the population in the Florentine countryside before 1300. Based on the dimensions of the urban enclosure after its enlargement between 1172 and 1175, and also on data for the adult male population in one sector of the city in 1199, it is possible to estimate the urban population of Florence from the later twelfth century. Sporadic pieces of evidence permit crude population estimates for isolated areas of the Florentine countryside in the later twelfth and early thirteenth centuries, but there exist no data to facilitate an estimate of the entire rural population before the end of the thirteenth century.¹⁴ The figure of 70,000 reported by the Florentine chronicler Giovanni Villani for the number of men in the countryside of Florence who were capable of rendering military service in 1300 provides the earliest evidence of any sort for the size of the entire rural population.¹⁵

¹⁴ Estimates for the population of Florence and its surrounding countryside from the later twelfth to the early fourteenth century are given below in Chapter 3.

¹⁵ Villani, bk. 8, chap. 39.

Demographic historians conventionally assume that the urbanisation ratio in much of western Europe in the later eleventh century was about ten per cent.¹⁶ The assumption is based on evidence from early Norman England, however, and the distribution of the population between the rural and urban sectors in the territory of Florence before the later thirteenth century is completely unknown. The evidence for the Florentine countryside from the eleventh and twelfth centuries, though ultimately inconclusive, nevertheless gives the impression that many parts of the countryside were heavily settled already before 1200. It is conceivable that the rate of urbanisation in the territory of Florence in the later twelfth century was even less than ten per cent. The migrations of poor and dependent cultivators from the Florentine countryside to the city of Florence in the thirteenth century must have been driven by demographic pressure in the countryside. If the urban population of Florence was only about 15,000 around 1200, however, then it seems unlikely that an urbanisation rate as high as ten per cent would have generated the pressure necessary to cause rural inhabitants to abandon the countryside for the city. Unfortunately, the extant documentation permits no final judgement on the matter, and when it finally becomes possible to assess the dimensions of both the rural and urban populations of Florence in 1300, the urbanisation rate appears to have been nearly thirty per cent. Certainly by this time, Florence was also absorbing surplus labour from the countrysides of other Tuscan cities and towns.

It is equally difficult to ascertain the incentive element, the 'pull' factor, that had drawn migrants from the countryside to the city before about 1250. The evidence for Florence from after the middle of thirteenth century attests to a burgeoning woollen textiles industry in the city, which no doubt attracted large numbers of rural-urban migrants. By the early fourteenth century, the Florentine woollen textiles industry may have employed as much as a quarter of the urban population. It is clear that Florence was exporting woollen textiles by 1225, and that Florentine textile workers were being lured away from Florence to establish workshops at Bologna in 1231. The size of the Florentine woollen textiles industry in the early thirteenth century is nevertheless uncertain, but the pace of urban development more in general suggests that the manufacturing sector in the city was undergoing rapid expansion already by 1250. Growth in manufacturing at Florence, and in the woollen textiles industry in particular, must have been providing employment opportunities that attracted surplus labour from the countryside to the city even in the early thirteenth century.

¹⁶ For example, see Pounds, 1990, p. 166.

Florentine supra-regional trade also grew rapidly in the later twelfth and early thirteenth centuries along three main trajectories: towards the north across the Apennine passes to Romagna; towards the southeast through the conduit of Arezzo to the cities of Umbria, the Marche, Lazio, and eventually Abruzzo; and towards the west to the port of Pisa, which also afforded the easiest means of access to more distant markets in Sicily and southern Italy. In Tuscany, Florence was precocious in establishing overland trading links with external markets, largely because its control over its own territory in the twelfth century was still relatively fragile. It is often impossible to determine the products of exchange in Florentine trade before 1250, but evidence from the second half of the thirteenth century suggests that the expansion of trade throughout the century was dominated by manufacturing exports, above all woollen textiles, and by commodities imports, mostly grain.

All of this helps to illustrate the dimensions of demographic and economic expansion at Florence in the later twelfth and thirteenth centuries, but it still leaves the really important questions surrounding the growth of the Florentine economy unanswered. What was it that delayed the growth of Florence relative to other towns in Tuscany and in north-central Italy, and how was it that Florentine growth assumed such extraordinary dimensions? These questions, in turn, have important implications for broader questions about the nature of the relationship between a rapidly expanding pre-industrial city and its surrounding countryside, about the structures of seigniorial power in the countryside and their bearing upon urban economic growth, about the still enigmatic origins of urban and rural communes, about the role of the state in the economy, and about the causes of long-term economic development and decline in a pre-industrial context.

This thesis seeks to understand urban growth at Florence mostly from the perspective of the countryside. It examines the structures of seigniorial power in the Florentine countryside and the process by which the commune of Florence established control over its surrounding hinterland. It also addresses the matter of urban growth at Florence through a consideration of the early development of the trade infrastructure in the Florentine countryside. Charles M. de La Roncière studied the networks of roads and markets in the hinterland of Florence in great detail, but his point of departure was 1280, when political power in the city passed from the traditional landed aristocracy and their allies among the mercantile elite

to another group of merchants, the *popolo grasso*.¹⁷ By this time, however, the Florentine economy was already well developed, and the evolution of the rural trade infrastructure likewise was relatively advanced. In order to appreciate the manner in which the development of the networks of roads and markets in the Florentine countryside contributed to economic expansion more generally, it is necessary to examine the early evolution of the trade infrastructure in the twelfth and early thirteenth centuries.

The paucity of the documentation for the twelfth and early thirteenth centuries nevertheless renders it necessary to take into account later evidence, because only rarely is it possible to establish the precise moment at which something began. The evidence may attest to a particular development or a particular practice for the first time on a given date, but it is often useful to consider the degree to which first attestations merely document for the first time earlier developments or practices. How far back can these developments or practices be pushed? It is for this reason that the following dissertation often refers to evidence that lies, properly speaking, outside of its chronological scope. It uses the more abundant documentation of the later thirteenth and early fourteenth centuries to illuminate, however faintly, earlier developments or practices. It is known, for example, that commercial relations between Florence and Bologna are attested from the beginning of the thirteenth century, but it is only later that the evidence begins to yield information about the products of exchange in the trade between Florence and Bologna. The later evidence may not permit precise determinations about the products of exchange in the early trade between Florence and Bologna, but it at least provides valuable clues about what those products might have been.

1.2. Hypothesis

What distinguished Florence from other Tuscan cities was the size of its territory, ecclesiastical division within the territory, and especially the strength of seigniorial power in the territory. The territory of Florence was large because it included two dioceses, the diocese of Florence itself and the diocese of Fiesole. In theory, the two dioceses were united from the middle of the ninth century, but the political union of the dioceses and the superior claims of Florence were realised only in the later twelfth and early thirteenth centuries. The sheer size of the terri-

¹⁷ De La Roncière, 1976; 1982. The passage of political power at Florence from the traditional aristocracy to the *popolo grasso* is discussed in Tarassi, 1978, pp. 153-160.

tory of Florence and ecclesiastical division within the territory favoured the emergence and persistence of seigniorial power especially in peripheral areas of the territory. The strength of seigniorial power in the Florentine hinterland effectively weakened the relationship between the city of Florence and its surrounding countryside, and it also inhibited the ability of Florence to establish trading relations with markets beyond the frontiers of its own territory.

It is widely recognized that seigniorial structures were comparatively weak in much of Tuscany, and this enabled most Tuscan towns to develop fairly strong relationships with their respective hinterlands, on which they depended for vital resources. There were rural lords in Tuscany, to be sure, and some of them were very powerful, but the more powerful lords tended to exercise power in the less urbanised zones of the region, or else they exercised power through urban institutions.¹⁸ As a result, most Tuscan cities were able to rely for the most part on their own hinterlands for vital resources.¹⁹ Pisa was an exception, not because relations between Pisa and its countryside were weak, but because the Pisan hinterland was relatively small and poor in resources. The city nevertheless was able to rely on maritime trade for the supply of vital resources. Pisa exploited its favourable location near the Tyrrhenian coast to develop strong relations with external markets, and unlike Florence, Pisa enjoyed access to external markets through territory that was subject to the control of neither antagonistic lords nor other Tuscan cities.²⁰

With respect to relations between the city and the surrounding countryside, Florence was another exception, but for reasons different than those given for Pisa. As already noted, the territory of Florence was large, and it was also comparatively rich in resources, but the size of the territory and ecclesiastical division within the territory made it difficult for the city to exercise control especially in peripheral areas of the territory and in the diocese of Fiesole. This permitted a

¹⁸ For a characterisation of seigniorial power in Tuscany in the twelfth century, see Wickham, 1996b, pp. 348-361.

¹⁹ This is not to say that most Tuscan cities maintained completely closed economies. Both Lucca and Siena benefited from a fairly high degree of contact with external markets, mainly by virtue of their locations on the *via Francigena*, the main pilgrimage route between Rome and the north. These cities nevertheless depended heavily on their immediately surrounding countrysides for the supply of vital resources. On the importance of the *via Francigena* in the economy of Siena, see Bowsky, 1981, pp. 5, 161, 198-199; Waley, 1991, pp. 3-4.

²⁰ The consequences of Pisan dependence on the sea are abundantly clear. When Pisan naval power began to wane in the early thirteenth century, the city ceased to expand. Except for some encroachment on the open spaces within the twelfth century walls of the city, the basic structure of Pisan urban topography was definitively rendered by the early thirteenth century.

handful of powerful lords to develop zones of seigniorial domination in the territory mainly in the eleventh and early twelfth centuries. Unlike rural lords in the countryside of Lucca and Siena, the more powerful lords in the Florentine countryside were in direct competition with the city of Florence in the early twelfth century. This inhibited the ability of Florence to establish strong relations with many areas in its own hinterland before the later twelfth century. It also increased the costs of trade between Florence and its countryside, weakened the ability of the city to exploit the resources in the hinterland, and slowed urban demographic and economic expansion.

Most Tuscan cities, in other words, depended either upon their own hinterlands for vital resources or upon trade in external markets, but they saw little need to develop extensive trading networks at both the territorial and the supra-regional levels. Florence, by contrast, was prevented from developing strong trading relations both in its own hinterland and beyond its frontiers by the strength of seigniorial power in the countryside. Rural lords blocked Florentine access both to resources in areas of the countryside under their control and to external markets. Unable to exercise adequate control over its own territory and lacking commercial links in external markets, the city of Florence experienced little significant growth in the later eleventh and early twelfth centuries while other major Tuscan cities, and chiefly Pisa, enjoyed unprecedented expansion.

Over the course twelfth century, the commune of Florence gradually extended its influence in the countryside, and it forged agreements with the most powerful lords in the territory in the second half of the century. These agreements initially may not have made it much easier for Florence to exploit areas within the Florentine countryside that were under seigniorial control, but they probably permitted Florentine merchants safe passage through these areas. This offered Florence both greater scope to exploit the productive potential of its own territory, at least outside areas of seigniorial domination, and opportunities to establish trading relations in external markets. Owing to the heavy dependence of most other Tuscan cities on their own hinterlands for vital resources, however, Florentine penetration into other markets in Tuscany met with considerable resistance.²¹ This

²¹ The Sieneese were enacting export embargos directed mainly against the Florentines from at least as early as 1223. See Banchi, ed., 1875, p. 206: 'nullus portet bladum extra comitatum Sen[ensem] et specialiter ad Florentiam et per comitatum Florentinum'. See also Fiumi, 1956, p. 46; 1957-1959, pt. 3, p. 472. On the food supply policies of Siena, see Bowsky, 1983, pp. 202-203; Redon, 1982, pp. 217-218. The Sieneese prohibition of grain exports especially to Florence in 1223 was by no means a rare occurrence. In times of food scarcity, whether real or perceived, communal governments in north-central Italy commonly imposed export embargos on domesti-

compelled the Florentines to seek entry into more distant markets across the Apennine Mountains in Romagna, to the south and southeast in the valleys of the rivers Tiber and Chiana, and in Sicily and southern Italy by way of the port of Pisa to the west.

Trade in distant markets was typically more costly than local or regional trade, because it entailed higher transport costs. It also increased the moral hazard that accompanies trade, which further raised trading costs. Moral hazard generally refers to the economic risks associated with undesirable behaviour that is difficult to detect or control.²² It is the concern held by one party in a commercial transaction about whether the other party in the transaction will uphold its part of the bargain. Within strictly local economies, for example at the level of a single village, such concerns are often mollified by the availability of reliable information about the past economic behaviour of the parties involved. Information tends to disseminate more freely in smaller communities, which permits members of a given community to make *ex ante* decisions about the prospects of entering into a commercial relationship with other members of the same community. In effect, it enables the community as a whole to subject members of the community who have in the past demonstrated undesirable behaviour, *ex ante*, to collective rather than individual punishment.²³

cally cultivated cereals while offering premium prices on imported grain. On export embargos and import premiums in north of the Apennine Mountains in Emilia-Romagna, Lombardy, Piemonte, and Veneto in the thirteenth century, see Peyer, 1950, pp. 38-49, 93-94, 119-124. The Sienese prohibition of 1223 nevertheless should also be considered in the context of political antagonism in Tuscany between the predominately pro-papal or Guelf cities of Florence and Lucca and the predominately pro-imperial or Ghibelline cities of Siena, Prato, Pistoia, Pisa, and Arezzo. It is worth noting that the earliest formal treaties attested between Florence and other communal governments in Tuscany were with Pisa in 1171 and Lucca in 1184. Although pro-imperial, Pisa was less hostile to the establishment of trading relations with Florence than other pro-imperial powers in Tuscany because it depended less on its own hinterland for vital resources. Lucca had supported the emperors during the investiture controversy in the eleventh century, but it had adopted a pro-papal position by the later twelfth century. The treaties that Florence negotiated with Pisa and Lucca in the later twelfth century are discussed below, Chapter 7.2. Certainly by the middle of the thirteenth century, when both Guelf and Ghibelline communes in Tuscany were establishing networks of diplomatic alliances, Tuscan Ghibellinism had effectively evolved into a coalition of the enemies of Florence. On the Guelfs and Ghibellines in north-central Italy, see Waley, 1988, pp. 145-156.

²² The definition of moral hazard employed here follows the definition developed in Hoffman, 1996, pp. 41, 78-79, 198-200, quoted from p. 41.

²³ The distinction between collective and individual methods of redress for undesirable economic behaviour is important. Individual punishment refers to the consequences for undesired behaviour experienced by the transgressor *vis-à-vis* the other party in the original agreement, whereas collective punishment refers to the consequences *vis-à-vis* the entire community to which the other party belongs. For the transgressor, the prospect of collective punishment is a greater deterrent because it entails not merely the subsequent inability to engage in commercial transactions with the other

When trade stretches across greater distances, it becomes more difficult for traders to obtain reliable information about the past behaviour of prospective trading partners. As long as trade remains confined to an area subject to a single jurisdictional authority, however, the difficulties involved in obtaining good economic information across distance can be offset, given the existence of the appropriate institutions and albeit at additional cost, by the effective enforcement of property rights. If one or more of the parties in a commercial transaction perceives a significant degree of risk, it might be considered advisable to enlist the services of a notary to record the transaction in a formal contract, which then could be used in the event of a dispute to support a claim. The contract thus provides both an *ex ante* deterrent, at least in so far as the mere existence of a formal contract encourages compliance, and an *ex post* remedy. The matter becomes even more complicated when trade crosses jurisdictional boundaries because of problems associated with the enforcement of contracts across jurisdictions. These problems can also be offset, again given the existence of the appropriate institutions and at additional cost, through the negotiation of treaties to establish the conditions of trade, to provide for the effective enforcement of property rights, to afford traders the ability to pursue claims in impartial foreign courts.

In the early twelfth century, trade in local and regional markets may have been at least as expensive for Florentine merchants as trade in distant markets. This is because powerful rural lords in the territory of Florence and other communal governments in Tuscany were in direct competition with Florence for access to vital resources at both the local and regional levels, and they often exercised monopsony privileges on vital resources in their own spheres of control.²⁴ Poor and indeed often antagonistic relations between Florence and both rural lords in its own territory and other communal governments in Tuscany, particularly the pro-imperial governments at Pisa, Pistoia, and Siena, also increased problems related to the enforcement of commercial contracts across jurisdictional boundaries. Beyond the frontiers of Tuscany, however, the communal governments in Romagna to the north and northeast, and in Lazio, the Marche, and Umbria to the south and southeast at least shared with Florence a pro-papal political ideology. They were also less threatened by Florentine demographic and economic expansion, and they

party in the original agreement, at least not without additional costs, but it also reduces opportunities throughout the community. On the distinction between individual and collective remedies for problems of moral hazard, see Greif, 1989; 1993; 1994a.

²⁴ Economists use the term 'monopsony' to refer to a buyer's monopoly.

were thus more willing to negotiate commercial treaties with Florence to facilitate contract enforcement and to establish the conditions of trade.

The remaining problem for the Florentines was safe passage through areas under the control of antagonistic seigniorial or communal powers. In the early twelfth century, the Florentines began to subjugate rural lords in the countryside immediately surrounding the city, but they still were unable to subjugate the more powerful lords who controlled the peripheral regions of the territory. In 1158, however, Florence reached an accommodation with the Guidi counts that probably afforded Florentine traders safe passage through Guidi territory both at Empoli and at Montevarchi. The Florentines had also definitively blocked the efforts of the bishops of Fiesole to transfer the seat of the see of Fiesole to Figline Valdarno by 1170. In the following year, Florence took advantage of the facility of safe passage through Empoli by establishing commercial relations with Pisa, thereby gaining access to the Tyrrhenian Sea. During the famine year of 1182, the Florentines imported grain from the Pisan Maremma, and they probably used the river Arno to do so, steering directly through Guidi territory. The Florentines also imported grain from the territory of Arezzo in 1182, exploiting both the facility of safe passage through Montevarchi and the failure of the bishops of Fiesole to establish a new diocesan seat at Figline independent of Florentine control. In 1200, Florence reached accommodations both with the Alberti counts in the valley of the river Elsa southwest of Florence and with the Ubaldini lords in the Mugello north of the city. These agreements clearly afforded Florentine traders safe passage through seigniorial territory, which enabled Florence to establish trading relations across the Elsa valley with Volterra and San Gimignano and across the Apennine Mountains with Bologna, Faenza, and Imola.²⁵

In the early thirteenth century, largely on the strength of an expanding supra-regional trade, Florence was already beginning to assert itself as a dominant power in Tuscany, even though it was still unable to exercise control in large areas of its own countryside.²⁶ Florence exploited access to the sea by way of Empoli

²⁵ The various treaties and their significance are discussed below. On the 1158 treaty between Florence and the Guidi counts, see Chapters 2.2.2, 6.1.2. On the efforts of the bishops of Fiesole to transfer the seat of the diocesan see to Figline Valdarno, see Chapter 6.1.1. On the accommodation reached between Florence and the Alberti counts in 1200, see Chapters 2.3.1, 6.1.3. On the agreement between Florence and the Ubaldini lords, see Chapters 2.3.1, 7.3.1. Florentine regional and supra-regional trading relations are discussed at length in Chapter 7.

²⁶ Late in 1197, Florence, Arezzo, Lucca, Pisa, San Miniato al Tedesco, Siena, Volterra, the Aldobrandeschi counts, and the Guidi counts negotiated the formation of the *societas Tuscia*, or the Tuscan League. The League was joined soon thereafter by the towns of Certaldo and Figline Valdarno, and the Alberti counts. Despite considerable encroachments by the commune of Florence

and the port of Pisa, the trans-Appennine routes through Ubaldini dominated territory, safe passage in the upper valley of the river Arno, and generally favourable relations with Arezzo to develop an extensive trading network. For Florentine merchants, safe passage through areas of seigniorial domination within the territory of Florence and through the territories of neighbouring communes helped to transform trading conditions of outright uncertainty into risk, which provided greater incentives for investment in trade.²⁷ Rural lords in the Florentine countryside cooperated with the city because of the high cost of continued resistance and also because cooperation yielded substantial dividends in revenue partly from seigniorial exactions on trade but increasingly from the sale of agricultural products in the expanding central market at Florence. As a result, agricultural productivity in the Florentine countryside increased significantly over the course of the thirteenth century.²⁸

Safe passage through territory controlled by seigniorial lords also afforded merchants access to a fairly sophisticated trade infrastructure in the countryside, which was composed of trading networks developed by rural lords in the later eleventh and early twelfth centuries. These networks, oriented around several large rural market centres, spanned practically the entire territory, and they continued to develop in the later twelfth and early thirteenth centuries, but they developed most conspicuously along the corridors that facilitated Florentine regional and supra-regional trading relations. As Florence strengthened its control in the countryside in the twelfth and thirteenth centuries, the integration of these seigniorial market networks into a larger Florentine market network enabled Florence to integrate trade in its own countryside with its regional and supra-regional trading relations. More than anything else, the Florentine economy was distinguished by the effective coordination of local, regional, and supra-regional trade, which the other communal governments in Tuscany failed to accomplish.

on seigniorial power in the Florentine countryside, the subscriptions of the Alberti counts, the Guidi counts, and the towns of Certaldo and Figline to the Tuscan League are suggestive of the weakness of Florentine jurisdiction in the countryside of Florence. For the treaty itself and subsequent subscriptions, see Santini, ed., 1895, *Capitoli*, no. 21, 1197 November 11-1198 February 4, pp. 33-39; no. 22, 1197 November 13-15, pp. 39-41; no. 23, 1198 April 10, pp. 41-42; no. 24, 1198 April 10, pp. 42-43; no. 25, April 15, pp. 43-46; no. 26, 1198 May 11, pp. 46-47. In 1198, the position of prior of the Tuscan League was occupied by a Florentine representative. See Davidsohn, 1977, 1, p. 930

²⁷ This is another important distinction. Whereas uncertainty would have precluded determinations about the probability of an outcome, risk enabled investors to make actuarial judgements about trading ventures. See North, 1990, pp. 126-127; 1991, pp. 28-29.

²⁸ See below, Chapter 4.1.2, tbl. 2.

1.3. Programme

The following chapters explore particular aspects of the hypothesis in greater detail. Chapter two establishes the political background of Florentine demographic and economic expansion in the twelfth and thirteenth centuries. It stresses the weakness of Florentine jurisdiction in its own countryside in the twelfth century and the gradual expansion of Florentine jurisdiction in the later twelfth and early thirteenth centuries. Chapter three examines the demographic dimensions of Florentine expansion, both in the city itself and in the surrounding countryside, and the subsequent chapter uses the demographic data to suggest the possible extent of agricultural productivity growth in the territory of Florence in the thirteenth century. Chapter four also considers the various techniques applied by peasants in the Florentine countryside to generate increased levels of agricultural productivity, and it discusses developments relative to estate management and the availability of rural credit that probably also stimulated productivity improvements. Chapter five explores the development of the manufacturing sector in the city and urban development more generally, largely in terms of the expansion of the Florentine woollen textiles industry. It also considers the role of Florentine merchant-bankers in papal finances as a source of capital formation. Chapter six examines the evolution of the networks of distribution and exchange around several strategically situated seigniorial enclaves in the Florentine countryside and the integration of these networks into a larger network of distribution and exchange centred on Florence itself. Chapter seven traces the development of Florentine trade beyond the territory of Florence at the regional and supra-regional levels, and the final chapter considers the degree to which the hypothesis proffered above is supported by the evidence. The main text is supplemented by twelve appendices that devote greater attention to certain aspects of Florentine demographic and economic expansion than was possible in the text.

2. Political integration

In the early twelfth century, jurisdictional rights in the territory of Florence were dispersed among a variety of seigniorial lords. The commune of Florence itself evidently had not yet fully crystallised, and urban interest in the countryside for the most part was still confined to the estates of the three major ecclesiastical lords in the city, the bishops of Florence, the cathedral chapter, and the urban abbey of Santa Maria, the so-called 'Badia di Firenze'. The presence of Florentine urban lords in the countryside, whether lay or ecclesiastical, was overshadowed by the presence of rural lords who maintained little contact with the city. In particular, the Florentine countryside was dominated by a handful of powerful comital lords, alongside of which were many other lords, both lay and ecclesiastical, who controlled more modest circuits of power. The extraordinary power of the comital lords in the Florentine countryside and their indifference towards the city of Florence contrasted with the situation in the countrysides of other major Tuscan towns, where rural lords were not only less powerful but were also more oriented towards the city itself.

The area under the direct control of Florence was expanding from about the beginning of the twelfth century, but the meagre evidence for the exercise of Florentine urban jurisdiction in the surrounding countryside before the later twelfth century tends to illustrate more the limits of urban jurisdiction than its extent. In the early twelfth century, Florence often employed military force to compel rural lords in the immediate vicinity of the city to submit to urban jurisdiction. Towards the end of the century, the communal administration at Florence was exercising direct jurisdiction over only a small portion of the countryside in the immediate vicinity of the city. Even within the area of direct urban control, seigniorial lords were exempt from communal jurisdiction. The area in the countryside under indirect Florentine control nevertheless increased considerably over the course of the twelfth century. The growth of the rural estates of Florentine urban ecclesiastical lords throughout the twelfth and thirteenth centuries and the migration of rural landowners from the countryside to the city in the thirteenth century effectively extended the range of urban influence. By about the middle of the thir-

teenth century, much of the Florentine countryside was under direct urban jurisdiction.

This chapter examines the construction of the territory of Florence through the gradual expansion of Florentine jurisdiction in the surrounding countryside from the beginning of the twelfth century. It also establishes the institutional framework that supports many of the arguments developed in subsequent chapters. In medieval Florence, the importance of jurisdictional integration lay in the fact that it lowered transaction costs and increased the benefits of trade.¹ The chapter summarises the political circumstances that underlay Florentine jurisdictional expansion, particularly with respect to the ecclesiastical reform movement of the eleventh century and to seigniorial politics in the Florentine countryside. It considers the manner in which the political allegiances of Florence may have helped to sustain the advance of Florentine interests. Above all, the chapter emphasises the relative weakness of urban jurisdiction in the countryside particularly in the twelfth and early thirteenth centuries, and the persistence of seigniorial power in certain parts of the countryside even at the end of the thirteenth century. It contrasts the weakness of Florence within parts of its own territory with the increasing economic and political power of Florence in Tuscany as a whole. The seeming paradox stems from the fact that the economic and demographic expansion of Florence in the twelfth and thirteenth centuries occurred in the context of this persistence of seigniorial power.

Powerful comital lords in the Florentine countryside for the most part permitted and to a certain extent even encouraged Florentine growth in the twelfth and early thirteenth centuries because it yielded economic benefits to the lords themselves. The more powerful rural lords were willing to tolerate a certain degree of encroachment upon their jurisdictional rights, but sustaining the continued expansion of Florence required increasingly substantial encroachments on seigniorial jurisdiction. The effect of these encroachments for the Florentine economy was to reduce transaction costs by decreasing the moral hazard associated

¹ Transaction costs, following North, 'are the costs of specifying and enforcing the contracts that underlie exchange', including 'all the costs involved in capturing the gains from trade'. North identified four main variables in the costs of commercial exchange: measurement costs, the costs involved in measuring the attributes of goods and services or the performance of agents; the nature of the exchange process, whether personal or impersonal, which determines the degree to which costly specification and enforcement are needed; enforcement costs, the costs involved in creating and maintaining a body of law, a court system, and coercive power to enforce the law; and ideology, loosely defined as the willingness to incur a premium rather than to 'free ride'. See North, 1984; 1985.

with trade, by removing barriers to trade such as tariffs and tolls, by giving Florence greater control over security on the roads, and by minimising the potential for disruptions to Florentine trade owing to political disputes. Even in the later thirteenth century, however, the increasing power of Florence was posing serious threats to the few remaining independent lords in the Florentine countryside, precipitating intensified conflict between the city and some rural lords.

2.1. The political background

The expansion of Florentine urban jurisdiction in the surrounding countryside was conditioned first of all by the struggles between the emperors and the popes over ecclesiastical reform in the eleventh century and secondly by the structures of seigniorial power in the Florentine countryside. Florence had been precocious in its enthusiasm for church reform, fostered first by the abbot Guarino of the abbey of Settimo in the early tenth century, then later in the century by the hermit Giovanni Gualberto, the founder of the Vallombrosan order, and by the countess Matilda, who ascended to the margravate of Tuscany in 1076. During the disputes between the emperors and the popes, Florence stood alone among the larger cities of Tuscany in support of the papal cause, and thereafter, despite brief interruptions, the city remained for the most part allied with the papacy. The Guelf loyalties of Florence favoured the city not only in relations with the popes at Rome but also in trade with other Guelf regimes at Bologna, Orvieto, Perugia, and in the Italian south after 1265.

The papal loyalties of Florence may have helped to facilitate the expansion of Florentine urban jurisdiction in the surrounding countryside after about the middle of the eleventh century, though the evidence proffered in support of such a claim is exceptionally meagre. In the eleventh and early twelfth centuries, Florentine jurisdiction in the countryside was limited by the broad dimensions of seigniorial power. The Florentine countryside was dominated at the end of the eleventh century by several extremely powerful comital lords and by numerous smaller lords who maintained little if any connection with the city of Florence itself. There were also only three urban landlords at Florence around 1100 who presided over rural estates of any consequence.

2.1.1. Church reform and the margrave of Tuscany

The jurisdictional expansion of Florence from the later eleventh century occurred at the expense of imperial power, which was weakened first by the death of Henry III in 1056, leaving as heir his six year old son, and then later by the investiture controversy.² Already in the preceding year, Henry had installed an imperial representative at Florence to replace the administrator who until then had governed the city on behalf of the Tuscan margrave Boniface, who had been assassinated in 1052. The assassination probably was intended precisely to open the way for the appointment of a new margrave in Tuscany more favourably disposed towards the emperors during the minority of the son of Boniface. The stratagem was countered by Beatrice, the widow of Boniface, who had secretly remarried with Godfrey of Lotharingia to protect her regency. She also sent two of her three children into hiding, and then established a residence at Florence with her daughter Matilda. Within five years of the death of Henry, the administration of Florence had been transferred back to a margraval representative.

When Godfrey died in 1069, Beatrice was again confronted with the necessity of protecting her regency through marriage. Matilda was hastily wed to the son of Godfrey of Lotharingia, Godfrey the younger, but relations between Matilda and the young Godfrey were poor, and Matilda soon returned to Florence to be near her mother. Alone and again at risk, Beatrice and Matilda sought the support of ecclesiastical authority. They aligned themselves with Giovanni Gualberto, the abbot of Vallombrosa, with the new Florentine bishop Rainerius (1071-1113), and with the reform popes at Rome, particularly Gregory VII (1073-1085). The alliance was forged in the context of the unfolding controversy over the practice of lay investiture, the appointment of ecclesiastical offices by secular officials.

In 1059, the Florentine bishop Gerardus ascended to the papacy as pope Nicholas II, and he immediately issued a decree prohibiting lay investiture. Over the previous decade, from the pontificate of Leo IX (1049-1054), the popes had been issuing regular decrees against simony, the sale of church offices, but the prohibition of lay investiture constituted a more direct challenge to imperial power. When the Cluniac monk Hildebrand ascended to the papacy as Gregory

² The following summary of events corresponds in the essential facts with the version narrated by Davidsohn, 1977, 1, pp. 207-446, *passim*. On pope Gregory VII, see Cowdrey, 1998. For a concise treatment of the investiture controversy, see Blumenthal, 1988. The economic aspects of the eleventh century reforms are discussed in Zema, 1941; 1944; 1947.

VII in 1073, the young emperor Henry IV (1056-1106) made overtures of compliance with the papal ban, but lay officials continued to invest petitioners with the powers of ecclesiastical office. In 1075, Gregory reiterated the prohibition against lay investiture, which amounted to a direct challenge against Henry IV. The emperor responded by convening a synod at Worms early in 1076. German bishops loyal to the emperor drafted a letter to the pope renouncing their obedience, and the emperor himself attached a letter beseeching Gregory to descend from the papacy. In reply, the pope immediately deposed the emperor, excommunicated him, and liberated his subjects. Gregory also excommunicated the archbishop of Mainz, the chief author of the letter drafted on behalf of the German bishops, and he divested of office all German bishops who continued to disobey his pronouncements.

The papal manoeuvre exploited an already unstable political situation north of the Alps and threatened to undermine the imperial administration. Henry faced the prospect of being deposed by the German leadership unless he could secure absolution from the pope before a council that was scheduled to convene at Augsburg in February of 1077. In the meantime, Godfrey the younger had been assassinated and Beatrice had died, leaving Matilda as sole lord of the margraval estate and with few allies other than the pope and the citizens of Florence. Gregory left Rome for the north in late November or early December of 1076, intent upon pronouncing a sentence against the emperor at the Augsburg council, over which he was to preside. The pope arrived at Florence before the end of December and then continued by way of Lucca to the margraval stronghold of Matilda at Canossa in the territory of Reggio. The emperor, meanwhile, was travelling south from his German dominions to meet the pope. Henry arrived at Canossa during the papal visit and presented himself to Gregory as a penitent soliciting absolution, which obliged the pope to acknowledge his contrition.

Throughout the dispute between the emperor and the pope, Florence remained faithful to the papacy and to Matilda. It is unclear whether support for Gregory and the Tuscan margrave brought any immediate rewards to Florence, but the continued loyalty of Florence to the papal cause in the twelfth and thirteenth centuries certainly yielded tangible economic benefits in the longer term. By the end of the twelfth century, Florentine merchant-bankers were active at the papal curia, and they were managing the transfer of papal revenues to Rome by the early thirteenth century. The Guelf loyalties of Florence also may have facilitated trading relations with other Guelf cities in north-central Italy from the begin-

ning of the thirteenth century. Florence had established commercial relations with Bologna probably by 1200, with Perugia by 1218, and with Orvieto probably by 1230. In the later thirteenth century, Florence supported the papal ally Charles I of Anjou in his conquest of Sicily and southern Italy, which earned Florentine merchant-bankers favoured trading status in the kingdom.³

2.1.2. Structures of seigniorial power

Politically and economically, the city of Florence was poorly integrated with its surrounding countryside before the later twelfth century. At the beginning of the twelfth century, jurisdictional rights in the Florentine countryside were shared by a variety of seigniorial powers. The commune of Florence itself was still a nebulous institution, and if it exercised any jurisdiction in the surrounding countryside at all, its control was highly circumscribed. Apart from the city, there were few urban lords with substantial holdings in the countryside. The bishops of Florence presided over a large estate, while both the cathedral chapter and the abbey of Santa Maria governed less extensive but by no means inconsiderable rural estates. Smaller urban and suburban churches also maintained more modest estates in the countryside, and there may have been a handful of secular urban lords in possession of small rural estates. Urban landlords in the countryside of Florence nevertheless constituted the exception rather than the rule before the later twelfth century.⁴

³ On Florentine merchant-bankers and their relations with the papal curia at Rome, see below, Chapter 5.3. Florentine supra-regional trading activities are discussed below, Chapter 7.3.

⁴ Dameron has recently argued that Florence and its surrounding countryside were more thoroughly integrated than is often thought to have been the case, but his assertion is not borne out by the evidence. In his work, Dameron has focused specifically upon two of the greater Florentine urban landlords of the period, namely the cathedral chapter and above all the bishops of Florence. The dimensions of the capitular estate and especially of the episcopal estate were indeed probably greater than those of all but a handful of estates in the Florentine countryside, but it should be stressed that the cathedral canons and bishops of Florence were resident in the city as a matter of course. Florence was, after all, the seat of an episcopal see. The ecclesiastical affiliations of these estates no doubt also rendered more likely the survival of a relatively extensive body of documentation. The great secular lords of the Florentine countryside, on the other hand, left few records, and the evidence that survives draws attention to their detachment from urban affairs rather than to their integration with the city. The emphasis placed upon these two great urban landlords by Dameron therefore may have made urban landlords in general seem more ubiquitous in the Florentine countryside than they were in truth. The fact remains that jurisdiction in the Florentine countryside before the later twelfth century was widely dispersed. The estates of the cathedral chapter and the bishops of Florence may have been well integrated with the urban commune, but the estates of the Guidi, Alberti, and Ubaldini lords were not. The point at issue really has little to do with whether or not there were in Florence urban landlords with substantial pro-

Among the urban ecclesiastical lords at Florence, the bishops certainly controlled the largest estate. They held enclaves throughout the Florentine diocese, but their possessions were concentrated in the Mugello around Borgo San Lorenzo, in the valley of the river Pesa around San Casciano in Val di Pesa, in the lower valley of the river Arno on the Sesto and Settimo plains, and in the immediate vicinity of the city. The bishops were also beginning to expand in the valley of the river Elsa around Castelfiorentino by the early twelfth century.⁵ The estate of the cathedral chapter of Florence was smaller than that of the bishops, but it also covered a broad area. The estate included properties in the Mugello, in the lower Arno valley, at Castelfiorentino in the Elsa valley, at Impruneta, and in the immediate vicinity of the city.⁶ The cathedral chapter also owned isolated properties in the diocese of Fiesole. The abbey of Santa Maria owned properties in and around the city itself, and it owned properties in several widely scattered but strategic locations in the countryside for the most part south and west of Florence.⁷

Clearly, then, there were at least some Florentine urban landlords with substantial proprietary holdings in the countryside even before the later twelfth century, but they were exceptions, and they should not be seen as representative of a broader pattern of urban lordship in the countryside. More symptomatic of circumstances in the Florentine countryside at the beginning of the twelfth century was probably the case of the abbey at Passignano. The abbey owned little if any urban or suburban property at Florence in the later eleventh and early twelfth centuries, but it owned substantial urban and suburban properties at Siena.⁸ The

proprietary holdings in the countryside. Indeed there were, but the question here is one of degree rather than of fact. Urban landlordship of rural property was less prevalent at Florence than at Lucca, for example, where the point of reference for most rural lords was the city. The emphasis that Dameron has placed upon the cathedral chapter and the bishops of Florence has led him to overlook the vast estates of the large comital lords in the Florentine countryside. See Dameron, 1996. At the beginning of the twelfth century, however, the countryside of no other city in northern Tuscany was as dominated by these large comital lords as was the countryside of Florence. See Wickham, 1996, pp. 356-358.

⁵ Dameron, 1991, pp. 55-60, 77-85.

⁶ Rotelli, 1988; Dameron, 1996.

⁷ Ninci, 1990.

⁸ As far as I have been able to determine, the records of the abbey at Passignano provide no indication that the abbey owned any property in the city of Florence or in its suburbs. At Siena, on the other hand, numerous documents of the early twelfth century attest to the ownership of urban or suburban property by the abbey. For example, see ASF, *Diplomatico*, Badia di Passignano, 1101 March, 1103 June, 1104 May, 1105 June, 1107 February, 1108 January. Interestingly, the abbey preferred to invest in property at Siena, situated thirty kilometres to the south across undu-

countryside around Passignano, moreover, was marked in the eleventh century by the almost complete absence of urban landlords.⁹

The rural and urban sectors in the territories of both Lucca and Arezzo, by contrast, had become more or less thoroughly integrated by about the beginning of the twelfth century. Certainly in political terms, rural lords even in mountainous and seemingly remote parts of the countryside tended to be oriented more towards the city than towards smaller centres in their own immediate environs, and the principal point of reference for most rural lords in both territories was the city itself.¹⁰ Economic integration between the rural and urban sectors in the territories of Lucca and Arezzo was appreciably weaker before about 1100, mainly because agricultural production in the immediate hinterlands of the cities was sufficient to satisfy urban demand for staple foodstuffs. From the beginning of the twelfth century, however, increased urban demand was creating incentives for the development of silvo-pastoral agriculture in the more remote parts of the countryside, which stimulated the economic integration between the rural and urban sectors in the territories.¹¹

Once it had commenced, moreover, economic integration between more remote mountainous areas in the countrysides of Lucca and Arezzo and their respective cities proceeded rapidly because there were few seigniorial barriers to integration. In the countryside of Lucca in particular, there were powerful lords, but the estates of Lucchese lords tended to be scattered throughout the diocese of Lucca, on the plains near the city and in the more distant mountains, and the larger rural lords were at any rate intimately involved in urban politics.¹² Seigniorial power in the Florentine countryside, by contrast, was concentrated in areas on the periphery of the dioceses of Florence and Fiesole, and the large comital powers in

lating terrain, rather than to establish ties with Florence, situated only twenty-two kilometres to the north across more forgiving terrain.

⁹ Conti, 1965, p. 170. Conti observed that only two documents of the eleventh century offer even the suggestion of urban ownership of property in the countryside around Passignano. He nevertheless conceded that the records for the abbey at Vallombrosa suggest increased integration between the abbey and the city from about the middle of the eleventh century. Whereas the abbey at Passignano was situated between Florence and Siena, the location of Vallombrosa afforded the abbey little opportunity to choose between Florence and another large Tuscan city. For Vallombrosa, the only viable option was Florence.

¹⁰ Wickham, 1988, pp. 130-133, 145-147, 334-335, 342-343, 353-355.

¹¹ Wickham, 1988, pp. 147-148, 354.

¹² Wickham, 1988, pp. 129-133.

the countryside maintained little if any contact with the city before the later twelfth century.

In the countryside of Florence in the early twelfth century, jurisdiction was divided between a variety of rural lords, both lay and ecclesiastical, and the three principal urban ecclesiastical lords of Florence, but large tracts of the Florentine countryside were under the sway of a handful of powerful comital lords: the Guidi, the Cadolingi, the Alberti, and the Ubaldini. Of these, the Guidi were among the more enduring, and they were clearly the most important in terms of the extent of their holdings. Both the Guidi and the Cadolingi had their origins in the early tenth century when king Berengar I (888-924) established them as comital lords of Pistoia. The vast possessions of the Guidi counts were scattered throughout the countrysides of Florence, Pistoia, and Arezzo in Tuscany, and on the northern escarpments of the Apennine ridge in Romagna, but the core of the Guidi estate was centred east of Florence in the dioceses of Fiesole, Arezzo, Forlì, and Faenza. In the Florentine countryside and in bordering areas, Guidi properties were concentrated around the important towns of Dicomano in the middle valley of the river Sieve, Empoli in the lower Arno valley, Montevarchi in the upper Arno valley, and Poggibonsi in the upper valley of the river Elsa. They also controlled much of the Casentino as well as strategically situated properties in the valley of the river Lamone on the road from Florence to Faenza.¹³

The Cadolingi estate was situated west of Florence and included properties in the lower Arno valley, in the Elsa valley, and in the dioceses of Lucca, Pisa, Pistoia, and Volterra.¹⁴ In the early twelfth century, when the last of Cadolingi counts died leaving no heirs, much of the Cadolingi estate passed into the hands of

¹³ The Guidi were concentrated in the dioceses of Florence, Fiesole, Pistoia, Arezzo, and along the spine of the Apennine Mountains between eastern Tuscany and Romagna. The extent of Guidi territory shortly after the middle of the twelfth century is indicated in an imperial charter dated from Pavia in 1164. See ASF, *Diplomatico*, Stroziane-Uguccione, 1164 September 28; Appelt, ed., 1975-1990, 2, no. 462, s.d., pp. 369-371; Ficker, 1868-1872, 4, no. 138, s.d., pp. 179-182. See also above, Map 6. Guidi possessions are enumerated again in the early thirteenth century in two confirmations of imperial privilege granted to the Guidi by Frederick II in 1220 and 1247. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. For the 1220 confirmation, see also Huillard-Bréholles, ed. 1852-1861, unnumbered, 1220 November 29, pp. 58-64. At the end of the eleventh century, the countess Matilda adopted Guido Guerra Vecchio, and she granted him extensive properties near the *castrum* of Marturi, which is to say Poggibonsi. See Overmann, 1895, no. 57, 1099 November 12, pp. 165-166. On the Guidi at Poggibonsi before 1200, see Cambi, 1995, pp. 109-123. See also Davidsohn, 1977, 1, pp. 676-680; Dameron, 1991, pp. 73-74. See also Sestan, 1968; Milo, 1981; Chiappelli, 1932; Ammirato, 1640. On the Guidi in Tuscany in general and in the territory of Arezzo in particular, see Delumeau, 1996, pp. 384-410.

¹⁴ Pescaglini Monti, 1981.

the Alberti counts.¹⁵ In 1164, the Alberti estate included numerous properties along a line that ran from the Apennine towns of Camugnano and Castiglione dei Pepoli in the territory of Bologna, down the valley of the river Bisenzio, then across the valleys of the rivers Arno and Pesa to the Elsa valley.¹⁶ The Ubaldini lords dominated the central and western parts of the Mugello and the mountains immediately to the north, and they controlled strategically situated properties on the main roads from Florence to Bologna and Imola.¹⁷

At the end of the eleventh century, the Aldobrandeschi lords also held property in the upper valley of the river Elsa on the southern fringes of Florentine territory near the frontier with Siena and Volterra, but the centre of Aldobrandeschi power lay to the south in the Maremma around Grosseto.¹⁸ In addition to these large comital lords, other secular lords such as the Firidolfi, the Pazzi, the Ricasoli, and the Ubertini controlled more modest circuits of power in the Chianti and in the upper valley of the river Arno. The countryside of Florence was also punctuated by the estates of ecclesiastical lords such as the bishops of Fiesole, and the various monasteries of the orders of Vallombrosa, Camaldoli, and Saint Benedict. By the later twelfth century, the rural communities of Figline Valdarno and Certaldo, and probably others, were also beginning to exercise a large degree of autonomy.

It is unclear whether the *districtus* of Florence, the area over which the city exercised almost complete control, extended much beyond the boundaries of the

¹⁵ Davidsohn, 1977, 1, pp. 547-554, 564-566, 641-643.

¹⁶ For an indication of the extent of Alberti possessions after the middle of the twelfth century, both north of Florence between the western Mugello and the Bisenzio valley, and southwest of the city in the valley of the river Elsa, see Appelt, ed., 1975-1990, 1, no. 110, 1155 June 4, pp. 186-187; 2, no. 456, 1164 August 10, pp. 360-362. The 1164 document is also published in Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 90-92. See also above, Map 7. The Alberti possessed several *castella* on the high ground above the left bank of the river Pesa, from Sammontana in the north to Santa Cristina a Salivolpe in the south, and two *castella* on the right bank of the upper Pesa, one at Bargino and another at Ripa, near Montefiridolfi. These *castella* formed a defensive chain along the northeastern perimeter of an area in which the Alberti clearly dominated. For another map indicating the *castella* pertaining to the Alberti in this area of the Florentine countryside, see Salvini, 1969, p. 27.

¹⁷ On the extent of the Ubaldini estate, see Magna, 1982, pp. 18-25. The holdings of the Ubaldini before the middle of the twelfth century are attested in Ildefonso di San Luigi, ed., 1770-1789, 10, pp. 183-188, 365; Savioli, ed., 1784-1795, 1, pt. 2, no. 133, 1145 May, pp. 211-215. For the patrimony of a single branch of the Ubaldini at the time of the coronation of the emperor Frederick II in 1220, which also confirmed the rights of the Ubaldini to exact tariffs and tolls, see Huillard-Bréholles, ed., 1852, 2, pt. 1, unnumbered, 1220 November 25, p. 33-37; Böhmer, ed., 1971, no. 1223, s.d., p. 272. See also Map 8 above.

¹⁸ Davidsohn, 1977, 1, pp. 629-630; Rossetti, 1981; Collavini, 1998, p. 170.

urban parish of San Giovanni at the beginning of the twelfth century. If the Florentine *districtus* extended beyond parish boundaries at all, it was nevertheless limited to a circumscribed zone immediately surrounding the city. Deeper in the hinterland, the mosaic of seigniorial jurisdictions around 1100 frustrated political integration between the city and the countryside, and it probably also placed constraints on economic integration in the territory. On the episcopal estate, vassals of the Florentine bishops were already subject to urban jurisdiction, in as much as submission to the bishops of Florence also entailed submission to urban authority.¹⁹ Nevertheless, economic integration between the city and the countryside was still relatively weak at the beginning of the thirteenth century. At the episcopal town of Borgo San Lorenzo, for example, local measures for grain persisted alongside both older and newer measures used on the urban market at Florence in the early thirteenth century.²⁰ Throughout the Florentine countryside, the persistence of local measures in the early thirteenth century implies higher transaction costs in commercial operations between urban and rural markets, and it suggests a relatively poor degree of integration.²¹

¹⁹ Davidsohn, 1977, 1, p. 617.

²⁰ The Florentine bishops had been acquiring properties in and around Borgo San Lorenzo from the eleventh century, and the town became an episcopal stronghold probably in the twelfth century. See Dameron, 1991, pp. 45, 77, 98-99. Certainly by the middle of the thirteenth century, the bishops were maintaining an episcopal palace at Borgo San Lorenzo. See ASF, *Manoscritti* 48BIS (*Bullettone*), folio 78v [1248 March 13]. Already in 1213, moreover, the 'rectores' of Borgo San Lorenzo swore to collect an ecclesiastical tax on behalf of the Florentine bishops. See ASF, *Manoscritti* 48BIS (*Bullettone*), folio 80v [1213 June 28]. In 1236, the commune of Florence intervened on behalf of the Florentine bishops in an effort to compel the men of Borgo San Lorenzo to fulfil their tax obligations to the bishops. See ASF, *Manoscritti* 48BIS (*Bullettone*), folio 79r [1236 August 30]. There are nevertheless indications that economic integration between Florence and Borgo San Lorenzo was still far from complete in the early thirteenth century. Economists measure market integration by the degree to which prices in staple goods covary between markets, but the nature of the documentation for twelfth and thirteenth century Florence renders it impossible to gauge the covariance of prices between markets. In view of the character of the evidence, the dissemination of urban measures on rural markets perhaps offers a better means by which to measure the economic integration of the rural and urban sectors in the territory of Florence over the course of the twelfth and thirteenth centuries. In the area around Borgo San Lorenzo and Luco di Mugello, the local measure of Borgo San Lorenzo is attested frequently during the first quarter of the thirteenth century, but it is attested less frequently after 1225. Weights and measures in the territory of Florence are discussed in greater detail below, Appendix 10.

²¹ In addition to Borgo San Lorenzo, local measures for grain are attested in the Florentine countryside during the later twelfth and early thirteenth centuries at Calenzano, Castelfiorentino, Colle di Val d'Elsa, Empoli, Ganghereto, Mangona, Montevarchi, Poggibonsi, Passignano, and Semifonte. See again below, Appendix 10.

2.2. The early expansion of Florentine jurisdiction

Robert Davidsohn argued that jurisdictional privileges devolved to Florence from the countess Matilda in the aftermath of the confrontation between the emperor Henry and pope Gregory at Canossa in 1077. The argument hinges upon weak assumptions, however, and no substantial expansion of Florentine jurisdiction in the surrounding countryside is attested before the beginning of the twelfth century. The early advance of Florentine interests in the countryside was accomplished through military means, recorded for the most part in chronicle accounts. The earliest documentary evidence for the expansion of Florentine urban jurisdiction in the surrounding countryside occurs in 1138. This section considers the argument put forward by Davidsohn for the devolution of jurisdictional privileges from the countess Matilda, and then it recounts the earliest evidence, both narrative and documentary, for Florentine jurisdictional expansion.

2.2.1. The devolution of imperial power

Davidsohn associated the beginnings of the Florentine exercise of autonomy with jurisdictional privileges believed to have been conferred upon the city by the countess Matilda.²² According to Davidsohn, a devolution of imperial power to Florence is implied in the privileges supposedly granted to Florence by Matilda and is seen as a direct response to similar privileges that were granted to Pisa and Lucca in 1081 by the emperor Henry IV.²³ The imperial grants to Pisa and Lucca were designed to secure for the emperor the support of these two important cities in his struggles with the reform papacy of Gregory VII. The privileges generally thought to have been extended to Florence by Matilda were seen by Davidsohn as a response to these imperial grants to Pisa and Lucca, and he believed that they stemmed from the advocacy of Matilda for the papacy. The privileges were in-

²² The transition from a margraval to an urban politics, as Wickham has noted, remains extremely obscure, not only in Florence but throughout Tuscany. See Wickham, 1988, p. xxxi. On the march of Tuscany in general, and most recently, see the studies collected in Golinelli, ed., 1994. See also Nobili, 1983, pp. 235-258; 1981, pp. 79-105. On the very early history of the margrave of Tuscany, see Keller, 1973, pp. 117-140.

²³ The imperial grants to Pisa and Lucca in 1081 are discussed in Davidsohn, 1977, 1, pp. 392-398. For the Pisan charter, see von Gladiss, ed., 1953-1955, 2, no. 336, 1081, pp. 442-443; Muratori, ed., 1738-1752, 4, s.d., cols. 19-22. For the Lucchese charter, see von Gladiss, ed., 1953-1955, 2, no. 334, 1081 June 23, pp. 437-438; Ficker, ed., 1868-1874, 4, no. 81, s.d., pp. 124-127.

tended as a reward to Florence for the loyalty demonstrated by the city towards the countess during the investiture contest.²⁴

No direct evidence survives for any such devolution of power and privilege from the countess Matilda to Florence, but Davidsohn nevertheless inferred a devolution of power on the basis of two pieces of indirect evidence. By 1079, Florence was using its own system of weights and measures for both length and capacity, and Davidsohn believed that this stemmed from an imperial prerogative. In the early 1090s, the city was able to appropriate a seigniorial due that previously had been reserved for the emperor or margrave.²⁵ Neither the adoption or establishment of a system of weights and measures nor the imposition of direct taxes, however, were necessarily tantamount to an act of political sovereignty.

In the countryside of Florence, weights and measures probably were determined for the most part by the exigencies of the local economy.²⁶ At least three

²⁴ Florence was perhaps the ideal place in Tuscany at which to cultivate support for the papal cause. A strong sentiment for church reform already had been fostered in the early eleventh century by the abbot Guarino of San Salvatore di Settimo in the lower valley of the river Arno, and then by Giovanni Gualberto, founder of the Vallombrosan monastery at Aquabella. Of all the Tuscan cities, Florence alone remained faithful to Matilda and the papacy. It was precisely this fidelity, Davidsohn suggested, that consigned to Florence a position of political importance sufficient to motivate Matilda to transfer directly to the city significant jurisdictional powers, thus initiating a process that transformed the city into an autonomous commune by the time of the death of Matilda in 1115. On the concessions of Matilda to Florence, see Davidsohn, 1977, 1, pp. 398-400. See also Dameron, 1991, pp. 65-67. On the Abbot Guarino, Giovanni Gualberto, and the founding of the monastery of Vallombrosa at Aquabella west of Florence in the Pratomagno, see Dameron, 1991, pp. 29-31, 42-43. On Giovanni Gualberto in particular, see also Boesch Gajano, 1964.

²⁵ Davidsohn, 1977, 1, pp. 400-401; and Davidsohn, ed., 1896-1908, 1, pp. 62-63. The fundamental work on the imperial tax, the *fodrum*, is Brühl, 1968. On direct taxation in medieval Tuscany, see Fiumi, 1957; Herlihy, 1964; Bowsky, 1969. Like Davidsohn, Brühl regarded this particular episode as evidence for the exercise of urban jurisdiction deep in the countryside. See Brühl, 1968, 1, p. 555, n. 554.

²⁶ Kula argued that measures of capacity in the Polish countryside during the early modern period were determined by landlords, who altered measures to increase agricultural rents. See Kula, 1986, pp. 112-113, 127-160. In the countryside of Florence, measures for agricultural products in which rents were paid, such as grain, were certainly evolving upwards during the twelfth and thirteenth centuries, but it is usually impossible to determine the source of the pressure for increases in standard measures. When the bishops of Lucca raised property rents on their estate in the twelfth and thirteenth centuries, the source of the pressure is usually much easier to fathom because they often paid for the right to do so. See Osheim, 1977, p. 103, 156-159. On the estate of the Florentine bishops, a series of recognitions of episcopal lordship in the Elsa valley around Castelfiorentino in 1289 include numerous examples of reductions of agricultural rents from older measures *ad starium Florentinum nunc currentem*, that is, to the current measure of Florence. The reductions also converted both labour obligations and rents in inferior grains such as barley and spelt to rents in wheat. When the conversion simply reduced rents for a single type of grain from the older measures to the newer measure, the conversion ratio can be determined precisely. For wheat, the conversion ratio from the *starium fictalem Castri Florentini* to the current measure of

different measures for area existed concurrently at Florence already in the early twelfth century, and numerous measures for capacity are attested in the Florentine countryside in the twelfth and thirteenth centuries. The various measures for area evidently evolved to take into account differences in terrain, while the various measures for capacity reflect the importance of local markets.²⁷ Florentine systems of weights and measures therefore attest neither to the devolution of imperial power nor even to the usurpation of an imperial prerogative. From the early thirteenth century, however, the increasing predominance of the Florentine measure for capacity in the countryside of Florence, and conversely the persistence of local systems of measurement, may serve as a means by which to assess the relative degree of economic integration between the city and various parts of the countryside.

The evidence for urban imposts in the countryside of Florence before the beginning of the twelfth century likewise constitutes an unconvincing argument for a devolution of imperial power to Florence or the usurpation of an imperial prerogative. The matter of taxation and Florentine urban finances is discussed at greater length below. For the moment, it is sufficient to note that the early evidence for urban imposts in the countryside is meagre, occurring only in one or two documents in a rather circumscribed area of the Florentine countryside and during a very short space of time in the early 1090s.²⁸ The first really secure example of

Florence was three to two. See Cioni, 1912-1915, pt. 3, no. 29, 1289 April 23, pp. 34-36, esp. 35. Whether the relationship between the *stadium* of Castelfiorentino and that of Florence in 1289 is accurately reflected in this document is another matter. It should be stressed, however, that the conversion is attested in the context of a recognition of episcopal lordship, which presents at least two possibilities. It is possible, for instance, that the bishops offered a favourable conversion to the dependent in exchange for the recognition of their lordship. On the other hand, the bishops may have benefited from a favourable conversion in compensation for excusing the dependent from rents in arrears. The evidence for the recognitions of episcopal lordship at Castelfiorentino in the later thirteenth century nevertheless gives no clear indication that the reductions of older local measures for grain to the measure of Florence were designed to increase agricultural rents.

²⁷ On weights and measures in the territory of Florence, see below, Appendix 10.

²⁸ The conclusions drawn by Davidsohn in this regard were based merely upon two documents from the Mugello north of Florence. One of the documents, from 1093, obliged the men of the villages of Rifredo and Casanova to render an 'adiutorium ad ipsum monasterium [i.e., San Pietro di Luco di Mugello] in perpetuum pro rege, marghione, civitate [sic] incendio et pro maximo conquisto'. See ASF, *Diplomatico*, Monache di Luco, 1092 February 13. I have been unable to corroborate the existence of the second piece of evidence cited by Davidsohn, also from the same collection of documents. At any rate, one or two pieces of evidence hardly constitutes a weighty argument for the Florentine exercise of sovereignty even in the Mugello alone, much less throughout the entire countryside of Florence. The term 'adiutorium', moreover, need not have referred to a tax at all. In the early middle ages, the term denoted merely 'assistance', and it gradually became associated with a fixed contribution in money or in kind, but still not necessarily a tax.

an urban impost in the Florentine countryside occurs in two copies of a single act dating only from 1156.²⁹ In any case, Florentine urban imposts in the countryside should not be understood as evidence for a devolution of imperial power but simply as the exercise and expansion of communal jurisdiction.

In 1221, the right to impose direct taxes was recognised probably throughout Tuscany as a prerogative of communal jurisdiction within a certain territorial area, the *districtus*. The deposition of witnesses in a dispute between the commune of Pistoia and the bishop in that year over the jurisdiction of two *castella* suggests that the right to levy direct imposts was indeed embraced by the concept of 'jurisdiction'. One witness in particular, when asked to indicate he thought was meant by the term 'jurisdiction', stated that it denoted the right to administer justice and to impose direct taxes.³⁰ By the early thirteenth century, the imposition of direct taxes in Tuscany was merely another expression of precisely such jurisdiction. There is no need, therefore, to suppose that the advent of urban imposts

²⁹ See ASF, *Diplomatico*, Badia di Passignano, 1155 January 17. Davidsohn has argued that the language of a critical phrase in these two copies differed somewhat, in that the term *adiutorium* was substituted for the term *fodrum* in one of the copies. Landlords had been collecting from their tenants annual rents *inter censum et oblias et adiutorium* from before the beginning of the twelfth century, and the term *adiutorium* occurs in the document of 1092 cited above. The *fodrum* no doubt was a public tax, and the substitution of the term *adiutorium* for *fodrum* in one of the copies of the 1156 act would have enabled Davidsohn to trace the origin of urban imposts in the Florentine countryside at least as far back as the later eleventh century. It also gave Davidsohn the basis for his argument that the 1092 document cited above provides the earliest evidence for Florentine urban imposts in the surrounding countryside. The phraseology of the critical passage in the two copies of the act dating from 1156 is identical, however, and neither of the copies contains the term *adiutorium*. See Davidsohn, 1977, 1, p. 1010, n. 5.

³⁰ Santoli, ed., 1915, nos. 136-137, 1221 September 13, pp. 107-125, esp. 110: 'imperare benis et eos regere in iustitia, punire malefactores de furto, adulterio, omicidio, et ceteris, et amasciare'. See also the discussion in Herlihy, 1964, pp. 388-389. The depositions of other witnesses in the 1221 dispute between the commune and the bishops of Pistoia further suggest that jurisdiction entitled the lord to the profits from the administration of justice, and it gave him license to issue orders to his dependents and to exact fines from them for disobedience. The lord also demanded entry fines in conveyances of landed property from his dependents, and he obliged them to perform labour and military service, to secure permission to graze animals on seigniorial land and to pay for the privilege. Jurisdiction typically also entailed the right to collect tolls and market dues, as in an 1164 imperial charter to the Guidi counts. See ASF, *Diplomatico*, Stroziane-Ugucione, 1164 September 28; Appelt, ed., 1975-1990, 2, no. 462, s.d., pp. 369-371; Ficker, 1868-1872, 4, no. 138, s.d., pp. 179-182: 'Ut autem habundantioris gratie nostre prerogativa levetur, concedimus ei suisque legitimis heredibus et speciali largitate donamus omnia regalia nostra et omnem nostram iurisdictionem, quam habemus in omnibus terris et possessionibus suis, quas ipse modo habet vel de quibuscumque patrem suum investivimus, et in omnibus his, que ille, qui nunc est, acquisierit, videlicet bannum, placitum, districtum, theloneum, pedagium, ripaticum, mercata, molendina, aquas aquarumque decursus, piscationes, venationes, paludes, argenti fodinas, ferri fodinas et quicquid metalli vel thesauri in terra sua inveni potest, alpes quoque, montes, valles et omnia ea, que ad nos et ad imperium spectant'.

in the Florentine countryside required a devolution of imperial power to Florence or the usurpation of an imperial prerogative. It attests only to the extension of Florentine communal jurisdiction at the expense of seigniorial jurisdiction.

2.2.2. The subjugation of the rural nobility

From the very beginning of the twelfth century, Florence was extending its jurisdiction in the surrounding countryside. The expansion of Florentine control in the surrounding countryside was effected largely through the submissions of rural lords to urban jurisdiction. The documentary evidence for Florentine jurisdictional expansion begins in earnest only in 1138. Earlier evidence for the Florentine extension of jurisdictional authority in the surrounding countryside survives only in chronicle accounts, the most famous of which is that of the Florentine chronicler and merchant Giovanni Villani.³¹ All of the surviving chronicles suggest a considerable degree of coercion. According to Villani, for example, Florence resolved in 1107 to expand into the surrounding countryside, to enlarge its lordship, and to make war against any *castellum* that refused to submit to Florentine control. Villani also reported in the same instance that Florence razed the *castellum* of Monte Orlandi in 1107 precisely because its resident lords wished not to obey the city.³²

³¹ Other important chronicles are those of Sanzanome and Marchionne di Coppo Stefani. For complete references, see below in the bibliography under these names. Additional chronicle sources are published in Hartwig, ed., 1875-1880. The degree to which the chronicles might serve as useful sources for the study of the extension of Florentine seigniorial power in the surrounding countryside in the early twelfth century, admittedly, is debatable, though the sources published in Hartwig are more reliable because they are earlier. Villani himself was born probably in 1276, and he spent much of his adult life working in the Peruzzi merchant-banking company. He was probably writing already before 1325, but most of his chronicle was written in the second quarter of the fourteenth century. His account of the events that occurred during his lifetime, and particularly between 1333 and 1341, tends to be more reliable, but his renderings of earlier events are less certain, contingent upon the reliability of his sources and the accuracy of his own interpretations. For the chapters concerning the twelfth century in books 4 and 5, Villani was drawing upon a variety of earlier chronicle accounts of the events he described. Some of these earlier chronicles have endured the passage of time and permit insight into the manner in which Villani may have embellished the evidence at his disposal. He reiterated the often terse observations of his predecessors, and his own versions of events no doubt were conditioned to a large extent by these reports, but he also punctuated his reiterations with commentary informed partly by legend and heresay, to be sure, but also partly by the course of subsequent developments. On the twelfth and thirteenth century chronicle sources for Florence, see Del Monte, 1950. On Villani and the reliability of his chronicle, see Fiumi, 1953; Frugoni, 1965; Green, 1972, pp. 155-164; Hunt, 1994, pp. 268-271; Ragone, 1998; Saponi, 1955, pp. 25-33. See also Luzzati, 1969; 1971.

³² See Villani, bk. 4, chap. 25: 'Negli anni di Cristo 1107, essendo la nostra città molto montata e cresciuta di popolo, di genti, e di potere, ordinarono i Fiorentini di distendere il loro contado di

Six years later, the Florentines launched their first assault on the *castellum* of Monte Cascioli, which was situated near Scandicci on a spur above the river Greve immediately southwest of Florence. Monte Cascioli was an ecclesiastical property that had been a possession of the Cadolingi counts. When the last of the Cadolingi counts died in 1113, the property was to become a possession of the bishops of Florence, but the Alberti counts, who had inherited allodial properties of the Cadolingi counts, contested the reversion of Monte Cascioli to the Florentine bishops. The Florentines succeeded in destroying Monte Cascioli in 1113, but they were compelled to return in the following year to raze the walls once again after the recalcitrant inhabitants had begun reconstruction. The struggle for the *castellum* erupted again five years later, probably as a consequence of the efforts of emperor Henry V (1106-1125) to appoint as margrave of Tuscany a figure more favourably disposed to imperial interests after the death of the countess Matilda in 1115. By about the summer of 1119, the imperial appointee had occupied Monte Cascioli and had begun to supervise its reconstruction, but the Floren-

fuori, e allargare la loro signoria, e qualunque castello o fortezza non gli ubbidisse, di farli guerra. E nel detto anno prima presero per forza Monte Orlandi, ch' era de sopra Gangalandi e certi Cattani il teneano, i quali non volendo ubbidire alla città di Firenze furono distrutti, e il castello disfatto e abbuttuto'. See also the *Gesta Florentinorum*, p. 272; Stefani, rub. 38; Malispini, chap. 65. The *castellum* of Monte Orlandi, as Villani stated, was situated above Gangalandi, the modern community of Lastra a Signa in the lower valley of the river Arno on the left bank of the river about fifteen kilometres west of the city of Florence. See Francovich, 1973, p. 154. One earlier chronicle account indicated that the *castellum* destroyed by the Florentines in 1107 was that of *Mons Gualandi*, or Gangalandi, but documentary evidence attests to the existence of this *castellum* in the following year, and Francovich has argued that it was still extant in the thirteenth century. For the earlier chronicle account, see the *Annales Florentini* 2, p. 40. For evidence that the *castellum* of Gangalandi was still standing in 1108, see Piattoli, ed., 1938, no. 156, 1108 [March 25-September], pp. 378-380, esp. 379. For more on Gangalandi, see Francovich, 1973, p. 92; See Repetti, 1833-1845, 2, pp. 396-398. Another early account, evidently confounding both the name of the *castellum* and the year of its subjection by Florence, indicated that the *castellum* of Monte Rollandi was vanquished by Florence in 1147. Monte Rollandi appears again in the extant documentation neither before nor after this unique allusion, however, suggesting that its mention was an erroneous reference to the Monte Orlandi incident of 1107. See the *Annales Florentini* 1, p. 4. The seigniorial affiliation of the *castellum* is obscure. Villani stated that the *castellum* appertained to the 'Cattani', a term that Chiappelli believed to have been synonymous with Cadolingi, but Villani probably used the term more generically as a designation for all *militēs*, or noble lineages. Like Chiappelli, Repetti suggested the Cadolingi as the most likely lords, while Davidsohn ascribed the *castellum* to the Adimari lineage, and Fiumi believed that it had been the property of some anonymous lords probably of the Alberti lineage. See Chiappelli, 1932, p. 119; Repetti, 1833-1845, 3, p. 452; Davidsohn, 1977, pp. 535-537; Fiumi, 1957, p. 402, n. 56. In the same year as the Florentine assault on Monte Orlandi, the Florentines also subdued Prato. See Villani, bk. 4, chap. 26; Stefani, rub. 38; Malispini, chap. 61; the *Annales Florentini* 2, p. 40; *Gesta Florentinorum*, p. 272. See also Davidsohn, 1977, 1, pp. 531-533.

tines destroyed the *castellum* for a third and final time in the early autumn, killing the successor to Matilda.³³

In 1123, the Florentines initiated a series of military campaigns against the hilltop fortress of Fiesole. Relations between Florence and Fiesole had been deteriorating at least from the beginning of the twelfth century when complaints were filed against the bishop of Fiesole and nobles in the diocese by representatives of the Florentine bishops at San Martino al Vescovo.³⁴ More importantly, however, Fiesole was situated only about five kilometres from Florence, and its position more than 250 metres above the plain in the Arno river valley rendered it easily defensible. The Florentines no doubt felt threatened by the prospect of an alliance between Fiesole and an enemy of Florence, for example the imperial margrave in Tuscany or perhaps the Guidi counts. After two unsuccessful campaigns during the summers of 1123 and 1124, the Florentines laid siege to Fiesole at the end of June 1125, and by the middle of September, the Florentines had forced its surrender. The Florentines then razed the fortress to the ground, but they allowed the ecclesiastical structure of the diocese to remain intact, perhaps wishing to avoid intervention by the pope.³⁵

The dioceses of both Florence and Fiesole had been considered as a part of the Florentine *comitatus*, which is to say the territory of Florence, from the middle of the ninth century, and a Florentine administrator was managing the properties

³³ For concise accounts of the Florentine conflict with Monte Cascioli, see Villani, bk. 4, chap. 29; Malispini, chap. 69, p. 63. For a more detailed account of the Monte Cascioli campaign, see Davidsohn, 1977, 1, pp. 564-574; Davidsohn, ed., 1896-1908, 1, pp. 86, 87-88. Earlier chronicle accounts of the conflict are published in the *Annales Florentini* 1, p. 3; the *Annales Florentini* 2, p. 40; *Gesta Florentinorum*, p. 272. On the location of the *castellum* of Monte Cascioli, see Francovich, 1973, p. 153; Repetti, 1833-1845, 1, pp. 506-507, esp. 506.

³⁴ Davidsohn, 1977, 1, pp. 423, 473, 583.

³⁵ Villani, bk. 6, chap. 32: 'Negli anni di Cristo 1125 i Fiorentini puosono oste alla rocca di Fiesole che ancora era in piede e molto forte, e teneanla certi gentili uomini Cattani stati della città di Fiesole, e dentro vi si riduceano masnadiieri e sbanditi e mala gente, che alcuna volta faceano danno alle strade e al contado di Firenze, e tanto vi stettero all'assedio che per diffalta di vittuaglia s'arrendéo, che per forze mai non s'arebbe avuta, e fecionla tutta abbattere e disfare infino alle fondamento, e feciono decreto che mai in su Fiesole non s'osasse rifare niuna fortezza'. A more lengthy account appears in Sanzanome, pp. 126-128. See also the *Gesta Florentinorum*, p. 272; Paolino Piero, p. 5; Malispini, chap. 72. The Florentine campaign against Fiesole in the summer 1125 had been much stronger than the previous two campaigns. The death of the emperor Henry V earlier in 1125, which extinguished the Salian line of German emperors, had momentarily removed threat of imperial intervention, and the recent death of the elder Guido Guerra had likewise removed the threat of Guidi intervention. In addition, Pisa was preoccupied by its war with Genoa, which eliminated another potential source of assistance for Fiesole. See Davidsohn, 1977, 1, pp. 582-592.

of the bishops of Fiesole in the early eleventh century. The bishops of Fiesole nevertheless disputed subordination to Florence, and they began to distance themselves from Florence in the 1020s.³⁶ The capitulation of Fiesole to Florence in 1125 resulted in the almost definitive political subordination of the hilltop town to its larger neighbour in the Arno valley. Technically, Fiesole remained an independent diocese, but in practice it was almost completely subsumed under the Florentine diocese as little more than a parish seat. Although the bishop of Fiesole continued to administer ecclesiastical affairs within the diocese, his actions were conditioned by Florentine politics.

For the bishops of Fiesole, the only conceivable means by which to dissociate themselves from Florentine control lay in the transfer of the seat of the diocesan see to a location more distant from Florence in the larger portion of the diocese.³⁷ In 1141, the bishops of Fiesole may have begun to explore the possibility of relocating the diocesan seat.³⁸ In the 1160s, during the pontificate of Alexander III (1159-1181), political circumstances materialised that favoured such a transfer, and the bishops of Fiesole chose Figline Valdarno as the new seat of

³⁶ In theory, the dioceses of Florence and Fiesole had been politically united since the middle of the ninth century, but the political union of the two dioceses and the superior claims of Florence were effectively realised only during the course of the twelfth century. On the political union of the two dioceses in the middle of the ninth century, see Davidsohn, 1977, 1, p. 129; Davidsohn, ed., 1896-1908, 1, p. 27-28, esp. 27. On the Florentine administration of the properties of the bishops of Fiesole and the efforts of the bishops to distance themselves from Florence in the early eleventh century, see Davidsohn, 1977, 1, pp. 129, 196-197; Davidsohn, ed., 1896-1908, 1, pp. 27-28, 33.

³⁷ The diocese of Fiesole is divided into two parts. The first part, which includes Fiesole, consists of an area of about ten square kilometres for the most part north and east of Fiesole itself, marked by Fontebuona in the northwest corner, Santa Brigida and Doccio in the east, Monteloro in the southeast, Maiano in the south, and Trespiano in the west. This part of the diocese is completely surrounded by the diocese of Florence. The other part of the diocese of Fiesole roughly forms a rectangle running from southwest to northeast between the dioceses of Florence and Arezzo. Monte Peschiera and the Alpe di San Benedetto marked the northernmost extent of the diocese, and the southern borders were marked by San Leonino and San Sano in the Chianti. The diocese of Fiesole crossed the extreme upper valley of the river Arno in the Casentino as well as the portion of the river between Pontassieve and Montevarchi. The precise contours of diocesan boundaries in Tuscany, both medieval and modern, are delineated on the maps that accompany Guidi, ed., 1932; Giusti and Guidi, eds., 1942. For a rough sketch of the boundaries of the medieval dioceses of Florence and Fiesole, see above, Map 5.

³⁸ The earliest evidence indicating that the bishops of Fiesole sought to transfer the seat of the episcopal see from Fiesole appears in a bull of pope Innocent II (1130-1143) to the abbot of San Bartolomeo, the abbey at Fiesole. The papal bull informed the abbot that the authority to transfer the seat of an episcopal see rested solely in the hands of the pope. See Jaffé, ed., 1885-1888, 1, no. 8151, 1141 September 22, p. 897; Ughelli, ed., 1970, p. 245. The attempt of the bishops of Fiesole to transfer the seat of the episcopal see is discussed in Davidsohn, 1977, 1, pp. 751-757; Davidsohn, ed., 1896-1908, 1, pp. 104-109.

their see.³⁹ Figline must have seemed an ideal location. It was a well fortified town in the heart of the larger segment of the diocese of Fiesole, near the frontier of Florentine territory, and virtually equidistant from both Florence and Arezzo.⁴⁰ Moreover, Figline was situated on a variant of the old via Cassia, a primary artery of inter-regional communication between northern Tuscany and Rome, and it possessed an important market.⁴¹ Figline cannot have been very large around the middle of the twelfth century, but it is by no means surprising that its inhabitants may have held more urban aspirations.⁴²

The pope probably regarded the request of the bishops of Fiesole to transfer the seat of their see to Figline as a means by which to counterbalance the growing economic and political influence of the Florentines, who had recently showed indifference towards papal interests. He sanctioned the transfer in 1167, conferring upon bishop Rodolfus the new title of 'episcopo Figlinensi et Fesulano'.⁴³ Not surprisingly, the Florentines violently opposed the transfer, and they appear to have used a campaign against Arezzo as a pretext to destroy the *castellum* at Figline in 1170.⁴⁴ Relations between Florence and Figline oscillated for the next

³⁹ On Figline Valdarno in the twelfth century, see Wickham, 1996. The history of Figline during this period is also summarised in Pirillo, 1992, pp. 7-37, esp. 10-13.

⁴⁰ Writing in the 1230s, after a failed Florentine attempt to besiege Figline in 1225, the Florentine chronicler Sanzanome described the *castellum* of Figline as 'almost impregnable'. See Sanzanome, p. 133: 'Incepta est guerra cum castello Feghine dicitur, quod cum esset penitus inexpugnabile, vacillabat, iram civitatis emendo'. By way of the river Arno, Figline is situated 31 kilometres from Florence and 44 kilometres from Arezzo.

⁴¹ On the old via Cassia and the road network in the upper valley of the river Arno, see below, Appendix 4. A market is attested at Figline from the middle of the twelfth century, and it is attested frequently thereafter. For the earliest reference to the market at Figline, see ASF, *Diplomatico*, Badia di Passignano, 1153 June 1. Wickham has speculated that the market at Figline dates from the beginning of the twelfth century. See Wickham, 1996, p. 15.

⁴² As Wickham observed, 'In a world in which Prato had gained effective autonomy from Pistoia and the Alberti counts, and [in which] the latter were even promoting the wholly new creation of Semifonte, the Figlinesi may well not have found the idea of being a city at all implausible'. See Wickham, 1996, p. 11.

⁴³ Davidsohn, ed., 1896-1908, 1, nos. 53-55, 1167, p. 180; Kehr, ed., 1908, *Episcopatus Faesulanus*, nos. 14-16, 1167 (?), p. 77.

⁴⁴ See the account in Sanzanome, pp. 132-133. Villani made no mention of the assault on Figline, but he noted the campaign against Arezzo. See Villani, bk. 5, chap. 5: 'Negli anni di Cristo 1170 i Fiorentini fecero oste sopra gli Aretini, perch' erano co' conti Guidi contro al comune di Firenze; e uscendo gli Aretini loro incontro, da' Fiorentini furono sconfitti del mese di Novembre, e poi feciono accordo co' Fiorentini con onorevoli patti per lo comune di Firenze, e promisero di non essere loro incontra per neuna cagione, e riebbono i loro pregioni'. See also Stefani, rub. 45; Paulino Pieri, p. 8. The campaign is discussed in Davidsohn, 1977, 1, pp. 752-757. The Florentines may have attacked Figline already in 1167, immediately following the sanction of the transfer of the diocesan seat by the pope. An anonymous chronicler reported that the Florentines defeated

eighty years, but the destruction of the *castellum* effectively put an end to the notion of establishing a new seat of the diocese of Fiesole at Figline. It also confirmed the incorporation of the dioceses of Florence and Fiesole into a single territorial entity with Florence at its centre.⁴⁵

Invigorated by their victory over Fiesole, the Florentines next sought to establish greater control over the disputed southern frontier of the territory along the border between the dioceses of Fiesole and Siena. In 1129, the Florentines marched against the *castellum* of Vignale in the Chianti, situated less than ten kilometres from Siena on a hill above the main road running north from the city towards Castellina in Chianti and Florence. The Florentines subdued Vignale in November, capturing many Siennese prisoners, but Florence and Siena continued to dispute the border for centuries.⁴⁶

In 1135, the Florentines turned their attention to the *castella* controlling the main roads nearer to Florence. They first launched an assault against the *castellum* of Montegufoni, situated less than twenty kilometres from Florence on the main road that continued through Castelfiorentino towards Volterra and the Maremma. Montegufoni appertained to the Ormanni, a family that later took the name of Foraboschi. The Ormanni were using the *castellum* as a base from which to exact tolls and tributes from travellers on the main road, particularly from transhumant sheep farmers moving herds between summer pastures in the uplands of the Florentine countryside and winter pastures on the plains of the Maremma. The campaign against Montegufoni, which resulted in the destruction of the *castellum*, probably was motivated mainly by the desire to eliminate the obstacle that the Ormanni posed to the free movement of traffic on the via Volterrana.⁴⁷

the Aretines in November of 1167, but the account perhaps refers to the events of 1170. See the *Gesta Florentinorum*, p. 272. See also Davidsohn, ed., 1896-1908, 1, pp. 104-109, esp. 107.

⁴⁵ In the early thirteenth century, the Florentines endeavoured to compel the bishop of Fiesole to transfer the seat of their diocese within urban enclosure of Florence, but the attempt attracted the ire of pope Innocent III. In 1228, during the pontificate of Gregory IX, the administrative functions of the diocese of Fiesole were nevertheless transferred to Florence. See Davidsohn, 1977, 1, p. 952-955, esp. 955, n. 1.

⁴⁶ The terse chronicle account of the episode is published in the *Annales Florentini* 1, p. 3. See also Davidsohn, 1977, 1, pp. 603-604. On the location of the *castellum* of Vignale, see Francovich, 1973, pp. 144-145. On further hostilities between Florence and Siena, see below.

⁴⁷ See Sanzanome, p. 128. The pertinent entry is transcribed immediately below. See also Davidsohn, 1977, 1, pp. 616-617; Repetti. On the location of Montegufoni, see Francovich, 1973, p. 153; Repetti, 1833-1845, 3, pp. 403-404. It is worth noting that the obstruction to trade and travel on the via Volterrana posed by the Ormanni at Montegufoni also would have hindered the efforts of the Florentine bishops to exploit their possessions in the Elsa valley. See below, Chapter 2.3.2.

Immediately after the Florentines had subdued the Ormanni at Montegufoni, they turned their attention to the Buondelmonti lords of the *castellum* of Montebuoni, which occupied a strategic position less than ten kilometres south of Florence on a hill above the right bank of the river Greve and near the main road towards Siena. The Florentine attack on Montebuoni may have been a response to the abandonment of the Florentine army by the Buondelmonti contingent during the siege against Montegufoni. The Buondelmonti had been vassals of the Florentine bishops from 1092, when they were constrained to submit to episcopal authority and to consign their properties to the bishops. The bishops then returned the properties to the Buondelmonti as episcopal fiefs, evidently requiring in exchange the Buondelmonti to render military service to the bishops whenever necessary. The abandonment of the siege of Montegufoni by the Buondelmonti provided the Florentines with sufficient cause to dislodge the lords of Montebuoni from their strategically situated stronghold. According to Villani, the Florentines were both by the close proximity of the Buondelmonti fortress to the city and by the fact that the Buondelmonti had been collecting a toll at Montebuoni. The Florentines completed the conquest of Montebuoni before the end of October and they razed the *castellum* to the ground.⁴⁸

The earliest documentary evidence for the expansion of Florentine jurisdiction in the surrounding countryside occurs in 1138, perhaps as result of a successful campaign waged by the Florentines against the Aldobrandeschi lords at Colle di Val d'Elsa. No record of the conflict survives, but Davidsohn believed that

⁴⁸ Sanzanome, p. 128: 'Parvo tempore procedente [after the surrender of Fiesole to Florence], cum Florentini destruxissent castrum quod dicebatur Monsgufonis, in reversione guerram cum Montisboni non sine causa inceperunt: quoniam cum in servitio Florentinorum apud predictum castrum eiusdem domini essent, videntes futuram eiusdem castrum Montisgofonis destructionem, statim de propria morte dubitarunt. Credentes eidem posse resistere, recesserunt noctu, castrum Montisboni custodibus hedificiis et necessariis omnibus munientes. Quod postea destructum est anno millesimo centesimo trigesimo quinto'. For the account of Giovanni Villani, see Villani, bk. 4, chap. 36: 'Negli anni di Cristo essendo in piè il castello di Montebuono il quale era molto forte e era di que' della casa de' Bondelmonti, i quali erano cattani e antichi gentili uomini di contado, e per lo nome del detto loro castello avea nome la casa Bondelmonti; e per la fortezza di quello, e che la strada vi correa a piè, coglievano pedaggio, per la qual cosa a' Fiorentini non piaceva nè voleano sì fatta fortezza presso la città, sì v' andarono ad oste del mese di giugno ed ebonlo, a patti che 'l castello si disfacesse, e l'altre possessioni rimanessero a' detti cattani, e tornassero ad abitare in Firenze. E così cominciò il comune di Firenze a distendersi, e colla forza più che con ragione, crescendo il contado e sottomettendosi alla giurisdizione ogni nobile di contado, e disfacendo le fortezze'. See also Stefani, rub. 42; Paolino Pieri, p. 5. Earlier chronicle accounts are published in the *Annales Florentini* 1, p. 3; the *Annales Florentini* 1, p. 40; *Gesta Florentinorum*, p. 272. See also Davidsohn, 1977, 1, pp. 617-618. On the submission of the Buondelmonti to the Florentine bishops, see Dameron, 1991, pp. 57-58, 229, n. 164, citing AAF, *Bullettone*, fol. 72r. On the location of Montebuoni, see Repetti, 1833-1845, 3, pp. 327-328; Francovich, 1973, p. 152.

donations of property at Colle di Val d'Elsa from the lord 'Ugicio' to Florence in 1138 were part of a settlement forced by a Florentine military victory on an Aldobrandeschi ally. The contract indicates that the donation was made 'pignoris nomine et pene nomine', which is to say as compensation to the city for damages, presumably those inflicted upon the Florentines in a military engagement of some sort. The disagreement may have been over the exaction of tolls at Colle di Val d'Elsa, though tolls imposed at Colle are mentioned only in 1202 in a treaty between 'comes palatinus Ildebrandinus' and Siena. The 1138 settlement itself required the lord 'Ugicio' to construct a residence at Florence and to reside in the city or in its suburbs for three months each year during times of war. This became a common feature of Florentine settlement treaties, tying the interests of rural lords to those of the city, particularly during periods of instability.⁴⁹

Emboldened by a string of successful campaigns, the Florentines next turned their attentions to the powerful Guidi counts and their stronghold at Monte di Croce.⁵⁰ Most of the Guidi possessions in the territory of Florence were concentrated along the Florentine frontier, but some of their properties were situated dangerously close to the city.⁵¹ In the valley of the river Arno above the city and in

⁴⁹ The Aldobrandeschi estate was concentrated farther south in the Maremma around Grosseto, but it extended to the frontier of the dioceses of Florence, Siena, and Volterra. On the extent of Aldobrandeschi possessions before about 1130, see Collavini, 1998, pp. 164-174. Colle di Val d'Elsa was an important junction on the via Francigena at the intersection of roads leading south towards the Maremma and west towards Volterra. Already at the end of the eleventh century, the Aldobrandeschi lord 'Uguiccio filio quondam Aldobrandini comitis' had conceded to the bishops of Florence his properties at Fabbrica in the Pesa valley. Davidsohn viewed the grant as an expression of Florentine interest in diminishing Aldobrandeschi influence in the area, though the bishops of Florence also may have sought to diminish the growing influence in the area of the abbey at Passignano. On the concession at Fabbrica, see Davidsohn, 1977, 1, p. 423. On the 1138 donations, see Davidsohn, 1977, 1, pp. 629-632. See also Collavini, 1998, p. 170. For evidence of the donations at Colle di Val d'Elsa, see Santini, ed., 1895, *Capitoli*, no. 1, 1138 June 4, pp. 1-2; no. 2, 1138 June 4, pp. 2-3. On the 1202 convention between 'comes palatinus Ildebrandinus' and Siena, see Davidsohn, 1977, 1, p. 630, n. 3. The donations included three *castella* and a residence in one of the *castella*. One *castella* was identified as the 'castrum de Colle Novo' or 'castro Novo de Colle', called 'Pititiano' or 'Piticiano', in which the residence was located. On the identification of this *castella* with Colle di Val d'Elsa, see Cammarosano and Passeri, 1984, no. 20.1., pp. 63-67, esp. 63. The other two *castella* were those of Silliano and Tremali, the exact locations of which have not been identified.

⁵⁰ On Monte di Croce in general from the middle of the twelfth century to the middle of the fourteenth century, see Nelli, 1985. The series of confrontations between Florence and the Guidi counts at Monte di Croce from about 1142 to 1147 is discussed in Davidsohn, 1977, 1, pp. 643-654. The early history of Monte di Croce is also summarised briefly in Nelli, 1985, pp. 3-9. On the location of Monte di Croce, see Repetti, 1833-1845, 3, pp. 375-376; Francovich, 1973, pp. 106, 108.

⁵¹ The Guidi were concentrated in the dioceses of Florence, Fiesole, Pistoia, Arezzo, and along the spine of the Apennine Mountains between eastern Tuscany and Romagna. The extent of Guidi

the lower valley of the river Sieve, the Guidi controlled numerous properties that lay within twenty kilometres of Florence.⁵² These properties afforded the Guidi control over the Sieve itself as well as a considerable portion of the road that followed the Sieve valley and provided access to some of the trans-Appennine routes between Florence and Romagna.

An initial confrontation between Florence and the Guidi counts appears to have occurred in 1142, during which the Guidi evidently resisted a Florentine assault and seized Florentine prisoners. When the Florentines requested the release of their prisoners probably in early 1143, the Guidi declined, setting the stage for another confrontation. The Florentines then attacked and destroyed the *castellum* of Quona, which was situated in the hills above Pontassieve and belonged probably to Guidi vassals rather than to the Guidi themselves. The Florentines also razed the monastery at Rosano in the Arno valley, which had been founded by the Guidi counts, and they laid siege to the *castellum* of Monte di Croce. The defenses of Monte di Croce were more formidable than the Florentines had anticipated, however, and they abandoned the siege after only two weeks. The following year passed without incident, but the Florentines again made unsuccessful attempts to besiege Monte di Croce in 1145 and 1146. The Florentines finally overcame the defenses of the *castellum* in 1147, while Guido Guerra himself was away from the Florentine countryside fighting in the Crusades, but the victory was not decisive. The conflict between Florence and Guidi counts erupted again in 1153 or 1154, resulting in the destruction of Monte di Croce, but even this was indecisive.⁵³

territory shortly after the middle of the twelfth century is indicated in an imperial charter dated from Pavia in 1164. See ASF, *Diplomatico*, Stroziane-Uguccione, 1164 September 28; Appelt, ed., 1975-1990, 2, no. 462, s.d., pp. 369-371; Ficker, 1868-1872, 4, no. 138, s.d., pp. 179-182. See also above, Map 6. Guidi possessions are enumerated again in the early thirteenth century in two confirmations of imperial privilege granted to the Guidi by Frederick II in 1220 and 1247. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. For the 1220 confirmation, see also Huillard-Bréholles, ed. 1852-1861, unnumbered, 1220 November 29, pp. 58-64.

⁵² The Florentines had been warring with the Guidi intermittently since about 1120 in an effort to temper Guidi influence in the Florentine countryside, particularly in areas in close proximity to the city. The war between Florence and Fiesole from 1123 to 1125, discussed above, also may have been motivated, at least in part, by Florentine fears of an alliance between the Guidi and Fiesole.

⁵³ The most complete chronicle account of the Florentine campaigns against Monte di Croce is that of Sanzanome, who remarked that 'Mons Crucis est cruciatus'. See Sanzanome, pp. 129-130. See also the *Annales Florentini* 2, p. 40; Stefani, rub. 43; Paolino Pieri, pp. 6, 7. Evidence of the destruction of the monastery at Rosano is recorded in a deposition of 1203, published in Davidsohn, 1898, p. 240: '[...] et dicit se audisse ex quo recordatur quod monasterium de Rosano est edificatum in solo comitis Guidi et quod antiqui comites Guidi, scilicet quidam sui fideles domus Guiducci Brunelli, edificaverunt dictum monasterium [de Rosano] pro comite et dicit quod quando

The Florentines were also alarmed by the power that the Guidi counts exercised in other parts of the countryside. Perhaps sensing that the Guidi were more vulnerable in the area around Poggibonsi than they were at Monte di Croce, the Florentines attacked and destroyed the *castrum* of Marturi in 1155.⁵⁴ In response to the Florentine assault, count Guido negotiated an exchange of property at Poggibonsi with the abbot Rainerius of the abbey of San Michele di Marturi towards the end of March in 1156, and about a week later, he donated an eighth of his property at Poggibonsi to Siena.⁵⁵ The donation was probably designed to garner

Florentini distruxerunt locum illum, comes Guido fecit reedificari suis expensis et se vidente et dicit quod sunt LX anni quod hec fuerunt [...]'. For the account of the Florentine victories at Monte di Croce by Giovanni Villani, see Villani, bk. 4, chap. 37: 'Negli anni di Cristo 1147 avendo i Fiorentini guerra co' conti Guidi, imperciocchè colle loro castella erano troppo presso alla città, e Montedicroce si tenea per loro e facea guerra, per la qual cosa per arte de' Fiorentini v'andarono ad oste co' loro soldati, e per troppa sicurtade non facendo buona guardia, furono sconfitti dal conte Guido vecchio e da loro amistà Aretini e altri del mese del Giugno. Ma poi gli anni di Cristo 1154, i Fiorentini tornarono a oste a Montedicroce e per tradimento l'ebbero, e disfeciono fino alle fondamenta; e poi le ragioni che v'aveano i conti Guidi venderono al vescovo di Firenze, non possendole giorire nè averne frutto, e d'allora innanzi non furono i conti Guidi amici del comune di Firenze, e simile gli Aretini che gli aveano favorati'.

⁵⁴ The town of Poggibonsi comprised the adjacent hills of Marturi and of 'Podium Bonizi', and the *burgus* of Marturi situated just below the hills. The Florentines certainly attacked and destroyed the *castrum* of Marturi in 1155, and they attacked 'Podium Bonizi' in 1156. A deposition in a court case of 1174 mentions the destruction of the *castrum* and the consequent flight of its inhabitants to the nearby *burgus*. The sentence delivered in the case by the papal delegate later in the same year also refers to the time of the destruction of the *castrum* of Marturi by the Florentines, 'quando castrum vetus de Martura destructum fuit a Florentinis'. For the deposition, see Cambi, 1995, app., no. 51, 1174 March, pp. 277-307, esp. 302; ASF, *Diplomatico*, Spedale di San Giovanni Battista, s.d. For the sentence, see again Cambi, 1995, app., no. 53, 1174 December 20, pp. 309-316, esp. 312; ASF, *Diplomatico*, Spedale di San Giovanni Battista, s.d. The reports of the destruction of the *castrum* both in the court deposition and in the sentence were almost certainly recalling the conflict of 1155. The *castrum* of Marturi disappears from the sources after 1155. Moreover, Davidsohn observed that the Florentine assault in 1156 was designed to impede the construction of 'Podium Bonizi' on the neighbouring hill rather than any reconstruction of Marturi, and at any rate the 1156 assault was unsuccessful. See Davidsohn, 1977, 1, p. 677, n. 2. In the Italian translation, the text gives the date 1115 for the Florentine attack on Marturi, but this is a misprint; the text should read 1155. See the original German edition in Davidsohn, 1896-1927, 1, p. 458, n. 1. The Florentine assault against 'Podium Bonizi' in 1156 is discussed immediately below.

⁵⁵ For the 1156 exchange, see Cambi, 1995, app., no. 31, 1156 March 29, pp. 257-260; ASF, *Diplomatico*, Spedale di San Giovanni Battista, s.d. Thirty years later, the successor of Rainerius sought justice in an imperial court against count Guido Guerra for non-fulfillment of contractual obligations in connection with the original property exchange. The presiding judge, Syrus Salimbene of Pavia, ruled in favour of the abbey. See Cambi, 1995, app., no. 75, 1186 September 6, pp. 346-349; ASF, *Diplomatico*, Spedale di San Giovanni Battista, s.d. For the Guidi donation to Siena in 1156, see Santini, ed., 1895, *Capitoli*, no. 3, 1156 April 4, pp. 3-4. On the same day, the inhabitants of Poggibonsi pledged to defend Siennese possessions in the town against any adversary, excepting Guido Guerra, and especially against the Florentines. See Ficker, ed., 1868-1874, 4, no. 124, 1156 April 4, pp. 166-167.

Sieneſe support againſt another Florentine offeſive. The Florentine biſhops in particular muſt have been alarmed not only by the Guidi preſence on the frontier of the dioceſe of Florence, but alſo by the fact that pope Adrian IV (1154-1159) had already granted the biſhop of Siena rights to conſtruct a new church at Poggibonſi dedicated to Sant' Agneſe.⁵⁶

Early in the ſecond half of the twelfth century, in other words, Florence ſuddenly found itſelf confronted by the poſſible loſs of epiſcopal juriſdiction at a large town in a ſtrategic location near the periphery of the dioceſe on the via Francigena, the principal pilgrimage route between Rome and the north.⁵⁷ Florence alſo found itſelf oppoſed by a powerful alliance forged between the papacy, Siena, and count Guido Guerra. Within a few days of the Guidi donation to Siena, the Florentines launched a unſucceſſful aſſault on Poggibonſi. The Florentine expedition was joined by the Alberti counts who no doubt were likewise uncomfor- table about a Guidi stronghold near their poſſeſſions in the upper valley of the river Elsa. The Florentine contingent, including the Alberti, was repulſed after inflicting heavy loſſes at Poggibonſi.⁵⁸ By the end of the year, however, the pope had reversed his deciſion of the previous year granting conſtruction rights to the Sieneſe for the church of Sant' Agneſe on the grounds that the deciſion had preju- diced the rights of the biſhops of Florence, and pope Lucius III (1181-1185) con- firmed the reversal in 1182.⁵⁹

In 1157, Guido Guerra was killed evidently while fighting on behalf of Siena, and the Florentines negotiated a treaty with the Guidi counts in the follow-

⁵⁶ Jaffé, ed., 1885-1888, 2, no. 10050, 1155 May 6, p. 109. The inhabitants of Poggibonſi, according to Davidſohn, welcomed the advances of the biſhop of Siena becauſe they had been ſub- ject to exceſſive taxation under the Florentine biſhops. See Davidſohn, 1977, 1, p. 679.

⁵⁷ On the importance of Poggibonſi, ſee below, Chapter 6.1.

⁵⁸ See Sanzanome, p. 131. An early fourteenth century account of the battle by a monk of the abbey of San Michele di Marturi indicates that the aſſault occurred on 9 April 1156. See David- ſohn, 1977, 1, pp. 680-681, n. 2.

⁵⁹ For the reversal of pope Adrian IV, ſee Dameron, 1991, p. 74, and p. 233, n. 30, citing AAF, *Bullettone*, fol. 5r: 'Qualiter Adrianus Papa quartus revocavit conſeſſionem, quam fecerat Epiſ- copatui Senenſi in Monte Bonitii in preiudicem Epiſcopatus Florentini, ſub milieſimo centeſimo quinquageſimo ſexto tertio nonas Decembris'. This typically terse entry from the *Bullettone*, an early fourteenth century epiſcopal register that catalogueſ the poſſeſſions of the biſhops of Flo- rence, perhaps obſcures the intention of the pope in reversing his earlier deciſion. Dameron be- lieved that the reaſon for the reversal lay in the fact that the pope regarded Florence as a more uſeful ally than Siena againſt the emperor Frederick I Barbaroſſa. For the later confirmation of the reversal by pope Lucius III, ſee Kehr, ed., 1908, p. 66.

ing year, though Monte di Croce remained under Guidi control until 1227.⁶⁰ The agreement between Florence and the Guidi in 1158 may have entitled Florentine traders to an exemption from Guidi tolls along the lower Arno valley at Empoli and perhaps even farther downstream. The only record of the treaty survives in the account of the Pisan chronicler Maragone, which makes no mention of any exemption from tolls.⁶¹ The Guidi nevertheless held the right to exact tolls and mooring fees in areas under their jurisdiction, and an exemption from Guidi tolls certainly would have made it more economically practical for Florentine merchants to engage in regular trading relations with Pisa.⁶² In 1171, Florence for-

⁶⁰ On the death of Guido Guerra, see Davidsohn, 1977, 1, pp. 686-687. As a result of the 1158 treaty, the Guidi submitted Monte di Croce to Florentine jurisdiction, but the Guidi were still collecting a tax, the *datium*, at Monte di Croce in 1226. In 1227, the land and appertaining rights passed first from the Guidi to the Adimari lords and then from the Adimari to the bishops of Florence. See Nelli, 1985, p. 25; Dameron, 1991, pp. 105-106. See also ASF, *Manoscritti* 48BIS (*Bullettone*), fols. 145v, 146v.

⁶¹ The agreement reached between the Florentines and the Guidi counts in 1158 was actually part of a larger settlement that Florence and Lucca negotiated with Pisa and the Guidi. For the chronicle account of the treaty, see Maragone, pp. 17-18, esp. 18: 'Eodem anno [1158], ordinauerunt et fecerunt trequam cum consulibus Lucensium, in mense Iunio et Iulio et Augusto in X annos inter Pisanos et eorum amicos et socios et Comitem Guidonem, et Senenses et Pistorienses et comitem Albertum de Prata ex una parte, et Lucenses et eorum amicos et socios Florentinos et Pratenses et capitaneos et Garfagninos ex alia parte. Huius trequae fuit sententia lecta et data in vigilia Assumptionis Sancte Marie per Consules Pisanos et Lucenses in comuni parlamento Pisanorum, et in comuni parlamento Lucensium. Item supra scripti consules Pisani et Lucenses ordinauerunt et fecerunt pacem in annis XX, inter comitem Guidonem, et Pistorienses, et comitem Albertum de Prata, et Senenses ex una parte; et Florentinos, et Pratenses, et Capitaneos, et Garfagninos ex alia parte. Sententia fuit data et lecta in die Assumptionis Sancte Marie, et secundo et tertio die per Consules Pisanos et Lucenses, apud Sanctam Vivianam et Ripafractam, in presentia suprascriptorum amicorum utriusque partis. De qua tregua et pace Pisani magnum habuerunt honorem et laudem et gratiam per omnes eorum amicitias et bonam famam per totam Tusciam'. For an abstract of the account, see Pampaloni, 1965, no. 2, 1158 June, p. 484.

⁶² The imperial charter of 1164 granted to the Guidi counts 'theloneum, pedagium, [and] ripaticum', in their subject territories, which included areas in the lower Arno valley around Empoli. See ASF, *Diplomatico*, Stroziane-Uguccione, 1164 September 28; Appelt, ed., 1975-1990, 2, no. 462, s.d., pp. 369-371; Ficker, 1868-1872, 4, no. 138, s.d., pp. 179-182. In the middle of the thirteenth century, the Guidi were exacting tolls at numerous locations in lower Arno valley around Empoli. They controlled right to tolls at Cerreto Guidi, Collegonzi, 'Collis Petre ad domum Ciaccii', Petroio, Sovigliana, Vinci, and at Empoli itself. See Santini, ed., 1952, *Capitoli*, no. 22, 1254 September 10-November 11, pp. 78-86, esp. 81; no. 43, 1256 May 6-July 8, pp. 130-141, esp. 135. The Guidi also controlled rights to tolls at Larciano, and evidently at Cecina and Colechio as well, until 1226, when they alienated these rights to Pistoia. See Santoli, ed., 1915, no. 269, 1226 November 23, pp. 190-191, esp. 190. Even as late as 1267, the Guidi were still exacting tolls in the valley of the river Nievole and along the frontier between the territories of Pistoia and Lucca, which marked the westernmost extent of Guidi possessions in Tuscany. A treaty negotiated between Pistoia and the Guidi in 1267 obliged the Guidi to guarantee security for the citizens of Pistoia and its territory 'in civitate Luce et ejus fortia [...] sine aliquo pedagio vel toloneo vel malatolta solvendis in civitate Luce vel ejus fortia'. It also obliged the Guidi to guarantee the safety of the citizens of Lucca and its territory in the territory of Pistoia. See Santoli, ed., 1915, no. 269, 1267 April 30, pp. 252-253, esp. 253.

mally established commercial ties with Pisa, for which friendly relations with the Guidi in the lower Arno valley and an exemption from Guidi tolls were the *sine qua non*.⁶³

The same period witnessed continued clashes between Florence and Siena, and further confrontations between Florence and the Guidi counts over the disposition of Poggibonsi.⁶⁴ In the second half of the twelfth century, the Florentines turned their attentions to the fertile area south of the Arno between the rivers Elsa and Pesa, where the Alberti counts were dominant.⁶⁵ In 1173, the Bernardini family donated to Florence all of its possessions situated 'in podio et apenditis Ugonis Renuccii', perhaps Montebello on the right bank of the river between Certaldo and Castelfiorentino.⁶⁶ In the following year, the lords of the *castellum* of Martignano, situated on the torrent Orme about five kilometres south of Empoli, donated to the city 'podium Petri', which lay probably in the Pesa valley near the main road between Florence and Castelfiorentino.⁶⁷ These submissions substantially increased Florentine jurisdiction in the Elsa and Pesa valleys, rein-

⁶³ On the commercial treaty negotiated between Florence and Pisa in 1171, see below, Chapter 7.3.3.

⁶⁴ On the clashes between Florence and Siena in 1141, 1145, 1147, 1158, and 1174, see Davidsohn, 1977, 1, pp. 636-637, 648-649, 655, 684-686, 801-804, 807-810. The frontier between Florence and Siena was delineated in a decision rendered in a court case of 1203. See Santini, ed., 1895, *Capitoli*, no. 42, 1203 April 9-14, pp. 97-103; no. 43, 1203 April 27-1203 May 7, pp. 104-110; no. 44, 1203 May 4, pp. 111-113; no. 45, 1203 May 23, pp. 114-121; no. 47, 1203 June 4, pp. 124-127; no. 48, 1203 June 4-8, pp. 127-133; no. 49, 1203 June 6, pp. 133-136. Florence appears to have reached a durable accommodation with the Guidi counts probably in 1175 or 1176, after a Florentine assault on Poggibonsi in 1174. See Villani, bk. 5, chap. 7. An earlier treaty between Florence and the Guidi counts is attested in the depositions of 1203 given by 'Plebanus de Decomano, nomine Bonusamicus', 'Presbiter Bandinus de Gallene', 'Picclio de Plebe Veteri', 'Ugolinus, conversus Hospitalis de Girone', and 'Ubaldinus de Galiga'. The deposition of 'Ubaldinus de Galiga' in particular stated that the peace between Florence and the Guidi counts was negotiated not more than twenty-eight years earlier. See Passerini, ed., 1876, pp. 385, 389, 391, 396-397, 399, respectively, esp. 399: 'Et dicit quod iam sunt XXVIII anni et non plus quod pax fuit facta inter Comitem et Florentinos'. See also Davidsohn, 1977, 1, p. 806, n. 2.

⁶⁵ Alberti possessions in the Elsa valley are listed in an imperial confirmation of 1164 published in Appelt, ed., 1975-1990, 2, no. 456, 1164 August 10, pp. 360-362. See also Map 7 above, and compare this map with the one in Salvini, 1969, p. 27. Map 7 uses only the 1164 confirmation and charts only the properties for which I am relatively certain about the location.

⁶⁶ Santini, ed., 1895, *Capitoli*, no. 5, 1173 February 23, pp. 6-7. Davidsohn identified *Podium Ugonis Renuccii* as Montebello in Val d'Elsa. See Davidsohn, 1977, 1, p. 799, n. 2. See also Reppi, 1833-1845, 3, p. 325.

⁶⁷ Santini, ed., 1895, *Capitoli*, no. 6, 1174 April 7, pp. 7-8; no. 7, 1174 April 7, pp. 9-10. The lords of Martignano also submitted to Florentine jurisdiction on the same occasion. See Santini, ed., 1895, *Capitoli*, no. 8, 1174 April 7, pp. 10-11. On the location of *Podium Petri*, see Davidsohn, 1977, 1, pp. 799-800.

forcing the presence of other urban and suburban lords in a highly contested area.⁶⁸ It is difficult to determine what benefit these submissions might have yielded to the submitting lords, but it may have been that they were simply more favourably disposed to Florentine rule than to the prospect of Alberti overlordship, which was perhaps a very real threat.

The expansion of Florentine interests south and west of the city continued unabated in the early 1180s, mostly at the expense of the Alberti counts.⁶⁹ Empoli, a river port and market town under Guidi jurisdiction, submitted to Florence in 1182, which afforded Florentine merchants safe passage through the area.

⁶⁸ The area around Castelfiorentino in particular was divided among several jurisdictions. The bishops of Florence held property and rights in the area, but Castelfiorentino itself was still dominated by the Alberti counts. In addition, the bishops of Lucca held properties to the north and east of Castelfiorentino, while the bishops of Volterra controlled rights to tolls at Castelfiorentino from 1190. See Dameron, 1991, pp. 84, 235, n. 73. For evidence of the concession of rights to tolls at Castelfiorentino from the imperial *podestà* to the bishops of Volterra in 1190, see Lami, ed., 1758, 1, pp. 343-344. On the expansion of episcopal power at Castelfiorentino, see also Nelli, 1995. On the expansion of the episcopal estate in the Pesa valley, see Dameron, 1991, pp. 79-83. In addition, the Badia di Firenze owned property south of Empoli in the upper valley of the torrent Orme, between the parish seats of Santa Maria a Coeliaula and San Pietro in Mercato. See Ninci, 1990, pp. 330-331.

⁶⁹ Although the Alberti counts were among the primary targets of Florentine expansion in the later twelfth century, they were clearly not the only target. In the famine year of 1182, the Florentines also attacked the Firidolfi *castellum* of Montegrossoli, which was situated deep in the Chianti near Gaiole in Chianti. See Villani, bk. 5, chap. 10: 'Negli anni di Cristo 1182, rimase le battaglie cittadine in Firenze, i Fiorentini feciono oste al castello di Montegrossoli in Chianti e presonlo per forza'. See also the *Annales Florentini* 2, p. 40; pseudo-Brunetto Latini, p. 221; *Gesta Florentinorum*, p. 273; Stefani, rub. 50; Paolino Pieri, p. 9; Malispini, chap. 76. The Florentines had briefly occupied the *castellum* of Montegrossoli already in 1168 and 1172. See Majnoni, 1981, p. 30. The attacks against Montegrossoli may have been triggered by fears about the movement of foodstuffs to Florence from the countryside of Arezzo during the 1182 famine. The Firidolfi probably constituted a menace to commercial traffic in the Chianti and in the upper Arno valley. In 1189, for example, the Firidolfi lords attacked an Aretine caravan of fifty loaded mules en route to Florence. See Davidsohn, 1977, 1, p. 837. The Florentines evidently were unable to maintain the outpost at Montegrossoli after the assertion of imperial power in Tuscany in 1185, and they were eventually compelled to purchase the *castellum* in 1197 or perhaps early 1198. See Villani, chap. 5, bk. 22: 'Nel detto anno [1197] i Fiorentini comperarono il castello di Montegrossoli in Chianti da certi Cattani cui era, che lungamente aveano fatta guerra a' Fiorentini, e andatavi più volte l'oste de' Fiorentini'. See also the *Annales Florentini* 2, p. 40; *Gesta Florentinorum*, p. 273; Stefani, rub. 55; Malispini, chap. 86. The Florentines may have despatched two *castellani* to Montegrossoli already in 1196. See Paolino Pieri, p. 11. Certainly by 1203, there was at least one *castellanus* stationed at Montegrossoli. See Santini, ed., 1895, *Capitoli*, no. 47, 1203 June 4, pp. 124-127, esp. 127. See also the 1203 depositions of 'Ottavianus Servi de Fighine' and 'Righectus de Fighine' in Davidsohn, 1898, pp. 235-237, esp. 236, 237. It is likely, however, that this *castellanus* would have been an imperial officer, appointed while imperial power in the territory of Florence was at its height, and that the officer would have supported the rights of the rural nobility over Florentine seigniorial control. See De Rosa, 1995, p. 69. On the assertion of imperial power in Tuscany in 1185, see below. On the location of Montegrossoli, see Repetti, 1833-1845, 3, p. 403; Francovich, 1973, p. 110.

Florentine control at Empoli nevertheless remained subordinated to that of the Guidi counts until after the middle of the thirteenth century, in as much as the treaty obliged the men of Empoli to defend Florence against all enemies except the Guidi counts.⁷⁰ In the same year of 1182, the Alberti *castellum* of Pogna submitted to Florence, but the inhabitants of the *castellum* failed to adhere to a critical clause in the submission treaty that prohibited them from assisting in the construction of a *castellum* at Semifonte, and the Florentines attacked Pogna and its suburb of Marcialla in 1184.⁷¹ In November of 1184, the Alberti counts submitted to Florentine jurisdiction. They agreed to dismantle both the fortifications at Pogna and the towers at Certaldo, and to reconstruct neither them nor some vaguely identified structures at Semifonte, suggesting that Semifonte had also been destroyed in the course of the engagement.⁷²

The decisive victory against the Alberti in the 1184 campaign appears to have been fought not at Pogna but north of Florence at Montepiano, where the count Albertus himself was taken prisoner.⁷³ The Alberti market town and stronghold of Mangona on the eastern escarpment of the Monti della Calvana submitted to Florentine jurisdiction in October, agreeing to consign to Florence an annual tribute at the time of the feast of San Giovanni in June.⁷⁴ On the opposite escarp-

⁷⁰ The submission treaty is published in Santini, ed., 1895, *Capitoli*, no. 12, 1182 February 3, pp. 17-18. The economic importance of Empoli is discussed further below, Chapters 6.1, 7.2.

⁷¹ For the submission treaty of 1182, see Santini, ed., 1895, *Capitoli*, no. 13, 11[8]2 March 4, pp. 18-20, esp. 19: 'Item castellum de Pogna de podio et statu in quo modo est non mutabimus: nec in Somofonti pro castello edificando vel in alio podio non ibimus pro castello vel fortiza construenda vel facienda aliquo ingenio, sine parabola omnium consulum vel rectorum qui pro tempore erunt, data nobis ab ipsis omnibus in consilio eorum facto eadem causa ad sonam campane'. The treaty is actually dated from 'anno millesimo centesimo primo', but internal evidence suggests that the notary had mistakenly omitted 'octuagesimo'. On the Florentine assault against Pogna in 1184, see Villani, bk. 5, chap. 11: 'Negli anni di Cristo 1184 del mese di Giugno, i Fiorentini assediarono il castello di Pogna perchè non volea obbedire al comune di Firenze, e era molto forte, e guerreggiava la contrada di Valdelsa infino alla Pesa, ed era di gentili uomini Cattani, che si chiamavano i signori di Pogna'. See also the *Annales Florentini* 2, p. 40; pseudo-Brunetto Latini, p. 221; Stefani, rub. 51; Paolino Piero, p. 9; Malispini, chap. 77, p. 68. On the location of Pogna, see also Repetti, 1833-1845, 4, pp. 498-499; Francovich, 1973, pp. 125-126. Semifonte is discussed at greater length below both in this chapter and in Chapter 6.1.

⁷² Santini, ed., 1895, *Capitoli*, no. 16, 1184 November, pp. 25-26. The vaguely identified structures at Semifonte were designated simply as 'domos et operas', which is to say 'houses and works'.

⁷³ Davidsohn, 1977, 1, p. 844, n. 2, citing BNCF, *Passerini* 12, fol. 46v, dated 1184 September 9. Davidsohn identified the source as a *spoglio* for documents of the Alberti counts.

⁷⁴ Santini, ed., 1895, *Capitoli*, no. 15, 1184 October 28, pp. 24-25. The market at Mangona is first attested earlier in the same year. See Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357, esp. 357.

ment of the Monti della Calvana in the upper valley of the river Bisenzio, the Alberti controlled market town of Vernio was also made to swear allegiance to Florence.⁷⁵ The Florentines nevertheless used the victory at Montepiano to gain concessions from the Alberti in the Elsa valley. In two separate but overlapping treaties negotiated in November 1184, the Alberti granted to Florence half of all revenues taken on its properties ‘inter Arnun et Elsam’ between the first of May and the first of August each year. They also promised that all of its dependents ‘inter Arnun et Elsam’ would be made to swear allegiance to Florence within two months, and they promised to render to Florence two payments of two hundred *libre* each in Pisan money in the following January and in the following March. Finally, two of the sons of Albertus, Guido and Maginardus, promised to reside in Florence for two months each year during times of war and for one month each year during times of peace.⁷⁶

2.2.3. The limits of Florentine jurisdiction

The Alberti submission was extremely important, but it was probably an expensive victory for Florence, and the Florentines were in no condition to resist emperor Frederick I Barbarossa when he descended into Tuscany in 1185. The emperor arrived at Florence on the last day of July, and he remained in the city long enough to hear the complaints of rural nobles about the expansion of Florentine jurisdiction in the countryside. Frederick reacted by confirming the rights and the possessions of the rural patrilineages, the monastic houses, and the bishops, and

⁷⁵ Santini, ed., 1895, *Capitoli*, no. 16, 1184 November, pp. 25-26. The Vernio market is attested only after the beginning of the thirteenth century, possibly as early as 1221 and almost certainly by 1233. A ‘mercatale’ is attested in the upper Bisenzio valley in Fantappiè, ed., 1975, no. 15, 1221 May 20, pp. 78-79, esp. 79. Vernio was using its own commercial measure for grain by 1233. See Fantappiè, 1980, pp. 197-198, n. 35, citing Archivio Bardi presso i conti Guicciardini di Firenze, *Diplomatico*, 1233 February 28. See also Fantappiè, 1980, pp. 197-198, n. 35, citing ASF, *Diplomatico*, Bardi-Serzelli, no. 232, 1295 May 10.

⁷⁶ Santini, ed., 1895, *Capitoli*, no. 16, 1184 November, pp. 25-26. The obligation to consign to Florence half of all revenues collected on Alberti possessions ‘inter Arnun et Elsam’ is repeated in Santini, ed., 1895, *Capitoli*, no. 17, 1184 November 29, pp. 27-28. In recompense for the Alberti submission, the Florentines evidently granted citizenship to count Albertus, which may have enabled him to assume a position as Florentine consul in 1193. The appointment of count Albertus as a Florentine consul in 1193 is attested only in narrative sources, however, and at any rate it may have had little to do with the submissions of Pogna, Certaldo, and Mangona. The Florentines may have appointed Albertus as Florentine consul in order to placate the Henry VI, who became emperor after the death Frederick I in 1191. Henry had also been in Italy as recently as 1190, and the Alberti were imperial vassals. On count Albertus as a Florentine consul, see Santini, ed., 1895, p. xli.

he divested the Florentine commune of all jurisdictional rights in the surrounding countryside up to the walls of the city itself.⁷⁷ Parts of the countryside continued to acknowledge the jurisdictional authority of Florence even after the emperor proclaimed the suppression of urban jurisdiction beyond the walls of the city.⁷⁸ The assertion of imperial authority in the countryside of Florence nevertheless also appears to have been reflected in the documentation.⁷⁹

⁷⁷ The emperor was at San Miniato al Tedesco in Tuscany in late July of 1185, and he was certainly at Florence on the kalends of August. For an imperial charter dating from Florence on the first of August, see Appelt, ed., 1975-1990, 4, no. 912, 1185 August 1, pp. 173-174. On the itinerary of Frederick I in Italy from September 1184 to June 1186, see Oppl, 1978, pp. 82-90; Brühl, 1968, 1, p. 580. For the chronicle account of Giovanni Villani, which erroneously dates the imperial pronouncement to 1184, see Villani, bk. 5, chap. 12: 'Nel detto anno di Cristo 1184, Federigo primo imperadore andando di Lombardia in Puglia passò per la nostra città di Firenze a dì 31 di Luglio del detto anno, e in quella soggiornato alquanti dì, e fattagli querimonia per gli nobili del contado, come il comune di Firenze avea prese per forza e occupate molte loro castella e fortezze contra l'onore dello'mpero, sì tolse al comune di Firenze tutto il contado e la signoria di quello infino alle mura, e per lo contado facea giustizia; e simile fece a tutte l'altre città di Toscana ch'aveano tenuta la parte della Chiesa quando egli ebbe la guerra con papa Alessandro, salvo che non tolse il contado nè alla città di Pisa nè a quella di Pistoia che tennero con lui; e in questo anno il detto Federigo assediò la città di Siena, ma non l'ebbe. E queste novitadi fece alle dette città di Toscana, imperciocchè non erano state di sua parte, sicchè, con tuttochè s'era pacificato colla Chiesa e venuto alla misericordia del detto papa, come addietro è fatta menzione, non lasciò di partorire il suo male volere contro alle città ch'aveano ubbidito alla Chiesa, e così stette la città di Firenze senza contado quattro anni, infino che 'l detto Federigo andò al passaggio d'oltremare ove annegò, come ad dietro facemmo menzione'. The dating of the proclamation to 1185 rather than 1184, as Villani claimed, is based on the fact that Frederick had been north of the Alps in July of 1184, but his presence in Tuscany is securely attested in July of 1185. See also the pseudo-Brunetto Latini, p. 221; *Gesta Florentinorum*, p. 273; Stefani, rub. 52; Paolino Pieri, p. 9. Davidsohn duly noted that such an arbitrary decree could not have been sufficient to cancel all memory in the countryside of the benefits of Florentine jurisdiction. On the assertion of imperial authority in the countryside of Florence, see Davidsohn, 1977, 1, pp. 846-857, esp. 856-857.

⁷⁸ See ASF, *Diplomatico*, Badia di Passignano, 1186 April 26. In the event of a violation of this contract for a sale of land in the Pesa valley, the offending party was to render a payment of six *libre* 'ad consules Florentinorum'. See also Davidsohn, 1977, 1, p. 856, n. 1.

⁷⁹ From 1176, penalty clauses in contracts redacted throughout the territory of Florence began to include the expression 'sub obligo potestatis et consulum florentie pro tempore', or some variant thereof, which has been understood to indicate the jurisdictional authority under which the contract was originally undertaken. Early examples of the expression, from 1176 to 1181, tend to suggest the persistence of imperial jurisdiction through references that perhaps allude to an imperial representative, the *potestas*, more commonly referred to in the literature as the *podestà*. The early examples also invariably include a reference to the consuls of the city in tandem with a reference to the imperial representative, but contracts dating from 1182 to 1185 omitted the reference to imperial authority and typically obliged the contracting parties only to the consuls of the city. After the imperial pronouncement of 1185, however, contracts once again began to oblige the contracting parties to the imperial *potestas*. See Santini, 1895-1903, pt. 3, pp. 76-79. It must be acknowledged, however, that the Latin term *potestas* was not necessarily synonymous with an imperial governor. It may have simply connoted 'power', in the sense of the power exercised by the communal government at Florence.

The suppression of Florentine jurisdictional rights in the countryside was impossible to sustain, however, and in 1187, Henry VI, the son of the emperor Frederick, partially restored to Florence rights in the countryside in exchange for an annual payment of silk. The 1187 concession granted to Florence jurisdiction within a radius of ten *miliaria* from the city, about 16.5 kilometres, but it limited Florentine jurisdiction to only three *miliaria* from the city in the direction of Settimo and Campi, and to only one *miliarium* in the direction of Fiesole. Castelfiorentino, Certaldo, Empoli, Figline Valdarno, Poggibonsi, and Signa all lay beyond the reach of Florentine jurisdiction, and seigniorial lords were exempt from Florentine jurisdiction even if they resided within the area of Florentine control.⁸⁰

The Guidi counts had been at peace with Florence since 1175 or 1176, and they evidently made no really substantial effort to exploit the reassertion of imperial power at Florence, though they were no doubt pleased to see the capacities of

⁸⁰ Henry VI was in Italy from December 1185 to December 1187. See Brühl, 1968, 1, p. 580. The Roman *miliarium*, or mile, originally measured about 1.48 kilometres, but the measure of the *miliarium* had assumed numerous local variations by the twelfth century. In the early fourteenth century, the Florentine *miliarium* measured 1.65 kilometres, forty-five metres longer than the modern mile used in Great Britain and the United States, which measures 1.61 kilometres. See Zupko, 1981, p. 153. In other words, Florentine jurisdiction was limited to an area that extended only to just beyond Cerbaia, San Casciano in Val di Pesa, and Strada in Chianti in south, but it fell just short of Rignano sull'Arno, and it only barely embraced Pontassieve in the east. North of Florence, urban jurisdiction extended only to just beyond Vaglia, but Fiesole and the entire valley of the river Sieve lay beyond its bounds. In the west, Florentine jurisdiction was limited to the area east of the river Greve on the left bank of the Arno and it extended only as far as Peretola and Quarto on the right bank. For the text of the royal concession, see Ficker, 1868-1872, 4, no. 170, 1187 June 24, pp. 213-214: 'Unde beneficiis uberrimus liberalitate benefica ipsos respicere volentes, concedimus eis iurisdictionem cum iure et ratione nostra in civitate Florentina et extra civitatem secundum formam subscriptum: versus Septimum ad tria miliaria; versus Campum ad tria; versus Fesulanam terram ad unum, in alia partibus circa civitatem ad decem miliaria; excepto ac salvo iure nobilium et militum, a quibus etiam volumus, ut Florentini nichil exigant, regali edicto precipientes ut nullam omnino personam secularem vel ecclesiasticam iniuste gravent. In recognitionem autem huius magnifice nostre concessionis quolibet anno in kalendis maii bonum eximitum maiestati nostre dare tenetur'. See also the pseudo-Brunetto Latini, p. 222. Davidsohn argued that the royal concession of Henry constituted merely the restoration of pre-existing rights originally granted by the countess Matilda, but De Rosa argued that the concession was really the first genuine indication of Florentine jurisdiction in the countryside. See Davidsohn, 1977, 1, pp. 398-401, 860; De Rosa, 1995, pp. 68-70. The claim put forward by Davidsohn is weakly based, as suggested above, but the fact that Frederick had revoked Florentine jurisdiction in the countryside nevertheless implies that Florence indeed enjoyed jurisdictional privileges in the surrounding countryside. Florence originally may have simply usurped these privileges, or it may have enjoyed them at the discretion of the emperor. Whatever the case may have been, the royal concession of 1187 was by no means a complete restitution of the jurisdictional rights exercised by Florence in the surrounding countryside before 1185. The concession effectively circumscribed Florentine jurisdiction in the countryside, especially in the west towards Settimo and Campi and in the northeast towards Fiesole.

Florence diminished, if only temporarily.⁸¹ The primary beneficiaries of both the 1185 suppression of Florentine jurisdiction in the surrounding countryside and the 1187 privilege of Henry VI, however, appear to have been the Alberti counts.⁸² Identifying the imperial governor ‘Henricus Teutonicus’ with a member of the Alberti family, Davidsohn speculated that the administration of the territory temporarily passed into the hands of the Alberti.⁸³ Even the partial restoration of Florentine jurisdiction in the countryside in 1187 left all of the most valuable Alberti possessions safely beyond the areas under communal control.⁸⁴ Count Albertus himself assumed the title of count of Semifonte, ‘Comes Albertus de Summofonte’, and he probably increased efforts to complete the construction of

⁸¹ The Guidi also may have been constrained from taking fuller advantage of the weakness of the Florentine authority after 1185 by rebellion on their own estates in the countrysides of Florence and Arezzo. See Davidsohn, 1977, 1, pp. 895-896, esp. 896, n. 2. On the peace negotiated between Florence and the Guidi counts probably in 1175 or 1176, see again the 1203 deposition of ‘Ubaldinus de Galiga’ in Passerini, ed., 1876, p. 399. See also Davidsohn, 1977, 1, p. 806, n. 2. The treaty may have granted the Guidi counts Florentine citizenship. During the reign of Henry VI, the Guidi count Tegrimus appears to have served as a communal consul at Florence in 1192, which suggests that he had obtained citizenship. The Guidi also may have taken residence in the city in the same year along with other rural nobles, as the pseudo Brunetto Latini chronicle reports. See the pseudo-Brunetto Latini, p. 222: ‘[...] In questo anno erano consoli di Firenze Messer Tegrimo de conti Guidi paladini in Toschana e Chianni de Fifanti. E in questo anno si fece ordinamento in Firenze che conti Guidi e li conti Alberti e li conti da Capraia e li conti da Certaldo, Ubaldini e Filigiovanni, Pazzi ed Ubertini, conti da Panago e li singnori da Montemangno e la casa dormagna e di Pierpagano e d’altri nobili assai cittadini dovessero abitare quatro mesi dell’anno nella città di Firenze, e lungo tempo s’aservoe a grande honore del comune’. See also Santini, ed., 1895, p. xl. The chronicle provides the only source for both the consular position of Tegrimus and assumption of residence in the city by the Florentine rural nobility, and the report should be treated with caution. The Guidi nevertheless maintained a residence at Florence from at least as early as 1218. For an act redacted at Florence ‘in palatio dictorum comitum [i.e., the Guidi]’, see Lasinio, ed., 1914, no. 1616, 1218 March 19, pp. 115-116, esp. 115. For another act from 1226 redacted at Florence ‘in palatio comitum filiorum quondam comitis Guidonis’, see Santoli, ed., 1915, no. 272, 1226 November 26, p. 192. The Guidi sold their residence at Florence to the Cerchi merchant-bankers in 1280. See Compagni, bk. 1, chap. 20. The disposition of the Guidi counts towards the reassertion of imperial power in the Florentine countryside was probably favourable. Count Guido had participated in the besiegement of Naples in 1191 alongside the emperor Henry VI. See Böhmer, ed., 1972, no. 154, 1191 May 24, p. 66; Stumpf-Brentano, ed., 1865-1881, 2, no. 4700, 1191 May 25, p. 428. On the Guidi attitude towards the increase in imperial power at Florence, see also Davidsohn, 1977, 1, pp. 849-850.

⁸² In the Chianti, the Firidolfi also appear to have benefited from the reassertion of imperial power at Florence. As already noted above, they were evidently able to regain the *castellum* at Montegrossoli after it had been destroyed by the Florentines in 1182, and the Florentines were compelled to purchase the *castellum* from the Firidolfi in 1197. See above in this chapter.

⁸³ Davidsohn identified ‘Henricus Teutonicus’ with the Alberti lord ‘Henricus de Montespertuli’. See Davidsohn, 1977, 1, p. 854, n. 1. For more on ‘Henricus Teutonicus’, see De Rosa, 1995, pp. 69, 90, n. 15.

⁸⁴ This included the Alberti including the property at Ugnano, which lay just seven linear kilometres from Florence near the confluence of the rivers Arno and Greve.

the new fortified market town of Semifonte precisely during this period of heightened imperial power.⁸⁵ He also began to prepare for an anticipated confrontation with the Florentines. In 1189, perhaps with a view towards rendering any thought of a military assault against Semifonte even more daunting than it otherwise may have been, Albertus established an alliance with the powerful lord Scorcialupus de Mortenanna, donating to his ally half of the *castellum* of Semifonte.⁸⁶ Albertus also negotiated a treaty of mutual assistance with the bishop of Bologna, and he purchased a residence at Bologna perhaps to serve as a refuge in the event of war.⁸⁷ In 1192, Albertus may have joined other rural lords in establishing a residence at Florence, and he appears to have served as a communal consul at Florence in the following year.⁸⁸

⁸⁵ For evidence of the assumption of the title of count of Semifonte by Albertus, see Davidsohn, 1977, 1, p. 862, n. 1, citing the register entry in Stumpf-Brentano, ed., 1865-1881, 2, no. 4620, 1187 August 19, p. 420. The pertinent clause is missing from the register entry, but see the act dated from 1187 September 1 in Rena and Camici, ed., 1789, 5, pt. 4, pp. 23-25, esp. 25. A market at Semifonte, probably situated in the suburban enclosure on the site of the modern village of Petrognano, is securely attested from 1196, but Semifonte was using its own commercial measure for grain from at least as early as 1195, which suggests that the market antedates the first secure attestations somewhat. See below, Appendix 7. Very little is known about the construction and settlement of Semifonte, and both may have been completed by the time that the emperor Frederick I cancelled the jurisdictional privileges of Florence in 1185. A treaty of 1202 in which Semifonte ultimately submitted to Florentine authority after the *castellum* had been razed to the ground nevertheless suggests that the catchment area from which Semifonte attracted settlers extended up to about six or seven kilometres to the north and south, five kilometres to the west, and two or three kilometres in the east. The treaty was signed by 317 men from 21 different communities, 15 of which can be identified with certainty. For the treaty itself, see Santini, ed., 1895, *Capitoli*, no. 38, 1202 April 3, pp. 73-77. For the oaths of the men of Semifonte to adhere to the treaty, Santini, ed., 1895, *Capitoli*, no. 39, 1202 April 7, pp. 77-82. The brief history of the Alberti attempt to create a new settlement at Semifonte is covered in Salvini, 1969.

⁸⁶ Santini, ed., 1895, *Capitoli*, no. 19, 1189 July 18, pp. 30-31. See also Davidsohn, 1977, 1, p. 879. The *castellum* of Mortenanna lay between Poggibonsi and Castellina in Chianti, near the villages of Sant'Agnese a Mortennana and San Quirico a Mortennana, situated on either bank of the borro Strolla. See Repetti, 1833-1845, 3, p. 447.

⁸⁷ Davidsohn, 1977, 1, p. 879. For the treaty negotiated between Albertus and the bishop of Bologna, see Savioli, ed., 1784-1795, 2, pt. 2, no. 299, 1192 February 7, pp. 169-171. For the purchase of residential property at Bologna made by Albertus, Davidsohn was citing ASSiena, *Diplomatico*, Archivio Generale, 1192 July 1.

⁸⁸ On rural lineages establishing urban residences at Florence in 1192, see again the pseudo-Brunetto Latini, p. 222. The pertinent passage is transcribed above. See also Santini, ed., 1895, p. xli. The report should be interpreted not necessarily as the submission of the rural nobility to urban authority, but as the exploitation by the rural nobility of the increase in imperial power in Tuscany under Frederick I and Henry VI. Presumably, rural nobles were afforded the possibility to enjoy the advantages of urban residence without the loss of power or revenue on their rural estates.

2.3. The consolidation of Florentine jurisdiction

Frederick I died in 1190 and his son Henry VI died only six years later, leaving the imperial succession in dispute and rendering it impossible to sustain imperial power at Florence. As a consequence, Florence was resurgent during the final years of the twelfth century and in the early thirteenth century. The large comital lords in the countryside of Florence generally acquiesced to Florentine authority because it was usually in their best interest to do so. Florentine urban growth probably yielded substantial benefits to rural lords in revenues from agricultural production and tolls. The continued expansion of Florence was often at the expense of the rural nobility, however, and as the larger rural lords witnessed their autonomy gradually eroded by Florentine power, they became less pliant.

2.3.1. Jurisdictional expansion in the early thirteenth century

The Alberti counts were aware that the increase in imperial power at Florence under Frederick I and his son Henry VI was merely temporary, and, as noted above, the Alberti were already making preparations for the moment at which the imperial presence at Florence would begin to diminish. Florence was showing signs of resurgence already in 1192, when ‘Vinc[us] tunc comitatus Florentinorum rector et procurator’, a Florentine official responsible for administration in the countryside, is attested as a witness to an act concerning rights to properties near Vallombrosa.⁸⁹ In the following year, the *castellum* of Trebbio, situated in the parish of San Giusto in Salcio near Radda in Chianti, submitted to Florentine authority.⁹⁰

When the emperor Henry VI died in Sicily in late September 1197, the imperial presence at Florence collapsed. Soon after the death of Henry, the Florentines may have offered to purchase rural *castella*, for example Montegrossoli, while threatening to impose urban authority on intransigent *castella*.⁹¹ The Alberti

⁸⁹ Santini, ed., 1897, no. 1, 1192, pp. 284-285.

⁹⁰ Santini, ed., 1895, *Capitoli*, no. 20, 1193 July 24, pp. 31-33. See also Davidsohn, 1977, 1, p. 889; Repetti, 1833-1845, 5, pp. 584-585; Francovich, 1973, p. 140.

⁹¹ Stefani, rub. 55: ‘In Firenze si fece una legge, la quale chiunque volesse vendere al Comune sue castella, le vendesse, nonostante che il Comune per forza l’avesse prese’. On the Florentine purchase of the *castellum* of Montegrossoli probably in late 1197 or early 1198, see again Villani, chap. 5, bk. 22. The pertinent passage is transcribed above in this chapter. The chronology is somewhat unclear. Paolino Pieri reported that the Florentines despatched two *castellani* to Montegrossoli already in 1196, but it is likely that the *castellani* were sent to Montegrossoli only after the purchase of the *castellum* by Florence, and it is also likely that the purchase occurred only

counts at first tried to resist Florentine advances, but their position had weakened considerably, and they were simply unable to enforce their claims against Florentine encroachment in the absence of strong imperial support. Less than seven weeks after the death of Henry, representatives from Florence met before papal legates for Tuscany to negotiate a treaty with representatives from Lucca, Siena, San Miniato al Tedesco, and Volterra. The treaty, which established the *societas Tuscie*, or 'Tuscan League', was later joined by Arezzo, count Guido Guerra, the Aldobrandeschi count Ildebrandinus, count Albertus, Figline Valdarno, and Certaldo. The purposes of the treaty were manifold, but the overriding concerns lay in discouraging the loyalty of Pisa and Pistoia towards the German emperors, and in organising a coordinated resistance against any future attempt by the emperors to exercise their imperial prerogatives in Tuscany. The treaty also included an agreement with the papacy, which obliged subscribers to assist the papacy in the assertion of its jurisdiction at the expense of the emperors. It was therefore received favourably by pope Celestine III (1191-1198) and embraced even more enthusiastically by his successor, pope Innocent III (1198-1216), who envisaged all of Italy as free from the influence of foreign lords. Significantly, the subscription of Figline to the treaty entitled Florence to half of all revenue from tolls and market dues at Figline, and it obliged the inhabitants of Figline, with the exception of knights and soldiers, to consign to Florence an annual hearth tax of twenty-six *denarii* per household.⁹² By the end of 1198, Florence appears to have consoli-

after the death of Henry VI. See Paolino Pieri, p. 11. See also the *Annales Florentini* 2, p. 40; *Gesta Florentinorum*, p. 273; Malispini, chap. 86.

⁹² The treaty also insured subscribers the integrity of their respective territories, thus implicitly asserting Florentine jurisdiction in the diocese of Fiesole, and it obliged subscribers to renounce claims to land appertaining to the territories of other subscribers. Poggibonsi, because of its still ambiguous jurisdictional situation between the territories of Florence and Siena, was afforded the opportunity to subscribe to the treaty independently. No representative for Prato subscribed to the treaty, but the treaty still granted Prato a favoured position among the subscribers. Individual subscribers were obliged to seek majority approval from the other subscribers in order to negotiate treaties, but the majority was valid only if it consisted of representatives from Florence, Lucca, Siena, Prato, San Miniato al Tedesco, and Volterra. In the event that Pisa, Pistoia, and Poggibonsi elected to subscribe to the treaty, they would also receive veto privileges. For the initial treaty and the later subscriptions of Arezzo, count Guido Guerra, the Aldobrandeschi count Ildebrandinus, and count Albertus, see Santini, ed., 1895, *Capitoli*, no. 21, 1197 November 11, 1197 December 4, 1198 February 5 and 7, pp. 33-39. For the formal subscriptions to the treaty given by the consuls and advisors of Florence, see Santini, ed., 1895, *Capitoli*, no. 22, 1197 November 13 and 15, pp. 39-41. For the subscription of the rector and men of Figline, see Santini, ed., 1895, *Capitoli*, no. 23, 1198 April 10, pp. 41-42; no. 24, 1198 April 10, pp. 42-43; no. 25, 1198 April 15, pp. 43-46. Santini dated the second of these documents incorrectly. The date indicated in the document itself, 'xvii kalendas madii', corresponds to 1198 April 15, the same as the third document. The second document also includes the clause obliging the inhabitants of Figline, apart from knights and soldiers, to pay an annual hearth tax of twenty-six *denarii* per household to Florence. For the

dated its position atop the 'Tuscan League' by securing the appointment of its own representative as prior of the League.⁹³

The Florentines also redoubled their efforts to enforce the submission of the Alberti lords, destroying the Alberti *castellum* of Frondigliano in the upper Pesa valley near Pieve di Panzano and initiating an assault on Semifonte.⁹⁴ Early in 1200, count Albertus yielded to Florentine pressure and reaffirmed his submission to urban authority, now agreeing to consign to the city half of all revenues collected on Alberti possessions 'inter Arnum et Elsam' for four months each year, which presumably included revenues from tolls and tariffs. The Alberti also agreed not impose tolls on Florentine merchants or the citizens of Florence in Alberti territory, and they even swore to defend the commune of Florence against Semifonte and to remain allied to the commune as it waged war against the *castellum*.⁹⁵ Florence also gathered support against Semifonte from Volterra, Poggi-

submission of Certaldo to Florence and the subscription of the town to the treaty, see Santini, ed., 1895, *Capitoli*, no. 26, 1198 May 11, pp. 46-47. On the death of emperor Henry VI and the treaty, see Davidsohn, 1977, 1, pp. 911-931.

⁹³ The appointment is attested in a letter of pope Innocent III. See Potthast, ed., 1874-1875, 1, no. 403, 1198 October 30, p. 39: 'Acerbum priorem et alios rectores Thusciae et ducatus monet et exhortatur, ut persistant in devotione ecclesiae Romanae; promittit eis favorem et protectionem'. The register entry does not establish the citizenship of the prior, but see also Davidsohn, 1977, 1, p. 930.

⁹⁴ Villani, bk. 5, chap. 26: 'Negli anni di Cristo 1199, essendo consoli della città di Firenze conte Arrigo della Tosa e suoi compagni, i Fiorentini assediato il castello di Frondigliano, che s'era rubellato e faceva guerra al comune di Firenze, e presonlo e disfecionlo infino alle fondamenta, e mai son si rifece. E nel detto anno i Fiorentini puosono oste a Simifonti, il quale era molto forte, e non ubbidia alla città'. See also the pseudo-Brunetto Latini, p. 222; *Gesta Florentinorum*, p. 273; Stefani, rub. 56; Paolino Pieri, p. 11; Malispini, chap. 89. The Florentine attack on Frondigliano is discussed in Davidsohn, 1977, 1, p. 932. The precise location of Frondigliano is unknown, but Repetti suggested that the *castellum* was located in the Pesa valley near San Pancrazio, and subsequent authors have tended to follow him. See Repetti, 1833-1845, 2, p. 363; Salvini, 1969, p. 28; Francovich, 1973, p. 92. Evidence from the early thirteenth century attests to the fact that the *castellum* indeed appertained to the Alberti. See ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1208 February 23. The imperial confirmation of Alberti possessions in 1164 mentions 'Fundigniana' among the list of Alberti holdings, and this probably corresponds with Frondigliano. See again Appelt, ed., 1975-1990, 2, no. 456, 1164 August 10, pp. 360-362.

⁹⁵ Santini, ed., 1895, *Capitoli*, no. 27, 1200 February 12-23, pp. 48-51; no. 28, February 12-19, pp. 51-53. Count Albertus also formally donated Semifonte to Florence along with half of the revenues collected from taxes in Alberti territory between the rivers Arno and Elsa from the beginning of May to the beginning of August each year. See Santini, ed., 1895, *Capitoli*, no. 29, 1200 February 12 and 23, pp. 53-56. To complete the submission of the Alberti counts to Florence, Scorialupus returned to Albertus the half interest in the *castellum* of Semifonte, which the Alberti conceded to Scorialupus in 1189. The donation of half of the *castellum* of Semifonte to Scorialupus by the Alberti is discussed above in this chapter. For the return of the donation from Scorialupus, see Santini, ed., 1895, *Capitoli*, no. 31, 1200 March 6, pp. 57-59.

boni, Colle di Val d'Elsa, Siena, Lucca, Prato, and the Guidi counts.⁹⁶ Finally, in the famine year of 1202, the Florentines reached an accord with Semifonte and their allies at San Gimignano, and the *castellum* of Semifonte was razed to the ground.⁹⁷

Despite the loss of Semifonte and the submission to Florence, the Alberti counts still held considerable power. North of the river Arno, they retained almost complete control of their possessions, and a branch of the lineage continued to exercise considerable power at several strategic locations along the Apennine frontier in the early thirteenth century.⁹⁸ The Alberti counts used their Apennine possessions to harass commercial traffic on the trans-Apennine passages in the later thirteenth century and even to collect tolls in the early fourteenth century, in clear violation of the conditions set forth in the submission treaty of 1200.⁹⁹ The

⁹⁶ For the bishop of Volterra, see Santini, ed., 1895, *Capitoli*, no. 30, 1200 February 13, pp. 56-57. For Poggibonsi as well as a small group of lesser lords, see Santini, ed., 1895, *Capitoli*, no. 33, 1200 November 23 and December 1, pp. 61-62. For Colle di Val d'Elsa, see Santini, ed., 1895, *Capitoli*, no. 35, 1201 April 27, p. 65; no. 36, 1201 April 28-30, pp. 66-72. The Florentines also supported Siena in their efforts to gain the submission of Montalcino, no doubt to secure Siene support in their own efforts against Semifonte. See Santini, ed., 1895, *Capitoli*, no. 34, 1201 March 29, pp. 63-64; Davidsohn, 1977, 1, pp. 939-940. On the support enlisted by the Florentines from Lucca, Prato, and count Guido Guerra. See Davidsohn, 1977, 1, p. 943.

⁹⁷ Villani, bk. 5, chap. 30: 'Negli anni di Cristo 1202, essendo consolo in Firenze Aldobrandino Barucci da Santa Maggiore, che furono molto antichi uomini, colla sua compagnia, i Fiorentini ebbono il castello di Simifonti, e fecionlo disfare, e il poggio appropriare al comune, perocchè Ingamente avea fatta guerra a' Fiorentini. E ebbono i Fiorentini per tradimento per uno da Sardonato in Poci, il quale diede una torre, e volle per questa cagione egli e' suoi discendenti fossero franchi in Firenze d'ogni incarico, e così fu fatto, con tuttochè prima nella detta torre, combattendola, fu morto da' terrazzini il detto traditore'. See also the *Annales Florentini* 2, p. 41; pseudo-Brunetto Latini, p. 223; *Gesta Florentinorum*, p. 273; Stefani, rub. 57; Paolino Pieri, p. 12; Malispini, chap. 92. For the treaty itself and the subsequent approval of the treaty by the men of Semifonte, respectively, see again Santini, ed., 1895, *Capitolo*, no. 38, 1202 April 3, pp. 73-77; no. 39, 1202 April 7, pp. 77-82. See also Davidsohn, 1977, 1, pp. 942-946; Salvini, 1969, pp. 121-122. Later in the same year, the Florentines destroyed the *castellum* of Combiate, which, according to Villani, was a Cattani stronghold. See again Villani, bk. 5, chap. 30. Repetti believed that the *castellum* was the dominion of the lords of Barberino di Mugello, while Davidsohn speculated that Combiate appertained to the Ubaldini. The fact that relations between Florence and the Ubaldini were for the most part congenial until about the middle of the thirteenth century nevertheless argues against the identification of Combiate with the Ubaldini and favours another interpretation. See Repetti, 1833-1845, 1, p. 789; Davidsohn, 1977, 1, p. 947.

⁹⁸ Huillard-Bréholles, ed., 1852-1861, 2, pt. 1, unnumbered, 1221 February 18, pp. 128-132, esp. 131-132.

⁹⁹ The submission treaty of 1200 prohibited the Alberti from imposing tolls in their territory. See Santini, ed., 1895, *Capitoli*, no. 27, 1200 February 12-23, pp. 48-51, esp. 49: 'Item si strada aliquando reddiret per nostram terram et fortiam non tollemus passagium nec tollere facimus vel permittemus alicui mercatori vel civi Florentie nisi illud quod constitutum esset cum consulibus mercatorum civitatis Florentie'. An imperial charter issued to the Alberti by Otto IV in 1209 nevertheless confirmed the right of the Alberti to exact tolls on their possessions north of Florence

Alberti also retained most of their revenues from south of the Arno and east of the Elsa.¹⁰⁰ The death of the count Albertus in the early thirteenth century nevertheless resulted in the partitioning of the estate, internecine struggles, and the dissipation of Alberti power in the territory of Florence.¹⁰¹

around Mangona and Vernio, and at locations across the frontier in the territory of Bologna. See Savioli, ed., 1784-1795, 2, pt. 2, no. 386, 1209 November 4, pp. 301-302. In the early fourteenth century, the Alberti evidently were collecting tolls on the roads that ascended from Florence or Prato on either escarpment of the Monti della Calvana towards Bologna. See Davidsohn, 1896-1908, 3, nos. 525-526, 1307 September 24, p. 105. Cf. ASF, *Capitoli* 41, fol. 121. See also Davidsohn, 1977, 4, pt. 1, p. 223. The Alberti, or 'Maghinardos', are also mentioned among the lords imposing tolls in the Florentine countryside against the wishes of the commune in the *Statuto della Podestà* of 1325. See Caggese, ed., 1921, bk. 5, rub. 94, pp. 422-423: 'Pro evidenti utilitate civium Florentie, et maxime mercatorum, statutum et ordinatum est quod dominus Potestas, primo mense sui regiminis, et Priores artium et Vexillifer iustitie, infra xv dies mensis iulii, procurare teneantur cum effectu pro posse quod passagia et exactiones que tolluntur et fiunt ad modum prede, maxime per Comites Guidones, Ubaldinos, Maghinardos et alios a Florentinis civibus et districtualibus et aliis quibuscumque victualia Florentinam deferentibus non tollantur, vel saltem ea sola tollantur et exigantur honeste que ab antiquo moderate consueverant exigi; et ista procurant sub debito iuramenti'. The Bolognese chronicler Matthaëus de Griffonibus also reported that travellers in the Apennines, presumably between Florence and Bologna, were assaulted by the Alberti near Mangona in 1272, and the Bolognese responded by destroying several Alberti *castella*. See Matthaëus de Griffonibus, p. 20: 'Quidam mercatores derobati fuerunt in quodam busco vocatur *Herba verde*, quod est juxta confinia et turrem comitum Albertorum de Mogono, per quemdam de dictis comitibus'.

¹⁰⁰ If revenues from Alberti possessions 'inter Arnum et Elsam' experienced no seasonal fluctuations, then the loss of revenue to the Alberti from the submission to Florence would have amounted to about 16.7 per cent. As noted above, the Alberti had agreed in 1184 to consign to Florence half of all revenues from taxes between the Arno and the Elsa from the first of May to the first of August. The new submission required the Alberti to consign half of all revenues from the same area from the beginning of May through the entire month of August. The period may have produced more revenue from taxation than other periods, particularly from taxes on cereal harvests, with the result that the loss of revenue for the Alberti from the lands between the Arno and Elsa probably amounted to more than 16.7 per cent. It nevertheless appears that the Alberti remained free to conduct their affairs in the manner in which they pleased. The peace achieved earlier between Florence and the Guidi counts likewise probably enabled the Guidi to conduct their affairs as they pleased, and to retain a considerable amount of their power and revenue. This is important, because it provided incentives to the comital lords in the territory of Florence to manage their estates efficiently and to exploit Florentine growth in ways that encouraged trade.

¹⁰¹ The dating of the death of count Albertus is uncertain. His will is undated, but Santini speculated that it was redacted around 1210. See Santini, ed., 1895, *Miscellanea*, no. 11, 13th century, p. 375. Santini further argued that Albertus was still alive in 1204, when *Albertus comes* is attested. See Santini, ed., 1895, *Capitoli*, no. 54, 1204 October 30, pp. 143-144, esp. 143. Davidsohn believed that the 1204 attestation concerned the son of the deceased count, whose name was also Albertus, rather than the count himself, and he suggested that the elder Albertus died before June of 1203, since one of his sons is attested at that time as 'Maginaro condam comitis Alberti'. See Santini, ed., 1895, *Capitoli*, no. 47, 1203 June 4, pp. 124-127, esp. 127. In the will, Albertus bestowed all of his possessions on the right bank of the Arno to the younger Albertus, naming the consuls of Florence as regent, but he made no mention of the Alberti possessions on the left bank, which were evidently disputed by his other three sons. The partitioning of the Alberti possessions on the left bank of the Arno was settled only in 1209. See ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1208 February 23. See also Davidsohn, 1977, 1, pp. 955-956. In 1210, the em-

Guido Burgognonis, an Alberti count from a collateral branch of the lineage, seized the *castellum* at Capraia soon after the death of Albertus. Anticipating such difficulties, Albertus placed his son Albertus and his inheritance of Alberti possessions north of the river Arno under the protection of the Florentine consuls, and when Guido Burgognonis commandeered the *castellum* at Capraia, the Florentines intervened.¹⁰² They initiated the construction of fortifications at Montelupo on the opposite bank of the Arno probably in early 1204 to facilitate their assault on Capraia.¹⁰³ By June of the same year, Guido had agreed to an armistice mediated by representatives from Lucca, and he submitted to Florentine authority along the men of Capraia by late October.¹⁰⁴ In exchange for the submission, Guido was granted usufruct of Alberti possessions north of the Arno on behalf of the younger Albertus, and in 1205, the son of Guido, ‘Rodolfus comes de Capraia filius Guidonis Burgondionis comitis’, was granted the honour of serving as the Florentine *podestà*.¹⁰⁵

peror Otto IV extended imperial protection over one portion of the inheritance, which included properties at Certaldo, Pogna, Frondigliano, and at several other locations in and above the Elsa valley. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 92-96; Böhmer, ed., 1971, 1, no. 344, undated, p. 106.

¹⁰² For the provisions of the will of the count Albertus, see again Santini, ed., 1895, *Miscellanea*, no. 11, 13th century, p. 375.

¹⁰³ On the construction of Montelupo, see the *Annales Florentini* 2, p. 41. The Hartwig edition of the *Annales Florentini* dates the construction of Montelupo to 1203, but Davidsohn reported that the manuscript gives the date of 1204. See Davidsohn, 1977, 1, p. 957, n. 1. Other chronicle sources erroneously report that Montelupo was destroyed in 1203. For example, see Villani, bk. 5, chap. 31; pseudo-Brunetto Latini, p. 223; *Gesta Florentinorum*, p. 273; Stefani, rub. 58-59; Paolino Pieri, p. 12; Malispini, chap. 93. A settlement negotiated between Florence and the Alberti count Guido Burgognonis in October of 1204 nevertheless confirms that the ‘castrum quod vocatur Montelupus’ had been built by the Florentines, who then compelled the inhabitants of the parish of Fibiiana to migrate to Montelupo. The settlement of 1204 also obliged Guido to safeguard the interests of Montelupo ‘ad honorem comunis Florentie’. For the 1204 settlement, see Santini, ed., 1895, *Capitoli*, no. 53, 1204 October 29-1204 November 7, pp. 139-143, esp. 139. On the forced migration of the inhabitants of the rural parish of Fibiiana to the *castrum* at Montelupo, see again Davidsohn, 1977, 1, p. 957, n. 1, citing a document of 1206 October 18 in the Archivio della Chiesa Collegiale di Empoli.

¹⁰⁴ On the armistice between Guido Burgognonis and Florence in June of 1204, and on an alliance that Guido formed soon thereafter with Pistoia in an effort to maintain his hold on Capraia, see again Davidsohn, 1977, 1, p. 957, n. 1, citing Francesco Antonio Zacharia, *Bibliotheca Pistoriensis*, 1752, 2, pp. 129-130, the second volumes of which I have not seen. For the submission of Guido to Florence in 1204, see again Santini, ed., 1895, *Capitoli*, no. 53, 1204 October 29-1204 November 7, pp. 139-143; no. 54, 1204 October 30, pp. 143-144.

¹⁰⁵ On the grant of usufruct, see again Santini, ed., 1895, *Capitoli*, no. 54, 1204 October 30, pp. 143-144, esp. 143. On the son Guido Burgognonis as *podestà* of Florence in 1205, see Santini, ed., 1895, p. xlvi.

The decline of imperial power in the territory of Florence also may have influenced developments elsewhere in the Florentine countryside. By 1200, for example, the Florentines had established relations with the Ubaldini lords of the Mugello north of the city. The Ubaldini promised to defend the Florentines and their goods in Ubaldini territory.¹⁰⁶ The treaty no doubt facilitated Florentine trading relations with cities and towns north of the Apennine Mountains in Romagna, which are securely attested for the first time in 1203.¹⁰⁷ Nearly fifteen years later, relations between Florence and the Ubaldini lords were still permitting the movement of goods from Romagna to Florence.¹⁰⁸

During the same period, the Florentines reached an agreement with Siena that was intended to stabilise the disputed frontier between the two territories.¹⁰⁹ Skirmishes between Florence and Siena along their frontier nevertheless continued unabated in the early years of the thirteenth century. Florence and Siena concluded another treaty in 1208, after Florentine victories in Sienese territory at Montalto della Berardenga in 1207 and at Rigomagno in the following year.¹¹⁰ The Florentines had also been called upon to assist their allies the Guidi counts to maintain their hold on the *castellum* of Montemurlo in the countryside of Pistoia during this period. Pistoia seized Montemurlo from the Guidi counts in 1203 or 1204, but the Florentines reconquered the *castellum* later in the same year, and they defended it from assaults launched from the newly constructed Pistoiese *castellum* of Montale until 1207, when Pistoia and the Guidi counts reached an

¹⁰⁶ Santini, ed., 1895, *Capitoli*, no. 32, 1200 October 15, pp. 59-60. Commercial relations between Florence and the Ubaldini are also discussed below, Chapter 7.3.1.

¹⁰⁷ For Evidence of Florentine trading relations with Bologna, see Muratori, ed., 1738-1752, 4, 1203 September 13, cols. 453-454; Savioli, ed., 1784-1795, 2, pt. 2, no. 353, s.d., p. 248. For evidence of trading relations between Florence and Faenza, see Santini, ed., 1895, *Capitoli*, no. 55, [1204], pp. 144-147. The document is undated, but Florence was represented in the treaty by Ildebrandinus Cavalcantis, *consul Florentie*, who is known to have held an office as Florentine consul in 1204. See Santini, ed., 1895, p. xlvii-xlviii.

¹⁰⁸ In 1217, members of the Ubaldini lineage agreed to adhere to a decision regarding tariffs on goods destined for Florence. See ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1217 May 3. See also Davidsohn, ed., 1896-1908, 3, no. 4, s.d., p. 2.

¹⁰⁹ See Santini, ed., 1895, *Capitoli*, no. 45, 1203 May 23, pp. 114-121; no. 47, 1203 June 4, pp. 124-127; no. 48, 1203 June 4-8, pp. 127-133; no. 49, 1203 June 6, pp. 133-136; no. 50, 1203 June 8, pp. 136-137. See also Davidsohn, 1977, 1, pp. 947-951, esp. 950.

¹¹⁰ See Davidsohn, 1977, 1, pp. 962-972. The *castellum* of Montalto della Berardenga lay east-northeast of Siena, just beyond Castelnuovo Berardenga, and Rigomagno was situated east-southeast of Siena near Sinalunga. On Montalto della Berardenga and Ricomagno, respectively, see Repetti, 1833-1845, 3, p. 315; 4, pp. 756-757. For the 1208 treaty between Florence and Siena, see Santini, ed., 1895, *Capitoli*, no. 58, 1208 October 13, pp. 150-163; no. 59, 1208 October 16, pp. 164-174.

arbitrated agreement.¹¹¹ The Guidi counts conceded Montemurlo to Florence in 1219, though the stronghold passed into Florentine possession only after the middle of the thirteenth century.¹¹²

Within the confines of the Florentine territory, however, the early thirteenth century was a period of relative calm, especially during the second decade of the century, which spurred Florentine demographic and economic growth. Inhabitants of the Florentine countryside, encouraged by urban expansion and perhaps even more by tax concessions, swore an oath of fealty towards the city in 1218.¹¹³ The allegiance of countryside, particularly rural lords, was an important step in the coalescence of urban and rural interests, but it was not universal, and in 1220, the Florentines were compelled to subdue by force the intransigent lord Scorcialupus of Mortennana, whose circuit of power was situated a short distance west of Castellina in Chianti.¹¹⁴ Other strategic parts of the Florentine countryside also

¹¹¹ See Davidsohn, 1977, 1, pp. 957-958. See also Villani, bk. 5, chap. 31: 'E in questo anno medesimo [1203] i Pistolesi tolsono il castello di Montemurlo a' conti Guidi; ma poco appresso, il Settembre, v'andarono ad oste i Fiorentini in servizio de' conti Guidi e riebbberlo, e renderlo a' conti Guidi. E poi nel 1207 i Fiorentini feciono fare pace tra' Pistolesi e' conti Guidi, ma poi non possendo bene difendere i conti da' Pistolesi Montemurlo, perocch'era loro troppo vicino, e aveanvi fatto appetto il castello di Montale, si 'l vendero i conti Guidi al comune di Firenze libbre cinquemila di fiorini piccioli, che sarebbero oggi cinquemila fiorini d'oro: e ciò fu gli anni di Cristo 1209, ma i conti da Porciano mai non vollono dare parola per la loro parte alla vendita'. For additional chronicle reports, see the *Annales Florentini* 2, p. 41; pseudo-Brunetto Latini, p. 223; *Gesta Florentinorum*, p. 273; Stefani, rub. 58-59; Paolino Pieri, p. 12; Malispini, chap. 93. The arbitrated agreement of 1207 is published in Santoli, ed., 1915, no. 18, 1207 August 3, pp. 13-14.

¹¹² See Santini, ed., 1895, *Capitoli*, no. 67, 1219 April 24, pp. 192-195. See also Ammirato, 1640, pp. 11-12, esp. 11; Ildefonso di San Luigi, ed., 1770-1789, 8, p. 136.

¹¹³ Villani, bk. 5, chap. 41: 'Negli anni di Cristo 1218, essendo podestà di Firenze Otto di Mandella di Milano, i Fiorentini feciono giurare tutto il contado alla signoria del comune, che prima la maggiore parte si tenea a signoria de' conti Guidi, e di quegli di Mangone, e di quegli di Capraia, e da Certaldo, e di più cattani che 'l s'aveano occupato per privilegi, e tali per forza degl'imperadori'. See also the *Gesta Florentinorum*, p. 273; Paolino Pieri, pp. 15-16; Malispini, chap. 102. Barbadoro speculated that these chronicle reports concern oaths of fealty undertaken in exchange for tax concessions that excluded noble households from the obligation to render certain communal taxes. See Barbadoro, 1929, p. 36. The concessions are attested in ASF, *Diplomatico*, Vallombrosa, 1219 March 10: 'super inposita datii et accaptus hominum alterius et alloderiorum atque civium salvaticorum et militum non nobilium comitatus Florentie tollenda'. The act is published in Santini, ed., 1897, no. 6, 1220 March 10, pp. 297-298. For more on the evolution of communal tax policy at Florence, see below.

¹¹⁴ Villani, bk. 5, chap. 42: 'Negli anni di Cristo essendo podestà di Firenze messer Ugo del Grotto di Pisa, i Fiorentini andarono a oste sopra uno castello degli Squarcialupi che si chiamava Mortennana, il quale era molto forte, me per forza e ingegno si vinse; e quegli che per suo ingegno l'ebbe, fu fatto a perpetuo franco d'ogni gravezza di comune, e egli, e' suoi discendenti; e 'l detto castello fu tutto disfatto infino alle fondamenta'. See also the *Annales Florentini* 2, p. 41; *Gesta Florentinorum*, p. 274; Stefani, rub. 67; Malispini, chap. 106. The Florentines returned to enforce the subjugation of Mortennana in 1254. See Villani, bk. 6, chap. 56; *Gesta Florentinorum*, p. 276;

remained outside of Florentine control. Poggibonsi, a large town of perhaps 6000 inhabitants, was still exercising sovereignty in 1224, and it was only after repeated assaults against Poggibonsi during the third quarter of the thirteenth century that Florence finally forced the town to submit to Florentine rule.¹¹⁵

In the Mugello, the Ubaldini lords continued to exercise a considerable degree of autonomy. Florentine relations with the Ubaldini had been for the most part good during the first half of the thirteenth century, as noted above, but they deteriorated after the death of the emperor Frederick II and the advent of popular government at Florence in 1250. Despite the destruction of the Ubaldini *castellum* of Montaccianico in 1251 and the submission to Florence in 1274 of nineteen Ubaldini communities, the Ubaldini continued to defy Florentine rule, using their strongholds in the Mugello to harass commercial traffic between Florence and Romagna.¹¹⁶ Early in the last quarter of the thirteenth century, ambassadors from Florence presented to the communal government at Bologna concerns about security on the roads between Florence and Bologna in their respective territories, owing to the hostile presence of the Ubaldini.¹¹⁷ In the early fourteenth century, for example, the Ubaldini were still exacting extortionate tolls along the roads north of Florence.¹¹⁸ In response to persistent Ubaldini intransigence and the obstruction of the trans-Appennine passages, the commune established new towns at Scarperia in 1306 and at Firenzuola in 1332 'ad reprimendum effrenandum

Stefani, rub. 107; Paolino Pieri, p. 29; Malispini, chap. 153. The area controlled by the lord of Mortenanna included the land in the parishes of Sant'Agnesa a Mortennana and San Quirico a Mortennana, both situated a short distance west of Castellina in Chianti. See Repetti, 1833-1845, 3, p. 447.

¹¹⁵ Poggibonsi was exercising a measure of sovereignty when it negotiated a commercial treaty with Florence in 1224, affording its citizens safe passage at Empoli and throughout the territory of Florence. See Santoli, ed., 1915, no. 210, 1224 June 21, pp. 166-167. On the population of Poggibonsi in the 1220s, see Fiumi, 1957-1959, pt. 2, p. 477; 1977, p. 99. On the repeated attempts of Florence to subordinate Poggibonsi 1254 to 1270, see Villani, bk. 6, chaps. 56, 63; bk. 7, chaps. 21, 36.

¹¹⁶ On Ubaldini hostility in the Mugello in 1251, see Villani, bk. 6, chap. 47. On the submission of nineteen Ubaldini communities to Florence in 1274, and for an enumeration of the communities, see Magna, 1982, p. 49, n. 145, citing ASF, *Capitoli* 29, fols. 260r-261v [1274 June 11]. Magna noted that the nineteen communities in question, which were concentrated in and around the upper valley of the river Santerno, were rural communes, and each of them was represented by a 'hominum comunis et universitatis' in the 1274 negotiations with Florence. She further noted that these communities, despite their submission to Florentine authority, remained firmly in the hands of the Ubaldini for many years thereafter. See Magna, 1982, pp. 49-50.

¹¹⁷ Davidsohn, ed., 1896-1908, 3, no. 92, 1276 March 3, p. 28.

¹¹⁸ See again Caggese, ed., 1921, bk. 5, rub. 94, pp. 422-423.

superbiam Ubaldinorum et aliorum de Mucello et de ultra alpes'.¹¹⁹ Ten years after the establishment of Firenzuola as a communal outpost, the Ubaldini responded to Florentine encroachments in what they clearly regarded as their territory by destroying the settlement.¹²⁰

The upper valley of the river Arno was likewise an area in which the Florentine commune experienced difficulty in establishing control. The town of Figline Valdarno had originally submitted to Florence in 1198, but Figline ceased to cooperate with the city in 1223 or 1224, and it resisted Florentine control until 1252 when the Florentines again forced its submission.¹²¹ Ties between Florence

¹¹⁹ For the text of the decision to construct the new towns of Scarperia and Firenzuola, see Friedman, 1988, app., no. 3, 1306 April 29, pp. 310-313, citing ASF, *Provisioni* 12, fols. 206r-v, 207v. Scarperia, attested as a market town already in 1186, was 'established' in September 1306, but Firenzuola was not established until 1332. For evidence of a market at Scarperia in the later twelfth century, see ASF, *Diplomatico*, Rifformagioni, Atti Pubblici, 1186 May 1. For a chronicle account of the new foundation at Scarperia, see Villani, bk. 8, chap. 86: 'E feciono fare i Fiorentini giuso al piano di Mugello nel luogo detto Scarperia, una terra per fare battifolle agli Ubaldini, e torre i loro fedeli, e feciongli franchi, acciocchè Montaccianico ma non si potesse riporre. E cominciassi la detta terra a edificare a di 7 di Settembre gli anni di Cristo 1306, e puosonle nome santo Barnaba'. Soon thereafter, Florence reached an accommodation with the Ubaldini in which the Ubaldini promised to maintain security along the trans-Appennine routes. See Villani, bk. 8, chap. 100: 'In questo medesimo tempo [1308] i signori Ubaldini s'accordarono co' Fiorentini, e vennero in Firenze a fare reverenza e le comandamenta del comune, e sodaro la cittadinanza di tenere il passaggio dell'Alpi sicuro, per idonei mallevadori. E'l comune di Firenze dimise e perdonò loro ogni misfatto, e accettogli per cittadini e distrittuali, loro, e' loro fedeli e terre, e che in ogni atto e fazione dovessero fare al comune come distrittuali e cittadini'. The plan to found another town at Firenzuola, 'nel cuore dell'Alpe', was executed after a breakdown in relations between Florence and the Ubaldini. See Villani, bk. 10, chap. 199; Stefani, rub. 490.

¹²⁰ See Hieronimus de Bursellis, p. 42: 'Ubaldini multa mala Florentinis inferentes Florentiolam in montibus destruxerunt'.

¹²¹ The history of Figline Valdarno in the twelfth and early thirteenth centuries is covered in Pirillo, 1992; Wickham, 1996. On the collapse in relations between Florence and Figline towards the end of the first quarter of the thirteenth century, see Villani, bk. 6, chap. 4: 'Negli anni di Cristo 1224, quegli di del castello di Fegghine in Valdarno, il quale era molto forte e possente di genti e di ricchezze, si rubellaro, e non vollono ubbidire al comune di Firenze; per la qual cosa nel detto anno, essendo podestà in Firenze messer Gherardo Orlandi, i Fiorentini per comune feciono oste a Fegghine, e guastarla intorno, ma non l'ebbero; e per battifolle, ovvero bastita, tornando l'oste de' Fiorentini a Firenze, si puosono i Fiorentini il castello dell'Ancisa, acciocchè al continuo colle masnade de' Fiorentini fosse guerreggiato il castello di Fegghine'. See also the pseudo-Brunetto Latini, pp. 226; *Gesta Florentinorum*, p. 274; Stefani, rub. 69; Paolino Pieri, p. 17; Malispini, chap. 110. On an unsuccessful attempt to force the submission of Figline to Florence in 1250, see Villani, bk. 6, chap. 38. See also the *Gesta Florentinorum*, p. 275; Stefani, rub. 87; Malispini, chap. 136. On the Florentine reconquest of Figline in 1252, see Villani, bk. 6, chap. 51: 'Nel detto tempo [1252], essendo usciti ghibellini di Firenze col conte Guido Novello della casa de' conti Guidi ritratti nel castello Fegghine, il quale era molto forte, e rubellatolo al comune di Firenze, essendo l'oste de' Fiorentini fuori sopra i Pisani, come detto è di sopra, tornata la detta oste vittoriosamente in Firenze, incontanente senza soggiorno andarano e puosonsi ad oste a Fegghine, e a qualla dirizzarono dificii, e diedonvi aspre battaglie; alla fine s'arrendero a patti d'andarne sani e salvi il conte co' forestieri, e' ghibellini usciti di tornare in Firenze per pace; e ciò

and Figline grew stronger in the succeeding years, and in 1259, Florentine officials were sent to Figline to redesign the important market of the town, which confirmed Florentine jurisdiction.¹²² During the Ghibelline period at Florence from 1260 to 1266, ties became stronger still as elite residents of Figline migrated to the city in considerable numbers.¹²³ The close relations between Florence and Figline after 1252 soon enabled merchants from Figline to establish commercial ties in France and to become the principal bankers of the French crown. Merchants from Figline are attested acquiring residential property at Paris first near Notre-Dame and then in the exclusive quarter of Saint Germain l'Auxerrois, from which they oversaw a lucrative export trade in Burgundian lambswool.¹²⁴

Despite the improved relations between Florence and Figline Valdarno, the upper Arno valley continued to be subject to sporadic insurgence. After the expulsion of the Ghibellines from Florence in 1266, the area was dominated by Ghibelline exiles. The Florentines launched assaults against the exiled Ghibellines at Sant'Ellero in 1267, at Ostina in 1269, at Piantravigne in 1270, and at Ganghereto in 1271.¹²⁵ Towards the end of the thirteenth century, the commune

fu, perchè più casati guelfi ch'erano terrazzani di Fegghine non piacendo loro la signoria de' ghibellini, cercaro il detto trattato. E chi disse che quegli della casa de' Franzesi, per moneta che ebbono da' Fiorentini, avevano ordinato di dare loro il castello; per la qual cosa il conte e gli usciti di Firenze vennero a' detti patti. E partitone il conte e sua gente, la terra fu contro a' patti rubata e arsa e abbattuta, e ciò fu alla signoria del detto messer Filippo degli Ugoni, del mese d'Agosto gli anni di Cristo 1252'. See also the *Gesta Florentinorum*, p. 276; Stefani, rub. 101; Paolino Pieri, pp. 26-27, esp. 27; Malispini, chap. 148.

¹²² For evidence of the despatch of Florentine officials to Figline to redesign the market, see Santini, ed., 1952, *Capitoli*, no. 87, 1259 March 11, pp. 260-261.

¹²³ Pirillo counted more than fifty recent immigrants from Figline in a single urban parish in the eastern part of Florence in 1267. See Pirillo, 1992, pp. 46-47.

¹²⁴ Pirillo, 1992, pp. 51-54.

¹²⁵ On the Florentine assault against Sant'Ellero in 1267, see Villani, bk. 7, chap. 19; Malispini, chap. 194. On Ostina in 1269, see Villani, bk. 7, chap. 32; *Gesta Florentinorum*, p. 280; Stefani, rub. 144; Paolino Pieri, pp. 37-38, esp. 38; Malispini, chap. 203, p. 169. On Piantravigne in 1270, see Villani, bk. 7, chap. 36; *Gesta Florentinorum*, p. 281; Stefani, rub. 148; Paolino Pieri, pp. 38-39, esp. 38; Malispini, chap. 207. Piantravigne, or 'Planum inter Vineas', was also called Pian di Mezzo. The plain was situated northeast of San Giovanni Valdarno and just south of the site of Castelfranco di Sopra. Piantravigne was one of two *castella* in this particular area of the upper Arno valley appertaining to the Pazzi lords, the other being Pian di Mezzo. Stefani reported that the second *castellum* was called 'Ristrucchioli'. The Florentines again attacked Piantravigne in 1302. See Villani, bk. 8, chap. 53. On the location of Piantravigne, see Repetti, 1833-1845, 4, pp. 183-184. On Ganghereto in 1271, see Paolino Pieri, pp. 24-25, esp. 24. See also Gaye, ed., 1839-1840, 1, app. 2, 1271 June 4, p. 415; Repetti, 1833-1845, 2, pp. 398-400, esp. 399. Exiled White Guelfs, the 'Bianchi', were still using Ganghereto as a base from which to harass merchants and other travellers in the upper Arno valley in the early fourteenth century. See *Storie pistoresi*, p. 34: 'In quel tempo [1303] li Bianchi di Firenze, che erano fuori per ribelli, erano molto moltiplicati: trovaronsi fare una mostra di quatrocento cavalieri, e cominciarono a fare grande guerra al

of Florence founded new towns at San Giovanni Valdarno, Castelfranco di Sopra, and Terranuova Bracciolini in the upper Arno valley primarily to constrain intransigent lords in the area to yield to Florentine rule.¹²⁶ The Florentines also deliberated upon but never realised the foundation of new towns in the upper Arno valley at Tartigliese near Figline Valdarno and in the Ambra valley near Bucine.¹²⁷

Urban landlordship over rural property probably facilitated the expansion of Florentine jurisdiction, but even the most established urban landlords were not always in harmony with the city. In the lower Arno Valley, for example, jurisdiction at Signa was contested in 1225 between the commune of Florence, the urban abbey of Santa Maria, and the rural commune of Signa.¹²⁸ Although a papal arbitrator granted jurisdiction at Signa to the abbey of Santa Maria, jurisdictional

contado di Firenze, e stavano in Gangareta, e spesso assallivano la strada, e pigliavano li mercantanti e le some che passavano per lo paese'.

¹²⁶ Moretti, 1980, pp. 24-26. For the deliberations of the communal consuls at Florence in August of 1285 concerning the establishment of new towns in the upper valley of the river Arno between Figline Valdarno and Montevarchi, see Gherardi, ed., 1896-1898, 1, pp. 276-277, 281-282, 284-285, 289-290. See also Gaye, ed., 1839-1840, 1, app. 2, p. 442; Friedman, 1988, app., no. 1, pp. 305-308, esp. 306-308. For legislation concerning the establishment of San Giovanni Valdarno and Castelfranco di Sopra in 1299, see Friedman, 1988, app., no. 2, 1298 January 26, pp. 308-310, citing ASF, *Provvisoni* 9, fols. 136r-137r. For the later establishment of Terranuova Bracciolini, see Friedman, 1988, no. 16, 1337 April 2, pp. 332-334, citing ASF, *Provvisoni* 28, fols. 152r-v. The sources give no clear indication of the reason for the establishment of these towns, but the legislation for their establishment explicitly prohibited lords from holding property in the towns: 'Providentes insuper et firmantes quod nullus de magnatibus civitatis vel comitatus Florentie possit seu audeat vel presummat in ipsis terris vel aliqua earum, alioquo modo, iure vel causa, per se vel alium, emere seu alio quocumque titulo, iure vel cause seu modo acquirere vel habere seu ad pensionem conducere vel tenere aliquam domum, terrenum seu casolare, ac etiam decetero, extra aliquam ipsarum terrarum infra seu prope duo miliaria aliquam fortilitiam seu domum construere, hedificare et facere seu hedificari et fieri facere aliquo modo, iure vel causa, non obstantibus aliquibus statutis ordinamentis seu consiliorum reformationibus, tam editis quam edendis, in predictis vel aliquo predictorum quomodolibet contradicentibus vel repugnantibus'. The passage is quoted from the legislation for the establishment of San Giovanni and Castlefranco, but the legislation for the establishment of Terranuova contains a similar passage. Among the unnamed lords to whom the texts refer were probably the Pazzi and Uberti. For chronicle accounts of the establishment of the new towns at San Giovanni and Castelfranco, see also Villani, bk. 8, chap. 17.

¹²⁷ On the never realised plans to establish a new town at Tartigliese, see Moretti, 1980, pp. 28-29. On discussions concerning the foundation of a new town to be called Giglio Fiorentino in the Ambra valley after the middle of the fourteenth century, see Moretti, 1980, p. 29. Documents related the planning of the new town of Giglio Fiorentino are published in Friedman, 1988, app., nos. 17-21.

¹²⁸ Santini, ed., 1895, *Miscellanea*, no. 21, 1225 May 15, p. 388; no. 22, 1225 October 31, pp. 388-389. Cf. ASF, *Diplomatico*, Badia di Firenze, under the same dates. The latter act granted jurisdiction at Signa to the abbey of Santa Maria, but the abbey never succeeded in imposing its jurisdiction, and jurisdictional rights at Signa eventually passed entirely to the Florentine commune.

rights at Signa passed entirely to the commune of Florence by 1252.¹²⁹ Urban landlords in the countryside, and especially the three principal ecclesiastical lords, nevertheless tended to operate in concert with the urban commune rather than against it. Not surprisingly, the most conspicuous example of seigniorial cooperation with the city comes from the Florentine bishops.

2.3.2. The bishops of Florence

The expansion and consolidation of the rural estates of the principal urban ecclesiastical lords doubtless facilitated the spread of Florentine jurisdiction in the countryside. The expansion of the episcopal estate nevertheless was clearly more important for Florence than the expansion of the estates of either the cathedral chapter or the urban abbey of Santa Maria. This is partly because the episcopal estate was much larger than the estates of the other urban ecclesiastical lords, but it is also because submission to the Florentine bishops, as already noted, entailed submission to urban authority.¹³⁰ In the eleventh and twelfth centuries, moreover, the urban commune was still struggling to define itself juridically, whereas the institution of the bishop was accepted by the German emperors from time immemorial. The commune pursued its aims through the bishops, or at least it depended heavily on the official and well-established importance of the bishops to legitimate its actions *vis-à-vis* the emperors.¹³¹

¹²⁹ By 1252, Signa was governed by a Florentine *potestà* assisted by a judge and a chamberlain, or treasurer, and the town was represented by a twelve member consulate. See ASF, *Diplomatico*, Cestello, 1252 May 5. See also Davidsohn, 1977, 4, pt. 1, pp. 362-363. The abbey of San Salvatore di Settimo had been investing heavily in property in and around Signa from the early thirteenth century, and particularly in the middle decades of the century. From perhaps as early as 1250, the abbey at Settimo had established an official relationship with the Florentine commune, which perhaps constituted merely the formalisation of pre-existing but more informal ties that nevertheless may have facilitated the passage of jurisdiction at Signa to the commune of Florence. The communal *camera*, or treasury, was reformed around 1250, after which monks of the abbey at Settimo were regularly appointed to the office of communal *camerarius*, or chamberlain. Giovanni Villani reported that Settimo monks alternated in the office with members of the *Umiliati* in six month terms from at least as early as 1266, but Davidsohn believed that the Cistercians of Settimo became associated with office of *camerarius* from the moment of the reform. For the chronicle report of Giovanni Villani, see Villani, bk. 7, chap. 16: 'In questo modo d'ordinò lo stato e corso del comune e del popolo di Firenze alla tornata de' guelfi: e camerlinghi della pecunia feciono religiosi di Settimo e d'Ognissanti di sei in sei mesi'. On the *Umiliati*, see below, Chapter 5.1.2. On the administration of the communal *camera*, see Davidsohn, 1977, 4, pt. 1, pp. 200-204, esp. 201.

¹³⁰ See again Davidsohn, 1977, p. 617.

¹³¹ Tabacco, 1979, pp. 397-427; 1989, pp. 321-344.

In the eleventh and early twelfth centuries, the bishops of Florence were under pressure from an increasingly powerful rural elite, particularly the Guidi and Cadolingi counts, and from the monasteries of the Vallombrosan order, which competed with the bishops for religious patronage. The bishops reacted by investing in parts of the countryside that bordered areas under the control of rival lords. They focussed their efforts on creating bulwarks against further Guidi expansion in the Mugello around Monte di Croce. They also sought to limit the extension of Cadolingi control in the lower Arno valley and in the valley of the river Elsa, and they wanted to counteract the expansion of the network of Vallombrosan monasteries throughout the Florentine countryside. The bishops needed to appeal particularly to members of the minor aristocracy who, like the bishops themselves, were threatened by the expansionist tendencies of the more powerful lords in the territory.

In the Mugello, the bishops may have used such a strategy to enlist the support of the Ubaldini lords and other members of the aristocracy against the Guidi counts.¹³² The Ubaldini were already vassals of both the margrave of Tuscany and probably also the Guidi when they became episcopal vassals in the eleventh century. For the Ubaldini, an alliance with the bishops may have served to protect them from Guidi encroachments.¹³³ The most visible manifestation of episcopal expansion in the Mugello was the acquisition of interests in several *castella* in the Sieve valley in the middle decades of the eleventh century. The new acquisitions lay in the area around Borgo San Lorenzo, where the bishops had held property from the middle of the tenth century. One of the *castella* was at Cerliano, situated less than ten kilometres northwest of Borgo San Lorenzo near Scarperia, in the heart of what would later become Ubaldini dominated territory. The other two

¹³² The lesser aristocracy turned to the bishops for protection no doubt for a variety of reasons, but it is important to note that the bishops, as an extension of urban government, had a comparative advantage in the provision of protection, at least in parts of the countryside that were not under the control of rival lords. See North, 1981, p. 21; 1991, pp. 24-25. The bishops also benefited from economies of scale in the provision of protection. As a single producer catering to a large market, the bishops were able to provide protection to the lesser aristocracy more cheaply than members of the lesser aristocracy were able to provide their own protection. See Lane, 1958.

¹³³ Feudo-vassalic ties between the Ubaldini and the Guidi are not securely attested, but Magna inferred a relationship between the two patrilineages from the fact that the Ubaldini occupied some possessions of the Guidi in the twelfth century. It is also possible, however, that jurisdiction over the sites at which Guidi and Ubaldini possessions overlapped was divided. On the feudo-vassalic relations of the Ubaldini in the eleventh and twelfth centuries, see Magna, 1982, pp. 27-28. Dameron speculated that the Ubaldini attached themselves to the Florentine bishops to protect properties that they held independent of their feudo-vassalic ties to the Guidi from Guidi expansion. See Dameron, 1991, pp. 44-45.

castella lay east of Borgo San Lorenzo, at Vespignano and at Ampinana, and they were probably intended to discourage the expansion of the Guidi estate in the middle Sieve valley.¹³⁴ The bishops also may have sought to obstruct the expansion of the Vallombrosan order in the mountains above the Mugello around the middle of the eleventh century.¹³⁵

During the same period, the bishops of Florence also acquired rights in the *castella* at Ripoli in the Pesa valley near Campoli and at Cercina just above the Sesto plain northwest of Florence, and they established a foothold in the Elsa valley by creating the baptismal church of Sant'Ippolito di Castelfiorentino. The acquisition of the *castellum* at Ripoli by the bishops in 1054, like the contemporary acquisitions of *castella* in the Mugello, was probably intended to deter hostile seigniorial expansion in the Pesa valley. The seigniorial presence in the middle Pesa valley was negligible around the middle of the eleventh century, but the Aldobrandeschi counts and especially the Vallombrosan abbey at Passignano controlled the upper Pesa valley. With the acquisition of Ripoli, the bishops sought to temper the influence of both the Aldobrandeschi and Passignano in the area.¹³⁶

¹³⁴ The effort was only partially successful. The episcopal presence at the *castellum* of Vespignano is attested for the first time in proscriptions against the sale of episcopal interests at Vespignano, which suggests that the bishops were experiencing difficulty in maintaining control of their portion of the *castellum*. Even more telling of the weak purchase held by the bishops in the middle Sieve valley was their failure to gain complete control of the *castellum* at Ampinana. In 1230, the Guidi held at least a portion of Ampinana, but the *castellum* effectively marked the westernmost extent of Guidi possessions in the Mugello. They controlled a few other scattered enclaves farther west and above the Mugello along the trans-Appennine passages, but the concentration of Guidi holdings in the middle Sieve valley extended only as far as Ampinana. On the acquisition of *castella* in the Mugello by the Florentine bishops in the eleventh century, see Dameron, 1991, pp. 45, 226-227, nn. 116-117. On the *castella* at Ampinana, Vespignano, and Cerliano, respectively, see Francovich, 1973, pp. 76, 141-142, 150. For evidence that the Guidi owned at least a portion of the *castellum* of Ampinana in 1230, see Santini, ed., 1897, no. 10, 1230 March 19, pp. 303-305, esp. 304.

¹³⁵ The Vallombrosan abbey of San Pietro di Moscheta was constructed above the Santerno river valley between 1048 and 1050, and San Paolo di Razzuolo is attested as a Vallombrosan institution after 1047. See Vasaturo, 1962.

¹³⁶ The precise location of *castellum* at Ripoli is unknown, but it is known to have been situated near Campoli. See Francovich, 1973, p. 130; Repetti, 1833-1845, 4, p. 778. On the acquisition of Ripoli, see Dameron, 1991, p. 45. The estate of the Aldobrandeschi counts, as already noted above in this chapter, was concentrated in the Maremma around Grosseto, but the Aldobrandeschi also possessed enclaves near frontier of the dioceses of Florence, Siena, and Volterra. On the extent of Aldobrandeschi possessions before about 1130, see Collavini, 1998, pp. 164-174. In 1098, the Aldobrandeschi conceded to the bishops of Florence properties at Fabbrica. See Davidsohn, 1977, 1, p. 423; Collavini, 1998, p. 170. On the extent of the Passignano estate in the eleventh century, see Conti, 1965, *passim*.

Episcopal expansion at Cercina and on the Sesto-Campi plain likewise may have been intended to diminish the influence of the Vallombrosan order in the lower Arno valley.¹³⁷ San Salvatore di Settimo was originally founded sometime after 998, and it became attached to the Vallombrosan order between 1040 and 1046. The abbey was still under the Vallombrosan regime in 1076, but it was no longer attached to the order by 1090.¹³⁸ It is nevertheless clear that Settimo was supported by the Cadolingi counts in the eleventh century.¹³⁹ It also clear that the Florentine bishops sought to limit the influence of Vallombrosan monasteries particularly in the immediate vicinity of the city. This can be inferred first by the fact that pope Gregory VII placed the Vallombrosan order under the direct authority of the papacy in 1085 in order to prevent episcopal encroachment.¹⁴⁰ Secondly, in 1102, pope Paschal II (1099-1118) issued a bull of protection to Settimo that was specifically intended to safeguard the abbey from episcopal interference.¹⁴¹ The abbot of Settimo may have solicited the papal bull in order to avoid continued episcopal encroachment of the sort that had perhaps already resulted in the departure of abbey from the Vallombrosan order. The expansion of the episcopal estate in lower Arno Valley was designed to counterbalance the threat posed not only by Settimo but also by the Cadolingi counts, who had possessions near Settimo at Mantignano and Montecascioli and controlled extensive properties farther downstream around Fucecchio.¹⁴²

¹³⁷ On the *castellum* at Cercina, see Francovich, 1973, pp. 86-87; Repetti, 1833-1845, 1, p. 655.

¹³⁸ Vasaturo, 1962, pp. 463-464. See also Davidsohn, 1977, 1, pp. 218-220, 278. Whereas the abbey at Settimo had departed from the Vallombrosan order by 1090, the abbey of Santa Trinita, extant from 1047 and situated in the Oltrarno in what were the Florentine suburbs in the eleventh century, is securely attested as a Vallombrosan institution in 1092. The circumstances surrounding the departure of Settimo from the Vallombrosan order are obscure, but it is interesting to consider whether the appearance of Santa Trinita as a Vallombrosan abbey was related in any way to the departure of Settimo from the order, perhaps as compensation to the order for the loss of Settimo. It is nevertheless notable that the larger Vallombrosan institutions in the Florentine countryside, at least after the departure of Settimo from the order, all lay in the diocese of Fiesole.

¹³⁹ Pescagliani Monti, 1981, p. 196; Chiappelli, 1932, p. 122.

¹⁴⁰ Kehr, ed., 1908, p. 51; Jaffé, ed. 1885-1888, 1, no. 5313, 1085 May 9. See also Davidsohn, 1977, 1, p. 425; Dameron, 1991, p. 56.

¹⁴¹ Dameron stated that the papal bull was issued to San Salvi, a Vallombrosan abbey in the eastern suburbs of Florence. See Dameron, 1991, pp. 56, 229, n. 160, citing ASF, *Diplomatico*, Cestello, 1102 March 6: 'Porro laborum vestrorum decimas vobis ob pauperum unus retinendas absque episcopi cuiuslibet contradictione concedimus'. A published transcription of a papal bull issued on the same date containing the identical passage nevertheless identifies the abbey at Settimo as the recipient of the bull. The editor also cites the same source cited by Dameron. See Pflugk-Hartung, ed., 1881-1886, 2, no. 213, 1102 March 6, pp. 176-177, esp. 177.

¹⁴² Pescagliani Monti, 1981, pp. 194-195; Chiappelli, 1932, pp. 119-120.

In the Elsa valley, the Florentine bishops created the baptismal church of Sant'Ippolito di Castelfiorentino in 1036 to increase their influence in a strategic part of the countryside on the via Francigena and to undermine Cadolingi power in the area.¹⁴³ Sant'Ippolito was placed under the jurisdiction of the cathedral chapter of Florence in 1050, but pope Nicholas II (1059-1061) restored sole jurisdictional rights at Sant'Ippolito to the Florentine bishops when he confirmed the possessions of the baptismal church in 1059.¹⁴⁴ The bishops were leasing property in the Elsa valley from before the middle of the tenth century, but the episcopal presence there remained negligible in the later eleventh and early twelfth centuries, probably because Cadolingi influence in the area left little scope for manoeuvre.¹⁴⁵

Moreover, episcopal penetration into the Elsa valley before 1135 was hampered by the sheer distance of the valley from Florence and especially by obstructions to communications on the via Volterrana at Montegufoni. It is noteworthy that the pacification of the Ormanni lords at Montegufoni by Florence in 1135 was followed almost immediately by the enlargement of the patrimony of Sant'Ippolito by the Florentine bishops.¹⁴⁶ The advance of episcopal interests in the Elsa valley in the twelfth century nevertheless was negligible in comparison with episcopal expansion in the Mugello, in the Pesa valley, and on the Sesto-Campi plain. This was no doubt because seigniorial power in the area, which had passed from the Cadolingi to the Alberti after 1113, was still too formidable. It was only in the thirteenth century, after the Florentine commune had reached an

¹⁴³ Kehr, ed., 1908, p. 58; Ughelli, ed., 1970, 3, coll. 55-56.

¹⁴⁴ Dameron, 1991, pp. 46-47. For the confirmation of the rights of Sant'Ippolito by Nicholas II, see Pflugk-Harttung, ed., 1881-1886, 2, no. 123, 1059 December 11, pp. 89-90.

¹⁴⁵ On the weakness of the episcopal presence in the Elsa valley in the eleventh and twelfth centuries, see Nelli, 1995, pp. 119-121.

¹⁴⁶ In 1126, thirteen years after the death of the last of the Cadolingi line, a noblewoman named Zabollina, who was the widow of a Cadolingi associate, donated to the bishops properties in the Elsa valley at Cinciano and Linari. She also donated to the bishops her interest in the *castellum* at Timignano, which would become the *castrum Florentini*, or Castelfiorentino. The donations were probably intended to safeguard the properties from Alberti encroachment. To administer and protect these properties, and to expand their influence in the Elsa valley more generally, the bishops increased the patrimony of Sant'Ippolito as soon as it was prudent to do so. The opportunity came in 1136, a year after the Florentines had subjugated the Ormanni at Montegufoni. On the enlargement of the patrimony of the baptismal church, see Nelli, 1995, p. 120. On the subjugation of the Ormanni in 1135, see above, Chapter 2.2.2. On the donations to the bishops from Zabollina, see Dameron, 1991, pp. 83-84.

accord with the Alberti counts, that the bishops aggressively began to increase their influence in the Elsa valley.¹⁴⁷

All of this is important because the episcopal estate expanded in the twelfth and thirteenth centuries in the areas relatively free of seigniorial domination that were nevertheless threatened by seigniorial expansion. The Florentine bishops developed properties and rights in the Mugello around Borgo San Lorenzo to frustrate the expansion of the Guidi counts and perhaps also to check the emergence of Vallombrosan institutions in the Apennines around the middle of the eleventh century. To the south, the bishops expanded in the area around San Casciano in Val di Pesa and Campoli to arrest the northward penetration of the Aldobrandeschi counts and especially the Passignano estate into the diocese of Florence. The extension of the episcopal influence farther south in the Pesa valley also served to impede first Cadolingi expansion, and then, after 1113, Alberti expansion. On the Sesto-Campi plain, the growth of the episcopal estate was designed first to temper the enlargement of the Cadolingi and Settimo estates, and later to obstruct the development of the Alberti estate. In the Elsa river valley, the bishops likewise established the baptismal church at Sant'Ippolito di Castelfiorentino and then acquired properties and rights in the area, slowly at first but more aggressively in the thirteenth century, to thwart Cadolingi expansion at first and then to bridle the aspirations of the Alberti counts.¹⁴⁸

The expansion of the episcopal estate from the eleventh through the thirteenth century was intended not merely to create bulwarks against the extension of rival seigniorial control in the diocese. The bishops also wished to exploit some of the most fertile land of the Florentine countryside, and they wanted to deprive rival lords of the opportunity to do the same. The Mugello, the Pesa valley, the Sesto-Campi plain, and the Elsa valley were all agriculturally rich, and lowlying parts in each of these areas were probably already being drained for cultivation in the eleventh century, if not earlier.¹⁴⁹ The bishops used their acquisitions in these

¹⁴⁷ Dameron, 1991, pp. 83-84, 107-110; Nelli, 1995. Episcopal expansion at Castelfiorentino in the thirteenth century also may have entailed the acquisition of rights to tolls, which were controlled by the bishops of Volterra in 1190. See Lami, ed., 1758, 1, pp. 343-344.

¹⁴⁸ The expansion of the episcopal estate in the Mugello, in the Pesa Valley, on the Sesto-Campi plain, and in the Elsa valley in the twelfth and thirteenth centuries is covered in Dameron, 1991, pp. 77-90, 93-118, 159-183.

¹⁴⁹ The *Libro di Montaperti*, which lists quantities of grain that communities in the Florentine countryside were obliged to contribute for the provisioning of Montalcino during a Sieneese siege, gives perhaps the best impression of the relative levels of grain production of different areas in the countryside. The upper Pesa valley around San Pietro a Bossolo, where the bishops established a

areas to exploit the urban grain market. They were collecting annual grain rents for leased property in the Pesa valley as early as 1142, even though rents in much of the Florentine countryside were still paid in coined money rather than grain until about 1200.¹⁵⁰ The commutation of traditional rents for leased property from specie and services to grain in the early thirteenth century is a further example of episcopal exploitation of the urban grain market.¹⁵¹ In the early fourteenth century, the bishops even maintained a granary either in the Mugello itself or nearby, perhaps at Vaglia on the road between Florence and San Piero a Sieve.¹⁵²

Because submission to the Florentine bishops also entailed submission to urban authority, the expansion of the episcopal estate clearly indicates the extension of urban influence in the countryside. According to Davidsohn, the secular elite in the city of Florence had begun to insinuate themselves in episcopal affairs from the early eleventh century, and the bishops were using communal courts to settle their disputes by the later twelfth century.¹⁵³ After 1180, the bishops began

considerable presence in the course of the twelfth century, and the middle Elsa valley around Castelfiorentino were exceptionally well suited for cereal cultivation. The area in the immediate vicinity of Borgo San Lorenzo was also fertile, though production elsewhere in the Mugello, particularly away from the river Sieve, was attenuated by the upland nature of the land. See Paoli, ed., 1889, pp. 103-177. On episcopal expansion around San Pietro a Bossolo, see Dameron, 1991, pp. 80-81. Land reclamation in lowlying parts of the Florentine countryside is discussed below, Chapter 4.2.1.

¹⁵⁰ For a grain rent on property at Campoli in 1142, see ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 42v [1142 August 28]. From about 1200, rents on leased property in the Florentine countryside were most commonly stipulated in grain, but the diffusion of grain rents in the territory of Florence was relatively late. At Lucca, rents for leased property were stipulated in grain already in the eleventh century, and the transition was virtually complete by 1100. See below, Chapter 4.2.3.1. It is plausible that the appearance of grain rents in the Pesa valley from 1142 was related to the Buondelmonti submission to Florence in 1135, which eliminated tolls and tariffs on the road between the Pesa valley and the city of Florence at Montebuoni. The tariff at Montebuoni probably made it unprofitable to transport grain from the Pesa valley to city for resale on the urban grain market. On the Buondelmonti submission to Florence, see above, Chapter 2.2.2.

¹⁵¹ See below, Chapter 4.2.3.2.

¹⁵² The exact location of the granary is unclear, but the source in which the reference to it occurs, the episcopal *Bullettone*, is organised geographically. The entry in which the granary is attested is in the section for Vaglia and concerns a recognition of dependency to the bishop by 'Cancell[us] Corsellini Bongianis de Vaglia', who was obliged to deliver his grain rents 'in granario dicti episcopatus'. It also may have been located at nearby Borgo San Lorenzo or San Piero a Sieve, which were both important market towns, and they would have afforded easier access to the river Sieve for the transport of grain to Florence. It is also possible that the granary was situated in Florence itself, but the fact that there are no other references to the episcopal granary in sections of the *Bullettone* covering other parts of the diocese suggests a location in or near the Mugello. See ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 77r [1313 October 30].

¹⁵³ On the insinuation of lay urban leaders in episcopal affairs, see Davidsohn, 1977, 1, p. 504. On the use of communal courts by Florentine bishops by the later twelfth century, see Dameron, 1991, pp. 91-92.

to experience increased resistance to episcopal lordship in many parts of the countryside, no doubt as the threat of encroachment from rival lords diminished dependency on the bishops for protection. The bishops were confronted by strong local resistance to episcopal lordship in the early thirteenth century at Sesto, Querceto, and Campi on the Sesto-Campi plain; at Borgo San Lorenzo, San Cresci di Valcava, and Monte di Croce in the Sieve valley; at Castelfiorentino in the Elsa valley; at San Pietro a Bossolo, Petriolo, and San Casciano in Val di Pesa.¹⁵⁴ Against most cases of resistance, the bishops appealed to the Florentine courts or communal representatives, which generally supported episcopal claims, but they also may have occasionally requested Florentine military intervention to quell resistance.¹⁵⁵ The commune supported episcopal interests in the countryside because they coincided with communal interests. Communal support of the bishops was based largely on the fact that the commune depended on the bishops for the collection of the *datium*, an imperial tax appropriated by its collectors in many parts of the countryside in the twelfth century, especially after the collapse of imperial power in Tuscany in 1197. The bishops proved to be reliable collectors of the *datium*, which they undertook on behalf of the Florentine commune throughout the episcopal estate by 1200.¹⁵⁶

2.3.3. Taxation

The admittedly meagre evidence from the early twelfth century suggests that only a handful of comital lords were capable of mounting any serious resistance against the city. Even the powerful Guidi and Alberti counts, after putting forth substantial efforts to resist Florentine encroachment on their jurisdictional rights, eventually preferred to reach an accommodation rather than to perpetuate troublesome and no doubt costly confrontations. The examples of resistance stand apart from the probably far more numerous examples of cooperation and compliance pre-

¹⁵⁴ Resistance to episcopal lordship in these areas of the Florentine countryside in the early thirteenth century is discussed in Dameron, 1991, pp. 95-118.

¹⁵⁵ On the intervention of Florentine courts or communal representatives to suppress resistance to episcopal lordship, see Dameron, 1991, pp. 96-97, 100, 104, 106-107, 108-109, 113, 115. The Florentines destroyed the newly constructed *castellum* of Bossolo at San Pietro a Bossolo in 1219, and Dameron speculated that the Florentine assault was in response to an attempt by the community to gain independence from the bishops of Florence. See Dameron, 1991, p. 112. On the *castellum* of Bossolo, see Francovich, 1973, p. 80.

¹⁵⁶ The Florentine bishops were collecting the *datium* as early as 1195, though probably on behalf of the emperor rather than the commune. See Davidsohn, 1977, 1, p. 1010, n. 3: 'datium impositum per imperatorem'. See also Conti, 1985, pp. xii-xiv; Dameron, 1991, pp. 76, 89, 99, 123.

cisely because they are recorded in the documentary evidence and reported in the chronicles. There was little need to preserve the records of voluntary submissions to Florentine authority, and the chroniclers no doubt regarded these submissions as unexceptional.

The evolution of communal tax policy in the countryside to the middle of the thirteenth century was characterised by the gradual withdrawal of the exemption from the *datium* initially granted to *nobiles et milites* to encourage their submission to urban jurisdiction, and the introduction of a graduated tax assessed on the basis of status. From 1250, the commune also increased exactions from ecclesiastical lords, who were probably exempt from most communal taxes before the middle of the century, except perhaps from levies for extraordinary expenditures during periods of war. The changes in Florentine fiscal policy in the later twelfth and early thirteenth centuries suggest considerable improvements in the administrative infrastructure in the territory, and they also constitute further evidence for the expansion of urban jurisdiction in the countryside.

2.3.2.1. The removal of the exemption for the nobility

In the twelfth century, the demands that Florence imposed upon its subjects probably were not very onerous. The commune required its subjects to swear allegiance to the commune and to defend its interests, to perform military service when necessary, and to make war or peace only with the approval of the commune. Rural lords who submitted to Florentine jurisdiction only under duress were at least occasionally required to establish a residence in the city and to reside in the city for part of each year, especially when the city was at war. The earliest submissions to Florentine authority are attested for the most part only in the chronicle sources, and documentary evidence for them is virtually non-existent. Even as late as 1174, however, the submission of the lords of Martignano evidently entailed no fiscal concessions.¹⁵⁷ It was only in the last quarter of the twelfth century that submission to Florence unambiguously began to entail fiscal concessions. Fiscal exactions in the countryside, whether in the form of annual tributes or direct taxes, serve as an important indication of the extent of Florentine jurisdiction.

¹⁵⁷ Santini, ed., 1895, *Capitoli*, no. 8, 1174 April 7, pp. 10-11. The lords of Martignano were nevertheless required to provide accommodation for Florentine consuls or their representatives.

By about 1180, submission to Florentine authority typically included some sort of fiscal concession. They sometimes took the form of an annual tribute, as in the cases of Empoli in 1182, Mangona in 1184, and Certaldo in 1198.¹⁵⁸ The submissions of the Alberti counts to Florence in 1184 and 1200 included an obligation to consign to the commune half of all revenues collected from Alberti possessions situated ‘inter Arnun et Elsam’ for a specified period of the year, first for three months and then ultimately for four months.¹⁵⁹ Bernardo Barbadoro identified this payment with the imperial *datium*, which had been abandoned by the emperors and usurped by the commune by the end of the twelfth century.¹⁶⁰ Florence

¹⁵⁸ In 1182, the residents of Empoli were required to render to Florence an annual tribute of fifty *libre* in the money current at Florence and one church candle for the church of San Giovanni on or just before the feast of San Giovanni on 24 June. Two years later, the inhabitants of Mangona were required to render a payment of one pound of pure silver and one church candle on the feast of San Giovanni, and they were obliged to provide accommodation for the Florentine consuls and their assistants once each year. The submission of the Alberti *castellum* at Pogna in 1182 included no tribute requirement, probably to encourage compliance, but the abrogation of the submission resulted in the forced subjugation of Pogna in 1184 and a much broader Alberti submission that included fiscal concessions. The Alberti submission of 1184 and 1200 are discussed below. The subscription of Certaldo to the ‘societatis Tuscie’ in 1198 obliged the residents of the town to render to Florence ‘omni anno pro accatu de Certaldo et eius districtu comunis vel camerario comunis sine malitia in festo sancti Iohannis vel ante duas libras boni argenti, et I cereum in festo sancti Iohannis mensis iunii unius duodene ecclesie sancti Iohannis de Florentia’. For the submissions of Empoli, Mangona, and Certaldo, respectively, see again Santini, ed., *Capitoli*, no. 12, 1182 February 5, pp. 17-18, esp. 18; no. 15, 1184 October 28, pp. 24-25; no. 26, 1198 May 11, pp. 46-47, esp. 47.

¹⁵⁹ Santini, ed., 1895, *Capitoli*, no. 16, 1184 Novembre, pp. 25-26, esp. 25: ‘Item dabimus et promittimus et concedimus omni anno consulibus Florentie et rectoribus qui pro tempore erunt, dari et acatari perpetuo omnes terras castella villis et homines quas habemus et tenemus vel alii per nos inter Arnun et Elsam; et cum eis erimus ad faciendum ad tollendum ipsum accatum et datium ad voluntatem consulum et rectorum Florentie; de quo accato et datio medietas habent consules seu comunis Florentie, et alia medietas habemus nos comus Albertus et Guido et Maginardus; et ipsum accatum et datium debeat tolli a kalendas madii usque ad kalendas augusti et antea infra ipsum terminum’. See also Santini, ed., 1895, *Capitoli*, no. 27, 1200 February 12-23, pp. 48-51, esp. 49: ‘Item iuramus facere datium comuni Florentie ad dictum sapientis eorum cum personis necessariis ut possint tollere accatum hominibus et terris omnibus quas habemus et ad nos pertinent inter Elsam et Arnun et addatiare eos; de quo datio et accatu medietas sit comunis Florentine civitatis et altera medietas sit mea dicti comitis Alberti et filiorum meorum, detractis tamen expensis hinc inde sine malitia et salvis rationibus et usuariis quas comunis Florentie habet et solitus est habere in eis terris et hominibus’. The period during which half of Alberti revenues are to be rendered to Florence is not indicated in this document, but it is noted in Santini, ed., 1895, *Capitoli*, no. 29, 1200 February 12-23, pp. 53-56, esp. 54: ‘Et in super donasse tradidisse et concessisse simili modo vobis pro predicto comuni Florentie recipientibus ius percipiendi exigendi et tollendi datium et accatum singulis annis a kalendis madii usque ad pertotum mensem augusti de omnibus terris villis castellis et hominibus atque rebus quas nos habemus et ad nos pertinent inter Arnun et Elsam’.

¹⁶⁰ Barbadoro, 1929, p. 19. The identification of this payment with the *datium* nevertheless fails to explain its seasonal aspect, and it hinges partly upon the understanding that an unspecified exemption in the treaty concerned an exemption from the hearth tax for members of the nobility attested in 1198. The exemption is discussed at greater length immediately below.

may have been exacting the imperial *datium* from rural households in certain parts of its surrounding countryside from as early as 1156.¹⁶¹ The ability of the Florentine commune to exact this payment from rural inhabitants probably hinged on the strength of imperial power in Tuscany. The evidence for the Florentine usurpation of the imperial *datium* in 1156, for example, is dated from just a few months after the emperor Frederick I had completed a year long sojourn in Italy.¹⁶² The assertion of imperial power at Florence in 1185, by contrast, rendered it more difficult, and perhaps even impossible, for the Florentines to collect the *datium* from many parts of the countryside, but the collapse of imperial power after the death of the emperor Henry VI in 1197 probably removed most obstacles.

By the end of the twelfth century, the *datium* was synonymous with the *focaticum*, or hearth tax, which obliged rural households to render an ordinary tax of twenty-six *denarii* each year.¹⁶³ In the Florentine countryside, the hearth tax is first attested in the subscription of Figline Valdarno to the 'societatis Tuscie' in 1198, less than seven months after the death of Henry VI.¹⁶⁴ In addition to the ordinary hearth tax, rural households also may have been expected to render up to an additional ten *denarii* each year towards extraordinary imposts, for example to offset the expenses of public works. When the emperors demanded payment of the *fodrum* or when it became necessary to meet expenses incurred as a consequence of war, the commune was able to exact even greater tax contributions from rural households.¹⁶⁵ In the early thirteenth century, some rural communities in the

¹⁶¹ Most historians agree that the payment of a *fodrum* required by a lease dating from Monteficelle, near Greve in Chianti, just after the middle of the twelfth century concerns the payment of the imperial *datium*. See ASF, *Diplomatico*, Badia di Passignano, 1155 January 17: 'fodero pro civitate Florentia et pro marchione et rege'. The weakness of imperial power at Florence early in the reign of Frederick I Barbarossa no doubt facilitated the collection of the *fodrum* from compliant communities in the Florentine countryside.

¹⁶² Frederick I was in Italy from October 1154 to September 1155. See Opll, 1978, pp. 13-18; Brühl, 1968, 1, p. 580.

¹⁶³ According to Barbadoro, the wide diffusion of the *datium* of twenty-six *denarii* per hearth not only in Tuscany but also in other parts of north-central Italy attests to its imperial origins. See Barbadoro, 1929, pp. 26-27.

¹⁶⁴ Santini, ed., 1895, *Capitoli*, no. 24, 1198 April 10, pp. 42-43, esp. 42: 'Item de XXVI denariis pro focolare iuramus dare et facere dare comuni Florentie toto tempore ad comandamentum consulum Florentie vel rectoris seu rectorum pro tempore existentium, exceptis focolaribus militum et masnaderium sine fraude. Item dabimus vel dare faciemus medietatem de pedagio et guida et passadio atque mercato secundum quod impositum et statutum fuerit a consulibus vel rectoribus Florentie civitatis concorditer cum consulibus vel rectoribus seu rectore Figinensium'.

¹⁶⁵ Circumstances in the Florentine countryside are unclear, but already before the end of the twelfth century, Pistoia had prohibited taxes in excess of thirty-six *denarii* per household, except on occasions when the emperors demanded payment of the *fodrum* or in times of war. See Fiumi,

Florentine countryside were meeting the cost of an annual tribute to Florence through the collection of the hearth tax. At Luco di Mugello, for example, an arbitrated settlement between the convent of San Pietro di Luco and the consuls of Luco in 1210 required the consuls to render to the convent two thirds of the *datium*, which Davidsohn suggested was used to pay an annual tribute to the city.¹⁶⁶ A few years later, officials at nearby Borgo San Lorenzo agreed to assist in the collection of the *datium* imposed by the bishop of Florence.¹⁶⁷

Significantly, members of the nobility were exempt from the hearth tax.¹⁶⁸ The exemption from Florentine jurisdiction for *nobiles et milites* was recognised already in the restoration of limited urban jurisdiction in the countryside granted

1957, p. 331. By 1214, the statutes of Volterra likewise prohibited tax contributions exceeding thirty-six *denarii* per year unless the emperors demanded payment of the *fodrum* or unless the commune was at war. See Fiumi, ed., 1951, pp. 72-73: 'Et ponimus quod consules vel potestas non debeant nec debeat tollere datium, nec tolli facere, in civitate Vulterre et in eius confinibus, ultra III solidos per focum in anno: set illos possint tollere vel tolli facere, facta inde positione et divisione a bailitoribus datii, prout melius visum fuerit ei secundum divitem et secundum pauperem. Salvo quod possint vel possit tollere datium, vel tolli facere, pro facto imperatoris et pro facto guerre comunis'. The evidence for Florence gives no indication of the maximum tax contribution to be rendered by rural households in the Florentine countryside, but the document of 1156 indicates that the contribution was 'secundum quod faciunt alios suos homines pro comune terre secundum suam possibilitatem et non amplius'.

¹⁶⁶ Davidsohn, 1977, 1, p. 1012. See also ASF, *Diplomatico*, Monache di Luco, 1209 March 11: 'Quos et quas consules predicti gravabant de datio et accatto pro supradicto communi ultra quam deberent. Que differentia lis et causa cum esset satis agitata fuit data et commissa ad laudandam et finiendam arbitrio Belli eiusdem ecclesie et monasterii conversi [Luchi] et Giannini Martini et Orlandi qui iusis et auditis allegationibus utriusque partis laudaverunt diffinierunt sic. Nos Bellus Gianninus et Orlandus laudamus arbitramus et dicimus quod semper in infinitum Consules de Luco imponant hominibus predictis datium et accattum sicut aliis hominibus eiusdem terre sine malitia imposita vero facta consules Luchi accipiant nuntium abbatisse ad faciendam collectam tempore oportuno. Facta aut collecta venidentur [sic] domine abbatisse et ipsa duas partes habeat tertiam que det consulibus de Luco datium viginti sex denar[iorum] habat semper abbatissa et faciat colligi'.

¹⁶⁷ ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 80v: 'Qualiter Marinus iudex et plures alii rectores Burghi Sancti Laurentii de Mucello iuraverunt recolligere et adiuvere recolligi datium et impositum annuatim domini Episcopi et Episcopatu Florentii. Sub MCCXIII quarta kalendas Julii. Indictione prima'.

¹⁶⁸ In special cases, the exemption was also considered for non-nobles. In the early thirteenth century, Florentine officials granted the privilege of immunity from every *datium* to the heirs of certain men from San Donato in Poggio and Rossiano in recognition for services rendered to the commune of Florence during attacks against Semifonte. See ASF, *Diplomatico*, Acquisto regio, 1201 February 1; Stroziane Ugucione, 1202 March 1. The latter act is published in Santini, ed., 1895, *Miscellanea*, no. 7, s.d., pp. 369-372. The exemption was confirmed fifty years later in ASF, *Diplomatico*, Stroziane Ugucione, 1253 August 13. This act is also published in a footnote in Santini, ed., 1895, pp. 370-371. See also Santini, ed., 1952, *Miscellanea*, no. 99, s.d., pp. 341-342. An exemption of the same sort is attested again in 1259 for the descendants of a soldier who suffered a broken arm during the siege of Gressa in the Casentino. See ASF, *Diplomatico*, Stroziane Ugucione, 1259 March.

by Henry VI in 1187.¹⁶⁹ The subscription of Figline Valdarno to the ‘societatis Tuscie’ eleven years later required the residents of Figline to consign to Florence an annual payment of twenty-six *denarii* per hearth, but it excepted *milites et masnaderii* from the obligation.¹⁷⁰ The submission of the Alberti counts to Florence in 1200 also may have exempted the nobility from the hearth tax. As already noted above, the submission treaty obliged the Alberti to render to Florence half of all proceeds collected from Alberti possessions situated ‘inter Arnun et Elsam’ from the beginning of May until the end of August, but the obligation allowed an unspecified exemption that perhaps corresponds with the exemption granted to the nobility in the 1198 subscription of Figline to the ‘societatis Tuscie’.¹⁷¹ The exemption from the hearth tax for *milites* is clearly stipulated in the submission of the Alberti count Guido Burgognonis to Florence in 1204.¹⁷² It was evidently still in force in 1220, but immunity from the tax had been removed for certain categories of men by that time, most notably for the *milites non nobiles*.¹⁷³

The reduction of the exemption from the hearth tax perhaps explains the wholesale submission of rural nobles to Florence in 1218.¹⁷⁴ Presumably, Florence offered certain members of the rural nobility a final opportunity to submit to Florentine authority in exchange for the exemption. The commune also may have

¹⁶⁹ See again Ficker, 1868-1872, 4, no. 170, 1187 June 24, pp. 213-214: ‘excepto ac salvo iure nobilium et militum, a quibus etiam volumus, ut Florentini nichil exigant, regali edicto precipientes ut nullam omnino personam secularem vel ecclesiasticam iniuste grauent’.

¹⁷⁰ See again Santini, ed., 1895, *Capitoli*, no. 24, 1198 April 10, pp. 42-43, esp. 42. The pertinent clause is transcribed above in this section.

¹⁷¹ See again Santini, ed., 1895, *Capitoli*, no. 27, 1200 February 12-23, pp. 48-51, esp. 49: ‘salvis rationibus et usariis quas comunis Florentie habet et solitus est habere in eis terris et hominibus’. Barbadoro, following the same original documents as Santini, corrected ‘usariis’ as ‘usuariis’. See Barbadoro, 1929, p. 19, n. 1, citing ASF, *Capitoli* 26, fol. 62r; ASF, *Capitoli* 29, fol. 68v.

¹⁷² Santini, ed., 1895, *Capitoli*, no. 53, 1204 October 29-1204 November 7, pp. 139-143, esp. 140: ‘Item predictum castrum Caprairie cum curte reconfirmando subpono constituto atque confirmo sub comuni et pro comuni Florentie pro comitatu Florentino, et dabo et dari faciam annuatim regimini comunis Florentie vel ei aut eis cui vel quibus regimen comunis Florentie voluerit aut preceperit pro unoquoque foculari denarios XXVI; set milites non debeant dare denarios XXVI pro foculari’.

¹⁷³ ASF, *Diplomatico*, Vallombrosa, 1219 March 10: ‘super inposita datii et acceptus hominum alterius et alloderiorum atque civium salvaticorum et militum non nobilium comitatus Florentie tollenda’. The act is published in Santini, ed., 1897, no. 6, 1220 March 10, pp. 297-298. See also Davidsohn, ed., 1896-1908, 4, p. 299.

¹⁷⁴ On the submission of rural nobles to Florence in 1218, see again Villani, bk. 5, chap. 41; *Gesta Florentinorum*, p. 273; Paolino Pieri, pp. 15-16; Malispini, chap. 102. Florence may have persuaded rural nobles to submit to the commune by offering a tax exemption for the nobility, as Barbadoro believed.

threatened to impose its authority upon any reluctant nobles, and to remove the exemption from the hearth tax for subsequent submissions, whether forced or voluntary.¹⁷⁵ In 1220 when the Florentines forcibly subjugated the lords of Mortenanna, for example, they offered the lords no tax concessions, obliging them instead to pay all imposts.¹⁷⁶ The withdrawal of the exemption for nobles from the hearth tax would also explain the promulgation of a decree by the emperor Frederick II in 1220 liberating the Ubertini lords from Florentine jurisdiction, declaring them directly subject to the emperor and immune from all taxes.¹⁷⁷

The evidence is meagre, but Barbadoro believed that Florence had instituted a graduated tax by 1220, which obliged *milites* to pay twice the amount in taxes demanded from other non-nobles. In 1230, communal assessors were collecting information concerning the status of men in the countryside north of Florence, probably for the purpose of levying taxes at differential rates for nobles and owners of allodial property on the one hand, and for dependant cultivators on the other.¹⁷⁸ Three years later, probably for the same reason, a communal notary at Florence recorded the testimony of men who declared themselves to be subjects of the abbey of Buonsollazzo.¹⁷⁹ The new tax regime also appears to have abolished the immunity from the *datium* for nobles. The noble Ricasoli lords evidently

¹⁷⁵ See again Barbadoro, 1929, p. 36-37.

¹⁷⁶ According to Giovanni Villani, the Scorcialupi lords of the *castellum* of Mortenanna were made 'a perpetuo franco d'ogni gravezza di comune' after they were forced to submit to Florentine authority in 1220. See again Villani, bk. 5, chap. 42; the *Annales Florentini* 2, p. 41; *Gesta Florentinorum*, p. 274; Stefani, rub. 67; Malispini, chap. 106. The 1203 deposition of 'Orlandus de Cintoia' concerning the frontier between Florence and Siena suggests that the Scorcialupi lords considered themselves beyond the reach of Florentine jurisdiction. See Santini, ed., 1895, *Capitoli*, no. 45, 1203 May 23, pp. 114-121, esp. 114: 'Item meo iuramento dicto quod audivi Scquarcilupum dicentem: non difiteor me esse de comitatu Florentino, tamen datium dare non debeo'.

¹⁷⁷ ASF, *Diplomatico*, Riformagioni, Atti pubblici, 1220.

¹⁷⁸ In 1230, a communal official was despatched to San Cassiano di Mugello in order to record the oaths of men with respect to their status. See Santini, ed., 1895, app. 1, p. 510: 'Qualiter dominus Iacobus de Florentia filius Iacobi del Fronte, auctoritate comunis Florentie tempore Oddonis de Mandello potestatis dicti comunis deputatus in plebatu plebis sancti Cassiani de Mucello ad inquirendum conditiones et statum hominum illius plebatus, secundum formam capituli civitatis Florentie unusquisque diceret statum suum. Qui iuraverunt diversis modis ut in dicto instrumento plenius continetur. Carta manu Gherardi notarii, sub MCCXXVIII, XV kallendas martii, indictione III'.

¹⁷⁹ See ASF, *Diplomatico*, Cestello, 1232 February 24: 'Cum capitulum constituti Florentie omnes et singulis homines comitatus Florentie et tenerentur et deberent et venire Florentiam coram notario sui sexti super hoc posito et electo et quilibet dicere et scribi facere cuius conditionis sit, sive sit nobiles aut miles, factitus vel alloderius seu homo alterius vel fidelis seu fictaiolus aut cultaiulus seu cuiuscumque alterius conditionis sit, prout hec et alia in dicto capitulo constituti continetur'. See also Santini, ed., 1895, *Miscellanea*, no. 28, 1233 February 24, p. 401.

refused to submit to the new tax regime, and they were initially proscribed, but they petitioned the commune for an exemption from the *datium*, which was granted in 1234 with a provision that required the lords to continue to pay a customary annual tribute of one *libra* of silver.¹⁸⁰ The grant of immunity from the *datium* that Florence extended to the Ricasoli lords was exceptional, however, and most rural nobles were obliged to pay the tax.

Evidence for the precise nature of the varying tax rates surfaces only in 1240, indicating that nobles and independent cultivators were taxed at the rate of twelve *solidi* per *annum* for each allodial property, while dependent cultivators continued to pay at the rate of twenty-six *denarii* per household. In other words, the tax rate paid by nobles and independent cultivators, at the very least, was about five and a half times the rate paid by dependent cultivators.¹⁸¹ Both the gradual elimination of the exemption from the *datium* for *nobiles et milites*, and the introduction of a graduated tax based on status reflect the increasing sophisti-

¹⁸⁰ For the grant of immunity from the *datium* from Florence to the Ricasoli lords, see Santini, ed., 1895, *Miscellanea*, no. 35, 1234 November 22, pp. 410-411: 'In quo enim consilio ad petitionem et positionem Ranerii de Ricasole et Alberti fratris sui et etiam ad impositam dicte potestatis et eorum consilium supradictorum voluit et statuit sententiavit et iudicavit quod admodo domini et comune et homines de Ricasole non teneantur nec possint nec debeant solvere vel dare comuni Florentie nec cogantur solvere et dare comuni Florentie Datium vel acaptum, nisi unam libram argenti tantum annuatim ut sonsuenti sunt. Et si sunt in aliquo banno occasione datii vel acapti extrahantur de banno, et bannis comunis Florentie cancellentur, non obstante aliquo vel aliquibus capitulis constituti vel aliquo consilio quod contra diceret; et si potestas inde in aliquo tenetur ipsum inde absolverunt'. The document is inserted in an act of 1342, published by Santini as a footnote, which confirms the original grant.

¹⁸¹ ASF, *Diplomatico*, Badia di Passignano, 1240 July 23: 'Cum pro soluendis stipendiis m[illi]tibus pro comuni Florentie iam electis in seruitio domini imperatoris et turis Guidalocus Voltodellorco et Ubaldinus Guicciardi essent ab ipsa potestate pro comuni Florentie constituti ad exigendum et recipiendum accactum sive datium comitatus Florentie in anno proxime futuro solvendum videlicet solidos duodecim pro allodio et denarios vigintisex pro quolibet focolare aliorum hominum comitatus, Bellincione filius maczeti rectori Pogii al Vento pro trigintasex hominibus alterius dicti loci pro quibus contigerent in futurum solvendum libras tres et solidos decem et octo denarios pisane monete, facta excomputatione octo mensium ad rationem denariorum quatuor quolibet mense per libram, solvit predictis Guidaloco et Ubaldino libras tres et solidos octo et denarios decem pisane monete de quibus denariis predictis vocaverunt se bene pagatos pro comuni Florentie a predicto rectore et pro loco predicta et renuntiaverunt exceptioni non numerate pecunie'. The same document indicates that discounts of twenty per cent per *annum* were given for early payment of the *datium*, suggesting that the commune still may have preferred to exploit ordinary sources of revenue to finance exceptional requirements rather than to resort to a potentially unpopular extraordinary impost. See also Santini, ed., 1895, *Miscellanea*, no. 89, s.d., pp. 473-474; no. 94, 1244 February 28, pp. 479-480. The discount is discussed in Barbadoro, 1929, pp. 46-47. The nominal tax contribution of dependent cultivators in the Florentine countryside evidently remained unchanged from the later twelfth century and through the early thirteenth century, but monetary devaluation and inflationary pressures over the same period probably resulted in diminished tax burdens on dependent farmers.

cation of fiscal administration in the countryside, particularly during the second quarter of the thirteenth century. The documents of 1230 and 1233 cited above suggest that communal administrators had already begun to collect information for the purpose of levying taxes, and by 1241, the commune was keeping ‘duos libros focolarium comitatus Florentie’ to facilitate more efficient fiscal administration.¹⁸² Barbadoro believed that one of these books concerned the countryside in general, while the other concerned noble households. In the following year, for example, the commune was using the information recorded in one ‘libro focolaris comunis Florentie’ to facilitate the collection of a tax from rural nobles who were not subject to the payment of the urban *libra*.¹⁸³ Another document of 1247 attests to another office, or perhaps the same office, ‘ad inponendum et colligendum denarios pro facto comunis’.¹⁸⁴

The advent of popular government at Florence and the death of the emperor Frederick II in 1250 appears to have resulted in even greater encroachments upon the rural nobility. Almost immediately, the new regime reorganised the administration of the countryside along the lines of the ninety-six baptismal churches in the countryside.¹⁸⁵ The reorganisation may have been designed to augment tax revenue, particularly at the expense of the seigniorial elite, and to limit even further their jurisdictional claims in the countryside. By the end of the decade, the commune evidently had introduced a tax levied on the basis of an assessment of wealth, the *extimum*.¹⁸⁶ The new measures provoked increased resistance to communal authority from the Ubaldini lords at Montaccianico in the Mugello and from the Guidi counts, or more likely from vassals of the Guidi, at Montaio in the

¹⁸² For evidence of the *libri focolarium*, see Santini, ed., 1895, *Miscellanea*, no. 90, 1241 December 4, p. 474.

¹⁸³ See ASF, *Diplomatico*, Stroziane Ugucione, 1242 March 31; Santini, ed., 1895, *Miscellanea*, no. 91, s.d., p. 475. The document attests to an office of twelve men ‘ad recollegendum denarios et pecuniam a nobilibus comitatus Florentie qui Florentie libram non solvent, neque cum forensibus datium vel accattum’. See also Barbadoro, 1929, pp. 48-49.

¹⁸⁴ For the 1247 document, see ASF, *Diplomatico*, Riformagioni di Firenze, 1247 June 26; Santini, ed., 1895, *Miscellanea*, no. 112, s.d., p. 496.

¹⁸⁵ On the advent of the *primo popolo* and the reorganisation of the countryside, see Villani, bk. 6, chap. 39: ‘E come ordinò il detto popolo le ’nsegne e gonfaloni in città, così fece in contado a tutti i pivieri il suo, ch’ erano novantasei, e ordinargli a leghe acciocchè l’una atasse l’altra, e venissero a città e in oste quando bisognasse’. See also Stefani, rub. 92. The organisation of the countryside around the network of baptismal churches in the territory is clearly attested in the *Libro di Montaperti* of 1260. See Paoli, ed., 1889; Plesner, 1938, pp. 12-18.

¹⁸⁶ The *extimum* is first attested at Florence in 1259 in Lansinio, ed., 1905, pp. 442-443.

Chianti.¹⁸⁷ Resistance to Florentine fiscal policy is also attested elsewhere in the countryside after the reorganisation of rural administration in 1250. West of Florence on the left bank of the lower Arno below Ponte a Signa, for example, the commune was experiencing difficulty collecting the hearth tax from the town of Brucianesi.¹⁸⁸

After 1250, communal officials at Florence probably began to levy taxes in the surrounding countryside on the basis of assessed wealth. Tax assessments for certain Florentine ecclesiastical institutions, both urban and rural, survive from 1252, and the *extimum*, a proportional tax, is attested at Florence from 1259, when the commune rendered payment to a judge and three notaries who assisted the judge 'super extimo comitatus Florentie'. By the 1270s, the total tax requirements of the commune evidently were set first and then divided between the city and the countryside. The rural *extimum* was then subdivided successively among rural sectors, baptismal churches, and ultimately households. From about 1280, on average, the communal *extima* appear to have been revised every three years.¹⁸⁹

¹⁸⁷ On Ubaldini resistance at Montaccianico, see Villani, bk. 6, chap. 47: 'Negli anni di Cristo 1251, i signori della casa degli Ubaldini con loro amistadi di ghibellini e di Romagnuoli aveano fatta gran raunanza in Mugello, per fare oste a Monteaccianico che ancora non era loro. I Fiorentini vi cavalcaro e sconfissono i detti Ubaldini con gran danno di loro e di loro amistà'. See also *Gesta Florentinorum*, p. 275; Stefani, rub. 96; Malispini, chap. 145. Villani reported that Montaccianico was not yet controlled by the Ubaldini in 1251, but a document of 1145 indicates that the 'Lagi Montis Accianichi' were under Ubaldini control already before the middle of the twelfth century. See Ildefonso di San Luigi, ed., 1770-1789, 10, pp. 183-188, 365; Savioli, ed., 1784-1795, 1, pt. 2, no. 133, 1145 May, pp. 211-215. The Ubaldini assault on Montaccianico reported by Villani may have been launched after the lords had been expelled from the *castellum* by the Florentines. Presumably, the Ubaldini had been using Montaccianico to disrupt traffic along the main routes between Florence and Bologna. On the conflicts between the Ubaldini and Florence in 1251 and again in 1259, see also Magna, 1982, pp. 39-43. The Florentine campaign in Guidi territory against the fortified market town of Montaio began in August of 1251 and continued until January 1252. See Villani, bk. 6, chap. 48; *Gesta Florentinorum*, pp. 275-276; Stefani, rub. 97; Paolino Pieri, pp. 26-27, esp. 26; Malispini, chap. 145. See also Davidsohn, 1977, 2, pt. 1, pp. 549-556. Montaio is attested as a possession of the Guidi counts after the middle of the twelfth century in ASF, *Diplomatico*, Strozzi-Ugucione, 1164 September 28; Appelt, ed., 1975-1990, 2, no. 462, s.d., pp. 369-371; Ficker, 1868-1872, 4, no. 138, s.d., pp. 179-182. For evidence of the market at Montaio before the middle of the thirteenth century, see ASF, *Diplomatico*, Coltibuono, 1239 June 1. Markets in the Chianti assumed particular importance for Florence during the second quarter of the thirteenth century owing to the poor state of relations between Florence and Figline Valdarno between 1224 and 1252. Florentine merchants evidently made greater use of the roads and markets in the Chianti during this period in order to circumvent Figline. See below, Chapter 6.3.1.

¹⁸⁸ Santoli, ed., 1915, no. 337, 1255 July 28, pp. 235; no. 338, 1256 April 21, p. 235; no. 339, 1256 April 22, p. 236; no. 340, 1256 April 22, p. 236.

¹⁸⁹ On tax assessments for Florentine ecclesiastical institutions, see below. For evidence of the *extimum* in 1259, see again Lasinio, ed., 1905, pp. 442-443. For the *Liber extimationum* of 1269, see Brattö, ed., 1956. *Extima* are also attested for 1271, 1276, and 1280. See Barbadoro, 1929,

In 1285, in the course of discussions concerning the revision of the *extimum*, the Florentine consuls debated on the rate of taxation to apply on movable and immovable wealth, differentiating in the latter between ‘possessions’, presumably land, and houses. Although the evidence from the 1285 deliberations of the consuls provides no final determination on the issue, one of the consuls proposed rates of ten per cent on movable wealth, about six and a half per cent on immovable wealth in the form of land, and five per cent on houses. The same consul suggested that the total *extimum* for Florence and the surrounding countryside should be divided in such a way that the assessment for the countryside was three quarters of the urban assessment, or nearly sixty per cent of the total assessment.¹⁹⁰ In 1289, according to Giovanni Villani, the commune met the expenses of its military campaign against Arezzo by means of a 6.25 per cent tax, raising more than 36,000 *floreni*, which suggests a total assessment of 576,000 *floreni*.¹⁹¹ The city was responsible for slightly more than sixty per cent of the tax, while the countryside contributed the rest.¹⁹² The consul deliberations of 1285 evidently also resulted in further communal encroachments on the rural nobility. The Ubaldini lords were subject to urban imposts for the first time in 1286, and assessments of Ubaldini wealth are attested in the *extima* of 1288-1289, 1296, 1299, and 1300.¹⁹³

2.3.2.2. Communal taxation of ecclesiastical property

pp. 84-86, citing ASF, *Notarile antecosimiano* A981, fol. 88r for 1271; A983, fols. 14v, 15v, and 1105, fol. 41r for 1276; 1104, fols. 35r, 49r for 1280. In the later thirteenth century, Prato likewise first set its total tax assessment, presumably based on budgetary requirements, and then apportioned the total assessment on the basis of tax surveys. In 1281, the urban assessment was more than three times the rural assessment. See Herlihy, 1964, p. 396, n. 44, citing Archivio comunale di Prato, Tomus 57, 1281 March 10.

¹⁹⁰ For the debates of the Florentine consuls over the *extimum* in March and April of 1285, see Gherardi, ed., 1896-1898, 1, pp. 179-201, *passim*. For the proposals concerning the rate of taxation on movable wealth, immovable wealth in the form of land, and houses, see Gherardi, ed., 1896-1898, 1, p. 188 [1285 March 19]: ‘quod summa extimi non declaretur: et de mobilibus, extimetur quilibet de X denariis in uno denario; et de possessionibus, de XV denariis in uno denario; et de domibus, de XX denariis in uno’. See also Barbadoro, 1929, pp. 86-89.

¹⁹¹ Villani, bk. 7, chap. 132: ‘Et nota, che tutta la spesa della detta oste si fornì per lo nostro comune per una libbra di libbre sei e soldi cinque il centinaio, che montò più di trentasei migliaia di fiorini d’oro, sì era allora bene ordinato l’estimo della città e del contado, con altre cose e rendite del comune simiglianti bene ordinate’.

¹⁹² Herlihy, 1964, p. 396, n. 48, citing ASF, *Notarile antecosimiano* R192, folio 41v.

¹⁹³ Magna, 1982, pp. 53-54.

The reorganisation of communal administration in the countryside along the lines of baptismal churches in 1251 also enabled the Florentine commune to generate greater tax revenue from the assets of wealthy ecclesiastical lords throughout the territory.¹⁹⁴ The commune had been taxing ecclesiastical lords in the countryside from the beginning of the thirteenth century. In 1203, for example, the abbey at Passignano contracted a loan to pay the interest on another loan that had been used to pay an extraordinary tax imposed by Florence to offset expenses incurred in the course of its costly military campaign against Semifonte.¹⁹⁵ The commune also attempted to subject the convent at Rosano in the Arno valley east of Florence to an extraordinary tax of fifty *libre* to meet the expenses of the Semifonte campaign, but count Guido, to whom the convent belonged, successfully petitioned the commune against the exaction.¹⁹⁶ At some point between 1240 and 1249, the abbey at Vallombrosa imposed a *datium* on the men of Magnale, probably to pay a tax levied on the abbey by the Florentine commune.¹⁹⁷ Evidence for the communal taxation of ecclesiastical property nevertheless increases dramatically immediately following the reorganisation of the countryside in 1251.

In the city itself, the urban church of San Lorenzo was compelled to contract a loan for forty-seven *libre* in 1252 to pay a tax imposed by the commune of Florence, probably on the basis of its landed wealth independent of income from rents, as Barbadoro suggested.¹⁹⁸ Early in the following year, pope Innocent IV (1243-

¹⁹⁴ In thirteenth century Tuscany, the organisation of rural administration along parish lines was by no means unique to Florence, but neither was it pervasive. In the territories of Florence, Arezzo, and Cortona, rural administration was organised on the basis of pre-existing ecclesiastical boundaries, but administration in the countrysides of Pisa, Siena, and Pistoia was based more on civil units. In the Florentine countryside, communal authority developed initially as an extension of the temporal authority of the bishops of Florence, eventually displacing the bishops on the familiar pattern. See Zorzi, 1994, p. 319.

¹⁹⁵ ASF, *Diplomatico*, Badia di Passignano, 1203 May 20; Santini, ed., 1895, *Miscellanea*, no. 8, s.d., p. 372: 'Ubertus permissione divina abbas ecclesie et monasterii sancti Michaelis de Passignano, providens utiliora iamdicte ecclesie et pro solvenda usura Iacobo filio Uguiccionis Hebrici de denariis quos ab eo accepit pro solvenda libbra comuni Florentie pro concio de Summofonte; ideoque accepit mutuo a Manno filio quondam Gianni Maccie libras viginti bonorum denariorum, quos denarios ei per stipulationem reddere et solvere promisit hinc ad sex menses proxime vel antea, et meritum per quemlibet mensem et libram deniorum IIII'.

¹⁹⁶ The convent was absolved of the obligation to pay the tax because it was a dependency of the Guidi counts and not of the city. See the testimony in Davidsohn, ed., 1898, pp. 234-235, esp. 235.

¹⁹⁷ ASF, *Diplomatico*, Vallombrosa, 124[...].

¹⁹⁸ Santini, ed., 1952, *Miscellanea*, no. 42, 1252 January 30-1252 February 1 and 2, pp. 303-304, from the original in the Archivio del Capitolo di San Lorenzo: 'pro solvendo comuni Florentie libram ipsius ecclesie a dicto comuni Florentie impositam, quam ex necessitate et coactos oportet eos solvere, nec ipsam sine gravi et maximo periculo et dampno ipsius ecclesie possent retinere;

1254) granted the urban abbey of Santa Maria an exemption from the papal *vigesima* because the abbey was already subject to taxes from the Florentine commune that were ‘*ultra facultates proprias*’ of the abbey.¹⁹⁹ In June of the same year, communal officials responsible for the collection of a one per cent tax imposed on churches in the Florentine countryside received full payment from the convent at Luco di Mugello on its assessed wealth of two thousand *libre*.²⁰⁰ A month later, the same officials received three instalments over the course of a week in payment of the same one per cent tax from the abbey at Coltibuono in the Chianti, based on an assessed wealth of fifteen thousand *libre*.²⁰¹ Early in 1254, the abbey at Passignano consigned full payment to Florentine tax collectors on the basis of an identical assessment.²⁰²

The movable assets of Florentine ecclesiastical lords were sometimes insufficient to satisfy their tax obligations.²⁰³ In such instances, the commune was able to offset any shortfall by placing a lien on agricultural rents normally paid by tenants on the estates of ecclesiastical lords unable to render full payment.²⁰⁴ Ecclesiastical lords also borrowed to meet their obligations, as already noted above, and they sometimes disposed of immovable property. The abbey at

obligando se vice et nominedicte ecclesie et suorum successorum et ipsam ecclesiam et suos successores; fuerunt confessi se in veritate et non spe future numerationis mutuo accepisse a Falconerio Alfieri libras quadraginta septem bonorum denariorum pisanorum, cum non habeat ad presens de bonis ipsius ecclesie unde ipsam libram et impositam solvant’. In 1261, the wealth of San Lorenzo was assessed at 4500 *libre*. See Barbadoro, 1929, pp. 54-55, citing Archivio del Capitolo di San Lorenzo, 1260 March 20.

¹⁹⁹ ASF, *Diplomatico*, Badia di Firenze, 1252 March 11; Santini, ed., 1952, *Miscellanea*, no. 47, s.d., p. 306.

²⁰⁰ See ASF, *Diplomatico*, Monache di Luco, 1253 June 7; Santini, ed., 1952, *Miscellanea*, no. 91, s.d., p. 336: ‘Hec sunt solutiones libre facte pro ecclesiis et clericis comitatus et districtus Florentie [...] pro ipsa libra recollenda ad rationem solidorum XX pro quolibet centinario. [...] Pro monasterio de Luco allibrato in libris duabus milibus Bencivenni frater [ipsius] monasterii solvit eis Vinte et Giambono, recipientibus pro comuni Florentie, libras viginti’.

²⁰¹ ASF, *Diplomatico*, Badia di Coltibuono, 1253 July 2; Santini, ed., 1952, *Miscellanea*, no. 96, 1253 July 2-8, p. 339. The abbey at Coltibuono had submitted to Florentine jurisdiction voluntarily in 1239, seeking protection probably from the predations of the Firdolfi lords. See ASF, *Diplomatico*, Badia di Coltibuono, 1239 August 25; Santini, ed., 1895, *Miscellanea*, no. 84, s.d., p. 466.

²⁰² ASF, *Diplomatico*, Badia di Passignano, 1253 February 23; Santini, ed., 1952, *Miscellanea*, no. 110, 1254 February 23, p. 347.

²⁰³ It is worth noting, for example, that Coltibuono needed a week to assemble the funds necessary to fulfill its tax obligation in 1253. See again ASF, *Diplomatico*, Badia di Coltibuono, 1253 July 2; Santini, ed., 1952, *Miscellanea*, no. 96, 1253 July 2-8, p. 339.

²⁰⁴ For example, see Santini, ed., 1952, *Miscellanea*, no. 108, 1254 February 2.

Vallombrosa was compelled to liquidate some of its landed assets to eradicate a debt and to render payment on an impost levied by the Florentine commune in 1254.²⁰⁵ Later in the same year, the church of San Lisandro di Signano likewise alienated property to the abbey at Buonsollazzo ‘pro solvenda libra comunis [Florentie]’.²⁰⁶

By 1256, perhaps in response to growing discontent among ecclesiastics regarding the communal taxation of church property, the Florentine government lowered the proportion of assessed wealth to be paid in taxes by ecclesiastical institutions to less than a half of one per cent.²⁰⁷ Whereas earlier imposts has been calculated at the rate of twenty *solidi* for every one hundred *libre*, or 1.0 per cent, the imposts of 1256 evidently were calculated at the rate of one *denarius* per *libra*, or 0.4 per cent.²⁰⁸ The wealth of the episcopal estate was assessed at thirty thousand *libre*, which would have obliged the bishops to render a payment of 125 *libre* under the new rate.²⁰⁹ In 1257, the cathedral chapter rendered a payment of 120 *libre* to Florentine tax collectors, suggesting an assessed wealth of 28,800 *libre*, nearly equivalent to that of the Florentine bishops.²¹⁰ Continued communal taxation of ecclesiastical property evidently precipitated intervention by pope Alexander IV (1254-1261). In 1257, Florentine officials promised a papal representative that the commune would henceforth observe ecclesiastical liberty in the city and in the countryside.²¹¹

²⁰⁵ ASF, *Diplomatico*, Vallombrosa, 1254 September 29; Santini, ed., 1952, *Miscellanea*, no. 161, s.d., pp. 380-381.

²⁰⁶ ASF, *Diplomatico*, Cestello, 1254 November 15; Santini, ed., 1952, *Miscellanea*, no. 170, s.d., p. 387.

²⁰⁷ Growing discontent with communal taxation of church property is suggested by the fact that communal officials were admonished by a papal representative to recognise the liberty of ecclesiastical institutions in the dioceses of Florence and Fiesole in the following year. See ASF, *Diplomatico*, Stroziane Ugucione, 1257 September 17.

²⁰⁸ The new tax rate is attested in ASF, *Diplomatico*, Badia di Passignano, 1256 October 4: ‘pro comuni Florentia ad reconligendam libram unius denarii per libram ab ecclesiis sextus burgii civitatis et comitatu Florentie’. The assessed wealth of the abbey at Passignano was again recorded as fifteen thousand *libre*, but the tax obligation of the abbey had diminished to sixty-five *libre* and ten *solidi*.

²⁰⁹ For the assessed value of the episcopal estate in 1256, see the entry dated from 1256 September 28 in ASF, *Manoscritti* 48BIS (*Bullettone*), folio 158v-159r; Davidsohn, ed., 1896-1908, 4, p. 300.

²¹⁰ Barbadoro, 1929, pp. 54-55, citing ACF, 1256 March 14.

²¹¹ See again ASF, *Diplomatico*, Stroziane Ugucione, 1257 September 17.

Increased fiscal pressure on noble and ecclesiastical lords in the Florentine countryside helped to produce a Ghibelline backlash after the Florentine defeat at Montaperti in 1260.²¹² The popular government at Florence was expelled as a consequence of the defeat and replaced by a Ghibelline regime, which endured for only six years. Before Montaperti, the evolution of Florentine fiscal policy in the countryside was characterised by increased pressure first on the nobility and then on ecclesiastical lords. By at least 1240, and from perhaps as early as 1230, the Florentine commune had introduced a rudimentary proportional tax in the countryside, assessed on the basis of status. After the middle of the thirteenth century, the commune reorganised the fiscal administration of the countryside along the lines of the ninety-six baptismal churches in the countryside to facilitate tax collection and it began to exact taxes based on assessments of wealth. The gradual increase in the tax burden particularly among the wealthier segments of Florentine rural society before 1260 reflects the expansion of Florentine jurisdiction in the countryside. The admittedly sparse evidence for the development of Florentine fiscal policy during the early 1260s, when Florence was under a Ghibelline regime, betrays no radical departure from the innovations introduced before 1260 by the popular government.²¹³ The restoration of the Guelfs in 1266 likewise appears to have generated little change in fiscal policy. What emerges instead from the evidence is an ever increasing sophistication in fiscal policy that was clearly designed to facilitate tax collection while minimising discontent.

2.4. Conclusion

Ultimately, any determination of the degree of integration that existed between the city of Florence and its surrounding countryside will depend upon the definition of integration applied. The paucity of the evidence renders it impossible to use strictly economic measures of integration, such as price convergence and price covariance. The diffusion of Florentine weights and measures in the surrounding countryside as an indicator of the relative degree of integration between the city and particular areas of the countryside is perhaps more amenable to consideration,

²¹² For chronicle accounts of the battle at Montaperti, see Villani, bk. 6, chap. 79; Stefani, rub. 123; Paolino Pieri, pp. 29-30.

²¹³ The resolution of a dispute in 1261 between the baptismal church of Signa and the church of San Martino a Gangalandi, for example, both Signa and San Martino were obliged to pay the *libra* as well as any other impost levied by the commune. See Strà, ed., 1982, no. 95, 1261 June 22-1261 October 25, pp. 204-211.

but weights and measures were by no means stable. They evolved considerably from the eleventh century until the middle of the fourteenth century. Even the weights and measures of Florence itself changed markedly over the course of the period under consideration.²¹⁴ A more detailed analysis of the spread of the urban weights and measures in the countryside nevertheless would offer another means by which to assess the economic impact of the expansion of Florentine jurisdiction in the countryside, especially in so far as the reduction of measurement costs entailed lower transaction costs.²¹⁵

The chronicle evidence for the expansion of Florentine urban jurisdiction in the surrounding countryside during the twelfth century is certainly suggestive, but the evidence is not contemporary, and it must be considered as much for what it omits as for what it includes. The incidents described by the chroniclers doubtless constitute exceptions to the manner in which the advance of Florentine jurisdiction proceeded more generally. The chronicles nevertheless suggest that the most powerful lords in the Florentine countryside were also the lords most likely to resist Florentine jurisdiction. The large comital lords, particularly the Guidi, the Alberti, and the Ubaldini, were the most difficult to control, and the commune of Florence was generally compelled to reach some sort of accommodation with them that allowed them to retain at least some of their autonomy. Even the Alberti submissions to Florence in the later twelfth and early thirteenth centuries, though clearly debilitating, were less than complete. The agreements nevertheless reduced barriers to trade in strategic parts of Florentine countryside: in parts of the Mugello and along the trans-*Apennine* passages to the north, in the upper Arno valley to the southeast along the routes leading to central Italy, and in the lower Arno valley to the west, which ultimately gave access to the Tyrrhenian Sea.

In the twelfth century, the Florentine commune often responded to resistance from less powerful lords, particularly those in the immediate vicinity of the city, with military force. By the end of the first quarter of the thirteenth century, disputes concerning jurisdiction particularly in the vicinity of the city were settled more often by arbitrators in urban courts rather than by soldiers on the battlefield, though they were still generally settled in favour of the city and its urban lords. In the deeper countryside, rural communities paid less heed to Florentine courts, and resistance was more difficult to suppress. The use of urban courts to resolve dis-

²¹⁴ Weights and measures are discussed in greater detail below, Appendix 10.

²¹⁵ North, 1981, p. 36.

putes in the countryside was not seriously pursued in this thesis, but it is clearly a matter that deserves more careful consideration.

It was not until the second quarter of the thirteenth century that bishops of Florence were fully able to assert their rights on properties at San Casciano in Val di Pesa and Borgo San Lorenzo, some of which had slipped out of episcopal control probably in eleventh and twelfth centuries.²¹⁶ The towns of Castelfiorentino, Empoli, Figline Valdarno, and Poggibonsi all remained at least partly outside the complete control of Florence at least until after the middle of the thirteenth century.²¹⁷ The advent of popular government in 1250 and its restoration in 1266 led to heightened resistance to Florentine rule particularly in the Mugello and in the upper Arno valley. Towards the end of the thirteenth century and in the early fourteenth century, the Florentine commune even began to establish new towns in areas of continued seigniorial intransigence expressly to dampen resistance to urban authority.

Even in the twelfth century, however, the vast majority of rural lords probably accepted Florentine control with little hesitation, perhaps because the commune offered the promise of increased security. The question that arises in considering submissions to urban authority concerns the interplay between coercion and incentive. The difficulty lies in the fact that coercion is often plainly visible in the sources, but any incentives that lay in becoming a citizen of Florence are for

²¹⁶ On the expansion of the estate of the Florentine bishops in the early thirteenth century, see Dammeron, 1991, pp. 95-118. The reassertion of episcopal control on the estates of the bishops of Florence in the early thirteenth century is discussed at greater length below, Chapter 4.2.3.

²¹⁷ To consider only one example, Empoli had submitted to partial Florentine jurisdiction already in 1182, but Florence came into complete possession of the town only in the later thirteenth century. Empoli was a possession of the Guidi counts, who controlled extensive properties in the lower Arno valley. The submission treaty of 1182 obliged the inhabitants of Empoli to defend the interests of the Florentine commune, but it released them from the obligation to defend Florence against the Guidi counts. For the treaty, see again Santini, ed., 1895, *Capitoli*, no. 12, 1182 February 3, pp. 17-18. The territorial extent of Guidi control in and around Empoli in the early thirteenth century is attested in an imperial confirmation of Guidi possessions by Frederick II in 1220 and in a privilege of 1247 after the partitioning of Guidi estates in the lower Arno valley. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. See also Böhmer, ed., 1971, 1, no. 1241, 1220 November 29, p. 275; nos. 3622-3623, 1247 April, pp. 647-648. Just after the middle of the century, three members of the Guidi patrilineage each alienated to Florence a quarter share of properties and rights in and around Empoli. See Santini, ed., 1952, *Capitoli*, no. 20, 1254 August 12, pp. 65-75; no. 22, 1254 September 10 and 1254 November 10, pp. 78-86; no. 43, 1255 May 6 and 28 July 28, pp. 130-141. The Guidi renounced the last of their seigniorial rights at Empoli in 1273 in order to extinguish a debt with the commune of Florence. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 129-135. In 1294, evidently for the first time, Florence sent to Empoli a communal *podestà* at the request of the inhabitants of the town. See Gherardi, ed., 1896-1898, 2, p. 347.

the most part imperceptible. The commune no doubt offered at least to some of its prospective citizens in the countryside positions of importance in urban government through which they might be able to influence Florentine policy to their advantage. The city sought to impose its rule on the surrounding countryside in order to minimise threats to Florentine power arising from within the dioceses of Florence and Fiesole. Submissions to Florentine authority were also effective in joining the various interests of rural lords with the interests of city, and they provided the city with additional manpower from which to draw in the event of military exigencies. More than anything else, however, submissions to Florentine authority helped to expand urban jurisdiction in the countryside, thereby reducing barriers to trade, broadening the tax base, and enhancing urban revenues.

Despite continued resistance to communal control in parts of the Florentine countryside throughout the thirteenth century, the evolution of Florentine fiscal policy in the hinterland attests to a gradual increase in the tax burden of both the rural nobility and ecclesiastical lords. A tax exemption typically granted to the nobility in the later twelfth and early thirteenth centuries to provide incentives for submission to Florence was eliminated probably by 1230, and a rudimentary proportional tax based on status was introduced by about the same time. In 1251, the new popular government reorganised the administration of the countryside along the lines of the baptismal churches in the countryside, probably to facilitate the collection of taxes particularly from ecclesiastical lords. The reorganisation generated increased resistance from reluctant Florentine subjects and provoked the intervention of a papal representative on behalf of religious institutions throughout the territory of Florence. The evolution of Florentine fiscal policy in the countryside provides perhaps the clearest evidence for the expansion of Florentine jurisdiction in the countryside in the early thirteenth century, but it stresses the degree of jurisdictional control exercised by Florence over its subject territory rather than the territorial extent of its jurisdictional powers. Despite the increasing sophistication of Florentine fiscal policy and the gradual expansion of Florentine jurisdiction in terms of both degree and territorial extent, Florentine control in parts of the dioceses of Florence and Fiesole was still incomplete even at the end of the thirteenth century.

3. Population

From the later twelfth century until at least the end of the first quarter of the fourteenth century, the city of Florence and its surrounding countryside experienced extraordinary demographic and economic growth. At the end of the twelfth century, Florence was perhaps the least important of the major towns in Tuscany. It was overshadowed by Pisa, Lucca, and Siena in terms of both the size of the urban population and the vitality of the urban economy. By the early fourteenth century, however, Florence had become the dominant city in Tuscany and indeed one of the largest and most economically dynamic cities in all of western Europe.

This chapter examines population growth both in the city of Florence itself and in the surrounding countryside from the later twelfth century to the early fourteenth century, focussing on the demographic dimensions of Florentine growth during this period of maximum expansion. The assessment of demographic expansion in the territory of Florence also provides the basis for a rudimentary analysis of agricultural productivity growth in the territory over the same period, which is undertaken in the succeeding chapter. The limited evidence available for consideration of the demographic growth of Florence before the Black Death suggests that the urban population of the city around the year 1338, and probably by about 1325, had reached a figure of about 120,000. In the countryside, the population had grown to perhaps 300,000. Far more conjecturally, this chapter proposes a total population of no less than 100,000 in the territory of Florence around 1175, with no more than ten per cent of the total population residing in the city itself.

Urban demographic growth at Florence was fuelled above all by immigration to the city from the surrounding countryside. Most of the documented immigrants coming into the city of Florence in the thirteenth century were rural landowners, but the predominance of landowners among documented rural-urban migrants distorts reality. The surviving evidence tends to draw attention to the activities of the landowning classes, but it inadequately illustrates the movements of landless peasants and poor independent cultivators, who almost certainly composed the overwhelming majority of rural-urban migrants at Florence. The catchment area from which Florence attracted migrants extended beyond the frontiers of its territory. Evidence for demographic stagnation or even regression

elsewhere in Tuscany, in the face of continued population growth in both the rural and urban sectors in the territory of Florence, suggests that the development of urban industry at Florence was attracting surplus labour from the territories of other Tuscan towns and from even farther afield.

3.1. The population in Florence in the early fourteenth century

For the city of Florence and its surrounding countryside, the first remotely satisfactory population figures appear only from about the beginning of the fourteenth century in the chronicle of Giovanni Villani, a merchant of the Peruzzi company.¹ According to Villani, there were about 90,000 mouths to feed in the city of Florence around the year 1338, excepting foreigners and members of the religious orders, and there may have been as many as 17,000 paupers in the city in 1338. Villani also reported that there were between 5500 and 6000 baptisms performed annually in the baptistry of San Giovanni around 1338, and that male births typically outnumbered female births by three hundred to five hundred each year. Villani further observed that there were in the countryside about 80,000 men capable of serving in a military capacity in 1338, and he also noted that the number of men fit to bear arms around the year 1300 had been about 30,000 in the city and about 70,000 in the countryside.²

¹ The reliability of the statistics for early fourteenth century Florence that come down to the present in the chronicle of Villani has been addressed in Fiumi, 1953; Frugoni, 1965; Green, 1972; Hunt, 1994, pp. 268-271; Saporì, 1955, pp. 25-33.

² For most of the figures of Villani presented here, see Villani, bk. 11, chap. 94: *Stimavasi d'averè in Firenze da novantamila bocche tra uomini e femmine e fanciulli, per l'avviso del pane che bisognava al continuo alla città, come si potrà comprendere; ragionavasi avere continui nella città da millecinquecento forestieri e viandanti e soldati; non contando nella somma de' cittadini religiosi, e frati e monache rinchiusi, onde faremo menzione appresso. Ragionavasi avere in questi tempi nel contado e distretto di Firenze da ottantamila uomini. Troviamo dal piovano che battezzava i fanciulli (imperocchè ogni maschio che si battezzava in san Giovanni, per averne in novero metteva una fava nera, e per ogni femmina una fava bianca) che erano l'anno in questi tempi dalle cinquantacinque alla sessanta centinaia, avanzando più il sesso mascolino che'l femminino da trecento in cinquecento per anno'. For the number of paupers in the city in 1330, see Villani, bk. 10, chap. 162: 'e dando a ciascuno povero, come n'usciva, danari sei, si trovò che montò libbre quattrocentotrenta di piccoli, che furono per numero più di diciassette migliaia di persone tra maschi e femmine piccoli e grandi, senza i poveri vergognosi e quegli degli spedali e pregioni e religiosi mendicanti, che disparte ebbono la loro limosina a danari dodici l'uno, che furono più di quattromila. La quale cosa fu tenuto gran fatto, e grandissimo numero di poveri; ma di ciò non è da maravigliare, perocchè non solamente furono di Firenze, ma per le limosine che vi si fanno, traggono di tutta Toscana e più di lungi a Firenze'. For the number of men capable of rendering military service in the year 1300, see Villani, bk. 8, chap. 39: 'Nel detto tempo essendo la nostra città di Firenze nel maggiore stato e più felice, che mai fosse stata dappoi ch'ella fu redificata, o*

3.1.1. The urban population

Numerous scholars have endeavoured to extrapolate credible estimates for the population of Florence and its countryside before the middle of the fourteenth century from the figures provided by Villani. For the urban population, Enrico Fiumi accepted as roughly accurate the figure of 90,000 given by Villani for the year 1338, although he adjusted the figure up to 95,000 for 1300 to account for a slight diminution in the population during the intervening period of nearly forty years. Josiah Cox Russell followed Fiumi very closely, giving an only slightly higher figure of 96,000 for the decade from 1290 to 1300, but Charles M. de la Roncière found it necessary to adjust the figures upwards more substantially in order to account for those portions of the population not represented, for example members of religious orders and foreigners.³

Other scholars, most notably David Herlihy and Christiane Klapisch-Zuber, have cast doubt on the figure provided by Villani for the number of mouths to be fed in the city, which they have regarded as rather low. Herlihy and Klapisch-Zuber observed that Villani appears to have based his figures on what he had been able to ascertain about grain consumption in the city around the year 1338. They preferred to work from the figures that Villani had given for the number of baptisms that were performed annually in the urban baptistry which serve as a better barometer of the urban population in as much as Villani was most explicit about the manner in which he had arrived at these figures.⁴

prima, sì di grandezza e potenza, e sì di numero di genti, che più di trentamila cittadini avea nella cittade, e più di settantamila distrittuali d'arme avea in contado'.

³ See, for example, the discussions in Fiumi, 1950, pp. 106-118; Russell, 1972, pp. 39-52; De la Roncière, 1976, 2, pp. 659-696, and esp. tables 99 and 103, pp. 677 and 696, respectively.

⁴ According to Villani, the baptisms of males in Florence were marked by the parish priest with a black bean, while the baptisms of females were marked by a white bean, and the baptisms of males generally outnumbered those of females by about 300 to 500. With respect to urban grain consumption, Villani reported that his figures came from tax records and from information concerning the bread production in the city, which at least lends the figures a dimension of credibility, but he also stated quite clearly that the figure for the number of mouths to be fed in the city was estimated from what was known about the bread requirements of the city. From the available figures, Villani indeed appears to have calculated that urban grain consumption stood at about one *starium* per person per month and then to have derived his population figure on this basis. For the observation of Herlihy and Klapisch-Zuber that Villani probably based his population figure for the city on urban grain consumption, see Herlihy and Klapisch-Zuber, 1985, p. 69; 1978, p. 176. On the formula for grain consumption of one *starium* per person per month, see Fiumi, 1953, pp. 208-209; Mira, 1957, pp. 508-510. For more on grain consumption in the territory of Florence, see below, Appendix 9.3.

It is also possible that Villani erred only in estimating *per capita* grain consumption in the city and not in the total amount of grain consumed annually. Villani reported that 140 *modia* of grain were consumed daily in the city around the year 1338, which represented a 22.5 per cent increase in urban grain consumption from 1280.⁵ The *modium* was a unit of dry measure consisting of twenty-four *staria*, each of which had a capacity of about 0.24 hectolitres.⁶ The urban requirement of grain in Florence around the year 1338, according to Villani, was thus about 820 hectolitres per day, and nearly 300,000 hectolitres per year. For an urban population in Florence between about 90,000 and 105,000, this would translate into a figure for annual grain consumption between about 2.8 and 3.3 hectolitres per person.⁷ The larger figure, corresponding to an urban population of 90,000, is almost certainly too high for *per capita* annual grain consumption in the city of Florence in the early fourteenth century. It may even be too high to reflect consumption levels in the countryside, where cereals probably constituted a larger proportion of the diet.

The commonly accepted figure for *per capita* grain consumption in the Florentine countryside before the Black Death is one *starium* per person per month, which translates as 2.9 hectolitres of grain per person per year.⁸ In pre-

⁵ Villani, bk. 11, chap. 94. In the succeeding passage, Villani noted that urban grain consumption had stood at about 800 *modia* per week in the year 1280, or about 114.25 *modia* daily.

⁶ Weights and measures in medieval Italy varied enormously even over relatively short distances, and even local measures were subject to change over time. In the territory of Florence alone in the early thirteenth century, there were more than a dozen different designations for the various systems of weights and measures in use, though some of these systems may have differed in name only. Probably around the beginning of the thirteenth century, the system of weights and measures in the city of Florence itself was modified, and the capacity of the Florentine *starium* was adjusted downwards. For the relative difference between the *starium anticum* of Florence, the new *starium* of Florence, and the *starium* of Borgo San Lorenzo in the early thirteenth century, see ASF, *Diplomatico*, Monache di Luco, 1222 April 6, 1229 April 20. For the various measures of the *starium* throughout Italy and in Florence in particular, see Zupko, 1981, pp. 269-277, esp. 275.

⁷ Villani stated that there were 90,000 mouths to feed in Florence around the year 1338, but he also stated that this figure excepted foreigners and members of the church hierarchy. The actual figure for the urban population thus was no doubt somewhat greater, and the range given here includes an adjustment for the segment of the urban population not embraced in the figure given by Villani. The actual figures for *per capita* annual grain consumption would be as follows: for an urban population of 90,000, 3.3 hectolitres per person; for 95,000, 3.1 hectolitres per person; for 100,000, 3.0 hectolitres per person; and for 105,000, 2.8 hectolitres per person.

⁸ This estimate was employed by Fiumi, 1953, pp. 208-209. Fiumi stressed that the estimated cereal requirement of one *starium* per person per month was based on the alimentary requirements of a fully grown adult living in the countryside, where it is generally thought that cereals comprised a much larger part of the diet than in the city. Mira arrived at the comparable figure of 227.5 kilograms annually for *per capita* grain consumption in the territory of Perugia in the early

industrial Europe, however, *per capita* annual grain consumption in urban areas may have been lower than in the countryside, as already intimated above, and grain consumption in early fourteenth century Florence may have been perhaps even as low as 2.5 hectolitres per person per year.⁹ Presumably, wealthier urban residents would have been able to diversify to non-staple foods, although it is also possible that the genuinely poor may have tended to concentrate in the cities in search of food handouts, with the result that average wealth in the city below the upper quintile may have been lower than in the countryside.¹⁰ Perhaps even more problematic, however, is the fact that the population figure given by Villani for 1338, which was probably based on grain consumption by urban bakeries, evidently took no account of the proportion of the urban grain supply used for baking in private ovens.¹¹

fourteenth century, corresponding to 3.0 hectolitres per person per year. Mira acknowledged that his estimate was lower than those obtained for later periods, and he allowed that the annual *per capita* consumption of cereals may have increased from the early fourteenth century, but he maintained that a figure of less than 230 kilograms per person per year was acceptable for the early fourteenth century. See Mira, 1957, pp. 508-510.

⁹ An annual *per capita* consumption of 2.5 hectolitres of grain corresponds to 187.50 kilograms per person per year, and such an estimate for Florence is in line with the estimate of per annual capita grain consumption that Mira has given for early modern Rome. According to Mira, the consumption of cereals in Rome in the seventeenth century fell in a range between 170 and 190 kilograms per person per year, which is to say between 2.27 and 2.53 hectolitres. For Como in the sixteenth century, Mira estimated that *per capita* grain consumption may have reached 300 kilograms annually, which is to say as much as 4.0 hectolitres of grain per person per year. See Mira, 1957, pp. 509-510, n. 6.

¹⁰ The urban population of Florence, according to Villani, included perhaps as many as 17,000 paupers in the year 1330. See Villani, bk. 10, chap. 162. With respect to consumption patterns between urban and rural areas in pre-industrial Europe, and by way of comparison, contemporary estimates for the *per capita* consumption of cereals in Paris during the eighteenth century have given figures between 2.67 and 2.85 hectolitres per year. In the French countryside, however, grain consumption may have been closer to about 3.5 hectolitres per person per year. In other words, *per capita* cereal consumption in eighteenth century Paris was between about 76.3 and 81.4 per cent of consumption levels in rural areas. See Grantham, 1993, pp. 497-498. The figure of 3.5 hectolitres of grain per person per year corresponds to an annual *per capita* requirement of 262.5 kilograms. In his discussion of consumption and production levels in the early fourteenth century, Wilhelm Abel assumed that the annual *per capita* consumption of cereals was between 150 and 200 kilograms, which is to say between 2.00 and 2.67 hectolitres per year. See Abel, 1980, p. 41.

¹¹ As noted already above, Villani obtained his data about grain consumption in Florence from tax records and from information provided by urban bakers. This information evidently took account neither of grain purchased on the urban markets for private baking or of grain collected by urban landlords from their own rural estates for private baking. It also failed to consider grain procured by other means for private baking. Villani stated that there were 146 bakeries in Florence in 1338. There are also sporadic references to private ovens in conveyances of urban property in the evidence for the thirteenth century. The degree to which private baking was employed in the city

Niccolò Rodolico was the first scholar to employ the figures provided by Villani for the number of baptisms each year as the basis for an estimate of the urban population. Working from these figures, he calculated that the population of Florence around the year 1338 probably stood at about 125,000. Rodolico applied an estimated annual rate of birth of forty-five births for every one thousand inhabitants, which actually yields low and high population figures of 122,000 and 133,000, respectively.¹² Other research suggests that the rate of birth employed by Rodolico was probably too high for Florence before the Black Death, but the commonly accepted and more realistic rate of forty births for every one thousand inhabitants yields figures so great as to defy belief.¹³ Drawing on the extensive post-plague data in the Florentine *Catasto* of 1427-1430, however, Herlihy and Klapisch-Zuber reconsidered the estimates of Rodolico. They noted that about fifteen per cent of the parish population were actually living outside the most recently constructed circuit of walls, in some of the immediately surrounding suburbs. Given a similar distribution of the population in 1338 and using the more realistic birth rate of forty births per thousand inhabitants, Herlihy and Klapisch-Zuber calculated that the total urban population of Florence would have stood between about 115,450 and 126,450 before the Black Death.¹⁴

during the thirteenth and early fourteenth centuries is exceedingly difficult to determine on the basis of the extant documentation. In the fifteenth century, however, urban manufacturers of woollen textiles commonly obtained from their suppliers in the countryside not only raw wool but also considerable quantities of grain, wine, and other foodstuffs, probably to satisfy the requirements of the labourers in their employment. See Salvestrini, 1998, pp. 244-250. For evidence of private ovens in thirteenth century transfers of urban property, see Davidsohn, ed., 1896-1908, 4, 1277 May 29, p. 520; ASF, *Diplomatico*, Santa Trinita, s.d.

¹² Rodolico, 1905, pp. 18-21. In the calculations used by Rodolico, in other words,

$$\frac{b}{r} \cdot 1000 = p,$$

where b = the number of baptisms per year, which serves as a proxy for the number of births per year; r = the estimated annual rate of birth, in this case the number of births per year per thousand inhabitants; and p = the estimated total population.

¹³ The more realistic annual birth rate of forty births for every one thousand inhabitants yields population figures of 137,500 for 5500 births per year and 150,000 for 6000 births per year. Given the size of the city even subsequent to the addition of a new circuit of walls, such figures are utterly untenable.

¹⁴ Herlihy and Klapisch-Zuber, 1985, pp. 67-69; 1978, pp. 174-176. Fiumi also noted that the figures given by Villani for the number of baptisms performed in the urban baptistry of San Giovanni no doubt included the baptisms of a substantial number of inhabitants from the immediately surrounding countryside, and he declined to use the figures as a basis from which to calculate population estimates for this reason. See Fiumi, 1950, pp. 85-87.

3.1.2. The rural population

With respect to the size of the rural population in the Florentine countryside before the middle of the fourteenth century, estimates have depended wholly upon the figures given by Villani for the number of men in the countryside capable of rendering military service. As noted earlier, Villani reported that there about 70,000 men living in the Florentine countryside in 1300 who were capable of serving in a military capacity, and by 1338, the figure had increased to 80,000. On the basis of these figures, Fiumi estimated that there were about 245,000 inhabitants in the hinterland of Florence around the year 1300 and about 280,000 around 1338. Originally, Fiumi had given even lower estimates because he believed that Villani had mistakenly considered the inhabitants of both San Gimignano and Volterra in the figures that he had given for the number of men in the Florentine countryside capable of serving in a military capacity. Using the conventional multiplier of 3.5 and applying it to the figures provided by Villani, Fiumi initially had arrived at precisely the numbers given above, but he adjusted them downwards in order to correct for the presumed inclusion of the populations of San Gimignano and Volterra. After further research into the demographic composition of these two other Tuscan towns, however, Fiumi ultimately concluded that his earlier suspicions had been unfounded. Villani had taken into account neither the populations of San Gimignano nor Volterra, Fiumi now determined, but rather he had been excessively prudent in his calculations.¹⁵ It should be noted, nevertheless, that the territory of Florence was larger in 1338 than it had been at the beginning of the fourteenth century, and at any rate it is impossible to discern exactly what Villani understood as the extent of the territory at any given moment.¹⁶

¹⁵ For the original calculations of Fiumi on the population in the Florentine countryside, see Fiumi, 1950, pp. 87-105. For his later reconsiderations, see Fiumi, 1962, pp. 288-290. Pinto regarded the earlier estimates of Fiumi as the more accurate. Extrapolating from both Villani and the evidence in the *Libro del biadaiole* concerning the grain requirements of the city in the second quarter of the fourteenth century, Pinto estimated the number of urban inhabitants to have been around 100,000 and the number of rural inhabitants to have been about twice as great. Pinto acknowledged the reconsiderations of Fiumi, but he elected not to follow them at the time that he was writing, in the main because the smaller figures were consistent with evidence in the *Libro del biadaiole*. See Pinto, 1978, pp. 75-79. In all fairness to Pinto, however, it should be stressed that he probably was not able to take into consideration the findings of Herlihy and Klapisch-Zuber, published roughly at the same time.

¹⁶ Florence annexed from Pistoia the town of Pescia in the Val di Nievole as well as six nearby communes on the lower slopes of the Monte Albano just before 1330, and they were formally incorporated into the territory of Florence in 1336. See Guasti and Gherardi, eds., 1866-1893, 1,

Herlihy and Klapisch-Zuber, again on the basis of the Florentine *Catasto* of 1427-1430, argued that the population figures suggested by Fiumi are on the lower margin, and they proposed that a higher multiplier should be used. The *Catasto* evidence suggests that a multiplier of 3.7 would be more appropriate for determining the total rural population from the number of males in the countryside between the ages of 15 and 70 years. A Pistoiese chronicler from the beginning of the fifteenth century evidently thought that a multiplier of 4.0 more accurately captured the ratio between the number of men capable of rendering military service and the number of mouths to be fed in the countryside of Pistoia.¹⁷ The evidence for the population in the countryside of Prato in the last years of the thirteenth century and through the first half of the fourteenth century, which is somewhat better than the Florentine evidence, indeed suggests that the multiplier of 4.0 probably gives a figure that most closely approximates rural population in Tuscany.¹⁸ The multiplier of 3.5 used by Fiumi gives a low figure of 280,000, while the multiplier of 3.7 derived from the *Catasto* evidence for the number of males

no. 3, p. 5. See also Herlihy and Klapisch-Zuber, 1985, p. 65; and 1978, p. 171. If Villani included the populations of the annexed territory in his figure for the number of men in countryside of Florence capable of rendering military service, then the figure given here for the population in the Florentine countryside for the 1338 is too high. For the dimensions of the territory of Florence at the end of the thirteenth century, see Ildefonso di San Luigi, ed., 1770-1789, 9, pp. 351-353. For an enumeration of the towns and villages in the Florentine countryside under Florentine communal jurisdiction at the end of the first quarter of the fourteenth century, see Caggese, ed., 1910, bk. 5, rub. 80, pp. 275-290, esp. 280-285.

¹⁷ Herlihy and Klapisch-Zuber, 1985, p. 65; 1978, pp. 171-172. For Barcelona in the later fourteenth century, Bensch used what he labelled a 'conservative' multiplier of 4.5 to calculate the urban population from the hearth-tax surveys, or *fotages*, of 1365 and 1378. See Bensch, 1995, p. 40. Extrapolations from hearth-tax surveys must use a higher multiplier than extrapolations from figures of the sort given by Villani for the number of men in the population capable of bearing arms because more than one man capable of bearing arms lived in many households.

¹⁸ Herlihy and Klapisch-Zuber, 1985, pp. 61-64, esp. 62-62; and 1978, pp. 166-171, esp. 168-170. For Prato and its countryside in the later thirteenth and early fourteenth centuries, the authors were relying on the data collected in Fiumi, 1968, pp. 35-111. Although there may have been parallels between Prato and Florence during the period under investigation, it must be stressed that the demographics in these two territories were very different. Around the year 1300, more than fifty per cent of the overall population in the territory of Prato was living in the city, but the proportion of the population dwelling in the city was in decline in the first half of the fourteenth century, owing no doubt to strong commercial and industrial competition coming from Florence, a mere twenty kilometres distant. Analogous developments can be observed in Pistoia, San Gimignano, and Volterra by about the middle of the second quarter of the fourteenth century, all of which supports the contention articulated by Herlihy and others that Florence was laying claim to an ever increasing share of urban functions in Tuscany as a whole. See Herlihy and Klapisch-Zuber, 1985, pp. 64, 56-57; 1978, pp. 170-171, 178, and nn. 33-34. On the population of Pistoia in particular, see Herlihy, 1967, p. 146. On San Gimignano and Volterra, respectively, see Fiumi, 1962; 1949.

capable of bearing arms gives an intermediate figure of 296,000, and the multiplier of 4.0 used by the Pistoiese chronicler yields a high figure of 320,000. Suffice it to say that the population in the countryside of Florence around the year 1338 probably was not less than about 280,000 and perhaps as great as 320,000, but it was probably closer to 300,000.¹⁹

3.1.3. Population pressure

It thus appears that the urban population of Florence around the year 1338 was between about 115,000 and 125,000, while a figure between 280,000 and 320,000 probably captures well enough the size of the rural population in the Florentine countryside at about the same time. The population in the city of Florence and perhaps also the population in the surrounding countryside probably had already reached a plateau before 1338, however, and they both may have been in decline in the second quarter of the century, particularly after 1339.²⁰ In nearby Prato, for example, the urban population appears to have reached a peak around the year 1300, while the population in the countryside clearly was in decline already before the end of the thirteenth century.²¹

Demographic stagnation or even regression in Tuscany was perhaps compounded by a rapid succession of famines and two outbreaks of pestilence even before the advent of the Black Death in 1348. In the later thirteenth century and particularly in the early fourteenth century, Villani and other Italian chroniclers made frequent mention of instances of food shortage and escalating grain prices,

¹⁹ In the countryside of Florence and throughout rural Tuscany, population density at the height of demographic expansion in the early fourteenth century evidently reached levels that were not achieved again until the nineteenth century. Herlihy calculated a population density of about 62 inhabitants per square kilometre in the countryside south of Florence at Impruneta in 1307. See Herlihy, 1968, pp. 249-250. Settlement may have been even more concentrated in the countryside around San Gimignano, for which Fiumi estimated a population density of 74 inhabitants per square kilometre between 1271 and 1299, and 85 in 1332. See Fiumi, 1961b, pp. 153-157. Fiumi has further speculated that the population of Tuscany as a whole at the height of demographic expansion may have surpassed two million. See Fiumi, 1962, p. 290.

²⁰ The first of two outbreaks of pestilence occurred in 1339-1340, during which perhaps a quarter of the population of Pistoia perished, according to one chronicle report. See again Herlihy, 1967, pp. 104-112, esp. 104, n. 7, and p. 105. See also Herlihy, 1965. Villani reported that the more than 15,000 residents of the city of Florence died of the pestilence in 1339-1340, and that the suffering was even worse in the countryside. On the pestilence of 1339-1340 in the territory of Florence, see Villani, bk. 11, chap. 114. Another outbreak of pestilence occurred in 1347. See below.

²¹ See again Herlihy and Klapisch-Zuber, 1985, pp. 61-64; 1978, pp. 166-171.

and the upheavals to which they attest may have effectively dampened further population growth.²² The dislocations of the first half of the fourteenth century are often attributed to a Malthusian crisis, to ecological disaster and the more general deterioration of the climate, to soil exhaustion, and to pestilence and ultimately plague.²³ There may have been even more important factors, however,

²² Much has been made of the so-called 'great famine' of 1315-1317, but Villani mentioned only that there was serious famine and loss of life north of mountains, which is to say the Apennines, and that its effects stretched as far south as Romagna, the Mugello, and the Casentino, but he mentions nothing of the impact of the famine in Florence. See Villani, bk. 9, chap. 80. In point of fact, the grain harvest in the Florentine countryside had been particularly good in 1315 and 1316. On the early fourteenth century chronicle accounts of famine, see Palermo, 1984. For studies on the great famine with a northern European focus, see Lucas, 1930; Jordan, 1996. On good grain harvests in the Florentine countryside in 1315 and 1316, see Pinto, 1978, pp. 89-90. Based on Villani and other sources, subsistence crises of varying degrees of severity are known to have occurred in Florence in 1182, 1202, 1204, 1217, 1219-1220, 1223-1225, 1227, 1239, 1256, 1270-1271, 1274-1277, 1282, 1286, 1291, 1296-1298, 1302-1303, 1310-1311, 1318-1319, 1322-1323, 1328-1330, 1333, 1339-1341, and 1346-1347. In addition, there were outbreaks of pestilence in Tuscany in 1339-1340 and again in 1347, and the Black Death of 1348. In addition to Villani and other Tuscan chroniclers, see Masi, ed., 1934, p. 19, citing various narrative and secondary sources. See also Carabellese, 1897; Davidsohn, ed., 1896-1908, 4, 309-315; Fiumi, 1957-1959, pt. 3, pp. 466-478; Pinto, 1978, pp. 79-106.

²³ According to the neo-Malthusian model, population growth normally is contingent upon productivity growth, but population growth occasionally may exceed levels of productivity, causing a subsistence crisis. See Grigg, 1980, pp. 51-59, 65-82. Boserup, on the other hand, reversed the order of the two main variables. For Boserup, population growth is the independent variable on which productivity is contingent, which is to say that increases in productivity for the most part were responses to population growth rather than the causes of such growth. Societies tended to adopt more intensive systems of land use, according to Boserup, only as a response to increases in population density. See Boserup, 1965, p. 41-42; 1981, pp. 39-42; 1987. The Malthusian notion of an equilibrium between population and resources nevertheless has remained pervasive, and demographic explanations still have validity on the local level in areas characterised by low population density and a rapid rate of population growth. In the modern developing world, however, the relationship between population growth and famine has had much to do with the underlying condition of poverty and the attendant vulnerability of the population to sharp fluctuations in the supply and price of staple foodstuffs. Demographic change no doubt bears heavily upon economic change and food consumption, but the Malthusian paradigm is inadequate to explain the dislocations in the European west in the early fourteenth century. On Malthusian arguments in general, see Arnold, 1988, pp. 34-42; Devereux, 1993, pp. 46-65, 183-184. With respect to the deterioration of the climate in the middle ages, see Le Roy Ladurie, 1971, pp. 244-287, esp. 248-268; 1967, pp. 238-255, esp. 244-255. Briefly stated, the pattern of climatic change articulated by Le Roy Ladurie from about the turn of the millennium until the middle of the fourteenth century and beyond was characterised first by a warm and dry 'little optimum' which began around the year 1000 and began to fade probably only after about the beginning of the thirteenth century. From about 1215 onward, much of Europe witnessed an advance of the alpine glaciers that subsided only in the seventeenth century. The author was careful to stress the paucity of the medieval sources for both of these developments, however, and he also added that the catastrophes of the late middle ages such as the Black Death probably had little to do with climatic change. Soil exhaustion also fails to account for the dislocations of the early fourteenth century. In areas of intensive agriculture, farmers were well aware of the means at their disposal to minimise, if not avoid entirely, the depletion of the soil. See below, Chapter 4.2.2.

which rendered the balance between the demand for foodstuffs and the supply increasingly precarious. There is evidence to suggest that excessive rural-urban migration and the political economy of the food supply in north-central Italy, perhaps particularly in Tuscany itself, may have exacerbated localised shortages in foodstuffs to a degree sufficient to precipitate larger subsistence crises as well as a broader pattern of demographic regression.²⁴

Duane Osheim, for example, has argued that the traditional explanations for demographic regression before the middle of the fourteenth century based on climatic change, plague, and warfare remain unsatisfactory.²⁵ In the thirteenth and early fourteenth centuries, Tuscan communes encouraged migration into the cities from their countrysides and even from outside their territories as a means of attracting skilled labourers. In order to satisfy the consequent increasing requirements for foodstuffs in the cities, these same communes often imposed export prohibitions and other trade restrictions on grain cultivated within their territories. The food supply policies were designed to guarantee an adequate supply of staple foodstuffs at more or less reasonable prices for labourers in the burgeoning manufacturing sector, but they often compelled cultivators to sell their grain at prices below the free market value.²⁶

Opportunities for employment in the cities and the concomitant guarantee of an adequate food supply, alongside communal intervention in the grain trade that made it increasingly difficult for peasants to engage profitably in grain cultivation, encouraged migration to the city. The fiscal requirements of the commune associated with the maintenance of the food supply and other exigencies precipitated the

²⁴ With respect to the political economy of the food supply in thirteenth and early fourteenth century Tuscany, it will be useful to consider the political economy explanations of famine proffered in Devereux, 1993, pp. 103-177, 186-190. Referring largely to the modern developing world, Devereux identifies resource management, development, government policy, war, and international relations as political economy explanation of famine, which is to say as potential causes of a situation in which some members of a given population are unable to obtain sufficient supplies of food. In medieval Tuscany, all five of these factors played a part in straining the food supply, but the negative effects of government intervention in the grain market are perhaps the easiest to observe. Government grain supply policies and their effects in northern Italy are discussed in Peyer, 1950; Gualazzini, 1956.

²⁵ Osheim, 1976.

²⁶ A Pistoiese document dating from 1343, for example, indeed suggests that market controls were introduced at least partly for the benefit of artisans, which is to say those employed in the non-agrarian sector. See Herlihy, 1967a, p. 124, n. 3, citing ASPistoia, *Provvisioni* 12, fol. 68v, 1343 October 29, which stated that such controls were introduced 'ad ipsius civitatis et civium maxime artificium et pauperum utilitatem'.

imposition of a taxation regime in the countryside that further hastened the flow of migrants to the city.²⁷ According to Osheim, evidence for the decline of the rural population in Tuscany already in the later thirteenth century suggests that excessive immigration from the countryside, spurred in part by the urban demand for labour and the political economy of the food supply, helped to precipitate major economic and social dislocations that contributed to the crisis of the fourteenth century.²⁸

Whatever the ultimate causes of these dislocations, they were doubtless symptoms of a broader structural malaise that also affected business. Rising grain prices typically compelled consumers to spend an increasing proportion of their incomes on staple foodstuffs, which left even less disposable income for purchases of manufactured products and imported goods than otherwise might have been the case. Even under normal conditions, the purchase of foodstuffs may have taken anything from sixty to as much as eighty per cent of the budget of most working families.²⁹ In times of dearth and rising prices, many consumers no doubt found it necessary to divert expenditure away from the manufacturing and

²⁷ By the early fourteenth century, even Florentine tax commissioners understood that taxation policies were driving those with sufficient means to migrate to the cities while impoverishing many of the independent peasants who remained behind in the countryside. See Herlihy, 1968, pp. 266-270. In the countryside of Pistoia, the same phenomenon can be observed in the middle and later thirteenth century. See Herlihy, 1967a, pp. 184-185.

²⁸ The political economy of the food supply in Florence and public intervention in the grain market especially during the thirteenth century is beyond the scope of this work, but suffice it say that the policies of Florence and other Tuscan cities may have actually exacerbated relatively minor disruptions in the food supply to an extent sufficient to produce famine conditions. The fundamental characteristic of famine is not necessarily food shortage, but rather the inability of certain segments of the population to secure adequate provisions. Famine conditions often were engendered when localised disruptions were exacerbated by considerations of a political nature, despite the theoretical availability of sufficient foodstuffs. On rural population decline in Tuscany in the later thirteenth and early fourteenth century, see again Osheim, 1976. The matter receives more thorough treatment below in connection with migration.

²⁹ Cipolla, 1980, pp. 3-63, esp. 28-29, and table 1-7, p. 30. In Florence in the early fourteenth century, an unskilled labourer in the building trade providing for a family of four was spending an average of nearly sixty per cent of his annual income to satisfy the requirements of his family for cereals in normal years. When grain prices were exceptionally low, he might have spent as little as a third of his income on cereals for his family, but feeding the family during a year of severe famine may have consumed well over one hundred per cent of his annual income. Skilled workers typically were able to satisfy the needs of their families by devoting only about half as much of their incomes to purchases of staple foods, but a year of especially severe famine still would have left only about thirty per cent of the income to meet other expenses. See Pinto, 1978, pp. 139-150, esp. 144, tbl. 5, which illustrates the percentage of income consumed in the acquisition of staple foods, and which is reproduced here.

service sectors and into staple food products, in the main because the elasticity of demand tended to be much greater for industrial and imported goods than for essential foodstuffs. Consumers simply were not able to adjust very much their alimentary requirements in the face of short-term supply shortages and price volatility.³⁰ Periodic subsistence crises therefore led to spasmodic changes in the patterns of consumption for industrial and imported goods, which had negative repercussions for many Florentine merchant-banking companies. Some of the largest companies had also become major distributors of imported grain, and they must have benefited from increased demand for grain imports during periods of local food shortage. Many Florentine merchant-bankers nevertheless failed in the second quarter of the fourteenth century, including some of the larger merchant-banking houses such as the Bardi and the Peruzzi. The collapse of Florentine companies was no doubt owing to a combination of causes, but the effect of volatility in the supply and price of staple foods on patterns of consumption for industrial and imported cannot have been good for business.³¹

YEAR	UNSKILLED LABOURERS		SKILLED LABOURERS	
	BACHELORS	FAMILY OF FOUR	BACHELORS	FAMILY OF FOUR
1321	8.4	33.6	4.4	17.8
1327	14.4	57.8	7.6	30.5
1329	33.7	134.6	17.7	70.8

³¹ Jongman and Dekker, 1989, p. 115.

³¹ For a detailed eyewitness account of the economic crises of the 1340s in Florence, see Villani, bk. 11, chap. 88; bk. 12, chap. 55. Between 1333 and 1346, certainly dozens and perhaps hundreds of merchant-banking enterprises in Florence, most of them no doubt very small, had collapsed. The Bardi and the Peruzzi companies were simply the most conspicuous examples of failed merchant-banking houses in Florence during the economic dislocations of the second quarter of the fourteenth century. For a list of bankruptcies in Florence from 1333 to 1346 prepared for the offices of the *Mercanzia* and the *Podestà*, and accompanied by a list of bankruptcies prepared for the consuls of the guilds, see ASF, *Tratte* 216. For another list of 1344 enumerating individuals ineligible to participate in communal elections owing to bankruptcy, see ASF, *Tratte* 290.

3.2. The population of Florence in 1280 and 1300

It has already been argued that the urban population at Florence around 1338 was about 120,000, and that the population in the surrounding countryside at the same time was about 300,000. It was also argued that demographic expansion both in the city and in the countryside had probably reached a plateau around the end of the first quarter of the fourteenth century. From 1339, as a result of pestilence, the population almost certainly had begun to diminish. The total population in the territory of Florence during the period of maximum expansion from 1325 to 1338 therefore was about 420,000, with the urban population constituting about 28.6 per cent of the population in the territory as a whole. As noted above, Villani also reported that there were about 30,000 men in the city and another 70,000 men in the countryside qualified to render military service at the very beginning of the fourteenth century.³² On the basis of these figures, and using coefficients of 3.5 for the city and from 3.5 to 4.0 for the countryside, the urban population around the year 1300 would have been about 105,000 while the size of the rural population would have fallen between 245,000 and 280,000, and probably closer to about 260,000.³³

These figures seem reasonable, but this would suggest that the rate of urbanisation in the territory of Florence underwent almost no change in the first quarter of the fourteenth century and in fact that it had actually declined slightly. The apparent stagnation in the rate of urbanisation after 1300 is perhaps the consequence of the annexation of new territory by Florence from the countryside of Pistoia in 1327-1329. In other words, if Villani took the annexed territory into account when he gave his figure for the number of men in the countryside capable of bearing arms in 1338, then part of the increase in the estimated rural population between 1300 and 1338 would have come in the form of the inhabitants of the newly annexed land. Any such increase in the rural population may have been sufficient to nullify an increase in the rate of urbanisation in the territory as a whole within the pre-1327 boundaries between 1300 and 1338. If this is indeed

³² See again Villani, bk. 8, chap. 39.

³³ Only the lower multiplier has been used for the urban population, following the not unreasonable assumption that urban residents tended to postpone marriage somewhat *vis-à-vis* their rural counterparts, and also that urbanites tended to have smaller families. Higher coefficients of 3.7 and 4.0 yield figures of 111,000 and 120,000, respectively, for the population of the city of Florence at the end of the thirteenth century. While the lower of these two figures might serve to delineate the upper margin, the figure of 120,000 for the year 1300 is clearly too high.

the case, the rural population in the territory of Florence within the boundaries of about 1300 may have been lower in 1338 than the extrapolations from the figures given by Villani suggest.³⁴ Unfortunately, it is impossible to estimate the effect that these annexations might have had.

Additional earlier evidence for the urban population of Florence may be extrapolated from the figures that Villani provided for the varying levels of grain consumption in the city in 1280 and 1338 alongside the population estimates for the city and its countryside in 1338 presented above. According to Villani, the city of Florence was consuming 140 *modia* of grain per day around the year 1338, which is to say about 51,100 *modia* per year. For the year 1280, however, Villani reported that the city was consuming 800 *modia* of grain per week, or only about 41,700 *modia* per year.³⁵ On the basis of an average *per capita* requirement of

³⁴ See again Guasti and Gherardi, eds., 1866-1893, 1, no. 3, p. 5. See also Herlihy and Klapisich-Zuber, 1985, p. 65; and 1978, p. 171. On the territorial expansion of Florence particularly after 1300, see Becker, 1966; Benigni, 1988; Zorzi, 1994.

³⁵ See Villani, bk. 11, chap. 94. Another source for grain consumption in Florence, dated from 1339, gives a figure of 500 *modia* of grain per week in 1280 and 1050 *modia* of grain per week in 1339. See Ildelfonso di San Luigi, ed., 1770-1789, 12, pp. 352-354, esp. 353. Yet another source, the so-called *Florentie Urbis et Reipublice Descriptio anno 1339 exarata*, gives the staggering figure of 230 *modia* per day for urban grain consumption in Florence at that time, which is to say 1610 *modia* of grain per week or between about 83,720 and 83,950 *modia* of grain per year. See Frey, 1885, pp. 119-123, esp. 122: 'Indiget civitas pro commorantibus intra eam, ut ab expertis sepius est reperum, CCXXX grani modiis omni die'. At least for the year 1339, however, the information provided by Villani is probably more reliable. Villani had spent much of his adult life as an agent for the Peruzzi merchant-banking company, and his experience no doubt had imbued him with a keen sense for figures. Moreover, Villani specifically noted in his chronicle that he had obtained his figures from the tax receipts for grinding grain into bread flour and from information that had been provided by the bakers themselves. By way of comparison, it may be worth noting that a Milanese chronicler writing in 1288 claimed that Milan was consuming 1200 *modia* of grain per day at the time, or about 438,000 *modia* per year, equivalent to about 328,500 *modia* of grain in the Florentine system of weights and measures. It may be noted here that the dry capacity of the Florentine *starium* was 0.244 hectolitres, while the Milanese *starium* was only 0.183 hectolitres, and hence four *staria* of Milan were roughly equivalent to three *staria* of Florence. See Zupko, 1981, pp. 273, 275. The Milanese chronicler, Bonvicinus de Ripa, indicated that he had obtained his figure for daily urban grain consumption through 'serious [and] careful investigation', and that other statistics available at the time would be able to corroborate his assertion, although he was conspicuously more vague than Villani with respect to his sources. Bonvicinus also stated that such a figure for urban grain consumption supported his contention, expressed earlier in the text, that the city contained about 200,000 residents. Bonvicinus evidently believed that an appropriate figure for *per capita* grain consumption in the city would have been more than four Milanese *staria* per person per month, equivalent to three Florentine *staria* per month, which is to say about three times the rate on which Villani evidently based his population figures for the city of Florence. Suffice it to say that neither Bonvicinus nor the anonymous authors of the other Florentine sources are known to have shared with Villani his appreciation of figures. On the urban population of Milan, see Bonvicinus de Riva, chap. 3, pt. 2, p. 78. On daily urban grain consumption, see Bonvicinus de Riva, chap. 3, pt. 14, pp. 84-85.

grain of one *starium* per month, the urban population of Florence would have been about 83,400, but Villani may not have taken into account of the grain used for baking in private ovens, as already suggested above. Nevertheless, the figures provided by Villani for grain consumption in Florence in 1280 and 1338 probably reflect population levels in some way. If the figure of about 120,000 suggested above for the urban population of Florence in 1325/1338 can be regarded as reasonably accurate, then it would be possible to estimate the size of the urban population in 1280 based on the change in urban grain consumption between 1280 and 1338.

On the basis of the figures provided by Villani, grain consumption in the city of Florence underwent an increase of about 22.5 per cent during the nearly sixty years between 1280 and 1338. If the population of the city in the year 1338 was about 120,000 as suggested above, and if the growth of the urban population between the years 1280 and 1338 had been proportional to the increase in grain consumption in the city, then the urban population would have been very nearly 98,000 around 1280. This assumes, of course, that the sources of information used by Villani for both 1280 and 1338 were consistent.³⁶ It also assumes that there had been no significant improvements either in the ingredients or in the techniques involved in grain milling and bread production between 1280 and 1338. Finally, it discounts the possibility that improved standards of living might have precipitated changes in patterns of food consumption away from staple products to non-staple foods. These are not utterly safe assumptions, however, and a figure approaching about 98,000 for the population of the city of Florence around the year 1280 perhaps should be regarded as occupying the upper margin, and a more reasonable estimate would be about 90,000.³⁷

³⁶ Although Villani noted the sources of information that he used to obtain his figure for 1338, he made no such claim with respect to the figure for 1280, and indeed Villani appears to have given a more approximate figure for 1280.

³⁷ Assuming a five to ten per cent margin of error in the figure given by Villani for weekly grain consumption in Florence in 1280, the population may have grown by 29.3 to 36.5 per cent between 1280 and 1338. Suffice it to say that the new circuit of walls in Florence on which construction began in 1284 enclosed an area of approximately 630 hectares. Russell, whose calculations give considerable weight to hypothetical urban population densities, estimated that the urban population of Florence in the decade between about 1290 and 1300 was around 96,000. See Russell, 1972, pp. 44-45. On the basis of these figures, the population density in the enclosed area in the early 1280s would have been between about 152 inhabitants per hectare, while the figure of 98,000 would yield a density of about 155 inhabitants per hectare. For the area comprehended by both the 1172-1175 and the 1284-1333 circuits of walls at Florence, see Marinelli, 1921, p. 36.

3.3. The population of Florence before 1280

There are very few earlier data on the population of the city of Florence and its surrounding countryside. Population estimates for Florence before the last quarter of the thirteenth century typically have been based upon calculations of the area of the city, suppositions regarding population density, and the capacity of the Roman theatre. Mario Lopes Pegna, for example, used these criteria to propose a figure of at least 10,000 for the maximum size of the population of Roman Florence around the year 200CE.³⁸ For the later twelfth century, again relying on suppositions about population density, Russell estimated that the urban population of Florence had more than achieved its Roman proportions. Russell argued that the population density in Florence around the year 1172, when construction on a new circuit of walls was begun, probably could not have been much more than about 125 inhabitants per hectare. The new circuit of walls comprehended about 80 hectares, and if it was designed embrace the whole of the urban population at the time, then the city may have numbered about 10,000 inhabitants by about 1172 when construction began. The new city walls were completed in 1175, but the urban population already was expanding rapidly beyond their bounds and into the immediately surrounding suburbs. By about the end of the century, according to Russell, the population of Florence must have been at least 15,000.³⁹

Arguments of this sort are not very satisfactory, however, and the most substantial piece of evidence concerning the urban population of Florence before the beginning of the thirteenth century comes in the form of an oath undertaken in the year 1199 by 523 Florentine citizens between the ages of 18 and 60 in the sector, or *sestiere*, of the Porta di San Pancrazio.⁴⁰ From this figure, Gaetano Salvemini calculated that the number of inhabitants in the city of Florence at the time must

³⁸ Lopes Pegna, 1962, pp. 74-75, 217-219.

³⁹ Russell, 1972, p. 42. For Pisa, Russell argues that the density of the population could have been at least 125 inhabitants per hectare in the later twelfth century, but he states parenthetically that 'it could hardly have been more' for Florence at about the same time. For the end of the thirteenth century, Russell suggests that population density in Florence might have been about 150 inhabitants per hectare. If population density in the city had been 150 inhabitants per hectare, then the urban population would have been about 12,000. See Russell, 1972, pp. 42, 45. For Barcelona around the year 1200, Bensch estimated that an urban area of roughly 60 hectares could have contained a population of about 10,000 to 12,000, which is to say from about 165 to 200 inhabitants per hectare. See Bensch, 1995, p. 40.

⁴⁰ ASF, *Diplomatico*, Riformagioni, Atti pubblici, 1198 January 15. See also Santini, ed., 1897, no. 4, 1199 January 9-16, pp.; Davidsohn, 1977, 1, p. 918.

have been about 10,000.⁴¹ Considerable doubts have been raised about the estimate proffered by Salvemini, and indeed about the degree to which the 1199 oath can be used as the basis for reliable population estimates at all.⁴² Critics of Salvemini have doubted that all adult males in the sector of the Porta di San Pancrazio were represented in the oath, and they have further questioned the degree to which the population of this sector may be regarded as representative of the other five sectors.⁴³ Even if the number of adult males in the 1199 oath under-represents the average number of adult males in each of the six sectors of the city by as much as fifty per cent, however, the urban population of Florence still would not have approached the figures suggested by some of the critics of Salvemini.⁴⁴

These speculations about the population of the city of Florence before 1200 may be compared with extrapolations drawn from the somewhat richer demographic data for Pisa in later twelfth and early thirteenth centuries. According to Herlihy, the urban population of Pisa around the year 1164, when the city itself was able to field an army of 400 horsemen and 3000 infantry soldiers in a war against Lucca, must have been no more than about 11,000. Herlihy used a multiplier of only 3.5, which indeed may be somewhat low as Herlihy himself eventually came to believe later in connection with his research on the *Catasto*. Using a higher coefficient of 4.0, Russell arrived at a figure slightly greater than 13,000, and he further noted that the area enclosed within the newly constructed city walls would have been able to sustain a population of at least that size.⁴⁵ In the light of

⁴¹ Salvemini, 1960, pp. 49-50. Salvemini, following Santini, counted only 519 names in the 1199 oath, whereas Davidsohn arrived at a figure of 523. By my own count, from the transcription of Santini, the text includes the names of 519 individuals sworn to the oath. At any rate, Salvemini multiplied the figure of 519 by six, for each of the six sectors of the city, which actually yields a sum of 3114, though Salvemini gave the figure of 3124. He then multiplied his figure of 3124 by the coefficient of 3.5 on the supposition that each urban male between the ages of 18 and 60 actually represented about 3.5 inhabitants. The precise sum at which Salvemini should have arrived for the urban population of Florence in 1199 was thus 10,899, which he acknowledged as a very rough approximation. A higher coefficient of 4.0 would yield a figure of 12,456.

⁴² Neither Battara nor Fiumi considered the 1199 oath as an appropriate point of departure for estimating the urban population of Florence. See Battara, 1935, pp. 218-221, esp. 220-221; Fiumi, 1957-1959, pt. 2, pp. 463-464.

⁴³ Pardi, 1916, pp. 20-25.

⁴⁴ See Fiumi, 1957-1959, pt. 2, pp. 463-465, esp. 465; Pardi, 1916, pp. 20-25.

⁴⁵ See Herlihy, 1958b, p. 37; Russell, 1972, p. 42. The multiplier of 3.5 used by Herlihy actually gives a figure of 11,900, while the coefficient of 4.0 employed by Russell yields a figure of 13,600. Russell also added that he found it difficult to imagine that an important port city such as Pisa could have had anything less than about 15,000 inhabitants towards the end of the third quarter of the twelfth century, and that such a figure is at least plausible given the physical dimen-

the more recent investigation on the urban demography of Pisa in the early thirteenth century conducted by Enrica Salvatori, the higher figure proposed by Russell now appears to be more credible. Working from a treaty of alliance between the cities of Pisa, Pistoia, Poggibonsi, and Siena that was signed in 1228 by more than four thousand Pisans, Salvatori has put forward a plausible argument that the urban population of Pisa at that time was about 25,000.⁴⁶

For the city of Florence in the later twelfth century, it would be reasonable to assume that the urban population lagged somewhat behind that of Pisa, and that it achieved parity with Pisa during the first quarter of the thirteenth century. The population of the city of Florence was probably between 10,000 and 12,000 around 1175, and had risen to about 15,000 by the end of the twelfth century. Florence had probably surpassed Pisa in terms of urban population by about 1225, and the Florentine population may have even been more than twice the size of the

sions of the city at the time. Construction on a new circuit of walls in Pisa began early in the third quarter of the twelfth century, enclosing perhaps 114 hectares on the right bank of the river Arno. Herlihy used the figure of 114 hectares for the area of Pisa within its twelfth century walls, which was originally proposed by Beloch, though Herlihy also stated that the figure is clearly wrong. Herlihy regarded as more accurate the estimate of 185 hectares put forward by Pederschi. See Beloch, 1940, p. 161; Pederschi, 1951, p. 124. Russell followed Beloch, stating that Pisa might have been able sustain an urban population of 13,250 on the basis of its 114 hectares and a population density of 125 inhabitants per hectare. The point may be picayune, but the two figures actually give a product of 14,250. In addition, Russell incorrectly asserted that the army assembled by Pisa in 1164 comprehended only 400 foot soldiers but 3000 horsemen, rather than vice versa.

⁴⁶ Salvatori has taken issue with the figure of 15,000 proffered by Beloch, and followed by Herlihy, for the population of the city of Pisa around the year 1228. She has also dismissed the higher estimates between 40,000 and 50,000 put forward by Barbagallo and Rossi for the population of Pisa in the early fourteenth century. Salvatori used the alliance treaty as the point of departure, but she also employed a variety of other sources to determine the degree to which the undersigners of the treaty might have represented the entire adult male community. Ultimately, she argued that the treaty was signed only by a substantial portion of the adult males resident in Pisa at the time, and not the entire community. According to Salvatori, there were probably more than two thousand additional adult males resident in Pisa who were not represented in the treaty. Working from a base figure of 6353 and employing the conventional multipliers of 3.5 and 4.0, Salvatori arrived at low and high figures of about 22,200 and 25,400, respectively. She also suggested that these figures might be increased by an additional ten per cent to account for ecclesiastics not represented in the sources, which would give high and low figures between about 24,500 and 27,900. Significantly, Salvatori further argued that there was little additional increase in the urban population of Pisa after 1228. See Salvatori, 1994, pp. 107-123, esp. 116-120. For the lower estimate of about 15,000 in 1228 put forward by Beloch, see Beloch, 1940, p. 161; Herlihy, 1958b, pp. 35-36, n. 1. For the higher estimates of more than 40,000 suggested by Barbagallo and Rossi for the population in Pisa before the advent of the Black Death, see Barbagallo, 1935, p. 940, n. 1; Rossi, 1945-1947, pp. 5-62, esp. 59.

Pisan population by about the middle of the thirteenth century.⁴⁷ Earlier estimates had put the urban population of Pisa at about 40,000 by the end of the thirteenth century, which suggests that it could not have been greater than about 30,000 or 35,000 by the middle of the century. If the population of Florence was indeed more than twice the size of Pisa by about the middle of the thirteenth century, then the urban population of Florence at the same time would have been more than 60,000 and perhaps even as great as 75,000. The recent demographic study of Pisa by Salvatori has argued very strongly, however, that the urban population of Pisa did not grow substantially after 1228.⁴⁸ The weight of the evidence now supports a more conservative approach, placing the urban population of Florence around the middle of the thirteenth century between about 50,000 and 60,000, though perhaps tending towards the upper margin.⁴⁹

⁴⁷ According to Villani, Pisa was less than half the size in terms of population by 1252, though it must be acknowledged that the testimony of Villani is not that of a contemporary witness, and it would be perhaps prudent to allow for some degree of hyperbole. See Villani, bk. 2, chap. 78.

⁴⁸ The period of maximum expansion at Pisa, on the basis of a variety of factors, was probably during the eleventh and twelfth centuries rather than the thirteenth century. The mid-twelfth century walls were never superseded by walls enclosing a larger space during the ensuing two centuries, and indeed the enclosed area of the city underwent little change even until the beginning of the twentieth century. Construction within the walls appears to have been most intense during the second half of the twelfth century, and despite some encroachment on the open spaces within the walls after 1200, the basic structure of Pisan urban topography was definitively rendered by the beginning of the thirteenth century. Manufacturing interests at Pisa may have been less ambitious than those of other north-central Italian cities in attracting certain classes of immigrants, especially those willing to undertake the heavy labour of the urban workshops, and industry at Pisa was underdeveloped in comparison with Florence. Moreover, justifiable doubts have been raised not only about the arguments on which population figures as great as 50,000 have been proposed for Pisa in the later thirteenth and early fourteenth centuries, but also about the methodology employed to arrive at such exorbitant figures. If the rate of population decline at Pisa had been similar to the admittedly steep rate of decline at Prato between the beginning of the fourteenth century and 1427-1430, then the maximum medieval population of Pisa at the end of the thirteenth century would have been about 31,440. If the demographic regression at Pisa was more along the lines of the milder rate of decline observable at Florence, however, then the Pisan population at the end of the thirteenth century would have been only about 24,000. By either measure, the urban population of Pisa around the year 1300 was not very much different from the figure between 24,000 and 27,000 inhabitants recently calculated by Salvatori for the year 1228. See Salvatori, 1994, pp. 109-123, esp. 120. On the absence of any observable change in the urban topography of Pisa after the later twelfth century, see Redi, 1991, p. 140; Garzella, pp. 210-248, esp. 242-243. On the eleventh and twelfth centuries as the period of maximum expansion at Pisa, see Cristiani, 1962, pp. 162-231, esp. 164. On the diminutive dimensions of the woollen textiles industry at Pisa in the thirteenth century, see Castagneto, 1996. On the political demography of Pisa, see again Cristiani, 1962, pp. 180-187. On the rate of population decline at Pisa between the beginning of the fourteenth century and 1427-1430, see Herlihy and Klapisch-Zuber, 1978, p. 179; 1985, pp. 71-72.

⁴⁹ In contrast to Pisa, public building in Florence was most conspicuous in the thirteenth century. At the beginning of the century, only one bridge crossed the river Arno within the city of Florence, but three bridges spanned the river within the space of about a kilometre already by the

Estimates for the population in the countryside of Florence before the later thirteenth century are even more problematic and indeed almost entirely conjectural. For medieval western Europe as a whole in the later eleventh century, a ratio of about nine to one between the rural and urban sectors of the population has been frequently suggested.⁵⁰ If such a distribution prevailed in the territory of Florence around the year 1175, and if the urban population was indeed somewhere around 10,000 at the same time, then the population in the Florentine countryside would have been about 90,000.⁵¹ Certain areas in the Florentine countryside

middle of the century and a fourth was about to be constructed. The second bridge across the Arno after the Ponte Vecchio was the Ponte alla Carraia, constructed between 1218 and 1220. See Villani, bk. 5, chaps. 41-42. The construction of the third bridge across the Arno in 1237, the Ponte Rubaconte, was evidently accompanied by an ambitious public works programme to pave the roads within the city. See Villani, bk. 6, chap. 24. In 1252, the Ponte di Santa Trinità was constructed to provide the Frescobaldi merchant-bankers easy access to the city and the western suburbs from the Oltrarno where their possessions were concentrated. See Villani, bk. 6, chap. 50. The continued growth of Florence had even necessitated by 1258 the expansion of the urban enclosure to embrace the suburbs of San Niccolò, Santo Spirito, and San Frediano in the Oltrarno. See Sznura, 1975, pp. 94-97.

⁵⁰ In his survey on the historical geography of Europe, Pounds stated the commonly held belief, based on extrapolations from the Domesday evidence, that at least eighty per cent of the total population in the medieval west, and perhaps as much as ninety per cent, lived in small villages and were employed in agriculture. Pinto also accepted a nine to one ratio between the rural and urban sectors of the population throughout medieval Europe. See Pounds, 1990, p. 166; Pinto, 1978, p. 76.

⁵¹ Although some demographic data exist for particular locations in the Florentine countryside in the thirteenth and early fourteenth centuries, they are insufficient to permit an assessment of the size of the rural population in the territory before 1300. Oaths of various sorts give figures from which it is perhaps possible to estimate the populations of Figline Valdarno and Semifonte at the beginning of the thirteenth century. Respectively, see Santini, ed., 1895, *Capitoli*, no. 25, 1198 April 15, pp. 43-46; no. 39, 1202 April 7, pp. 77-82. Figures for inferring the populations of Colle di Val d'Elsa, and Montepulciano are also available, respectively, in Santini, ed., 1895, *Capitoli*, no. 36, 1201 April 28-30, pp. 66-72; no. 40, 1202 October 24, pp. 83-93. Another document of 1219 provides figures for extrapolating the population of the town of Magnale, situated near Vallombrosa below the Pratomagna. See ASF, *Diplomatico*, Vallombrosa, 1218 March 16. At Figline in the upper Arno valley, for example, 167 adult males swore an oath of allegiance to Florence towards the end of the twelfth century. From this figure, Wickham has estimated that the population of Figline around the year 1200 was probably no greater than 1000. See Wickham, 1996, pp. 31-32. Later figures exist from a tax survey undertaken in the countryside of Florence in 1343, but the survey is an unsatisfactory source. For Figline, and indeed for many other rural settlements, the number of households recorded in a similar survey dated from 1350, which is to say after the Black Death, substantially exceeds the figure for 1343. The 1343 data are incomplete and they survive only in a sixteenth century copy, which is transcribed in Ildefonso di San Luigi, ed., 1770-1789, 13, pp. 207-288. See also Fiumi, 1950, pp. 87-96. As far as I have been able to determine thus far, the evidence for Florence provides no other figures for any of these places to facilitate observations concerning population change over time before the middle of the fourteenth century.

nevertheless appear to have been heavily settled already by the beginning of the twelfth century, and the figure of 90,000 for the rural population in the territory of Florence around 1175 should be regarded as an absolute minimum.⁵²

Considering the paucity of the demographic evidence for Florence and its surrounding countryside before the middle of the fourteenth century, the lengthy discussion above must be regarded as somewhat speculative. The whole operation, moreover, accentuates the degree to which the estimates hinge almost entirely upon the information in the chronicle of Giovanni Villani. The analysis nevertheless establishes the broad parameters of Florentine rural and urban demographic growth from the later twelfth century until the middle of the fourteenth century.

Table 1. The population of Florence and its surrounding countryside

	1175	1200	1252	1280	1300	1325/38
City	10,000	15,000	60,000	85,000	105,000	120,000
Countryside	90,000	—	—	—	260,000	300,000
Territory	100,000	—	—	—	365,000	420,000
Urbanisation	10.0%	—	—	—	28.8%	28.6%

3.4. Sources of population growth

Between 1175 and 1325, based on the population estimates given above, the annual rate of population growth in the territory of Florence was about one per cent. Such a figure is by no means inconsistent with rates of demographic increase that

⁵² Both the Settimo plain and the area around the abbey at Passignano appear to have been heavily settled already before 1100. See E. Conti, 1965, pp. 61-70. The figure of 90,000 for the population in the Florentine countryside around 1175 perhaps should be seen as lying on the extreme lower margin. It is certainly conceivable that the rural population in the countryside of Florence in the later twelfth century was twice the figure given here, but the low figure is maintained in the interest of conservatism. If anything, a higher estimate of the rural population in the later twelfth century would make urban growth easier to explain, and it would yield an even higher figure for the rate of urbanisation over the century and a half between 1175 and 1325, and thus a higher figure for productivity growth over the same period. On productivity growth in the territory of Florence, see below, Chapter 4.

have been calculated for other regions in the western Mediterranean during the pre-industrial period, and indeed it is sometimes modest by comparison.⁵³ In the city itself, the population grew at an annual rate of 1.9 per cent, despite mortality rates that were probably four per cent or more even in normal years, and at any rate certainly more than sufficient to offset any growth in the urban population through natality.⁵⁴ A steady flow of immigrants into Florence was therefore necessary not only to fuel urban demographic growth but merely to compensate for natural losses, and recent immigrants probably constituted a substantial proportion of the population in the larger Tuscan cities.⁵⁵

3.4.1. Rural-urban migration

The Danish historian Johan Plesner argued that most of the documented immigrants in thirteenth century Florence were rural landowners from the surrounding hinterland.⁵⁶ As suggested above in the introductory chapter, however, documented migration from the countryside to the city probably constituted only a small proportion of all rural-urban migration in the territory of Florence. In view

⁵³ In Provence during the later fifteenth and early sixteenth centuries, for example, the population grew by an annual rate of 1.7 per cent, and the Sicilian population expanded by an annual rate of 1.6 per cent from 1464 to 1478. Epstein, 1992, p. 67, n. 73.

⁵⁴ The figure of four per cent given as the probable rate of mortality in normal years pertains to Florence in the early fifteenth century and has been drawn from Herlihy and Klapisch-Zuber, 1978, pp. 454-456; 1985, pp. 269-270. A comparison of baptismal records and census data for Florence in the third quarter of the eighteenth century suggests that the natality rate in Florence between 1751 and 1767 oscillated between 3.48 and 3.88 per cent per year, which is roughly comparable to birth rates in other pre-industrial cities in Mediterranean Europe. The rate of natality hardly could have been higher in Florence during the early fifteenth century, not to mention the early fourteenth century. See again Herlihy and Klapisch-Zuber, 1978, p. 176; 1985, p. 68. See also Lastri, 1775, pp. 94-95, 107-111. For examples of comparable birth rates for elsewhere in pre-industrial Italy, see Reinhard, Armengaud, and Dupaquier, 1968, pp. 164-165.

⁵⁵ Herlihy, 1958b, pp. 39-42. On the basis of the Florentine *Catasto* of 1427-1430, Herlihy and Klapisch-Zuber estimated that at least ten per cent of the urban population of Florence was comprised of recent immigrants in the early fifteenth century, and at Pisa, nearly twenty per cent of the urban inhabitants were recent immigrants. Elsewhere in Tuscany in the early fifteenth century, recent immigrants typically accounted for between five and six per cent of the urban population. See Herlihy and Klapisch-Zuber, 1978, p. 314; 1985, p. 112. It must be stressed, however, that the demographic conditions present at the time of the redaction of the *Catasto* were very different from those that prevailed from the later twelfth to the early fourteenth century.

⁵⁶ Plesner, 1934. Plesner based his observations not on urban documentation but on two case studies drawing on the evidence for the area around the abbey at Passignano in the Chianti and the parish of Giogoli in the countryside to the southwest of Florence. The arguments put forward by Plesner have never been systematically challenged, which emphasises the enormous difficulties entailed in so doing.

of the nature of the surviving evidence, it is very likely that poor and dependent cultivators are not adequately represented. Statutes and treaties inhibiting the ability of serfs to acquire citizenship in the cities of Tuscany in the thirteenth century imply a significant servile component in migratory movements.⁵⁷ The mere existence of these charters suggests that the flight of serfs from their stations on rural estates constituted for the affected rural landowners, at the very least, a considerable annoyance.⁵⁸

In the later thirteenth century, Florence actually liberated the serfs in its territory *en masse*, but the emancipation of the serfs was an instrument employed by the commune to extend urban influence in the countryside rather than to encourage the migration of labour into the city.⁵⁹ The degree to which the liberation of

⁵⁷ A statute promulgated at Lucca even before the end of the first quarter of the thirteenth century explicitly prohibited serfs from acquiring citizenship, and other potential citizens were required to hold property in the city. See Vaccari, 1926, pp. 83-86, esp. 85; De Stefani, ed., 1894, pp. 253-255, esp. 254. Pisan statutes of the early thirteenth century stipulated that the mobility of peasants living within the city walls and in the immediately surrounding suburbs was not to be restricted, except voluntarily, but the abandonment of the land by peasants in the deeper countryside was expressly forbidden. See Vaccari, 1926, pp. 86-91. In 1225, Florence negotiated a treaty with San Gimignano that prohibited either city from granting citizenship rights to serfs from the territory of the other city before the serf had spent ten years in continuous residence in the host city. See Santini, ed., 1895, *Miscellanea*, no. 23, 1225 November 19, pp. 390-391. It is likely that this clause was designed to discourage migration from San Gimignano and its environs to Florence rather than the other way around. The text of the treaty strongly suggests that San Gimignano made the clause a condition for the repayment a large debt that it owed to Florence. Requirements from five to ten years of continuous and independent residence in the city for immigrants at the lower end of the social spectrum before attaining liberty and thus becoming eligible for citizenship occur frequently in the legislation for cities in Tuscany and north-central Italy in the thirteenth and early fourteenth centuries. Requirements of five years are attested at both Pistoia and Ravenna, and requirements of ten years are attested at Pisa, Reggio, Parma, and Perugia. See again Vaccari, 1926, pp. 86-97.

⁵⁸ In the thirteenth century, it is possible to observe large landowners in the Florentine countryside successfully pursuing fugitive serfs through the court system in the city. See Santini, ed., 1895, *Atti di giurisdizione*, no. 22, 1219 January 1, pp. 240-244; cf. ASF, *Diplomatico*, Badia di Firenze, 1218 January 1. See also Santini, ed., 1952, *Miscellanea*, no. 192, 1255 January 21 and February 25, pp. 399-400; and no. 197, 1255 February 17 and 25, pp. 403-404. Cf. ASF, *Diplomatico*, Cestello, s.d.

⁵⁹ The liberation of the serfs in the territory of Florence in 1289 was enacted only after communal officials in Florence were notified by ambassadors from several communities in the Mugello that the cathedral chapter in Florence had expressed its intention to alienate property in the Mugello on which tenants owed annual services to the Ubaldini. The manoeuvres of the Florentine commune in this particular instance have been interpreted as an effort to limit the extension of the seigneurial power of the Ubaldini lords in the Mugello. See Vaccari, 1926, pp. 112-122; Luzzatto, 1939, p. 197; Magna, 1982, pp. 55-58. For evidence of the circumstances that gave rise to the emancipation, and for the resulting provision that ostensibly liberated the serfs in the territory of Florence, see Ildefonso di San Luigi, ed., 1770-1789, 9, no. 17, pp. 299-301 [1289 July 30, 1289 August 6]. The provision of liberation is also published in Rumohr, ed., 1830, pt. 2, no. 1, pp. 100-103.

the serfs in the territory of Florence may have borne upon migration patterns remains a matter of conjecture, but it is worth noting that the liberation of serfs elsewhere in north-central Italy was intended not to attract labour to the city but to discourage the abandonment of the land. The collective enfranchisement of the serfs in the territory of Bologna in 1257, for example, was motivated above all by fiscal exigencies, and particularly by the necessity to limit the flow of migrants from the countryside and the loss of tax revenue that such population movements entailed.⁶⁰ In the territory of Florence, the liberation of the serfs was also intended as an assertion of political sovereignty and as a means by which to circumscribe seigneurial power.⁶¹ The establishment of new towns in the Florentine countryside beginning in the later thirteenth and early fourteenth centuries was likewise designed not only to stem the tide of migrants from the countryside and into the city but also to diminish seigneurial power.⁶²

Undocumented immigrants from the lower strata of rural society must have accounted for a considerable share of the growth in the Florentine population. They probably swelled not only the ranks of the labourers in the three hundred woollen textiles workshops in the city around the year 1308, but they also may have accounted for a large proportion of the 17,000 indigent reported by Villani to have been in the city in 1330.⁶³ The documentation for Florence in the second half of the thirteenth certainly demonstrates that skilled and semi-skilled labourers

⁶⁰ Vaccari, 1926, pp. 100-110; Luzzatto, 1939, p. 197; Pini, 1978, pp. 376-390, esp. 381-389.

⁶¹ Magna, 1982, p. 57, n. 164; Zorzi, 1994, p. 337.

⁶² Pinto, 1984b, p. 27; Zorzi, 1994, pp. 338-341. On new towns in the Florentine countryside, see Higounet, 1962; Moretti, 1980. See also Friedman, 1974; 1988. Five new towns in the Florentine countryside were realised in the course of the first half of the fourteenth century. Castelfranco di Sopra, San Giovanni Valdarno, and Terranuova Bracciolini were founded in the upper valley of the river Arno between Figline and Montevarchi, and Scarperia and Firenzuola were founded north of the city. It must be acknowledged, however, that San Giovanni Valdarno and Scarperia existed as market towns already in the later twelfth century. Other foundations were planned in the upper Arno valley, in the valley of the river Ambra, just below the Passo della Consuma, and at Colle di Casaglia, but they never came to complete fruition. Scarperia and Firenzuola were established, or re-established, as a means by which to counter the seigneurial power of the Ubaldini lords in the Mugello and to provide greater security for travellers along the trunk route between Florence and Bologna. The new foundations in the upper Arno valley were likewise designed to counter seigneurial power and to facilitate the movement of staple foodstuffs to Florence. The Florentine *terre nuove* are discussed briefly above, Chapter 2.3.1, and below, Chapter 7.2.2.

⁶³ On the number of textile workshops in Florence in 1308, see Villani, bk. 11, chap. 94. On the indigent population in Florence in 1330, see again Villani, bk. 10, chap. 162.

were migrating from the countryside into the city, though the movement of unskilled labour towards the city has remained for the most part invisible.⁶⁴

3.4.2. Regional demographic movements

Rural-urban migration in pre-industrial Europe generally occurred over relatively short distances, with most migrants rarely venturing beyond the nearest large town. Migration into Florence likewise came mostly from the immediately surrounding countryside, which is to say from the dioceses of Florence and Fiesole, but large cities such as Florence were able to attract migrants from a much broader area. The languid growth of other major Tuscan towns from about the beginning of the second quarter of the thirteenth century in the face of continued rapid growth at Florence indeed suggests that Florence was absorbing much of the surplus labour migration from the territories of other towns in Tuscany.

From the middle of the thirteenth century and until the Black Death, for example, the population density in the countryside of Pistoia was diminishing while the urban population remained virtually stagnant from 1219 through the thirteenth and early fourteenth centuries. This suggests that many migrating peasants were not merely abandoning the countryside of Pistoia for the city but rather that they were abandoning the territory of Pistoia completely.⁶⁵ Pisa appears to have attracted a greater number of immigrants from its surrounding countryside, but the most recent research on urban demography at Pisa, as noted above, suggests that the urban population may have registered little significant growth after 1228. Migration from the countryside of Pisa and into the city was either sufficient only

⁶⁴ The surviving evidence for Florence leaves much room for additional research, but the work thus far undertaken on migration from the countryside and into the city has merely scratched the surface. Nenci was able to identify 1340 immigrants in Florence over the course of the second half of the thirteenth century. Artisans and apprentices were most numerous during the decade from 1291 to 1300, but much of the apparent increase in their numbers probably reflects the extant documentation, which swells towards the end the thirteenth century. The disparity favouring the last decade of the century is nevertheless more pronounced among artisans and apprentices than among the population of identifiable immigrants as a whole. The area of the city that received most of the identifiable immigration was the Oltrarno, but once again this probably reflects the fact that the Oltrarno is the best documented area of the city in the second half of the thirteenth century. See Nenci, 1981.

⁶⁵ Herlihy, 1967a, pp. 56-77.

to replenish natural losses or else was offset by migration from the city of Pisa itself to other cities.⁶⁶

The attraction of Florence was perhaps most sharply felt in nearby Prato, where the decline of the rural population was matched by demographic loss in the city. The population in the countryside of Prato was in continuous decline from about 1290 until the Black Death, but it is abundantly clear that losses in the rural population were not fuelling urban demographic expansion at Prato. The urban population of Prato registered slight growth only in the last decade of the thirteenth century and during the first years of the fourteenth century, but the population in the city declined markedly from about 1305.⁶⁷ The returns on papal tithes in the later thirteenth and early fourteenth centuries further suggest a considerable degree of depopulation throughout rural Tuscany.⁶⁸ At the upper levels of society, immigrants from Pisa, Pistoia, and the countryside of Prato were assuming prominent positions in the communal government in Florence alongside immigrants from the Florentine countryside even before the middle of the thirteenth century. They were joined in the Florentine communal administration by other Tuscan immigrants from Fucecchio, Lucca, Siena, and Volterra, and also by immigrants from beyond the confines of Tuscany.⁶⁹

⁶⁶ On rural-urban migration in Pisa, see Herlihy, 1958b, pp. 39-42, 124-125. On urban demographic stagnation at Pisa in the thirteenth century, see again Salvatori, 1994, pp. 109-123.

⁶⁷ Herlihy and Klapisch-Zuber, 1978, pp. 166-171; 1985, pp. 61-64.

⁶⁸ Osheim, 1976. Working from the records for the collection of papal tenths in Tuscany during the periods from 1274 to 1280 and from 1296 to 1304, Osheim argued that the traditional organisation of rural parish churches in Tuscany was being undermined by demographic regression in the countryside owing to rural-urban migration. The diminishing population of rural parishes throughout Tuscany rendered it impossible for many parish churches to pay their ecclesiastical dues on a regular basis. The research conducted by Osheim assumes a positive correlation between the frequency of non-payment on papal tithes and the relative degree of demographic regression. On this basis, the evidence suggests that the depopulation of the countryside was most severe in the dioceses of Pisa, Fiesole, and Pistoia, respectively. The diocese of Florence was very clearly the least adversely affected by demographic regression, but the Florentine hinterland included the dioceses of both Florence and Fiesole. When the dioceses of Florence and Fiesole are considered in tandem, they still constitute the region least adversely affected, but much of the disparity between Florence and Siena, the next least adversely affected diocese, dissolves.

⁶⁹ Santini compiled a catalogue of communal offices and officials in Florence from 1125 until 1250, and the list includes the names of several officials bearing toponomastic designations that suggest recent immigration. See Santini, ed., 1895, pp. xvii-lxxii. 'Boninsegna filius Guidi Pisani' is attested as a *provisor* of Florence in 1227, for example, and one 'Iohannes de Pistorio' was serving a *iudex curie sextus Porte Sancti Petri* in 1237. For the source in which 'Boninsegna filius Guidi Pisani' appears, see Santini, ed., 1895, *Atti di giurisdizione*, no. 30, 1228 January 11, pp. 253-254; ASF, *Diplomatico*, Badia di Passignano, under 1227 January 11. For 'Iohannes de Pistorio', see Santini, ed., 1895, *Atti di giurisdizione*, no. 45, 1237 August 20, pp. 267-268; ASF,

Within the territory of Florence itself, the city of Florence was not the only beneficiary of migration from the more rural zones to more urbanised zones. Infrastructural development and improved drainage conditions on the plains and in the river valleys in the twelfth and thirteenth centuries helped to precipitate the blossoming of such lowland towns as Castelfiorentino, Certaldo, Empoli, Montelupo, Figline Valdarno, Montevarchi, Borgo San Lorenzo, and San Piero a Sieve.⁷⁰ The towns that benefited most from the realignment of the population in the territory became centres of artisan activity.⁷¹ The expansion of the lowland towns situated particularly on the periphery of Florentine territory no doubt came at the expense of population loss in the more marginal areas of the Florentine countryside that were poorly served by changes in the infrastructure, but their growth was also a product of depopulation in neighbouring territories. Population movements within the territory of Florence and indeed within Tuscany as a whole were nevertheless most conspicuously oriented towards the city of Florence itself and towards its burgeoning industrial sector.⁷²

Diplomatico, Badia di Firenze, s.d. In 1232, 'Forese Goccii de Sancto Georgio, Pratese', is recorded in Florentine records as a *nuntius comunis Florentie*. See Santini, ed., 1895, *Miscellanea*, no. 27, 1232 August 2, pp. 400-401; ASF, *Diplomatico*, Badia di Firenze, s.d. These immigrants served in the communal administration of Florence with immigrants from such places as Brozzi, Campi, Candeli, Castelfiorentino, Certaldo, Luco di Mugello, Panzano, Passignano, Quona, and Sommaia within the Florentine countryside. Other Tuscan immigrants from Fucecchio are attested in the communal administration in 1247, from Lucca in 1241 and 1244, from Siena in 1231 and 1234, and from Volterra in 1244. Immigrants from Bologna, Modena, Parma, Perugia, and Viterbo also served in the communal administration in Florence during the early thirteenth century. See again Santini, ed., 1895, pp. xvii-lxxii.

⁷⁰ Plesner, 1938, pp. 5-11, 92-101; Fiumi, 1957-1959, pt. 2, pp. 469-473, esp. 471. On the relationship between infrastructural development and demographic movements, see below in Chapter 4.2.1

⁷¹ For evidence of artisan activity at Figline Valdarno in the early thirteenth century, see ASF, *Diplomatico*, Passignano, 1233 February 24. See also Prunai, 1983; Masi, ed., 1934, pp. 213-217. Figline was an important market town already by the middle of the twelfth century, and it served as a port on the river Arno from at least as early as 1186. For the earliest evidence of the market at Figline, see ASF, *Diplomatico*, Badia di Passignano, 1153 June 1. For the earliest evidence of port facilities at Figline, see ASF, *Diplomatico*, Badia di Passignano, 1262 January 29, which is improperly dated in the ASF; and cf. Kehr, 1904b, no. 33, 1186 January 29, pp. 139-203. Demographic growth at Figline is attested in documents from 1175 and 1180, which indicate that the population of Figline was growing daily in the later twelfth century. See Ughelli, ed., 1970, 3, coll. 245-246 [1175 April 1]: 'Hinc est utique, quod populum Figinensem fide, et numero quotidie crescere conspicientes'. See also Ughelli, ed., 1970, 3, coll. 247-248 [1180 April 8], in which the passage appears again in virtually the same form.

⁷² See below, Chapter 5.1.

3.5. Conclusion

By all indications, the population of both the city of Florence and the surrounding countryside grew enormously from the later twelfth century until about the end of the first quarter of the thirteenth century. At the height of demographic expansion around 1325, the urban population may have been as great as 120,000, and the population in the countryside was probably close to 300,000. Demographic expansion in the city was fuelled partly by the migration of rural landowners from the Florentine countryside but much more considerably by landless peasants. Florence also appears to have absorbed much of the surplus labour from the territories of other Tuscan towns, and, to a lesser extent, the city even attracted migrants from beyond Tuscany. Demographic movements in the territory of Florence and in Tuscany as a whole helped to precipitate productivity improvements in agriculture and provided the labour force for the burgeoning textiles industries in the city of Florence.

4. Agricultural productivity

The growth of both the rural and urban populations of Florence from the later twelfth century until the early fourteenth century placed considerable demands upon the production of foodstuffs in the countryside, while urban demographic growth in particular provided strong incentives for agricultural production. The first part of this chapter introduces the concept of productivity in agriculture and briefly reviews a means by which to examine productivity change in agriculture in a poorly documented economy. On the basis of the figures for population presented above, and also taking into account the dimensions of the territory of Florence and the changing relationship between the size of the population and amount of land in the territory, the chapter then undertakes a rudimentary analysis of agricultural productivity growth in the territory as a whole. The second part of this chapter considers the various factors that stimulated changes in agricultural productivity in the thirteenth century.

4.1. Productivity

Productivity is typically defined as the ratio of output to input.¹ In agriculture, the most important inputs, or factors of production, are usually understood to be land and labour, but inputs from livestock and other forms of capital investment also bear upon productivity. In order to estimate changes in overall productivity, economists have favoured the measurement of total factor productivity, or TFP, which is the residual increase in overall productivity that cannot be ascribed to known increases in the individual factors of production, typically land, labour, and variable capital. The residual increase thus expresses improvements in more intangible production factors such as technology, knowledge, organisation, and the quality of inputs. In poorly documented economies, however, it is only rarely

¹ Economists and economic historians have defined productivity in a variety of ways, but this simple definition will suffice. See Overton and Campbell, 1991, pp. 7-17, esp. tbl. 1.1, p. 10. Much of what appears in this and in the succeeding paragraphs follows the general introduction to the concept of productivity change in European agriculture in Overton and Campbell, 1991. On the measurement of changes in land and labour productivity in agriculture in general, see also Grigg, 1982, pp. 163-176.

possible to estimate productivity in agriculture taking into account all the primary factors of production. The productivity of both capital investment and livestock in agriculture are particularly elusive in a pre-industrial context owing to the nature of the documentation, but land and labour productivity are more amenable to consideration.

4.1.1. Land and labour productivity in agriculture

Land productivity in agriculture takes into account the total agricultural output drawn from the available landed resources, which is expressed as units of output per unit of land. Labour productivity is determined in part by land productivity in as much as it considers the ratio between labour and inputs from land, which is expressed as the product of the total agricultural output per unit of land multiplied by the unit area of farmland per agricultural worker.² The easiest means by which to generate positive changes in agricultural output is through increased inputs of land as a factor of production, which is to say through the extension of arable. Bringing more land under cultivation will not necessarily generate increased productivity, however, and it may even cause productivity to decrease, especially if the new land is inferior in quality or location to the land already under cultivation and if inputs of labour and capital investment remain constant.³ In practice, however, the introduction of new land is often accompanied by an intensification of land use that stimulates productivity growth, and reclamation in particular may engender changes in the physical character of the land that make it more productive.⁴

² Labour productivity is expressed as

$$\frac{Q}{L} = \frac{Q}{T} \cdot \frac{T}{L},$$

in which Q = output, T = land, and L = labour. See Overton and Campbell, 1991, pp. 23-24, esp. 23.

³ The classical economic theories espoused by David Ricardo in the early nineteenth century associated increasing agricultural output on the aggregate level, in the absence of technological change or capital investment, with a decline in output per unit of agricultural land and hence with a decrease in land productivity. Ricardo assumed that the lands most favourable for agricultural exploitation are brought into cultivation first, and that higher levels of output increasingly reflect the introduction of more marginal land into cultivation.

⁴ The association between the extension of the area under cultivation and the increased intensity of land use stems from the fact that they are both motivated by increased demand for agricultural products during periods of population pressure. The intensification of land use is often reflected in a transition from pasture to arable, because staple crops such as grain have the capacity to yield

Agricultural productivity growth is generated either by increasing factor inputs in land, labour, and capital, or through improvements in the existing technology. In the absence of technological change, however, increased factor inputs will eventually create negative growth. Beyond a certain threshold, increased factor inputs give rise to diminishing returns from each subsequently added unit of input.⁵ It is also possible to raise productivity through improvements in agricultural efficiency, which may even occur independent of increased factor inputs and is often associated with the influence of large centralised markets.⁶

more human food per unit of agricultural land than livestock. In Florence, developments of this sort are suggested in the tendency in the woollen textiles industry to rely increasingly on imported wool in the later thirteenth and early fourteenth centuries, which is discussed below. When the introduction of new land is more on the extensive margin of cultivation, farmers are able to intensify their use of land by transferring to the new lands crops that are better suited for inferior conditions, thereby liberating higher quality land for the cultivation of more demanding but also more remunerative staple crops such as grain. New lands are not always at the extensive margin, however, and the reclamation of alluvial lowlands often permits the agricultural exploitation of land rich in soil nutrients. Evidence for the descent of many roads in the Florentine countryside from the ridges and hillsides to the plains and river valleys in the twelfth and thirteenth centuries indeed suggests that some of the most fertile land in the territory was brought into cultivation during the same period. For more on reclamation and drainage in the Florentine countryside, see below.

⁵ Thomas Robert Malthus, writing at the end of the eighteenth century, focused on diminishing returns from labour. Malthus believed that population tends to grow exponentially unless its growth is arrested by the limited food supply. As the population expands, an ever increasing supply of labour is compelled to draw sustenance from a fixed supply of land. Increased labour inputs cause aggregate agricultural output to grow, but the marginal product of each additional labour input eventually begins to decline.

⁶ The influence of a large centralised market tends to create a concentric pattern of land use that diminishes in intensity with distance from the market. The diminishing intensity of land use is a response to changes in economic rent, which is negatively correlated with distance from the market. Lands in close proximity to the market tend to command higher levels of economic rent, which in turn requires higher inputs of production factors and more intense strategies of land use. As distance from the market increases, economic rent tends to decline, demanding progressively lower levels of input. The phenomenon is known as the von Thünen effect, after Johann Heinrich von Thünen who first articulated the theory in his *Der isolierte Staat*. See von Thünen, 1966. See also Dempsey, 1960; Hall, 1966. The theories espoused by von Thünen are discussed briefly below in Chapter 6.2. For the moment, suffice it to say that the problem of transport costs, a central feature of the von Thünen effect, is given consideration in the manual of Petrus de Crescentiis (c. 1230-1321), *Opus ruralium commodorum*, which describes state-of-the-art agrarian practice in north-central Italy in the early fourteenth century. See Petrus de Crescentiis, bk. 3, chap. 1 (De area), fol. 43: 'Area longe a villa esse non debet propter deportandi facilitatem'.

4.1.2. Measuring agricultural productivity

Urban demographic expansion in pre-industrial Europe was contingent upon the availability of an adequate supply of essential foodstuffs, which in turn depended upon agricultural productivity. In highly urbanised north-central Italy before the middle of the fourteenth century, and in the territory of Florence in particular, productivity growth in agriculture clearly was an important aspect of overall growth, but it is exceedingly difficult to document in view of the available evidence. Even in poorly documented economies, however, it is often possible to infer changes in agricultural productivity from demographic data, and in particular from changes in the distribution of the population between the agrarian and non-agrarian sectors.

In any given territory, the rate of urbanisation reflects *per capita* production in the agrarian sector. The level of surplus production in the agrarian sector determines the maximum size of the non-agrarian sector. An increase in the size of the non-agrarian sector *vis-à-vis* the agrarian sector thus implies a correlative improvement in *per capita* agricultural output in the agrarian sector while also providing a measure of the scale of change.⁷ In Tuscany as a whole during the thirteenth century, and especially in Florence, changes in the urbanisation ratio suggest that the labour force was undergoing a sectoral shift from agriculture to trade, manufacturing, and finance. In absolute terms, the size of the agricultural population in the territory of Florence increased throughout the period under investigation, but the proportion of the population employed in agriculture diminished significantly. Agricultural output in the territory of Florence itself evidently suffered few if any negative repercussions from this sectoral shift, however, or else the urban demographic expansion of Florence would have been impossible.

⁷ Wrigley, 1985, pp. 683-684. The model presumes an essentially closed economy, but such a presumption becomes problematic for Florence after the beginning of the thirteenth century. In order to account for the portion of the urban demand for foodstuffs that was satisfied through external trade, it is necessary to adjust any calculations for food imports. For Florence in the thirteenth century, it would be reasonable to assume that food imports accounted for between five and ten per cent of aggregate food production. It is also impossible to isolate perfectly the non-agrarian sector from the agrarian sector in any developing medieval economy. Not all non-agrarian labourers were dwelling in the city of Florence, and neither were all agricultural workers resident in the countryside. The larger towns in the Florentine hinterland such as Borgo San Lorenzo and Castelfiorentino, for example, must have contained sizable populations of non-agricultural workers. The proportion of the population resident in the primary urban centre of a given area nevertheless provides an adequate approximation, and in some cases the only available measure, of the relationship between the two sectors.

Working from the population estimates for Tuscany suggested by Josiah Cox Russell, the Swedish economic historian Karl Gunnar Persson has measured the rate of urbanisation and agricultural labour productivity growth in Tuscany as a whole during the thirteenth century. Treating Florence as the principal urban centre in Tuscany, Persson estimated an urbanisation ratio for all of Tuscany between about 11 and 26 per cent, and he further suggested that the urbanisation ratio for the territory of Florence itself may have been somewhat higher, perhaps closer to about 30 per cent.⁸ Based upon these measurements of the rate of urbanisation in Tuscany as a whole, Persson estimated that agricultural labour productivity in general grew at an annual rate between 0.15 and 0.35 per cent in the region between the first decade of the thirteenth century and the last decade of the century.⁹

⁸ Russell, 1972, p. 42; Persson, 1991, pp. 124-143, esp. 133.

⁹ Persson, 1991, pp. 133-139. Persson himself indeed qualified his results, suggesting that his figure for an average annual rate of productivity growth in thirteenth century Tuscany between 0.15 and 0.35 per cent probably erred on the side of conservatism. According to Persson, the rate of productivity growth in Tuscany in the thirteenth century probably exceeded his estimates. These estimates presume a more or less closed economy in Tuscany during the period, but this presumption is untenable after the beginning of the thirteenth century, as Persson himself realised. He estimated an annual net import of food of about five to ten per cent of aggregate food production, but his consideration of Tuscany as a whole obscures the differential dependence of the various cities within the region on imported foodstuffs. The territories of some cities may have been net exporters of staple foods. During the first half of the thirteenth century, food imports at Florence probably averaged no more than about five per cent of aggregate food production per year, but they probably averaged closer to about ten per cent annually during the second half of the century. Labour productivity growth in Tuscany in the thirteenth century was indeed partly, and perhaps very largely, a direct consequence of the fact that the economy was becoming increasingly more open to external trade. The first meaningful figures from which to draw inferences about food imports come from a passage in the memoir of Domenico Lenzi, a Florentine grain merchant, written in May of 1329. According to Lenzi, grain production in the territory of Florence was sufficient to satisfy the food supply requirements of Florence for only five months per year. For Davidsohn, the passage indicated that grain production in the Florentine countryside was able to satisfy the total grain requirement of both the city and the countryside only five months per year. See Davidsohn, 1977, 5, p. 238; Davidsohn, ed., 1896-1908, 4, pp. 307-315, esp. 312-313. Pinto disagreed, however, suggesting that the author was referring only to the proportion of the urban grain requirement that was satisfied by production in the countryside, and he has taken this to mean that the needs of the countryside itself were for the most part met locally. On the basis of an urban population of 120,000, a rural population of 300,000, and an average requirement of twelve Florentine *staria* per person per year, and assuming that the food supply requirements of the rural population were met entirely, the shortfall would have been about 16.7 per cent. Both Davidsohn and Pinto agreed that Lenzi was referring to ordinary times, but 1329 was a famine year, and it is more likely that the entry reflects the conditions that were prevailing at the moment. Moreover, Florence was at or very near maximum expansion at the time that Lenzi was writing, and net food imports may have constituted a somewhat higher proportion of aggregate food production in the territory than they did during the thirteenth century. See Pinto, 1978, p. 317; see also pp. 75-79, and p. 317, n. 1.

Another means by which to examine overall productivity growth in Florence and its surrounding countryside during the thirteenth century considers the changing relationship between the total amount of land in the territory, the total population, and the distribution of the population between the agrarian and non-agrarian sectors. Around the year 1175, following the population figures proposed above in the preceding chapter and adjusting for an estimated five per cent net import of food, about 90,000 cultivators were producing enough foodstuffs to feed a total population in the territory of about 95,000.¹⁰ In other words, each cultivator was producing foodstuffs sufficient for about 1.05 inhabitants, which is to say that the *per capita* agricultural surplus was 0.05. At the same time, and again adjusting for five per cent food imports, the ratio between the total amount of land in the territory in hectares and the total population being fed was about 4.1 to 1.¹¹

By the end of the thirteenth century, and now adjusting for an estimated ten per cent net import of food, about 260,000 cultivators were producing enough foodstuffs to feed a total population in the territory of about 328,500. In other words, each cultivator was now producing foodstuffs sufficient for about 1.26 inhabitants, which is to say that the *per capita* agricultural surplus was now 0.26. Meanwhile, and still adjusting for ten per cent food imports, the ratio between the

¹⁰ In order to adjust for an estimated five per cent net imports of aggregate food production around the year 1175 and an estimated ten per cent net imports of food around the year 1300, the figure for the total population has been adjusted by either five or ten per cent to arrive at the total number of inhabitants being fed by domestic food production. The measurements for *per capita* agricultural production, *per capita* agricultural surplus, and *per capita* area of land are thus based on the adjusted population figures. In his analysis, as already noted above, Persson likewise assumed that net imports of food accounted for five to ten percent of aggregate food production, and that net imports might have accounted for a slightly higher proportion of aggregate food production in the city. See Persson, 1991, p. 133.

¹¹ The figure employed here for the area of the territory of Florence is 390,000 hectares, rounded slightly upwards from 387,964 hectares, the area of the modern province of Florence. Pinto used the figure of 390,000 hectares for the area of the territory of Florence in his discussion of the grain-producing capacity of the territory in the early fourteenth century. The actual area of the territory of Florence in the thirteenth and early fourteenth centuries is debatable, and at any rate it was subject to change over time, but the figure for the area of the modern province is sufficient for present purposes. In very general terms, the boundaries of the territory of Florence, at least through most of the thirteenth century, roughly encompassed the dioceses of Florence and Fiesole, which embraced an area somewhat smaller than the area of the modern province. The most substantial territorial gains in the territory of Florence, comprising mostly rural territory, came subsequent to 1300. For the area of the modern province of Florence, see Barucci, 1964, p. 1; Pinto, 1978, p. 73, n. 6. On the territorial expansion of Florence particularly after 1300, see Becker, 1966; Benigni, 1988; Zorzi, 1994. The amount of land under cultivation in the territory is unknown, but see below, tbl. 8, for estimates regarding average annual yields in edible grain and the amount of land under cultivation necessary to sustain a given population.

land and the total population being fed was now only about 1.2 to 1. From about 1200 to 1300, the quantity of foodstuffs produced by each cultivator increased by about 0.14 per cent annually, even though the amount of land from which each cultivator was drawing his produce may have decreased by about 0.99 per cent annually over the same period. Viewed solely in terms of the change in *per capita* agricultural surplus, the annual rate of growth in the thirteenth century was 1.26 per cent.¹²

Table 2. Agricultural productivity growth in the Florentine countryside

Year	Population distribution	Urbanisation ratio	Per capita agricultural production	Per capita agricultural surplus	Per capita area of land
1175	urban = 10,000 rural = 90,000	10.0%	1.05	0.05	4.10 hectares
1300	urban = 105,000 rural = 260,000	28.8%	1.26	0.26	1.19 hectares
Annual rate of change*			0.14%	1.26%	- 0.99%

* Adjusted for an estimated five per cent net import of food in 1175 and ten per cent net import of food in 1300.

These estimates of agricultural productivity growth, like the estimates of population growth on which they depend, are not intended to serve as a definitive statement on the subject. The purpose of these estimates is rather to suggest the possible extent of agricultural productivity growth in the territory of Florence before the Black Death and above all in the thirteenth century. Agriculture throughout Italy during much of the pre-industrial period, and until the eve of the First World War, was characterised by high land productivity but also by wide-

¹² See below, tbl. 2.

spread unemployment and poor labour productivity, at least in relation to such northern European economies as England. Before the late renaissance, however, land productivity in Italy may have been higher than anywhere else in western Europe.

The rapid growth in the urbanisation ratio in the territory of Florence over the course of the thirteenth century also suggests that improvements in agricultural productivity hinged upon the ability of the non-agrarian sector to absorb surplus labour. The vigorous development of manufacturing in the urban centres of Tuscany and above all in the city of Florence itself during the thirteenth century absorbed surplus labour from the countryside and helped to stimulate a more efficient distribution of labour between the agrarian and non-agrarian sectors in the territory as a whole. Labour in the countryside was in surplus in the twelfth century whereas the increasing demand for labour in the cities, particularly after the beginning of the thirteenth century, may have tended to exceed supply. It was this rural surplus of labour in Tuscany that fuelled in significant measure the urban expansion of which the city of Florence was the principal beneficiary.

4.2. Stimulants of agricultural productivity

The most straightforward means by which to raise agricultural productivity, as noted above, is through increased factor inputs, but it is also possible to generate productivity growth in a variety of other ways. Improvements in the existing infrastructure can bring uncultivated or under-utilised lands within the margin of cultivation, thereby increasing incentives for reclamation or for the intensification of land use on existing farms. Increased productivity may also derive from technological change and the dissemination of new technology, or from other innovations that improve the efficiency of agriculture. Greater specialisation, both on individual farms and across wider geographical areas, enhances productivity through the more efficient organisation of production. Changes in tenurial arrangements and estate administration can improve the efficiency of rent extraction, which in turn creates incentives for the intensification of land use. The increased availability of credit can stimulate productivity by providing peasants with access to capital for land acquisition and improvement, for leasing and purchasing farm animals, for purchasing farm implements and seed, and perhaps especially for mitigating the potentially disastrous effects of poor harvests.

4.2.1. Infrastructural development and the extension of arable

The most obvious means by which to increase productivity in agriculture is through the intensified use of the available landed resources, which typically involves the conversion of pasture to arable, and the reclamation of woodland or marsh. The extension of arable will not necessarily generate appreciable improvements in productivity, however, especially if the land that is brought into cultivation is inferior in quality or location to the land that is already being cultivated. The conversion of grassland to arable for cereal-culture might increase productivity only temporarily, with any such improvements continuing only until the accumulated reserves of nitrogen in the soil had been exploited and then diminishing as soil nitrogen was exhausted. It is equally possible, however, that reclamation can foster more or less permanent changes in the physical characteristics of the land and thereby help to engender long-term increases in productivity.

The sources for Tuscany before the middle of the fourteenth century are not especially forthcoming with respect to land improvement and land reclamation.¹³ It is clear, however, that the area under cultivation was expanding, and the evidence at least permits some informed speculation about the effect that land improvement and land reclamation might have had upon agricultural productivity. It is well known, for example, that land improvement very often was a condition of lease contracts in Tuscany, even if such conditions may reflect more notarial conventions than enforced obligations of the tenant.¹⁴ When actually undertaken, land improvement in Tuscany for the most part probably involved the clearing of fields and the digging of ditches to facilitate drainage and irrigation, and to demarcate property boundaries. The image of the Florentine countryside that emerges from the surviving documentation is that of a land bisected by countless

¹³ Explicit evidence for reclamation is perhaps richest in the territory of Siena, where the communal administration initiated programmes specifically designed to facilitate land improvement. See Bizzarri, 1917. For an example of an early fourteenth century sharecropping contract from the countryside of Siena that required the tenant to drain and to improve the land, see Imberciadori, 1951, no. 33, 1309 December 15, pp. 123-124, esp. 124: 'bonificare et meliorare et omne bonificamentum et melioramentum eis utile facere et in utile pertinere ad usum boni et legalis laboratoris'.

¹⁴ Philip Jones argued that land improvement was a condition of most leases in Italy from the seventh century, and indeed leases *ad meliorandum* are well-documented in the Florentine countryside throughout much of the middle ages, though contracts offering obviously beneficial terms to tenants bringing new land into cultivation, common in central and southern Italy, are more rare in the documentation for the countryside of Florence in the twelfth and thirteenth centuries. It is perhaps also worth noting that the formulaic character of the contracts may tend to diminish the significance of such clauses. See Jones, 1966, p. 344.

numbers of ditches or small canals, called *fossae* or *fossata*. These ditches often served to define property boundaries and they betray a considerable degree of human intervention with respect to the physical properties of the terrain. It is also likely that *fossae* were used for drainage and irrigation in Tuscany from even before the tenth century.¹⁵ The evidence for land reclamation and drainage in the Tuscan lowlands is more difficult to identify, but the development of roads in low-lying areas of rural Tuscany in the thirteenth century betrays improved drainage conditions on the plains. Demographic movements between upland and lowland areas during the same period both in Tuscany and elsewhere in north-central Italy also suggest that reclaimed marshland was becoming more productive.¹⁶

David Herlihy has identified evidence for infrastructural development in marshland and low-lying areas in the territories of both Pisa and Pistoia in the thirteenth century. He speculated that improvements to the road network in the lower valley of the river Arno in the countryside of Pisa may have owed almost as much to superior construction techniques as to drainage and land reclamation. The comparatively rich demographic evidence from Pistoia, however, suggests that road construction on the marshy plain between Pistoia and Prato was accompanied by a large scale drainage and land reclamation project from which agriculture benefited immensely.¹⁷

Construction was first initiated on a new road between Pisa and Florence along the left bank of the Arno in the third quarter of the thirteenth century. This new passage was designed to replace the old road that departed from Pisa on the left bank of the river and then forded the river to the right bank at a shallow point just outside the city called the 'Guathalungo', or the long wade, thereby avoiding the marshland that lay along the left bank. After the crossing, the road passed through the nearby villages of Ghezzano and Mezzana to the northeast of the city and then skirted Monte Pisano above the right bank of the river towards Vico-

¹⁵ Squatriti, 1995, pp. 26-28; 1998, pp. 76-85. In the countryside of Florence, early sharecropping contracts sometimes required the tenant to dig ditches for drainage and irrigation. See ASF, *Diplomatico*, Monache de Luco, 1197 September 24. Petrus de Crescentiis was well aware of the benefits of effective drainage and irrigation. See Petrus de Crescentiis, bk. 1, chap. 9 (*De aqueductu faciundo*), fol. 13r. The ancient authorities on Italian agriculture, with whose work Petrus was familiar, also understood the importance of proper drainage and irrigation. See K. D. White, 1970, pp. 146-172.

¹⁶ See below.

¹⁷ On infrastructural development in the lower Arno valley in general, see Herlihy, 1958b, pp. 94-103.

pisano and Bientina, keeping above the marshy areas alongside the river. In the early thirteenth century, the old road crossed back over to the left bank of the river at another low water ford called the *passagium* 'de Ricavo', about midway between Pontedera and Montopoli near the Castello del Bosco. By about the middle of the thirteenth century, however, the crossing was moved farther downstream to a shallow point in the river near Calcinaia, no doubt in order to avoid the often impassable lowlands around Bientina and perhaps also to take advantage of the opening of a portion of the new passage on the left bank of the Arno between Calcinaia and Ricavo.¹⁸

The old road had managed to avoid some of the most formidable obstacles to travel in the lower Arno valley, but movement along the road was still somewhat circuitous and depended largely upon the vagaries of the weather. During the typically rainy winter months, for example, the road between Pisa and Florence was frequently impassable, perhaps especially beyond Bientina before the opening of the river crossing near Calcinaia.¹⁹ The Arno itself, however, was not always a viable alternative to overland transport between Pisa and Florence. The passage on the river from Pisa to Florence and then back to Pisa again may have occasionally required as many as six days in the early fourteenth century.²⁰ The new road, on the other hand, facilitated regular journeys between Pisa and areas north of the Apennines by way of Florence, and the passage between Pisa and Florence at least could be negotiated virtually independent of all but the most

¹⁸ On the relocation of the river crossing from Ricavo farther downstream to Calcinaia, see Davidsohn, ed., 1896-1908, 3, no. 1, 1209 March 12, p. 1. For the complete text of the document, see Caturegli, ed., 1974, no. 47, 1209 February 14-1209 March 12, pp. 83-85.

¹⁹ Herlihy noted, for example, that a late thirteenth century account book of a Florentine merchant working at Pisa contains 'a conspicuous gap' during the winter months, which suggests that business was severely disrupted in winter by unfavourable weather. See Herlihy, 1958b, p. 95. For the source in question, see Castellani, ed., 1952, 2, pp. 459-469.

²⁰ Herlihy evidently believed that six days for the return journey between Pisa and Florence was standard at the beginning of the fourteenth century. The source cited by Herlihy nevertheless indicates only that a Pisan merchant intent upon acquiring wine in Florence was willing to absorb the expenses of the journey, up to four *solidi* per day, for up to six days. See Herlihy, 1958b, p. 93; Bonaini, ed., 1854-1870, 3, p. 1150 (anno 1305): 'Et quicumque ibit apud Florentiam, ut dictum est, debeat habere de bonis artis vini, ut dictum est, pro vectura et expensis, pro quilibet eorum, pro qualibet die, soldos quatuor, usque ad dies sex ad minus'. Six days thus should be seen as the maximum duration of a return journey on the Arno between Pisa and Florence rather than the length of a typical journey. Suffice it to say that the passage from Pisa to Florence on the Arno, against the current of the river, would have required more time than the journey from Florence to Pisa.

severe weather conditions in a day or two.²¹ It is also likely, moreover, that transportation even on the Arno depended very much upon the weather. From the late autumn to early spring, seasonal rains and melting snow raised water levels, resulting in swift currents that no doubt often handicapped movement on the river.

Construction along the entire stretch of new road on the left bank of the Arno, from the city of Pisa to the frontier between the territories of Florence and Pisa was probably completed by the end of the third quarter of the thirteenth century. A cartulary entry dated from 1264 indicates that the construction of an elevated road on the left bank of the river starting from the church of San Martino at Guathalungo by that time was already in progress.²² During a period of popular government in Pisa from about 1276 to 1284, however, the road evidently fell into disrepair, and a Pisan statute of 1286 calls for it to be repaired as it was originally designed and constructed.²³

Certainly by the early fourteenth century, it was possible to negotiate the passage between Pisa and Florence at any time of the year regardless of the weather conditions. The extent to which the construction of the new road on the left bank of the Arno depended upon land reclamation and drainage over a broad area rather than superior road-building technology remains uncertain, but it seems likely that land reclamation and drainage played some part in the construction of the new road.²⁴ It is indeed difficult to imagine that agriculture in the lower Arno

²¹ According to Herlihy, the new road between Pisa and Florence provided Pisa with its most important means of access to the north by the early fourteenth century. Pisan ambassadors evidently were able to use this road to travel to Venice, execute their duties, and then return to Pisa again all within the space of one month. See Herlihy, 1958b, pp. 102-103, n. 58, citing ASPisa, *Comune*, A 88, fol. 40v.

²² See Herlihy, 1958b, p. 102, n. 55, citing ASPisa, *Archivio degli Ospedali Riuniti di Santa Chiara*, 2514, fol. 32r, 1 December 1264: 'illius vie et strate que mittitur inter sanctum Martinum de Guassalungo et Fasianum'.

²³ See Bonaini, ed., 1854-1870, 1, *Breve Pisani Communis* (1286), bk. 4, rub. 15, pp. 489-490, esp. 489: 'et omnes et singulos qui occupaverunt seu habent occupatam terram seu de terra secus stratam Vallis Arni, quatenus tenet dicta strata; stratam a campanili de Rinonichi usque ad Pontem Sacci; ipsam terram occupatam et apprehensam dimictere, et in pristinum statum reducere, in ea amplitudine qua et sicut erat tempore quo dicta strata designata et facta fuit: procurando super predictis inquirere veritatem, et reficere et reactare boccales et pravos passus dicte strade, et ipsam viam ubicumque necesse fuerit pro mala via que est ibi, per homines qui dictam stratam a principio fecerunt, seu communia'.

²⁴ The descent of roads from mountain flanks and ridges to the marshy plains demanded a means by which to elevate the road somewhat above the plain, and this was accomplished through the introduction of a gravel base that could be strengthened by planting rows of trees on either side. Proper drainage and the elimination of muddy impasses were achieved through the use of a stone pavement, applying techniques developed in antiquity. The construction techniques utilised by

valley would not have benefited in some way from the construction of the new road. At the very least, the presence of a viable transportation artery in the lower valley of the Arno cutting directly across the plain towards Florence would have raised economic rents along the corridor, thereby significantly increasing returns on capital investment in land reclamation and drainage. The documentation for agricultural development on the plain is too meagre to confirm such a conjecture, but Herlihy has been able to draw some illuminating evidence in this regard from the sources for Pistoia.

Before the end of the twelfth century, the road between Pistoia and Florence followed roughly the path of the old *via Cassia*, but it may have deviated somewhat from the Roman road especially between Pistoia and Prato in order to avoid the marshland on the plain. The early medieval road may have followed a route that skirted more closely than the Roman road the mountains directly to the north, going by way of a more elevated passage through Montale and Montemurlo. By the end of the century, however, the most popular route followed the more direct passage of the *via Cassia* through Agliana and Prato to Florence. For Herlihy, the renewed use of the *via Cassia* in the thirteenth century and the development of an even more direct passage to Florence in the early fifteenth century through the heart of the plain suggest improved drainage conditions, but it is not necessarily indicative of any improvement in agriculture.²⁵

The demographic evidence for Pistoia is sufficiently rich to facilitate an assessment of the geographic distribution of the population in the territory from even before the middle of the thirteenth century. It suggests that marshland areas in the countryside of Pistoia experienced both substantial reclamation through drainage and long-term improvements in agriculture. Around the year 1244, for example, only about thirty-one per cent of the rural population in the territory of Pistoia resided on the plain and in the low hills, but the figure had increased to

Pisan road-builders and the design of the road itself are summarised in Herlihy, 1958b, pp. 96-97. See also Bonaini, ed., 1854-1870, 1, *Breve Pisani Communis* (1286), bk. 4, rub. 17, pp. 490-492; 2, p. 433.

²⁵ Herlihy was actually arguing for improved control of waterways rather than land reclamation *per se*, but in this instance at least they essentially amount to the same thing. On the evolution of the route from Pistoia to Prato and Florence, see Herlihy, 1967a, p. 23, nn. 25-26, and pp. 50-51, nn. 70-71. The contention of Herlihy that the old *via Cassia* followed a route directly across the plain between Pistoia and Prato is not supported by Lopes Pegna. The discovery of Roman tombs of the third or fourth century CE near Chiesa Nuova along the modern *via Montalese* just outside of Prato, according to Lopes Pegna, suggests that the old Roman road also avoided the lowlands in favour of a more elevated passage to the north. See Lopes Pegna, 1962, p. 221.

forty per cent by 1344 and to nearly fifty per cent by 1427, despite demographic regression in the rural zones of the territory as a whole.²⁶ According to Herlihy, improved control over the waterways on the plain facilitated more efficient communications, removed obstructions to the agricultural exploitation of the richest land in the countryside of Pistoia, and virtually eliminated the health hazard that had been posed by stagnant waters.²⁷

In the territory of Florence itself, the descent of the principal arteries of transportation from the ridges and hillsides to the plains and river valleys mostly in the twelfth and thirteenth centuries was likewise a reflection of improved drainage conditions on the plains. The old Roman roads, particularly in the more remote areas of the territory, typically avoided the lowland plains and river valleys, seeking instead the protection of the ridges and hillsides, and they sometimes followed circuitous routes to circumvent low-lying terrain. It is nevertheless often difficult to establish the precise period, even within broad parameters, during which land reclamation and drainage in the Florentine countryside was most intense. Johan Plesner, the Danish historian who first broached the matter in detail,

²⁶ Herlihy, 1967a, pp. 50-51. On demographic regression in the countryside of Pistoia, see Herlihy, 1967a, pp. 56-72. Some of the loss in population no doubt occurred in 1339-1340, when pestilence and famine ravaged the territory, killing perhaps a quarter of the population, but the extant documentation suggests that the rural population of Pistoia was in decline from the middle of the thirteenth century. See Herlihy, 1967a, pp. 64-65, 104-105.

²⁷ Similar developments can be observed southeast of Florence in Umbria in the territory of Perugia. Between 1282 and 1319, the population of highland villages in the territory tended to decline, while lowland villages tended to show population increases. As in the territory of Pistoia, such demographic movements reflect improved drainage conditions and decreased hazards from malaria on the plains, and the removal of obstructions to the agricultural exploitation of the most fertile land in the territory. Reclamation on the plain south of Perugia also facilitated road improvements between Perugia and Marsciano in the Tiber valley after about 1260 or 1270. On the descent of settlement from hills to the plain in the territory of Perugia and infrastructural development in the Tiber valley, see Blanshei, 1976, p. 39. Before the later thirteenth century, the movement of people in the Tiber valley south of Perugia probably had been more by means of water transport on the river. On the use of boats on the Tiber south of Perugia for the purpose of transporting people, see Blanshei, 1976, p. 14, n. 11. The potential health hazards of lowland marshes were duly noted by Petrus de Crescentiis, but he also recognised the productive potential of properly drained wetlands. On the health hazards of the lowland marshes, see Petrus de Crescentiis, bk. 1, chap. 5 (*De situ loci habitabilis et de cognitione bonitatis et malicie sue*), fol. 9r. On the productive potential of drained wetlands, especially in the first harvest, see Petrus de Crescentiis, bk. 3, chap. 17 (*De milica*), fol. 51r; bk. 11, chap. 2, pt. 5 (*De letamine stercoratione et immutatione plantarum*), fols. 197r-197v, esp. 197v. Note that book eleven in Petrus de Crescentiis is composed of 'regule' that pertain to earlier books in the manual, with the chapter number in book eleven corresponding to the earlier book number.

was no doubt overly pessimistic in assigning the most conspicuous of these transformations entirely to the thirteenth century.²⁸

Contrary to the claims put forward by Plesner, the suburban plains of Ripoli, San Salvi, Sesto and Campi, and Settimo were for the most part already drained by 1200. Before the end of the eighth century, for example, the abbey of San Bartolomeo di Ripoli was founded beside the even more ancient church of San Pietro, about four kilometres east-southeast of Florence virtually in the centre of the Ripoli plain and near the site of the old Roman baths from which the community of Bagno a Ripoli perhaps takes its name.²⁹ The church of San Salvi existed on the plain east of the city already before the middle of the eleventh century, when it was donated along with neighbouring lands for the foundation of a Vallombrosan monastery.³⁰ The Sesto and Campi plains were already centuriated in antiquity, and it is possible to identify thirteenth century roads that followed precisely the pattern of Roman centuriation.³¹ The abbey of San Salvatore di Settimo was founded probably towards the end of the tenth century on the already heavily cultivated Settimo plain west of Florence on the left bank of the river Arno.³² Plesner

²⁸ On the reclamation of lowland areas in the territory of Florence, see Plesner, 1938, pp. 92-101. The methodology employed by Plesner emphasised toponomastic evidence, particularly designations indicating Roman milestones or suggesting poor drainage, and the arrangement of parish churches in the territory. For a critique of the Plesner thesis, see Szabó, 1992.

²⁹ On the establishment of the abbey of San Bartolomeo di Ripoli in the later eighth century, see Lami, ed., 1748, 2, p. 1161 [790 July 14]; Davidsohn, 1977, 1, p. 107. On the Roman baths at Bagno a Ripoli, see Lopes Pegna, 1962, p. 225. Repetti suggested, however, that the designation of Bagno a Ripoli derived from the frequent inundations that the plain had been accustomed to suffer. See Repetti, 1833-1845, 1, pp. 242-245, esp. 243.

³⁰ ASF, *Diplomatico*, Badia di Ripoli, 1048 March 26, 1048 April 16; Vallombrosa, 1055 June 15. See also Vasaturo, 1962, no. 4, p. 465. The estate of the monastery, as it expanded in the second half of the eleventh century, included proprietarial holdings scattered throughout the Florentine countryside. The abbey received donations of property immediately south of Florence in Arcetri, in the area around Antella near Ponte a Ema, in the more distant valleys of the rivers Greve and Pesa, and even in the Mugello. The acquisitions of San Salvi were nevertheless concentrated in the eastern suburbs of Florence, especially in the vicinity of Parlascio, the site of the old Roman amphitheatre near the Piazza de' Peruzzi, but they also included properties farther to the east and closer to the monastery itself. On the development of the estate of San Salvi, see Vannucci, 1963-1964.

³¹ On the centuriation of the Sesto-Campi plain in antiquity, see Lopes Pegna, 1962, pp. 54-62, esp. 60-61. The entries in the *Bullettone*, an early fourteenth century register of the estate of the Florentine bishops suggests substantial cultivation on the plain already in the tenth century. See ASF, *Manoscritti* 48BIS (*Bullettone*), fols. 71v-74v.

³² For an early eleventh century reference to the abbey at Settimo that establishes its existence in 998, see Lami, ed., 1758, 1, 230 [1015]; and cf. Davidsohn, 1977, 1, p. 218. On the founding of the abbey probably in the later tenth century, see Vasaturo, 1962, no. 1, pp. 463-464. On cultivation and drainage on the Settimo plain already in the tenth century, see E. Conti, 1965, pp. 69-70.

argued that the suburban plains were often impassable before the thirteenth century owing to poor drainage and that the principal routes leading away from the city circumvented these plains, but the evidence suggests that the suburban plains were more thoroughly drained and also more heavily cultivated than Plesner had imagined.³³

The thesis articulated by Plesner for the development of the road network in the Florentine countryside probably depicts circumstances more accurately in areas more distant from the city, but the argument that major roads avoided the plains and river valleys before 1200 is often impossible to sustain even in the deeper countryside.³⁴ The new road network in the Florentine countryside very clearly was beginning to emerge already in the twelfth century, and even earlier in favoured locations near the city. By the same token, many of the upland routes that were ultimately displaced or superseded by the new roads often persisted as

³³ For further discussion about the roadways that traversed the plains in the suburbs of Florence, and for more on roads in the Florentine countryside in general, see below, Appendix 4.

³⁴ Chris Wickham has suggested that Figline Valdarno was serviced by a major road already before the middle of the twelfth century. Wickham inferred the presence of a major road at Figline before 1150 on the basis of the existence of two hospitals at Figline in the twelfth century, the first of which is attested frequently from the beginning of the century. The hospital first cited at the beginning of the twelfth century is described in 1231 as situated adjacent to a bridge across the stream Cesto, which certainly implies a road. Wickham also noted that a market at Figline is attested from 1153, and that port facilities are attested from 1186. For Wickham, the evidence for a major road at Figline undermines the argument put forward by Plesner that the only roads between Florence and Arezzo before 1200 were upland routes that avoided the plains and river valleys. See Wickham, 1996, p. 15, n. 16; Plesner, 1938, pp. 48-46, 84-87. For the earliest reference to a hospital at Figline, situated next to the stream Cesto, see ASF, *Diplomatico*, Badia di Passignano, 1104 February. For later evidence of a bridge over the Cesto near the same hospital, see ASF, *Diplomatico*, Badia di Passignano, 1231 January 30. Additional evidence for roads in the upper valley of the river Arno near Figline at Tartigliese in 1124 and at a place called Ranocchiaia in 1155 further undermines the so-called Plesner thesis, at least in so far as the Florence-Arezzo route is concerned. For evidence of the road at Tartigliese, see ASF, *Diplomatico*, Badia di Passignano, 1124 November 10. For evidence of two roads at Ranocchiaia, the 'via de la Ranocchiaia' and another road designated simply as a 'strada pluvica', or public road, see ASF, *Diplomatico*, Badia di Passignano, 1155 November 4. I have been unable to identify securely the location of Ranocchiaia, but it was probably situated on the right bank of the Arno across the river from Figline and somewhat upstream. On the location of Tartigliese, situated in the upper Arno valley on the left bank of the river about equidistant from Figline and San Giovanni Valdarno, see Repetti, 1833-1845, 5, p. 502. In the early thirteenth century, roads are attested in the vicinity of Figline at Mazzaia, the precise location of which I have been unable to identify, and at Orbine, perhaps Urbini, upstream from Figline on the right bank. The road at Orbine is identified as the 'strata pazzorum', which is to say the road of the Pazzi lords. The Pazzi were one of a handful of noble lineages on the right bank of the Arno against whose dominance the Florentines eventually established towards 1300 the new towns, or 'terre nuove', of Castelfranco di Sopra and Terranuova Bracciolini. For evidence of the roads at Mazzaia and Orbine, see ASF, *Diplomatico*, Badia di Passignano, 1230 February 12, 1230 July 29, respectively.

important means of communication during the thirteenth century and some of them were still heavily used in the early fourteenth century. Plesner nevertheless identified an exceedingly important development in the countryside of Florence, because the descent of roads to the plains and river valleys coincided with both a descent of settlement in the territory and profound changes in the structure of seigniorial power.

The areas most affected were the upper valley of the river Arno, the Elsa valley and the Empoli plain, and the valleys of the Sieve, Pesa, Greve, and Ema. The demographic effects of land reclamation on the plains and in the river valleys after about the middle of the twelfth century can be seen in both the extraordinary growth of numerous lowland towns and the waning of many upland towns. The plains and river valleys witnessed the blossoming of such towns as Castelfiorentino, Certaldo, Empoli, Figline Valdarno, Montevarchi, Borgo San Lorenzo, and San Piero a Sieve. Meanwhile, many of the towns on the ridges and hillsides that figure so prominently in the earlier sources either ceased to expand or began to decline particularly after about 1250.³⁵

4.2.2. Technological change and specialisation

Another means by which to increase productivity in agriculture is through technological change, which can take the form of either specific physical innovations or more intangible innovations. Historians of medieval Europe have been concerned more with the former category, and particularly with the introduction of new farm implements such as the heavy plough, the use of the horse in agriculture, and methods of crop rotation.³⁶ These developments appear to have been far more important in northern Europe, however, and their effect seems to have been negligible through much of Italy. Farming techniques developed in Roman antiquity evidently were already sufficiently well suited to the climate and terrain in Italy,

³⁵ On the relationship between infrastructural development and the redistribution of the rural population between highland and lowland areas in the territory of Florence, see Fiumi, 1957-1959, pt. 2, pp. 469-473, esp. 471; 1977, pp. 91-95, esp. 93. The descent of the roads in the territory of Florence from the ridges and hillsides to the plains and river valleys is discussed much more thoroughly below, Chapter 6.2.2, Appendix 4.

³⁶ For example, see L. White, 1962, pp. 39-78; Watson, 1981b.

and traditional methods appear to have undergone little change before the end of the eighteenth century.³⁷

Other physical innovations in agricultural technology in Italy may have concerned the introduction of new breeds of livestock or new crop varieties, although developments of this sort are not easy to document. Animal husbandry is particularly difficult to assess before the last decades of the thirteenth century, but there are some indications that new cereal crops may have diffused into Mediterranean Europe from Islamic Egypt and North Africa before the end of the thirteenth century. The introduction, or perhaps more likely the wider application, of both a more resilient variety of sorghum (*sorghum bicolor*) and hard-grain durum wheat (*triticum durum*) indeed may have constituted some of the more significant physical manifestations of technological change in Italian agriculture before the middle of the fourteenth century.³⁸

There also appears to have been considerable innovation in milling technology in the territory of Florence, and the evidence suggests that Florence may have been more amenable than its neighbours to the adoption of new technology particularly in fulling mills, or *gualchiere*. The so-called 'French mill', the *molendinum francescum*, began to appear in Florentine sources in the later thirteenth and early fourteenth centuries, which is to say at about the same time that the woollen textiles industry in Florence is thought to have entered its most significant phase of development.³⁹ The French mill may have been named as such

³⁷ On the persistence of Roman agricultural techniques in Italy, see Luzzatto, 1963, pp. 179-183. On agrarian practices in Roman antiquity, see Frayn, 1979; K. D. White, 1970, 1967. On Tuscan agriculture in the nineteenth century, see Mazzini, 1882; Pazzagli, 1973.

³⁸ With respect to animal husbandry, it may be noted that archaeology provides much scope for further research, even if the documentary evidence from before the later thirteenth century is relatively unyielding. For example, see Baker and Clark, 1993. On the use of livestock in agriculture in Tuscany, see below. The possible introduction of new cereal crops in Mediterranean Europe before the end of the thirteenth century is discussed more thoroughly below, Appendix 3. See also Watson, 1983, pp. 12-14, 20-23.

³⁹ On the technical aspects and processes involved in the manufacture of woollen textiles, see Munro, 1988b; Castagneto, 1996, pp. 166-178. In Tuscany, Florence appears to have been precocious in the introduction of the so-called 'molendinum francescum' or French mill. This type of mill was distinguished from other types above all by an overshot wheel, which is to say by an external vertical water-wheel propelled by water descending from a small aqueduct into buckets on the wheel itself. The French mill harnessed power not only from the current of the water but also from its weight. Two other types of mill employing French technology were the 'molendinum orbicum', or orbital mill, and a hybrid of the new French mill and the older horizontal mill. Like the French mill, the orbital mill also featured a vertical water-wheel, but the vertical wheel of the orbital mill was undershot, which is to say that it was driven by a current of water from below rather than from above by water descending from an aqueduct. The orbital mill required a strong

precisely because it enabled the Florentine woollen textiles industry to produce more easily or more efficiently fabrics that imitated the more luxurious imported cloths from the north, which were often designated in Italian sources generally as 'French cloths', or *panni franceschi*.⁴⁰ Considering the success of the woollen

and steady current of water such as is generally found on the Arno and on the lower reaches of its larger tributaries. The hybrid of the French and horizontal mills combined the horizontal water-wheel used in the older mills with the sort of gearing used in the new French mill. Both overshot and undershot vertical mills are attested in antiquity and in early medieval Italy, but horizontal mills were preferred owing to the high cost involved in the construction and maintenance of vertical mills. See Squatriti, 1998, pp. 134-139. The first absolutely secure reference to the French mill in the territory of Florence occurs only in the first quarter of the fourteenth century, but the French mill appears to have come into the territory roughly in tandem with the orbital mill, which is attested securely from 1282. The French mill evidently was not well known in the territory in 1242, when a notarial formulary listed the types of mills that a notary might have been required to document. See Masi, ed., 1943a, p. 103-104, esp. 104: 'quendam molendinum in navibus, positum tali loco; vel molendinum pendulum, sive duo molendina pendula posita in loco tali, vel molendinum terraneum positum in tali rivo sive fossato, et cetera, ut supra'. This suggests that the French mill may have become more widely used in the territory of Florence between 1242 and 1282, and indeed a reference to a mill at Querceto in 1269 has been tentatively identified as an early example of the vertical type of French mill. By way of comparison, the use of vertical waterwheels on mills in Provence in the thirteenth century is attested from 1267. Vertical waterwheels also appear to have been employed more for industrial purposes rather than for grinding grain. See Amouric, 1983. The first specific reference for the territory of Florence to a fulling mill of the French type, a *gualchiera francesca*, comes from Razuolo in the Mugello and occurs in 1333. In the Chianti, only one example of the use of French mill technology has been identified at Mulino di Vistarenni on the borro di Fontercoli, just east of Radda in Chianti, but the example is late. The mill itself perhaps dates from the eleventh century, but the vertical waterwheel was introduced later, perhaps only in the eighteenth or nineteenth century. Vertical waterwheels were poorly suited to the smaller watercourses of the Chianti, and they were more expensive to maintain. In view of the physical characteristics of the watercourses in the Chianti, horizontal mills were more efficient and less expensive, and the retention of the older technology in the Chianti was perfectly logical. On mills in the Florentine countryside in general, see especially Muendel, 1981. On the diffusion of the French type of mill in the territory of Florence more specifically, see Muendel, 1984. See also Muendel, 1991a; 1991b. On horizontal mills in medieval Tuscany, see Muendel, 1972; 1974; 1977. On the absence of vertical waterwheels in the Chianti during the middle ages, see Papaccio, 1996, 1, pp. 78-81; 2, no. 46, pp. 387-389. Papaccio suggested that the mill at Mulino di Vistarenni is attested from 1074 in the evidence for the abbey at Coltibuono, but I have found no direct evidence for the mill in the document cited. See again Papaccio, 1996, 2, no. 46, pp. 387-389, citing Pagliai, ed., 1909, no. 88, 1074 March, pp. 44-45. Vistarenno itself, but not its mill, is also attested in Pagliai, ed., 1909, no. 40, 1049 September 4, pp. 21-22; no. 61, 1066 February, p. 32 no. 117, 1078 September, p. 58.

⁴⁰ Evidence for Florentine imitations of northern luxury cloths begins to appear towards the end of the first quarter of the fourteenth century with references to *panni a la francesca*, which is to say as 'fabrics produced in the manner of the French'. See Hoshino, 1980, pp. 123-138; 1983, pp. 186-187. The production of these higher-quality woollens also may have entailed a correlative innovation in loom technology in Florence. By 1337, for example, at least one notary in the city felt compelled to distinguish between looms of the 'French' type, *telarium francescum*, and those of the 'Latin' type, *telarium latinum*. See Muendel, 1984, pp. 236-237, and p. 246, n. 29. Before the end of the third quarter of the fourteenth century, Florence evidently had achieved a certain reputation for the production of luxury cloths, and other centres of textile manufacture began to imitate the finer Florentine fabrics. In the Marche, for example, the woollen textiles industry in

textiles industry at Florence relative to the industries of other Tuscan towns, it is interesting to note that traditional milling methods persisted in the countrysides of nearby Arezzo, Pistoia, and even Prato precisely during the period that the French mill was disseminating through the Florentine hinterland.⁴¹ Some scattered evidence suggests, moreover, that the advent of the French mill in the territory of Florence also improved the efficiency of flour mills in which it was employed. The conversion of an existing mill in the countryside of Florence from traditional methods to the new French method was often accompanied by about a twenty per cent increase in the rental value of the mill, and at least occasionally, the increase was a direct consequence of the conversion to the new technology.⁴²

Technological change in agriculture need not have followed only from specific physical innovations, however, and indeed progress may have arisen more commonly as a consequence of less tangible developments. Most advances in agricultural technique probably took the form of relatively minor incremental improvements in accepted 'best practice' based on the accumulation and dissemination of knowledge. In repeated productive operations, for example, improvements of this sort might arise through random variations in standard production methods, in which the producer recognises that a particular combination of inputs tends to generate results superior to other input combinations at or below the level of resource expenditure typically associated with the standard method. Repeated productive operations over a long period also tend to foster 'economies of practice', in which the by-product of the productive operation itself is an increase in knowledge that enables the producer to minimise the expenditure of resources per unit of output. Both randomly occurring improvements in production methods and those arising through economies of practice are positively related to the amount of time that a producer spends engaged in a particular productive operation, and because they are by-products of the productive operation itself, they are achieved without appreciable cost. A more conscious effort to increase knowledge concerning production techniques through trial and error might entail some

the town of Fabriano had begun to produce at least by 1369 certain types of high-quality fabrics *ad modum Florentinorum*, that is, 'in the manner of the Florentines'. See Hoshino, 1980, pp. 144-145.

⁴¹ On the retention of traditional milling technology in the countrysides of Arezzo, Pistoia, and Prato, see Muendel, 1984, pp. 237-239.

⁴² On the efficiency of French mills in the grinding of grains and the consequent increase in the value of mill rents, see Muendel, 1984, pp. 229-230.

expense, but the cost of such efforts would be negligible as long as experimentation is confined to minor variations in standard production methods.

Another important characteristic of the knowledge about production methods accumulated through repeated productive operations rests in the fact that at least a portion of such knowledge is transferable, typically through demonstration in production. The transfer might occur either across generations along familial lines at little or no cost, or it might occur intra-generationally at costs that can be offset by other mechanisms. Conditions of demographic growth and increasing commercialisation also tend to accelerate the accumulation and dissemination of knowledge concerning the methods of production by providing incentives for the division of labour and regional specialisation, and also by improving the spread of information. The point here is that the accumulation and dissemination of knowledge about production techniques in agriculture ultimately constitutes a sort of technological progress that actually increases agricultural productivity without any apparent technological breakthrough. In the countryside of Florence and indeed throughout rural Tuscany during the thirteenth century in particular, it is likely that demographic growth and commercialisation produced a continuous cycle in which increased urban demand for foodstuffs raised the returns on agricultural investment in 'best practice', which in turn stimulated increases in agricultural productivity.⁴³

Investment in 'best practice' was manifested in the use of effective drainage, the consolidation of scattered holdings of landed property, the integration of arable and animal husbandry, fallowing and crop rotation, and the use of leguminous crops. Drainage has already been discussed above in the context of land reclamation for infrastructural improvements, but it is equally clear that marshland was drained specifically for cultivation, and that the use of irrigation was widely practised.⁴⁴ There is also substantial evidence for land consolidation, which was

⁴³ 'Best practice' agriculture simply refers to the sort of minor improvements in agricultural technique with respect to the sowing, maintenance, and harvesting of the crops that would have accrued through practical experience and the exchange of information. On the diffusion and measurement of 'best practice' agriculture in pre-industrial Europe, see Persson, 1988, pp. 7-13.

⁴⁴ On the domestication of marshland for agriculture, see Petrus de Crescentiis, bk. 2, chap. 18 (*De cultu agri novalis*), fols. 30v-31r, esp. 31r. For evidence of a large scale drainage project in the territory of Verona already before the end of the twelfth century precisely for the purpose of augmenting the communal food supply, see Castagnetti, 1974. Similar programmes were attempted in the territory of Siena in the thirteenth and early fourteenth centuries. See again Bizzarri, 1917. The manual of Petrus de Crescentiis is a veritable encyclopedia of 'best practice' agriculture. Historians have claimed that similar manuals written by ancient Roman agronomists such

undertaken by large and small proprietors alike to reduce costs in monitoring and transport, and to increase the efficiency of agriculture more in general.⁴⁵

Some of the more important manifestations of investment in 'best practice', and also some of the more intangible, may have concerned advancements in biological and chemical technology that fostered the maintenance of soil fertility, which depends on adequate supplies of soil nitrogen. Mixed farming would have facilitated the use of both animal energy for ploughing and manure for fertilisation. Italian peasants clearly used livestock for ploughing in the middle ages, but its practical application was circumscribed in much of Italy by climate, the nature of the terrain, and the propensity for inter-cropping, and methods of

as Cato, Columella, Pliny the Elder, and Varro were descriptions of ideal methods in agriculture that were seldom attained in practice. The mere knowledge of such methods nevertheless would have facilitated their adoption as soon as the anticipated returns on investment in these methods warranted their adoption. On the ancient writers, see K. D. White, 1970, pp. 14-43.

⁴⁵ In the countryside of Florence, landowners were able consolidate their holdings by means of an exchange of one parcel of land for another. *Permutationes*, as these kinds of conveyances were called, enabled landowners to alienate properties that were difficult to integrate with their core holdings in exchange for properties more easily integrated. Unfortunately, contracts for exchanges of property rarely, if ever, state the motivation for the exchange, and the rationale that underlay exchanges of property is often difficult to fathom. It nevertheless requires no great stretch of the imagination to appreciate the ways in which many exchanges promoted consolidation. An excellent example of a property exchange that must have promoted consolidation can be found in document from the records for the abbey at Coltibuono, in which 'Supradictus Petrus dedit nobis in Aggio iuxta mansionem nostram, et ille similiter receipt in Piallo iuxta mansionem suam'. See Pagliai, ed., 1909, no. 103, 1076, pp. 51-52, esp. 51. Nearly a century later, the abbey at Passignano exchanged its properties situated along the high road that followed the ridge between San Pietro a Sillano and Panzano for property at Campoli that was situated adjacent to another piece of land controlled by the abbey. See ASF, *Diplomatico*, Badia di Passignano, 1168 May 4. In the same year, the monastery of San Miniato al Monte negotiated an exchange whereby it acquired property at Novole that was bordered on three sides by other properties of the monastery. See Mosiici, ed., 1990, no. 95, 1168 November 10, pp. 313-315, esp. 314. In the lower Sieve valley in the early thirteenth century, the church of Sant'Angiolo di Sieve received from one Bonaiuto a piece of land 'iusta cultum dicte ecclesie [of Sant'Angiolo]' in exchange for two other pieces of property. See ASF, *Diplomatico*, Passerini, 1205 November 2. Herlihy also argued that the fluidity of transfers in agricultural holdings in southern France and Italy relative to the fluidity of transfers in rural homesteads especially during the tenth century reflected 'efforts to restore the "congruity" of property scattered by partitionings among heirs'. See Herlihy, 1958a, esp. p. 28. Herlihy further associated the release of hoarded treasure into the Italian economy from the later tenth to the early twelfth century with the efforts of the more well-disposed 'to buy up scattered pieces of land, [and] to wield them into compact and efficient estates'. See Herlihy, 1957, esp. p. 12. The abbey at Passignano, like other large ecclesiastical institutions in the Florentine countryside, was certainly purchasing parcels of land that lay adjacent to its own existing holdings in the twelfth and early thirteenth centuries. For example, see ASF, *Diplomatico*, Badia di Passignano, 1121 March, 1139 January, 1176 August 26, 1188 January 6, 1200 January, 1214 September 8, 1220 February 18, 1221 March 30.

ploughing in Italy probably had undergone little change since antiquity.⁴⁶ The use of manure and other fertilisers was already widespread and relatively sophisticated in Roman Italy.⁴⁷

⁴⁶ In Roman Italy, the motive power for ploughing was often supplied by oxen, but the animals required frequent resting to prevent the development of friction sores on the neck from the abrasion caused by the neck-yokes. When ploughing fields that were inter-cropped with orchard trees, it was also necessary to take precautions to avoid damaging the trees or injuring the oxen. See K. D. White, 1970, pp. 176-177. On the use of animal energy for ploughing in medieval Italy, see Petrus de Crescentiis, bk. 2, chap. 15 (*De utilitatibus arationum et fossionum*), fols. 26v-27v, esp. 26v-27r. In the countryside of Florence, the use of animal energy is attested at least from the early twelfth century in numerous lease contracts that required peasants to perform labour services using livestock. For example, see ASF, *Diplomatico*, Badia de Passignano, 1131 December 1, in which the tenant was obliged annually to perform 'duodecim opere manuali et duo de boves'. See also ASF, *Diplomatico*, Badia di Passignano, 1166 February 12, 1192 March 15, 1193 June 23; Badia di Ripoli, 1226 July 18; San Vigilio di Siena, 1212 April 2; Vallombrosa, 1195 May 19, 1202 December 11. Labour services using livestock are also attested sporadically in ASF, *Manoscritti* 48BIS (*Bullettone*), fols. 109v, 110r, 176v, 177r. In the thirteenth century, and especially in the later thirteenth century, both leases and purchases of livestock are well attested in the extant documentation for the Florentine countryside. For two examples of 'soccida' contracts, which is to say leases of livestock, see Mosiici, ed., 1985, pp. 226-227. Cf. ASF, *Notarile antecosimiano* 2487/B1473, fol. 8r [1261 February 22]; 11252/1105, fol. 29v [1273 April 30]. On 'soccida' contracts in the Florentine countryside from the later thirteenth century to about the middle of the fourteenth century, see De la Roncière, 1976, 3, pp. 793-798. On 'soccida' contracts in the countryside of Pisa, see Herlihy, 1958b, pp. 15, 117, 211-212. On livestock leasing in the countryside of Cortona in the later thirteenth century, see Ticciati, 1892, pp. 278-279. For purchases of livestock in the upper valley of the river Pesa in the Florentine countryside, see Mosiici and Sznura, eds., 1982, no. 92, 1238 March 25, p. 153; no. 94, 1238 March 25, p. 155; no. 148, 1238 April 29, pp. 208-209; no. 184, 1238 June 3, pp. 237-238; no. 240, 1238 August 13, pp. 285-286; no. 247, 1238 August 19, pp. 291-292. On the use of animal energy for ploughing in Lazio in the thirteenth and fourteenth centuries, see Cortonesi, 1988b, pp. 45-47. The ownership of livestock in Tuscan agriculture is well attested in the early fifteenth century even among many of the more modest inhabitants in the countryside. See Herlihy and Klapisch-Zuber, 1978, pp. 276-277, 279-283; 1985, pp. 118-121.

⁴⁷ On the use of manures and other fertilisers in antiquity, see K. D. White, 1970, pp. 125-145. On their use in medieval Italy, see Petrus de Crescentiis, bk. 2, chap. 13 (*De putredine sive letamine et stercoreatione et cibo plantarum*), fols. 23r-26r; bk. 11, chap. 2, pt. 5 (*De letamine stercoreatione et immutatione plantarum*), fols. 197r-197v. In sharecropping contracts dating from as early as the middle of the twelfth century, lords in the Florentine countryside were often obliged to provide sharecroppers not only with seed, but also with manure. See Imberciadori, 1951, no. 5, 1155 November 4, pp. 81-82; no. 7, 1190 August 18, pp. 83-84; no. 8, 1202 October 10, p. 84. See also ASF, *Diplomatico*, Badia di Passignano, same dates. For additional evidence of this sort, see ASF, *Diplomatico*, Badia di Passignano, 1146 August 1, 1211 July 19, 1240 July 29; Monache de Luco, 1197 September 24. In antiquity, the use of sheep was favoured for direct manuring of fields immediately after the harvest. See K. D. White, 1970, p. 134. The practice should have been well-received in the more elevated areas of the Florentine countryside, where the climate was especially well-suited to sheep farming. Petrus de Crescentiis recognised the versatility of sheep as a source of milk, cheese, and clothing. In Florence, moreover, wool was an important industrial crop that was relatively easy and inexpensive to transport. Sheep manure also contains high levels of nitrogen. See K. D. White, 1970, pp. 127-128. On the merits of sheep farming, see Petrus de Crescentiis, bk. 9, chap. 1 (*De omnibus animalibus que in rure nutriuntur*), fols. 144r-144v, esp. 144v; bk. 11, chap. 9, pt. 6 (*De ovibus*), fol. 204v. Transhumant agriculture was practised in the

The benefits of effective fertilisation were further enhanced by fallowing and crop rotation, and the use of legumes. Fallowing allowed land to rest and to recover naturally the soil nitrogen that was used in cultivation, eliminated parasites by depriving them of their food source, and minimised the loss of moisture from the soil.⁴⁸ Legume rotation was practiced in antiquity and nearly facilitated the elimination of the fallow by the second century BCE.⁴⁹ Fallowing persisted in medieval Italy, and leguminous plants were widely cultivated. The importance of legume rotation, in which legumes are planted in alternate years to rotate with cereal crops, lay in the nitrogen-fixing properties of legumes. Cereal crops such as wheat, spelt, rye, and barley are all consumers of soil nitrogen, while legumes are producers of nitrogen. Legume rotation, used in combination with manure and fallowing, was thus an effective means by which to maintain adequate levels of soil nitrogen.⁵⁰

Florentine countryside particularly in the high Mugello north of the Sieve river valley, deep in the Chianti, and in the Pratomagno. In the autumn, the herds were moved to the Maremma and then returned in the early spring. For evidence of transhumant sheep farming in the Mugello before the middle of the thirteenth century, see ASF, *Diplomatico*, Monache di Luco, 1246 September 10. For evidence of transhumant sheep farming practised between the uplands of Mugello and the Maremma in the later thirteenth century, see De Angelis, Gigli, and Sznura, eds., 1978-1986, 1, no. 24, 1298 April 1, pp. 27-29. This particular instance involved the transfer of a herd of two hundred animals, divided between sheep and goats, the latter of which produces manure that is even richer in nitrogen than the manure derived from sheep. See K. D. White, 1970, p. 128. For evidence of sheep farming in the Chianti in the early thirteenth century, see ASF, *Diplomatico*, Badia di Coltibuono, 1230 August 3, 1237 May 25. On transhumance between the Pratomagno and the Maremma in the fourteenth and fifteenth century, see Salvestrini, 1998, pp. 238-240. On transhumance towards the Maremma from as early as the eighth century, see Violante, 1995.

⁴⁸ The retention of moisture is facilitated through the repeated ploughing of ground that is to lie fallow, which prevents weeds from seeding, thus arresting evaporation through surface growth, and it also retards the loss of moisture through capillary action. See K. D. White, 1970, p. 113.

⁴⁹ K. D. White, 1970, pp. 112-114, esp. 113.

⁵⁰ There are two types of leguminous plants: pulses and field grasses. The first group consists of beans, peas, and vetches, and the second consists of clovers such as alfalfa and lupine. Both groups were widely used in Roman and medieval Italy. Beans and peas possessed the advantage of being important sources of human food, but they made demands on labour as heavy as those required for the cultivation of cereals. On fallowing and legume rotation at Impruneta in the countryside south of Florence in the early fourteenth century, see Herlihy, 1968, pp. 252-253. For evidence of the use of legumes in the countryside of Siena in the second half of the thirteenth century, see Imberciadori, 1951, no. 19, 1268 July 6, pp. 95-96. The use of legumes is attested only rarely in the charter evidence for the Florentine countryside, typically as agricultural rents. See ASF, *Diplomatico*, Badia di Passignano, 1237 March 21. See also ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 169v. Vetches and grasses ripen quickly, and they required only about a quarter of labour input required by pulses. Some of them were typically grown for cattle feed or were combined with the lesser cereals such as barley for animal fodder, while grasses such as lupine were ploughed under as green manure. On the use of vetches and grasses in Roman Italy, see K. D. White, 1970, pp. 189-191. On their use in medieval Italy, see Petrus de Crescentiis, bk. 2,

Productivity growth was also stimulated by greater farm and regional specialisation, which entailed the more efficient exploitation of the comparative advantage of a given piece of land. It is of course difficult to establish the existence of specialisation in agriculture in medieval Tuscany on the basis of the extant documentation. There are nevertheless indications that agriculture was becoming more specialised on some of the larger and more urban oriented estates in the Florentine countryside already before the end of the first quarter of the fourteenth century. On the estate of the bishops of Florence, for example, the payment of annual rents in kind listed in an episcopal register dated from 1323 tended to vary in character from place to place. Wheat grain was the standard form of rent in kind, but other agricultural products figured more prominently in the rents collected from areas in which the land may not have been especially well suited for the cultivation of wheat grain.⁵¹ This is not to say that small farms and owner-cultivators were more resistant than larger estates to pressures for specialisation. Smaller farms may have been more responsive to market influences than large estates, but the documentation for smaller farms in the Florentine countryside is insufficient to permit a more thorough consideration of the matter.⁵²

chap. 16 (*De medicamine agri ut fiat satinus*), fols. 29v-31r. In antiquity, there is also evidence for the use of non-leguminous soil improvers, organic fertilisers such as seaweed and wood ash, and liming and marling. See K. D. White, 1970, pp. 137-145.

⁵¹ It is abundantly clear from an examination of the manual of Petrus de Crescentiis that farmers in north-central Italy during the middle ages were well aware of a wide variety of means by which to obtain the most from natural endowments of the land. They knew the type of soil ideally suited to each crop as well as the amount of moisture required by each crop. The actual implementation of these methods on any given farm or estate probably depended upon the extent of market penetration. In the territory of Florence, specialisation in the collection of rents in kind on the estate of the Florentine bishops is attested in an episcopal register dated from 1323 that lists all the annual rents that the bishops were collecting at that time. See ASF, *Manoscritti 48BIS (Bullettone)*, *passim*. Most rents in kind were rendered in cereals, and most of these in wheat, but rents were paid in inferior grains where conditions were unfavourable to the cultivation of wheat, and they were sometimes paid in other agricultural products. In areas of the Florentine countryside that were well suited for the cultivation of superior grains, for example in the vicinity of Castelfiorentino, wheat constituted more than 95 per cent of the total of all rents collected in cereals (fol. 32r). In less favourable areas such as the rolling hills around the nearby village of Vallecchio, however, wheat sometimes constituted even less than 25 per cent of the total of all cereal rents (fol. 33v). In the mountainous zone between the Passo della Futa and the Passo di Raticosa, which was very clearly an unfavourable location for the cultivation of wheat, all of the thirty-seven *staia* of cereals collected as rent were paid in spelt (fols. 88r-88v). Other areas ill-suited for cereal cultivation listed almost no cereal rents, and annual payments in kind were instead rendered in wine or must, pork, poultry, labour services, money, or some combination thereof.

⁵² In fourteenth century Flanders, for example, the research of van Cauwenberghe and van der Wee has suggested that yields per hectare were negatively correlated with the size of the area under cultivation. Agriculture became more intensive, they argued, as the cultivated area dimin-

The techniques described here were well known in medieval north-central Italy, but they were not adopted everywhere. To the degree that the adoption of such techniques required additional investment, their adoption would have depended upon the anticipated returns on investment, which in turn would have been influenced by the extent of market penetration. In the context of demographic growth and commercialisation, increasing returns on agricultural investment produced pressures for the intensification of agriculture that encouraged the adoption of these methods. As elsewhere in pre-industrial western Europe, agricultural productivity in the countryside of Florence was contingent upon the level of demand generated by the close proximity to a major urban market.

4.2.3. Tenurial arrangements and estate administration

Changes in tenurial arrangements and methods of estate administration may also stimulate productivity growth. In the countryside of medieval Florence, the more important of these changes concerned the transition from money rents for new fixed-term and perpetual leases of landed property to rents in kind, the commutation of existing money rents to rents in kind, the introduction of entry fines, and the diffusion of short-term leases. In and around the city, the use of wage labour for the cultivation of small plots of land may have yielded benefits to produc-

ished. See van Cauwenberghe and van der Wee, 1978, pp. 130-135. Smaller farms are thought to have predominated throughout Tuscany in the middle ages, but the supposition is difficult to test in the territory of Florence in view of the fact that the vast majority of documentary survivals from before the later thirteenth century come from large ecclesiastical estates. It is not until the early fifteenth century that satisfactory figures for gauging the extent of owner-cultivation in Tuscany become available. According to Herlihy and Klapisch-Zuber, 56.6 per cent of all rural families lived on their own land in 1427, although many peasants in this category leased additional parcels of land. Sharecroppers constituted no less than 18.9 per cent of rural families, with the highest concentrations closest to the city of Florence and towards the south and south-southwest, while only 4.3 per cent of rural families leased the property on which they lived. See Herlihy and Klapisch-Zuber, 1978, pp. 268-269; 1985, pp. 115-117. Patterns of property ownership in Tuscany during earlier periods are more difficult to assess. Wickham has argued that landownership in both the Garfagnana in the territory of Lucca and the Casentino in the territory of Arezzo before 1200 was dominated by 'peasant and near-peasant proprietors', which is to say by owner-cultivators and landlords with just a few tenants. See Wickham, 1988. This claim is borne out by Herlihy in his estimates of landholding patterns in the parish of Santa Maria di Impruneta in the countryside south of Florence during the last quarter of the thirteenth century. According to Herlihy, the parish church owned slightly less than twenty per cent of all the land in the parish, and large urban landlords owned less than five per cent of the total, but more than seventy-five per cent of the land was owned by small farmers. It was nevertheless mostly on the estates of ecclesiastical and large urban landlords that the most intensive farming techniques were adopted. See Herlihy, 1968, pp. 256-257.

tivity.⁵³ The period also witnessed the dissemination of sharecropping, but the degree to which sharecropping improved productivity is a matter of debate.⁵⁴

4.2.3.1. The transition from money rents to grain rents

Rents in kind for property leases had always been an aspect of the rural economy in the Florentine countryside, but rents were more commonly stipulated in specie before the beginning of the thirteenth century. Contracts for land leases in the territory of Florence during the twelfth century stipulate that money payments were to be rendered in the silver coinage of Lucca, *denarii lucensium*, and then increasingly after about 1181 in the *denarii* of Pisa.⁵⁵ The transition from the

⁵³ On the use of wage labour on small parcels of agricultural land in Florence and the immediately surrounding suburbs in the early fourteenth century, see De la Roncière, 1974. On the productivity benefits associated with wage labour in English agriculture in the early fourteenth century, see Stone, 1998.

⁵⁴ On sharecropping in Tuscany, see Imberciadori, 1951; Jones, 1968; Pinto and Pirillo, eds., 1987; Muzzi and Nenci, eds., 1988. On the economic aspects of sharecropping in Tuscany during the later middle ages, see the debate in Galassi, 1992; S. R. Epstein and Galassi, 1994. On social aspects of sharecropping in Tuscany, see Emigh, 1997a; 1998.

⁵⁵ Stipulations that annual payments of money were to be paid in the *denarii* of Pisa begin to appear in the 1170s, and contracts increasingly specified that money rents were to be paid in the coinage Pisa after 1181. The first reference to the money of Pisa in the twelfth century occurs in 1151, but the Pisan mint had not received a papal or imperial sanction, and its coinage was sometimes regarded as a spurious imitation of the money of Lucca. In the 1170s, however, the money of Pisa evidently had achieved quasi-official status as the currency of Florence. In 1171, Pisa conceded to Florence one half of the profits from the Pisan mint, and a Siense document of 1176 refers to Pisan money as the money of Florence. For the treaty of 1171, see Santini, ed., 1895, no. 4, 1171 July 2, pp. 5-6: 'Et medietatem logorie monete Pisane civitatis eis dabo [Florentinos] in sempiternum'. For evidence that the money of Pisa was regarded as the official money of Florence in 1176, see Cecchini, *et al.*, eds., 1932-1991, 1, no. 14, 1175 March 22, pp. 20-26, esp. 25: 'Item monetam Pisanum, quam modo Florentini habent, vel aliam rationabilem quam in antea adquisierint, faciam bannire in civitate Senensi eiusque comitatu et ut predicti homines eam accipiant et tollant in arringo, consules Senensium precipient suis civibus per sacramentum et cambiatoribus precipient per sacramentum, ut eorum cambium portent ad monetam pisanum'. In 1181, moreover, Pisa had entered into a monetary convention with Lucca as part of a more general commercial and political treaty, perhaps as a means by which to legitimise its own issues. The convention dictated that the mints of Pisa and Lucca were to share their profits equally, that the coinage of each city was to circulate freely in the territory of the other city, and that the coins of the two cities were to be clearly distinguishable. There are two versions of the treaty, one redacted for the Pisans containing the Lucchese concessions and another redacted for the Lucchese containing the Pisan concessions, and they are both dated according to both the Pisan and the Lucchese styles of dating. For the Pisan version, see Corsi, 1980, no. 2, 1181/1182 June 16, pp. 52-60, esp. 54. For the Lucchese version, see Corsi, 1980, no. 3, s.d., pp. 61-68, esp. 61-62. Around 1190, Pisa evidently reformed its coinage, and indeed a document of 1192 indicates that twelve of the new Pisan *denarii* were worth fourteen of the old Pisan *denarii*. See Herlihy, 1967, pp. 182-183. By about 1200, the transition was complete, and the coinage of Lucca is virtually absent from lease contracts in the Florentine countryside after the beginning of the thirteenth century. On

coinage of Lucca to that of Pisa was owing no doubt in significant measure to the debasement of the *denarius* of Lucca in the second half of the twelfth century, perhaps by as much as fifty per cent in the thirty years before 1195.⁵⁶ By the beginning of the thirteenth century, the *denarius* of Pisa for the most part had supplanted that of Lucca for money payments throughout the territory of Florence.

The deterioration of the *denarius* of Lucca certainly would have made it profitable for lords to terminate, whenever possible, existing contracts in which rents were to be rendered in specie and to replace them with rents in kind, or else to change the structure of existing rents in similar fashion through commutations of money rents to rents in kind. The evidence for Lucca in the later twelfth century indeed indicates that the cathedral chapter was endeavouring, albeit unsuccessfully, to restructure some existing rents *pro deterioratione monete lucensis*.⁵⁷ In the face of an almost continuous pattern of monetary devaluation in the later twelfth and early thirteenth centuries, and in the context of proliferating markets, increasing commercialisation, and demographic growth, rents in kind constituted a more stable form of remuneration. Commodities such as grain not only tended to maintain their value but were subject to inflationary pressures as a result of in-

monetary developments in Tuscany during the twelfth and thirteenth century, see Herlihy, 1954; 1974. See also Matzke, 1993; Travaini, 1988a. On the later monetary history of Florence, see Bernocchi, 1974-1985; Cipolla, 1982; Goldthwaite and Mandich, 1994.

⁵⁶ The sharp deterioration of the *denarius* of Lucca in the second half of the twelfth century is attested in an act of 1195 that demands payment in the coinage of thirty years earlier, which held twice the value of the money that was then in circulation. See Guidi and Parenti, eds., 1910-1933, 3, no. 1728, 1195 January 21, pp. 181-184, esp. 181: 'Lambertus confitetur habere et negat facere debere et si deberet facere, negat facere debere, nisi dederit sibi pro canonica libr. lx, ad bonam monetam, que fuit a xxx annis retro, vel duplum de presenti moneta, salvo suo iure in superflo'. According to Matzke, the *denarius* of Lucca underwent debasement in terms of both weight and standard of fineness in the twelfth century. In the later eleventh century, the *denarius* of Lucca weighed from 1.05 to 1.10 grammes, and the silver content was between 50 and 75 per cent. By the early twelfth century, the weight standard had declined to between 0.92 and 0.95 grammes, while the silver content had declined to between 40 and 50 per cent. Between about 1160 and 1181/1182, the weight of the Lucchese *denarius* oscillated between 0.87 and 0.92 grammes, and the silver content remained constant at about 40 per cent. By the end of the twelfth century, the *denarius* of Lucca weighed only about 0.80 to 0.85 grammes, and the standard of fineness had diminished to a mere 15 per cent silver. On the debasement of the silver *denarius* in the second half of the twelfth century, see especially Matzke, 1993, pp. 189-191. Also, and once again, see Herlihy, 1954; 1974.

⁵⁷ See Guidi and Parenti, eds., 1910-1933, 3, no. 1642, 1191 August 23, pp. 98-100, esp. 99: 'Item fecerunt eis finem et refutationem et perdonationem atque transactionem et pactum de non petendo de toto quod predicti canonici possint requirere pro deterioratione monete Luc[ensis] pro eo quod hucusque [*sic*] debitam vel consuetam pensionem ad presentem monetam solverunt'. By the later twelfth century, the diffusion of rents in kind in the territory of Lucca was already widespread, but there were still efforts to bring under the new regime tenants who still paid their rents in money.

creasing demand and the vagaries of supply. Monetary devaluation, on the other hand, brought constant diminishing returns from fixed rate payments in specie.

In the territory of Florence, new contracts for leases of landed property began to specify payment in kind around the year 1200. At the beginning of the thirteenth century, the payment of rents in kind in the territory of Florence constituted only about 14.5 per cent of all such rent payments, and payments in coined money were particularly prevalent in the immediate vicinity of the city. Within the space of about two decades, however, payments in kind, and typically in grain, constituted about 65.4 per cent of all such payments, and the change was even more dramatic in the immediate vicinity of the city where the payment of rents in kind constituted only about 10.8 per cent of all such payments around 1200 but climbed to about 90.2 per cent by the middle of the fourteenth century.⁵⁸

The diffusion of the payment of rents in kind in the territory of Florence came rather later than in the territory of Lucca. By the early twelfth century, the payment of rents in kind constituted about 68.1 per cent of all rent payments in the territory of Lucca, and they constituted about 88.8 per cent of all rent payments by the end of the century. Contracts from the territory of Lucca stipulating that rent payments were to be rendered in money tended to prevail somewhat only in regions in which viticulture predominated or in regions most distant from the city, which is to say, presumably, regions that were less well served by existing channels of transportation.⁵⁹

⁵⁸ Kotel'nikova, 1983a, p. 101. On the estate of the abbey at Settimo, however, money rents still dominated for leases of agricultural property in the immediate suburbs of Florence in the early fourteenth century. In the vicinity of the abbey at Settimo, still only about ten kilometres from the centre of Florence, agricultural rents were indeed the rule. See Jones, 1956a, pp. 93-101. See also below.

⁵⁹ Kotel'nikova, 1983a, pp. 100-101. In the territory of Lucca, the transition to rents in kind had already begun before the middle of the eleventh century, and it had reached the territory of Siena and the southern margins of Florentine territory by 1150. The appearance of rents in kind on the southern margins of Florentine territory before the later twelfth century was owing more to the influence of the market at Siena rather than to the market at Florence. On the dissemination of rents in the territory of Lucca, see Jones, 1954a, pp. 27-28; Kotel'nikova, 1968. On the diffusion of rents in kind in northern Italy more in general, see Kotel'nikova, 1975, pp. 19-141. On the transition to rents in kind in the territory of Siena, see Cammarosano, 1974, pp. 50-54. On rents in kind in the territory of Florence, see Kotel'nikova, 1983, pp. 99-100. For a brief register of twelfth century lease contracts illustrating the penetration of rents in kind into the territory of Florence in the area around Poggio al Vento, situated near the frontier between the territories of Florence and Siena, see E. Conti, 1965, 1, pp. 273-290. On the persistence of money rents in parts of the territory of Lucca in which viticulture predominated and in the parts of the territory most distant from the city of Lucca, see Kotel'nikova, 1968, p. 616; 1983, pp. 100-101.

The transition from money rents to rents in kind for fixed-term and perpetual leases of landed property in Tuscany and throughout northern Italy has never been fully explained. Monetary devaluation, and perhaps also the shortage of specie that devaluation suggests, may have borne upon the transition to rents in kind in Tuscany to a considerable extent. The relatively late diffusion of rents in kind in the territory of Florence suggests, however, that additional elements must be introduced into any explanatory paradigm.⁶⁰ It is not within the scope of this work to present a full treatment of the issue, but suffice it to say that the diffusion of rents in kind, in the context of a monetised economy, would have raised transaction costs. The additional costs must have been offset by other benefits. The movement away from money rents to rents in kind indeed reflects the growth of the urban market and its penetration into the countryside, the proliferation of rural markets, and improvements in the trade infrastructure sufficient to support at acceptable costs the transportation of the bulky commodities in which agricultural rents were increasingly paid.⁶¹ Increased urbanisation created a large market for staple foods, and the development of a sophisticated network of secondary and tertiary markets improved efficiency in the movement of staple foods from the countryside to the city. Ultimately, the assessment of rents in grain gave landlords a form of insurance against monetary devaluation, and it provided them with a more consistent return on their investment. Despite the higher costs entailed by rent assessments in grain, landlords clearly viewed grain rents as a hedge against monetary uncertainty.

⁶⁰ On coin shortage, see Cipolla, 1963a; Spengler, 1965.

⁶¹ It is notable that money rents tended to prevail in areas that were least subject to the penetration of the urban market. In the Casentino in the territory of Arezzo, for example, Wickham observed that the remote monasteries of Camaldoli and Prataglia displayed a marked disinterest towards economic re-organisation in the twelfth century, and that money rents still prevailed throughout the area even beyond 1250. See Wickham, 1988, p. 229. Nearer to the urban market, the use of grain rather than coined money was limited not only to the payment of rents on landed property but was pervasive in the Florentine economy. In 1235, the abbey at Passignano was even disbursing annual remittances in grain to its legal advocate in Florence for services rendered. See ASF, *Diplomatico*, Badia di Passignano, 1235 October 29.

4.2.3.2. The commutation of money rents to grain rents

The growth of the urban market at Florence is further reflected in certain changes in the manner in which the bishops of Florence administered their extensive holdings in the countryside from the later twelfth century and especially in the second quarter of the thirteenth century, during the bishopric of Ardingus Foraboschi.⁶² The strategy pursued by the bishops after about 1190 emphasised the acquisition and consolidation of property in areas in which the bishops had already established a considerable presence. In the early thirteenth century, the bishops for the most part began to shift away from a policy that focused on the continued acquisition of new properties, and more towards a policy that stressed the firmer control and greater exploitation of existing properties. In particular, the bishops sought to reassert control over properties that had drifted out of episcopal control before 1150.⁶³

The administration of the sprawling estate of the bishops of Florence in the early twelfth century must have been encumbered with such logistical difficulties that many of the tenants on the estate probably were effectively beyond the reach of their episcopal overlords.⁶⁴ Traditional rents for leases of landed property in the Florentine countryside in the early twelfth century usually were not very onerous. Although some lease contracts required the tenant to render annual labour services or goods in kind, most leases required payment entirely in specie. The sums demanded typically amounted to only a few *denarii* per year, and they were sometimes little more than symbolic payments intended for the most part to denote episcopal lordship. In many cases, these rents probably would not have justified the expenditure necessary to facilitate either their collection or the eviction of tenants who sought to avoid payment. The difficulties entailed in the displacement of tenants from episcopal lands for non-payment were further complicated

⁶² Ardingus Foraboschi was bishop of Florence from 1231 to 1247. For the tenures of the episcopal seat in Florence from 1008 to 1321, see below, Appendix 12.

⁶³ The usurpation of episcopal property by lessees before about 1150 was by no means confined to the diocese of Florence but can be observed throughout Tuscany. See Dameron, 1991, p. 94; Jones, 1954a, pp. 27-29.

⁶⁴ For an illustration of the process on the estate of the archbishop of Pisa, see Caturegli, ed., 1938, no. 361, 1137 March 5, pp. 240-242.

by legislation that was specifically intended to inhibit the dispossession of tenants in arrears.⁶⁵

By the early thirteenth century, however, the bishops of Florence began to recognise the vast potential for profit that lay in their under-utilised landed assets. The growth of the urban market had begun to offset the costs of investment in more meticulous administrative organisation, and institutional changes made it possible for the bishops to implement a more aggressive policy of estate management.⁶⁶ The bishops sought to enhance their revenue through the reassertion of control on usurped episcopal property and through the commutation of traditional annual dues in services and specie to annual payments in kind, and mostly in grain. Quite obviously, commutations were rather different from new contracts in which annual rents were to be rendered in kind, but the distinction frequently has been overlooked. Whereas rent assessments in new lease contracts in the later twelfth and early thirteenth centuries probably were fixed at whatever rate the market would bear for a given piece of land, commutations effectively vacated critical clauses in existing contracts.

To secure commutations of traditional rents, the bishops must have been negotiating from a position of advantage. Presumably, the bishops of Florence compelled tenants to submit to these commutations first by establishing the fact of episcopal lordship over the property in question and then by offering the tenant a means to resolve the debt accumulated in unpaid annual rents and penalties over

⁶⁵ Dameron, 1991, p. 92; Davidsohn, 1977, 1, pp. 1014-1015. Davidsohn noted institutional changes that would eventually enable the bishops of Florence to reassert control on usurped properties. Legislation introduced in Florence in 1159 was designed to inhibit the ability of the laity to alienate church property. See Santini, ed., 1895, app. 1, p. 501; ASF, *Manoscritti 48BIS (Bullettone)*, fol. 158. Twenty years later, a church council convened under pope Alexander III (1159-1181) expressed opposition to other restrictions of ecclesiastical rights by the city. The council also protested against a decree that limited the jurisdiction of the bishops over the inhabitants of episcopal property.

⁶⁶ Some of the difficulties previously experienced by the bishops in controlling their subject properties were mitigated by the appointment of Rolandus Ugonis Rubei as the pro-episcopal *podestà* of Florence in May 1236. The predecessor of Rolandus, the Ghibelline Guilielmus Venti, had refused to intervene on behalf of the bishops in disputes with tenants on the episcopal estate, but Rolandus supported the bishops. See Dameron, 1991, p. 115. Dameron erroneously identified the *podestà* appointed in May 1236 as Rubaconte Rossi. The pro-episcopal sentiments of Rolandus are betrayed in a note from the *Bullettone* in which the *podestà* promised 'conservare ecclesiasticam libertatem et homines et personas episcopatus'. See Santini, ed., 1895, app. 1, p. 511; ASF, *Manoscritti 48BIS (Bullettone)*, fol. 158.

years, decades, or perhaps even generations.⁶⁷ Some were able to secure their freedom from the bishops through substantial payments for which they undertook sizeable loans.⁶⁸ Others were left with little option but to agree to the new terms offered by the bishops, which typically replaced all existing debts and penalties with an annual payment in kind, generally in grain.⁶⁹ Still others probably had been forced to abandon episcopal property, enabling the bishops to lease the land again at the market rate, and this time for an agricultural rent in grain.⁷⁰

The changes in the administration of the episcopal estate in the later twelfth and early thirteenth centuries have been interpreted as a response to increased fiscal pressures. The bishops of Florence, according to this interpretation, sought to commute money rents to rents in kind in order to take advantage of the expanding market for agricultural produce generated by increased urban demand and thereby reduce their soaring debt liabilities.⁷¹ In the territory of Lucca, however, there is no secure indication that commutations from money rents to rents in kind on the estate of the cathedral chapter were designed to alleviate economic hardship.⁷² The argument that the Florentine bishops commuted rents in specie to agricultural rents in response to fiscal pressures is likewise unconvincing. The commutations merely provided the bishops with a means by which to recover rents in arrears. The substitution of rents in kind for money rents on the estates of the Florentine bishops was rendered practical by increased urban demand for agri-

⁶⁷ Many entries in the episcopal *Bullettone* of 1323 record recognitions of episcopal lordship without reference to any change in the obligations of the tenant while other entries clearly indicate the commutation of traditional rents. The *Bullettone* makes no mention of penalties, but twelfth century land leases with money rents customarily fixed penalties at twice the value of the annual rent payment. On the *Bullettone* itself, see Dameron, 1991, pp. 16-21; 1989. The bishops were not the only ecclesiastical lords who endeavoured to reassert their rights on properties that had fallen out of their control. The same process can be observed north of Florence on the estate of the abbey at Buonsollazzo towards the middle of the thirteenth century. See ASF, *Compagnie Religiose soppresse da Pietro Leopoldo* 479, 302.

⁶⁸ For example, see Mosiici and Sznura, eds., 1982, no. 13, 1238 January 4, pp. 77-78.

⁶⁹ For examples of commutations on the episcopal estate, see ASF, *Manoscritti* 48BIS (*Bullettone*), fols. 41r-46r, 84v-85v, and *passim*.

⁷⁰ Although the eviction of tenants unable or unwilling to submit to episcopal lordship and its terms undoubtedly entailed high transaction costs, evictions also may have facilitated productivity improvements by enabling the bishops to replace poor farmers with more productive tenants.

⁷¹ Dameron, 1991, pp. 93-95. Dameron also noted considerable opposition to the reassertion of episcopal rights particularly at San Casciano in Val di Pesa in 1236 and at Borgo San Lorenzo in 1240 and 1241, and he believed that opposition of this sort provided the catalyst for the formation of a number of rural communes in the Florentine countryside.

⁷² Jones, 1954a, pp. 28-29.

cultural products, escalating land prices in the countryside, and improvements in the rural trade infrastructure. The bishops of Florence were taking advantage of economic opportunity, to be sure, but they were doing so not because they were unduly burdened by high debts.

There is no question that ecclesiastical institutions in the territory of Florence were borrowing money in the later twelfth and early thirteenth century, and they also alienated properties specifically to satisfy debts. Evidence for debt and even evidence for alienations of property as debt remedies are not necessarily secure indications of fiscal pressure. Ecclesiastical institutions at Florence and in the surrounding countryside continued to borrow money throughout the thirteenth century. Moreover, ecclesiastical lords in the territory of Florence were also among the more important providers of rural credit.⁷³

Growing ecclesiastical debt in Florence in the later twelfth and early thirteenth centuries sometimes betrays actual fiscal pressures, but it is necessary to distinguish signs of fiscal crises from what is often merely evidence for growth in the credit market.⁷⁴ Ecclesiastical lords often possessed abundant landed re-

⁷³ The credit operations of ecclesiastical lords are attested in acquisitions of property in which the alienating party disposed of property to extinguish a debt undertaken from an ecclesiastical creditor. For examples of credit provided by the abbey at Passignano, see ASF, *Diplomatico*, Badia di Passignano, 1222 September 12, 1228 February 20, 1232 March 30. For credit provided by the hospital Ubaldo di Pianalberti, an ecclesiastical institution affiliated with the abbey at Passignano, see ASF, *Diplomatico*, Badia di Passignano, 1235 December 8. For the provision of credit by the abbey at Coltibuono, see ASF, *Diplomatico*, Badia di Coltibuono, 1246 January 2. For the provision of credit by the abbey at Settimo, see ASF, *Diplomatico*, Cestello, 1227 August 21, 1237 June 19, 1253 March 4. For the provision of credit by the abbey at Buonsollazzo, see ASF, *Diplomatico*, Cestello, 1239 May 8. Some of these acts are alienations of property to an ecclesiastical institution in order to satisfy a debt, but not all of these acts specifically indicate that the debt was originally contracted with the institution in question. Some of the transfers may have served to satisfy debts undertaken from third parties, but alienations of property to resolve debts taken from third parties typically specify the creditor who is to receive restitution. When no third party is mentioned, it is thus assumed that the party acquiring the property was the original creditor. Ecclesiastical institutions also bought and sold loan credits. For a purchase of loan credit by the convent of San Pietro di Luco di Mugello, see ASF, *Diplomatico*, Monache di Luco, 1236 August 9. For the sale of loan credit by the abbey at Passignano to urban creditors, see ASF, *Diplomatico*, Badia di Passignano, 1235 October 8. Church figures also provided loans independent of the institutions to which they were attached. For example, see Mosiici and Sznura, eds., 1982, no. 135, 1238 aprile 19, pp. 196-197; no. 147, 1238 aprile 27, pp. 208. The provision of credit by ecclesiastics is discussed further below.

⁷⁴ There are, to be sure, indications at Florence and in the surrounding countryside that ecclesiastical institutions may have been assuming too much debt in the later twelfth and early thirteenth centuries. In 1204, for example, the abbey at Passignano found it necessary to catalogue the debts assumed by the monastery under the abbot Uberto, and the abbot was expelled in the following year for exceeding acceptable debt limits. See ASF, *Diplomatico*, Badia di Passignano, 1204, 1205 April 1. The enumeration of debts accumulated under the governance of an abbot was

sources, which afforded them access to conspicuous amounts of capital on the rural and urban credit markets. They borrowed on these markets to finance major investment programmes in the acquisition of new properties, in land consolidation and land improvement, or simply to offset sudden and unforeseen expenses. To satisfy their debt obligations, they occasionally incurred new loans, but they also disposed of agricultural rents or liquidated landed assets.⁷⁵ Alienations of immovable property, moreover, were sometimes used to resolve debts incurred in the acquisition of other properties, which suggests that the disposal of land to satisfy

nevertheless a common practice in monasteries at the end of the regime of the abbot in question. For an example of the same practice by the abbey at Settimo in the early fourteenth century, see Jones, 1956a, app., no. 85, p. 120. At the beginning of the thirteenth century, the abbey at Settimo collateralised all of its possessions in the parish of San Martino alla Palma in order to obtain a loan of more than two hundred and fifty *libre*. When the loan came due in 1211, the abbey at Settimo again collateralised its possessions at San Martino alla Palma in order to secure another loan of three hundred *libre* to repay the outstanding debts from the earlier loan. Respectively, see ASF, *Diplomatico*, Cestello, 1201 March 6, 1211 September 14. The debts may have been incurred as a consequence of warfare, as reported by an eighteenth century historian of the monastery. See ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 494, pp. 69-70. At the same time, however, the abbey at Settimo continued an aggressive policy of land acquisition, especially from about 1217 when the abbey began to invest heavily in port facilities, mills, and other waterworks on the river Arno. The investments of the abbey at Settimo on the Arno are discussed below in Chapter 5.2. The point is that apparent financial distress evoked by evidence for debt at Settimo may represent nothing more than the prudent financial management. In some cases, however, financial distress was genuine. The bishops of Fiesole, under the bishop Rainerius, had borrowed heavily from Florentine creditors before 1220 and they were unable to repay their loans. After the death of Rainerius in 1220, Florentine creditors confiscated property of the bishops of Fiesole and eventually, in 1225, reached an agreement with Ildebrandus, the successor to Rainerius. The bishop of Fiesole repaid a portion of the outstanding debts and agreed to establish a permanent residence in the city of Florence. See Dameron, 1991, p. 122; Davidsohn, 1977, 2, pp. 133-136.

⁷⁵ Evidence for the disposal of landed property by ecclesiastical institutions to satisfy debts often indicates that the debts were originally undertaken 'pro utilitate ed melioramento' of the institution in question, while others were undertaken 'pro utilitate et necessitate'. The difference in terminology is perhaps noteworthy, though it cannot be certain that the former type of loan was strictly for investment and that the latter was intended to offset financial distress. At any rate, for examples of debts undertaken by ecclesiastical institutions 'pro utilitate et melioramento', see ASF, *Diplomatico*, Badia di Coltibuono, 1244 August 10; Monache di Luco, 1218 February 24, 1237 December 1, 1244 May 16, 1246 January 7; San Vigilio di Siena, 1193 August 4. Churches also sold agricultural rents to satisfy debts undertaken 'pro utilitate et melioramento'. See ASF, *Diplomatico*, Badia di Passignano, 1222 September 12. Ecclesiastical institutions sometimes alienated property to satisfy debts originally incurred to pay taxes or dues. See ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1201 March 1. See also ASF, *Diplomatico*, Badia di Passignano, 1203 May 29, 1204. Smaller ecclesiastic institutions alienated assets simply to offset expenses assumed, for example, in the restoration of the local church. See Mosiici and Sznura, eds., 1982, no. 227, 1238 July 27, pp. 273-274. In most cases, however, alienations of landed property to satisfy a debt give no indication of the purpose for which the debt was originally contracted, that is, beyond the vague formulae of 'pro utilitate et melioramento' or 'pro utilitate et necessitate'. It is important to note, however, that immobile property alienated to resolve a debt often came from legacies that were difficult to integrate into existing core holdings.

creditors also may have been part of a strategy designed to promote land consolidation.⁷⁶ The reassertion of seigniorial rights on ecclesiastical estates, and particularly on the estate of the Florentine bishops, was designed not so much to offset soaring debt as it was to take advantage of economic opportunity.

4.2.3.3. Entry fines and short-term leases

In the later twelfth century and especially in the early thirteenth century, entry fines and short-term leases were becoming more common in the Florentine countryside. Whether these practices facilitated productivity improvements is to some extent a matter of conjecture, but they probably enabled landlords to extract higher levels of rent from their proprietary holdings, which in turn would have provided incentives for tenants to increase output. Landlords were beginning to require from new tenants the payment of an entry fine in addition to the annual rent from as early as 1172. Not surprisingly, the practice is attested most on the commercially oriented estates that enjoyed relatively easy access to the city or to large rural markets.⁷⁷

Short-term leases were often used for early sharecropping contracts, but leases at short-term were also used independent of sharecropping arrangements.⁷⁸ The abbey of Settimo may have been leasing land by short-term contracts already before the end of the twelfth century, and they were certainly using short-term

⁷⁶ For an alienation of landed property by the parish church of San Pietro di Sillano to resolve a debt incurred in the acquisition of other properties, see ASF, *Diplomatico*, Badia di Passignano, 1188 April 17.

⁷⁷ The abbey at Settimo, situated just west of Florence, was charging entry fines on perpetual leases from at least as early as 1172. See ASF, *Diplomatico*, Cestello, 1172 October 9. Immediately north of Florence, the abbey at Buonsollazzo was charging entry fines by the second quarter of the thirteenth century. See ASF, *Diplomatico*, Cestello, 1229 January 10, 1233 November 23. On the estate of San Michele di Marturi at Poggibonsi, an important point of transit on the via Francigena, entry fines are attested from at least as early 1175. See ASF, *Diplomatico*, Spedale di San Giovanni di Battista, 1175 October 26, 1176 February 22, 1191 July 22, 1192 March. The abbey at Passignano was occasionally requiring the payment of an entry fine on perpetual leases from the later twelfth century, and the abbey at Vallombrosa was charging entry fines by 1234. See ASF, *Diplomatico*, Badia di Passignano, 1194 February 16, 1195 February 27, 1208 February 1, 1214 June 1, 1247 August 25, 1255 December 26, 1257 February 3; Vallombrosa, 1233 January 29.

⁷⁸ The earliest sharecropping contract from the Florentine countryside dates from the early eleventh century, but sharecropping was practised in the countryside of Siena from as the early ninth century. See Imberciadori, 1951.

leases by the beginning of the thirteenth century.⁷⁹ In 1236, Settimo adopted the Cistercian rule.⁸⁰ The impact of the advent of the Cistercian order at Settimo is difficult to assess, as Philip Jones has already observed, but it may be worth noting that the Cistercian rule specifically advocated the use of short-term leases.⁸¹ The evidence for Settimo itself suggests no dramatic shift towards short-term leasing in the years and even decades immediately following the adoption of the Cistercian rule, but five-year leases for agricultural land on the Settimo estate became more common in the early fourteenth century.⁸² Elsewhere in the Florentine countryside, however, short-term contracts indeed appear to have become more common after the introduction of the Cistercian rule at Settimo.⁸³

⁷⁹ The abbey at Settimo renewed two lease contracts in 1190, though the renewals mention nothing about the duration of the contracts. See ASF, *Diplomatico*, Cestello, 1190 June 13. In 1200, however, the abbots of Settimo leased eight pieces of property in separate contracts for seven years each. The annual rents varied from as little as 2.5 *staria* of grain for each *starium* of land to as much 7.5, but none of the leases obliged the tenant to pay a portion of the harvest. For a brief inventory of the leases, see ASF, *Diplomatico*, Cestello, 1200 October 6.

⁸⁰ ASF, *Diplomatico*, Cestello, 1236 March 18.

⁸¹ Jones, 1956a, pp. 91-92. By the early fourteenth century, the Cistercian leadership was seeking to limit the duration of leases on Cistercian estates to no more than five years, and according to Jones, this suggests that actual practice had already deviated from the rule. On Cistercian agriculture and estate management in medieval France, see Berman, 1986; Bouchard, 1991.

⁸² Jones, 1956a, pp. 94-96. According to Jones, perpetual leases were still common on the Settimo estate throughout the thirteenth century, but renewable leases of about twenty years became more common on the estate towards the end of the century. It is perhaps important to note that much of the evidence used for the thirteenth century by Jones came from early fourteenth century estate inventories rather than from contemporary documentation. The relative lack of evidence for short-term leases on the Settimo estate immediately following the adoption of the Cistercian rule perhaps reflects more the nature of the documentation than genuine absence. Short-term land lease contracts clearly possessed only limited utility. Monastic administrators may have tended to record such leases in account books or inventories rather than in individual charters. If they even bothered to commission parchment copies of short-term lease contracts at all, they probably disposed of them after the term of the contract had expired. The few short-term lease contracts that have survived in individual charters perhaps owe their existence to the fact that some sort of problem concerning the contract had arisen subsequent to the initial redaction, which perhaps compelled abbeys to commission a copy of the original act. The survival of documentation regarding many short-term leases tends to hinge on the survival of inventories in which they are recorded. For example, see ASF, *Diplomatico*, Cestello, 1200 October 6; ASF, *Diplomatico*, Olivetani di Firenze, 1216 April 10, cited again below, which records no less than eight short-term leases. The apparent acceleration in the diffusion of short-term contracts in the later thirteenth and early fourteenth centuries probably reflects more the increased survival of complete or nearly complete estate inventories from the period.

⁸³ In the Chianti, apart from evidence for sharecropping, short-term leasing of agricultural property is documented from before 1220. For short-term lease contracts of three years and five years, respectively, see ASF, *Diplomatico*, Badia di Coltibuono, 1213; Badia di Passignano, 1216 March 1. Short-term lease contracts of ten years are documented before 1220 closer to the city of Florence on the estate of San Miniato al Monte, and seven year contracts are attested before 1220 in

In the early fourteenth century, the abbots of Settimo appear to have pursued a coherent strategy of estate management. The abbey leased undeveloped land for longer periods, often seventeen years, sometimes for ploughing but more often for the transformation of woodland into vineyards. By contrast, developed agricultural lands were typically leased for five years both for fixed rents and in sharecropping arrangements.⁸⁴ Fixed rents on urban properties and on agricultural land in the immediate suburbs of the city were usually stipulated in money rather than agricultural products, but fixed rents on rural properties in the vicinity of the abbey at Settimo were in kind.⁸⁵ Sharecropping contracts were more common on

the more distant Pratomagno on the estate of the abbey at Vallombrosa. See ASF, *Diplomatico*, Olivetani di Firenze, 1216 April 10; Vallombrosa, 1219 January 23. From about 1235, short-term contracts of about five or six years become more common, though their greater numbers probably reflects somewhat increased documentary survivals more in general. See ASF, *Diplomatico*, Badia di Passignano, 1235 October 29, 1240 July 29; Monache di Luco, 1244 May 16; Olivetani di Firenze, 1239 February 27; San Vigilio di Siena, 1245 February 2. Contracts of ten, twenty, twenty-four, twenty-five, twenty-nine, and thirty years are also attested. For a ten year lease of a mill situated on the river Ambra near Bucine in the upper Arno valley, see ASF, *Diplomatico*, Stroziane-Uguccione, 1241 October 15. For another ten year lease contract, see ASF, *Diplomatico*, Vallombrosa, 1241 June 17. Contracts of twenty years are attested for the abbey at Buonsollazzo, a Cistercian abbey affiliated with Settimo, in ASF, *Diplomatico*, Cestello, 1256 December 23. For a twenty year lease contract on the estate of the bishops of Florence, see ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 95v [1266 March 31]. The bishops also leased land for twenty-four, twenty-five, and thirty years, but the evidence from the *Bullettone* suggests that the perpetual lease remained the standard type of lease on the episcopal estate. For two twenty-five year contracts, see ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 94v [1256 April 5]; fol. 65r [1259 September 26]. For contracts of twenty-four and thirty years, respectively, see ASF, *Manoscritti* 48BIS (*Bullettone*), fol. 137r [1301 June 13]; fol. 96r [1277 August 20]. Renewals of thirty year leases are attested in ASF, *Diplomatico*, Monache di Mugello, 1239 September 17, 1248 January 13. A twenty-nine year lease is attested in ASF, *Diplomatico*, Badia di Ripoli, 1221 January 27.

⁸⁴ Jones, 1956a, pp. 95-96.

⁸⁵ Jones, 1956a, pp. 96-101. Grain dominated rents in kind, and the level of rent was often calculated to the area of land generally at about 3-3.5 *staria* of grain for each *starium* of land, though there were also significant variations. Other fixed rents in kind included wine, oil, and wood, the latter of which were typically specified in terms indicating that the wood was used for fuel. For the most obvious indication that wood rents were for the provision of fuel, see the lease contracted in 1288 for an annual rent of twelve *salme* 'lignorum combustibilium' in ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, fol. 13r. The observations of Jones regarding the prevalence of money rents on agricultural properties in the immediate suburbs of Florence appear to contrast with the conclusions put forward by Kotel'nikova, as already noted above. According to Kotel'nikova, rents in kind dominated in the countryside of Florence more in close proximity to the city than in more distant areas. See Kotel'nikova, 1983a, p. 101. The difference of opinion may have been semantic, depending largely on the respective notions of Jones and Kotel'nikova as to what constituted 'urban' or 'rural' property. It is also worth noting that two contrasting pressures were at work to influence the manner of payment for leases of agricultural land. One was the availability of specie, which was probably greater in close proximity to the city and thus created pressure towards payment in money. The other pressure concerned transport costs, which were lower in close proximity to the urban market and thus favoured payment in kind. The administrators of the Settimo estate probably would have been less averse to stipulating rents in

the Settimo estate in the parish of San Martino alla Palma, and they were often associated with viticulture and payments in wine, but payments in fruit and vegetables are also widely attested.⁸⁶

Practically speaking, short-term leases very often were probably not much different from leases contracted over longer terms. Sufficiently productive and responsible tenants simply renewed their leases at the conclusion of each term. The principal advantage to landlords lay in the fact that short-term leases granted them greater flexibility in replacing poorly productive farmers.⁸⁷ Short-term leases also enabled lords to increase agricultural rents as productivity increased, and it allowed them to adjust money rents to account for monetary fluctuations.

4.2.4. The dissemination of rural credit

Credit operations are poorly documented in the surviving parchment *cartule* and *instrumenta* for medieval Tuscany, but the evidence becomes comparatively rich from the moment that notarial cartularies begin to survive in the early thirteenth century.⁸⁸ The parchment *cartule* and *instrumenta* that have come down to the

money because the relatively brief terms of the contracts facilitated the periodic adjustment of rent levels to take into account monetary fluctuations. Money rents also placed the burden of storage and transport on the tenant, and it eliminated the conveyance of agricultural rents from the Florentine suburbs of Legnaia or Monticelli, for example, to the abbey, which the abbey then would have been compelled to send back over the same roads to one of the urban markets. In the later thirteenth century, the abbey at Passignano confronted a similar problem on their properties at Mucciano, situated in the Pesa valley below San Casciano in Val di Pesa at nearly half the distance from Florence as the abbey itself. The abbey still collected grain rents from tenants at Mucciano, but the tenants were obliged to consign their annual rents not at the granaries of either Passignano itself or Poggio al Vento, which by then was common for tenants of the abbey in the upper Pesa valley. Instead, tenants at Mucciano conveyed their grain rents to Florence where they consigned them to a representative of the abbey. See ASF, *Corporazioni religiose soppresse dal governo francese* 179, 36, no. 2, fol. 17v [1295 June 12].

⁸⁶ Jones, 1956a, pp. 98-99.

⁸⁷ Most of the short-term lease contracts in the evidence for Florence and its countryside are evidently effective immediately upon redaction of the act, but some of them specify a future date when the contract is scheduled to go into effect. It is possible, though ultimately unverifiable, that such leases may have become effective upon the conclusion of the lease of a previous tenant whose contract the lord elected not to renew. For example, see ASF, *Diplomatico*, Olivetani di Firenze, 1216 April 10, 1239 February 27. One of eight lease contracts listed in the former document was scheduled to go into effect on the *kalends* of May, only a few weeks after the redaction of the act, but the contract recorded in the latter document was scheduled to go into effect on the *kalends* of October, seven months later.

⁸⁸ For Lucca and Siena, a few notarial cartularies survive from the 1220s. The earliest example from Lucca is the unpublished cartulary of the notary Martino, which dates from 1220. The first of a long series of cartularies of the Lucchese notary Ciabatto, which dates from the beginning of

present and in which early credit operations are sometimes attested constitute not original acts but formal copies prepared at the request of an interested party. Notaries first recorded their acts as *imbreviature* in notebooks, or cartularies, either directly from dictation or perhaps more commonly from *notule*, which is to say from loose cuttings of parchment or scraps of paper on which they took notes in the course of transacting business. When a cartulary became full, the notary deposited it in an archive of some sort, maintained perhaps by the notary himself or by the guild to which he belonged. These cartularies served as permanent records and also as potential sources of income for the notary in question in the event that a parchment copy of an act might be required. Because an *imbreviatura* entered in a notarial cartulary was sufficient to confer upon an act the weight of law, however, the formal redaction of an act in a parchment *cartula* or *instrumentum*, a charter in other words, may have been exceptional.⁸⁹

The process through which parchment copies of notarial acts have come down to the present was far more selective than that through which the notarial cartularies themselves have survived. A notarial cartulary of perhaps two hundred parchment folios and as many as five or six hundred acts generally would have included the entire range of notarial activity for a period of perhaps several years. The survival of notarial acts in formal parchment copies, on the other hand, has tended to favour conveyances of landed property particularly through outright sale, donation, or lease to the virtual exclusion of other kinds of acts. In the earliest extant thirteenth century notarial cartularies, however, land conveyances constitute a relatively small proportion of all documented notarial activity. Conveyances of immovable property recorded in the five earliest cartularies dating from Siena, for example, amount to only 16.1 per cent of the total number of acts. On

the second quarter of the thirteenth century, is published in Meyer, ed., 1994. The notarial archives of Siena begin in 1221, but only two cartularies survive from before the middle of the thirteenth century. Both of these are published. See Bizzarri, ed., 1934; 1938. On the notarial archives of Siena, see Prunai, 1953. On the earliest cartularies from the Sienese archives, see Redon, 1973; 1982, pp. 43-95. The notaries of Siena are also discussed in Morandi, 1985; Redon, 1995. The earliest notarial cartulary from Pisa contains acts redacted in 1263 and 1264. On the notarial archives of Pisa, see Herlihy, 1958b, p. 215. The notarial archives of both Lucca and Pisa are discussed in Lopez, 1951. Only one substantial cartulary fragment, containing 275 acts and covering about nine months in 1237 and 1238, survives from Florence before the middle of the thirteenth century. The fragment is published in Mosiici and Sznura, eds., 1982. For the fragment itself, see ASF, *Notarile antecosimiano* 5471/C568a. On the notarial archives of Florence, see Pannella, 1934.

⁸⁹ Notarial practice in twelfth and thirteenth century Tuscany is discussed in greater detail below, Appendix 1, but see also Epstein, 1984, pp. 1-66; Herlihy, 1958b, pp. 1-20.

the other hand, at least 35.7 per cent of the notarial acts in these five cartularies were either money loans or loans against forthcoming harvests, the latter of which, in effect, were contracts for commodities futures.⁹⁰

The predominance of contracts for the conveyance of landed property in surviving parchment copies of notarial acts is owing to the fact that landlords required such copies to buttress their claims to property and also to facilitate the management of their estates. Loan contracts, on the other hand, lost much, if not all, of their utility once restitution had been effected and the conditions of the contract fulfilled. The discrepancy between the evidence for credit activity in notarial cartularies and that which survives in parchment copies is not merely quantitative but also qualitative. This is because the circumstances under which the parchment copies were drawn in the first place and through which they have survived by no means constituted a random selection. As a consequence, the credit operations that survive in parchment copies from the period under consideration should not be regarded as necessarily representative of credit activity in general. The survival of evidence in parchment copies for early credit operations is partly fortuitous, to be sure, but it also owes much to the fact that loans very often were guaranteed with real estate. In instances of default and foreclosure, a parchment copy of an original credit act might have been retained by the creditor, along with a copy of the contract for the actual alienation of the property that had been used to secure the loan, in order for the creditor to buttress his claim on the collateralised property. If the terms of the loan contract had been fulfilled, however, there would have been little cause for the retention of a formal copy of the act.⁹¹

⁹⁰ These data have been drawn from Redon, 1973, tbl. 4, p. 139; 1982, tbl. 4, p. 65. The table is reprinted below, Appendix 1. They are based on cartularies that contain acts dating from the 1220s, the 1250s, and from 1268 to 1271. Mario Chiaudano also analysed the data from the two earliest Sienese cartularies, those dating from the 1220s, but his methodology differed somewhat. Whereas Redon aggregated all conveyances of immobile property in a single category, Chiaudano isolated outright sales of land, which enabled him to calculate the monetary value of credit operations relative to that of outright sales of landed property. It is also clear that Chiaudano aggregated several different kinds of credit operations in a single category, while Redon treated them independently. According to the figures presented by Chiaudano, loans accounted for 38.5 per cent of the total number of acts in the two cartularies, while outright sales of land constituted only 9.1 per cent of the acts. In strictly monetary terms, loans accounted for 25.4 per cent of all money exchanged in the acts of these two cartularies, while outright sales accounted for only 2.6 of all money exchanged. See the introduction of Chiaudano in Bizzarri, ed., 1938, pp. ix-cxi, esp. cx-cxi.

⁹¹ As intimated above, examples of contracts for the conveyance of landed property in order to offset outstanding debts (*pro expendiendo debito*, *pro solvendo debito*) are relatively common in the evidence for Florence and its surrounding countryside from the later twelfth century.

By the same token, it should not be presumed that the earliest surviving notarial cartularies for Tuscany in the thirteenth century document a sudden blossoming of credit activity. There is indeed every indication that the earliest surviving notarial cartularies for Tuscany merely document an already well-developed credit market. In southern Lazio, for example, the later eleventh and early twelfth centuries have been identified as the formative period in the history of credit, and the market for credit in south-central Italy experienced its full maturation in the second half of the twelfth century.⁹² Evidence for peasant indebtedness in Lombardy is likewise exceedingly difficult to discern before the last decades of the eleventh century. By the later twelfth century, however, contracts for the recognition of debt were commonplace, while communal statutes from the later twelfth and early thirteenth centuries even began to set rates of interest and the means of restitution.⁹³ Circumstances probably were not very different in the Florentine countryside.⁹⁴

By about the middle of the thirteenth century, according to a contemporary Bolognese source, moneylending had become a common form of financial investment, practised not only by professionals but by anyone with any liquid capital to invest.⁹⁵ A list of the creditors of the abbey at Passignano at the beginning of the thirteenth century, for example, indeed illustrates that investors in the pri-

⁹² Toubert, 1972, 1, pp. 609-619.

⁹³ Menant, 1993, pp. 301-306. For credit activity in the region of Milan even before the end of the tenth century, see also Violante, 1962a; 1962b; 1953, pp. 259-288.

⁹⁴ Certainly before the end of the twelfth century, if not earlier, wealthy landowners in the countryside of Florence such as the abbey at Passignano enjoyed access to large amounts of credit. For an early example of a parchment copy of a contract for a loan undertaken by the abbey at Passignano, see ASF, *Diplomatico*, Badia di Passignano, 1192 September 18. Loans to the abbey at Passignano probably had little direct connection with agriculture, however, and were designed more to facilitate improvements to the abbey itself and property acquisition. Other records from the Chianti provide evidence for disguised credit activity already before the end of the eleventh century. For the Chianti, see Kotel'nikova, 1985, for which the author was drawing mostly on the evidence for Coltibuono. In the same short article, the author further noted that credit activity of this sort is documented also in Lucca before the end of the eleventh century, and similar developments have been observed at Piacenza in the eleventh century. See Racine, 1980, 1, pp. 142-144; 2, p. 758.

⁹⁵ Tamassia, 1883-1884, pt. 2, pp. 79-80, n. 5: 'Et hodie camporis nostris temporis – modicam habent fidem – quicumque habet pecuniam ut possit fenus committere incontinenti efficitur campor'. The widespread use of credit mechanisms in the territory of Bologna before the middle of the thirteenth century is extensively documented in a hearth-tax survey dating from 1235. The survey lists the debts of each household, the creditor, and the means by which the debt was undertaken. See Bocchi, 1982a.

vate capital market spanned the entire gamut of the local elite and bourgeoisie.⁹⁶ In Prato and Montemurlo around the middle of the century, members of the Alighieri family, the ancestors of Dante, routinely invested in the private capital market, charging interest rates between fifteen and twenty per cent, and increasing their patrimony at the expense of clients unable to satisfy their debt obligations.⁹⁷ In Florence towards the end of the thirteenth century and at the very beginning of the fourteenth century, the Alighieri continued to invest in the private capital market, though Dante himself appears in the extant records only in the capacity of a borrower, which perhaps goes some distance towards explaining his consignment of usurers to the seventh ring of hell in the *Inferno*.⁹⁸

In medieval Tuscany and in the territory of Florence in particular, the dissemination of credit and the development of capital markets before the Black Death have not been very well studied. Armando Sapori examined late thirteenth century concepts of usury in Tuscany as well as the credit activities of two Florentine merchant-bankers of the Del Bene family in the second quarter of the fourteenth century.⁹⁹ Both Sapori and Giuliano Pinto studied mortgages, which is to say loans collateralised with landed property.¹⁰⁰ Enrico Fiumi devoted consider-

⁹⁶ ASF, *Diplomatico*, Badia di Passignano, 1204.

⁹⁷ On the Alighieri, see Piattoli, 1933. See also Piattoli, ed., 1950, nos. 7-25, 1246-1250, pp. 12-28; no. 30, 1257 October 20, pp. 31-32. When mentioned explicitly, interest rates typically were stated as certain number of *denarii* for each *libra* borrowed per month. An interest rate of twenty per cent, for example, was stated as four *denarii* per *libra* borrowed per month.

⁹⁸ Dante sometimes appears in late thirteenth and early fourteenth century documents as a borrower alongside his brother Francesco, but he also borrowed individually from Francesco, who later endeavoured to exact restitution from the sons of Dante. For examples of Dante and his brother Francesco active in the capital market together as borrowers, see Piattoli, ed., 1950, no. 57, 1297 April 11, pp. 64-65; no. 58, 1297 December 23. For examples of Dante borrowing from his brother Francesco, see Piattoli, ed., 1950, no. 71, 1300 March 14, p. 79; no. 74, 1300 June 11, p. 82. For evidence of the efforts of Francesco to bring suit against the heirs of Dante, see Piattoli, ed., 1950, no. 151, 1332 May 16, pp. 204-212. For the depiction of usurers in the seventh ring hell, see *Inferno* 17, vss. 43-78.

Another famous Florentine family, the Medici, also became active in the private capital market in Florence by the beginning of the fourteenth century. In 1301, for example, the church at Florence condemned one Bonegiunta de Medici to restore usurious exactions to peasants in the Mugello. See Jones, 1997, p. 244, n. 200, citing AAF, A. IV. 2, fols. 17v-18, 1301 May 4.

⁹⁹ On the concept of usury as articulated in a 1296 statute of Pistoia, see Sapori, 1955, 1, pp. 181-189. The study of a private record of the loans conceded by the brothers Jacopo and Amerigo Del Bene over a period from 1326 to 1340 considers the various types of loans issued and their terms, the collateral used to secure the loans, and the legal aspects of credit activities in relation to both Roman and Lombard law. See Sapori, 1955, 1, pp. 191-221.

¹⁰⁰ See again Sapori, 1955, 1, pp. 191-221. This is the second part of the second study cited in the note above, and it considers the loans conceded by a member of the Bardi merchant-banking firm

able attention to the credit activities of merchants in San Gimignano.¹⁰¹ Charles M. de la Roncière, in his larger work on the Florentine economy during the century from 1280 to 1380, also discussed the use of credit mechanisms. He noted, for example, that the majority of merchants who can be observed purchasing goods in the rural marketplaces of the Florentine countryside did so on credit, and they reinvested profits garnered through trade into moneylending.¹⁰² He further noted that the expansion of credit facilitated the dissemination of the gold *florenus* from at least as early as 1280.¹⁰³ In what must be the fullest account of the private capital market in Florence before the middle of the fourteenth century, De la Roncière has also provided a thorough analysis of the private records of one petty speculator on the Florentine money market.¹⁰⁴

By the time of the renaissance in Florence, money-changing and other banking activities had largely passed into the hands of professional bankers. Working for the most part from the records left by a local banker active in Florence during the fifteenth century, Richard Goldthwaite has reconstructed the operation of a comparatively small Florentine banking firm in astonishing detail. He has shown that professional bankers sometimes extended credit through overdrafts that they allowed on current accounts, though direct loans were more frequent, sometimes secured with jewellery or credit in the state debt but more commonly secured on nothing more than a promissory note. In the records of at least one local banker, these essentially unsecured loans constituted the greater part of all banking ac-

and his consequent accumulation of property in the Chianti upon default. See also Pinto, 1980b. The studies of both Saporì and Pinto, as well as the comments of Racine regarding Piacenza, have tended to consider loans secured with real estate as a means of seigniorial exploitation and proprietary expansion. See again Racine, 1980, 3, pp. 1170-1175, 1186-1187. While it is true that a significant proportion of the evidence for rural credit tends to document the passing of collateralised property from small landowners to the proprietors of larger estates, it should be stressed that this evidence has survived precisely because of the fact that the debtor defaulted and was compelled to consign his property to the creditor. Credit transactions in which the terms were fulfilled in a more or less timely matter probably were far more numerous, but they were preserved much less frequently. The historiography, in other words, has tended to emphasise credit transactions of an extraordinary nature, and to disparage the significance of what must have been the far greater proportion of ordinary credit acts. See S. R. Epstein, 1998, pp. 98-101, esp. 100.

¹⁰¹ See Fiumi, 1961a.

¹⁰² De la Roncière, 1976, 3, pp. 1097-1107. The overwhelming proportion of the evidence cited by De la Roncière was drawn from the early fourteenth century, but purchases of agricultural produce and livestock on credit is also well attested in the thirteenth century.

¹⁰³ De la Roncière, 1976, 2, pp. 530-532.

¹⁰⁴ De la Roncière, 1973.

tivity. Large merchant-bankers also engaged in this sort of activity, typically serving the wealthier classes and providing loans that were often much more substantial. Moneylending constituted a much smaller proportion of the activities of these larger enterprises, however, and the bulk of their operations tended to concern exchange and commercial investment.

The loans offered by local bankers typically were for relatively modest sums to be repaid within a period generally lasting no more than about six months, and they were undertaken by a wide range of borrowers from the middle and upper classes. Interest on loans was often disguised in account books through some sort of highly developed subterfuge, but surviving private accounts sometimes illuminate the manner in which the payment of interest on loans was shrouded in bank records. In 1450, for example, one borrower noted in his records that he had taken a loan of 110 *fiorini*, but he received only 100 *fiorini*, and he further noted that the extra 10 *fiorini* constituted a 'gift' charge, which is to say interest. Small Florentine banks also commonly purchased interest payments on credits in the state debt, generally paying 75 to 80 per cent on the value for the next three payments, which is to say for the payments of one year. Goldthwaite speculated that most of the loans issued by such small banks, and particularly secured loans, were undertaken for consumption rather than investment. The records that he reviewed gave the specific reason for which a loan was undertaken only very rarely, and the loans for which a reason was given typically mentioned the necessity to render a payment of some sort, a dowry or tax payment for example.¹⁰⁵

Despite the relative wealth of the Tuscan evidence, the subject of private capital markets in Tuscany before the Black Death still awaits systematic analysis.¹⁰⁶ Admittedly, there are some not inconsiderable difficulties in the collection and interpretation of the evidence, but recent research on credit markets in early modern Europe has been very suggestive. In a series of insightful articles concerning credit markets in early modern France, Jean-Laurent Rosenthal and other economic historians working from notarial records have made several pertinent

¹⁰⁵ Goldthwaite, 1985a. The Medici records reviewed by Florence Edler De Roover suggest that interest rates around the middle of the fifteenth century fluctuated in a relatively narrow band between ten and twelve per cent. See Edler De Roover, 1957.

¹⁰⁶ More than forty different notaries in the territory of Florence have left behind cartulary records dating from before the end of the thirteenth century. If credit operations are documented in these cartularies to the same degree as they are in the surviving early thirteenth century Tuscan cartularies, then it should be possible to construct a database of more than 1000 money loans and perhaps half as many loans on the harvest.

observations, and it will be useful to summarise some of their findings.¹⁰⁷ The provision of credit was handled largely by merchants or, indirectly, by notaries. Merchants tended to specialise in long-term credit mechanisms such as mortgages, and their activities generally were tied to bond markets in larger urban centres. Owing to their close connection to the bond markets, however, the lending activities of merchants were based on fragile networks that were subject to government intervention and were easily disrupted. Notaries, on the other hand, were more risk-averse, generally acting on a local scale in the capacity of intermediaries. They rarely provided the loans themselves but rather specialised in linking those who were seeking loans with potential investors in the capital market and also in the dispensation of vital information to creditors.

The loans made by merchants or through notaries by other investors for the most part tended to be sufficiently small to preclude the possibility that they were for much more than working capital. Borrowers typically took loans in order to make purchases of livestock, seed, or tools, but not for major real estate acquisitions or improvements. Economic fluctuations may have affected borrowing patterns but the relationship was by no means straightforward. Loans were undertaken in bad years to smooth consumption and replenish working capital, to be sure, but they were just as likely to be undertaken in good years in order to finance marginal improvements to land under more favourable circumstances. Agricultural borrowing clearly favoured the first two quarters of the year, from the beginning of January through the end of June. Such borrowing was possible because of the existence of other groups with different credit demands that were willing and able to make funds available for lending precisely during those months of the year when agricultural borrowing was greatest. The constituents of these other groups were largely engaged in light manufacturing and trade, with the implication that the development of the non-agrarian sector tended to facilitate the availability of credit in the agrarian sector. At any rate, one clear benefit of credit markets in pre-industrial society is that they reduced the impact of short-term scarcity and other shocks by enabling borrowers to distribute resources across time.

In the countryside of Florence during the thirteenth century, a variety of different credit operations can be identified in the extant documentation. First of all, there was the simple loan, the *mutuum*, usually a short-term credit device involv-

¹⁰⁷ See Rosenthal, 1993; 1994. See also Hoffman, Postel-Vinay, and Rosenthal, 1992; 1994; 1998, 1999.

ing relatively modest sums of money, and restitution was to be rendered generally from within a few months to a year, although longer terms certainly were available. The explicit mention of interest in such contracts was rare, but not unknown, even from a relatively early date, and the proscription of usury at the Second Lateran Council in 1139, reinforced in 1215, appears to have had little practical effect.¹⁰⁸ At the beginning of the thirteenth century, the standard rate of interest was twenty per cent.¹⁰⁹ With respect to the forty-six loan contracts that appear in the early thirteenth century cartulary fragment from Florence already cited above, the interest appears to have fallen most often in a range from fifteen to twenty-five per cent, and only on four occasions is it possible to verify interest charges greater than twenty per cent.¹¹⁰

¹⁰⁸ See, for example, ASF, *Diplomatico*, Badia di Passignano, 1203 May 29, in which an interest rate of forty per cent per annum is charged on a six month loan of twenty *libre*. The example in question is drawn not from a notarial cartulary but from a parchment copy, which already intimates that the document possesses an anomalous aspect. The fact that a parchment copy of the contract was required perhaps suggests that the transaction may have involved greater risk on the part of the creditor than was ordinarily the case, and the high rate of interest reflects the increased risk. More telling of normal circumstances perhaps is a contract drawn from the earliest cartulary fragment in the evidence for the Florentine countryside. The debtor, having previously contracted a loan, declares that he is prepared to pay an interest rate of four *denarii* per month per *libra* on a debt of thirty-three *solidi* and four *denarii*, though the creditor has insisted upon a rate of five *denarii* per month per *libra*. In other words, the debtor is prepared to pay an interest rate of about 1.67 per cent per month, which is to say twenty per cent per annum, although the rate demanded by the creditor was about 2.08 per cent per month, or twenty-five per cent per annum. It may also be noted that this explicit mention of interest comes after the prohibition of usury had been reinforced by the Lateran Council in 1215, and numerous other contracts of the thirteenth century confirm that the effect of the formal prohibition of usury was negligible. For the particular contract in question here, see Mosiici and Sznura, eds., 1982, no. 50, 1237 February 7, p. 115. This is not to say that credit providers were utterly indifferent to proscriptions of usury. Testamentary restitution to victims of foreclosure or their heirs, and perhaps especially to the church or some other charity, was the preferred means by which to eradicate the sins accumulated through the practice of usury. See Nelson, 1947; Edler de Roover, 1957. Merchant-bankers also made regular entries in their account books for charitable offerings to the church and to the poor. Jones, 1997, p. 201. For a recent treatment of scholastic concepts of usury in the thirteenth and early fourteenth centuries, see Langholm, 1992.

¹⁰⁹ ASF, *Diplomatico*, Vallombrosa, 1201 November 6; Santini, ed., 1897, no. 5, s.d., pp. 296-297: 'secundum constitutum fructus lucretur et insuper currant usure denariorum IIII per mensem et libram'.

¹¹⁰ The cartulary fragment of the notary Palmerius includes a total of 275 acts, and the forty-six loan contracts noted here constitute about 16.7 per cent of the total. The cartulary includes fifty-six other credit operations, giing a total of 102 for all credit operations, and these constitute 37.1 per cent of all contracts. With respect to hypothetical rates of interest, it may be possible to speculate on the amount of interest involved in a given loan based on the total amount of the loan, that is, as long as the amount given includes both the principal and the interest, as seems likely. In one contract from the same early thirteenth century cartulary, for example, the debtor has contracted a one-year loan for three *libre* and twelve *solidi*. Based on the assumption that the three

More than half of the forty-six loans were made by only five lenders, and eighteen were made by members of one family, though even prolific lenders occasionally required recourse to credit. The occupations of those who appear in these contracts, with respect both to borrowers and lenders, are for the most part unknown, but notaries can be seen borrowing on three occasions, while the creditor in one contract is identified specifically as a barber, and two other lenders had ecclesiastical affiliations.¹¹¹ For some of the lenders, it is clear that their primary activities revolved around the buying and selling of agricultural products. Three of them in particular appear frequently in the context of other contracts selling livestock or produce on credit, and extending credit to cultivators in exchange for portions of the forthcoming harvest.

Another common type of credit operation was the credit purchase, or *promissio solutionis*, which enabled a buyer to defer payment on purchases usually of mobile goods for a period of anything from a few days or a week to a few months, although sometimes a year or more was allowed to elapse before payment was due. The early thirteenth century cartulary fragment from the Florentine countryside includes contracts for purchases of grain, livestock, saffron, textiles,

libre constituted the principal and the twelve *solidi* constituted the interest, it is possible to hypothesise an interest rate of twenty per cent per annum. Speculations of this sort may seem cavalier, but calculations drawn from the available figures yield hypothetical rates of interest between fifteen and twenty-five per cent far too often, and also far too neatly, to suspect that such results are unwarranted. For the particular contract in question, see Mosiici and Sznura, eds., 1982, no. 43, 1237 February 1, p. 108.

¹¹¹ Palmerius himself, the notary from whose cartulary this evidence is drawn, twice contracted loans, but he went to the city of Florence on both occasions to take these loans rather than do so from a local moneylender. See Mosiici and Sznura, eds., 1982, no. 78, 1237 March 15, p. 141; no. 147, 1238 April 27, p. 208. The one other notary who appears in the same cartulary as a debtor, 'Ranerius iudex de Colle curie Semifontis', evidently also travelled some distance from his home in order to undertake a loan. See Mosiici and Sznura, eds., 1982, no. 64, 1237 February 28, p. 128. For evidence of a barber as a creditor, see Mosiici and Sznura, eds., 1982, no. 119, 1238 April 8, p. 184. It is perhaps worth noting here that in medieval Florence, barbers enjoyed a relatively high social position, as members in the guild of doctors and apothecaries, one of the seven major guilds, and it is therefore not at all surprising to find a barber making an investment in the private credit market. The only other occupational group represented among the creditors in no uncertain terms is ecclesiastical, and indeed Palmerius himself contracted one of his two loans from 'Abbate Mannelli'. See again Mosiici and Sznura, eds., 1982, no. 147, 1238 April 27, p. 208. In another contract, a priest can be seen making a loan to his brother. See Mosiici and Sznura, eds., 1982, no. 135, 1238 April 19, pp. 196-197. In the early fourteenth century, the bishops of Florence prohibited usury by members of the clergy in Florence, which at least suggests that the practice was sufficiently common to require episcopal attention. See Lami, 1758, 3, pp. 1675-1677, esp. 1675. See also Davidsohn, ed., 1896-1908, 3, no. 580, 1309 December 21, p. 115; Jones, 1997, p. 207.

and real estate utilising the facility of deferred payment.¹¹² Peasants also negotiated contracts that enabled them to defer payment on leases for tools, work animals, and even labour. Such a facility allowed time for the anticipated benefits of the operations for which the leases were originally intended to begin to accrue before it became necessary to render payment.¹¹³ The sums of money involved in deferred payment purchases were relatively modest, although the acquisition of real estate could entail large sums.¹¹⁴ Among the twenty-two examples of this type of transaction that appear in the early thirteenth century cartulary fragment of the notary Palmerio, purchases of grain were only somewhat more common, clustered in a period from early April until about the middle of June. The purchases particularly of grain by deferred payment were probably intended for consumption after personal inventories had been exhausted, or else for sowing the new crops.¹¹⁵ For merchants, craftsmen, and retailers alike, one of the chief benefits of the avail-

¹¹² For purchases of grain on credit, see Mosiici and Sznura, eds., 1982, no. 113, 1238 April 5, pp. 176-177; no. 133, 1238 April 18, pp. 194-195; no. 160, 1238 May 8, p. 219; no. 164, 1238 May 10, pp. 221-222; no. 170, 1238 May 13, pp. 227-228; no. 175, 1238 May 16, pp. 230-231; no. 195, 1238 June 17, pp. 245-246. For purchases of livestock on credit, see Mosiici and Sznura, eds., 1982, no. 92, 1238 March 25, p. 153; no. 94, 1238 March 25, p. 155; no. 148, 1238 April 29, pp. 208-209; no. 184, 1238 June 3, pp. 237-238; no. 240, 1238 August 13, pp. 285-286; no. 247, 1238 August 19, pp. 291-292; no. 261, 1238 August 24, p. 306. The use of credit for livestock purchases is also attested in ASF, *Diplomatico*, Badia di Firenze, 1215 December; Badia di Passignano, 1224 August 20, 1225 October 24. Based on a number of livestock purchases on credit in the earliest Sienese notarial cartulary dating from 1221-1223, Kotel'nikova calculated that the annual rate of interest on such purchases was between about ten and thirteen per cent. See Kotel'nikova, 1985, p. 73; and cf. Bizzarri, ed., 1934, *passim*. For a purchase of saffron on credit, see Mosiici and Sznura, eds., 1982, no. 18, 1238 January 2, pp. 82-83. For a purchase of textiles, see Mosiici and Sznura, eds., 1982, no. 89, 1238 March 25, p. 151; ASF, *Diplomatico*, Badia di Passignano, 1226 October 10. For purchases of real estate, see Mosiici and Sznura, eds., 1982, nos. 30-31, 1238 January 16, pp. 94-96; nos. 39-40, 1238 January 30, pp. 104-106; nos. 44-45, 1238 February 2, pp. 108-111; nos. 70-71, 1238 March 7, pp. 134-136; nos. 79-80, 1237 March 18, pp. 141-144; nos. 252-253, 1238 August 30, pp. 295-297.

¹¹³ The cartulary fragment of the notary Palmerio attests to no such activity in the Florentine countryside around Tavarnelle in Val di Pesa before the middle of the thirteenth century, but contracts for deferred payments on leases are well-attested in the notarial evidence for Tuscany from after 1250.

¹¹⁴ Credit purchases of grain were for between 1*l*.11*s*.00*d*. and 13*l*.00*s*.00*d*., and payment was expected from within one month to four and a half months after the date of purchase. Credit purchases of livestock were for between 4*l*.10*s*.00*d*. and 14*l*.13*s*.00*d*., and payment was expected from within eight days to one year after the date of purchase. Credit purchases of real estate were for between 10*l*.00*s*.00*d*. and 155*l*.00*s*.00*d*., and payment was expected from within one month to five and a half months.

¹¹⁵ In the examples in the cartulary fragment of Palmerius, grain purchased on credit sold at an average price of about five *solidi* and one *denarii* for each *starium*, contrasting with an average price of less than three *solidi* for each *starium* of grain sold for payment in advance of consignment.

ability of credit in the marketplace was that it afforded the possibility to delay payment on purchases of raw materials or unprocessed goods, and then to render payment only after resale of a finished or more refined product.¹¹⁶

Advance payment contracts constitute a third type of credit operation, the *promissio ex causa venditionis*, in which the creditor made a money advance to the borrower for agricultural products to be consigned at a later date. The consignments were usually at the time of the next harvest, though David Herlihy noted that contracts for such purchases sometimes allowed a period of several years to elapse before consignment.¹¹⁷ Grain predominated in these 'futures' contracts, comprising as much as 65 per cent of all goods sold for future consignment in the evidence for the parish of Santa Maria Impruneta south of Florence for the half century from 1276 to 1325.¹¹⁸ In the countryside near Tavarnelle in Val di Pesa before the middle of the thirteenth century, cereals appear to have predominated to an equal extent in 'futures' contracts, while saffron constituted the only other major cash crop.¹¹⁹ Transactions of this sort not only enabled farmers to distribute their incomes over the course of the year, but they also helped farmers to ease problems associated with storage, while encouraging them to be more productive in order to increase the marginal product remaining after the settlement of the debt.

Several other credit mechanisms also deserve a brief mention. By the later fourteenth century, the Jewish pawn loan had become an important credit instrument in the countryside of Florence.¹²⁰ The contract of exchange was fully devel-

¹¹⁶ The availability of credit on the rural marketplaces in the Florentine countryside, moreover, would have improved opportunities for arbitrage, and the exploitation of such opportunities in turn would have stimulated integration between markets.

¹¹⁷ Herlihy, 1968, p. 250.

¹¹⁸ During the period from 1326 to 1350, the proportion of all agricultural products comprised by grain in such 'futures' contracts had dropped to 54 per cent. The records for Santa Maria Impruneta examined by Herlihy, drawn from nine notarial cartularies penned by six notaries with entries dating from 1276 to 1348, have preserved 231 of these 'futures' contracts. See Herlihy, 1968, pp. 250-251; and, on the sources, see also Herlihy, 1968, p. 247, n. 4.

¹¹⁹ The contracts in the cartulary fragment of the notary Palmerio can hardly be considered representative. It is worth noting, nevertheless, that eighteen of the thirty-four 'futures' contracts contained therein concern wheat grain exclusively, while two others concern inferior cereals, and another six concern combinations of wheat grain and saffron. Seven of the contracts concern saffron exclusively, and only one concerns olive oil. See Mosiici and Sznura, eds., 1982.

¹²⁰ The Jewish community at Florence appears to have been relatively modest before about 1200, or at least not very well documented. Elsewhere in Tuscany, Lucca may have been among the more important centres of Jewish settlement in northern Italy from about the beginning of the

oped in Tuscany by the early thirteenth century as a means of currency conversion that was also used to disguise credit operations, but the use of these instruments as credit mechanisms was confined mainly to merchant-bankers in the major urban centres.¹²¹ An accounting procedure known as ‘offsetting’ served as another type of credit mechanism that was used chiefly in the cities to render payments to third parties from credits accumulated with a client, employer, or even a tenant.¹²²

The dissemination of rural credit also facilitated improvements in agriculture because it made cultivators less susceptible to unexpected catastrophe. The misfortune of a harvest failure or a bad investment need not force a peasant to liquidate his holdings as long as credit was available at reasonable rates. In the event of a few good years, a peasant might even undertake a loan to invest in some marginal improvements in order to render his land more productive. It is also likely that peasant debt encouraged peasants to be more productive simply in order to pay their debts in a timely fashion, thereby avoiding the possibility of penalty charges for late payment or even foreclosure, and also to be certain that there would be something remaining after they had satisfied their debts.

eleventh century. There was also a modest Jewish community at Pisa. When Benjamin of Tudela visited the city in the second half of the twelfth century, he discovered a community of about twenty Jewish families living there. The Jewish community at Siena is documented from at least as early as 1229, by which it was already well established. See Roth, 1969, pp. 68, 70, 75, 76-77. In the early fourteenth century, the commune of San Gimignano was offering incentives to attract Jews from Siena and Pisa specifically to provide moneylending services. See Davidsohn, ed., 1896-1908, 2, nos. 2460-2462, 1309 July 16-1309 August 14, pp. 328-329; no. 2363, 1311 October, p. 329. San Miniato al Tedesco evidently did the same. See Roth, 1969, pp. 133-134. In 1319, a representative from Rome was sent to San Gimignano to settle a dispute between the commune and a Jewish moneylender who had promised to come to San Gimignano but then failed to uphold his promise. See Davidsohn, ed., 1896-1908, no. 2464, 1319 February 27, p. 329. For a discussion of Jewish moneylending in northern Italy during the middle ages and early renaissance more in general, see Roth, 1969, pp. 103-152. See also Colorni, 1935. On Jewish moneylending in Florence in the fifteenth and sixteenth centuries, see Cassuto, 1918, pp. 119-171. For a more recent study of Jewish moneylending several northern Italian regions, including Tuscany, from 1284 to 1500, see Botticini, *forthcoming*. On the activities of one Jewish moneylender at Montepulciano in the early fifteenth century, see Carpi, 1985.

¹²¹ On the contract of exchange in general, the standard work is still that of De Roover, 1953. See also the observations of Goldthwaite concerning other ways in which they were used as credit instruments in Florence by the Alberti merchant-banking company around the middle of the fourteenth century in Goldthwaite, Settesoldi, and Spallanzani, eds., 1995, 1, pp. 109-113.

¹²² On offsetting at Florence in the fifteenth century, see Goldthwaite, 1980, pp. 307-316. Offsetting was used not only by larger businesses at Florence but also in the retail trade and tertiary sectors in smaller Tuscan towns and in the Tuscan countryside. On credit mechanisms used by smaller businessmen at Prato in the later fourteenth century, see Marshall, 1999, pp. 71-88. Offsetting is attested in the countryside of Siena in the fifteenth century in Balestracci, 1984, p. 64; 1999, p. 36.

There can be little doubt that peasant indebtedness sometimes resulted in foreclosure, and Philip Jones has even argued that a number of the Florentine merchant-banking companies, both large and small, extended credit to peasants with the object of foreclosure.¹²³ Merchant-bankers certainly acquired property through foreclosure, but foreclosure was typically a consequence of peasant indebtedness rather than the design of the creditor. Foreclosure entailed significant transaction costs, and it sometimes may have precluded the recovery of the entire value of an outstanding debt, but it was nevertheless a satisfactory expedient when all hope of restitution by the desired means had been exhausted. Still, instances of foreclosure owing to the accumulation of ruinous debt may have been more exceptional, or at any rate less common, than often has been suggested, and many if not most alienations of immovable property to extinguish debt probably had little to do with insolvency or foreclosure. Wealthy and utterly solvent ecclesiastical landowners routinely alienated landed property in order to eradicate a debt, which suggests that such alienations at least occasionally may have had more to do with liquidity than solvency. Chronicle reports of widespread indigence in the thirteenth century nevertheless cannot be dismissed, and many peasants indeed were dispossessed. When it did occur, however, foreclosure also may have actually stimulated productivity growth by encouraging and even forcing poorly productive peasants to vacate the land and to migrate to the city in search of employment while freeing real estate for use by more efficient and more productive farmers.¹²⁴

To this point, very little has been said about either the notary from whose quill issued the acts that have served as the basis for the above discussion. As more work on credit markets in pre-industrial Europe comes to light, the importance of the notarial profession in facilitating the dissemination of rural credit is becoming increasingly clear, particularly with respect to the sort of modest loans contracted by peasants that are most conspicuous in the cartulary evidence for Tuscany in the thirteenth century.¹²⁵ As in early modern France, notaries in medieval Tuscany constituted one of the principal channels over which information flowed. More than anyone else in the community, the notary was keenly aware of

¹²³ Jones, 1997, p. 244. See also Pinto, 1980b; Saponi, 1955, 1, pp. 191-221.

¹²⁴ Herlihy noted the same for Pisa. See Herlihy, 1958b, p. 115.

¹²⁵ Both Toubert and Menant have observed, for example, a considerable proliferation of the evidence for rural credit precisely at the time that, by all indications, the notarial profession was developing into a highly organised institution. See again Toubert, 1972, 1, pp. 609-619; Menant, 1993, pp. 301-306

both the financial circumstances and the reliability of the inhabitants in his village or town, and he was careful to dispense reliable information in order to maintain the business of those to whom he divulged his wisdom. The notary advised prospective creditors of potential low-risk borrowers eager to take a loan, and he discouraged his clients from making risky loans. Sources from the early thirteenth century even suggest that some notaries working in the more urbanised areas of Tuscany may have specialised to a certain degree in serving the needs of investors in the private capital market.¹²⁶ In the absence of a highly organised notarial profession, credit was largely the preserve of the wealthier classes or those willing to borrow at high rates of interest, but the notary put credit within the reach of a larger portion of the population, and particularly the small independent cultivator. Notaries may not have constituted the *sine qua non* in the dissemination of rural credit in medieval Tuscany, but they clearly made it much easier.

4.3. Conclusion

In the thirteenth century, agricultural productivity in the countryside of Florence probably attained levels as high as anywhere in Europe at the time. Agricultural productivity was stimulated by the extension of the area of land under cultivation, by improvements in the infrastructure, by technological development and specialisation, by changes in tenurial arrangements and estate administration, and by the dissemination of rural credit. It was stimulated also by communal encroachments on seigniorial jurisdiction in the countryside, which lowered the costs of trade throughout the territory and encouraged production for the central market at Florence. Based on estimated *per capita* requirements of staple foodstuffs, self-sufficiency in staple foods in the territory of Florence was very likely attainable throughout much of the thirteenth century, but it was never realised, and the commune probably moved farther away from self-sufficiency as the century progressed. The reason lay in the development of export industries in the city of Florence, which rendered efforts towards self-sufficiency in staple foods unneces-

¹²⁶ More than forty per cent of the acts in the earliest surviving cartulary of the Lucchese notary Ciabatto concern loans against the harvest, in other words commodity futures. In view of the fact that Ciabatto lived in the buildings of the cathedral church of San Martino, adjacent to an important urban marketplace at Lucca, this is perhaps not surprising. Another twenty per cent of the acts concern outright money loans, but only 3.5 per cent of the acts concern land conveyances. See Meyer, ed., 1994. For a breakdown of the acts, see below, Appendix 1. See also Lopez, 1951, p. 422.

sary. Despite the enormous difficulties in providing for the staple food requirements of its urban population, Florence was usually able to obtain enough food imports to offset any deficit in local production, and it found in the same markets an outlet for its manufacturing exports.

5. Manufacturing, urban development, finance

The economic expansion of Florence in the thirteenth century was based largely upon the absorption of surplus labour from the countryside by the burgeoning manufacturing sector in the city. Urban demographic growth in Florence was circumscribed, however, by the availability of staple foodstuffs, mainly grain, and agricultural production in the Florentine hinterland was generally insufficient to meet the total requirements of the territory as a whole. The provisioning of Florence depended upon the development of an extensive network of regional and supra-regional trade through which foodstuffs and raw materials were imported. The earliest evidence for food imports comes from the later twelfth century, but references are sporadic before the second half of the thirteenth century. Florence was importing food regularly by about 1250, however, and this ability depended upon the development of a strong export industry.

The development of the trade infrastructure in the territory of Florence and of Florentine supra-regional trade are examined in the two succeeding chapters. This chapter considers the early development of manufacturing in the city of Florence itself and in its immediately outlying suburbs, urban and suburban development more in general, and the means by which Florentine entrepreneurs may have financed industrial expansion. Florence was doubtless supporting a wide variety of industry in the thirteenth century, but urban manufacturing was clearly dominated by the woollen textiles industry. Chronicle evidence suggests that the woollen textiles industry provided employment for perhaps a quarter of the urban population by the early fourteenth century. The industry for woollen textiles was already well established at Florence by about the middle of the thirteenth century, when rural producers of woollen textiles were transferring to locations closer to the city in order to manufacture and to market their products more easily.

The evidence also suggests a considerable degree of urban development at Florence in the early thirteenth century. The commune constructed bridges, paved the roads in the city, expanded the urban enclosure, and diverted water for industrial purposes. At the very least, the evidence for urban development betrays substantial communal investment in public works and private investment in real estate. The evidence for both public and private investment expands enormously

in the second half of the thirteenth century, but it remains impossible to determine the degree to which this investment contributed towards industrial development.

The proliferation of mills on the river Arno within the city and in the immediately outlying suburbs in the second half of the thirteenth century indicates an increased demand for hydraulic power at Florence. Intense investment in property in both the eastern and western suburbs of the city, and also in the Oltrarno on the left bank of the river, further suggests increased exploitation of the land alongside the Arno. Some of the development of riverside property must have been designed for the construction of mills for grinding grain and for fulling, but it is often difficult to distinguish individual mills in the sources, and it is even more difficult to determine the use towards which individual mills were ultimately applied. The grinding of grain to satisfy the staple food requirements of the urban population almost certainly employed the services of the larger share of urban and suburban mills, but it is also clear that the fulling process was becoming increasingly centred in the city and its suburbs. Riverside development was also undertaken for the construction of port facilities to receive grain and raw materials both from the immediately surrounding countryside and from more distant suppliers, and also to accommodate the growing numbers of floating mills that were in use on the Arno.

The Florentine woollen textiles industry was already thoroughly developed by 1268, when Charles I of Anjou succeeded in wresting control of Sicily and southern Italy from the heirs of the emperor Frederick II, who died in 1250. The advent of Angevin rule in the Italian south was nevertheless extremely beneficial for Florentine manufacturing interests. Florentine merchant-bankers had financed Charles during his struggle to assert his rule in southern Italy and they continued to extend substantial amounts of credit to the Angevin king after he had assumed power. In return, Charles rewarded the Florentine merchant-bankers with privileged access to markets in the Italian south. Neither Sicily nor southern Italy possessed well developed industries for woollen textiles, with the result that the trading concessions granted to the Florentines enabled them to dominate a vast market, further stimulating the growth of the Florentine woollen textiles industry.

5.1. The woollen textiles industry

By about 1338, according to the fourteenth century Florentine chronicler Giovanni Villani, there were more than two hundred workshops in the city of Florence in

which woollen textiles were fashioned, and the woollen textiles industry employed more than 30,000 persons, or perhaps as much as a quarter of the urban population.¹ Thirty years earlier, before the Florentines had learned to produce fabrics from the finer grades of wool imported directly from England, there had been about three hundred workshops in the city manufacturing woollen textiles.² Villani reported that these workshops produced coarser and less expensive fabrics from local varieties of wool, but he also stated that they produced from twenty-five to perhaps as much as forty-three per cent more cloth by volume than thirty years later.³ If the number of persons employed per workshop in the woollen tex-

¹ Villani, bk. 11, chap. 94: 'Le botteghe dell'arte della lana erano dugento o più, a facevano da settanta in ottantamila panni, che valevano da uno milione e dugento migliaia di fiorini d'oro; che bene il terzo più rimaneva nella terra per ovraggio, senza il guadagno de lanaiuoli del detto ovraggio, e viveanne più di trentamila persone. Ben troviamo, che da trenta anni addietro erano trecento botteghe o circa, e facevano per anno più di cento migliaia di panni; ma allora non ci entrava e non sapeano lavorare lana d'Inghilterra, come hanno fatto poi. I fondachi dell'arte di Calimala de' panni franceschi e oltramontani erano da venti, che faceano venire per anno più di diecimila panni valuta di trecento migliaia di fiorini d'oro, che tutti si vendeano in Firenze senza quelli che mandavano fuori di Firenze'.

² By 1317, Florentines had begun to import raw wool directly from England for preparation in Florentine workshops, but they continued to import fabrics from northern France and Flanders, and raw wool from throughout the western Mediterranean. Florentine workshops also continued to produce cloth from wool grown in the surrounding countryside. See Hoshino, 1980, pp. 115-123; 1983, pp. 191-197.

³ According to Villani, annual production in 1338 was between 70,000 and 80,000 pieces of cloth, or between 350 and 400 pieces per workshop. Sales generated revenues of more than 1,200,000 gold florins annually, which is to say an average between 15.0 and 17.1 gold florins for each piece of cloth. More than 10,000 pieces of cloth from the north, worth an additional 300,000 florins, were also passing through Florence annually. Thirty years earlier, annual production had been more than 100,000 pieces of cloth, or about 335 pieces per workshop, but this cloth was only half as valuable as the fabrics produced in 1338. Annual revenues in 1308, on the basis of 100,000 pieces, would have been between about 750,000 and 857,000 florins. See again Villani, bk. 11, chap. 94. Hoshino suggested that the figures for annual production given by Villani were probably exaggerated. It may have been possible for the production of a single workshop to approach three hundred pieces of cloth yearly, he argued, but the maximum average annual production per workshop, based on evidence from the second half of the fourteenth century, was probably much closer to about one hundred pieces of cloth. Total annual production of the industry at Florence, according to Hoshino, was between 24,000 and 30,000. See Hoshino, 1980, pp. 196-203. Franceschi confirmed that the average annual output per workshop in the third quarter of the fourteenth century was slightly more than one hundred pieces, though it sometimes reached as high as 140. He has drawn attention, nevertheless, to the possible effects of the demographic crisis of 1348 on the Florentine woollen textiles industry. The decline of the urban population in general was matched by a decrease of nearly fifty per cent in the number of individuals matriculated in the Florentine wool guild from about 800 around 1338 to 413 in 1353. It would be perfectly logical, according to Franceschi, to suppose that the output of the woollen textiles industry declined substantially as a result of the crisis. See Franceschi, 1993, pp. 6-8, esp. 8. On the credibility of the figures given by Villani in general, see Fiumi, 1953; Frugoni, 1965; Green, 1972, 155-164; Hunt, 1994, pp. 268-271; Ragone, 1998; Saponi, 1955, pp. 25-33.

tiles industry in Florence in 1308 was similar to the figure suggested for 1338, then the industry would have even engaged an even larger proportion of the urban population towards the end of the first decade of the fourteenth century.⁴ By 1332, at any rate, 626 Florentines were matriculated in the wool guild at Florence, which suggests that the operations of each workshop may have been directed by two or three masters.⁵ Additional documentary evidence from the early fourteenth century confirms the existence of a mature and vigorous industry for woollen textiles in Florence at that time.⁶ The early development of the Florentine woollen textiles industry, particularly before the middle of the thirteenth century, nevertheless remains for the most part shrouded in mystery.

5.1.1. Textile manufacturing before 1250

Robert Davidsohn suggested that privileges accorded to Pisa and Lucca by the emperor Henry IV in the later eleventh century were designed at least in part to impede the development of the Florentine cloth industry. The Lucchese privilege in particular granted to the merchants of Lucca the right to trade on the markets at Parma and San Donnino, a right that was specifically denied to the Florentines,

⁴ The figures provided by Villani for the number of Florentines employed in the woollen textiles industry and the number of workshops in operation in 1338 suggest that each workshop required the services of about 150 individuals. Assuming the same number of persons per workshop thirty years earlier, there would have been more than 45,000 persons employed in the three hundred workshops of the industry, or probably between forty and forty-five per cent of the urban population at the time, but this figure stretches credibility. Working from the Florentine *Catasto* of 1427-1430, Herlihy and Klapisch-Zuber observed that nearly fifty-five per cent of the urban inhabitants at Florence with stated ages were between 15 and 64 years of age. In the same age group and throughout the area covered by the *Catasto*, nearly fifty-one per cent of the inhabitants with stated ages were males. If similar proportions prevailed in the city of Florence in 1308, then 45,000 persons would have constituted between seventy-five and eighty per cent of the urban population between the ages of 15 and 64, and well over one hundred per cent of the urban males between the same ages. For the proportion of the urban population between 15 and 64 years of age in 1427, see Herlihy and Klapisch-Zuber, 1978, p. 386, tbl. 57; 1985, p. 198, tbl. 6.7. The proportion of males in the same age group in the population of the territory as a whole was extrapolated from Herlihy and Klapisch-Zuber, 1978, p. 371, tbl. 55; 1985, p. 183, tbl. 6.5. Later evidence permits a more realistic appraisal. Nearly half of the ordinary wage-labourers in Florence that can be discerned in the notarial records from the second half of the fifteenth century were employed in the textiles industries, which by that time had expanded particularly in the production of silk. See Cohn, 1978, p. 11, n. 19. On the Florentine silk industry, see also Edler de Roover, 1999.

⁵ Hoshino, 1980, p. 226, tbl. 35, citing ASF, *Arte della Lana* 18-20.

⁶ Various aspects of the Florentine woollen textiles industry have been examined in detail in numerous shorter works by Hoshino, in addition to the monograph cited above. See the bibliography for references.

while the Pisan privilege rendered the maritime trade of Pisa more secure.⁷ According to Davidsohn, other imperial privileges and decisions also served to encumber Florentine trade and industrial development. In 1116, for example, a privilege of Henry V severely limited the activities of all Tuscan merchants on the markets in the territory of Bologna, and extensive commercial privileges originally granted to Venice in the territories of Florence, Lucca, and Pisa were broadened towards the end of the eleventh century and were renewed throughout the twelfth century.⁸

In the face of these obstacles to the development of Florentine trade and industry in the eleventh and twelfth centuries, not a single imperial privilege or decision favouring Florence is attested during the period. For Davidsohn, this betrays an imperial policy that was intended to arrest Florentine growth, and such a policy would have been pointless in the absence of genuine commercial and industrial development in Florence already in the later eleventh and early twelfth centuries.⁹ Davidsohn may have been correct in inferring from these imperial privileges that Florentine merchants were engaged in trade of some sort beyond the confines of their own territory from an early date, but it is unlikely that the privileges were designed to stifle the growth of trade and industry at Florence. In the eleventh and early twelfth centuries, there was probably little significant trade or industry at Florence to disrupt.

It is only during the course of the thirteenth century that more satisfactory evidence for the development of manufacturing at Florence begins to emerge from the sources. By the middle of the thirteenth century, the manufacturing of woollen textiles had become the most important industry at Florence. The Florentine wool guild is attested securely from at least as early as 1212, though it may have

⁷ The imperial grants to Pisa and Lucca in 1081 are discussed briefly above, Chapter 2.2.1. See also Davidsohn, 1977, 1, pp. 392-398. For the Pisan charter, see again von Gladiss, ed., 1953-1955, 2, no. 336, 1081, pp. 442-443; Muratori, ed., 1738-1752, 4, s.d., cols. 19-22. For the Lucchese charter, see von Gladiss, ed., 1953-1955, 2, no. 334, 1081 June 23, pp. 437-438; Ficker, ed., 1868-1874, 4, no. 81, s.d., pp. 124-127.

⁸ For the privilege of Henry V in favour of Bologna, see Salvioli, ed., 1784-1795, 1, pt. 2, no. 96, 1116 May 15, pp. 155-156, esp. 156: 'Negotiatores de Tussia subter Stratam [i.e., the via Emilia] negotiandi causa non transeant nisi duabus per annum vicibus idest ad Mercatum Oliviarum & Sancti Martini'.

⁹ Davidsohn, 1977, 1, pp. 1178-1179. In this view, imperial policy was designed to exact retribution for Florentine allegiance to the papacy during the investiture controversy in the later eleventh century and thereafter.

been established already by 1193.¹⁰ The guild of Por Santa Maria, the Florentine silk guild, is attested from 1225, though the evidence suggests that the guild may have been organised much earlier.¹¹ The annual payment of silk that Henry VI required the Florentines to consign to him in exchange for the grant of limited urban jurisdiction in the surrounding countryside in 1187 certainly argues for an earlier organisation of the silk industry at Florence, if not the guild itself.¹² The merchants of the Calimala, the importers of northern fabrics in Florence, are first attested in 1192.¹³ Florentine merchants evidently were trading in cloth with Faenza by the beginning of the thirteenth century, and with Perugia by 1218.¹⁴ Florentine trading relations with Bologna are well documented from the beginning of the thirteenth century, but the early commercial treaties themselves provide vir-

¹⁰ The first specific reference to the wool guild of Florence, the *ars lane*, dates from 1212, and a commercial treaty dating from 1218 attests to the existence of the consuls of the merchants of the wool guild, the *consules mercatorum artis lane*. Moreover, the wool guild was one of the seven major guilds of the city, the so-called *artes maiores*, and the rectors of these seven guilds, the *septem rectores qui sunt super capitibus artium*, are mentioned in an act of 1193. For the first specific reference to the wool guild, see Santini, ed., 1895, *Miscellanea*, no. 12, 1212 June 1, p. 376; ASF, *Diplomatico*, Riformagioni, s.d. For the commercial treaty containing the earliest reference to the consuls of the merchants of the wool guild, see Santini, ed., 1895, *Capitoli*, no. 66, 1218 March 21, pp. 190-192. For the first reference to the rectors of the seven major guilds, among which the wool guild is generally thought to have been included, see Santini, ed., 1895, *Capitoli*, no. 20, 1193 July 24, pp. 31-33.

¹¹ Santini, ed., 1895, app. 3, pp. 541-542.

¹² For the requirement of an annual payment of silk, see again Ficker, ed., 1868-1872, 4, no. 170, 1187 June 24, pp. 213-214. The pertinent clause is transcribed above, Chapter 2.2.3.

¹³ Santini, ed., 1895, *Miscellanea*, no. 3, 1192 December 9, pp. 365-367; ASF, *Diplomatico*, Strozziene Ugucconi, s.d. Merchants of the Calimala guild at Florence originally specialised in finishing and then marketing high quality woollen fabrics that had been purchased from producers in Brabant, Flanders, and northern France. By the end of the third quarter of the thirteenth century, Italian merchants were handling nearly twenty-five per cent of all raw wool exported from England through official channels, and Florentine merchants were handling about half of the Italian share. The Florentine merchants purchased the raw wool in England and then arranged for the transportation of the wool to producing centres in continental northern Europe. After the initial preparation of the wool in northern workshops, Florentine merchants then purchased the unfinished cloth and transported it to Florence for finishing, distribution, and sale. The Calimala guild took its name from the street on which its central office was based, which was called the 'Calle Mala', or the 'bad street'. On the disposal of wool by Cistercian monasteries in England to Florentine merchants from as early as 1270, see Donkin, 1957, p. 200. On exports of raw wool from England in 1273, see Schaube, 1908, p. 68.

¹⁴ A commercial treaty negotiated between Florence and Faenza in 1204 contains a clause regarding trade in cloth between the two cities. See Santini, ed., 1895, *Capitoli*, no. 55, [1204], pp. 144-147. Another commercial treaty negotiated between Florence and Perugia in 1218 contains a clause that establishes the duties to be paid on various textiles. See Santini, ed., 1895, *Capitoli*, no. 66, 1218 March 21, pp. 190-192. For more on these treaties, and on Florentine trade more in general, see below, Chapter 7.

tually no information on the items of exchange between the two cities. Other sources nevertheless suggest that the Bolognese were well acquainted with textiles of Florentine manufacture in the second quarter of the thirteenth century.¹⁵

In 1231, the commune of Bologna and groups of Bolognese merchant entrepreneurs encouraged textile artisans from such cities as Florence and Verona, among others, to establish workshops in Bologna.¹⁶ The Bolognese offered grants of citizenship, fiscal immunities, interest-free loans, rent-free workshops and residences, and machinery to textile artisans who agreed to live and work in Bologna for twenty years.¹⁷ Presumably, the Bolognese were seeking to establish an export industry in woollen textiles to complement an already existing industry that was designed to cater to the domestic market. In order to attract sufficiently skilled labour, they appealed especially to workers in cities with established industries that were probably already organised for export production.¹⁸ The Bolognese may have been seeking to emulate the success already achieved in textile manufacturing and trade in these cities.¹⁹ The attractive conditions offered to textile artisans

¹⁵ Florentine trading relations with Bologna are securely documented for the first time in 1203. See Muratori, ed., 1738-1752, 4, 1203 September 13, cols. 453-454; Salvioli, ed., 1784-1795, 2, pt. 2, no. 353, 1203 September 13, p. 248. For additional evidence for commercial relations between Florence and Bologna, see below in Chapter 7.3.1.

¹⁶ For an enumeration of the twelve Florentine textile artisans lured to Bologna in 1231, see Davidsohn, ed., 1896-1908, 3, no. 988, 1231 February 27, p. 205. See also Mazzaoui, 1967-1968, esp. pp. 310-319. One of the entrepreneurs who guaranteed the applications of at least four of the immigrants from Florence and of at least seven immigrants from Prato, though evidently none from Lucca, is identified as 'Ioseppus de Tuschis'. The same *fideiussor* supported the applications of two other immigrants whose city of origin was unknown but who were identified as 'Tusci'.

¹⁷ In addition to Florentines, the concessions offered by Bologna also attracted textile artisans from Lucca and Prato in Tuscany, and from Brescia, Mantua, Milan, Modena, and especially Verona. See Mazzaoui, 1967-1968, pp. 276-284, 310-319; 1984, pp. 523-524. See also Pini, 1978, pp. 378-379.

¹⁸ On the manufacture of woollen textiles at Bologna in the later twelfth and early thirteenth centuries, see Mazzaoui, 1967-1968, pp. 294-299. The Florentine response to Bolognese efforts to attract Florentine textile artisans is unclear, but Florence may not have been overly concerned. The Apennine mountains consigned Florence and Bologna largely to different regional markets and reduced direct competition somewhat, but the point here is that trans-Apennine trade between Florence and Bologna was regular by the early thirteenth century. More important in limiting direct competition between the Florentine and the Bolognese woollen textiles industries was the fact that the concessions offered by Bologna to immigrating textile artisans were connected with an effort on the part of the Bolognese commune to establish an export industry in luxury cloths. The development of an export industry in finer woollen textiles at Bologna in the early thirteenth century would not have threatened the Florentine industry, which at that time was still focused on the production of more modest fabrics. See Mazzaoui, 1967-1968, pp. 284-286.

¹⁹ If the Bolognese were trying to establish an export industry in higher quality fabrics in the early thirteenth century, their efforts were largely unsuccessful. In the thirteenth and early fourteenth

from these cities were probably based on the fact that the Bolognese by then had become accustomed to seeing their products on Bolognese markets. Woollen textiles of Florentine manufacture were also known at Venice from at least as early as 1225, and they are attested at Palermo in Sicily and at Macerata in the Marche from before the middle of the thirteenth century.²⁰

The Toschi company continued to import textile artisans from Tuscany into Bologna after 1250.²¹ Other governments also sought to attract Florentine textile artisans in an effort to improve their own industries. In the later thirteenth century, for example, Charles I of Anjou used tax exemptions to encourage Florentine cloth workers to migrate to Naples.²² In 1309, Charles II lured one Florentine wool worker to Naples on the condition that he produce one hundred pieces of cloth per year for the next ten years.²³ In the north of Italy, Ubertino da Carrara also lured Florentine fullers and wool workers to Padua in the early fourteenth century.²⁴

The earlier history of woollen textile manufacturing in the city of Florence is nevertheless illuminated only very faintly in the Florentine evidence.²⁵ The

centuries, Bolognese cloth is mentioned in the customs records of other Italian cities only rarely, and mostly within its own region. Textiles of Bologna are attested in the customs records of Cremona in 1274, Modena in 1307, Ferrara in 1326, and Imola in 1334. Bolognese fabrics are also attested in the records of Florence from the early fourteenth century, but the precise date is unclear, and they are attested in the records of Reggio and Parma in the later fourteenth and early fifteenth centuries. See Hoshino, 1980, pp. 50-63. Bolognese cloth is not attested in the records of any other Italian city, apart from Bologna itself. The Bolognese cloth industry was able to penetrate markets only within a relatively narrow range, and it was unable to penetrate more distant markets.

²⁰ On Florentine woollen textiles at Venice in 1225, see Hoshino, 1980, p.66; 1983, p. 184. See also Cessi, ed., 1950, pt. 2, rub. 123, pp. 79-80, esp. 80 [1225 May]. On Florentine woollen textiles at Palermo in 1237, see Monneret de Villard, 1946, p. 484. On Florentine cloth exports at Macerata in 1245, see Hoshino, 1980, p. 66; 1983, p. 184. For evidence of Florentine cloth exports at Macerata, see ASF, *Diplomatico*, Riformagioni, s.d. See also Pratesi, 1915, pp. 335-336; Davidsohn, ed., 1896-1908, 3, no. 29, 1245 December 3, pp. 9-10.

²¹ Greci, 1994.

²² Yver, 1902, p. 84; Powell, 1962, pp. 490-491; Pryor, 1979, p. 47.

²³ Hoshino, 1980, p. 203.

²⁴ Kohl, 1998, p. 31.

²⁵ The evidence is far from compelling, but there are sporadic indications that commercial manufacturing was practised in the city of Florence and on its periphery before the beginning of the thirteenth century. Much of the early evidence is onomastic. The operator of a fulling mill, one 'Stantius walcator', is attested in the evidence for the church of Santa Felicita in the Oltrarno already in 1068. Tailors are also frequently attested in the evidence for urban ecclesiastical institutions in the later eleventh century, alongside more occasional references to dyers and weavers.

merchants of the Calimala, the importers and distributors of northern European woollen textiles in Florence, were investing in property in the western suburbs of the city on behalf of the hospital of San Iacopo di San Eusebio already before 1220.²⁶ Even before these purchases, the Tornaquinci merchant-banking family had acquired from the emperor Otto IV the right to develop waterworks on the right bank of the Arno from the late twelfth century walls to the mouth of the Mugnone.²⁷ It was particularly in this area just west of the city that the expansion of the woollen textiles industry at Florence would become most visible.

For a list of artisan occupations attested in the evidence for Florence and the surrounding countryside from 1021 to 1211, see Davidsohn, ed., 1896-1908, 1, pp. 152-157. Already before the end of the eleventh century, Santa Felicita was leasing commercial property alongside the river Arno near the Ponte Vecchio in the Oltrarno. See Mosiici, ed., 1969, no. 24, 1089 April 16, pp. 90-92, esp. 91: 'integram casam cum fundamento et terram et cum omni fabrica sua posita prope flumine Arno et prope capite pontis predictae civitatis'. In 1167, the cathedral chapter was leasing commercial property near the cathedral and just outside the urban enclosure. See ACF, *Carte strozziane*, 1, 382, 1167 September 21: 'unam casam cum fundamento et terram et curtem cum fabbrica sua foras murum civitatis prope predictam ecclesiam [canonice sancte Dei Genitricis et gloriose semper virginis Maria maioris]'. The abbey of San Salvi was acquiring commercial property near the church of Santa Trinita in the western suburbs of the city even as early as 1077. See Schupfer Caccia, ed., 1984, no. 7, 1077 July 19, pp. 37-40, esp. 38; ASF, *Diplomatico*, Badia di Ripoli, s.d.: 'positum est foras muros Florentie civitatis non longe ab ecclesia sancti Pancratii, id est case cum fundamentis et terra cum omnibus fabricis earum et terra et curte retro ipse case tote ad uno tenentes, que sunt posite in civitate Florentia prope porta sancti Pancratii'. This and other properties acquired by the abbey of San Salvi in the same conveyance became the subject of a dispute between the abbey and another group of landowners eight years later. See Schupfer Caccia, ed., 1984, no. 13, 1085 July, pp. 51-53; ASF, *Diplomatico*, Badia di Ripoli, s.d. The intention is not to suggest that these properties were devoted to the manufacture of woollen textiles, but merely to illustrate the presence of small scale industry in the city and its suburbs before the beginning of the twelfth century.

²⁶ Santini, ed., 1895, *Miscellanea*, no. 16, 1216 July 2, pp. 380-382; no. 17, 1216 October 19, pp. 382-384. See also ASF, *Diplomatico*, Stroziane Ugucione, see dates. The precise nature of the relationship between the merchants of the Calimala and the hospital of San Iacopo di San Eusebio is unclear, but the merchants of the Calimala had represented the hospital in other acquisitions of property in 1192 and 1193. See Santini, ed., 1895, *Miscellanea*, no. 3, 1192 December 9, pp. 365-367; no. 4, 1193 October 21, pp. 367-368. See also ASF, *Diplomatico*, Stroziane Ugucione, same dates.

²⁷ The Tornaquinci had initially obtained the right to exploit the hydraulic power of the Arno by means of an imperial grant from Otto IV (1209-1215). See Davidsohn, ed., 1896-1908, 4, p. 4, citing a late fourteenth century manuscript. There is, however, no evidence to indicate that the Tornaquinci actually exploited these rights before the middle of the thirteenth century, when they conceded the rights to the *Umiliati*. Members of the Tornaquinci lineage had been active in the communal government of Florence from at least as early as the beginning of the last quarter of the twelfth century, and they remained active in government in the thirteenth century. See Santini, ed., 1895, *Capitoli*, no. 9, 1176 April 4, pp. 11-14, esp. 12. The hydraulic power of the Mugnone itself evidently was being used in the immediate vicinity of the city for industrial purposes already in 1164. The operator of a fulling mill, 'Gualkerinus de burgo de Campo Corbolino', is attested from 1164. See Lami, ed., 1758, 2, p. 1017.

5.1.2. The *Umiliati*

Historians of Florence have tended to relate the early development of the Florentine woollen textiles industry to the arrival of the *Umiliati* in the early thirteenth century. The *Umiliati* were a religious movement of lay men and women originating in twelfth century Lombardy. The social composition of the order was largely noble and patrician, but its members eschewed wealth and adopted a life of communal poverty devoted to charity among the poor and the infirm. The Third Lateran Council of 1179 prohibited the *Umiliati* from preaching and pope Lucius III (1181-1185) even excommunicated the order as a heretical sect in 1184 at the council of Verona, but pope Innocent III (1198-1216) recognised the *Umiliati* in 1201. The order was reorganised hierarchically into three tiers of canons and sisters, celibate laity, and married laity or 'tertiaries'. The upper orders were accepted into the Church, and the canons and sisters were granted exemptions from tithes. Innocent also granted the *Umiliati* permission to preach, as long as the preaching was limited to exhortations to the Christian life and theological issues were ignored.²⁸

The *Umiliati* are first attested at Florence in 1239, when the Florentine bishop Ardingus Foraboschi (1231-1247) granted to the order the deteriorating church of San Donato a Torri, situated in a marshy area about ten kilometres east of Florence on the right bank of the river Arno.²⁹ The *Umiliati* were skilled textile

²⁸ The *Umiliati* are the subject of a new monograph by Andrews, 1999. They are also discussed in Bolton, 1972; 1983, pp. 63-66, 95-97. In addition, see the outdated work by Zanoni, 1911.

²⁹ For evidence of the episcopal grant, which the *Umiliati* received in exchange for an annual rent of thirty Pisan *solidi* and the acknowledgement of episcopal jurisdiction, see ASF, *Diplomatico*, Commenda Covi, 1239 September 26. The act is published in Lami, ed., 1758, 2, pp. 1035-1036. Dameron interpreted both the 1239 grant and a subsequent episcopal concession to the *Umiliati* in 1251, which is discussed below, as signs of episcopal weakness. See Dameron, 1991, p. 129. The grant may have been part of a more general programme designed to strengthen the jurisdictional claims of the Florentine bishops, but it should not be seen as an indication of episcopal weakness. It was simply an extension of privilege to a recognised order that would perhaps alleviate some of the burden on the bishops for charity while bringing an annual rent. The church to which the *Umiliati* initially transferred in 1239 was situated near the confluence of the river Arno and the Borro delle Falle in an area called 'Stagneto'. In 1208, the urban abbey of San Pancrazio purchased property east of the city 'positam in Stagneto prope ecclesiam Sancti Donati ad Turri', which is to say adjacent to the church that the *Umiliati* acquired in 1239. See ASF, *Diplomatico*, San Pancrazio, 1208 August 26. The church is attested in the twelfth century first as a cloister of regular canons and then as a convent of the female order of Sant'Agnese. See Quilici, 1969, p. 300, n. 69. The location may have been chosen to permit the *Umiliati* to finance their charitable works through the manufacture of woollen textiles. San Donato a Torri was situated on the road between Florence and Pontassieve, which afforded the *Umiliati* access to a main transportation artery and an abundant supply of water, both of which would have been necessary for the development of industry.

artisans, and they brought with them to San Donato their vocation, but the San Donato site appears to have been amenable to neither industrial development nor the exploitation of the urban textiles market, precipitating another transfer to the western suburbs of Florence around the middle of the thirteenth century. The transfer of the *Umiliati* first to San Donato a Torri and then to the western suburbs appears to have been intended to stimulate the woollen textiles industry at Florence, although the arrival of the order by no means constituted the introduction of the woollen textiles industry in the city.³⁰

In May 1250, the Tornaquinci merchant-bankers alienated to the *Umiliati* rights to develop waterworks on the river Arno from the urban enclosure to the confluence of the Arno and the Mugnone. At the same time, the *Umiliati* purchased a substantial parcel of land in the area between the churches of San Paolo and Santa Lucia.³¹ A year later, the *Umiliati* received license from the Florentine commune to initiate construction in the western suburbs of Florence 'iuxta viam Insule Arni de Carraria', which is to say on property near the Carraia bridge adjacent to a road that ran parallel to the river bank.³² Later in 1251, the Florentine bishop Iohannes Mangiadori (1251-1275) granted license to the *Umiliati* to transfer their convent from San Donato a Torri to the chapel of Santa Lucia di San Eusebio, situated near the site where the order intended to construct a new church dedicated to All Saints. Significantly, the record of the episcopal concession explicitly states that the purpose of the transfer was to enable the *Umiliati* to manu-

³⁰ Repetti suggested that the *Umiliati* were responsible for the introduction of the commercial manufacture of woollen textiles at Florence. Peruzzi, on the other hand, suggested that the *Umiliati* stimulated an already existing but very modest industry at Florence through the introduction of new techniques of manufacture. Both Repetti and Peruzzi erroneously identified San Donato a Torri with the modern Villa Demidoff, which is situated above the right bank of torrent Mugnone a little more than ten kilometres north of the city. See Repetti, 1833-1845, 5, pp. 544-545; Peruzzi, 1868, pp. 63-65. On the activities of the *Umiliati* at Florence in particular, see Richa, 1754-1762, 4, pp. 252-262; Davidsohn, ed., 1896-1908, 4, pp. 402-404; Zanoni, 1911, pp. 177-185. On relations between the *Umiliati* and the Florentine bishops, see Quilici, 1969, pp. 299-301.

³¹ ASF, *Diplomatico*, Commenda Covi, 1250 May 30; Strozzi Ugucione, 1250 May 30. The act is published in Tiraboschi, ed., 1766-1768, 2, pp. 230-232. A month before the Tornaquinci alienated property and rights in the western suburbs of Florence to the *Umiliati*, the Florentine commune and representatives from the Florentine guilds approved a concession of property in the western suburbs to the *Umiliati*. See Richa, 1754-1762, 4, p. 253.

³² Santini, ed., 1952, *Miscellanea*, no. 22, 1251 May 31, p. 289; ASF, *Diplomatico*, Commenda Covi, s.d. The document suggests that the road lay on an island in the Arno, but Sznura argued that the 'viam Insule Arni de Carraria' corresponds roughly to the modern via Montebello, which today runs between piazza d'Ognissanti and via Curtatone. See Sznura, 1975, p. 78.

facture and to market their woollen textiles more easily, and thereby to provide for themselves through their own labours rather than to be dependent upon alms.³³ The grant also appears to have been intended to facilitate both development in the western suburbs of Florence and ecclesiastical penetration into the burgeoning industry for woollen textiles.

San Donato a Torri evidently was situated too far away from the city to enable the *Umiliati* to exploit efficiently their newly acquired property and privileges in the western suburbs. The bishops of Florence, merchant-banking interests, the communal administration more generally, and even the *Umiliati* themselves perhaps viewed the transfer of the order as an opportunity to develop the area immediately west of the city.³⁴ Development on the suburban plain, particu-

³³ Santini, ed., 1952, *Miscellanea*, no. 31, 1251 settembre 11-13, pp. 293-294; ASF, *Diplomatico*, Commenda Covi, 1251 settembre 11: 'Nos itaque attendentes quod ipsi fratres ad ecclesiam Sancti Donati ad Turrim, que dudum per felicis memorie antecessorem nostrum Ardingum quondam episcopum Florentinum eorum fuerat usibus deputata, exercere non possint conmode artem suam, videlicet lanificium, texere pannos et vendere, ac alia operari, ex quibus possint precipere alimenta, cum de labore manuum suarum vivant, non petent helimonsynas, set dantes eas indigentibus affluentibus, pro eo quod locus ille distat a civitate non modicum, unde minorem habent frequentiam civium mercatorum; deliberavimus ad eorum supplicationis instantiam illos prope civitatem reducere, ubi gratiosius poterunt servire Deo et maior exhibit odor et fama de actibus eorumdem et latius etiam poterunt artis sue gerere mercantiam. Quare nos episcopus in nomine Iesu Christi, restituta nobis ab ipsis ecclesia Sancti Donati predicta cum suis pertinentiis universis, damus et concedimus in concambium et permutationem eius tibi viro venerabili donno Amico, Dei gratia preposito ecclesie sancti Micchaelis de Alexandria, ordinis Humiliatorum fratrum, pro ipsa ecclesia et ordine recipienti et pro tuis successoribus imperpetuum, cappellam nostram Sancte Lucie de Sancto Eusebio, cum suis pertinentiis universis; que siquidem cappella continuata est et propinqua cum vestro oratorio et ecclesia quam hedificare intenditis ad honorem Sanctorum Omnium, sicut dicitis; ipsamque cappellam ordini vestro et religioni subicimus ut habeatis eam ulterius manualement vobis et teneatis in ordine et pro ordine supradicto, modo et forma infrascriptis; videlicet, quod teneatis eam solummodo pro ipso vestro ordine, et nulli alteri religioni vel ordini seu persone vel loco eam possitis concedere vel subdere vel aliquo modo alienare nec vendere possessiones ad ipsam ecclesiam pertinentes, absque nostra nostra nostrorumque successorum licentia speciali. Et quod annuatim pro expensis procuracionum, que fient pro episcopo et episcopatu Florentie vel pro ecclesia Romana suisque legatis vel nuntiis, quidecim solidos pisanorum parvorum et non amplius in festo Sancti Iohannis Battiste annis singulis nobis solvere teneamini, et insuper unum cereum unius libre cere pro censu in recognitionem iuris episcopalis in eodem festo nobis annuatim. Set ab omnibus aliis exactionibus sitis modis omnibus pro ipsa ecclesia liberi et exempti, ita quod nichil nobis pro episcopatu vel clero Florentino pro ipsa cappella reddere teneamini'.

³⁴ Sznura suggested that the development of the western suburbs of Florence stemmed from a deliberate programme of collaboration between the *Umiliati* and the Florentine commune. See Sznura, 1975, pp. 79-81. The *Umiliati* may have been exempted from all taxes and they also may have received appointments to serve in important positions in the communal government as a consequence of such an arrangement. For the clause from the communal statutes of Florence granting an exemption from all taxes to the *Umiliati*, see Lami, ed., 1758, 2, p. 1510. The communal *camera* was reformed around 1250, after which members of the order of the *Umiliati*, and also the monks of the abbey at Settimo, were regularly appointed to the office of communal *camerarius*, or

larly along the riverside, nevertheless appears to have been complicated by the alluvial nature of the area and perhaps also by the absence of a stable riverbank, which would explain the failure of the Tornaquinci to develop the area in the first place.³⁵ For the next quarter of a century after their transfer to the western suburbs, the *Umiliati* worked to build a new church, which was completed by 1256, and to render the land suitable for industrial development. By 1260, when the Florentines were organising for their confrontation with the Sienese at Montaperti, construction on a complex of mills on the right bank of the Arno west of the Carraia bridge had been initiated, but construction was still in progress.³⁶ The devel-

chamberlain. Giovanni Villani reported that *Umiliati* members alternated in the office with Settimo monks in six month terms from at least as early as 1266. See Villani, bk. 7, chap. 16: 'In questo modo d'ordinò lo stato e corso del comune e del popolo di Firenze alla tornata de' guelfi: e camerlinghi della pecunia feciono religiosi di Settimo e d'Ognissanti di sei in sei mesi'. Davidsohn believed that the *Umiliati* and the Cistercians of Settimo became associated with office of *camerarius* from the moment of the reform, but a member of the *Umiliati* is attested serving as the *camerarius* of the commune for the first time only in 1256. 'Rinaldus de ecclesia Omnium Sanctorum' is attested as communal *camerarius* in ASF, *Diplomatico*, Badia di Firenze, 1256 July 21. The notarial subscription of another document dated from 1257 indicates that it was redacted for 'fratri Guidoni de ordine Humiliatorum tunc camerario communis Florentie'. See Santini, ed., 1952, *Capitoli*, no. 70, 1257 May 3, pp. 217-219, esp. 219. 'Fratre Meliorello camerario populi Florentini' is mentioned in a document of 1258, and according to De Rosa, Meliorellus was certainly associated with the *Umiliati*. See Santini, ed., 1952, *Capitoli*, no. 74, 1258 January 16, pp. 228-232, esp. 230; De Rosa, 1995, pp. 206-207, and p. 226, n. 25. For 1259, see Lasinio, ed., 1905, pp. 444-445. On the *Umiliati* and the office of communal *camerarius*, see Davidsohn, ed., 1896-1908, 4, pp. 401-404.

³⁵ A late fourteenth century manuscript suggests that the failure of the Tornaquinci to develop the area was owing to the expulsion of the Tornaquinci from Florence, who were politically aligned with the Guelph faction. See Davidsohn, ed., 1896-1908, 4, p. 403. From before the middle of the thirteenth century, according to Sznura, the torrent Mugnone emptied into the Arno not west of the city near Peretola but near the Porta al Prato, where it divided and merged with the Arno and perhaps one or more lateral branches the river. See Sznura, 1975, pp. 77-78. According to Quilici, the Mugnone was diverted in 1233 to empty into the Arno near the church of Santa Lucia. See Quilici, 1969, p. 300. Schneider placed the confluence of the Mugnone and the Arno at the beginning of the thirteenth century near the eventual site of the Carraia bridge. Earlier, before the construction of the twelfth century walls, the Mugnone emptied into the Arno near the eventual site of the Santa Trinita bridge. At any rate, the confluence of the two systems effectively impeded the development on the plain immediately west of the city. Numerous references to islands, or *insule*, in the area indeed suggest that drainage and water management on the alluvial plain may have impeded development. By about the middle of the thirteenth century, however, the Mugnone had been diverted to join the Arno farther west and the smaller lateral branches of the Arno were diverted into the main branch or into canals to be used for industrial purposes, or simply drained and filled. See again Sznura, 1975, pp. 77-78. If the depiction of Florence in the earliest panoramic view of the city to have survived is correct, then the islets had been eliminated by the beginning of the last quarter of the fifteenth century. A woodcut by Francesco Rosselli, dated from about 1472, shows the river free of islets.

³⁶ When the Florentines were assembling their army for the forthcoming confrontation with the Sienese, communal authorities decided to assign two men, one miller and one grain carrier, to each run of mills on the river Arno within three miles of the city in order to provide for the urban re-

opment may have remained incomplete in 1277, when the *Umiliati* began to lease their riverside property to merchant-banking interests, including members of the Tornaquinci and Frescobaldi companies.³⁷

quirement of staple foodstuffs while most of the adult male population was away. To the mills situated on the right bank of the Arno immediately west of the Carraia bridge and above the church of Santa Lucia, however, the Florentines despatched two master craftsmen and an iron worker, and they sent only a master craftsman to the mills situated below the Santa Lucia. Muendel believed that the unique assignment was owing to the importance of this particular group of mills, but it was more likely because construction on these mills had not yet been completed. The pertinent clauses in the evidence even state that the masters were to be sent 'pro aptandis', which is to say for constructing. Six years later, when the Florentine Guelfs expelled the Ghibelline administration installed at Florence after the Siense victory at Montaperti, the suburbs immediately west of the city evidently were devoid of houses and still undeveloped. For evidence regarding the organisation of urban and suburban mills at Florence in preparation for the battle of Montaperti, see Paoli, ed., 1889, p. 54: 'Statutum et ordinatum fuit per Capitaneos exercitus: quod pro quolibet palmento fluminis Arni, quod sit prope civitatem Florentie per tra miliaria vel plus prope, macinate hominibus et personis civitatis burgorum et suburgorum, possit unus molendinarius et unus portareca tantum remanere, et venire ad presentem exercitum non cogantur; et si plures essent pro palmento, unus tantum et qui senior sit valeat remanere. Et pro quolibet etiam palmento fluminis supradicti quod distet ab civitate ultra tria miliaria, et alio quolibet palmento in quocumque comitatus Florentie sit positum flumine vel fossato, unus tantum molendarius valeat remanere. Verum, si pro palmento plures essent, remaneat senior, nec venire ad exercitum compellatur'. See also Paoli, ed., 1889, p. 55: 'Item, quod magister Brunus de populo Sancti Ambrosii, Porte Sancti Petri, filius [...], pro aptandis molendinis a Sancta Lucia supra, et Lorenzus faber populi Sancti Petri Maioris filius [...], pro aptandis martellis molendinorum predictorum, possint Florentie remanere, nec venire ad presentem exercitum compellantur. Item quod magister Claritus populi Sancte Trinitatis, sextus Burgi filius [...], pro aptandis molendinis a Sancta Lucia inferius, possit remanere'. Finally, see Paoli, ed., 1889, p. 57: 'Item die lune xij intrante aprile. Statuerunt et ordinauerunt Capitanei exercitus: quod magister Ponzettus populi Sancti Amgeli de Roveczano ramenerere possit pro aptandis molendinis a Sancta Lucia supra cum alio iam electo, nec venire ad presentem exercitum compellatur'. See also Muendel, 1991, p. 370. On the condition of Borgo Ognissanti in 1266, see Villani, bk. 7, chap. 15; Sznura, 1975, p. 79.

³⁷ For leases of the property by the *Umiliati* to merchant-banking interests, see ASF, *Diplomatico (a quaderno)*, Commenda Covi, 1277 September 9. The document is published, from an eighteenth century copy, in Pagnini, 1765-1766, 2, pp. 310-323. Both Sznura and Muendel believed that the *Umiliati* had been compelled to lease the property owing to the slow pace of development in the western suburbs. Muendel in particular argued that the leases stemmed from the failure of the *Umiliati* to develop the riverside with mills. See Sznura, 1975, p. 79; Muendel, 1991, p. 370. It is by no means clear from the lease contract, however, that mills had not been constructed on the property. The document indicates the rent to be paid on each new floating mill or pendulum mill subsequently introduced on the site, which perhaps led Muendel to believe that mills had not yet been constructed on the riverbank, but these kinds of mills are different from those that would have occupied the riverbank. The document further indicates that the purpose of the lease was to facilitate further construction on the church of the *Umiliati*, and that the church was not sufficiently large to accommodate the members of the order and their families, all of whom resided at the church. The document includes nothing to suggest that the *Umiliati* had been compelled to lease their riverside property to merchant-banking interests and to abandon the development of the riverbank. As already suggested above, development on the suburban plain was very likely complicated, and also delayed, by the alluvial nature of the plain and by the instability of the riverbank. From the time that they transferred to the western suburbs in 1251 to 1277, the *Umiliati* probably laboured at the construction of their new church of Ognissanti while also working simply

In 1278, the *Umiliati* evidently commenced another development project in the western suburbs of Florence. They presented communal officials with a detailed plan for development in the area and offered to create a 'burgum novum'. The *Umiliati* proposed to concede to the city the property necessary for the establishment of a common field, a new city gate, and a primary road through the suburb, the eventual 'via de Burgho Omnium Sanctorum'. In exchange, the order sought to retain the land situated in front of their recently constructed church for the establishment of a square as well as the liberty to develop additional riverside property for industrial purposes and to divert water from the Arno into a network of canals.³⁸ The plan was implemented shortly thereafter, and in the following year, the *Umiliati* also received license from the commune to alienate property for residential development along the 'via de Sancto Paulo', which is to say in the modern via Palazzuolo.³⁹ The suburb was being developed, in other words, to support industry and to absorb the immigrant labour necessary for industry. Several mills were operating on the Arno below Borgo Ognissanti by 1290, and by 1326 the once sparsely populated suburb had been enclosed within a new circuit of walls, and the industrial complex of the *Umiliati* on the right bank of the Arno immediately west of the Carraia bridge included no less than seven mills.⁴⁰

to strengthen the riverbank and to drain the area in order to establish a secure foundation for industrial development. The *Umiliati* prepared the property for subsequent industrial development, and they may have even constructed on the riverbank either wholly or in part, though it must be conceded that this cannot be established on the basis of the lease contract. At any rate, the *Umiliati* then leased the property to merchant-banking interests, including members of the same company from which they had obtained the property in the first place, perhaps according to a pre-ordained plan specifically for the construction of mills and other industrial facilities on the site. It is perhaps worth noting that the *Umiliati* were accomplished textile artisans but they were not at the time interested in the management of fulling mills. They nevertheless would have desired convenient access to fulling mills and to other elements of the trade infrastructure such as port facilities, warehouses, markets, and roads, and they therefore may have been willing to undertake the initial development of the area.

³⁸ Pampaloni, ed., 1973, no. 58, 1278 October 29, pp. 100-102, citing ASF, *Capitoli* 29, fol. 356. See also Sznura, 1975, pp. 80-81. The 'via de Burgho Omnium Sanctorum' is attested in ASF, *Diplomatico*, Commenda Covi, 1291 January 9. See also Sznura, 1975, p. 83.

³⁹ ASF, *Diplomatico*, Cestello, 1279 May 29; Commenda Covi, 1279 October 22. See also Sznura, 1975, pp. 79-80.

⁴⁰ For evidence of several mills on the river Arno below Borgo Ognissanti by 1290, see Frey, 1885, app., no. 44, 1290 September 30, p. 170: 'inveni quandam viam, que fuit inter domus molendinorum, que sunt subtus burgum Omnium Sanctorum, et quandam domusculam, que est in eodem loco versus ecclesiam Sancte Lucie, et antiquitus ire solebat inter campos, que erant in loco, ubi est pratum comunis et flumen Arni'. On the mills on the Arno west of the Carraia bridge in 1326, see also Muendel, 1991, p. 370, citing ASF, *Notarile antecosimiano*, 172, fol. 111v [1326 May 8].

5.2. Urban and suburban development

Urban and suburban development in general accelerated considerably after 1200, and by the middle of the thirteenth century, the city of Florence very clearly was no longer the same city that it had been only a half of a century earlier. The early thirteenth century had witnessed the beginning of continuous and substantial communal investment in public works. At the beginning of the thirteenth century, only one bridge crossed the river Arno within the city, but three bridges were spanning the river within the space of only about a kilometre already by the middle of the century and a fourth was about to be constructed within the same space. Moreover, the construction of the third bridge across the Arno in 1237, the Rubaconte or the modern Ponte alla Grazie, was accompanied by an ambitious programme of infrastructural development to pave the roads throughout the city.⁴¹ The continued growth of Florence had even necessitated by 1258 the expansion of the urban enclosure to embrace the suburbs of San Niccolò, Santo Spirito, and San Frediano in the Oltrarno.⁴² By 1252, the urban population of Florence already may have been as great as 60,000, or about twice the size of Pisa at the time.⁴³

The presence of the Arno coursing through Florence rendered riverside property in the city and its suburbs ideal for industrial development.⁴⁴ It is nevertheless only after about 1250 that the development of the Florentine woollen

⁴¹ The second bridge across the Arno after the Ponte Vecchio was the Ponte alla Carraia, constructed between 1218 and 1220. See Villani, bk. 5, chaps. 41-42. On the construction of the Ponte Rubaconte and the paving of urban roads in 1237, see Villani, bk. 6, chap. 24. In the year after the *Umiliati* had received license from the bishop of Florence to undertake the transfer to Borgo Ognissanti, the Ponte di Santa Trinita was constructed to provide the Frescobaldi merchant-bankers easy access to the city from the Oltrarno where their possessions were concentrated. In the early 1280s, contemporary documents even refer to the Santa Trinita bridge as the 'pontis de domo de Frescobaldis'. See Gherardi, ed., 1896-1898, 1, p. 54. On building the Ponte di Santa Trinita, see Villani, bk. 6, chap. 50.

⁴² Sznura, 1975, pp. 94-97.

⁴³ By the time of the introduction of the gold *florenus* at Florence in 1252, the urban population of Florence may have been twice the size of the urban population of Pisa, which was probably around 30,000. On both the introduction of the gold *florenus* and the relative size of the urban populations of Florence and Pisa in 1252, see Villani, bk. 6, chap. 53. For more on the urban populations of Florence and Pisa around the middle of the thirteenth century, see above, Chapter 3.3, and below, Appendix 2.

⁴⁴ The considerable merits of the river Arno and another waterway, probably the torrent Mugnone, with respect to the service they rendered for the woollen textiles industry were duly noted by an anonymous fourteenth century Florentine chronicler. See Frey, 1885, pp. 119-123, esp. 120: 'Hoc quoque fluvium aquam suauem, ubi suavis exigitur, et riuus alius iuxta partem aliam civitatis aquam rigidam ad lauandas et extergendas lanas et alia necessaria non impetuose, sed abundanter producant'.

textiles industry begins to come into sharper focus in the sources. By the time that the *Umiliati* leased property on the right bank of the Arno in the western suburbs of Florence to members of the Tornaquinci and Frescobaldi merchant-banking families in 1277, the same group of entrepreneurs were investing in mills on the left bank of the river in San Frediano.⁴⁵ Secular investment in business partnerships at Florence specifically for the purpose of manufacturing ‘*pannos Florentinos di lana*’, which is to say woollen cloth of the Florentine type, is securely documented from 1244.⁴⁶ Even before the middle of the thirteenth century, in other words, woollen textile manufacturers at Florence may have been specialising in a particular variety of cloth identified specifically as ‘Florentine’.⁴⁷

The expansion of the city in the Oltrarno, like the development of the western suburbs, also appears to have been driven by the growth of business and industry in the area, much of it relating to manufacturing and trade in woollen textiles. The church of Santa Felicita owned at least twenty-six commercial shops in the

⁴⁵ Pampaloni, ed., 1973, no. 101, 1277 December 31, pp. 179-182; cf. ASF, *Capitoli* 29, fol. 258r.

⁴⁶ Santini, ed., 1895, *Miscellanea*, no. 96, 1244 November 7, pp. 481-482; ASF, *Diplomatico*, Strozziene Uguccone, s.d. Investment of this sort in the Florentine woollen textiles industry was probably well developed by that time, but documentary survivals attesting to such investment are rare, no doubt because the contracts lost their utility after the partnership had expired and the conditions of the contract had been fulfilled. The survival of this particular document can be attributed to the fact that there subsequently arose a dispute between the investors. The parchment on which the original contract survives also records a related act from more than two years later in which one of the investors was compelled to recognise a debt stemming from the partnership that he still owed to the other investor.

⁴⁷ The notion that the Florentine woollen textiles industry was producing an identifiably distinct variety of cloth by the middle of the thirteenth century raises questions about the relative quality of Florentine cloth. Hoshino argued that the quality of cloth manufactured at Florence was similar to cloth produced in other cities in north-central Italy in the later thirteenth century. He based his argument on tariff data, under the assumption that import tariffs were a reflection of the relative quality of textile products. See Hoshino, 1980, pp. 39-41, 50-51. The data for the thirteenth century are extremely exiguous, however, and the conclusions drawn by Hoshino for the period before 1300, by the strictest standards, must be regarded as provisional. It is doubtful, however, that tariffs always reflected the relative quality of similar products accurately. It was possible for governments to negotiate favourable tariffs on behalf of its citizens for certain products with friendly trading partners *vis-à-vis* those levied on citizens of other governments. Import duties were often stipulated in commercial agreements between Florence and its trading partners in the early thirteenth century. For an example of an agreement between Florence and Faenza in 1204 that effectively excused the citizens of each city from most duty and toll obligations in the other city, see Santini, ed., 1895, *Capitoli*, no. 44, [1204], pp. 144-147. For commercial treaties negotiated between Florence and Perugia in 1218 and 1235 that include clauses concerning import tariffs, respectively, see Santini, ed., 1895, *Capitoli*, no. 66, 1218 March 21, pp. 190-192; Bartoli Langeli, ed., 1983-1991, 1, no. 148, 1235 March 14, pp. 318-326. These treaties are discussed at greater length below, Chapter 7.3.1-2.

Oltrarno already by 1253.⁴⁸ The Del Bene merchant-banking family, which was involved in the woollen textiles industry in Florence both as an importer of northern European fabrics and as a producer of domestic cloth, already owned at least three warehouses, or *fundachi*, in Piazza Santo Spirito in the Oltrarno by 1299. In the early fourteenth century, the Del Bene were leasing several commercial shops in the square as well as other commercial and residential properties to labourers in various crafts, predominated somewhat by workers in the woollen textiles industry.⁴⁹

Similar developments can be observed on the eastern periphery of the city even before the middle of the thirteenth century, where the Vallombrosan abbey of San Salvi invested prodigiously in property alongside the Arno in the eastern part of the city and in the eastern suburbs.⁵⁰ Already in the later eleventh century, San Salvi was acquiring commercial property on the eastern periphery of Florence.⁵¹ Numerous documents of the later twelfth and early thirteenth centuries record acquisitions of riverside property by the abbey, probably for subsequent industrial development.⁵² In 1239, San Salvi purchased shares in several suspension mills at Pigna Camarzio on the left bank of the Arno above the newly constructed

⁴⁸ Sznura, 1975, p. 136. The Italian term for the sort of shop referred to here is *botteghe*, but in the Latin of the Florentine sources, these shops are designated as *apotheca* or *apotheca*.

⁴⁹ Saporì, 1955, 1, pp. 305-352, esp. 305-309.

⁵⁰ On investment by San Salvi in 'terreni fabbricativi' between first and second circuits of the city walls, see Vannucci, 1963-1964, pt. 2, p. 33-56. Even as early as the 1187 in an imperial concession from Henry VI, the abbey of San Salvi was acquiring property and rights on the river Arno specifically for the construction and use of mills. See ASF, *Diplomatico*, Badia di Ripoli, 1187 April 29. The possession of mills by San Salvi 'in populo sancti Jacobi inter foveas' was confirmed in 1234 by pope Gregory IX. See ASF, *Diplomatico*, Badia di Ripoli, 1234 November 6.

⁵¹ See Schupfer Caccia, ed., no. 9, 1080 January, pp. 42-43, esp. 42; ASF, *Diplomatico*, Badia di Ripoli, 1079 January: 'casa cum fundamento et terra cum omni fabrica sua que est posita in civitate Florentia, non longe de pusterula que dicitur Teutii Fabri'. See also Schupfer Caccia, ed., no. 18, 1091 December 7, pp. 61-62, esp. 62; ASF, *Diplomatico*, Badia di Ripoli, s.d.: 'una casa cum fundamento et terra cum omni fabrica sua posita in civitate Florentia prope locum qui dicitur Pingna'. Once again, it is necessary to stress that these sites may have had no connection with the manufacturing of woollen textiles, but a reference dating from 1117 to a dyer from Varlungo, 'Florentius tintore da Varlungo', suggests that textile manufacturing was being practised in the eastern suburbs at least from the early twelfth century. In 1147, and closer to the city, a miller named 'Bernardus mugnarius' evidently was working in the eastern suburbs near the old Roman amphitheatre, the 'Perilasium'. See Davidsohn, ed., 1896-1908, 1, pp. 154, 155.

⁵² For example, see ASF, *Diplomatico*, Badia di Ripoli, 1195 February 6, 1206 May 26, 1208 January 12, 1217 February 12, 1241 April 13. The document of 1195 is incorrectly dated in the ASF. The correct date is 1198 February 13. On the development of the estate of San Salvi in the twelfth and thirteenth centuries, see Vannucci, 1963-1964.

Rubaconte bridge, near a weir that is attested from 1244.⁵³ The abbey was also leasing mills situated on the Arno near the mouth of the torrent Affrico by the middle of the thirteenth century.⁵⁴ San Salvi was collecting grain rents on at least fourteen floating mills on the Arno at the port of Tempio, situated on the right bank of the river at the end of a street called the 'Corso dei Tintori' near the Rubaconte bridge, by the end of the third quarter of the thirteenth century.⁵⁵

The commercial operations of San Salvi were probably closely related to those of its parent abbey of Vallombrosa, situated on the western escarpment of the Pratomagno below the Monte Secchieta, and also to those of the abbey of Coltibuono and other Vallombrosan institutions in the upper Arno valley.⁵⁶ Certainly by the later fourteenth century, Vallombrosa was raising sheep specifically for the despatch of wool to urban workshops of the Florentine textiles industry, and it is likely that the evidence documents a long established practice.⁵⁷ Wool from the Pratomagno was probably sent first to the markets at Leccio or Pelago, or to the river port of Sant'Ellero, and then conveyed by river to the city.⁵⁸ Another

⁵³ Purchases by San Salvi of shares in at least two suspension mills, or 'molendina pendula', are documented in ASF, *Diplomatico*, Badia di Ripoli, 1239. See also ASF, *Diplomatico*, Badia di Ripoli, 1239 September 17. These were probably the same suspension mills that are recorded at Pigna Camarzio in 1251. See ASF, *Diplomatico*, Badia di Ripoli, 1251 March 25. In 1290, San Salvi was leasing four suspension mills at Pigna Camarzio. See Davidsohn, ed., 1896-1908, 4, p. 446; ASF, *Diplomatico*, Badia di Ripoli, 1290 ottobre 29. The existence of a weir on the Arno at Pigna Camarzio is noted in Repetti, 1833-1845, 1, p. 404.

⁵⁴ ASF, *Diplomatico*, Badia di Ripoli, 1247 April 25, 1248 May 2, 1249 May 24.

⁵⁵ Another floating mill was anchored just across the river at the port of Camarzio in 1275. See Muendel, 1991, pp. 368, and p. 382, n. 14, citing ASF, *Notarile antecosimiano* 997/A983, fol. 4r, 1275 June 5. For evidence of the floating mills of San Salvi at the river port of Tempio, see Pampaloni, ed., 1973, no. 100, 1273 July 25, pp. 177-179. See also Davidsohn, ed., 1896-1908, 4, pp. 444-445; ASF, *Diplomatico*, Badia di Ripoli, 1271 July 14. The port was probably used to service the livestock market situated at the northern end of the Rubaconte bridge. On the close proximity of the market and the port, see Davidsohn, ed., 1896-1908, 4, 1261 September 17, p. 519.

⁵⁶ Collaboration in commercial matters among the major Vallombrosan ecclesiastical institutions is attested occasionally in thirteenth century land conveyances when a monk of one Vallombrosan monastery represents the interests of another monastery of the order.

⁵⁷ Salvestrini, 1998, p. 244. Over the course of nearly thirty years during the second half of the fifteenth century, Vallombrosa sent an average of more than 1000 *libre* of wool per year to a single urban workshop located in the western part of the city near the Porta a Prato. The abbey was also supplying other urban and rural workshops with shipments of 'lana magiese', or the spring shearing, and 'lana settembrina' or 'lana novembrina', or the autumn shearing. These shipments were often accompanied by other agricultural products, typically grain, oil, wine, nuts, pork, and other items. See Salvestrini, 1998, pp. 244-250.

⁵⁸ The market at Leccio is attested frequently from the later twelfth century. See Pagliai, ed., 1909, no. 492, 1177 February, p. 220; no. 509, 1187 December 30, p. 227. See also ASF, *Diplo-*

likely destination was the market and port town of Figline Valdarno, which had become a centre for the manufacture of clothing by 1233.⁵⁹ Figline also may have been a principal destination for wool grown in the Chianti even before the middle of the thirteenth century.⁶⁰ Evidence for traffic in wool within the territory of Florence is extremely exiguous before the later fourteenth century, but early

matico, Badia di Coltibuono, 1218 November 14; Vallombrosa, 1255 November 17. The market at Leccio is extensively documented in the late thirteenth and early fourteenth century cartularies of the notary Guido da Leccio. See Muzzi and Nenci, eds., 1988, no. 199, 1294 January 2, pp. 300-301, and *passim*. See also ASF, *Notarile antecosimiano* 10896-10897/G830, *passim*. The market at Pelago is attested from at least as early as 1188. See ASF, *Diplomatico*, Vallombrosa, 1188 May 7, 1231 April 24. See also Repetti, 1833-1845, 4, p. 85-91, esp. 85. For additional references to the market at Pelago, see Strà, ed., 1982, no. 69, 1224 November 14, pp. 134-141. See also ASF, *Diplomatico*, Passerini, 1233 September 8; Badia di Firenze, 1256 August 24. Between 1300 and 1319, the Pelago market is also extensively documented in ASF, *Corporazioni Religiose Soppresses* 260, 122, fol. 4r, and *passim*. The river port at Sant'Ellero, situated on the right bank of the Arno at the confluence of the river and the torrent Vicano di Sant'Ellero, is attested in ASF, *Diplomatico*, Vallombrosa, 1192 January 26.

⁵⁹ The market at Figline Valdarno is attested from 1153. See ASF, *Diplomatico*, Badia di Passignano, 1153 June 1, 1211 October 23; Santissima Annunziata, 1261 August 2. See also Santini, ed., 1895, *Capitoli*, no. 24, 1198 April 10, pp. 42-43, esp. 42; Santini, ed., 1952, *Capitoli*, no. 87, 1259 March 11, pp. 260-261. By the later thirteenth century, Figline was regarded as one of the most important grain markets in the Florentine countryside. See Gherardi, ed., 1896-1898, 1, pp. 68-69 [1282 February 23]. Further references to the market at Figline can be found in Gherardi, ed., 1896-1898, 1, pp. 119, 121, 122, 154. Figline is attested as a port town from at least as early as 1186, and Matteo Villani noted the importance of the port of Figline in the food supply of Florence in the later fourteenth century. For evidence of port facilities at Figline before the end of the twelfth century, see Kehr, ed., 1904, no. 33, 1186 January 29, pp. 186-188. See also ASF, *Diplomatico*, Badia di Passignano, 1262 January 29, under which the document is mistakenly catalogued. Additional evidence for port facilities at Figline occurs in ASF, *Diplomatico*, Badia di Passignano, 1195 March 27. For the comments of Matteo Villani, see M. Villani, bk. 7, chap. 45. For evidence of a tailoring guild at Figline in 1233, see Prunai, 1983; Masi, ed., 1934, pp. 213-217. See also ASF, *Diplomatico*, Passignano, 1233 February 24.

⁶⁰ For evidence that the abbey at Coltibuono was growing wool in the early thirteenth century, see ASF, *Diplomatico*, Badia di Coltibuono, 1230 August 3, 1237 May 25. The markets at Montevarchi, San Giovanni Valdarno, and even Gaiole in Chianti were other possible destinations for wool grown on the estates of Coltibuono, though only the former two afforded direct access to transport on the Arno. For evidence of the market at Gaiole in Chianti, see ASF, *Diplomatico*, Badia di Coltibuono, 1236 December 18. Gaiole in Chianti was located in the Sieneese countryside, but it was under Florentine control and fully integrated in the Florentine network of rural markets certainly by 1282. See Gherardi, ed., 1896-1898, 1, pp. 119, 121, 122, 154. Already in 1239, the Florentines had taken the nearby abbey of Coltibuono under their protection. See ASF, *Diplomatico*, Badia di Coltibuono, 1239 August 25. The market at Montevarchi is attested in ASF, *Diplomatico*, Vallombrosa, 1169 March 13; Badia di Passignano, 1207 March 13; Stroziane Uguccioni, 1220 November 27. See also Santini, ed., 1952, *Capitoli*, no. 16, 1254 March 31, pp. 48-59; no. 18, 1254 April 6, pp. 62-64. In addition, Giovanni Villani mentioned the existence of the market in 1248. See Villani, bk. 6, chap. 33. For evidence of the market at San Giovanni Valdarno, see ASF, *Diplomatico*, Badia di Passignano, 1188 June 15, 1209 October 8, 1212 December 5, 1219 February 5. Although they were clearly important market towns, it should be noted that port facilities are attested at neither Montevarchi nor San Giovanni Valdarno.

sharecropping contracts from the later thirteenth century sometimes required tenants to consign a portion of the wool sheering.⁶¹

Farther downstream, around the port and market town of Empoli, the Guidi patrilineage possessed no less than eighteen mills on the river Arno and its tributaries by 1254.⁶² Nearer to Florence, the abbey at Settimo was embarking upon its own ambitious programme of investment and construction both on the river Arno below Ponte a Signa and on the torrent Vingone near Scandicci.⁶³ From about the middle of the thirteenth century, the abbey invested heavily in ports, mills, and weirs on the Arno.⁶⁴ In 1276, the abbey secured from a member of the Frescobaldi merchant-banking company two port facilities and all of the possessions of the company on the Arno between Ponte a Signa and the mouth of the torrent Ombrone.⁶⁵ The acquisitions of waterworks on the river by the abbey were accompa-

⁶¹ See Muzzi and Nenci, eds., 1988, no. 51, 1269 November 23, p. 166; no. 55, 1269 December 15, pp. 169-179; no. 66, 1272 January 22, pp. 180-181; no. 67, 1272 January 26, pp. 181-182; no. 73, 1275 September 20, pp. 186-187; no. 76, 1277 January 17, pp. 188-189; no. 89, 1278 January 8, pp. 199-200; no. 186, 1292 July 3, pp. 287-288; no. 210, 1295 October 8, pp. 309-310, esp. 309; no. 244, 1298 January 25, pp. 335-336; no. 280, December 26, p. 369.

⁶² Santini, ed., 1952, *Capitoli*, no. 20, 1254 August 12, pp. 65-75, esp. 68. The lengthy document records the alienation by the Guidi counts of a quarter share of all of their possessions in the area around Empoli to the Florentine commune for nearly ten thousand *libre*. By 1254, the Guidi were collecting an annual rent of three *staria* of grain from each of the eighteen mills. The port of Empoli has its origins in antiquity as the *Emporium Arni*. On the port of Empoli in classical antiquity, see Solari, 1914-1918, 1, pt. 3, p. 98; app., no. 741, p. 72. For the earliest medieval reference to the ports at Empoli and Pontorme, see Davidsohn, ed., 1896-1908, 3, no. 284, 1297 June 13, p. 64, citing ASF, *Capitoli* 35, fol. 105r. The medieval market at Empoli is attested for the first time only in 1254 in the document of sale cited here, but the market must have antedated this particular reference. In point of fact, Empoli is not well covered by the extant documentation before about 1280, when notarial cartularies of Empolese notaries begin to survive.

⁶³ On the industrial complex developed by the abbey at Settimo near Scandicci, see Salvini, 1977.

⁶⁴ On the investments of the abbey at Settimo in mills and other waterworks on the river Arno below the city, see Pirillo, 1995b. Port facilities are attested at Signa from the later tenth century. See Piattoli, ed., 1938, no. 14, 964 July, pp. 40-45, esp. 42. For additional early evidence of the port at Signa, see ASF, *Diplomatico*, Cestello, 1181 June. Investment by the abbey at Settimo on the left bank the river Arno at 'Metatis', the modern town of Porto di Mezzo situated about a kilometre downstream from Ponte a Signa, can be dated from 1217. Investment on the river around Ponte a Signa itself, mostly across the river on the right bank, became intense only towards the middle of the thirteenth century. For investment at Porto di Mezzo, see ASF, *Diplomatico*, Cestello, 1217 settembre 13. For investment in mills in the area around Ponte a Signa, see ASF, *Diplomatico*, Cestello, 1245 maggio 17, 1246 ottobre 25, 1253 dicembre 30, 1265 gennaio 3. The investments of the abbey at Settimo in mills, ports, and weirs on the river are further documented in ASF, *Compagnie religiose soppresse di Pietro Leopoldo* 479, 302, fols. 23r-28r, *passim*.

⁶⁵ ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, fol. 26r. The Frescobaldi evidently were prominent landowners in the area, and they are attested frequently in the evidence for the abbey at Settimo after the middle of the thirteenth century. See ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, fols. 25v-28r, *passim*.

nied somewhat later by investment in the western quarter of the city in workshops and commercial establishments.⁶⁶ By the later thirteenth century, the abbey at Settimo had invested so substantially on the Arno that its ports, mills, and weirs may have constituted a major obstacle for the transport of grain and other merchandise on the river.⁶⁷

The construction of mills and weirs on the river Arno within Florence was also considerable. Numerous mills are documented on the right bank of the Arno at Altafronte in the relatively small space between the Rubaconte bridge and the point at which the inner circuit of walls abutted the river before 1290.⁶⁸ On the opposite bank in San Niccolò, around a place called the 'Fonte al Porto', the monastery of San Miniato al Monte as well as private interests possessed fulling mills already in the early thirteenth century.⁶⁹ By 1278, the riverbank below San Miniato al Monte was occupied by an unknown number of suspension mills, and another mill is attested on about the same site in 1326.⁷⁰ The Arno was teeming

⁶⁶ On investment by the abbey at Settimo in workshops and commercial sites in the western quarter of the city in the early fourteenth century, see Jones, 1956a, pp. 90-91.

⁶⁷ In 1284, the Florentine commune agreed to compensate the abbey of Settimo 11,000 *libre* for the removal of mills and weirs on the river Arno that were disrupting the transportation of goods from Pisa to Florence on the river. See Davidsohn, ed., 1896-1908, 3, no. 1195, 1284 May 15, pp. 235-236; ASF, *Diplomatico*, Cestello, s.d.: 'impediunt naves et ligna honeratas grano, blado et sale et aliis rebus necessariis ad hominum alimenta venire directo per flumen Arni de civitate Pisarum et aliis partibus ad civitatem Florentie'. In the early fourteenth century, the possessions of the abbey at Settimo on the Arno again became a subject of negotiation between the Florentine commune and the abbey. Communal officials believed that mills and other waterworks on the river Arno in the city and particularly below the city were responsible for frequent flooding in the low-lying areas on the right bank of the river below the city. In 1331, the abbey at Settimo and the commune of Florence finally reached an agreement whereby the abbey consented to the destruction of some of its investments on the river in exchange for 3500 gold *floreni*, and the rental receipts on eight money-changing tables in the *Mercatum novum* in the city and on property at Semifonte. See Pirillo, 1995b, p. 84-85. See also De la Roncière, 1976, 3, 907-909; 4, pp. 307-308. The river in the area around Empoli evidently was also congested with mills already in the middle of the thirteenth century. In 1254, the Guidi lords sold a portion of their possessions in and around Empoli, including the rents on eighteen mills on the Arno, to the commune of Florence. See Santini, ed., 1952, *Capitoli*, no. 20, 1254 August 12, pp. 65-75, esp. 68.

⁶⁸ Muendel, 1991, p. 371, and pp. 384-385, nn. 32-38, citing ASF, *Dono Bagnesi* 344, fols. 1r-16v. The site was bustling with commercial activity. According to Muendel, dyers stretched and dried finished cloth using beams that were built into the walls of the river embankment, at least suggesting that some of the mills were being used for the preparation of wool. The site was also used by others to collect wood for construction or fuel, and manure for urban and suburban gardens.

⁶⁹ ASF, *Diplomatico*, Olivetani di Firenze, 1209 March 14, 1244 October 22. See also Sznura, 1975, p. 113.

⁷⁰ For suspension mills situated near the left bank of the Arno below San Miniato al Monte in 1278, see Davidsohn, ed., 1896-1908, 4, p. 445. On these mills and another mill attested in

with mills by the beginning of the second quarter of the fourteenth century, with no less than fifteen clearly documented mills operating on the river within the third circuit of walls, and there were doubtless many more mills that are not clearly distinguishable in the sources.⁷¹ By the early fourteenth century, the urban segment of the river had become so crowded with mills and other waterworks that the commune was compelled to introduce legislation to prohibit the operation of mills within the city, though evidently to little effect.⁷²

It is important to stress that most of the mills operating on the river Arno within the city of Florence or in its eastern and western suburbs were used exclusively for grinding the prodigious quantities of grain that were coming into the city to feed the swelling population. Urban and suburban millers indeed typically

roughly the same area nearly fifty years later, see Muendel, 1991a, pp. 368, 370, and p. 383, nn. 18, 20.

⁷¹ Muendel, 1991, pp. 370-371, and pp. 384-385, nn. 30, 39, and 41-42, citing a variety of notarial sources dating from 1262 to the completion of the third circuit of walls in 1330. Many more mills were situated just beyond the new walls of the city, on the right bank at Rovezzano and Girone above the city and on the left bank between Settimo and Signa below the city. For the mills at Rovezzano, see De Angelis, Gigli, and Sznura, eds., 1978-1986, 1, no. 121, 1298 December 8, p. 129; 1, no. 155, 1299 March 9, pp. 159-160, esp. 160. On fulling mills in the territory of Florence in general but with particular reference to a complex of fulling mills situated at Girone a short distance west of the city of Florence itself, see Hoshino, 1984. For the mills of the abbey at Settimo on the Arno, see above.

⁷² The commune prohibited the operation of mills in the city between the Ponte Rubaconte and the Ponte alla Carraia already in 1308, and the proscribed zone was even extended in 1322 and again in 1333. The commune was concerned that mills and other waterworks could become dislodged in rising waters and cause damage to the bridges in the city. This may have been what actually happened in 1269, for example, when both the Santa Trinita and Carraia bridges were destroyed by debris carried on the river swollen from torrential rains. In 1250, heavy rains and swift currents on the river had indeed loosened mills and boats from their riverside moorings in and around the city. At any rate, the restrictions imposed in 1308 and in 1322 evidently were not very effective, as mills are documented in the proscribed zones through the first three decades of the fourteenth century. On legislation regarding urban mills in Florence in the early fourteenth century, see Muendel, 1981, p. 87, and p. 108, nn. 23-24; 1991, pp. 374-376, and pp. 386-387, nn. 49-60. On the flood of 1269, see Villani, bk. 7, chap. 34. On the heavy rains of 1250, see Stefani, rub. 50: 'Una piova cominciò a' dì 17 d'ottobre negli anni di Cristo 1250, la qual durò continua tre dì e tre notti, comechè tutto ottobre fosse forte piovoso, in la quale piova, perchè quell'anno era stato piovoso, molti edificj caddono in questa piena, e molte molina e navi ne vennero per Arno'. For the legislation of 1308, see Barbadoro, ed., 1921-1930, 1, p. 401-402, esp. 401 [1308 September 20-21]: 'Item, provisionem factam de molendinis et piscariis non tenendis inter pontes Rubacontis et Carrarie in flumine Arni'. For the provisions of 1322, see Caggese, ed., 1910, bk. 4, rub. 6, pp. 172-174, esp. 173 [1322-1325]: 'Et non permittat vel patiatur dominus Capitaneus quod aliquod molendinum vel aliqua pischaria construatur vel fiat in flumine Arni ex parte superiori Pontis Rubacontis versus orientem prope per trecenta braccia, et si facta fuerint faciat removeri'. On legislation enacted to restrict the operation of mills in the city after another damaging flood in 1333, see Gherardi, 1873, p. 243.

paid rents in grain or flour.⁷³ By the early fourteenth century, millers were nevertheless converting grain mills into fulling mills to take advantage of the profits to be garnered in textile manufacturing. A few kilometres upstream from Florence on the right bank of the Arno at Girone, for example, the proprietors of a complex of grain mills transformed several of their mills into fulling mills shortly after 1300. They subsequently leased the newly transformed mills to members of the Albizzi family, which was already prominently involved in the Florentine woollen textiles industry, and the Albizzi later acquired outright virtually all of the mills at Girone.⁷⁴ Owners of fulling mills situated in the Bisenzio river valley in the territory of Prato were even establishing contractual links with the woollen textiles industry at Florence.⁷⁵ The evidence suggests, nevertheless, that the preparation of wool was concentrated increasingly in the city, and many urban and suburban mills may have divided their operations between fulling and grinding in varying degrees, while a few mills no doubt specialised entirely in the preparation of wool. The evidence also suggests that the use of rural mills for the preparation of wool may have declined from the later twelfth century.⁷⁶ Certainly by the later

⁷³ For evidence of rent payment by suburban millers in grain, see again Pampaloni, ed., 1973, no. 100, 1273 July 25, pp. 177-179. On the payment of land-use taxes by urban millers, see again Muendel, 1991, p. 371.

⁷⁴ Hoshino, 1980, 307-308; 1984, pp. 269-270. Florentine engineers were certainly adept in the construction of fulling mills. In the early fourteenth century, when the leaders of Padua wished to construct additional fulling mills in the city, they sent for Florentines. See Kohl, 1998, p. 140.

⁷⁵ For evidence of contractual links between fulling mills in the Bisenzio valley and Florence by the early fourteenth century, see Davidsohn, ed., 1896-1908, 3, no. 1045, 1309 October 7, p. 211: 'ad conducendum omnes pannos lanos a civitate Florentie, quos habere poterit, ad gualchieras per [...] Baccheram conductas, a domino Benricordatode Prato, positas in flumine Bisenzi in populo Sancti Miniatis de Pupigliano'. For evidence from the middle of the thirteenth century demonstrating links between fulling mills in the territory of Prato and the textiles industries of both Florence and Prato, see Piattoli, ed., 1936, pt. 3, sec. 2, no. 15, 1254 August 4, pp. 205-206, esp. 206: 'Et Ranerius et Bonacorsus promiserunt et convenerunt eisdem reducere et deportate ad gualcandum et conciandum omnes pannos, quos ipsi habere poterint in Prato et in Florentia sive aliunde, et procurare ad reducendum eis ad dictas gualcherias bona fide, sine fraude, prout melius poterint, et cetera'.

⁷⁶ Despite the increasing wealth of the documentation for the Florentine countryside in the thirteenth century, for example, fulling mills specifically designated as such are somewhat more richly documented in the twelfth century. My own investigations are far from exhaustive, but I have identified only four fulling mills in the Florentine countryside specifically identified as *gualchiere* in the thirteenth century. For one thirteenth century *gualchiera* near Legri in the valley of the torrent Marina, see ASF, *Diplomatico*, Cestello, 1201 January 13, 1202 February 21. Another thirteenth century *gualchiera* was situated at Bucine in valley of the torrent Ambra. See ASF, *Diplomatico*, Stroziane Uguccione, 1241 October 15. In the Chianti, there was a *gualchiera* extant on the torrent Dudda near Ponte a Stielle. See Pagliai, ed., 1909, no. 543, 13th century, p. 245. The fourth *gualchiera* that I have been able to identify was on the river Greve near Impruneta. See Muzzi and Nenci, eds., 1988, no. 109, 1279 August 1, p. 219, citing ASF, *No-*

fourteenth century, the manufacture of woollen textiles in the Florentine countryside was limited to areas located towards the periphery of the territory.⁷⁷

The proliferation of mills particularly on the Arno in the city and in its suburbs also may have been related to the demographic expansion of the city. It suited the requirements of both the woollen textiles industry and the urban food supply to harness the hydraulic power of the Arno. The increasing intensity with which urban and suburban mills were used in turn facilitated the adoption of technological improvements in mill construction that ultimately enhanced productivity in the Florentine woollen textiles industry.⁷⁸

tarile antecosimiano 11250-11251/1104, fol. 14r. The evidence for fulling mills in the Florentine countryside in the twelfth century is by no means overwhelming, but my research has identified seven different *gualchiere* in the less abundant twelfth century documentation. Two of these, one situated on the torrent Cesto near Figline and another on the river Pesa near Sambuca, appear in the sources for the twelfth century as *gualchiere* but simply as a *molendina* when they reappear in the thirteenth century sources. For the twelfth century references to the *gualchiera* on the Cesto, see ASF, *Diplomatico*, Badia di Passignano, 1167 February 11, 1183 May 11. For the thirteenth century reference to the same mill, see 1253 January 4. For the *gualchiera* and *molendinum* on the Pesa, respectively, see ASF, *Diplomatico*, Badia di Passignano, 1179 March 24, 1214 September 8. Both of these mills are also attested earlier in the twelfth century simply as *molendina*. For the mill on the Cesto, see ASF, *Diplomatico*, Badia di Passignano, 1139 March 6, 1146 December 27. For the mill on the Pesa, see ASF, *Diplomatico*, Badia di Passignano, 1180 July 21, 1182 April 9. The change between the later twelfth and the early thirteenth centuries may have been strictly terminological, and notaries may have referred to all mills increasingly as *molendina*. An early fifteenth century tax register of the mills in the Florentine countryside nevertheless goes some distance towards confirming the suspicion that the fulling process was increasingly centred in the city. Of the seven hundred and twenty-six mills that are documented in the Florentine countryside in the early fifteenth century, only sixty were engaged in the preparation of wool, and forty-five of these combined their fulling operations with the grinding of grain. Moreover, most of these fulling mills were located in remote parts of the Florentine countryside, which would have rendered access to urban and suburban fulling mills difficult. Competition between these remote fulling mills and their urban and suburban counterparts also would have been negligible. See Muendel, 1981, pp. 91-102, esp. 98-99, 101-102.

⁷⁷ De la Roncière, 1976, 3, pp. 800-803, esp. 801; 4, pp. 241-242, n. 41.

⁷⁸ The use in the territory of Florence of French mill technology, which is to say vertical waterwheels rather than horizontal ones, is discussed in Chapter 4.2.2. Vertical waterwheels had been used on mills already in antiquity and in the early middle ages. The critical factor influencing the adoption of the vertical waterwheel at Florence may have been the intensity of use. The construction of mills using vertical waterwheels required a greater initial investment and they were more expensive to maintain than mills using horizontal waterwheels, which was due to the gearing used in vertical waterwheels. The extra costs were justified only when use was expected to be sufficiently intense not only to offset the extra costs but also to yield a profit. The development of the woollen textiles industry at Florence alongside the constantly increasing need in urban bakeries for flour perhaps provided the necessary incentive. Changes in the institutional organisation of the woollen textiles industry in the later thirteenth and early fourteenth centuries also may have generated economies of practice that rendered the production process more efficient. Certain tasks that had been performed by workers at home were removed to the workshop to facilitate closer supervision of the process, and other tasks were fragmented in order to allow workers to focus their

5.3. The Florentine advantage

In his study of the Florentine woollen textiles industry during the later middle ages and early renaissance, Hoshino suggested that woollen cloth produced in Florence was similar to the cloth produced in many other Italian cities towards the end of the third quarter of the thirteenth century. He also argued that the quality of even the best Italian cloth was not yet comparable in the later thirteenth century to the quality of the finer fabrics imported from northern Europe. According to Hoshino, Florentine cloth achieved qualitative parity with the finer woollen cloth produced in Lombardy at Milan, Bergamo, Brescia, Como, Cremona, and Pavia by about 1274. The products of these industries were distinguished from the more common fabrics produced at Bologna, Mantua, Parma, Piacenza, Reggio, and Verona. The Lombard industries Bergamo, Brescia, Como, and Cremona, in addition to finer textiles, also produced more common varieties of cloth.⁷⁹ The apparent qualitative similarity between Florentine cloth and the finer Italian fabrics of the Lombard industries raises questions about the early development of an extensive export trade in woollen textiles at Florence. If Florentine woollen textiles were not superior to fabrics produced in Lombardy, then what accounts for the blossoming of an export trade in woollen cloth at Florence in the early thirteenth century?

The argument put forward by Hoshino concerning the relative quality of fabrics produced in various north-central Italian cloth industries hinges upon the premise that import tariffs accurately reflected quality, but it is by no means certain that tariff assessments on particular products were based exclusively on product quality. Some communal governments may have even offered certain of their trading partners favourable tariff rates. In the early fourteenth century, for example, Florentine merchants at Bologna benefited from special tariffs on Florentine goods, and by the middle of the century, this special tariff entitled Florentine merchants to savings of 40-50 per cent on ordinary tariffs for most goods.⁸⁰ Mer-

attention on a smaller range of activities. The Florentine wool guild also began to collaborate more closely with the communal administration, and the guild itself became the preserve of wealthy investors. See Cohn, 1978, p. 9. Cohn was citing the 1971 Italian translation of a work originally published in 1958 by the Russian scholar Victor Rutenburg, *Popolo e movimenti popolari nell'Italia del '300 e '400*, which I have not seen. The views of Rutenburg on the matter are nevertheless summarised in Rutenburg, 1973, pp. 623-635.

⁷⁹ Hoshino, 1980, pp. 40-41.

⁸⁰ Astorri, 1998, p. 177; Frati, ed., 1903; Greci, 1978. The practice is also attested from the early thirteenth century, when Volterra granted favourable tariff rates on some goods to Siennese mer-

chants from Florence also benefited from favourable tariffs at Bologna in the thirteenth century. In 1262, the Bolognese were unable to sell the 'datum pas-sadii Luxulini et Castrofranchi' owing to proscriptions against collecting tolls from merchants of cities that were exempt from tariffs. These cities included Ferrara, Florence, and Modena, and the merchants of both Ferrara and Florence had enjoyed such an exemption from at least 1259.⁸¹ The exemption from tariffs enjoyed by Florentine merchants at Bologna perhaps explains the absence of tariff rates for Florentine cloth in Bolognese customs records for 1264.⁸²

For the thirteenth and early fourteenth centuries, tariff data sometimes provide the only available measure by which to infer qualitative differences between similar manufactured products of different cities during the thirteenth century. It is nevertheless important to note that the relationship between tariff assessments and product quality was not always straightforward. The absence of tariff assessments for the products of one city in the customs records of another, moreover, should not necessarily be interpreted as an absence of trade. Communal governments sometimes conferred favourable tariff rates on preferred trading partners, and they sometimes even granted exemptions from tariffs to preferred partners. Product prices probably are more indicative of quality than tariff assessments, but the documentation from the thirteenth century generally provides insufficient price data. Even prices can be misleading, however, because they sometimes obscure differences in the distance from the point of production to the point of sale between similar products that were manufactured in different locations.

On the market at Lucca in 1246, for example, the average unit price of the 'viridis' cloth of Ypres was 166.7 per cent greater than the price of the 'viridis'

chants in 1224. See Fiumi, 1957-1959, pt. 3, p. 446, n. 90. The favourable tariffs enjoyed by Florentine merchants at Bologna in the early fourteenth century were probably offered by the Bolognese to encourage the Florentines to send goods destined for northern markets through Bologna. As the Florentine presence in foreign markets expanded in the thirteenth and early fourteenth centuries, it is likely that Florence found it easier to exact concessions of this sort from its trading partners. By the later thirteenth century, the withdrawal of Florentine merchants would have proved economically devastating for many communal governments. Even Pisa, a traditional adversary of Florence, was unable to break commercial ties with Florence for very long. In the thirteenth century, the Pisan economy needed Florentine trade, and Pisa was perhaps even more poorly disposed to withstand lengthy disruptions to its trade with Florence than was Florence itself. See below, Chapter 7.3.3.

⁸¹ Arias, 1901, pp. 335-338.

⁸² Hoshino, 1980, p. 39, and tbl. 1, pp. 50-51, esp. 51.

cloth of Florence.⁸³ How much of this difference in price can be attributed to differences in the quality of the respective products, and how much of the difference stemmed from differences in the cost of transport? The mere fact that northern European cloth was sold on Italian markets for more than double the price commanded by the finer Italian fabrics nevertheless suggests a significant qualitative disparity between the respective products of the northern and Italian cloth industries. The point is simply that products must bear the cost of transport from the points of production to the market, and if the points of production lie at varying distances from the market, then the relationship between product price and quality is likely to be distorted by differences in transport costs.

There are also other variables to bear in mind when considering the relationship between price and quality. Lower product prices can be achieved by compromising product quality, to be sure, but they can also be the result of improved efficiency or economies of scale. Measuring the efficiency of production even in modern industries is by no means an easy task, and the paucity of the evidence for the Florentine woollen textiles industry in the thirteenth century dissuades any effort in that direction. It is nevertheless possible, and indeed expedient, to put forward a few tentative remarks regarding economies of scale in the Florentine cloth industry. The same evidence for Lucca discussed above suggests that the cloth industry at Florence commanded between about thirty and fifty per cent of the trade in woollen textiles on the Lucchese market already in 1246, or perhaps as much as twice the market share commanded by the local cloth industry. At Orvieto in 1299, more than half of all imported woollen fabrics sold on the market were manufactured at Florence, and from about 81.6 to 89.4 per cent of all woollen textiles imported from within Italy were products of Florentine industry.⁸⁴

The predominance of Florentine cloth on the Orvieto market at the end of the thirteenth century illustrates the privileged position that the woollen textiles of

⁸³ By the same token, the price of the 'santellaresi vergati' cloth of Verona was 11.6 per cent greater than the price of the 'santellaresi vergati' cloth of Florence, and the price of the 'cilestris' cloth of Florence was 13.6 per cent greater than the price of the 'cilestris' cloth of Lucca. See Hoshino, 1980, p. 97, tbl. 5, citing ASLucca, *Archivio de' Notari*, busta 1, no. 1, fols. 1-73, *passim*.

⁸⁴ The figures for Lucca have been extrapolated by the author from Hoshino, 1980, p. 97, tbl. 5, citing ASLucca, *Archivio de' Notari*, busta 1, no. 1, fols. 1-73, *passim*. The figures for Orvieto have been extrapolated from Hoshino, 1980, p. 98, tbl. 6, citing ASOrvieto, *Archivio notarile* 1, Registro del 1299. See also below, Chapters 7.2, 7.3.2. It is also tempting to speculate on the degree to which Florentine merchants also controlled trade in northern fabrics on Italian markets, which would have afforded opportunities for merchants to benefit from economies of scope.

Florence held in south-central Italy. Among the centres of textile production in north-central Italy, Florence was the centre most advantageously situated to serve south-central Italian markets. Many of the cities in south-central Italy no doubt supported healthy industries for the production of woollen textiles, but they tended to produce more common fabrics for the local market and they were not organised for export trade. The products of the Florentine cloth industry, as already noted, appear to have been at least qualitatively similar to the finer fabrics produced in Lombardy in the later thirteenth century. Fabrics produced in south-central Italy and even elsewhere in Tuscany, on the other hand, were almost certainly inferior to the finer varieties of northern Italian cloth. This is suggested by the fact that the woollen textiles of Florence are virtually the only fabrics produced south of the Apennine Mountains that are regularly attested in the customs records of northern Italian cities in the later thirteenth and early fourteenth centuries.⁸⁵

The evidence, especially for the early period, permits little more than conjecture on the matter, but it is plausible that the predominance of Florentine fabrics on south-central Italian markets enabled the cloth industry at Florence to achieve economies of scale in production earlier than some of its competitors. This would have increased the anticipated returns on investment in technology in the Florentine woollen textiles industry, thereby stimulating investment. It may have helped to bring about the adoption of vertical mill technology for fulling, the spinning wheel for the preparation woollen weft thread, and the horizontal loom for weaving. The introduction of vertical mill technology, the spinning wheel, and the horizontal loom into the production process no doubt increased productivity. The introduction of the horizontal loom alone may have entailed more than a threefold increase in productivity over older vertical looms, though there is nothing in the evidence to suggest that the Florentine woollen textiles industry was precocious in the adoption of new technology.⁸⁶ The point is that Florentine

⁸⁵ Hoshino, 1980, p. 42. The presence on northern Italian markets of textiles produced in Tuscany or farther south by industries other than Florence is suggested for the first time only in 1329, when customs records for Reggio-Emilia give tariff assessments for Siennese cloth. See Hoshino, 1980, pp. 52-56, tbl. 2.

⁸⁶ On vertical mill technology, see above, Chapter 4.2.2. The spinning wheel appears to have been introduced in western Europe by the Muslims and it was used in the Italian cotton industry in the twelfth century. Evidence for the use of the spinning wheel in the production of woollen fabrics occurs only in the thirteenth century, typically in prohibitions against the use of the spinning wheel for the preparation of woollen warp yarns, as opposed to weft thread. Warp yarns formed the longitudinal foundation of the fabric in the weaving process, and weft threads were inserted latitudinally between alternate longitudinal yarns. Warp yarns were prepared by hand spinning with a narrow rod of about thirty centimetres called a spindle or distaff. At Florence, hand spin-

cloth merchants enjoyed easier access than their counterparts in Lombardy to a vast market in south-central Italy in which the wool industries produced common fabrics intended for domestic consumption. Within Tuscany, moreover, the woollen textiles industry at Florence appears to have been the only industry organised for the production of finer fabrics for export.⁸⁷

5.4. Papal finance and capital formation

The growth of the Florentine woollen textiles industry over the course of the thirteenth century and the extraordinary dimensions that it assumed by the early fourteenth century raise important questions regarding the formation of investment capital in medieval Florence in particular and in pre-industrial economies more in general. The development of the woollen textiles industry at Florence clearly required substantial investment in manufacturing and infrastructure. The few scholars who have considered the early development of the Florentine woollen textiles industry have largely ignored the formation of entrepreneurial capital that must have underpinned the early development of the industry. Admittedly, the evidence available for such an inquiry is very limited, and any consideration of the early development of the Florentine woollen textiles industry depends for the most part upon inference, as already seen above. The activities of Florentine merchant-

ning evidently was still the most commonly used method for the preparation of warp yarns even in the fifteenth century. The spinning no doubt was sometimes used also to prepare warp yarns, as prohibitions against the use of the spinning wheel for warp yarns indeed suggest, but the finer fabrics of the medieval woollen textiles industries were produced using traditionally spun warps and wheel-spun wefts. The most common type of vertical loom in the early middle ages was the warp-weighted loom, on which the warp was tied to a crossbar and stretched vertically by weights tied to the lower end of the warp. The horizontal loom, by contrast, had a box-like wooden frame on which the warp yarns were stretched horizontally between a warp beam at the rear and a cloth beam at the front. As the weft threads were inserted in the warp, the warp was uncoiled from the rear. The horizontal loom was introduced in western Europe during the eleventh century, again probably by the Muslims. It stretched the warps more tautly than the older vertical looms, and it did so with even tension, which gave the finished products greater uniformity. The horizontal loom also could be used to produce far longer lengths of cloth, up to about thirty metres, whereas lengths of cloth fashioned from vertical looms were limited to about five metres at the most. See Mazzoui, 1981, pp. 78-79, 82-85, 194, 196-197; Munro, 1988b.

⁸⁷ The presence of Tuscan cloth manufactured in cities other than Florence on south-central Italian markets is suggested only rarely. The customs records for Orvieto give tariff assessments for the cloth of Pisa, Prato, and Siena in 1312, and the records for Cagliari in Sardinia give a tariff assessment for Pisan cloth in 1318, but the products of the smaller Tuscan cloth industries are otherwise absent from south-central Italian customs records. See Hoshino, 1980, pp. 52-56, tbl. 2.

bankers at the papal curia nevertheless may provide a solution to at least part of the enigma.

The role of Florentine merchant-bankers in papal finance during the later twelfth and early thirteenth centuries and the development of papal banking more generally are still poorly understood.⁸⁸ Only thirty years ago, scholars were still dating the inception of Florentine involvement in papal banking to early in the pontificate of Honorius III (1216-1227).⁸⁹ In 1973, however, Pierre Toubert reported that he had uncovered evidence from the papal residence at Anagni attest-

⁸⁸ It is not within the scope of the present work to consider fully the relationship between Florentine merchant-bankers and the papal curia before 1300. Though outdated, the standard work on papal finances in general during the middle ages is still Lunt, 1934. See also Schneider, 1906, pp. 1-14. On the relationship between Roman financiers and the papacy in the eleventh century, see also Zema, 1944, pp. 169-175; Lopez, 1947. On papal banking during the later twelfth and early thirteenth centuries, see Olsen, 1969. On the relations between Florence and the papacy from 1300 to 1375, see Partner, 1965.

⁸⁹ See Olsen, 1969, p. 54. Following Davidsohn, Olsen stated that the earliest evidence securely attesting to Florentine banking activity at the papal curia dated from early in 1219. The evidence survives in a papal letter concerning a dispute over a loan that the bishop of Chartres had contracted with a partnership of Florentine and Roman merchant-bankers while attending the papal curia at Rome. See Davidsohn, 1977, 1, pp. 1192-1193. The letter, in which the pope named a procurator to represent the bishop of Chartres in legal proceedings with his creditors, is published in Pressuti, ed., 1888-1895, 1, no. 1802, 1219 January 16, p. 229. Davidsohn nevertheless believed that the evidence from 1219 merely documented what was by that time already a well developed Florentine presence at the papal curia. He suggested that Florentines were probably active in banking at the papal curia from about the time that other Tuscans are attested operating in the same capacity early in the pontificate of Alexander III (1159-1181). For evidence that Pisan bankers were active at the papal curia in 1161, see Jaffé, ed., 1885-1888, 2, no. 10677, 1161 September 20, p. 154. Davidsohn also observed that the Florentine 'Rainucinus Tedaldini', probably a merchant, was at Rome in 1193. See ASF, *Diplomatico*, Badia di Passignano, 1193 October 24. He further noted that the ambassador sent by the Florentines to the papal curia in 1204 to negotiate with pope Innocent III (1198-1216) on behalf of Florence over a dispute between Florence and the bishop of Fiesole had been involved in banking. The Florentine ambassador to the papal curia, one 'Tiniosus Lamberti', was also among the Florentine bankers who had negotiated a commercial treaty on behalf of Florence with Bologna in 1203, and Tiniosus had extended credit to the abbey at Passignano in 1202. For evidence of the embassy of Tiniosus to the papal curia, see Santini, ed., 1895, *Capitoli*, no. 51, 1204 April 15, pp. 137-138. See also Davidsohn, 1977, 1, pp. 953-955, 1193. For evidence of the participation of Tiniosus as a witness to the negotiations with Bologna in 1203, see Muratori, ed., 1738-1752, 4, 1203 September 13, cols. 453-454; Salvioli, ed., 1784-1795, 2, pt. 2, no. 353, s.d., p. 248. The treaty is discussed below in Chapter 7.3.1. On the loan to the abbey at Passignano by Tiniosus, see Davidsohn, 1977, 1, p. 1193. See also ASF, *Diplomatico*, Badia di Passignano, 1201 January 4. One 'Tiniosu[s] de Burgo' is also mentioned in a deposition in an 1197 court case that centred on the debts accumulated by the administrators of the church of Santa Maria Novella. See ASF, *Diplomatico*, Santa Maria Novella, 1197 April 29.

ing to Florentine merchant-banking activity at the papal curia from at least as early as 1177.⁹⁰

Roman merchant-bankers had developed relations with the papal curia already during the pontificate of Gregory VII (1073-1085).⁹¹ By the later twelfth century, merchant-bankers from Rome and other Italian cities were offering money-changing services at the papal curia, and they were extending credit both to the popes themselves and to prelates visiting at the curia, but they evidently were not yet active in the transfer and deposit of papal funds. The knightly orders, and mainly the Templars, had been managing the transfer of papal funds and safeguarding papal deposits from at least as early as the middle of the twelfth century, and they were still doing so during the pontificate of Innocent III (1198-1216). The knightly orders possessed an organisational structure that was well suited for the conveyance and protection of substantial sums of money. They were not, however, organised specifically for this purpose. For the knightly orders, the provision of financial services to the popes was secondary to their activities as crusaders. In the later twelfth century, Italian merchants began to wrest from the orders the privilege of managing papal funds.⁹² The precise moment at which the Italian merchants eclipsed the orders is unclear, but Florentine merchants were transferring papal revenues to Rome from at least as early as 1219.⁹³ By the early

⁹⁰ Toubert, 1973, 1, p. 618.

⁹¹ Lopez, 1947; Zema, 1944, pp. 169-175.

⁹² Italian merchants were able to insinuate themselves in the transfer and deposit of papal funds by virtue of the expertise that they had acquired in moving large sums of money in connection with their moneylending operations. Loans incurred at the papal curia by visiting church prelates, particularly those visiting from northern European regions, typically were repaid not at Rome but at the Champagne fairs, which often required the conveyance of large sums of money back to Italy. See Olsen, 1969.

⁹³ In the early years of the thirteenth century, the papacy was using both the Templars and Italian merchants for the transfer and deposit of papal funds, but Italian merchants were the principal bankers of the popes by about the end of the first quarter of the thirteenth century. See Lunt, 1934, 1, p. 51-52; Schneider, 1906, pp. 1-14, esp. 3. In the early thirteenth century, from 1209, the communal government in Florence was often under the direction of Roman *podestà*, and it is tempting to associate these appointments with the Florentine entry into the transfer and deposit of papal funds. The privilege of appointing the *podestà* in north-central Italian cities was sometimes granted to foreign governments in exchange for other concessions. Arezzo granted to Florence the privilege of naming both its *podestà* and its *capitano del popolo* for the next three years in exchange for a loan to the Guelf party of Arezzo. See Santini, ed., 1952, *Capitoli*, no. 55, 1255 September 27, pp. 167-170. The treaty is discussed below in Chapter 7.3.2. It is impossible, however, to establish securely a connection between the appointments of Roman *podestà* at Florence and the penetration of the Florentines in papal banking. Nevertheless, it is possible to identify at least six Roman *podestà* at Florence during the first half of the thirteenth century. The first Roman *podestà* attested at Florence was one Iohannes Guidonis de Papa, *civis Romanus*, who held

fourteenth century, the transfer and deposit of papal funds was dominated by Florentine merchant-bankers.⁹⁴

The significance of Florentine involvement in papal banking, though perhaps ultimately a matter of conjecture, must have been enormous. The transfer and deposit of papal funds afforded Florentine merchant-bankers virtually continuous access to vast sums of liquid capital. In the fourteenth century, the popes began to place limits on the retention of funds by papal bankers, but the bankers usually were able to retain deposits for substantial periods in the thirteenth century. Between the initial deposit of funds with Florentine merchant-bankers and the eventual consignment of the funds to the papal treasury at Rome perhaps several months later, bankers were able to invest profitably in trade and industry.⁹⁵ The investment of papal deposits may have facilitated a rapid expansion of the Florentine woollen textiles industry, which enabled the industry to benefit from economies of scale. It very likely also fuelled the growth of a credit industry, not only at the papal curia but throughout Italy.⁹⁶ Papal banking clearly placed vast

the position in 1209 and evidently had connections with the papacy. Uguiccio Iohannis Petri Leonis, *Romanorum consul*, served as the Florentine *podestà* 1213, and he was succeeded in the following year by Iacobus Petri Iohannis Grassi, *Romanorum consul*, who brought with him a number of Roman administrators. In 1222, Oddo Petri Gregorii, *Romanorum consul*, was the *podestà* of the Florence, and Guido Iohannis Guidi Pape is attested as the Florentine *podestà* in 1226. Finally, in 1234-1235, Iohannes Iudicis, *Romanorum consul*, served the *podestà* of Florence. See Santini, ed., 1895, pp. xvii-lxxii.

⁹⁴ Arias, 1901b; 1905, pp. 166-170, esp. 170.

⁹⁵ Papal bankers occasionally received funds directly from those obliged to render payment to the popes, but the bankers usually received deposits from papal collectors or their agents. Collectors sometimes circumvented the bankers by sending the funds to the papal curia with agents or by carrying the funds to Rome themselves, though such practices were exceptional. When the transfer of funds to Rome was handled by papal bankers, as was usually the case, there were several means by which the bankers negotiated the transfer. They either transferred the money itself, despatched an order for a transfer of funds to a representative at Rome, or sent a bill of exchange. Bankers usually received a percentage of the amount transferred, generally from 0.25 to 4.0 per cent in the early fourteenth century, including expenses, though portage charges sometimes amounted to as much as 8.0 per cent of the total for especially long or dangerous journeys, for example from Jerusalem to Avignon. The period between the deposit of funds with bankers and the consignment of the same funds to the papal treasury, when specified, varied from about two weeks to nearly three months in the early fourteenth century, though most of the transfers were expected to have been completed within about three and a half to seven weeks. See Lunt, 1934, 1, pp. 52-53. For evidence of the charges levied for the transfer of papal funds and of limits on the time allowed for the transfer, see Arias, 1905, pp. 533-541.

⁹⁶ Even as early as 1191, Florentine merchants were active in moneylending at Camaldoli, situated below the Apennine ridge in the northern Casentino near the Giogo Seccheta. See Schiaparelli and Baldasseroni, eds., 1909, no. 1290, 1191 December 15, pp. 289-290, esp. 290. Florentine moneylending in Italy is discussed in greater detail below, Chapter 7.

sums of liquid wealth at the disposal of Florentine merchant-bankers, but it is impossible to determine even very roughly the sums that were passing through their care.⁹⁷

The patronage and protection of the popes also benefited Florentine merchant-bankers in other ways. In 1235, for example, pope Gregory IX (1227-1241) intervened to secure more favourable treatment for Florentine merchant-bankers at the Champagne fairs.⁹⁸ In 1291, pope Nicholas IV (1288-1292) intervened on behalf of several Florentine merchant-bankers to secure their release from the custody of king Philip IV of France.⁹⁹ In 1299, pope Boniface VIII (1294-1303) intervened on behalf of the Spini company of Florence to secure for its representatives fair treatment after the company had declined the request of the English king Edward I (1272-1307) for a sizeable loan.¹⁰⁰ Florentine involvement in papal banking also may have conferred upon Florentine merchant-bankers preferential treatment in the Papal States of Umbria, Romagna, the Marche, and Lazio, where Florentines were trading from before the middle of the thirteenth century. In addition, papal support probably left the Florentines favourably positioned to take advantage of the 'guelfizzazione' of the Italian south during the period from 1265 to 1268. After the advent of the Angevins in Sicily and southern Italy, the patronage of the popes probably helped the Florentine woollen textiles industry to achieve predominance in the vast southern Italian market, which still lacked well established woollen textiles industries of its own.¹⁰¹

⁹⁷ In order to be able to consider the effect of papal banking on the development of trade and industry at Florence, it would be necessary to have long series of records relating first to the deposit of papal funds with Florentine merchant-bankers by papal collectors and then to the consignment of the same funds to the popes at Rome. For the thirteenth century, however, the evidence is simply too sporadic. The documentation from the early fourteenth century is richer, but it is still fragmentary. The evidence nevertheless shows that Florentine merchant-bankers commonly received deposits from papal collectors amounting to as much as 20,000 *floreni* in the later thirteenth century. See again Arias, 1905, pp. 533-541. Examples of Florentine merchant-bankers working in the service of the papal curia in the later thirteenth and early fourteenth centuries are also recorded in Davidsohn, ed., 1896-1908, 3, *passim*.

⁹⁸ Auvray, ed., 1890-1955, 2, no. 2764, 1235 September 13, pp 163-164; Lunt, 1934, 1, no. 184, s.d., pp. 337-338.

⁹⁹ Langlois, ed., 1905, 2, no. 7326, 1291 May 28, pp. 1000-1001; Lunt, 1934, 1, no. 187, s.d., pp. 339-340. On relations between the French king Philip II and Florentine merchant-bankers, see Strayer, 1969. See also Villani, bk. 7, chap. 147.

¹⁰⁰ Rymer, 1704-1732, 2, pp. 839-840; Lunt, 1934, 1, no. 188, 1299 June 12, pp. 340-341.

¹⁰¹ Hoshino used the expression 'guelfizzazione' in reference to the Guelf political disposition of central and south central Italy and to the shift in the political alignment of the Italian south after the armies of Charles I of Anjou defeated claimants to the imperial throne. Sicily and southern

Florentine merchant-bankers also remained active in moneylending at the papal curia, which required papal permission but conferred upon creditors special rights to facilitate the prompt repayment of debts or their speedy recovery in the event of default.¹⁰² The record established by Florentine merchant-bankers both in moneylending at the papal curia and in the deposit and transfer of funds no doubt recommended the Florentines to ecclesiastics outside of the papal curia and also to sovereigns, to communal governments, and to private individuals in need of such services.¹⁰³

5.5. Conclusion

The Florentine woollen textiles industry was already well developed and producing fabrics for export in the early thirteenth century, and it was almost certainly the dominant industry in Tuscany in the second half of the century. Secure evidence for investment in textile manufacturing dates from the early thirteenth century, but ecclesiastical institutions may have been purchasing suburban property alongside the river Arno for industrial development already in the twelfth century. By about the middle of the thirteenth century, investment in mills in particular appears to have increased enormously. To some extent, the apparent increase in investment in urban and suburban mills around 1250 merely reflects an increase in the surviving documentation for the city. It no doubt also reflects urban demographic growth, the increasing food requirement of the urban population, and demand for flour mills to satisfy that requirement. Some of the increased invest-

Italy had been under the sway of the Hohenstaufen emperors, which is to say Frederick I Barbarossa and his descendents. In 1263, however, pope Urban IV invited Charles to assume the crown of Sicily and southern Italy in order to prevent the crown from falling into the hands of Manfred, the son of Frederick II. Charles arrived in Italy in 1265, and by 1268, he had succeeded in enforcing his claim, aided substantially by financing from Florentine creditors. Florentine merchant-bankers continued to extend large amounts of credit to the Angevin king after he had assumed complete control of the Italian south. In return for their financial support of the Angevin-papal alliance, Charles granted commercial concessions to Florentine merchant-bankers in Sicily and southern Italy, some of which clearly facilitated the further expansion of the Florentine woollen textiles industries. By the time that Charles achieved control in the Italian south, however, the Florentine woollen textiles industry was already well developed, and the explanation for its growth must be sought elsewhere. See Hoshino, 1980, p. 67. On Charles I of Anjou, see Dubabin, 1998.

¹⁰² Papal permission was required to make loans to church prelates at Rome because the prelates were compelled to guarantee the loans not only with their own personal property but also with the property of their church. See Lunt, 1934, 1, pp. 53-56, esp. 55.

¹⁰³ Lunt, 1934, 1, pp. 55-56.

ment in mills and other waterworks was nonetheless directed towards the woollen textiles industry.

Investment in the manufacture of woollen textiles for export may have been seen as a risky venture in the later twelfth century and at the beginning of the thirteenth century, and potential investors were perhaps discouraged by limited access to liquid capital or affordable credit. When early and perhaps risky investments began to yield large dividends, however, the industry attracted new investors while providing older investors with incentives to channel their profits back into manufacturing. Improvements in the trade infrastructure both in the territory of Florence and in external markets also helped to attract greater investment. The rise in investment in the woollen textiles industry probably also reflects increased Florentine involvement in papal banking, which afforded Florentine merchant-bankers access to a steady supply of liquid capital.

The growth of industry at Florence was facilitated by substantial communal investment in public infrastructure particularly in the city and its suburbs. By the early fourteenth century, the Florentine woollen textiles industry was clearly enormous. It had developed over the course of the early thirteenth century, and it expanded after the Angevins assumed control of Sicily and southern Italy in 1268. In the later thirteenth century, Florentine relations with the Italian south were characterised by a two-way trade consisting of manufacturing exports, chiefly woollen textiles, and food imports, mainly grain.

6. Infrastructure

The development of the trade infrastructure in the territory of Florence grew out of intense pressures for urbanisation that appear to have emerged in north-central Tuscany in the course of the eleventh and early twelfth centuries. Urbanisation was most profound in the territory of Florence, in the city itself, and in several competing centres in the dioceses of Florence and Fiesole. Florentine jurisdiction in the dioceses was still weak in the early twelfth century, which enabled rural lords to develop market centres and local market networks in the countryside without the expectation of communal encroachment. The nascent Florentine commune nevertheless was beginning to impose its authority particularly on the weaker lords in the immediately surrounding countryside by the middle of the twelfth century. The more powerful lords in the territory of Florence reacted to the early expansion of Florentine jurisdictional rights in the countryside by hastening their efforts to create urban centres on the fringes of the territory to compete with Florence.

North-central Tuscany, and the territory of Florence in particular, was ripe for the development of a large urban centre first because of the absence of such a major centre in the area despite a relatively high population density. Secondly, Florence lay at the convergence of several intra-regional trading zones within Tuscany, and at the convergence of several inter-regional trading zones extending beyond the frontiers of Tuscany. In order to understand both the late development of Florence in relation to other Tuscan towns and then the extraordinary dimensions of Florentine development once it had begun, in other words, it is necessary to place urban development at Florence in the context of regional development throughout Tuscany. The emergence of Florence as the dominant city in Tuscany by the later thirteenth century was in fact the culmination of a broader pattern of regional development similar to the model proposed by advocates of central-place theory. According to this model, population growth around several essentially isolated areas of population aggregation will tend to encourage development at an

intermediate location that is favourably situated 'to articulate trade throughout the region'.¹

Among the cities and towns of Tuscany, the geographic position of Florence was perhaps most ideally suited to the task because of its central location within the densely populated and highly urbanised region of north-central Tuscany. Florence enjoyed the best means of access to trans-Appennine markets, to the Mediterranean Sea, and to the markets in the north-central Italian regions of Umbria, the Marche, and Lazio. Lucca or Pistoia may have possessed better access to some trans-Appennine markets, Pisa to the Mediterranean, and Arezzo or Siena to central Italy, but no Tuscan city enjoyed better access to all three of these areas than Florence. Moreover, Florence was situated on the largest river in the region, the Arno, which was able to support river traffic at least as far inland as Figline Valdarno. The river Sieve, which rises on the eastern slopes of the Monti della Calvana in the extreme western Mugello and flows to the east-southeast for about thirty kilometres before turning towards the south-southwest to join the Arno at Pontassieve, was also capable of supporting light river traffic. The river Elsa was capable of doing the same, and perhaps even the lower portions of the Pesa, the Greve, and the Ema were large enough at certain times of the year to sustain a limited amount of light traffic. Access to these waters no doubt significantly lowered the cost of transport in much of the region, and the rivers served another important function in the economy by providing hydraulic power for mills.

In the early twelfth century, however, Florence was unable to exploit its favourable geographic position because the city was unable to exercise jurisdiction in many parts of its own territory. The weakness of Florentine jurisdiction within the territory stemmed from the vast size of the territory and ecclesiastical fragmentation in the territory, which permitted the emergence and persistence of seigniorial power. Rural lords developed circuits of control around seigniorial centres that grew into important market towns over the course of the twelfth century. The bishops of Fiesole and the men of Figline Valdarno sought to transfer the seat of the diocesan see of Fiesole to Figline to create a new episcopal centre in the heart of the diocese. The Guidi counts developed concentrations of power not only around Monte di Croce in the middle Sieve valley but also at Poggibonsi in the upper Elsa valley, at Montevarchi in the upper Arno valley, and at Empoli

¹ Quoted from Smith, 1976, p. 11.

in the lower Arno valley. The Alberti counts first developed their *castellum* at Prato, which evolved into an independent commune by 1141, and in the later twelfth century they established an entirely new market town at Semifonte, situated just north of Poggibonsi above the Elsa valley.

The development of seigniorial centres in the territory of Florence or along its perimeter, particularly at Prato but also at Poggibonsi and Semifonte, assumed urban or quasi-urban dimensions, and most of them were important market towns already in the twelfth century. Moreover, the development of seigniorial centres in the Florentine countryside constituted a direct challenge to Florence, as the bishops of Fiesole, the Guidi, and the Alberti all sought to protect themselves from the expansion of urban influence in the countryside.² Ultimately, seigniorial power in the Florentine countryside was unable to disentangle itself entirely from the urban commune. By the time that the bishops of Fiesole, the Guidi, and the Alberti seriously began to threaten Florentine authority, development at Florence was already too far advanced, and the commune proved more than capable of resisting the challenge. When the Florentines perceived that the threat posed by these new centres to their own development had become too great, they undertook measures to neutralise the threat, and if possible to quell it completely, at least to the extent that the political climate permitted, up to and including the complete destruction of the centre in question.

As Florence asserted and consolidated its jurisdictional control in the surrounding countryside, the commune secured control of several relatively well developed rural market centres. The Florentines obtained jurisdiction over some of these centres by force, damaging or even destroying them in the process, but even where the centre had been completely destroyed, the Florentines still acquired a trade infrastructure in the immediately surrounding area that remained for the most part intact. These newly acquired centres were gradually integrated with the existing network of market centres already under Florentine jurisdiction throughout the countryside, and several of them eventually assumed a position among the more important secondary markets in the territory. The communal government at Florence encouraged the integration of these centres into the Florentine market network with investment in infrastructure, which strengthened the position of

² On the efforts of the bishops of Fiesole to transfer the seat of the diocesan see of Fiesole to Figline Valdarno, and on development at Poggibonsi and Semifonte, see above, Chapters 2.2.2, 2.3.1. Semifonte is also discussed below in this chapter, along with Montevarchi, Empoli, and another concentration of Guidi power around Dicomano.

Florence itself at the centre of this network and helped to satisfy the increasing demand for staple food imports among the labouring classes in the city. The construction and maintenance of roads and bridges, and security on the roads, particularly along the master roads in the countryside that joined Florence with its secondary markets on the periphery of the territory and with markets beyond its frontiers, were major preoccupations of the communal administration.

Over the course of the twelfth and thirteenth centuries, communications within the territory of Florence and between the city itself and neighbouring regions were facilitated by the gradual descent of the primary roads in certain parts of the territory from the hillsides and ridges to the plains and river valleys. The development of lowland roads provided the most fertile areas of the countryside with reasonable access either to the primary market at Florence or to the network of secondary and tertiary markets located throughout the countryside. The networks of roads and markets in the territory of Florence provided merchants not only with efficient means by which to transfer goods from areas of surplus production within the territory to areas where the demand exceeded production, but also with better access to markets beyond the frontiers of the territory. Within the territory, improved access to markets lowered transaction costs and raised returns on the intensification of agriculture, thus stimulating increases in agricultural productivity. The amelioration of the territorial trade infrastructure also yielded dividends for Florentine industry by improving access to external markets.

6.1. The rural mosaic

Historians of urban development in medieval western Europe have not much considered the fortunes of towns that tried to develop but failed. The winners have attracted most of the attention, while the losers have tended to fade into relative obscurity. By the middle of the thirteenth century, Florence was emerging as the dominant city in Tuscany. Within the dioceses of Florence and Fiesole, Florence was establishing its dominance already by the middle of the twelfth century, but Florentine jurisdiction even within its own territory was still fragile and incomplete around 1150. The Florentine countryside was in fact composed of several rival seigniorial jurisdictions. The commune of Florence struggled to subdue the bishops of Fiesole, two large comital lords, and numerous petty lords who constituted a formidable challenge to Florentine authority, and they also sought to contain the expansion of the network of Vallombrosan monasteries in the territory. In

addition, north-central Tuscany was becoming a breeding ground for urban development in several relatively large and active centres that nevertheless lacked episcopal institutions. These centres were situated for the most part to the south and west of Florence and, notably, just beyond the frontiers of the Florentine diocese. Demographic expansion in the territory of Florence and throughout north-central Tuscany was indeed creating pressures for urbanisation, though it was not yet clear in the middle of the twelfth century that Florence was destined to become the primary beneficiary of urban development in the region.³

By the middle of the twelfth century, Florence had already imposed its authority on numerous rural lords in the immediate hinterland of the city, but it had not yet subjugated the more powerful comital lords in the territory nor even very many rural lords of the second tier such as the Firidolfi, the Pazzi, and the Uberti. The seigniorial powers in north-central Tuscany probably began to recognise towards 1150 that an effective means by which to challenge the increasing hegemony of Florence in the dioceses of Florence and Fiesole lay in the development of rival urban centres at strategic locations on the periphery of the dioceses.⁴ The bishops of Fiesole, the Guidi counts, and the Alberti counts all sought to establish rival urban centres on the periphery of Florentine territory. In the longer term, their efforts were unsuccessful, largely because Florentine hegemony in the territory, though still incomplete, was nevertheless too far advanced by the time that these lords began to react to the dominant position of Florence in north-central Tuscany.

One of the clearer examples of an attempt by a rival lord of Florence to challenge Florentine hegemony in the territory through the development of an urban centre can be found in the effort of the bishops of Fiesole to transfer the seat

³ The fact that Florence was the seat of an episcopal see clearly predisposed Florence to urban development, but it was by no means the *sine qua non*, and it certainly fails to explain how Florence became the dominant city in Tuscany. Other Tuscan towns, such as Colle di Val d'Elsa, Prato, San Miniato al Tedesco, and San Gimignano, for example, experienced a considerable degree of urban development in the later twelfth and early thirteenth centuries even though they all lacked the institution of the bishop. The incongruence of Florentine diocesan and territorial boundaries probably encumbered the territorial hegemony of Florence at first, and along with episcopal weakness at Pistoia and Volterra, it helped to create conditions favourable for the emergence of smaller urban centres that were not supported by episcopal institutions. See Zorzi, 1994, pp. 283-286; Chittolini, 1996, pp. 422-424.

⁴ The main interest of rival lords in the development of seigniorial centres no doubt lay more in maintaining a degree of parity with Florence than in the establishment of an urban centre *per se*. The effect of seigniorial development at certain locations, however, was indeed to create urban or *quasi*-urban centres that challenged Florentine hegemony in parts of the countryside.

of their diocesan see to Figline Valdarno in 1167. Florence had waged war against Fiesole from 1123 to 1125, finally forcing the surrender of Fiesole in September of the latter year. The ecclesiastical structure of the diocese of Fiesole nevertheless remained intact, probably because Florence wished to avoid intervention by the pope. The bishops of Fiesole already appear to have been weaker than their Florentine counterparts before the eruption of hostilities in 1123, but they were weakened even further by the defeat. To maintain independence from Florence, the bishops of Fiesole clearly sensed that it was necessary to put some physical distance between themselves and Florence, and they sought to accomplish this by transferring the seat of their diocesan see to Figline, perhaps from as early as 1141. The Florentines reacted to the attempt by destroying the *castellum* of Figline in 1170, after which the bishops of Fiesole evidently abandoned any notion of transferring the seat of their see to another location. The political union of the dioceses of Florence and Fiesole became complete in 1228, when the administrative functions of the bishops of Fiesole were transferred to the city of Florence. The successful campaign waged by Florence to block the transfer the diocesan seat in 1170 nevertheless effectively united the dioceses of Florence and Fiesole into a single territory with Florence at its centre, providing Florence with the largest territory in north-central Tuscany.⁵

The Guidi counts also challenged Florentine hegemony in the territory through development at several centres of agglomeration. By the middle of the twelfth century, the Guidi counts had established a considerable presence around the market towns of Poggibonsi, Montevarchi, and Empoli. The Guidi controlled a substantial amount of property in and around Poggibonsi by the middle of the twelfth century. They were clearly developing at Poggibonsi a quasi-urban centre both to challenge Florentine influence in that part of the countryside and to exploit an ongoing dispute between Florence and Siena about the border between their respective territories in the area. The power exercised by the Guidi in the area around Poggibonsi was sufficient to provoke Florentine attacks in 1155, 1156, and

⁵ On the war between Florence and Fiesole, the attempt of the bishops of Fiesole to transfer the seat of their diocesan see to Figline Valdarno, and the political union of the dioceses of Florence and Fiesole in the early thirteenth century, see above, Chapter 2.2.2.

1174, the last of which resulted in the establishment of a durable peace between Florence and the Guidi.⁶

Poggibonsi clearly was an important town by the middle of the twelfth century, 'posto quasi nel bilico di Toscana', as Giovanni Villani wrote when describing the destruction of the *castellum* by the Florentines in 1270.⁷ It lay on the via Francigena, the main pilgrimage route between Rome and the north.⁸ Poggibonsi is not securely attested as a market town until 1280, but it had a 'consul mercatorum' by 1221, and it was using its own commercial measure for grain already by 1172, which almost certainly indicates the presence of a market. It was certainly among the most important secondary markets in the Florentine countryside in the later thirteenth century.⁹ Poggibonsi even possessed a subject territory of about 7000 hectares, and the population of the town itself in the 1220s was probably around 6000. By this time, the inhabitants of Poggibonsi had formed organisations of merchants, bankers, grocers, metalworkers, shoemakers, and millers.¹⁰

⁶ On the extent of the Guidi estate in the twelfth century, on their holdings around Poggibonsi and on the efforts of the Florentine commune to diminish Guidi influence there, see above, Chapters 2.1.2, 2.2.2. See also Map 6.

⁷ Villani, bk. 7, chap. 36.

⁸ On the via Francigena in the territory of Florence, see below, Appendix 4.

⁹ For the 'consul mercatorum' at Poggibonsi by 1221, see Cecchini, ed., 1932-1991, 1, no. 170, 1221 July 10-12, pp. 239-250, esp. 240. For references to the commercial measure of Poggibonsi, see ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1172 January 2, 1175 October 26, 1200 July 22, 1208 April 14, 1219 February 4. For the earliest secure references to a market at Poggibonsi from 1280 to 1283, see De la Roncière, 1976, 4, pp. 343-347, no. 39, citing ASF, *Notarile antecosimiano* 18003/R192, *passim*. For evidence attesting to the importance of the market at Poggibonsi in the urban grain supply of Florence in the later thirteenth century, see Gherardi, ed., 1896-1898, 1, pp. 66, 68-69. By the early fourteenth century, the market had also developed a thriving trade in saffron. See Ciasca, ed., 1922, chap. 19, pp. 28-29. See also Pucci, ed., 1995, pt. 2, rub. 6, p. 107; pt. 2, rub. 23, p. 115; pt. 3, rub. 45, p. 139. Grain storage at Poggibonsi from the later twelfth century is also suggested in the name of one 'Ugolinus de granario', who is attested in an act dated from Poggibonsi in 1191. See ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1191 July 20. See also Davidsohn, ed., 1896-1908, 1, p. 156.

¹⁰ On the subject territory of Poggibonsi, see Repetti, 1833-1845, 4, pp. 484, 487. On the population of Poggibonsi in the 1220s, see Fiumi, 1957-1959, pt. 2, p. 477; 1977, p. 99. Fiumi based his estimates on the document of 1221 already cited above, in which 1627 men of Poggibonsi swore to an alliance with the Sienese against Florence. Five years later, 1695 men renewed the same alliance. For the 1221 alliance between Poggibonsi and Siena against Florence and its renewal in 1226, respectively, see Cecchini, ed., 1932-1991, 1, no. 170, 1221 July 10-12, pp. 239-250; no. 234, 1226 November 21-26, pp. 336-345. See also Schneider, ed., 1911, no. 595, 1221 July 10-12, pp. 265-266; no. 710, 1226 November 21-26, p. 315. On guild organisations at Poggibonsi, see again Fiumi, 1957-1959, pt. 2, p. 477; 1977, p. 99. See also Cecchini, ed., 1932-1991, 1, no. 170, 1221 July 10-12, pp. 239-250, esp. 240: 'Infrascripti iuraverunt die IIII idus iulii: Siribuonus Siribelli consul cambiatorum, Gilius Ildibrandini consul mercatorum, [...] Mainettus Ildibrandini

Elsewhere in the region, the Guidi had already developed a strong presence around the market towns of Montevarchi and Empoli. Like Poggibonsi, these towns are both situated near the frontier of Florentine territory.¹¹ In the early thirteenth century, the Guidi appear to have controlled extensive possessions in the upper valley of the river Arno around Montevarchi, including two markets at Montevarchi.¹² Guidi possessions in and around Empoli in the middle of the thirteenth century were equally extensive, including interests in the market at Empoli, in ten commercial shops behind the market, and in eighteen mills in the lower valley of the river Arno near the town.¹³ The Guidi also controlled tolls at Empoli

consul cambiatorum, Salinbene Ghiandolfini consul calzolariorum, [...] Iannes Beringnatti consul pizzicariolorum, [...] Martinus Garzetti consul pizzicariolorum, Bondie Melliorini consul calzolarium, [...] Alderoctus consul fabrorum, Boniannes de Luco consul mercatorum'. See also Schneider, ed., 1911, no. 595, s.d., pp. 265-266.

¹¹ Montevarchi actually lay just beyond the diocese of Fiesole and the territory of Florence. It was, and still is, located just within the diocese of Arezzo in the upper valley of the river Arno. Empoli, on the other hand, lay at the opposite extremity of the territory of Florence in the lower Arno valley, situated just within the Florentine diocese.

¹² The imperial confirmation issued by Frederick II to Guido Guerra in 1220 and 1247 indicate that the Guidi controlled vast properties in the upper Arno valley around Montevarchi, in the Chianti above the left bank of the Arno, and in the Pratomagno above the right bank of the river. See again Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. See also Böhmer, ed., 1971, 1, no. 1241, 1220 November 29, p. 275; nos. 3622-3623, 1247 April, pp. 647-648. In two separate groups of acts dating from the spring of 1254, two branches of the descendants of count Guido Guerra alienated to Florence quarter shares in two marketplaces at Montevarchi and in other properties and rights in and around the market town. The first act appears to refer to two distinct markets at Montevarchi, and the second act clearly identifies them as the old and new markets of Montevarchi. The alienations to Florence also included quarter shares in properties and rights at Montemurlo in the countryside of Prato and near the frontier of the territory of Pistoia. See Santini, ed., 1952, *Capitoli*, no. 16, 1254 March 31-1254 April 29, pp. 48-59; no. 18, 1254 April 6-1254 April 29, pp. 62-64. A market is attested at Montevarchi from 1170. See ASF, *Diplomatico*, Vallombrosa, 1169 March 13; Francovich, 1973, p. 114. Another descendent of count Guido Guerra also alienated a quarter share of properties and rights at Montemurlo to Florence. See Santini, ed., 1952, *Capitoli*, no. 17, 1254 April 6-1254 April 21, pp. 59-62. The five sons of count Guido Guerra had originally agreed to submit to Florentine authority and to alienate to Florence properties at both Montevarchi and Montemurlo, among other places, in April of 1219. See Santini, ed., 1895, *Capitoli*, no. 67, 1219 April 24, pp. 192-195. See also Ammirato, 1640, pp. 11-12, esp. 11; Ildefonso di San Luigi, ed., 1770-1789, 8, p. 136; Repetti, 1833-1845, 3, p. 442. On Florentine collaboration with the Guidi counts at Montemurlo in the early thirteenth century, see again Villani, bk. 5, chap. 31.

¹³ The Guidi had been prominent property holders in the lower Arno valley from at least as early as the beginning of the twelfth century. See for example ASF, *Diplomatico*, Santo Stefano di Empoli, 1124 October. Florence secured a treaty of submission from Empoli already in 1182, but the treaty made special provisions that released Empoli from the obligation to defend Florentine interests against the Guidi. For the treaty, see Santini, ed., 1895, *Capitoli*, no. 12, 1182 February 3, pp. 17-18. The confirmation of Frederick II to Guido Guerra in 1220 indicates the territorial extent of Guidi control in the lower Arno valley around Empoli. The Guidi controlled the left bank of the lower Arno from Empoli and at least as far downstream as Pagnana, on the right bank

'per terram et aquam'. It is likely that the plains around Empoli were among the most productive lands in the territory of Florence.¹⁴ The Florentines may have been placing pressure on the Guidi to relinquish their holds on Montevarchi and Empoli in the early thirteenth century. Already in 1245, the Guidi alienated numerous parcels of land at Empoli and at nearby Petroio.¹⁵ They no longer harboured designs to challenge Florentine expansion at Montevarchi and at Empoli, and indeed their relationship with Florence in the later twelfth and early thirteenth centuries was characterised by cooperation. In the economic and political environment of the early thirteenth century, it is also likely that the fragmented concentrations of Guidi power in Tuscany were becoming increasingly difficult to administer.

Soon after the middle of the thirteenth century, the Guidi alienated substantial interests in their holdings at both Montevarchi and Empoli, perhaps to satisfy debts, though there may have been other reasons behind the alienations.¹⁶ The

of the river around Cerreto Guidi, Collegonzi, and Vinci, and in the lower valley of the river Elsa at Granaiole and Monterappoli. The 1247 privilege recognised the subdivision of Guidi territory in and around Empoli. See again Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. The evidence for the Guidi in and around Empoli is supplemented again in three separate groups of acts redacted over the course of nearly a year. Three different descendants of count Guido Guerra each alienated a quarter share of properties and rights in and around Empoli. See Santini, ed., 1952, *Capitoli*, no. 20, 1254 August 12, pp. 65-75; no. 22, 1254 September 10-November 10, pp. 78-86; no. 43, 1255 May 6-July 28, pp. 130-141. The Guidi renounced the last of their seigniorial rights at Empoli only in 1273 in order to extinguish a debt with the commune of Florence. See Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 129-135.

¹⁴ The best indication of the relative level of staple food production between specific areas in the territory of Florence in the thirteenth century is provided in a list that enumerates the quantities of grain to be contributed by rural communities in Florentine countryside towards the supply of the besieged town of Montalcino. Presumably, the quantities to be consigned by the various rural communities reflected output levels in some way. Of the communities mentioned, only one was obliged to contribute a greater quantity of grain than Empoli. See Paoli, ed., 1889, pp. 103-177.

¹⁵ For the Guidi alienations at Empoli and at Petroio, see ASF, *Diplomatico*, Stozziane Uguccone, 1245 May 31.

¹⁶ For the alienations themselves, see the references cited above. At least one of the descendants of count Guido Guerra Vecchio may have been compelled to alienate property in order to repay his debts. Three separate acts dating from 1240, sewn together, indicate that the creditors of the grandson of the count, also named count Guido Guerra, were about to seize from the count the *castrum* of San Leonino, situated above the torrent Moscia near Londa. The sewn charters, redacted over a period from late July to early December in 1240 were to be sold at auction in 1918 by the auctioneering firm Christie, Manson & Woods, 8 King Street, St. James's Square, London SW1. Twelve other items dating from before the middle of the fourteenth century also were to be sold at the same auction. For the details of the sale, see *Catalogue of the Medici archives, consisting of rare autograph letters, records and documents, 1084-1770, including one hundred thirty-six holograph letters of Lorenzo the Magnificent, the property of the Marquis Cosimo de' Medici and the Marquis Averado de' Medici*. The catalogue provides English summaries of the

Guidi were certainly experiencing difficulty with Florentine creditors already in 1240, but the Guidi may have incurred at least some of their debts in the early thirteenth century in order to finance a restructuring of their real estate portfolio. By the middle of the thirteenth century, if not earlier, the Guidi probably recognised the economic and political authority of Florence in the dioceses of Florence and Fiesole as an already established fact, and they may have resigned themselves to exploiting Florentine urban development rather than challenging it. The Guidi sought to consolidate their holdings in an area of the Florentine countryside in which they already enjoyed considerable jurisdiction and power, in which Florentine jurisdiction was weak, and in which they would be in a favourable position to exploit urban expansion at Florence. The area around Dicomano, situated in the middle valley of the river Sieve northeast of Florence, met these criteria.

Certainly by the early thirteenth century, and probably much earlier, the Guidi were firmly established around Dicomano.¹⁷ The bishops of Florence were expanding their estate on the left bank of the river in the middle Sieve valley between Borgo San Lorenzo and Ampinana, and at various points along the right bank of the river as far as the confluence of the Sieve with the Arno, including the important Guidi *castellum* of Monte di Croce.¹⁸ Florentine jurisdiction in the area

original texts. The Guidi alienated rights to satisfy debts in 1273. See again Ildelfonso di San Luigi, ed., 1770-1789, 8, pp. 129-135.

¹⁷ See the 1220 confirmation of imperial privilege granted by Frederick II to Guido Guerra indicates the extent of Guidi holdings in the area around Dicomano in the early thirteenth century. See again Ildelfonso di San Luigi, ed., 1770-1789, 8, pp. 96-104; Böhmer, ed., 1971, 1, no. 1241, 1220 November 29, p. 275. Already at the beginning of the twelfth century, the Guidi count Albertus, from a branch of the lineage based at Modigliano in Romagna, donated to the abbey at Camaldoli all of his holdings in the parish of Sandetole, situated a short distance downstream from Dicomano near the confluence of the Sieve and the torrent Moscia. Towards the end of the twelfth century, the emperor Henry VI conceded to the Guidi the *castellum* of Vicorati, situated just north of Londa. See Pirillo, 1984, pp. 13, 37, n. 12. The entire parish of Dicomano was under Guidi jurisdiction in 1260. See Paoli, ed., 1889, p. 175.

¹⁸ On the extent of the episcopal estate in the middle and lower Sieve valley in the twelfth and early thirteenth centuries, see Dameron, 1991, pp. 78-79, 101-107. The Florentines had destroyed the *castellum* of Monte di Croce already in 1153 or 1154, but the Guidi maintained their hold on Monte di Croce until early in the second quarter of the thirteenth century. Even as late as 1226, the Guidi counts were still collecting the *datium* at Monte Croce, and the bishops of Florence gained control over the *castellum* only towards the end of 1227. See Dameron, 1991, pp. 105, 239, n. 53, citing ASF, *Manoscritti* 48BIS (*Bullettone*), p. 289. Dameron cites the page number from the ASF copy of the *Bullettone*, but the page numbers are skewed after fol. 68r because the same page number is given for both 68r and 68v. The entry attesting to the fact that the Guidi were still collecting the *datium* from Monte di Croce in 1226 is on fol. 145v, which should be p. 290. In 1227, the Guidi sold the *castellum* of Monte di Croce and appertaining privileges, including the right to collect the *datium*, to the Adimari lords, who in turn sold the property and

nevertheless was still weak, especially around Dicomano itself. In 1245, the Guidi alienated property on the right bank of the Sieve at Montesassi and at San Martino a Scopeto, but they dominated the left bank of the Sieve from Ampinana virtually to the confluence of the Sieve with the Arno.¹⁹ In addition, the Guidi still controlled a vast territory along both sides of the Apennine ridge, from the valley of the river Lamone in the north to the Casentino in the south. Dicomano was also well situated to benefit from urban growth at Florence. Attested as a market town from 1211, Dicomano was probably becoming an important centre for the distribution of foodstuffs imported by Florence from eastern Romagna already by the middle of the thirteenth century. Guidi control of Dicomano and its environs would have enabled the Guidi to benefit enormously from trade between Florence and eastern Romagna.²⁰

The restructuring of the Guidi real estate portfolio in the second quarter of the thirteenth century is suggested by the fact that Guido Guerra appears to have substantially increased his holdings in the middle Sieve valley during this period. Between 1220 and 1247, Guido Guerra acquired jurisdiction over Dicomano itself along with at least half of its market, and he also acquired the important *castrum* of Pozzo, which probably contained a minor market by 1300.²¹ The Guidi aliena-

rights to the bishops of Florence. See ASF, *Manoscritti 48BIS (Bullettone)*, fols. 145r, 146v. See also Nelli, 1985, pp. 3-9, 11-14.

¹⁹ For the Guidi alienations at Montesassi and at San Martino a Scopeto, see ASF, *Diplomatico*, Stroziane Ugucione, 1245 September 16.

²⁰ A market is attested at Dicomano for the first time in ASF, *Diplomatico*, Santissima Annunziata, 1211 June 5. From the end of the thirteenth century and in the early fourteenth century, there are numerous references to repairs rendered on the roads in the region precisely to facilitate the urban grain supply of Florence. For road repairs commissioned at Pozzo by the *Sex de blada*, see Conti, ed., 1996, no. 7, 1305 August 13, pp. 55-57; no. 8, s.d., pp. 57-58. The use of Dicomano was sometimes favoured over Borgo San Lorenzo as the port of entry for foodstuffs imported from Faenza because virtually the entire passage between Dicomano and Faenza was controlled by the Guidi, and travel by this route therefore necessitated the payment of fewer tolls. The passage between Faenza and Borgo San Lorenzo, on the other hand, crossed the conflicting jurisdictions of the Guidi and the Ubaldini, requiring the payment of additional tolls. Dicomano was also favoured because it provided access to water and a more cost-efficient means of conveying shipments of grain to the city. Port facilities are attested on the river Sieve at Dicomano from the middle of the fourteenth century, though it is likely that the facilities existed from much earlier. Borgo San Lorenzo also may have provided access to water, but no port facilities are attested there. For the earliest reference to port facilities at Dicomano, see De la Roncière, 1976, 4, p. 273, n. 183, citing ASF, *Or San Michele* 251, fol. 2v [1350 November]. On the trans-Apennine passages between Dicomano and Borgo San Lorenzo on the one hand, and Faenza on the other, see below in this chapter, and Appendix 4.

²¹ The imperial confirmation granted by Frederick II to Guido Guerra in 1247 includes a confirmation of Guidi possessions and jurisdiction at Dicomano, which had not been included in the 1220

tions at Montevarchi and Empoli, and the consolidation of Guidi interests in the northeastern portion of Florentine territory, nevertheless constituted a tacit acknowledgement of Florentine hegemony within the dioceses of Florence and Fiesole. The acquisition of Dicomano was intended not so much to challenge urban development at Florence as to benefit from it as much as possible. The Guidi relinquished their hold on possessions that, at any rate, probably would have been too costly for them to try to maintain in the face of persistent Florentine pressure, threats on their claims from other Tuscan towns, and probably also escalating administrative costs.²² At the same time, they strengthened their control in an increasingly strategic area of the countryside in which Florence was still unable to exercise authority, making the best of what was for them perhaps an unfortunate state of affairs.

Another clear example of an attempt by a rival lord to challenge Florentine hegemony in the territory through the development of an urban centre occurred at Semifonte, situated north of Poggibonsi above right bank of the river Elsa, which was controlled by the Alberti counts of Prato. The Alberti were imperial vassals who controlled properties mostly in the territories of Bologna, Florence, Pistoia, Prato, and Siena. By about the middle of the twelfth century, the Alberti had established control in two more or less distinct zones in the territory of Florence and along its frontiers. When the last of the Cadolingi line died in 1113, the Alberti inherited extensive properties on the northern end of the Monti della Calvana along the frontiers between the territories of Florence, Pistoia, and Bologna. The properties included the fortified market town of Mangona, situated in the extreme western Mugello immediately northeast of the Calvana on a road between Barberino di Mugello and Montepiano. The inheritance from the Cadolingi also included the *castellum* and market town of Vernio in the valley of the river Bisenzio

confirmation. It should be stressed, however, that the imperial confirmation of 1247 perhaps represents more Guidi claims than reality. Between 1220 and 1247, Guido Guerra nevertheless appears to have acquired considerable properties and rights in and around Dicomano, including at least fifty per cent interest in the market at Dicomano. See again Ildelfonso di San Luigi, ed., 1770-1789, 8, pp. 96-109. The existence of a market at Pozzo by the beginning of the fourteenth century is suggested by the fact that the town was using its own system of weights and measures by 1300. See De la Roncière, 1976, 1, p. 22; 4, p. 10, n. 16.

²² As already noted above, the Guidi sought to alienate the *castellum* of Montemurlo to Florence as early as 1209 owing to their inability to defend the site against Pistoia, but the sale was blocked the Porciani lords, who also owned a share of the *castellum*. See again Villani, bk. 5, chap. 31.

immediately north of the Calvana.²³ In the areas south and west of Florence, the Alberti controlled numerous properties, with most of their more important holdings concentrated between the rivers Elsa and Pesa, and especially between the torrent Virginio and the Pesa.²⁴

The areas north of Florence controlled by the Alberti presented no realistic opportunities for the development of an urban centre to challenge Florentine hegemony in the territory. The Elsa valley was more promising, as the Guidi attempt to develop Poggibonsi into an urban centre around the middle of the twelfth century indeed illustrated. In 1177, the Alberti counts initiated the construction of a new market centre at Semifonte, situated above the fertile valley of the river Elsa along the crest of a ridge between the villages of San Donnino and Petrognano, twenty-seven kilometres from both Florence and Siena.²⁵ In addition to its situation near the periphery of Florentine territory and equidistant from both Florence and Siena, Semifonte occupied a strategic position above the road from San Pietro in Bossolo through Tavarnelle in Val di Pesa, Barberino Val d'Elsa, and Sant'Appiano to Poggibonsi. It also occupied a site traversed by an eastern variant of the via Francigena, and it was accessible from other branches of the via Francigena, and from both San Gimignano and Volterra.²⁶

Beginning in 1182, when Semifonte enters the documentary record for the first time, the Florentines undertook a variety of diplomatic and military efforts to discourage both the consolidation of Alberti control in the region and the further development of Semifonte.²⁷ The efforts appear to have been largely successful,

²³ Davidsohn, 1977, 1, pp. 547-554, 564-566, 641-643; Davidsohn, ed., 1896-1908, 1, pp. 83-91. See also Dameron, 1991, pp. 70-73. Mangona is first attested as a market town in 1184. See Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357; no. 188, s.d., pp. 358-359. Vernio is attested as a market town probably from 1221. See Fantappiè, ed., 1975, no. 15, 1221 May 20, pp. 78-79, esp. 79.

²⁴ On the extent of the Alberti estate both north and south of the river Arno after the middle of the twelfth century, see above, Chapter 2.1.2. See also above, Map 7.

²⁵ On the brief history of Semifonte, see Salvini, 1969. For a chronicle account of the construction of Semifonte, which dates the beginning of construction to 1177, see Sanzanome, p. 134. Semifonte is attested in contemporary documents, however, only from 1182. See Santini, ed., 1895, *Capitoli*, no. 13, 11[8]2 March 4, pp. 18-20, esp. 19. Within a very short space of time, Semifonte developed into a market centre of some consequence. Semifonte was using its own system of weights and measures by 1195, which indeed suggests the presence of a market, and the market itself is attested at Semifonte a little more than a year later. See below in this chapter.

²⁶ This road is described in detail below, Appendix 4. See also Salvini, 1969, pp. 30-33.

²⁷ The earliest reference to Semifonte occurs in the 1182 treaty of submission negotiated between Florence and the *castellum* at Pogna. When Pogna submitted to Florentine authority, the treaty

at least until 1185, when the emperor Frederick I Barbarossa passed through Florence and confirmed the rights and the possessions in the countryside of the rural patrilineages, the monastic houses, and the bishops. He also divested the Florentine commune of all jurisdictional rights in the countryside up to the walls of the city itself. The complete cancellation of urban jurisdiction beyond the city walls was certainly unenforceable, however, and in 1187, Henry VI, the son of the emperor Frederick, granted to Florence limited jurisdiction in the surrounding countryside. Most of the lands controlled by the Alberti, including Semifonte, were outside the area subject to Florentine jurisdiction as indicated in the 1187 concession of Henry VI. Count Albertus quickly seized the opportunity, and within less than two months of the royal concession, assuming the title of 'count of Semifonte', redoubling efforts to complete the construction and settlement of Semifonte, and making preparations for anticipated confrontation with the Florentines.²⁸

During the last decade of the twelfth century, Semifonte was beginning to assume many of the characteristics of an important town. In 1192, the abbot of Passignano purchased a house at Semifonte for the construction of a hospital adjacent to property already owned by the abbey and earmarked for the construction of a church.²⁹ A month later, the abbot acquired ecclesiastical rights at Semifonte in the parish of the Bagnano gate, situated in the northern quarter of the town and extending beyond the walls of the *castellum*.³⁰ There were also at least three other

included a promise not to assist in the construction of Semifonte or any other *castellum*. See again Santini, ed., 1895, *Capitoli*, no. 13, 11[8]2 March 4, pp. 18-20, esp. 19. The treaty and the Florentine assault against Pogna are discussed above in Chapter 2.2.2.

²⁸ The grant of limited Florentine jurisdiction to a circumscribed area extending from the city towards the west on the Settimo and Sesto-Campi plains for only three miles, or about five kilometres, and for only one mile in the direction of Fiesole. In other parts of the countryside, the area subject to urban jurisdiction extended for only ten miles from the city, which excluded from urban jurisdiction the important towns of Castelfiorentino, Certaldo, Empoli, Figline Valdarno, Poggibonsi, and Signa. Even within the area subject to Florentine jurisdiction, lords remained exempt from urban jurisdiction. The 1185 cancellation of Florentine jurisdiction in the countryside by Frederick I, the partial restoration of urban jurisdiction by Henry VI in 1187, and the efforts of the Alberti to complete the construction of Semifonte are discussed above, Chapter 2.2.3.

²⁹ ASF, *Diplomatico*, Badia di Passignano, 1192 November 15: 'casam unam cum plateam positam in castro de Simifonte in burgo de [Cascian]ese'. In addition to the adjacent property already owned by the abbey, the house was also bordered by a road and the walls of the *castellum*.

³⁰ ASF, *Diplomatico*, Badia di Passignano, 1192 December 24: 'parrochiam in castello de Simifonte ab ea scilicet parte que dicitur porta de Bagnolo'. Another document includes a promise issued by the consuls of Semifonte to respect the rights of Passignano and its exemption from taxes in the area assigned to the abbey 'usque murum de porta Tezanelli'. See ASF, *Diplomatico*, Badia di Passignano, 1192 December. The location of the Tezanelli gate is not entirely clear. In

ecclesiastical institutions established either within or just outside the walls of the *castellum*, and Semifonte was governed by a group of consuls and advisers.³¹ By 1195, a market evidently had been established at Semifonte, probably just outside the eastern gate of the *castellum* proper in the suburb of Petrognano.³² The complete enclosure, including the *castellum* and the suburb, may have covered an area nearly as large as the area covered by the Florentine walls of 1172-1175.³³

After emperor Henry VI died in Sicily towards the end of September 1197, the Florentines along with their allies in Tuscany quickly took the initiative. Within eight months of the death of Henry, the Florentines negotiated a treaty with the papal legates for Tuscany and representatives from Arezzo, Lucca, Siena San Miniato al Tedesco, Volterra, count Guido Guerra, the Aldobrandeschi count Ildebrandinus, Figline Valdarno, Certaldo, and even count Albertus. The treaty established the *societas Tuscie*, or 'Tuscan League', and its main purposes were to discourage the loyalty of Pisa and Pistoia towards the German emperors and to organise a coordinated resistance against any future attempt by the emperors to exercise their claims in Tuscany. Within a year of the formation of the 'Tuscan

his early fourteenth century description of the *castellum*, Pace da Certaldo indicated that the *castellum* itself, the walls of which were more than one Florentine mile in circumference, 'oltre un nostrano miglio', possessed only three gates, the Bagnano gate in the north, the Roman gate in the east, and the San Niccolò gate in the south. Outside the Roman gate, there existed an enclosed suburb of residential and commercial buildings that extended down to another gate, the *Porta al Borgo*. See Pace da Certaldo, pp. 27-29. Repetti also identified another gate, the Zaganella or Razanella gate, evidently based on the same document of 1192 December cited above. See Repetti, 1833-1845, 5, pp. 242-244, esp. 243. Salvini argued that the Razanella gate was situated near San Donnino, which is to say the late twelfth century church of 'Sancta Iehrusalem'. See Salvini, 1969, p. 63.

³¹ In addition the church of 'Sancta Iehrusalem', or San Donnino, there were churches dedicated to the Virgin Mary, Santa Orsola, Santa Croce dello Salvatore, San Stefano, and San Michele Arcangelo, the latter of which may have been the cathedral church of Semifonte, perhaps established by the abbey at Passignano. See Pace da Certaldo, pp. 29-30; Salvini, 1969, pp. 47-48. Salvini was also citing Isidoro del Lungo, *Semifonte*, Castelfiorentino, 1910, which I have not seen. For evidence of the consuls of Semifonte and their advisors, see again ASF, *Diplomatico*, Badia di Passignano, 1192 December.

³² Semifonte certainly possessed its own commercial measure for grain by 1195, which implies the presence of a market, and the existence of a market at Semifonte is confirmed in 1196. For the measure of Semifonte, see ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1195 August; Enriques Agnoletti, ed., 1990, no. 247, 1197 July 3, pp. 175-177; Pagliai, ed., 1909, no. 532, 1197 August 30, p. 238. For explicit references to the market at Semifonte, see ASF, *Diplomatico*, Badia di Passignano, 1196 February 10; Pagliai, ed., 1909, no. 532, 1197 August 30, p. 238. The market was likely situated in the suburban enclosure on the site of the modern village of Petrognano.

³³ On the dimensions of Semifonte, see Salvini, 1969, pp. 62-70, esp. 70.

League', the Florentines secured the appointment of their own representative as prior of the League, evidently consolidating their dominant position in the League.³⁴ The death of Henry VI and the formation of the 'Tuscan League' gave the Florentines the leverage they needed for an assault on Semifonte, which was evidently defended by vassals of the Alberti counts. The initial attempts of the Florentines to subdue Semifonte were indecisive, but in the famine year of 1202, the Florentines reached a settlement with representatives of Semifonte, and the *castellum* was razed to the ground.³⁵

6.2. The Florentine inheritance

The expansion of Florentine jurisdiction in the surrounding countryside must have been appreciable in the twelfth century, but rural lords may have felt threatened by the increasing dynamism of the city, which was no doubt equally appreciable. The bishops of Fiesole and the men of Figline Valdarno, the Guidi counts, and the Alberti counts all sought to establish dynamic urban centres at strategic locations on the periphery of Florentine territory where urban jurisdiction was weak. They wished to disentangle themselves from Florentine influence, to challenge the spread of urban jurisdiction in the countryside, to consolidate control within their own circuits of power, and to create their own brands of urban dynamism. It is notable that most of the places at which they pursued these goals eventually became major secondary market towns in the Florentine countryside. Empoli, Figline, and Poggibonsi were clearly among the more important centres of distribution and exchange in the Florentine market network by the later thirteenth century. The only other secondary market towns in the Florentine countryside that were of comparable stature in the later thirteenth century were those at Borgo San Lorenzo, Castelfiorentino, and San Casciano in Val di Pesa, all of which were controlled to some extent by the bishops of Florence.³⁶

³⁴ The formation of the *societas Tuscie*, or 'Tuscan League', is discussed above, Chapter 2.3.1.

³⁵

³⁶ In February of 1282, the Florentine consuls decided to despatch notaries to four different markets in the Florentine countryside to supervise the grain trade. The consuls considered five possible sites: Borgo San Lorenzo, Empoli, Figline Valdarno, Marcialla, and Poggibonsi. There appears to have been little question that notaries were to be sent to Empoli, Figline, and Marcialla, and the choice of the fourth site was between Borgo San Lorenzo and Poggibonsi. Because Borgo San Lorenzo was controlled by the Florentine bishops, communal officials may have considered charging the bishops with supervision of the market instead of one of their notaries. Ultimately, however, the consuls despatched the fourth notary to Borgo San Lorenzo rather than Poggibonsi,

The incorporation of the markets at Empoli, Figline, and Poggibonsi into the Florentine market network also entailed the incorporation of subsidiary markets, administrative centres at which seigniorial rents were collected, and indeed entire local market networks and administrative infrastructures. The Florentine acquisition of rights at Empoli from the Guidi counts in 1254, for example, afforded the commune of Florence not only full rights to the Empoli market but also rights to a market at Vinci and rights to eighteen mills situated mostly on the Arno between Empoli and the confluence of the Arno with the river Elsa.³⁷ The administration of the vast properties in the areas around Empoli that were controlled by the Guidi counts, extending from Monte Albano in the north to Granaiolo in the south, no doubt necessitated the development of an infrastructure suited to the task, which the Florentines also inherited. It is even possible that the market centres in the various areas under Guidi control already enjoyed some degree of market integration when the Florentines acquired outright jurisdiction at Montevarchi and Empoli.³⁸ The submission of the Alberti counts to Florentine authority in 1200

perhaps because the Florentines had already decided to send a notary to Marcialla, which was situated less than fifteen kilometres from Poggibonsi. See Gherardi, ed., 1896-1898, 1, pp. 66, 68-69. Communal officials also may have been less than sanguine about leaving supervision of the Borgo San Lorenzo market entirely in the hands of the bishops. Most importantly, Poggibonsi only recently had been compelled to submit to Florentine authority, and communal control still may have been precarious. Poggibonsi was always more important as a market centre than Marcialla, however, and over the course of the later thirteenth and early fourteenth centuries, Poggibonsi displaced Marcialla as the major secondary market in the area. In 1346, the commune again dispatched officials to the most important secondary markets in the countryside to discourage hoarding and speculation in grain. Named among these markets, in addition to Borgo San Lorenzo, Empoli, and Figline, were Poggibonsi, Montelupo, San Giovanni Valdarno, and Scarperia, but not Marcialla. See Pinto, 1972, pp. 23-24, n. 45, citing ASF, *Abbondanza* 102, 8, fol. 46v. On the importance of Empoli and Figline in the distribution network in the Florentine countryside from the later thirteenth century, see De la Roncière, 1976, 3, pp. 820-822.

³⁷ See again Santini, ed., 1952, *Capitoli*, no. 20, 1254 August 12, pp. 65-75; no. 22, 1254 September 10 and 1254 November 10, pp. 78-86; no. 43, 1255 May 6 and July 28, pp. 130-141.

³⁸ Well integrated markets within the areas controlled by the Guidi would have provided greater scope for specialisation. Perhaps more importantly, they would have been able to absorb the detrimental effects of shocks to the food supply with greater speed and efficacy than more poorly integrated markets. In the event of a production shortfall in upper valley of the river Arno around Montevarchi, for example, the Guidi may have been able to divert surplus production from their estates in the lower Arno valley to offset the shortage. In view of the nature of the evidence, market integration of this sort, admittedly, would be difficult if not impossible to document. Economists measure market integration by the degree to which prices covary between markets. If variations in grain prices between two geographically distinct areas subject to Guidi control, for example Montevarchi and Empoli, were more closely correlated than variations in prices between one area controlled by the Guidi and another area controlled by Florence, then markets in the areas under Guidi control would be considered more integrated than markets across the two jurisdictions. It is very unlikely, however, that even the most painstaking search through the pertinent archival repositories would yield series of prices sufficient to facilitate such a comparison. An-

probably achieved a similar result, bringing into the Florentine ambit the numerous Alberti *castella*, including Pogna and its extra-mural market of Marcialla, and the interlocking infrastructure that joined the Alberti *castella* and facilitated their effective administration.³⁹

The incorporation of the diocese of Fiesole and its network of large Vallombrosan monasteries into the territory of Florence may have been as important for Florence as the integration of seigniorial markets networks into the Florentine market network.⁴⁰ Individually, the larger Vallombrosan monasteries developed

other means by which to infer market integration, though perhaps only somewhat more amenable to consideration on the basis of the surviving evidence, would involve an assessment of the evolution of weights and measures within various jurisdictions or trading zones. One would expect that the increased orientation of commercial activity around a dominant centre within a particular trading zone, or even around several centres, would eventually result in the harmonisation of weights and measures throughout the zone with the measure that prevailed in the dominant centre. Both Montevarchi and Empoli used local commercial measures for cereals alongside the measures used on the urban market at Florence. The harmonisation of weights and measures in the Florentine countryside with those used on the urban market at Florence, which would have lowered the cost of exchange between the city and the surrounding countryside, suggests that market integration in the territory increased from about 1200. On weights and measures in the territory of Florence, see below, Appendix 10.

³⁹ Marcialla probably developed as an extra-mural market just beyond the walls of the *castrum* of Pogna while the *castrum* was under the control of the Alberti counts. The area around Marcialla is poorly documented before the later thirteenth century, however, and the town is not specifically attested as a market town until 1269. Marcialla was nevertheless an important market town in the countryside of Florence by 1282, as indicated above, and one of the four principal grain markets in the Florentine hinterland. On the identification of Marcialla with the *castrum* of Pogna, see Repetti, 1833-1845, 3, p. 53; 4, pp. 498-499. For evidence of a major grain market at Marcialla in the later thirteenth century, see again Gherardi, ed., 1896-1898, 1, pp. 68-69. The earliest explicit reference to a market at Marcialla that has thus far come to light appears in the *Liber extimationum* of 1269. See Brattö, ed., 1956, par. 79, p. 31. A fragment of a notarial cartulary containing acts that date mostly from Marcialla, Uglione, and Lucardo in 1237-1238 nevertheless suggests something of the vitality of the agricultural economy in area already during the second quarter of the thirteenth century. The cartulary fragment is published in Mosiici and Sznura, eds., 1982. The market at Marcialla is attested frequently from 1281 to 1303 in the cartulary of a notary from Magliano, located two kilometres west-northwest of Barberino Val d'Elsa and only three kilometres south of Marcialla. See De la Roncière, 1976, 4, pp. 343-347, no. 25, citing ASF, *Notarile antecosimiano* 18003/R192.

⁴⁰ The diocese of Fiesole in particular was distinguished from that of Florence by the greater presence of large Vallombrosan monastic foundations. There were actually as many Vallombrosan foundations in the diocese of Florence as there were in the diocese of Fiesole by the middle of the twelfth century, but those situated in the diocese of Fiesole were far larger. The Vallombrosan houses founded in the diocese of Florence before the middle of the twelfth century, according to Vasaturo, were San Salvatore di Settimo (after 998), San Pietro di Moscheta (constructed 1048-1050), San Paolo di Razuolo (after 1047), San Salvi (from 1048), Santa Maria di Susinana (by 1090), Santa Trinita (extant by 1077, Vallombrosan by 1092), and Santa Maria di Vigesimo (by 1074). The abbeys at Moscheta, Razuolo, Susinana, and Vigesimo all appear to have been relatively small houses, and they all occupied agriculturally marginal areas of the countryside in the mountains north of the city. Settimo, San Salvi, and Santa Trinita were situated in the immediate

their own administrative infrastructures as well as their own networks of distribution and exchange, which facilitated the oversight of dependent institutions and relations of various sorts between parent institutions.⁴¹ Some of the larger Vallombrosan monasteries also pursued strategies of estate management and property investment that were designed to amplify relations with the city of Florence itself. Towards the middle of the twelfth century, the abbey at Vallombrosa, situated on the eastern escarpment of the Pratomagno, began to invest heavily along the primary arteries of communication between the Pratomagno and the city. The abbots of Vallombrosa acquired numerous properties east of Florence on the right bank of the Arno, especially at Guarlone, which may have served as a point of reference for relations between the abbey and the city.⁴² During the same period, the

environs of the city, but the abbey at Settimo was no longer attached to the Vallombrosan order by 1090. The suburban abbeys of San Bartolommeo di Ripoli and San Pancrazio later became Vallombrosan houses, and they are both mentioned in a bull of pope Innocent IV (1243-1254) confirming papal protection over the monasteries of the Vallombrosan order. See ASF, *Diplomatico*, Badia di Ripoli, 1253 June 20. In the diocese of Fiesole, the Vallombrosan houses founded before the middle of the twelfth century were San Casciano di Montescalari (by 1040), San Michele di Passignano (extant from perhaps as early as the fifth century, Vallombrosan by 1049), Santa Maria di Nerana a Tagliafuni (by 1090), San Salvatore di Sofena (extant by 1014, Vallombrosan by 1090), San Lorenzo di Coltibuono (constructed in 1037, Vallombrosan in 1095), Santa Maria di Caviglia (founded by 1075, Vallombrosan by 1153), and the abbey of Vallombrosa itself, Santa Maria d'Aquabella (not before 1035). Montescalari, Passignano, Coltibuono, and Vallombrosa in particular controlled enormous estates in some of the more productive areas of the diocese of Fiesole. See Vasaturo, 1962. For the locations of Vallombrosan monastic foundations in the territory of Florence, following Vasaturo, see above, Map 5.

⁴¹ The abbey at Passignano, situated in the Chianti in the valley of the river Pesa, possessed dependent institutions at Vigesimo in the western Mugello near Barberino di Mugello and in the upper valley of the river Arno near Figline Valdarno. These institutions appear to have acted for the most part independently, but there must have existed an administrative infrastructure sufficient to facilitate some degree of oversight. More direct intervention of one Vallombrosan monastery in the affairs of another is attested in ASF, *Diplomatico*, Badia di Coltibuono, 1238 April 19. When the abbot of the monastery of Santa Trinita a Spineta, in the diocese of Chiusi, abandoned his station without license to go to 'ultramarinas partes' in 1238, the abbot of Coltibuono travelled to the monastery and instructed its residents not to alienate property or to permit any alienations of property during the absence of the abbot Ildebrandus. The abbot of Coltibuono further instructed the residents at Spineta not to receive the wayward abbot before he had gone to Coltibuono to perform penitence. The instructions are followed by an inventory of the possessions of Santa Trinita a Spineta, indicating that the intervention was intended, above all, to protect the financial assets of the monastery at Spineta. See also Majnoni, 1981, p. 131. The donation of the abbey at Spineta to the Vallombrosan order in the early twelfth century had been mediated by the abbot of Coltibuono, but the monastery was not a dependency of Coltibuono. See Vasaturo, 1962, p. 474.

⁴² Salvestrini has suggested that property acquisitions by the abbots of Vallombrosa at Guarlone, situated at a crossing of the torrent Mensola, may have been connected with the development of a suburban court to facilitate relations between the abbey and the city. Acquisitions of property by Vallombrosa in the area around Guarlone are attested already in the early twelfth century, but they intensified during the years between 1147 and 1150. For acquisitions at Guarlone itself see Salvestrini, 1998, p. 67, nn. 97, 99, citing ASF, *Diplomatico*, Vallombrosa, 1118 May 26, 1147

abbey was beginning to acquire strategically situated properties at San Donato in Collina and at Rignano sull'Arno, perhaps with the intention to facilitate improved communications between the upper Arno valley and the city of Florence.⁴³ Vallombrosan monasteries also benefited from close ties with the popes, who sometimes intervened on behalf of individual monasteries in their relations with urban ecclesiastical authorities.⁴⁴

In the diocese of Florence, a parallel development may have occurred on the estates of the abbeys at Settimo and Buonsollazzo, both of which became Cister-

February 16, 1149 May 7, 1149 June 12, 1149 September 2, 1173 November 5, 1178 January 22, 1180 October 8, 1191 April 17. Acquisitions elsewhere in the area around Guarlone are attested in ASF, *Diplomatico*, Vallombrosa, 1129 November 3, 1132 March 20, 1139 February 11, 1144 August 29, 1144 October 27, 1150 June 4, 1150 June 16, 1150 July 2. On acquisitions of property farther upstream, see again Salvestrini, 1998, p. 56, n. 60, citing ASF, *Diplomatico*, Vallombrosa, 1105 May 14, 1106 October 1, 1145 November 21. If nothing else, the property acquisitions of Vallombrosa east of the city on the right bank of the Arno would have facilitated the coordination of economic activity between Vallombrosa and San Salvi. It is interesting to note that San Salvi, as well as Montescalari, also owned property in the area around Guarlone. In 1191, Vallombrosa purchased two pieces of property that were divided by a road and bordered by properties owned by San Salvi. See ASF, *Diplomatico*, Vallombrosa, 1191 April 17. For evidence of the purchase of property at nearby Varlungo by the abbey at Montescalari, see Camerani Marri, ed., 1962-1963, pt. 5, no. 112, 1096 October 6, pp. 84-85. Both Guarlone and Varlungo are probably corruptions of the Latin *Vadum Longum*, or 'long wade'. In antiquity and the early middle ages, the plain east of Florence was subject to frequent inundations, during which travellers would have been required to wade through pools of shallow water. See Repetti, 1833-1845, 3, pp. 561-562; 5, pp. 678-680. The term *vadum*, or *guado*, can be translated also as 'ford', which is to say a permanent crossing, which in this case would have traversed either the torrent Mensola or the torrent Affrico.

⁴³ For evidence of property acquisitions at San Donato in Collina, see ASF, *Diplomatico*, Vallombrosa, 1150 September 7, 1195 April 11, 1196 September 14. Vallombrosa was acquiring property at Rignano sull'Arno from as early as 1117, but the abbey became especially aggressive in the area in the 1220s. For early acquisitions at Rignano sull'Arno, see ASF, *Diplomatico*, Vallombrosa, 1117 May, 1149 December 13. For a series of acquisitions from 1223 to 1229, see Salvestrini, 1998, p. 56, n. 58, citing ASF, *Diplomatico*, Vallombrosa, 1223 January 27, 1225 December 11, 1226 August 18, 1227 December 15, 1229 March 12. Interestingly, Vallombrosa also negotiated exchanges of property in order to consolidate their holdings at both San Donato in Collina and Rignano sull'Arno. The abbey exchanged several pieces of property at an unidentified location called 'Fresciana' for a single piece of property at San Donato in Collina in 1209, and the abbey exchanged three pieces of property at Cafaggio for a single piece of property at Rignano sull'Arno. See Salvestrini, 1998, p. 78, n. 136, citing ASF, *Diplomatico*, Vallombrosa, 1209 April 18, 1239 October 24. San Donato in Collina lay on a variant of the old via Cassia, probably the most common route between Florence and Arezzo, at the crossing of a ridge between Incisa in Val d'Arno and the Ripoli plain. There was a bridge over the Arno at Rignano sull'Arno certainly by 1334. See Sartini, ed., 1953, p. 157.

⁴⁴ In 1085, for example, pope Gregory VII placed Vallombrosan monasteries under direct papal control to discourage episcopal encroachment on their ecclesiastical rights. See above, Chapter 2.3.2. In 1160, pope Alexander III intervened to persuade bishop Julius of Florence to concede urban property to the suburban Vallombrosan abbey of San Salvi. See Della Rena and Camici, eds., 1789, 6, section entitled 'Giunte diverse alle memorie antecedenti', pp. 100-102.

cian monasteries in 1236. The abbey at Settimo owned extensive properties in the lower Arno valley on the Settimo plain, in the area around Ponte a Signa and Porto di Mezzo, and on the Sesto-Campi plain, and it owned properties throughout the western Mugello. The properties of the abbey of Buonsollazzo were concentrated in the area around the abbey itself and in the valley of the torrent Carza below Vaglia, but it also owned property in the western Mugello. The degree of coordination between the two abbeys in matters of administrative organisation is somewhat unclear, but the close proximity of their respective possessions in the western Mugello certainly left considerable scope for cooperation, and the estates of both abbeys were indeed inventoried together in the early fourteenth century.⁴⁵ It is nevertheless clear that the economic organisation of Settimo was closely tied to the urban economy.

Towards the middle of the thirteenth century, the abbey at Settimo began to increase substantially investment in mills, weirs, and port facilities on the Arno at Ponte a Signa and at Porto di Mezzo.⁴⁶ The abbots probably sought to benefit from the increasing urban demand for staple foodstuffs at Florence, and particularly from demand for imported grain, much of which usually would have arrived from Pisa at Ponte a Signa or at Porto di Mezzo for unloading, perhaps grinding, and then despatch to Florence by mule-cart.⁴⁷ Because of the growing role in the urban food supply of the mills and port facilities controlled by the abbey at Settimo in the area around Ponte a Signa and Porto di Mezzo, relations between

⁴⁵ For the inventories of the two abbeys, see ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302. The same document also provides an indication of the geographical scope of their respective proprietary holdings.

⁴⁶ Settimo investment in mills and weirs on the Arno around Ponte a Signa is attested in ASF, *Diplomatico*, Cestello, 1245 May 17, 1246 October 25, 1253 December 30, 1265 January 3. For similar investment at Porto di Mezzo, see ASF, *Diplomatico*, Cestello, 1217 September 13. Port facilities are attested at Ponte a Signa from the later tenth century, but the abbey at Settimo began to invest substantially in port facilities only from 1239. For the earliest references attesting to the existence of port facilities at Ponte a Signa, see Piattoli, ed., 1938, no. 14, 964 July, pp. 40-45, esp. 42. See also Mosiici, ed., 1969, no. 15, 1078 February 20, pp. 68-74, esp. 71; ASF, *Diplomatico*, Cestello, 1181 June. For Settimo investment in port facilities, see ASF, *Diplomatico*, Cestello, 1239 June 19, 1246 October 25, 1252 April 9, 1252 April 13, 1252 April 20, 1254 September 26, 1265 January 3. For additional references from 1268 and 1277, see ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, fols. 25r, 26r. For evidence of Settimo investment at Porto di Mezzo, see ASF, *Diplomatico*, Cestello, 1217 September 13. An important market, attested from 1149, was also located at Signa. See Piattoli, ed., 1938, no. 190, 1149 October 1, pp. 453-455. See also ASF, *Diplomatico*, Cestello, 1252 August 10; ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, fol. 23v.

⁴⁷ On trade in grain on the Arno in the later thirteenth and early fourteenth centuries, see below in Chapter 7.3.3.

Settimo and the city became increasingly intense over the course of the later thirteenth and early fourteenth centuries. Sometime around the middle of the thirteenth century, relations between Settimo and the city assumed an official character.⁴⁸ By the end of the thirteenth century, Settimo had even begun to invest substantially in urban and suburban property, strengthening its ties with the city.⁴⁹

The demographic and economic expansion of the city of Florence, even the slow growth of the early twelfth century, encouraged rural monasteries to integrate their own economies and their administrative infrastructures with the urban economy at Florence. Deeper in the countryside, relations with the city were of course more tenuous. The weakness of Florentine jurisdiction throughout the territory before the middle of the twelfth century, and indeed in some more remote corners until after the middle of the thirteenth century, created opportunities for seigniorial initiative. The inability of Florence to impose its jurisdictional authority in many parts of the surrounding countryside encouraged many lords to establish markets and to develop market networks in the countryside outside the fiscal controls of the commune. Ecclesiastical lords in the Florentine countryside were perhaps more constrained to cooperate with the city in order to maintain the favour of the Florentine bishops, but secular lords were largely free of such constraints. Close relations between the city and ecclesiastical lords in the deeper countryside nevertheless may have facilitated the extension of communal control in certain parts of the countryside dominated by secular seigniorial powers. When the Florentines finally subjugated these areas, the commune inherited well developed satellite markets on the periphery of the territory that were already integrated with smaller markets in the surrounding area as well as administrative centres at which seigniorial rents were collected.

⁴⁸ Giovanni Villani stated that communal treasurers were furnished by the abbey at Settimo and the *Umiliati* from at least as early as 1267, and communal records indicate that a monk of Settimo was serving as chamberlain of finance already in 1259. See Villani, bk. 7, chap. 16. The pertinent passage is transcribed above, Chapter 5.1.2, in connection with the discussion on the *Umiliati*. For evidence attesting to the fact that a Settimo monk was serving as chamberlain of finance already in 1259, see Lasinio, ed., 1905. In addition, Masi observed that the chamberlain of the communal office charged with the oversight of the food supply in the early fourteenth century was typically a Settimo monk. See Masi, ed., 1934, p. 20.

⁴⁹ Jones, 1956a, pp. 90-91.

6.3. Florence as a 'central-place'

The demographic pressures that precipitated development at Figline Valdarno, Poggibonsi, Montevarchi, Empoli, Semifonte, and indeed at Florence itself occurred within the context of regional development throughout Tuscany and north-central Italy more in general. One of the more coherent theoretical approaches to the study of regional development concerns the formation of 'central-places'. The origins of the debate about central-places can be traced back to the work of Johann Heinrich von Thünen, who in the early nineteenth century devised a model of land use that stressed diminishing returns with distance from a central market.⁵⁰ Von Thünen was less interested in the formation of central-places than in patterns of land use around them, however, and central-place theory *per se* was developed only in the 1930s in the work of Walter Christaller. Central-place theory attempts to explain the location of various levels of market centres. Christaller himself was

⁵⁰ The pattern of land use in any given area, according to von Thünen, is a function of the different prices obtained for agricultural products on the market and the varying costs entailed in their production. The cost of transport from farm to market bears heavily upon production costs, with the result that distance from the market becomes an important determinant of cost. In order to isolate the contribution of transport costs to the overall costs of production, von Thünen imagined a model state, completely isolated from the outside world. The isolated state was dominated by a single large town that lay at the centre of a uniformly fertile plain crossed by no navigable waterway. The only market was located in the town, and prices on the market and in the economy in general were determined by the normal operation of supply and demand. The cost of transport was constant throughout the state, and it was consequently a pure expression of distance. The theory essentially has two parts, the first of which concerns the relative intensity of agricultural production for a single crop and the second concerns the choice of crop for a given location. The intensity theory states that, all things being equal, the intensity of agricultural production for a single crop will be negatively correlated with distance from the market. The lower cost of transport closer to the market will generate lower overall production costs, which in turn will create a larger differential between production costs and market prices. Because of the law of diminishing returns, which states that the application of each additional unit of input will generate a smaller return than the previous unit of input, the marginal product of each variation in input eventually declines to the point where production ceases to be profitable. Nearer the market, however, the larger differential between production costs and market prices will permit a greater intensity of input before the marginal product of each unit increase ceases to generate a profit. Because of variations not only in production costs but also in the land rent that various crops will generate, however, the location at which a given crop will be cultivated depends not merely upon intensity. The general location theory devised by von Thünen states that the crops most likely to be cultivated nearer the market will be those that experience the greatest value reduction as distance from the market increases. The value reduction might come as a result of lower production costs per unit, as long as yields remain the same, or it might come in the form of higher yields, as long as production costs are constant. The critical factor nevertheless rests in total production costs per unit of productive area, which bear the cost of transportation. See von Thünen, 1966. Parts of the work of von Thünen are translated and discussed in Dempsey, 1960; Hall, ed., 1966.

interested in the optimal location for retail suppliers, and he focused on the range and threshold for various levels of goods and services.⁵¹

It is beyond the scope of this work to delineate fully the implications of central-place formation for regional development in medieval Tuscany, but a model for market evolution first proposed by George William Skinner nevertheless merits attention. Demographic pressure constitutes the essential element of the Skinner model, in which the development of large market centres hinges on rural market intensification. Population growth around existing market centres in a given region leads first to the intensification of settlement around these centres and then to the establishment of new markets at the interstices between existing centres. As new markets are established, smaller existing markets typically ascend the market hierarchy. Continued growth encourages the expansion of trade and increased specialisation, and existing market centres begin to direct their trading activities through a favourably situated nodal point, typically an existing market, which then develops into a dominant market centre.⁵²

⁵¹ Christaller, 1933; 1966. 'Range' refers to the area beyond which consumers would be unwilling to travel for a particular product or service, and 'threshold' refers to the level of demand necessary to sustain the supplier of any given product or service. Christaller also categorised products and services according to the level of demand. Higher-level products and services are those for which demand is relatively low, while lower-level products and services are those for which demand is relatively high. Suppliers of higher-level goods thus would be more widely spaced than suppliers of lower-level goods, but suppliers of lower-level goods nevertheless would tend to locate first at centres already occupied by suppliers of higher-level goods in order to benefit from business attracted by suppliers of higher-level goods. The spatial arrangement of suppliers would be one in which centres supplying higher-level goods would also supply lower-level goods, while additional centres supplying lower-level goods would be located according to the range and threshold of the good. Consumers benefit from such an arrangement because it provides numerous smaller centres at which they are able to obtain easily the most frequently needed goods. On occasions when consumers must travel to larger centres to purchase less frequently needed goods, they are able to combine these purchasing activities with more regular purchases to spread the cost of transport over a greater variety of products. The system also encourages competition between suppliers for consumers who inhabit the areas around the interstices between the ranges of two different suppliers. If one supplier charges a higher price than a neighbouring supplier, then consumers inhabiting the fringes of the area in which the first supplier is located might be able to offset any increase in the cost of transport entailed in visiting a neighbouring supplier with lower prices.

⁵² Skinner avoided the troublesome question concerning the origins of markets and concentrated on the evolutionary development of existing systems. In addition to the spatial intensification of market networks, Skinner also observed a temporal type of market intensification, whereby the expansion of market activity was reflected first in increases in the number of market days rather than in the establishment of new market centres. According to Skinner, the temporal intensification of market activity presages the foundation of new market centres on the boundaries of existing market areas. Market frequency was also correlated positively to the level of the market, with daily schedules most prevalent in the central market. See Skinner, 1964-1965.

The application of an unmodified version of the evolutionary model proposed by Skinner to regional development in twelfth and thirteenth century Tuscany would be problematic. In the first place, the Skinner model fails to consider the role of functional and locational convergence in the formation of new market centres. If market centres for external exchange initially diverge in function and location from market centres that service internal exchange, then the evolutionary sequence may lead to the eventual displacement of the divergent markets by a new market centre that integrates the two market networks. In this case, convergence is likely to occur at a market centre that already caters to internal exchange. The Skinner model also proceeds exclusively from bottom to top, beginning with a region that supports only a loosely connected network of small undifferentiated peasant markets. The model ignores market intensification encouraged by pressures issuing from the vertex of the system, for example from increasing demand for staple foodstuffs among the non-agrarian population in administrative centres or in frontier outposts originally established for political and military reasons.⁵³

6.3.1. The integration of market networks

All of these considerations would have a place in an evolutionary model for regional development and central-place formation in twelfth and thirteenth century Tuscany, but the emergence of Florence as the dominant centre in Tuscany is perhaps best understood in terms of functional and locational convergence. It is worth noting, for example, that settlement in Tuscany towards the end of the eleventh century appears to have been concentrated mainly in and around the port city of Pisa on the Tyrrhenian coast, and in and around the cities of Lucca and Siena on the via Francigena, an important pilgrimage route between Rome and the north.

⁵³ Scholars working on developing economies in the twentieth century have indeed criticised the Skinner model on both grounds. The evolution of marketing may follow a pattern in which the initial centre is an import-export node situated just outside the perimeter of the local trading zone along a major artery of communication. Increases in local demand and improvements in the local infrastructure encourage the development of another trading centre within the local trading zone and influence the relocation of import-export firms. Eventually, both internal and external trade are articulated through a third centre that develops at an intermediate location. The arrangement of the market network may also hinge both on rural population density and on class composition in the towns. Rural areas with high population density are more likely to be serviced by a market town, but the absolute size of the upper classes in the town itself is also positively correlated with the presence of a market. Areas of higher population density are able to support larger non-agrarian populations, which create conditions sufficient for the development of a sizeable urban sector. More than anything else, it is indeed the level of urban demand that determined the structure of marketing systems. Respectively, see Schwimmer, 1976; Appleby, 1976.

In other words, settlement in Tuscany expanded first in and around centres experiencing the greatest amount of contact with other centres external to the region, concentrating demand and stimulating internal production and exchange. Other areas of less significant population aggregation lay in and around the more locally oriented urban centres of Arezzo, Florence, and Pistoia. As continued population growth began to saturate the areas around the three largest Tuscan cities, settlement began to intensify towards the north-central portion of the region.⁵⁴

By the later twelfth century, Florence was beginning to emerge as the principal beneficiary of these changes, largely by virtue of its location near the geographic centre of northern Tuscany, and it was clearly the dominant city in the region by the later thirteenth century.⁵⁵ Of all the cities and towns in the region, Florence was perhaps the most ideally situated to articulate trade within Tuscany. The city lay at a major crossing on the river Arno, the largest waterway in the region, which was able to support river traffic both above and below the city. The river Sieve, which joined the Arno about fifteen kilometres above Florence, also supported river traffic from as far upstream as its confluence with the torrent Stura, near Barberino di Mugello, and it is likely that smaller vessels plied the

⁵⁴ The actual processes of this evolution would be exceedingly difficult to document, given the nature of the early evidence. Pisa was clearly the dominant import-export centre in Tuscany at the beginning of the twelfth century, while Lucca and Siena were the centres through which intra-regional trade was articulated, largely by virtue of their superior infrastructure for inland transport. The importance of Siena can be illustrated by the fact that the economic orientation of the abbey at Passignano was clearly more towards Siena than Florence at the beginning of the twelfth century. See above, Chapter 2.1.2. Early development in the secondary centres of Arezzo, Florence, Pistoia, and Volterra may have been driven to a certain extent by demand for staple commodities in the primary centres of Pisa, Lucca, and Siena, which probably entailed a small degree of increased economic integration. The intensification of settlement away from the primary centres in north-central Tuscany is suggested, as noted above, first of all by small-scale urban development towards the periphery of Florentine territory at Figline Valdarno, Poggibonsi, Montevarchi, Empoli, and Semifonte. It is further suggested by the rise of breakaway communes that formed around new centres situated at the interstices between existing centres. Prato emerged along the frontier between Florence and Pistoia in territory dominated by the Alberti counts. San Gimignano emerged on the via Francigena on the northeastern periphery of the diocese of Volterra roughly between the cities of Siena and Volterra. San Miniato al Tedesco also emerged on the via Francigena on the fringes of the diocese of Lucca between Florence, Pisa, and Lucca at the residence of the imperial *podestà* in Tuscany. The growth of a centre for internal exchange over the import-export centre at Pisa owed much to the fact that specialisation through trade was more important within regions than between regions. Institutional differences across regions constrained development at centres based primarily on import-export trade because the effect of such differences on transport costs were more difficult to control.

⁵⁵ For a discussion of urban rank-size distribution in Tuscany from the end of the thirteenth century to the middle of the sixteenth century, which illustrates a consistently high degree of Florentine primacy in Tuscany, see S. R. Epstein, 1993, pp. 456-465, esp. 459-461.

river Elsa.⁵⁶ Florence lay about seventy kilometres from Pisa, about sixty from both Lucca and Arezzo, about fifty from both Siena and Volterra, and only a little more than thirty from Pistoia. Pisa was situated less than twenty kilometres from Lucca, but it was nearly ninety from Siena and about one hundred and twenty-five from Arezzo.⁵⁷

Moreover, Pisa was poorly connected with important inland trading centres beyond the frontiers of Tuscany. Whereas Florence was situated about eighty kilometres from Bologna and about one hundred and twenty from Perugia, Pisa was situated about one hundred and twenty kilometres from Bologna and about two hundred from Perugia. In other words, it was not merely the geographic centrality of Florence within northern Tuscany that favoured the emergence of Florence as the dominant urban centre in the region. Florence was also well situated to integrate local and intra-regional trading networks with maritime trade through the port of Pisa, trans-Appennine trade with the cities and towns of Romagna, and inland trade along the old *via Cassia* with trading centres in Umbria, the Marche, Lazio, and Abruzzo. The intensification of the market network within the territory of Florence from the later twelfth century until just after the middle of the thirteenth century helps to illustrate the efficiency with which Florence was able to coordinate internal and external trade.

Florentine trading relations with the cities and towns of Romagna are securely attested from the beginning of the thirteenth century, though the earliest evidence for trans-Appennine trade probably documents a pattern of trade already established in the later twelfth century.⁵⁸ Increased economic vitality along the

⁵⁶ A river port is attested on the Sieve at the confluence of the Sieve and the torrent Stura below Barberino di Mugello from the middle of the twelfth century, and another port is attested on the Sieve at Dicomano in the middle of the fourteenth century. For the port at a place called 'Castagnolo', situated at the confluence of the Sieve and the Stura, see ASF, *Diplomatico*, Badia di Passignano, 1153 January 8, 1154 January. The document of 1154 attests to a port at 'Castagnolo' while the document of 1153 establishes the location of 'Castagnolo'. For evidence of the port at Dicomano, see De la Roncière, 1976, 4, p. 273, n. 183, citing ASF, *Or San Michele* 251, fol. 2v.

⁵⁷ In measuring the cumulative distance between Florence, Arezzo, Lucca, Pisa, Pistoia, Siena, and Volterra, Florence is the least distant from the other five locations while Arezzo is the most distant. The cumulative distance for each location measured against the other five, roughly speaking, is as follows: Florence, 320 kilometres; Siena, 330 kilometres; Volterra, 335 kilometres; Pistoia, 340 kilometres; Lucca, 375 kilometres; Pisa, 405 kilometres; Arezzo, 520 kilometres. Measured in terms of the cost of transport, the differences between Florence and some of the other cities, particularly Siena and Volterra, would be amplified considerably because of the absence of navigable waterways.

⁵⁸ Trade between Florence and Romagna is discussed at length below in Chapter 7.3.1. On the development of the road network in the countryside north of Florence, see below in Appendix 4.

trans-Appennine routes even before 1200 is strongly suggested by the intensification of the market network in the Mugello north of Florence during the last quarter of the twelfth century. A market existed at San Piero a Sieve from the early twelfth century, but markets are attested for the first time at Mangona from 1184, Scarperia from 1186, and Galliano from 1198.⁵⁹ Borgo San Lorenzo was also using its own commercial measure for grain before 1200, which suggests the presence of a market.⁶⁰ In the first quarter of the thirteenth century, moreover, eight of the ten markets securely attested for the first time within the confines of the dioceses of Florence and Fiesole were situated on or near routes that lay between Florence and the mountains. Markets are attested for the first time at Latera in 1201, Combiate and San Giovanni Maggiore in 1209, Dicomano in 1211, Barberino di Mugello in 1217, Villanuova in 1220, Cardetole in 1222, and Pulicciano in 1225. In 1217, a market is also attested at Cavrenno, situated in the Santerno valley just inside the modern province of Florence but outside the medieval Florentine diocese in the diocese of Bologna.⁶¹

⁵⁹ San Piero a Sieve was the first market to be securely attested in the countryside north of Florence, but there were no further market attestations in the area until the last twenty years of the twelfth century, when Mangona, Scarperia, and Galliano are attested for the first time. The earliest reference to the market at San Piero a Sieve is reported in Repetti, 1833-1845, 5, pp. 107-109, esp. 107. See also ASF, *Diplomatico*, Cestello, 1117 June 13. For the earliest reference to the market at Mangona, see Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357, esp. 357. For the markets at Scarperia and Galliano, respectively, see ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1186 May 1, 1198 October 9.

⁶⁰ Borgo San Lorenzo is not securely attested as a market until the later thirteenth century, but it was using its own commercial measure for grain before 1200, which suggests the presence of a market in the town in the later twelfth century. The earliest known reference to the commercial measure of Borgo San Lorenzo occurs in an undated document of the twelfth century. See ASF, *Diplomatico*, Monache di Luco, twelfth century. The measure of Borgo San Lorenzo is attested frequently after the beginning of the thirteenth century. For numerous references to the commercial measure of Borgo San Lorenzo, see below, Appendices 9.7, 9.10.

⁶¹ For the earliest reference to the market at Latera, see ASF, *Diplomatico*, Badia di Passignano, 1201 February 1. For Combiate, see ASF, *Diplomatico*, Badia di Passignano, 1209 August 24. For San Giovanni Maggiore, see ASF, *Diplomatico*, Monache di Luco, 1209 February 28. For Dicomano, see ASF, *Diplomatico*, Santissima Annunziata, 1211 June 5. For Barberino di Mugello, see ASF, *Diplomatico*, Stroziane Uguccioni, 1217 September 15. For Villanuova, see ASF, *Diplomatico*, Badia di Passignano, 1220 February 22. For Cardetole, see ASF, *Diplomatico*, Cestello, 1222 July 16. For Pulicciano, see ASF, *Diplomatico*, Monache di Luco, 1225 February 14. The market at Cavrenno is attested in ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1217 May 3. For additional references to some of these markets, see below, Appendix 7. The locations of these markets are shown above, Map 14. Cavrenno appertained to the Ubaldini until 1294, when the Ubaldini sold their rights at the market town to Bologna. The town was later subjugated by Florence, and it lies within the modern Florentine diocese. On the sale of Cavrenno by the Ubaldini to Bologna for 16,200 *libre* in Bolognese coinage in 1294, see Matthaeus de Griffonibus, p. 26. Markets are also attested north of the Apennine ridge on the roads between Florence and

Florence was also trading with cities and towns in Umbria, Lazio, and the Marche by the early thirteenth century, but the market network along the primary routes towards Arezzo and north-central Italy developed in a manner different from that observed in the Mugello. Whereas several different trading routes of comparable objective difficulty traversed the mountains north of Florence towards Bologna, Faenza, and Imola, the trading routes towards the south varied much more considerably, and most of them converged on Arezzo.⁶² The river Arno itself and its valley clearly afforded the most efficient means of communication between Florence and central Italy, and this artery was dominated by rural markets at Figline Valdarno and at Montevarchi.⁶³ These markets were supplemented by others at Leccio, Incisa in Val d'Arno, and San Giovanni in Altura.⁶⁴ Florentine relations with both Figline and the Guidi counts at Montevarchi were sufficiently congenial towards the end of the twelfth century and in the early thirteenth century

Romagna at Monghidoro, just south of Loiano at Fratta, at Pianoro, at Monterenzio, at Castel del Rio, and at numerous locations farther west. See the map in Magna, 1982, p. 24. On the market at Castel del Rio, see Lerner, 1965, p. 22. The area north of Florence was dominated in the extreme west by the Alberti counts, in the centre by the Ubaldini lords, and in the east by the Guidi counts. The bishops of Florence also controlled an important enclave at Borgo San Lorenzo. The holdings of the Ubaldini lords in the central Mugello and along the frontier dividing the territories of Florence and Bologna were particularly extensive. See Magna, 1982, pp. 18-25. The patrimony of the Ubaldini before the middle of the twelfth is attested in Ildefonso di San Luigi, ed., 1770-1789, 10, pp. 183-188, 365; Savioli, ed., 1784-1795, 1, pt. 2, no. 133, 1145 May, pp. 211-215. For the patrimony of a single branch of the Ubaldini at the time of the coronation of the emperor Frederick II in 1220, see Huillard-Bréholles, ed., 1852, 2, pt. 1, unnumbered, 1220 November 25, p. 33-37. For the locations of Ubaldini holdings in the Mugello, see above, Map 8.

⁶² On the development of Florentine trading relations in the upper valley of the river Arno and in Umbria, the Marche, and Lazio, see below, Chapter 7.3.2. On the development of the road network in the upper Arno valley, see below, Appendix 4.

⁶³ The market at Figline Valdarno is attested for the first time in 1153, and it is attested frequently in the later twelfth and early thirteenth centuries. For the earliest reference to the Figline market, see ASF, *Diplomatico*, Badia di Passignano, 1153 June 1. The market at Montevarchi is documented from 1170, and it is well attested in the early thirteenth century. For the earliest reference to the market at Montevarchi, see ASF, *Diplomatico*, Vallombrosa, 1169 March 13. For additional references to the markets at both Figline and Montevarchi, see below, Appendix 7.

⁶⁴ The market at Leccio, situated upstream from Rignano sull'Arno on the opposite bank, is attested for the first time in Pagliai, ed., 1909, no. 492, 1177 February, p. 220. The market at Incisa in Val d'Arno, situated on the left bank farther upstream, is attested for the first time in 1297, though the earliest known references to the market concern its reopening after closure due to war, and the market clearly antedated its first appearance in the documentary record. See De La Roncière, 1976, 4, pp. 343-347, no. 19, citing ASF, *Provvisoni* 8, fols. 71-74 [1297 June 7]. The market at San Giovanni in Altura, or San Giovanni Valdarno, is well attested from 1188. For the earliest reference, see ASF, *Diplomatico*, Badia di Passignano, 1188 June 15. For additional references to the Leccio and San Giovanni markets, see below, Appendix 7.

to preclude the necessity of searching for alternative means of access from Florence to markets situated farther to the south.⁶⁵

Relations between Florence and Figline deteriorated towards the end of the first quarter of the thirteenth century, however, and they remained poor until the Florentine subjugation of Figline in 1252. The breakdown in relations between Florence and Figline perhaps compelled the Florentines to seek alternative means of access to the trunk routes towards central Italy. Within the dioceses of Florence and Fiesole, four markets are attested for the first time during the second quarter of the thirteenth century. All of them were situated in the Chianti along routes that could have been used to provide means of access to the market at Montevarchi and to the trunk routes between Florence and central Italy that avoided Figline. Markets are attested for the first time at 'Curlaccio' in 1233, at Panzano in 1237, at Montaio in 1239, and at Radda in Chianti in 1242. The market at Gaiole in Chianti, which enters the documentary record in 1215, is also attested during this period. As long as it remained possible to negotiate the passage from Florence to Arezzo along the Arno valley through Figline, there was little need to depend on other markets. Prolonged disruption of access to the Figline market from 1224 to 1252 encouraged Florentine traders to depend more heavily on the market network in the Chianti on roads that by-passed Figline.⁶⁶

⁶⁵ On relations between Florence and both Figline Valdarno and Montevarchi in the later twelfth and early thirteenth centuries, see above in this chapter.

⁶⁶ This is not to say that the markets in question were all established as a consequence of the breakdown in relations between Florence and Figline Valdarno in 1224, but the attestations perhaps stemmed from increased activity at these markets. As commerce was diverted from the secondary market at Figline, certain of the more favourably situated tertiary markets began to assume functions that previously had been performed for the most part at Figline. The increased activity at certain tertiary markets probably also rendered attestations of these markets more likely, because it encouraged notaries to frequent them in search of business. The exact location of the market at 'Curlaccio' is unclear, but the market was probably located in Avane, perhaps at Castelnuovo dei Sabbioni, in the area along the modern frontier between the territories of Florence and Arezzo above the left bank of the river Arno. The document records a loan on the next three harvests, and the debtor pledges two pieces of property as collateral, one 'positam nel Avane' and the other 'positam al Castellare'. In the *spoglio* entry for the act, the archivist understood what I have interpreted as 'Curlaccio' to be 'Carbaccilo'. See ASF, *Diplomatico*, Badia di Passignano, 1233 August 22. The 'castro novi de Avana', which is to say Castelnuovi dei Sabbioni, is attested from 1269 in Brattö, ed., 1956, par. 213. See also Francovich, 1973, p. 78. For both the earliest reference to the market at Gaiole and the later reference to market during the period in which communications through Figline were disrupted, respectively, see ASF, *Diplomatico*, Coltibuono, 1215 September 21, 1236 December 18. For Panzano, see ASF, *Diplomatico*, Badia di Passignano, 1237 August 15. For Montaio, see ASF, *Diplomatico*, Coltibuono, 1239 June 1. For Radda, see ASF, *Diplomatico*, Coltibuono, 1242 December 19. For the references to these markets, see also below, Appendix 7. For the locations of these markets, see above, Map 14. With the exception of

The proliferation of markets in the Florentine countryside is less evident in lower valley of the river Arno, partly owing to the poor coverage of the documentation in the valley below Signa, and also because the availability of river transport mitigated the need for the spatial intensification of the market network in the area. Market intensification in the lower Arno valley was probably characterised more by temporal intensification, which is to say increases in the number of market days rather than in the number of markets. It also may have been marked more by agglomeration around existing market centres situated on the river itself, particularly at Signa and Empoli, and later at Montelupo. Moreover, Florentine trade along the lower Arno within Florentine territory never suffered lengthy disruptions of the sort that accompanied the breakdown of relations between Florence and Figline Valdarno in the upper Arno. Signa resisted Florentine subjugation until 1225, and the Florentines shared jurisdiction at Empoli with the Guidi counts until the later thirteenth century, but workable relations between Florence and these two market towns obviated the need to devise alternative means of access to markets farther downstream or to Tyrrhenian ports.⁶⁷

It is usually impossible to determine conclusively where the initiative in the expansion of Florentine market networks lay, but the weight of the evidence strongly suggests that the growth of market networks before about 1225 was driven mainly by the more powerful lords in the countryside of Florence. Numerous markets attested before 1225 were located in settlements at which lords either were firmly established or at least held a substantial foothold.⁶⁸ Market networks

Panzano, the other market towns are now situated in the countryside of either Siena or Arezzo, but they were all situated within the diocese of Fiesole, and indeed they still are. See the maps that accompany Guidi, ed., 1932; Giusti and Guidi, eds., 1942. See also above, Map 5. All of these towns were situated on roads that afforded alternative means of access from Florence to Montevarchi and the trunk routes to central Italy.

⁶⁷ Even away from the lower Arno in the middle and lower valley of the river Elsa, market intensification may have entailed increases in the number of market days and agglomeration around existing markets at Castelfiorentino and Poggibonsi more than the proliferation of new markets. Like the Arno valley below Signa, however, the middle and lower valley of the Elsa is poorly documented before the later thirteenth century. The richest source of evidence for the Elsa valley is the episcopal *Bullettone*, discussed in Dameron, 1991; Nelli, 1995.

⁶⁸ The market towns of Barbischio, Calenzano, Montevarchi, and Poggibonsi, all of which are attested for the first time before 1225, appertained either entirely or largely to the Guidi counts, and the Guidi shared jurisdiction at the market town of Ganghereto. The Guidi also controlled the markets at Poppiana in the Casentino and Montaio in the Chianti, attested for the first time in 1238 and 1239, respectively, and they controlled markets attested for the first time between 1252 and 1260 at Empoli and Vinci in the lower Arno valley, and at Montelungo in the upper Arno valley. The market towns of Mangona in the western Mugello and Vernio in the upper valley of the river Bisenzio appertained to the Alberti counts. The Ubaldini certainly controlled Galliano and proba-

in the Florentine countryside probably continued to expand after 1225, but expansion was slower, and it was increasingly driven by the city. The period between about 1225 and 1300, moreover, was one of consolidation during which existing market networks were gradually integrated into the Florentine sphere. From the later thirteenth century, probably in response to rising food requirements, the growth of market networks in the countryside of Florence accelerated under the initiative of the commune itself.⁶⁹

Notwithstanding the paucity of the evidence for the development of the market network in the lower Arno valley, the data suggest that market intensification throughout the Florentine countryside closely followed the orientation of supra-regional trade. The development of local trading networks in the territory of Florence and the expansion of regional and supra-regional trade were complementary. During the course of the thirteenth century, Florence displaced Lucca and Siena as the dominant centre of internal exchange, and it had also displaced Pisa as the dominant centre of import and export trade even before the destruction of the Pisan fleet at Meloria in 1284, though Meloria removed any doubt.⁷⁰ The location of Florence and demographic pressure provided much of the initial impetus for the emergence of Florence as the dominant 'central-place' in Tuscany, but there were also other factors, the most important of which was urban demand for staple foodstuffs.

6.3.2. Market networks and the food supply

At the height of Florentine urban expansion in the early fourteenth century and even during periods of severe famine, more than eighty per cent of the staple food requirement throughout the territory of Florence was satisfied by production in the Florentine countryside. Under normal conditions in the later thirteenth and early fourteenth centuries, domestic production probably satisfied about ninety per cent of the total staple food requirement in the territory. The countryside itself for the most part was self-sufficient, but surplus production in the countryside was inade-

bly also Scarperia, at which markets are attested for the first time in the later twelfth century. They also controlled the market attested for the first time at Cornacchiaia and Santerno in 1261 and 1265, respectively.

⁶⁹ For a chronology of market attestations, see below, Appendix 7.

⁷⁰ The destruction of the Pisan fleet at Meloria at the hands of the Genoese in 1284 is discussed briefly below, Chapter 7.3.3.

quate to satisfy the total staple food requirement of the city even during the best of times. In good harvest years, domestic production perhaps satisfied sixty to sixty-five per cent of urban demand, but it may have satisfied as little as forty per cent of urban demand in the worst years.⁷¹ In the later twelfth and early thirteenth centuries, the urban sector at Florence may have been less dependent on staple food imports, but it is reasonable to assume that imports still accounted for an average of about five per cent of staple food consumption in the territory as a whole during the first half of the century.⁷²

Even at the beginning of the thirteenth century, in other words, the urban food supply depended on a combination of domestic staple food production and imports. Increasing demand over the course of the thirteenth century stimulated changes in the trade infrastructure in the territory of Florence that not only provided the most productive parts of the countryside with reasonable access to markets but also improved communications between Florence and external markets. Among the most important of these changes was the descent of the road network in the Florentine countryside, and settlement more in general, from the hillsides

⁷¹ According to Domenico Lenzi, an early fourteenth century grain merchant at Florence, cereal production in the Florentine countryside was sufficient to satisfy demand at Florence only five months per year. Davidsohn interpreted the passage to indicate that demand throughout the territory was satisfied only five months per year, but Pinto very reasonably believed that the passage was referring only to urban demand and that the countryside for the most part was self-sufficient. Both Davidsohn and Pinto believed that the merchant was referring to normal conditions, but the merchant was writing in May during the famine year of 1329, which is to say precisely at the time of the year, before the harvest of the winter grains, when reserves from the previous poor harvest probably would have been running dry. The famine was experienced throughout Italy, and at Florence, and grain prices varied by more than one hundred and forty per cent over the course of the year. It is difficult to imagine that the observations of the Florentine grain merchant were not coloured by prevailing conditions. If the passage is understood to refer to the proportion of urban demand for staple foodstuffs satisfied through domestic production, and if it is assumed that rural demand was met entirely, then the imports necessary to satisfy the remaining urban demand would amount to 16.7 per cent of staple food consumption in the territory as a whole. The pertinent passage from the memoirs of the early fourteenth century grain merchant is published in Pinto, 1978, p. 317. For the interpretations of the passage, see Davidsohn, 1977, 5, p. 238; Davidsohn, ed., 1896-1908, 4, pp. 307-315, esp. 312-313; Pinto, 1978, pp. 75-79, and p. 317, n. 1. For further discussion on the matter, see below, Appendix 3.

⁷² If virtually all staple food imports were allocated to the non-agrarian sector at Florence, which is a reasonable assumption, then the proportion of the urban food supply constituted by imports probably had not been substantially less even in the later twelfth century than it was in the second half of the century. Assuming that the urban population was 10,000 at the beginning of the last quarter of the twelfth century and that the urbanisation was about ten per cent, then five per cent of the total staple food requirement in the territory as a whole would have been enough to feed about 5000 persons, or about half of the urban population.

and ridges to the plains and river valleys.⁷³ The road network included both upland and lowland routes even in the eleventh century, but the relative importance of these two route systems was inverted in the later twelfth and thirteenth centuries. The increasing importance of roads on the plains and in the river valleys was largely the result of the application of advanced techniques of road construction and improved drainage in lowland areas that were susceptible to flooding. Better control of the waterways on alluvial lowlands also opened especially fertile terrain to cultivation.⁷⁴

Within the territory of Florence, the descent of the road network from the hillsides and ridges to the plains and river valleys is perhaps most evident to the south of Florence in the Chianti. By 1236, for example, the market at Barbischio descended about one hundred vertical metres to Gaiole in Chianti, situated about two kilometres to the west-northwest of Barbischio on a major road between Siena and Montevarchi.⁷⁵ The emergence of the markets at Fabbrica and San Casciano in Val di Pesa may have been related to the decline of a less favourably situated market at Campoli.⁷⁶ The market at Marcialla, situated at nearly four hundred

⁷³ The argument was proposed in Plesner, 1938. Plesner maintained that the descent of the roads in the Florentine countryside from the hillsides and ridges to the plains and river valleys occurred mainly in the thirteenth century. It is clear, however, that the plains and river valleys in many parts the territory were supporting major road systems already in the twelfth century. The particular merits and shortcomings of the Plesner thesis are discussed below, Appendix 4. On the descent of settlement in the Florentine countryside, see Fiumi, 1957-1959, pt. 2, p. 471-473, esp. 471; 1977, p. 91.

⁷⁴ See above, Chapter 4.2.1.

⁷⁵ The market at Barbischio, a possession of the Guidi counts, is attested in the later eleventh century, but never again. See Pagliai, ed., 1909, no. 108, 1077 April, p. 54. The market at Gaiole in Chianti, on the other hand, is first attested in 1236 and it had become an important frontier market in the Florentine trade infrastructure by the later thirteenth century. For the earliest reference to the market at Gaiole, see ASF, *Diplomatico*, Coltibuono, 1236 December 18. For references from the later thirteenth century, see Gherardi, ed., 1896-1898, 1, pp. 119, 121, 122, 154. For early fourteenth century references, see De la Roncière, 1976, 4, pp. 343-347, no. 17. The supersession of the market at Barbischio by a new market at Gaiole also indicates the transfer of market functions from a seigniorial market of the Guidi counts to one with no strong seigniorial underpinnings. Both Barbischio and Gaiole are now in the territory of Siena. In the middle ages, however, Barbischio was situated just outside the diocese of Fiesole, and Gaiole was situated on the frontier between the dioceses of Fiesole and Siena. Certainly by the later thirteenth century, both Barbischio and Gaiole lay within the territory under Florentine control.

⁷⁶ The market at Fabbrica is attested for the first time in ASF, *Diplomatico*, Badia di Passignano, 1203 October 8. The market at San Casciano in Val di Pesa is not securely attested until the early fourteenth century, though the earliest references perhaps document an already established market. See De la Roncière, 1976, 4, pp. 343-347, no. 42. Campoli is situated on a ridge about one hundred and fifty metres above Fabbrica in the fertile valley of the river Pesa. San Casciano lies at

metres on a ridge between the rivers Pesa and Elsa, began to decline in importance from the moment that Poggibonsi was incorporated into the Florentine market network probably around 1282.⁷⁷ The market at Monteficalle was superseded probably in the later thirteenth century by a market at Greve in Chianti, situated no more than a kilometre to the east and more than one hundred vertical metres lower on the master road between Florence and Siena.⁷⁸

Other displacements of this sort in the Chianti actually resulted in elevation gains. The market at San Giusto in Salcio, for example, was displaced by Radda in Chianti probably in the early thirteenth century. Radda is situated nearly one hundred vertical metres higher than San Giusto, but it lay on an important road between Poggibonsi and Montevarchi, whereas San Giusto lay a short distance to the south of Radda on a relatively minor road to Siena.⁷⁹ Radda, however, was an exception. Throughout the Florentine countryside, the road network gravitated in-

about the same altitude as Campoli, but it was situated on the master road that crossed the ridge from the valley of the river Greve to the Pesa valley.

⁷⁷ The use of the Florentine measure for grain is attested for the first time at Poggibonsi during the summer of 1282. See De la Roncière, 1979, 3, p. 1005; 4, p. 361, n. 27, citing ASF, *Notarile antecosimiano* 18003/R192, fol. 9r [1282 July 19].

⁷⁸ Fiumi believed that the market at Monteficalle was originally situated at the foot of the hill of Montefioralle, in the parish of San Cresci, and that it developed into the town of Greve in Chianti. See Fiumi, 1957-1959, pt. 2, p. 470; 1977, p. 92. See also Repetti, 1833-1845, 3, pp. 390-391.

It is perhaps more likely, however, that the market was still situated on the hillside above the river crossing at Greve in the village of Montefioralle in the twelfth century. It was probably relocated to Greve as communications and security in the area improved over the course of the thirteenth century, and especially as commercial traffic between Florence and the Chianti intensified. The 1155 reference is unclear, mentioning only the 'foro de Sancta Margarita', but it is possible that the market took its name from the thirteenth century hospital of Santa Margherita di Piagna or di Preiagna. The precise location of the hospital is unknown, but Repetti suggested that it may have been the same hospital that is identified as the hospital of Greve in later sources. The conjecture is neither borne out nor contradicted by the available evidence. The earliest secure reference to the market at Monteficalle occurs in an undated cartulary fragment from the thirteenth century, but the *castrum* of Monteficalle is attested from 1119 when Passignano received a donation of rights in the *castrum*. For evidence of the *castrum* of Monteficalle, see ASF, *Diplomatico*, 1119 November 15. See also Francovich, 1973, p. 108. The hospital at Greve in Chianti itself is first attested as such only in 1288. See Lami, ed., 1758, 1, p. 261. References to the market at Monteficalle in the early fourteenth century probably concerned a market situated in the valley. The close proximity of Monteficalle and Greve makes it possible that the later references merely preserve the name of the older market in the new location. Evidence for the market at Monteficalle in the *Statuti dell'arte degli albergatori* in 1334 and 1338 almost certainly concerns the market at Greve. See Sartini, ed., 1953, pp. 158, 245.

⁷⁹ San Giusto in Salcio is attested from just after the middle of the twelfth century in ASF, *Diplomatico*, San Vigilio di Siena, 1153 June 7. The market at Radda in Chianti is attested for the first time in ASF, *Diplomatico*, Coltibuono, 1242 December 19.

creasingly towards the plains and river valleys, precipitating the blossoming of such lowland towns as Empoli and Figline Valdarno in the Arno valley, Castelfiorentino and Certaldo in the Elsa valley, and Borgo San Lorenzo and San Piero a Sieve in the Sieve valley. These market towns occupied some of the richest agricultural land in the Florentine countryside, and their growth was directly related, at least in significant part, to the role that they played in the urban food supply. They served as centres for the collection of locally cultivated grain and for its despatch to the city. Most of these centres also served as conduits through which flowed imported grain destined for the city, which facilitated the coordination of local, regional, and supra-regional trade.

The development of the network of roads and markets within the territory of Florence thus provided potentially the most productive agricultural lands in the Florentine countryside with efficient means by which to transfer surplus produce to areas where the demand exceeded production. Improved access to roads and markets also lowered transport costs and raised returns on land reclamation and the intensification of agriculture precisely in those areas most well suited for intensive agriculture. By the later thirteenth century, the amelioration of the road network in the Florentine countryside was often designed specifically to facilitate communications both between Florence and areas of surplus in the Florentine countryside, and between Florence exporting regions beyond the territory.

The close relationship between the development and maintenance of the trade infrastructure in the Florentine countryside and the movement of imported foodstuffs towards the city is perhaps most evident in the areas to the north of the city. In May 1285, for example, the consuls of the commune of Florence judged prudent the appropriation of funds for a construction project at Pietrasanta near the Colla di Casaglia specifically to facilitate the importation of cereals from Romagna.⁸⁰ Less than a week later, the commune decided to send representatives

⁸⁰ Gherardi, ed., 1896-1898, 1, p. 217 [1285 May 15]: 'Item, si videtur dicto Consilio utile fore pro Comuni Florentie teneri Consilium super expensis faciendis ad presens pro Comuni usque in quantitatem librarum v [centorum] in fundando et faciendo muris Pietre Sancte; et hoc cum dicatur quod refectione dicte terre obveniant honor commodum et utilitas Comuni Florentie, et maxime pro copia grani et bladi habenda de partibus Romandiole'. Towards the end of the following month, it was suggested by one Iacobus Trinqualaqua that two officials should be sent to supervise not only the completion of the project mentioned above but also the construction of the road that comes from Romagna by way of Marradi. See Gherardi, ed., 1896-1898, 1, p. 257 [1285 June 29]: 'Iacobus Trinqualaqua consuluit, quod duo superstites mictantur, boni et legales, ad aptandum viam et stratam que venit de Romandiola a Maradi usque ad Petram sanctam; et quod castrum Pietresancte compleatur et fiat'. According to Repetti, Pietrasanta was more commonly known as Casaglia. The identification of Casaglia as Pietrasanta was derived from the church of San Pietro

outside the territory to endeavour to acquire grain, and also to undertake road-works precisely on the roads over which travelled foodstuffs destined for the city.⁸¹ In the autumn and winter of 1285, the *Sex de blado*, the officials charged with overseeing the urban grain supply, were granted funds by the commune to construct new roads and to effect repairs on existing roads leading into the city of Florence specifically to facilitate the provisioning of the city with grain.⁸² In 1295, the rural communities of Carraia and Legri were obliged to render repairs on the road in the Val di Marina on the southwestern fringes of the Mugello in such a manner as not to impede the movement of supplies towards Florence.⁸³

Markets were also established particularly near the periphery of Florentine territory to facilitate the urban food supply. In the early fourteenth century, a market was re-established at Razuolo in the Mugello precisely because of the abundant supplies of grain that had been coming through the market probably

a Casaglia. See Repetti, 1833-1845, 4, pp. 215-216. The same road to Pietrasanta is a subject of continuing concern. For example, see Gherardi, ed., 1896-1898, 1, pp. 269, 272; 2, pp. 321, 369. The construction project at Pietrasanta may have been the first attempt by the Florentine commune to establish a 'new town' in the Florentine countryside, as Friedman suggested, but the development of Pietrasanta was probably more as a frontier outpost than a new town. On the Florentine *terre nuove*, see Higounet, 1962; Moretti, 1980. See also Friedman, 1974; 1988. For additional references to foodstuffs imported from Romagna, see Gherardi, ed., 1896-1898, 2, pp. 13, 52, 53.

⁸¹ Gherardi, ed., 1896-1898, 1, pp. 220-221 [1285 May 21]: 'Item consuluit, quod per Capitaneum, Priores, Iudicem et officiales Sex de blado provideatur, et ordinentur officiales et bone persone que mittantur ad extraneas partes ad quas videbitur convenire, pro grano et blado conducendo ad civitatem Florentie. [...] Item, quod provideatur super aptatione stratarum, et maxime illarum de quibus et per quas blava et victualia, conducantur ad civitatem Florentie, et portuum existentium in pactis Societatis'.

⁸² For evidence of road repairs to facilitate the food supply of the city of Florence, see Pinto, 1978, p. 107, n. 139, citing ASF, *Provvisoni Protocolli* 1, fols. 37r-v, 39r, 40v, 41r-v, 69v, 70r-v: 'in stratis et pro stratis per quas granum et bladum conducitur ad civitatem Florentie reapertare et reapparare faciendis'. De la Roncière has cited the same source, fol. 29r, for evidence of the importation of grain from Romagna. See De la Roncière, 1976, 4, p. 153. On the *Sex de blada*, see Davidsohn, 1977, 5, pp. 240-242; Ottaker, 1974, p. 110; Masi, ed., 1934, pp. 12-31. For the earliest references to the *Sex de blada*, see ASF, *Diplomatico*, Santissima Annunziata, 1274 December, 1275 January. Fiumi has suggested, and probably correctly, that the institution of the *Sex de blada* very likely antedated somewhat the earliest evidence for its existence. See Fiumi, 1957-1959, pt. 3, p. 473; 1977, pp. 181-182.

⁸³ For evidence of road repairs in the Val di Marina, see again Pinto, 1978, p. 107, n. 139, citing ASF, *Provvisoni* 5, fol. 103v. Security also was a matter of concern, and this too fell under the jurisdiction of the *Sex de blada*. In 1305, the community of Pozzo was obliged by the *Sex de blada* to maintain security for the duration of two years on the road between Dicomano and Florence. In exchange, the commune of Florence agreed to protect the men of Pozzo and their goods and commerce for the same period. See L. Conti, ed., 1996, no. 7, 1305 August 13, pp. 55-57; no. 8, 1305 August 13, pp. 57-59. Cf. ASF, *Notarile antecosimiano* 3141/B2127, Bondoni Uguccione [di Ranieri da Firenze], 1300-1322, fols. 14r-15r.

from the territory of Faenza.⁸⁴ Another market was established in the early fourteenth century east of Florence near the Passo della Consuma to facilitate imports from the Casentino and eastern Romagna.⁸⁵ Markets were also established in the Chianti on the periphery of Florentine territory to facilitate to the urban food supply probably from even before the middle of the thirteenth century. The market at Gaiole in Chianti, attested already in 1236, was clearly an important centre of distribution and exchange in the later thirteenth century.⁸⁶ In 1287, probably in response to the disruption of trade in the upper valley of the river Arno in the territory of Arezzo, a market was established at nearby Monteluco della Berardenga specifically to facilitate the movement of grain towards Florence.⁸⁷ A market already existed at Loro Ciuffenna in the upper Arno valley below the Pratomagno in 1306, but it was re-established in 1347 to facilitate the importation of grain from the territory of Arezzo.⁸⁸

The connection between improvements in the trade infrastructure and the amelioration of the food supply is frequently less explicit in the extant documen-

⁸⁴ On the re-establishment of the market at Razuolo, see Pinto, 1978, p. 107, n. 140, citing ASF, *Provvisoni* 19, fol. 38v: 'magna abundantia frumenti consequatur in civitate et comitatu Florentie ex mercatu quod olim fiebat'.

⁸⁵ See Friedman, 1988, app., no. 12, 1329 October 11, pp. 327-329, esp. 328-329, citing ASF, *Capitoli* 32, fols. 70r-v; De la Roncière, 1976, 4, pp. 343-347, no. 7, citing ASF, *Provvisoni* 25, fol. 73r; Pinto, 1978, p. 300, n. 1, citing ASF, *Provvisoni Protocolli* 6, fol. 73r.

⁸⁶ For the thirteenth century references to the market at Gaiole in Chianti, see above.

⁸⁷ The market at Monteluco della Berardenga was established in 1287 'maxime pro copia grani et bladi habenda'. See Pinto, 1978, p. 107, n. 140, citing ASF, *Provvisoni Protocolli* 1, fol. 45r. See also De la Roncière, 1976, 4, pp. 343-347, no. 28, citing the same source. The remoteness of the new market at Monteluco della Berardenga reflects the severity of disruptions to the food supply of Florence caused by deteriorating relations between Florence and Arezzo. The decision to construct a *castellum* at Monteluco della Berardenga as a frontier outpost had been made two years earlier. See Gaye, ed., 1839-1840, 1, app. 2, p. 417, citing ASF, *Capitoli* 43.

⁸⁸ Loro Ciuffenna was incorporated into the territory of Florence in 1306 so that 'forum comunis Lori augmentetur'. In 1347, the Florence commune confirmed 'licentia faciendi mercatum et forum de grano, blado et aliis victualibus et aliis mercantiis in dicto comuni de Loro [...] qualibet die mercurii in quodam campo seu platea posita juxta castrum de Loro'. On the incorporation of Loro into the territory of Florence and the later confirmation of market rights at Loro, see De la Roncière, 1976, 4, pp. 343-347, no. 23, citing ASF, *Provvisoni, Duplicati* 7, fol. 1v. De la Roncière failed to indicate precisely the source of the 1306 attestation, but he stated that the grant of license in 1347 was a confirmation of rights recently conferred upon Loro by the *Abbondanza*, the communal office at Florence responsible for the food supply in the early fourteenth century. The confirmation of rights to hold a weekly market at Loro was specifically intended to increase staple food imports from Aretine territory. See Pinto, 1978, p. 107, n. 140, citing ASF, *Provvisoni* 34, fols. 105v-106r: 'ad hoc ut ad dictum forum venirent granum, bladam, victualia et alie mercantie precipue de partibus Casentini et comitatus Aretii, confinantibus cum ipso comuni de Loro'.

tation. When the reasons for improvements in the trade infrastructure are given, however, they typically concern the amelioration of the food supply. On several occasions, moreover, the *Sex de blada* directly administered both the construction and repair of roads and bridges in the territory of Florence and security on the roads.⁸⁹ Evidence for the construction and repair of roads and bridges in the Florentine countryside from about the beginning of the last quarter of the thirteenth century is considerable. By 1281 at least, there was an office in Florence charged with the oversight of the roads and bridges in the territory.⁹⁰ As early as 1260, jurisdiction in the Florentine countryside was divided into *sestieri*, six administrative zones that appear to have radiated out from the city along the lines of the six 'master roads' then in use.⁹¹ The earliest secure indication of a transport policy organised around the so-called 'master roads' occurs only in 1285, however, by which there were seven such arteries of communication.⁹² By the end of the

⁸⁹ On the construction and repair of roads and bridges in the territory of Florence administered by the *Sex de blada*, see again Pinto, 1978, p. 107, n. 139. On the organisation of security on the roads by the *Sex de blada*, see again L. Conti, ed., 1996, no. 7, 1305 August 13, pp. 55-57; no. 8, 1305 August 13, pp. 57-59.

⁹⁰ Gherardi, ed., 1896-1898, 1, p. 49 [1281 May 30]: 'Item, super stanciamento officialium viarum'. The office is attested again in September 1292. See Gherardi, ed., 1896-1898, 2, pp. 319-320 [1292 September 11]: 'offitio super actandis viis stratis pontibus et fontibus civitatis et comitatus Florentie'. See also Zorzi, 1994, p. 331.

⁹¹ Plesner argued that the organisation of the *sestieri* in the Florentine countryside was closely related to the development of the 'master roads' in the territory. The *Sesto del Duomo* administered much of the area north of Florence including the trans-Appennine roads to Bologna and Imola. The *Sesto di Porta San Piero* administered a large area east of the city including the roads through Dicomano to Forlì and along the western escarpment of the Pratomagno to Arezzo. The *Sesto del Borgo* administered the area immediately south of Florence, extending as far south as Panzano, and bordered in the west by the river Pesa and in the east for the most part by the ridge above the left bank of the river Arno. The *Sesto San Pancrazio* administered a relatively small area west of Florence on the Campi plain and a small tract on the left bank of the river Arno including the towns of Ponte a Signa and Porto di Mezzo. The *Sesto del Oltrarno* administered the area west of the river Pesa, extending to the south somewhat beyond San Donato in Poggio in the Pesa Valley and virtually as far as Poggibonsi in the valley of the river Elsa. The *Sesto di San Piero Scheraggio* administered the extreme southeastern portion of the Florentine countryside, including the roads on the left bank of the upper Arno valley, as well as much of the Chianti. See Plesner, 1938, pp. 76-78. Plesner based his argument on the organisation of the rural *sestieri* as they appeared in the *Libro di Montaperti* of 1260. Giovanni Villani reported that the administrative reorganisation of the countryside had been undertaken ten years earlier. For the *Libro di Montaperti*, see Paoli, ed., 1889. On the reorganisation of the countryside in 1250, see Villani, bk. 6, chap. 39: 'E come ordinò il detto popolo le 'nsegne e gonfaloni in città, così fece in contado a tutti i pivieri il suo, ch' erano novantasei, e ordinargli a leghe acciocchè l'una atasse l'altra, e venissero a città e in oste quando bisognasse'.

⁹² In September of 1285, after a poor harvest, the Florentine commune suspended most works on roads and bridges in the territory, but they excepted the seven 'master roads'. The general suspension of works was probably owing to the necessity to divert funds from the construction and repair

first quarter of the fourteenth century, the number of 'master roads' in the Florentine countryside had increased to ten.⁹³

The road network in the Florentine countryside was supplemented by water transport on the larger rivers, which facilitated the movement of bulky goods such as grain. In the upper valley of the river Arno, port facilities are documented at Incisa in Val d'Arno from 1101, at Figline Valdarno from 1187, and at San Ellero from 1192.⁹⁴ There were ports in the lower Arno valley at Signa from the later tenth century, at Porto di Mezzo from 1217, at Ponte a Signa from 1239, and at Empoli and Pontorme from 1297.⁹⁵ Ports are even attested in the Mugello on the

of all but the most important roads to the acquisition of staple food imports. Works on the seven 'master roads' were excepted because these roads afforded access to grain exporting regions beyond the frontiers of Florentine territory. See Gherardi, ed., 1896-1898, 1, p. 294 [1285 September 5]: 'Item, super suspensione laboreriorum pontium et stratarum, secundum notam cuiusdam cedule, et aliorum operum Comunis; salvis VII stratis mastris, et salva provisione Priorum'. The seven master roads that radiated out from the city of Florence in the later thirteenth century were probably the roads for (1) Pisa by way of Ponte a Signa and Empoli; (2) Prato, Pistoia, and Lucca; (3) Bologna by way of either the valley of the torrent Marina from Calenzano to Barberino di Mugello and the Passo di Futa, or by way of San Piero a Sieve and the Osteria Bruciata or the Giogo di Scarperia; (4) Faenza by way of Borgo San Lorenzo, Razuolo, and Marradi; (5) Arezzo by way of San Donato in Collina and Figline Valdarno; (6) Siena and the Chianti by way of San Casciano in Val di Pesa and Poggibonsi; and (7) Volterra by way of Castelfiorentino and Gambassi. See above, Map 10, and below, Appendix, 9.4.

⁹³ Caggese, ed., 1910, bk. 4, chap. 8, p. 175-181, esp. 175: 'Que strate et vie mastre sunt hec, videlicet: [1] via et strata que summitur a porta seu Burgo Sancti Niccholai per quam itur in Vallem Arni; [2] strata de Chianti que summit initium a pilastro ubi est crux ultra ponticellum de Ricorboli; [3] strata per quam itur Pratum et incipit a ponte seu Burgho Sancti Pauli; [4] strata de Sexto per quam itur Pratum et incipit a porta de Campo Corbolino; [5] strata per quam itur ad Sanctum Petrum de Sieve, versus Bononiam et versus Gallianum et Sanctam Aghatam, et incipit a porta seu Burgho Sancti Laurentii; [6] strata per quam itur ad Burghum Sancti Laurentii de Mucello, que summitur ab hospitali Sancti Galli; [7] strata per quam itur ad Pontem de Sieve at vadit versus Decomanum et incipit a Burgo Sancti Petri Maioris; [8] strata per quam itur ad Sanctum Cassianum, Podium Boniççi et Sanctum Donatum in Pocis; [9] strata de Giogholis que summitur a porta seu Burgho Sancti Petri in Gattolino; [10] strata per quam itur Pisas que summitur a porta seu Burgo Sancti Frediani'. See above, Map 11, and below, Appendix 4. Two-thirds of the 134 medieval hospitals in the Florentine countryside identified by De la Roncière were situated on these 'master roads'. See De la Roncière, 1976, 3, pp. 921-925, esp. 921. The radial system of 'master roads' that converged at Florence functioned to reinforce the centrality of the city within the territory. See Zorzi, 1994, p. 305.

⁹⁴ For evidence of port facilities at Incisa in Val d'Arno, see ASF, *Diplomatico*, San Vigilio di Siena, 1101 July 23. The port at Figline Valdarno is first attested in a document incorrectly dated in the ASF. See Kehr, ed., 1904, no. 33, 1186 January 29, pp. 186-188; ASF, *Diplomatico*, Badia di Passignano, 1262 January 29. For the earliest reference to the port at San Ellero, situated below the abbey at Vallombrosa near the confluence of the river Arno and the torrent Vicano di San Ellero, see ASF, *Diplomatico*, Vallombrosa, 1192 January 26.

⁹⁵ For evidence of port facilities at Signa, see Piattoli, ed., 1938, no. 14, 964 July, pp. 40-45, esp. 42; Mosiici, ed., 1969, no. 15, 1078 February 20, pp. 68-74, esp. 71; ASF, *Diplomatico*, Cestello, 1181 June. For Porto di Mezzo, see ASF, *Diplomatico*, Cestello, 1217 September 13; ASF, *Com-*

river Sieve from the middle of the twelfth century. There was a port near the confluence of the Sieve and the torrent Stura a few kilometres south of Barberino di Mugello from 1154, and port facilities are documented at San Piero a Sieve and Dicomano from the middle of the fourteenth century.⁹⁶ Numerous ports are also attested within the city of Florence itself and in the eastern and western suburbs of the city, underscoring the importance of water transport in the territory.⁹⁷

In the later thirteenth and early fourteenth centuries, the Florentine commune also improved the efficacy of the networks of roads and markets in the territory of Florence by founding 'new towns' towards the periphery of the territory.⁹⁸ New foundations were by no means unique to Florence. Elsewhere in north-central Italy, the establishment of new towns was designed largely to stem the flow of migration from countryside to the city and to encourage the re-population of the countryside.⁹⁹ In the territory of Florence, the foundation of new towns likewise was conditioned in part by demographic exigencies, but the overriding purpose of the new foundations was to circumscribe the seigniorial power in the Florentine countryside. The new towns of Scarperia and Firenzuola were founded in the countryside north of Florence specifically to weaken the control of the Ubaldini

pagnie religiose soppresse da Pietro Leopoldo 479, 302, fol. 24r. Several different port facilities at Ponte a Signa are attested in numerous documents of the thirteenth century, but the earliest reference is ASF, *Diplomatico*, Cestello, 1239 June 19. See also the list of ports below in Appendix 6. Port facilities at Empoli and Pontorme are securely attested in the middle ages only from the end of the thirteenth century, but Empoli was clearly an important river port already in antiquity. See Solari, 1914-1918, 1, pt. 3, p. 98; app., no. 741, p. 72. For the earliest medieval reference to the ports at Empoli and Pontorme, see Davidsohn, ed., 1896-1908, 3, no. 284, 1297 June 13, p. 64, citing ASF, *Capitoli* 35, fol. 105r.

⁹⁶ For evidence of port facilities at Castagnolo near the confluence of the river Sieve and the torrent Stura, see ASF, *Diplomatico*, Badia di Passignano, 1153 January 8, 1154 January. Port facilities are attested at both San Piero a Sieve and Dicomano only from 1350. See De la Roncière, 1976, 4, p. 273, n. 183, citing ASF, *Or San Michele* 251, fol. 2v.

⁹⁷ No less than six different port facilities, and perhaps as many as eight, are attested on the river Arno in the city of Florence itself and in the immediately outlying suburbs before 1300. The six clearly distinct port facilities, from east to west, were Carmazio on the left bank, Forche on the right bank, Fonte al Porto on the left bank, and Tempio, Altafronte, and Borgo Ognissanti on the right bank. In addition, there may have been port facilities on the left bank of the river in the western suburb of San Frediano and at Legnaia. For source references and dates, see below in Appendix 6.

⁹⁸ Most of the Florentine *terre nuove*, if not all, were not 'new towns', properly speaking. San Giovanni Valdarno and Scarperia, for example, were founded as 'new towns' in 1299 and 1306, respectively, but they were important market towns already in the later twelfth century. Presumably, most 'new towns' were established on relatively minor settlements that were nevertheless strategically situated.

⁹⁹ Pinto, 1984b, pp. 25-27; Zorzi, 1994, p. 339.

lords in the Mugello.¹⁰⁰ The new towns of San Giovanni Valdarno, Castelfranco di Sopra, and Terranuova Bracciolini presumably were founded in the upper Arno valley to offset the power exercised by various Ghibelline lords along the roads to Arezzo.¹⁰¹ The Florentines also deliberated upon but never realised the foundation of another new town in the upper Arno valley at Tartigliese.¹⁰² The new town of Pian dell'Asentio near the Passo della Consuma had been designed to safeguard the road between the town of Borselli and the frontier of Florentine territory, to facilitate the food supply of Florence, and to discourage military incursions from the Casentino by the Aretines, the Guidi, and exiled Ghibellines.¹⁰³ In the imme-

¹⁰⁰ Moretti, 1980, pp. 26-27. For the text of the decision to construct the new towns of Scarperia and Firenzuola, see Friedman, 1988, app., no. 3, 1306 April 29, pp. 310-313, citing ASF, *Provvisioni* 12, fols. 206r-v, 207v: 'Ad reprimendum effrenandum superbiam Ubaldinorum et aliorum de Mucello et de ultra alpes, qui comuni et populo Florentie rebellaverunt castrum Montis Accianichi et alias fortilitias et guerram faciunt et non hactenus fecerunt dicto comuni et populo Florentie, non habentes deum pre oculis et non reminiscendo quod nati sunt comuni et populo predicto, et que hactenus comune Florentie misericorditer remisit eisdem et eorum antecessoribus, ut eorum vires radicitus enerventur provida deliberatione provisum et ordinatum est quod pro comuni Florentie fiant due terre, una videlicet in Mucello, alia vero ultra alpes, ubi et sicut videbitur officialibus ad predicta ponendis per dominos priores artium et vexilliferum iustitie presentes vel futuros'. For chronicle accounts of the new foundations at Scarperia and Firenzuola, respectively, see Villani, bk. 8, chap. 86; bk. 10, chap. 199. On Firenzuola, see also Stefani, rub. 490.

¹⁰¹ Moretti, 1980, pp. 24-26. For the deliberations of the communal consuls at Florence in August of 1285 concerning the establishment of new towns in the upper valley of the river Arno between Figline Valdarno and Montevarchi, see Gherardi, ed., 1896-1898, 1, pp. 276-277, 281-282, 284-285, 289-290. See also Gaye, ed., 1839-1840, 1, app. 2, p. 442; Friedman, 1988, app., no. 1, pp. 305-308, esp. 306-308. For legislation concerning the establishment of San Giovanni Valdarno and Castelfranco di Sopra in 1299, see Friedman, 1988, app., no. 2, 1298 January 26, pp. 308-310, citing ASF, *Provvisioni* 9, fols. 136r-137r. For the later establishment of Terranuova Bracciolini, see Friedman, 1988, no. 16, 1337 April 2, pp. 332-334, citing ASF, *Provvisioni* 28, fols. 152r-v. The sources give no clear indication of the reason for the establishment of these towns, but the legislation for their establishment explicitly prohibited lords from holding property in the towns: 'Providentes insuper et firmantes quod nullus de magnatibus civitatis vel comitatus Florentie possit seu audeat vel presummat in ipsis terris vel aliqua earum, alioquo modo, iure vel causa, per se vel alium, emere seu alio quocumque titulo, iure vel cause seu modo acquirere vel habere seu ad pensionem conducere vel tenere aliquam domum, terrenum seu casolare, ac etiam decetero, extra aliquam ipsarum terrarum infra seu prope duo miliaria aliquam fortilitiam seu domum construere, hedificare et facere seu hedificari et fieri facere aliquo modo, iure vel causa, non obstantibus aliquibus statutis ordinamentis seu consiliorum reformationibus, tam editis quam edendis, in predictis vel aliquo predictorum quomodolibet contradicentibus vel repugnantibus'. The passage is quoted from the legislation for the establishment of San Giovanni and Castelfranco, but the legislation for the establishment of Terranuova contains a similar passage. Among the unnamed lords to whom the texts refer were probably the Pazzi and Uberti. For chronicle accounts of the establishment of the new towns at San Giovanni and Castelfranco, see also Villani, bk. 8, chap. 17.

¹⁰² Moretti, 1980, pp. 28-29.

¹⁰³ Moretti, 1980, pp. 27-28. For the ext of the decision to establish a new town at Monte al Pruno, see Friedman, 1988, app., no. 12, 1329 October 11, pp. 327-329: 'Et quia fortilitia non est aliqua, remanet quasi totum dictum terrenum incultum, et si construeretur aliqua terra intra dictum

diate aftermath of the Black Death, the Florentines also discussed the foundation of a new town to be called Giglio Fiorentino in the valley of the torrent Ambra, which empties into the river Arno above Montevarchi, but the planned foundation was never realised.¹⁰⁴

By the end of the thirteenth century, Florence had also begun to establish military outposts on the frontiers of Florentine territory and along the principal roads, administered by *castellani* and provided with small contingents of armed soldiers.¹⁰⁵ These outposts were no doubt intended largely as defensive installations against external threats, but they also safeguarded many of the master roads that carried staple food imports to Florence. In the early fourteenth century, Florence had even begun to purchase *castella* situated beyond the confines of Florentine territory on important arteries of communication, presumably for the same purpose. The Florentines acquired *castella* at Cerreto Guidi, Fucecchio, Montopoli, and Santa Croce sull'Arno in the lower valley of the river Arno, at Mangona in the western Mugello, and at Loro Ciuffenna and Lanciolina on the southwestern escarpment of the Pratomagno.¹⁰⁶

locum [Monte al Pruno], maxime prope dictos confines, homines de contratis redirent ad habitandum in ea, et totum dictum terrenum laboraretur et acquireret comune Florentie terrenum per spatium quatuor miliarum, quod quasi dici potest comune Florentie non habere vel possidere ullatenus, et Casentinenses et alii circumstantes et Romandioli confluerunt cum frumento, blado, forratico et bestiis tam domesticis quam silvestribus et aliis victualibus, et haberetur maior solito eorum copia in civitate Florentie, ac Aretini et Comites Guidones, ghibelline et rebelles comunis Florentie, guerram facere non possent contra comune predictum de partibus Casentini vel aliis circumstantiis. [...] Item quod in dicta terra vel extra ipsam terram iuxta eandem terram, possit et debeat fieri mercatum saltem semel singulis septimanis, ea videlicet die que placuerit hominibus dicte terre, in quo vendatur frumentum, bladum, formaticum, bestie et alia victualia et mercantie, sine solutione gabelle comuni Florentie facienda pro ipso mercato vel rebus que adducerentur vel venderentur in ipso mercato'.

¹⁰⁴ Moretti, 1980, p. 29. Documents related the planning of the new town of Giglio Fiorentino are published in Friedman, 1988, app., nos. 17-21.

¹⁰⁵ Outposts of this sort are attested north of Florence at Tirli in the valley of the river Santerno and at Pietrasanta near the Colla di Casaglia, and in the Chianti at Montelucio della Berardenga and Montegrossoli. They are also attested in the upper Arno valley at Leccio, Ostina, Caposelvi, and Laterina, and in the valley of the river Era on the western frontier of Florentine territory at Montecchio, Montignoso, and Peccioli. See Zorzi, 1994, p. 330, n. 216.

¹⁰⁶ See again Zorzi, 1994, p. 330, n. 217.

6.3. Conclusion

The weakness of Florentine jurisdiction in many parts of the territory of Florence before the end of the twelfth century created opportunities for the more powerful lords to develop markets and market networks without the expectation of communal encroachment on revenues from tolls and tariffs. The bishops of Fiesole, the Guidi counts, and the Alberti counts all sought to establish urban or quasi-urban centres in countryside to challenge the expansion of Florentine hegemony in the territory. They also sought to exploit demographic and economic growth in north-central Tuscany region more generally. They were responding to pressures similar to those that had already by 1150 precipitated the formation of independent political entities just outside the territory of Florence at Prato, San Gimignano, and San Miniato al Tedesco, despite the absence of episcopal institutions.

The bishops of Fiesole initiated efforts to transfer of the seat of their diocese to a location more distant from Florence probably even before the middle of the twelfth century, and pope Alexander III even sanctioned the transfer of the seat to Figline Valdarno in 1167. The transfer constituted a serious threat to Florence precisely because it carried with it the institution of the bishop, which would have favoured the development of an urban centre at Figline, and it also would have strengthened the prospect for the bishops of Fiesole to wrest control of their diocese from Florence. The Florentines therefore responded quickly to the threat, launching an assault against Figline perhaps as early as 1167 and destroying the *castellum* at Figline in 1170, which effectively eliminated ended any realistic possibility for the bishops of Fiesole to disentangle itself from the influence of Florence. The Guidi counts developed several strategically situated seigniorial centres in peripheral areas of the Florentine countryside, which elicited from Florence assaults against the Guidi first at Monte di Croce and then at Poggibonsi, and the Guidi were compelled to negotiate a settlement with Florence in 1158 and again in 1176. Having already witnessed their *castellum* of Prato develop into an independent commune by 1141, the Alberti began to construct a new settlement at Semifonte in the later twelfth century. The Florentines forced the submission of the Alberti in 1184 and again in 1200 after the counts reneged on the earlier submission, and to discourage further intransigence, the Florentines dismantled the *castellum* of Semifonte in 1202.

The emergence of new centres of population in north-central Tuscany was an outgrowth of a long-term pattern of regional development. As the larger cities and towns in the region began to expand in the tenth and eleventh centuries, the

level of trade between them and with other cities and towns in neighbouring regions also increased, encouraging development at an intermediate location that was favourably situated to articulate both intra-regional and supra-regional trade. In the twelfth century, Pisa was clearly the most dynamic city in the region, followed by Lucca and Siena. The centre of gravity in Tuscany thus lay in the northwest, but it had begun to drift towards the centre, particularly towards the territory of Florence and along its southern and western frontiers. The geographic position of Florence itself in relation to other Tuscan towns rendered it the most ideally situated city in the region through which to articulate trade. Florence was also favourably situated in relation to important trading centres beyond the confines of Tuscany in Romagna and in the south-central Italian regions of Umbria, the Marche, Lazio, and Abruzzo. The city itself lay on the river Arno, the largest waterway in the region, which was able to sustain river traffic both above and below the city. The territory of Florence was scored by numerous smaller waterways, which provided important sources of hydraulic power and, at least in the case of the river Sieve, additional arteries of water transport.

Florentine jurisdiction within its own territory was still weak in the early twelfth century, however, and the city was not yet able to exploit fully its favourable geographic position. The weakness of Florentine jurisdiction in its own countryside nevertheless created opportunities for seigniorial initiative. Until about 1225, the intensification of market networks in the Florentine countryside was driven largely, and indeed perhaps almost exclusively, by rural lords, who probably benefited from the inability of the Florentine commune to encroach upon market revenues. The efforts of the bishops of Fiesole at Figline Valdarno, the Guidi counts at Poggibonsi, Montevarchi, and Empoli, and the Alberti counts at Semifonte to develop urban or quasi-urban centres constitute only the most extreme examples of the exercise of seigniorial initiative. The ultimate aim in these exceptional instances was the establishment of market centres sufficiently large to resist Florentine domination, and indeed to challenge it. Most activity of this sort was practised on a much smaller scale, however, and it was directed more towards benefiting as much as possible from economic growth at Florence rather than towards challenging or hindering it.

The Ubaldini lords in the Mugello north of Florence, for example, evidently never sought to create such larger market centres, though they probably would have been capable of such efforts, given sufficient demographic pressure. It is notable, however, that the efforts of the more powerful lords in the Florentine

countryside to develop of urban or quasi-urban centres by is most conspicuous in the later twelfth century. During this period, the Ubaldini evidently still acknowledged their feudo-vassalic ties to the Florentine bishops, and their relationship with the city appears to have been for the most part cooperative until the middle of the thirteenth century.¹⁰⁷ Other rural lords simply were not capable of developing large market centres, but they developed numerous market centres on a more modest scale, particularly along the corridors facilitating supra-regional trade.

The middle decades of the thirteenth century constituted a period of consolidation during which the rural market networks in the countryside of Florence were gradually integrated into the Florentine sphere. By the end of the century, probably in response to rising staple food requirements among the urban population in the city of Florence itself, the Florentine commune was intervening directly in the development of the networks of roads and markets in the territory. The commune of Florence invested enormously in the construction and maintenance of roads and bridges in the countryside, particularly on the so-called 'master roads', which facilitated the more efficient transfer of agricultural goods both from nearby exporting regions and from the most productive lands in the Florentine countryside to the city itself. The amelioration of the territorial trade infrastructure also benefited Florentine industry by lowering the cost of transport and thereby improving access for products of Florentine manufacture to external markets.

The development of supra-regional trading relations between Florence and other Italian governments outside of Tuscany was another consequence of the inability of Florence to control its surrounding countryside. The weakness of Florentine jurisdiction in the countryside made it both more difficult and more expensive for Florence to develop close trading relations in many parts the hinterland. Most other Tuscan cities were able to exercise greater control of their respective countrysides, which helped to minimise the costs of trade between the city and hinterland, and they depended heavily on their own countrysides for vital resources. Because of their strong reliance on the own countrysides, however, they resisted the efforts of Florence to establish close trading relations in their hinterlands, which forced the Florentines to form commercial ties in more distant markets.

¹⁰⁷ In the eleventh and twelfth centuries, the Ubaldini were vassals of the margrave of Tuscany, the Guidi counts, and the bishops of Florence. The feudo-vassalic ties of the Ubaldini are discussed above, Chapter 2.3.2. See also Magna, 1982, p. 27.

7. Regional and supra-regional trade

In the early fourteenth century, Florence was the centre of an extensive commercial empire, and its merchant-bankers were active throughout much of western Europe. Florentine merchant-banking companies were active in northern Europe at London, Paris, and Bruges. They operated in the south of France especially at Avignon but also at Marseilles, Montpellier, and Nimes.¹ In the western Mediterranean, Florentine merchant-bankers were active at Barcelona, Majorca, Seville, and even in the Spanish interior. They were also active in the Levant, on the islands of Cyprus and Rhodes, at Ragusa, and in North Africa.²

¹ On Florentine merchant-banking in general in the later thirteenth and early fourteenth centuries, see Renouard, 1949, pp. 119-160. The customs and measures in all of the areas mentioned are discussed in *La pratica della mercatura* of Francesco Balducci Pegolotti, which dates from the years around 1340. See Evans, ed., 1936. Factors working on behalf of the major Florentine merchant-banking companies are attested in most of these areas before the middle of the fourteenth century in Renouard, 1938. Florentine merchant-bankers were active in England from as early as 1224. See Borsari, 1994, pp. 16-17, n. 37. The activities of Florentine merchant-bankers in England are discussed in Fryde, 1996; Hunt, 1994; Kaeuper, 1973b; Lloyd, 1982. See also Saporì, 1926; 1932; 1947; 1955, 1, pp. 859-926. On the activities in England of northern Italian merchant-bankers more generally, see Bond, ed., 1840; Kaeuper, 1973a; Lloyd, 1977; Prestwick, 1979b; Rhodes, 1907; Schaube, 1908; Whitwell, 1903. See also Fryde, 1974; 1985. On the activities of Florentine and other Italian merchant-bankers at Paris in the later thirteenth century, see Strayer, 1969. See also Villani, bk. 7, chap. 147. On merchant-bankers from Figline Valdarno active at Paris in the third quarter of the thirteenth century, see Pirillo, 1992, pp. 51-54. On Florentine merchant-bankers at Bruges in the early fourteenth century, see De Roover, 1948. On the operations of the Cerchi merchant-bankers of Florence at Marseilles in the second half of the thirteenth century, see Baggott, 1985, pp. 35-64, esp. 40. Florentine merchant-bankers were active at Montpellier from 1268, especially in the transfer of funds to Bologna for the accounts of students at the University of Bologna and for the repayment of student debts. See Reyerson, 1985, pp. 115-116. In the early fourteenth century, the Peruzzi company of Florence used the foreign exchange and monetary market at Montpellier as an intermediate link in an international financial network that extended to Valencia in Spain. See Reyerson, 1985, pp. 123-124. The Florentine merchant Guido di Filippo di Ghidone dell'Antella worked in Provence on behalf of both the Scali and Franzesi companies in the later thirteenth century. See Polidori, ed., 1843, pp. 5-7; Castellani, ed., 1952, 2, pp. 804-805. For abundant evidence of one Florentine merchant working in Provence before the end of the thirteenth century, see Castellani, ed., 1952, 2, pp. 708-803.

² See again Evans, ed., 1936; Renouard, 1938. Florentine merchants were active on the island of Majorca even before the middle of the thirteenth century, and merchant-bankers of the Bardi and Peruzzi companies sometimes commissioned Majorcan vessels for the exportation of English wool in the early fourteenth century. See Abulafia, 1994, pp. 113, 125-126, 199-200. On the activities of Florentine merchant-bankers at Ragusa, see Krekic, 1977; 1979. On Florentine involvement in trade between Sicily and Tunis, see Abulafia, 1987b. Merchant-bankers from Florence are at-

The commercial operations of Florentine merchant-bankers in these distant locales were both more exceptional and less intense, however, than their trading activities within Italy itself, particularly before the middle of the thirteenth century. Florentine companies operated not only in such larger Italian cities as Bologna, Genoa, Naples, Palermo, Pisa, Rome, and Venice, but also in Ancona, Bari, Barletta, Benevento, Città di Castello, L'Aquila, Macerata, Orvieto, Perugia, Spoleto, Viterbo, and even in the South Tyrol.³ The demographic and economic expansion of Florence in the later twelfth and thirteenth centuries was in fact nourished by the more modest but also more intense trading activities of its merchant-bankers within Italy.

This chapter delineates the early expansion of Florentine trade, focusing primarily on the trading activities of Florence within Italy and on the two-way exchange of manufacturing exports, mainly woollen textiles, and financial services for food imports, mainly grain. Florence developed supra-regional trading relations to compensate for the weakness of communal jurisdiction in the countryside, which increased the cost of trade within the territory and constrained the ability of the commune to obtain provisions from its own hinterland. The almost complete dependence of other Tuscan cities on their respective countrysides for vital resources made them sensitive to Florentine intrusion and limited the degree to which Florence was able to satisfy its basic requirements on the regional market. Geographically, attention centres upon the three main trajectories of Florentine commercial relations in Italy: north through the Mugello and across the Apennine Mountains to the cities of Romagna and towards Adriatic ports; southeast to Arezzo and thence to Umbria, the Marche, Lazio, and Abruzzo; and west along the lower valley of the river Arno to Pisa, which in turn afforded access by sea to Sicily and southern Italy.

Communal officials at Florence persistently endeavoured to establish and to maintain open lines of trade, and they also contrived suitable though clearly inferior alternatives to circumvent obstructions to trade. Florence behaved in such a manner because its own peculiar circumstances encouraged it to do so. The inhabitants in the territory of Florence achieved high levels of productivity by

tested in North Africa already before the middle of the thirteenth century. See Morozzo della Rocca and Lombardo, eds., 1940, 2, no. 776, 1245 June 30, pp. 301-302.

³ Most of these places, and others, are mentioned in Evans, ed., 1936; Renouard, 1938. On the activities of Florentine merchant-bankers in the South Tyrol, see Davidsohn, ed., 1896-1908, 4, pp. 323-357; Neri, 1951; Patrone, 1963.

means of a sectoral shift of labour from agriculture to manufacturing. In order to sustain the manufacturing sector, Florence needed both a healthy export trade and an adequate supply of staple foodstuffs. Agricultural production in the Florentine countryside alone, however, was usually insufficient to satisfy the total food requirements in the territory. It was therefore necessary to supplement domestic food production with imported foodstuffs from elsewhere in Tuscany and above all from Romagna, and from Sicily and southern Italy.

This chapter emphasises the multi-directional orientation of Florentine trade, and it illustrates that the factors critical to the development of Florentine trade were access to the sea, and the opening of the trans-Appennine passage between Florence and Bologna to regular commercial traffic around the year 1200. Florentine trade in central and southern Italy especially was influenced substantially by the Guelf political leanings of Florence and the ‘guelfizzazione’ of central and southern Italy.⁴

7.1. The expansion of trade

Much of the early evidence for the expansion of Florentine trade comes in the form of reciprocal trade agreements between Florence, or its guilds or merchants, and other states or seigniorial powers. These treaties typically indicate little or nothing about the nature or extent of trade, or the precise moment at which commercial relations were established. They constitute merely the formalisation of previously existing but more informal commercial relations. One of the primary objectives of such formalisation was the substitution of commercial reprisals with avenues of redress that were less detrimental to trade and limited the restitution of damages to the culpable party. Communes granted license for the execution of reprisal to citizens in compensation for their inability to prosecute claims for loss in another jurisdiction. The right of reprisal enabled a citizen who had suffered a loss in another jurisdiction to exact restitution, by coercion if necessary, for his loss from a subject of the jurisdiction in which the initial affront had occurred. The grant of license for the execution of reprisal and treaties designed to expedite

⁴ The ‘guelfizzazione’ of central and southern Italy is discussed above, Chapter 5.3.

the repeal of such license thus suggest the disruption of previously existing trade relations.⁵

These trade agreements vary considerably in terms of the privileges they afford, but they often guarantee the security of the citizens of each power in the territory of the other. The treaties may also include any of a variety of other commercial clauses that provide exemptions from tolls and customs duties, for example, or avenues of recourse for the settlement of disputes, but the early commercial treaties very rarely provide information concerning the extent or nature of trade. Chronicles sometimes help to illuminate the products of exchange in Florentine trade, and the wider variety of documentary evidence that begins to survive from the middle of the thirteenth century supplements the information that emerges from the early treaties. The evidence clearly illustrates that Florentine trade was primarily composed of manufacturing exports, which were mainly woollen textiles, and food imports, primarily grain.

7.2. Regional trade in Tuscany

Florentine commercial treaties survive in quantities sufficient to permit consideration of the early development of trade and industry at Florence only from the middle of the twelfth century. The earliest surviving example of a reciprocal trade agreement involving Florence is a settlement treaty negotiated in 1158 to terminate hostilities between Florence and Lucca on the one hand and Pisa and the Guidi counts on the other. The treaty brought an end to a conflict between the two alliances, cancelled all wartime claims, granted free passage to merchants through Pisa and Lucca, and provided for the restitution of conquered territories.⁶ The treaty also established an enduring peace between Florence and the Guidi counts

⁵ Arias described the evolution of commercial treaties in the thirteenth century as a reflection of changes in inter-communal relations, which was marked first by the replacement of commercial reprisals with the establishment of magistrates to arbitrate disputes and oversee their settlement. With the passage of time, the necessity for these special magistrates was eliminated by reciprocal agreements that guaranteed equal treatment for citizens of the contracting states and recourse in the local courts. See Arias, 1901a, pp. 217-268, esp. 229. For an undated thirteenth century rubric concerning reprisals from the communal statutes of Florence, see Rondoni, ed., 1882, no. 24, thirteenth century, pp. 70-72; ASF, *Diplomatico*, Santa Maria Novella, thirteenth century. For more on commercial reprisals, with special attention to Florence, see Del Vecchio and Casanova, 1894; Martines, 1968, pp. 359-373; Astorri, 1998, pp. 186-195. On the efforts of the commune of Siena to mitigate the effects of commercial reprisals, see Bowsky, 1981, pp. 232-246.

⁶ Maragone, pp. 17-18, esp. 18; Pampaloni, ed., 1965, no. 2, 1158 June, p. 484. See also above, Chapters 2.2.2, 6.1.2.

in particular, which later enabled Florence to develop trading relations in external markets through corridors dominated by the Guidi around Empoli and Montevarchi.⁷

In 1171, the commune of Florence concluded a forty year treaty with Pisa that granted to Florence protection for its citizens and their possessions in the territory of Pisa, a hostel for Florentine citizens just outside the walls of Pisa, and two commercial sites evidently situated on the old Roman bridge inside the city. The treaty also granted Florentine citizens sea passage with the payment of the same customs duties levied upon the citizens of Pisa, and it likewise exempted Florentines from tolls beyond those paid by Pisans.⁸ In order to take advantage of the treaty, the Florentines needed to be on friendly terms with the Guidi counts. The most direct route between Florence and Pisa was along the river Arno, but the Arno flowed through Guidi dominated territory in and around Empoli towards the western periphery of Florentine territory. For the Florentines, access to Pisa and its port hinged upon safe passage through Guidi territory. It is impossible to determine the products of exchange between Florence and Pisa on the basis of the treaty, but it is worth noting that the Florentine commune supplemented its supply of foodstuffs with grain from the Pisan Maremma when the territory of Florence

⁷ The peace established by the 1158 treaty between Florence and the Guidi counts was broken in 1174 or 1175, when a dispute erupted over the disposition of Poggibonsi, but another peace was negotiated in 1176. See above, Chapter 2.2.2.

⁸ Santini, ed., 1895, *Capitoli*, no. 4, 1171 July 2, pp. 5-6. See also the chronicle account of the treaty in Maragone, p. 53. According to Arias, this document should be seen more as a military alliance between Florence and Pisa against their common rival Lucca than as a commercial treaty. Arias believed that the commercial clauses in the contract were merely incidental. See Arias, 1901a, pp. 18-20. There is a military element to the treaty, but it very clearly possesses a commercial aspect. With respect to the location of the two commercial sites granted to Florence, suffice it to say that only one bridge crossed the river Arno inside the city of Pisa before about 1180. The precise location of the bridge remains debatable, but it may have stood on the site of the Ponte Nuovo, which is thought by some scholars to have been constructed on the site of the old Roman bridge after it was destroyed in 1179. See Herlihy, 1958b, pp. 97-98; Toscanelli, 1935, pp. 15-34. The treaty of 1171 between Florence and Pisa clearly favours Florence, in as much as the Pisan concessions to Florence were not reciprocated by the Florentines. Indeed, according to Davidsohn, Pisan merchants carrying goods to Florence in the early thirteenth century were paying border tolls four times greater than those rendered by Florentine merchants upon entering Pisan territory. See Davidsohn, 1977, 1, pp. 1173-1174; Davidsohn, ed., 1896-1908, 3, no. 1, 1209 March 12, p. 1. In strictly military terms, the treaty obliges Pisa to assist Florence against any adversary with the exceptions of the bishops of Volterra, and the Alberti and Aldobrandeschi counts, and it compels the Pisans to obtain the sanction of Florence before waging war against any other power. For further discussion of the economic aspects of the treaty, see below, Appendix 11.

was struck by famine in 1182.⁹ Notarial records from a century later, in the midst of another food supply crisis, attest to both a thriving grain market in the Maremma and a high degree of involvement on the part of Florentine merchants.¹⁰

It is likely, however, that the real significance of the 1171 treaty lay more in the fact that it afforded the Florentines access to the sea on Pisan vessels and perhaps also access to the commercial empire that Pisa was establishing in the central Mediterranean during the second half of the twelfth century. Already by 1193, for example, Florentines had established a settlement in a street called the 'ruga Florentinorum' at Messina in Sicily, where the Pisans also maintained a commercial colony.¹¹ Access to the sea indeed remained a consistent aspect of Florentine

⁹ For evidence of grain imports in Florence from both the Pisan Maremma and Arezzo during the famine year of 1182, see Stefani, rub. 50: 'Negli anni di Cristo 1182 di gennaio valse lo staio del grano, recando a fiorini, uno terzo di fiorino lo staio che fu a quel tempo una grandissima meraviglia; e per questa cagione di Maremma aveano provveduto di grano i Fiorenini e del contado d'Arezzo: perchè convenia che quello d'Arezzo quasi di furto'. With respect to price of grain at Florence in 1182, as reported by Stefani, suffice it to say that the author was converting late twelfth century prices to prices reckoned in the coinage with which he was more familiar, and the accuracy of the conversion, for present purposes at least, is hardly an issue. The point here is simply that the Florence imported grain from the Maremma in the later twelfth century.

¹⁰ Florentine merchants were especially active in the grain markets of the Pisan Maremma during the summer and autumn of 1284, when a naval war between Pisa and Genoa was disrupting both Florentine access to the sea and the arrival of food imports. The ultimate destination of their purchases must remain a matter of conjecture, but it is worth noting that all of the clients of one Pisan notary working in a Maremma grain market were Florentines, and also that grain was the principal item sold at the market. The exportation of grain from the Maremma probably would not have been impeded at the time, despite a prevailing food supply crisis throughout Tuscany, in as much as the aristocratic Guelph government in Pisa tended to interfere only minimally in trade. See Herlihy, 1958b, pp. 109-110.

¹¹ In the later twelfth century, Pisa was one of at least three northern Italian cities, the other two being Genoa and Venice, that were establishing commercial colonies in the Mediterranean. By the end of the twelfth century, Pisa had firmly established a commercial colony at Messina, and Messina itself had become the focal point of Pisan trading activity in the Mediterranean. The Pisan commercial colony at Messina probably afforded Pisa access to Sicilian grain as well as easier access to markets in the Levant. See Abulafia, 1978, pp. 72-78. On the possible existence of a Florentine settlement at Messina in the later twelfth century, see Davidsohn, 1977, 1, p. 1177; Abulafia, 1977, p. 261. In the evidence for Florence, travel between Florence and Sicily is attested in ASF, *Diplomatico*, Santa Maria Novella, 1197 April 29. By 1232, merchants of San Gimignano were also active at Messina, and the existence of a 'loggia' of the Florentines is attested at Messina from the end of the third quarter of the thirteenth century. For evidence of the merchants of San Gimignano at Messina, see Davidsohn, ed., 1896-1908, 2, no. 2324, 1232 June 7, p. 305. On the 'loggia' of the Florentines at Messina in the second half of the thirteenth century, see Davidsohn, 1977, 1, p. 1177. According to Jacoby, the treaty of 1171 also conceded to the Florentines and other Tuscans the benefits of Pisan citizenship in the eastern Mediterranean. Jacoby maintained that Pisa granted this facility to the citizens of other Tuscan towns in order to channel Tuscan maritime trade through its port, thereby allowing Pisa to exercise a measure of control over foreign commercial activity to the benefit of its own economy. In the middle decades of the thirteenth century, Florentines and other Tuscans were inhabiting the Pisan community at

trading relations with Pisa throughout the period under consideration, and it became increasingly important with the passage of time. The significance of Pisa in Florentine trade, like that of Arezzo, lay in the fact that it served as a conduit through which commercial relations with more distant markets might be achieved. It is perhaps more useful, therefore, to consider the commercial relations of Florence with both Pisa and Arezzo in greater detail below in the context of the assessments of Florentine trade in the zones to which these conduits afforded access.¹²

Florence concluded a twenty year treaty with Lucca in 1184. This treaty was more military in character than the treaty negotiated between Florence and Pisa thirteen years earlier, but it nevertheless included clauses that carried a commercial aspect. The treaty guaranteed the security of Florentine citizens and their possessions in the territory of Lucca, for example, and it established the procedures by which citizens of Lucca were to pursue claims of unpaid debts against Florentines. It granted the citizens of Florence an exemption from any tolls beyond those that were to be established by the consuls of the merchants of Florence and Lucca. It also granted unhindered passage through the territory of Lucca to travellers bound for Florence, as long as they were not enemies of Lucca. Finally, the treaty secured for Florence half of the revenues from the mint at Lucca that stemmed from charges levied against Florentine citizens on specie brought to the Lucchese mint for recoinage. The treaty contained a pronounced military element, which guaranteed to Florence the assistance of Lucca for twenty continuous days each year from the beginning of May to the beginning of October, at Lucchese ex-

Acre. On the extension of the privileges of Pisan citizenship to other Tuscans in the eastern Mediterranean, see Jacoby, 1997, IV, p. 197, and p. 230, n. 38. On Florentines and other Tuscans in the Pisan community at Acre, see Jacoby, 1997, V, p. 104. Abulafia also argued that Tuscans from outside of Pisan territory often declared themselves to be Pisan when travelling in order to take advantage of concessions previously granted to Pisa. Because such declarations effectively placed their claimants under Pisan jurisdiction, thereby conferring to Pisa a variety of fiscal benefits, the Pisans were content to allow the claims to go unchallenged. See Abulafia, 1982; 1987b, pp. 55-56. For evidence that other Tuscans may have travelled as Pisan citizens in 1245, see Davidsohn, ed., 1896-1908, 2, no. 2307, 1245 June, pp. 295-298, esp. 298: 'quod consules Pisani in Acon et in partibus Sirie et factitiis pro omnibus qui Pisanorum nomine censentur sive sint Florentini, sive Pistorienses, sive Senenses, sive de Sancto Geminiano sive de Tuscia, et quod predicti homines subsunt dictis consulibus'. For a more general assessment of the political background to the establishment of the northern powers in the commerce of Sicily and southern Italy, see Powell, 1962. See also Abulafia, 1977.

¹² Florentine trade with and through Pisa is discussed below in the section on Sicily and southern Italy, and the Aretine trade of Florence is discussed in the immediately preceding section on Florentine trade in Umbria, the Marche, Lazio, Abruzzo, and Apulia.

pense, throughout the dioceses of Florence and Fiesole and particularly against Pistoia and in the territory of Pistoia. In all other military engagements, Lucca was to supply Florence with 150 horsemen and 500 foot soldiers and crossbowmen, to be maintained at Florentine expense at the rate of three *solidi* per day per horseman and one *solidus* per day per foot soldier and crossbowman.¹³

In addition to these treaties, the commune of Florence also had negotiated various other settlements that were clearly more political, military, or diplomatic in aspect, yet yielded commercial benefits. By the end of the twelfth century, Florence had begun to establish its presence in the emerging market town of Poggibonsi through a treaty with Siena.¹⁴ Florence later undertook efforts, both diplomatic and military, to eliminate the threat to Florentine hegemony in the region to the north of Poggibonsi posed by the fortified market town of Semifonte, situated above the upper valley of the torrent Agliena near the village of San Donnino.¹⁵ Between 1182 to 1184, the commune of Florence also secured treaties of submission from Empoli in the lower valley of the river Arno, from Pogna in the middle valley of the river Elsa, from the market town of Mangona in western Mugello, and perhaps most importantly a partial submission from the Alberti lords.¹⁶ Finally, in 1197 and 1198, several Tuscan powers concluded a treaty of

¹³ Santini, ed., 1895, *Capitoli*, no. 14, 1184 July 21, pp. 20-23. Arias has stressed the military aspect of this treaty between Florence and Lucca, and he has suggested that the commercial clauses in the treaty, like those in the 1171 treaty that Florence had negotiated with Pisa, were merely incidental. See Arias, 1901a, pp. 18-20. The treaty nevertheless contains a considerable commercial component.

¹⁴ Cecchini, ed., 1932-1991, 1, no. 14, 1176 March 22, pp. 20-26. See also Santini, ed., 1895, *Capitoli*, no. 9, 1176 April 4, pp. 11-14; no. 10, 1176 April 8, pp. 14-15; no. 11, 1176 December 11, pp. 15-17. Poggibonsi nevertheless remained for the most part outside the Florentine zone of control until the later thirteenth century. On the economic importance of Poggibonsi, see above, Chapter 6.1.2.

¹⁵ On the importance of Semifonte, and on Florentine diplomatic and military efforts to establish control in the area around the settlement, see above, Chapters 2.3, 6.1.3. See also below in this chapter.

¹⁶ The submissions of Empoli, Pogna, and Mangona to Florence in the later twelfth century are discussed above, Chapter 2.2.2. The economic importance of Empoli lay in the fact that it was a river port on the Arno. The town had served as river port in antiquity, and the designation Empoli is thought to have been a derivation from the Latin *Emporium Arni*. Empoli was clearly an important town in the thirteenth century, but it is not very well documented before 1280 and a market at Empoli is securely attested for the first time during the middle ages only in 1254. See Santini, ed., no. 20, 1254 August 12, pp. 65-75, esp. 65; no. 22, 1254 September 10, pp. 78-86, esp. 78-79; no. 43, 1255 May 6, pp. 130-141, esp. 130-131, 135. Cioni nevertheless stated that the market at Empoli dated from at least as early as the fifth century. See Cioni, 1981, p. 269. On the ancient port of Empoli, see Solari, 1914-1918, 1, pt. 3, p. 98, and app., no. 741, p. 72. On port facilities at Empoli and Pontorme before the end of the thirteenth century, see Davidsohn, ed., 1896-1908, 3,

mutual assistance that was probably also designed to create a more congenial climate for commerce in Tuscany.¹⁷

The first surviving example of a commercial treaty between Florence and Prato, designed to avoid reprisals between citizens of the two cities, dates from 1212.¹⁸ Despite the close proximity of Florence and Prato, trading relations between these neighbours are attested only sporadically through the thirteenth century. Florence, Lucca, and Prato negotiated a peace treaty with Pistoia in 1254 that also included clauses with commercial implications.¹⁹ A treaty of friendship between Florence and Siena dated from the following year also established an accord between Florence, Lucca, Genoa, Montalcino, Montepulciano, Orvieto, Pistoia, Prato, Volterra, and the Guelf adherents in the divided city of Arezzo.²⁰ In the last quarter of the thirteenth century, both Florence and Prato subscribed to a

no. 284, 1297 June, p. 64. The significance of the submission of the Alberti *castrum* of Pogna rested on the economic importance of the market at Marcialla, which probably developed as an extra-mural market just beyond the walls of the *castrum*, although the market is not specifically attested as a market until 1269. The earliest explicit reference to a market at Marcialla that has thus far come to light appears in the *Liber extimationum* of 1269. On Marcialla and the *castrum* of Pogna, respectively, see Repetti, 1833-1845, 3, p. 53; 4, pp. 498-499. For the earliest evidence of the market at Marcialla, see Brattö, ed., 1956, par. 79, p. 31. In the later thirteenth century, Marcialla was clearly an important market town in the countryside of Florence, and one of the four principal grain markets in the Florentine hinterland. For evidence of a major grain market at Marcialla in the later thirteenth century, see Gherardi, ed., 1896-1898, 1, pp. 68-69. Marcialla was later displaced by Poggibonsi as the most important secondary market in the Elsa and Pesa river valleys. Mangona, situated on a principal road between Barberino di Mugello and Montepiano in the upper valley of the river Bisenzio, also appears to have been an important market by the later twelfth century. For the earliest evidence of the market at Mangona, see Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357, esp. 357.

¹⁷ The treaty is discussed above, Chapters 2.3.1, 6.1.3. It included provisions for the settlement of disputes as well as a clause that was intended to provide safe transit for all subscribers evidently on the road or roads in Tuscany that led to and from Rome. See Santini, ed., 1895, *Capitoli*, no. 21, 1197 November 11 and 1197 December 4, and 1198 February 5 and 7, pp. 33-39, esp. 37: 'Et stratam per omnes fines societatis securam tenere faciam sine fraude'. The clause occurs in the context of a larger clause that acknowledges the pre-eminence of papal jurisdiction over imperial jurisdiction. The subsequent subscription of Figline also included a promise to consign to the Florentine commune an annual hearth tax of twenty-six *denarii* for each household as well as half of the revenue collected at Figline from the tolls and tariffs. The subscription of Certaldo similarly included a promise to consign to Florence two *libre* of silver and a token of their recognition of Florentine authority. For the subscription of Figline to the treaty, see Santini, ed., 1895, *Capitoli*, no. 23, 1198 April 10, pp. 41-42; no. 24, 1198 April 10, pp. 42-43; no. 25, 1198 April 15, pp. 43-46. For the subscription of Certaldo to the treaty, see Santini, ed., 1895, *Capitoli*, no. 26, 1198 May 11, pp. 46-47.

¹⁸ Santini, ed., 1895, *Capitoli*, no. 60, 1212 April 2, pp. 174-175.

¹⁹ Santini, ed., 1952, *Capitoli*, no. 15, 1254 February 1-3, pp. 38-47.

²⁰ Santini, ed., 1952, *Capitoli*, no. 50, 1255 July 31-August 1, pp. 154-162.

commercial treaty also joined by Lucca, Pistoia, Siena, and Volterra that was intended to avoid reprisals.²¹ A few years later, during a period of recurring food supply crises, the Florentines granted temporary license to Prato to transport foodstuffs and other goods imported from the territory of Pisa through Florentine territory by way of Ponte a Signa.²²

The Florentines entered into a commercial treaty with Pistoia in 1220 to facilitate the enforcement of contractual arrangements.²³ Two years later, Pistoia returned to Florence various unwanted cloth products, and on a separate occasion a few weeks later, Pistoia returned to Florence cloth that had been plundered from Florentine merchants in the territory of Pistoia by men from the territory of Lucca.²⁴ In 1224, the Florentines granted safe passage at Empoli and throughout the territory of Florence to the men of Pistoia and its territory, conceding the same facility to the men of Pisa, Poggibonsi, and Siena.²⁵ Relations between Florence and Pistoia were sometimes strained, particularly in the later thirteenth century as Florence became the economically and politically dominant city in the region. Acquisitions of immobile property at Carmignano in the territory of Pistoia by the Frescobaldi merchant-banking company of Florence, for example, were a source of considerable tension.²⁶

²¹ Arias, 1901a, app., no. 10, 1284 February 8, pp. 407-411. For another treaty of this sort including San Gimignano and Colle di Val d'Elsa as additional subscribers but omitting Pistoia and Volterra, see Arias, 1901a, app., no. 26, 1295 June 1, pp. 445-447.

²² Arias, 1901a, app., no. 14, 1287 January 14, pp. 419-421: 'ordinare et firmare quod comune Prati et homines et persone comunis Prati possint et eis liceat, quandocumque voluerit, hinc ad kalendas Ianuarii proxime venturas, facere et deferri et portari ad terram Prati, per comitatum et forciam comunis Florentie per stratam et viam Pontis de Singa, salem, salinum, caseum, pisces salatos, tonninam, lanam, boldrones et stamen, que de civitate Pisana eiusque forcia extraherent'. It is worth noting that cereals are conspicuously absent from the goods specified in the document, but the source contains references to wool and related products.

²³ Sàntoli, ed., 1915, no. 95, 1220 March 25, pp. 79-81.

²⁴ Respectively, see Sàntoli, ed., 1915, no. 167, 1222 September 11-13, p. 139; no. 168, 1222 September 29, p. 139.

²⁵ Sàntoli, ed., 1915, no. 210, 1224 June 21, pp. 166-167. A few weeks later, the *podestà* of Pistoia and the communal consuls nominated representatives to argue a case concerning debt between citizens of Florence and Pistoia. See Sàntoli, ed., 1915, no. 212, 1224 July 10, p. 167.

²⁶ Sàntoli, ed., 1915, no. 375, 1268 September 11, p. 261. Following the intervention of a representative of the Angevin kingdom of Sicily southern Italy in 1270, the Frescobaldi agreed to sell their possessions at Carmignano to Pistoia. See Sàntoli, ed., 1915, no. 394, 1270 September 17, pp. 271-272; no. 395, 1270 October 14, p. 272; no. 398, October 19, p. 273. Other Florentines who had purchased property in the territory of Pistoia were also compelled to sell their acquisitions to Pistoia. See Sàntoli, ed., 1915, no. 396, 1270 October 16, pp. 272-273; no. 397, 1270 October 19, p. 273; no. 398, October 19, p. 273. During the same period, the Guelf party of Flor-

The relations established between Florence and Lucca in the 1184 treaty discussed above appear to have been for the most part enduring. With only minor disruptions, Florence and Lucca enjoyed a generally amicable relationship, and probably also a healthy trade, during the whole of the period under consideration in this treatment. With the exception of the treaties noted above between Florence, Prato, and other cities to which Lucca subscribed, the surviving treaties between Florence and Lucca tend to be more diplomatic and military in character.²⁷ Both Florentine trading relations with Lucca and the growth of the woollen textiles industry in Florence nevertheless are attested vividly in a notarial cartulary dating from Lucca in 1246. The cartulary evidence indicates that Florentine fabrics were selling on the Lucchese market towards the middle of the thirteenth century alongside the products of Lucca itself as well as those of Verona, Bologna, Arras, and Ypres. Moreover, the evidence suggests that the Florentine products may have been dominant on the market for woollen textiles at Lucca in 1246, commanding perhaps as much as fifty per cent of market share.²⁸ Based on somewhat earlier cartulary evidence for Lucca, Robert Lopez has noted that the

ence received repayment for a loan that it had made to the commune of Pistoia. See Santoli, ed., 1915, no. 381, 1269 June 22, p. 264. Loans of this sort were sometimes used by Florence to gain political leverage over its Tuscan neighbours. See below.

²⁷ Even the commercial agreements to which Lucca subscribed may have been more diplomatic and military in character. Arias published only the commercial clauses from what were evidently more extensive agreements.

²⁸ Hoshino, 1980, pp. 67, and p. 97, tbl. 5, citing ASLucca, *Archivio de' Notari*, busta 1, no. 1, fols. 1-73, *passim*. See also Blomquist, 1969; Davidsohn, 1977, 4, pt. 2, pp. 138-144, 835. The cartulary evidence for Lucca from 1246, according to Hoshino, illustrates that the woollen textiles industry in Florence had not yet begun to dominate the Italian market, even within the confines of Tuscany. The Florentine fabrics, moreover, sold on the Lucchese market at prices lower than those not only of northern Europe but also of Verona and, in some cases, even Lucca, which Hoshino understood as a reflection of the relative quality of the various fabrics. Inferior prices are not necessarily reliable indicators of either an inferior product or depressed market share, however, and in point of fact the Florentine products appear to have commanded a significant market share. If the evidence provided by the Lucchese cartulary may be taken as representative of the prevailing conditions, a proposition by no means secure, then Florence may have garnered between about thirty and fifty per cent of the business on the Lucchese market by the middle of the thirteenth century, or perhaps twice the share commanded by the Lucchese industry itself. The numerous designations that appear in this particular piece of evidence for the various types of Florentine woollen textiles, many more than for the fabrics of the other towns mentioned therein, further suggest that the woollen textiles industry in Florence may have been larger and more diversified than those of its competitors. For Blomquist, at any rate, the Lucchese evidence suggests that the Florentine woollen textiles industry, as well as those of Verona and Bologna, was organised for export to distant markets already before the middle of the thirteenth century. See Blomquist, 1969, p. 69.

woollen textiles of Florence and Verona appear to have predominated on the Luccese market already around the year 1220.²⁹

The first surviving example of a commercial treaty between Florence and Siena that has thus far come to light dates from 1237, just a few years after the cessation of a five-year war between the two cities.³⁰ The Siense nevertheless had invoked an embargo on grain exports directed especially against the Florentines already in 1223, which suggests that the Florentines had been importing grain from the territory of Siena in the first quarter of the thirteenth century.³¹ Other evidence suggests that Florentine merchants were trading in Siense territory from as early as 1192.³² The 1237 treaty between Florence and Siena endeavoured to eliminate commercial reprisals between the two cities and also to establish a means by which to resolve disputes. The communes of Florence and Siena concluded another commercial treaty to regulate credit operations between

²⁹ On the predominance of Florentine and Veronese fabrics in Lucca around the year 1220, see Lopez, 1951, p. 422. Earlier evidence attests to the manufacture of woollen textiles at Lucca from the middle of the ninth century. See Peruzzi, 1868, pp. 61-62. For evidence that a certain variety of thread, 'stame filato', from Lucca or of other provenance was prohibited in Florence in 1212, see Santini, ed., 1895, *Miscellanea*, no. 12, 1212 June 1, p. 376; ASF, *Diplomatico*, Riformagioni, s.d. The document in question also contains the earliest specific reference that has yet come to light attesting to the existence in Florence of the wool guild. To my knowledge, woollen textiles of Florentine manufacture are not attested in the early thirteenth century sources from Tuscan cities other than Lucca, but the degree to which this documentary absence reflects a genuine absence of Florentine fabrics on other Tuscan markets is to some extent a matter of conjecture. The evidence from Lucca cited by both Hoshino and Lopez is somewhat peculiar in as much as it survives in notarial cartularies, and in Tuscany, Siena is the only city other than Lucca from which notarial cartularies dating from before 1250 have survived. The Siense cartularies indeed mention woollen textiles, but references to fabrics of Florentine manufacture are conspicuously absent. This is perhaps not surprising. Lucca shared with Florence a Guelf and pro-papal political alignment, but Siena was traditionally Ghibelline and aligned with the German emperors. It is thus possible, though ultimately unverifiable, that the absence of references to Florentine woollen textiles in early thirteenth century Siense cartularies reflects an effort on the part of Siena to exclude Florentine fabrics from Siense markets on political grounds. Unfortunately, the paucity of the cartulary evidence dating from before 1250 from both Lucca and Siena, and also the total absence of surviving early thirteenth century cartularies from other Ghibelline cities in Tuscany, renders any further discussion on the matter purely speculative. On the extent of the cartulary evidence for Tuscany in the thirteenth century, see below, Appendix 1.

³⁰ Cecchini, 1932-1991, 2, no. 313, 1237 June 7, pp. 472-475.

³¹ See Banchi, ed., 1875, p. 206: 'nullus portet bladum extra comitatum Sen[ensem] et specialiter ad Florentiam et per comitatum Florentiam'. On the grain supply of Siena, see also the brief discussions in Bowsky, 1983, pp. 202-203; Redon, 1982, pp. 217-218.

³² In 1192, for example, the Florentine *podestà* despatched a legate to Siena to intervene on behalf of a Florentine merchant who had been robbed of his goods in the territory of Siena by Siense nobles. See Cecchini, *et al.*, eds., 1932-1991, 1, no. 70, 1192 November 1, pp. 103-104.

the citizens of the two cities in 1245.³³ Relations between Florence and Siena remained fragile, however, and eruptions of hostility were common. In 1257, for example, a group of Florentine merchants lost a load of iron to robbers on the via Francigena near Siena.³⁴

Commercial relations between Florence and Volterra are first attested in a treaty dating from 1224 that includes a provision allowing either city to impose tolls on merchandise, animals, or foodstuffs in order to compensate its own citizens for losses on unresolved debts owed by citizens of the other city.³⁵ In the following year, 1225, the Florentine commune negotiated an agreement with San Gimignano to regulate the settlement of debts and the extradition of fugitive serfs, and to compensate victims of brigandage. As a result, San Gimignano was obliged to indemnify Florence 1550 *libre* as well as one *denarius* and a half per *libra* per month on any unpaid balance, which is to say 7.5 per cent annual interest.³⁶ It is worth noting that Florentine commercial relations with both Volterra and San Gimignano depended upon safe passage across the Elsa river valley over which the Alberti counts held sway in the twelfth century. The submission in 1200 of the Alberti counts to Florence and the destruction in 1202 of the Alberti *castellum* at Semifonte, the most visible manifestation of Alberti power in the area, paved the way for the establishment of regular trading relations between Florence and its neighbours to the southwest.³⁷

7.3. Supra-regional trade

After the beginning of the thirteenth century, Florentine trade expanded immensely. At least some of the apparent expansion of Florentine trade in the early thirteenth century is no doubt merely a reflection of the increasing rate of survival of the documentary evidence, but the sources also bear witness to genuine growth. From the very beginning of century, and probably even from somewhat earlier,

³³ Cecchini, 1932-1991, 2, no. 369, 1245 August 15, pp. 542-549.

³⁴ Waley, 1991, p. 3.

³⁵ Santini, ed., 1895, *Miscellanea*, no. 20, 1224 July 1-2, pp. 386-387.

³⁶ Santini, ed., 1895, *Miscellanea*, no. 23, 1225 November 19, pp. 390-391.

³⁷ Safe passage through Alberti territory in the Elsa valley also afforded the Florentine bishops greater scope to exploit the productive potential of their properties around Castelfiorentino. On the Alberti submission to Florence and destruction of Semifonte, see again above, Chapters 2.3, 6.1.3.

Florentine commercial relations were extending beyond the frontiers of Tuscany.³⁸ The supra-regional trade of Florence developed along three main corridors: towards the north through the Mugello to markets in Romagna; towards the south-east along the upper valley of the river Arno through the conduit of Arezzo and to markets in Umbria, the Marche, Lazio, and Abruzzo; and towards the west in the lower Arno valley to the Tyrrhenian port of Pisa, which afforded the easiest means of access to Sicily and southern Italy.

7.3.1. Trans-Appennine trade

Florentine trans-Appennine trading relations with the cities of Romagna can be dated from at least the beginning of the thirteenth century. Already by the year 1200, Florentine merchants evidently had been venturing through the territory of the Ubaldini lords north of the city to and from Romagna. In a treaty from that year, the Ubaldini lord 'Fortebrachius filius Grecii' agreed to protect the Florentines and their goods in his territory. Moreover, Fortebrachius agreed that he and his subjects would offer protection to the Florentines in the usual manner, which suggests that the passage of Florentines through Ubaldini territory was by that time common.³⁹ Already in 1180, pack animals were bearing loads on a public road near the torrent Mugnone, perhaps following the old course of the Mugnone and the modern via Faentina.⁴⁰ Early in the third quarter of the twelfth century, moreover, imported grain from Romagna entered Florentine territory by way of

³⁸ On the development of the trade infrastructure in the territory of Florence, see above, Chapter 6. On the development of the road network in the territory, see below, Appendix 4.

³⁹ The treaty constitutes the earliest surviving evidence for relations of any kind between the commune of Florence and the Ubaldini, and Magna has stressed the significance of the fact that this first example already contains an economic element. For the treaty, see Santini, ed., 1895, *Capitoli*, no. 32, 1200 October 15, pp. 59-60, esp. 60: 'Item dabo et dare faciam guidam Florentinis et eorum bonis more solito ad dictum consulum mercatorum eiusdem civitatis'. See also Magna, 1982, pp. 33-34. Relations between Florence and Ubaldini remained for the most part friendly in the early thirteenth century, but they deteriorated after the death of the emperor Frederick II and the advent of popular government at Florence in 1250. See again Magna, 1982, pp. 39-63.

⁴⁰ The source documents the conveyance of a road outside the city gate of San Pancrazio to the consuls of the gate, which was situated at what is now the southern extremity of Piazza Santa Maria Novella where the via del Sole enters the square. The road itself was situated 'prope fluius qui dicitur Mugnione sicuti est designata et ordinata cum fossae et cum terminos eundo et redeundo cum bobus et asinis at aliis bestiis deferendo somas et sine somas sicuti per viam publicam'. See Santini, ed., 1895, no. 2, 1180 March 28, pp. 364-365; ASF, *Diplomatico*, Santa Maria Novella, s.d.

Modigliana.⁴¹ Commercial relations between Florence and Bologna are securely attested in a treaty dated from 1203 in which the two communes agreed that commercial reprisals should be aimed only against those directly involved in any dispute.⁴²

In the following year, 1204, Florence negotiated an extensive commercial treaty with Faenza that guaranteed the safety of the citizens of Faenza and their belongings in Florentine territory. The treaty obliged the merchants of Faenza to render certain payments on goods brought into the city, but it granted exemptions from all duties and tolls to anyone coming to Florence to purchase cloth, to invest in business, or to visit the city or its churches, and it required Florence to provide accommodation for citizens of Faenza. The treaty also accorded the same treatment to the Florentines in the city of Faenza and its territory.⁴³ A few years later, pope Innocent III issued a papal bull to confirm that the Vallombrosan monastery at Crespino di Lamone, on the master road between Florence and Faenza, lay in the diocese of Faenza and not in that of Florence. The proclamation also admonished Florence that its citizens were subject to any tolls or tariffs that the monastery might wish to impose.⁴⁴ In 1216, after Florentines, among others, were har-

⁴¹ The report of grain imports from Romagna occurs in the 1203 deposition of 'Ugolinus, conversus Hospitalis de Girone', who was referring to the period between the destruction of Monte di Croce by the Florentines in 1154 and the death of count Guido in 1157. Ugolinus appears to have been speaking about the grain imports in the context of preparations for a reception in honour count Guido at the monastery at Rosano. See Passerini, ed., 1876, p. 396: 'et granum fecerunt deduci de Romania, a Mutiliana'.

⁴² Muratori, ed., 1738-1752, 4, 1203 September 13, cols. 453-454; Savioli, ed., 1784-1795, 2, pt. 2, no. 353, s.d., p. 248. Florence also established a military alliance with Bologna against Pistoia in August 1204. See Savioli, ed., 1784-1795, 2, pt. 2, no. 360, 1204 August 4, pp. 260-261. In 1208, Florence and Bologna agreed to permit each other to negotiate peace and to establish treaties with Pistoia. See Savioli, ed., 1784-1795, no. 377, 1208 March 26, p. 289; no. 378, 1208 April 1, pp. 289-290.

⁴³ Santini, ed., 1895, *Capitoli*, no. 55, [1204], pp. 144-147. The document is undated, but Florence was represented in the treaty by Ildebrandinus Cavalcantis, *consul Florentie*, who is known to have held an office as Florentine consul in 1204. See Santini, ed., 1895, p. xlvii-xlviii. The treaty obliged the merchants of Faenza to render to Florence payments of eighteen *denarii* of unspecified type for each 'sauma', or saddle-bag, of goods, and three *solidi* for each 'tasca', presumably a bag of some sort about twice as large as a 'sauma'. Florentine merchants, on the other hand, had been required in the territory of Faenza to render payments of twenty-eight *denarii* for each 'sauma' and eighteen *denarii* for each 'tasca imperialium', but the treaty established new rates at twelve *denarii ravennenses* for each 'sauma' and eighteen *denarii ravennenses* for each 'tasca'. Effectively, the treaty excused virtually all citizens of Faenza from duty and toll obligations in Florence and likewise virtually all Florentines from such obligations in Faenza.

⁴⁴ Santini, ed., 1895, *Miscellanea*, no. 9, 1207 February 14, p. 373; ASF, *Diplomatico*, Badia di Ripoli, s.d. In 1160, the emperor Frederick I granted to the same monastery the right to levy a toll of one *denarius* of Lucca on each traveller and four *denarii* for each load bearing animal. See

assed in the diocese of Faenza near San Martino in Gattara on the main road between Florence and Faenza, soldiers from Faenza intervened to punish the offenders.⁴⁵ Commercial relations between Florence and Faenza are not securely attested again until 1257, when Faenza borrowed 1000 *libre* from Florence.⁴⁶ In the following year, the commune of Faenza despatched to Florence a letter expressing the desire to reach an accommodation with respect to a license of reprisal granted to a citizen of Faenza against Florence.⁴⁷

Relations between Florence and Bologna, as noted, are securely attested from 1203, and they are again attested in a fragment of an account book of a Florentine merchant-banker dated from 1211, and the evidence suggests that Florence was exporting financial services to Bologna already by that time. The fragment documents banking activity undertaken at Bologna in the market held during the festival of San Procolo. It is impossible to determine the merchant-banking company to which the fragment pertains, but the text, written in the vernacular, mentions numerous merchant-bankers from Florence and its surrounding countryside. Linguistically, moreover, the fragment is clearly Tuscan, which is sufficient to establish that it concerns a Florentine company.⁴⁸ Further evidence of commercial relations between Florence and Bologna appears in a treaty of 1216, which endeavours to regulate the contracts negotiated between the citizens of the two cities.⁴⁹ In the following year, various elements of the Ubaldini lineage agreed to

Appelt, ed., 1975-1990, 4, no. 1047, 1160 October 12, pp. 359-361; ASF, *Diplomatico*, Badia di Ripoli, s.d. It is tempting to speculate that the significance of the 1207 pronouncement perhaps lay in an exemption that Florentine citizens enjoyed from tolls and tariffs imposed by ecclesiastical lords of the Vallombrosan order within the dioceses of Florence and Fiesole. Unfortunately, neither this particular piece of evidence nor any another, as far as I have been able to ascertain, establishes the existence of an agreement between Florence and the Vallombrosan order concerning tolls and tariffs.

⁴⁵ Tolosani, p. 129: 'Preterea anno eodem [1216] Faventini destruxerunt duas altissimas atque fortissimas turres cum palaciis magnis castris Gattarie, propter stulticiam Amatoris filii Ugonis de Teuderico, qui, confisus fiducia turrium, sepissime offenderat Faventinos et Florentinos atque omnes vicinos'.

⁴⁶ Santini, ed., 1952, *Capitoli*, no. 69, 1257 April 27, pp. 215-217; no. 70, 1257 May 3, pp. 217-219; no. 71, 1257 May 8, pp. 219-223.

⁴⁷ Santini, ed., 1952, *Capitoli*, no. 86, 1258, p. 259.

⁴⁸ Santini, ed., 1887; Schiaffini, ed., 1954, pp. 3-15. For additional evidence of Florentine money-changing and money-lending at Bologna, see ASF, *Diplomatico*, Badia di Firenze, 1243 May 27, 1246 March 8. See also Davidsohn, ed., 1896-1908, 3, no. 23, s.d., p. 7; no. 30, s.d., p. 10, respectively.

⁴⁹ Santini, ed., 1895, *Capitoli*, no. 64, 1216 February 20, pp. 182-187; no. 65, 1216 February 29, pp. 187-190. See also Savioli, ed., 1784-1795, 2, pt. 2, no. 436, 1216 February 19, pp. 364-367;

abide by a decision regarding tariffs on goods destined for Florence.⁵⁰ In 1220, Florence and Bologna concluded another treaty that established the customs duties to be paid by the merchants of each city on the goods carried upon entry into the other city.⁵¹

In 1231, the communal government at Bologna and merchant entrepreneurs in the city encouraged textile artisans from Florence and other cities to establish workshops at Bologna. The Bolognese offered grants of citizenship, fiscal immunities, interest-free loans, rent-free workshops and residences, and machinery to textile artisans who agreed to live and work in the city for twenty years. They appealed to workers in cities such as Florence with well developed cloth industries that were already organised for export production because they sought to establish their own export industry in woollen textiles. Ultimately, the efforts of the Bolognese were not very successful. Bolognese fabrics are rarely attested in the customs records of other cities in Italy, and when they are it is invariably in the records of nearby cities in southern Lombardy and Emilia-Romagna.⁵² The point is that products of the Florentine woollen textiles industry, and consumer demand for them, must have been plainly visible on Bolognese markets, and Bologna

no. 437, 1216 March 6, pp. 367-368. Santini and Savioli have dated the initial treaty differently by one day, but the dating given by Santini is the correct dating. Pampaloni dated the treaty to 1217, presumably to adjust for the Florentine method of dating, but the treaty was negotiated in the communal palace at Bologna, which means that the Bolognese method of dating applies. See Pampaloni, ed., 1965, no. 38, 1217 February 20, p. 497. It is perhaps worth noting that this particular treaty was concluded during a period in which a citizen of Bologna, Dominus Andalò, served as the foreign *podestà* of Florence. See Santini, ed., 1895, p. liv.

⁵⁰ ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1217 May 3. It is perhaps worth noting that a tailor identified as 'Bonihomi sarti' was among the witnesses to the act, which was redacted in the market town of Cavrenno, situated northeast of the Passo della Radicosa near the master road between Florence and Bologna. The market at Cavrenno is attested for the first time in that same document. See also Davidsohn, ed., 1896-1908, 3, no. 4, s.d., p. 2.

⁵¹ Savioli, ed., 1784-1795, 2, pt. 2, no. 481, 1220 March 10, pp. 420-422. This treaty also was concluded in Bologna, and it thus follows the conventional dating scheme. The agreement set the customs duties for both cities at twelve 'bononinos', which is to say twelve Bolognese *denarii*, for each *salma* of merchandise. For additional evidence of Florentine trade with Bologna, see also Davidsohn, ed., 1896-1908, no. 32, 1250 February 11, p. 10.

⁵² Before the middle of the fourteenth century, Bolognese cloth exports are attested in the customs records of Cremona in 1274, Modena in 1307, Ferrara in 1326, and Imola in 1334. They are also attested in the records of Florence at an uncertain date in the early fourteenth century, and they are attested in the records of Reggio and Parma in later fourteenth and early fifteenth century, respectively. See Hoshino, 1980, pp. 50-63.

merely wished to emulate the success already achieved in textile manufacturing and trade at Florence.⁵³

Florence and Bologna concluded another commercial treaty in 1254, and it was intended to avoid commercial reprisals by referring disputes to communal arbitrators and by limiting liability to the culpable parties or their heirs, and it also prohibited the imposition of tolls between the two cities.⁵⁴ The problem of commercial reprisals in the trading relations between Florence and Bologna surfaced again in 1255, when the commune of Florence was compelled to pay 370 *libre* to a Bolognese citizen in compensation for the withdrawal of a license of reprisal against Florentine citizens in Bologna.⁵⁵ Another disagreement between Florence and Bologna concerning commercial reprisals was resolved a few years later, in 1258, with the result that all existing licenses granted by the communes of Florence and Bologna for the execution of commercial reprisals against citizens of the other city were cancelled and each city was compelled to pay compensation to the other.⁵⁶ By 1279, Florentine merchants were sufficiently well established at Bologna that they had even codified the regulations governing their activities in the host city. The statutes of the merchants of Florence at Bologna clearly suggest that Florentine merchants were travelling to Bologna with cloth and spices, and they also mention Florentine *vecturales*, or carriers, though the statutes give no indication of any goods that the Florentines may have imported from Bologna.⁵⁷

⁵³ See above, Chapter 5.1.1.

⁵⁴ Santini, ed., 1952, *Miscellanea*, no. 139, 1254 April 27, pp. 364-366; ASF, *Diplomatico*, Stroziane-Uguccione, s.d. The treaty also included a promise from the commune of Bologna to banish from its territory all citizens of Siena with the exception of those who were not engaged in study at Bologna, and it enjoined both Florence and Bologna to free all prisoners of the other city.

⁵⁵ Santini, ed., 1952, *Capitoli*, no. 56, 1255 October 29, pp. 170-175.

⁵⁶ Santini, ed., 1952, *Capitoli*, no. 75, 1258 February 10, pp. 233-236; no. 77, 1258 February 21, pp. 236-239; no. 78, 1258 February 21-23, pp. 239-242. Later agreements between Florence continued to concern commercial reprisals, but it is noteworthy that Florentine merchants in Bologna were referring disputes amongst themselves to the mediation of the *podestà* of the city by the end of the century. For additional evidence concerning commercial reprisals in the trading relations between Florence and Bologna, see Arias, 1901a, app., no. 22, 1294 April 9, pp. 437-439; no. 23, 1294 May 8, pp. 439-440; no. 33, 1296 February 22, pp. 461-465. For evidence of a request from Florentine merchants in Bologna to the *podestà* of the city to mediate a dispute that had developed amongst themselves, see Arias, 1901a, app., no. 35, section 4, 1296 September 23, pp. 467-472, esp. 472. For a grant of a license of reprisal by Florence to one of its citizens against Bologna in 1280, see Del Vecchio and Casanova, 1894, app., no. 3, 1280 December 11, pp. 288-294.

⁵⁷ The statutes of the merchants of Florence at Bologna were compiled in 1279, evidently for the first time on the basis of the language in the introductory rubric, and they come down to the present in a somewhat later copy dated from 1286-1289. The statutes reflect the protectionist com-

By 1238, Florence had also established commercial relations with Imola. The treaty concluded between Florence and Imola in March of that year was likewise intended to facilitate the settlement of disputes in general and especially to eliminate commercial reprisals. According to Antonio Ivan Pini, the treaty also illustrates the increasing interest exhibited by the cities of Tuscany in the early thirteenth century in the market at Imola for foodstuffs.⁵⁸ Imported grain from Romagna probably lay at the heart of Florentine trading relations with such cities as Bologna, Faenza, and Imola in the early thirteenth century, but the earliest explicit evidence for Florentine grain imports from Romagna comes in a chronicle report for 1256.⁵⁹

Two years after the 1256 famine, the commune of Florence purchased from one 'Pierus Pagani de Piero de Susinana de Romaniola' 800 *modia* of grain, which was to be consigned annually over the next eight years in quantities of 100 *modia* per year at the *castellum* of Castiglionchio in the valley of the river Lamone.⁶⁰ In

mercial policies of both Florence and Bologna in the later thirteenth century. Florentine merchants were prohibited from accepting merchandise for resale, and especially cloth, from any Bolognese merchant, in order to prevent Florentine merchants from operating in the service of the Bologna market. The statutes also prohibited the Florentines from accepting any money other than the *bononiensis*, which is to say the *denarius* of Bologna, in exchange for the sale of certain fabrics to citizens of Bologna, though foreigners were permitted to render payment in any currency. This may have been a condition imposed on the Florentines by their Bolognese hosts and intended to guarantee both the monopsony privileges of Bolognese money-changers and the monopoly privileges of the Bolognese mint. The statutes of Florence from the early fourteenth century similarly prohibited most Florentine citizens from transacting business in any currency other than the small Florentine *denarius*. For example, see Caggese, ed., 1921, bk. 3, rub. 128, pp. 279-280. The statutes of the merchants of Florence at Bologna also regulated the prices of cloth products and spices typically sold by Florentine merchants at Bologna, prohibited excess charges, and dictated the conditions under which Florentine merchants could offer twenty-five per cent discounts on the usual price of Florentine textile products. See Gaudenzi, ed., 1888.

⁵⁸ The treaty is published in Pini, 1975, no. 2, 1238 March 22, pp. 95-96, citing the original document in the Biblioteca centrale di Imola, Archivio storico, *Pergamene*, mazzo 1, no. 90. See also Davidsohn, ed., 1896-1908, 3, no. 18, p. 6. On the significance of the treaty, see Pini, 1975, pp. 78-80. Imola was exporting foodstuffs to Venice already at the end of the eleventh century. See Vasina, 1970, p. 217

⁵⁹ According to Bartholomeo della Pugliola, Florence imported from Bologna a 'great quantity' of grain in 1256. The importation of grain into Florence from Bologna evidently was provoked by a famine in Tuscany that also precipitated a flight of the peasantry from the Lucchese across the Apennines to Bologna. See Muratori, ed., 1723-1751, 18, col. 267: 'Fu in questo anno [1256] una gran carestia in Toscana, e tutti i contadini del contado di Lucca vennero a Bologna. E il Comune di Bologna diede una gran quantità di frumento a i Fiorentini per soldi otto di Bolognini la Corba'.

⁶⁰ Santini, ed., 1952, *Capitoli*, no. 80, 1258 April 22, pp. 245-248. Friendly relations between Florence and the son of Pierus Pagani, Maghinardo da Susinana, are attested in 1291 in Villani, bk. 7, chap. 149. Agreements of the sort between Florence and Pierus Pagani, according to Pirillo, were exceptional before the later thirteenth century, but they were becoming increasingly common

the later thirteenth century, the master road between Florence and Faenza that crossed the Apennine ridge at the Colla di Casaglia and then descended towards Romagna alongside the Lamone was very clearly carrying regular supplies of foodstuffs from Romagna to Florence. In May 1285, for example, the consuls of the commune of Florence judged prudent the appropriation of funds for a construction project at Pietrasanta near the Colla di Casaglia precisely in order to facilitate the importation of cereals from Romagna.⁶¹

Abundant additional evidence from the later thirteenth and early fourteenth centuries bears out the notion that the cities of Romagna, and chiefly Bologna, maintained a more or less regular trade with Florence and provided the city with substantial quantities of grain.⁶² Florence also may have depended on the coastal

as urban demographic expansion at Florence strained the capacity of the city to secure adequate food supplies for its urban population. Interestingly, the clause in the contract that cedes to Florence for the duration of the contract the *castellum* of Castiglionchio di Val di Lamone, thus affording the Florentine commune a measure of control over the master road between Florence and Faenza, gradually disappears from subsequent contracts of this sort. According to Pirillo, the increasing supply requirements of Florence may have actually compromised the bargaining position of the Florentines to the extent that they became less and less able to dictate the terms of such agreements. See Pirillo, 1993, pp. 565-566. With respect to this last point, however, one might expect rather that Florence would have been more able to dictate the terms of trade agreements concerning staple foodstuffs with distributors in Romagna as Florentine demand composed an ever increasing proportion of overall demand. On the *castellum* of Castiglionchio di Val di Lamone, see Repetti, 1833-1845, 1, p. 326; 3, pp. 86-97, esp. 87-88.

⁶¹ See above, Chapter 6.2.2.

⁶² For the texts of treaties between Florence and Bologna from the 1290s and concerning commercial reprisals, see Arias, 1901a, app., no. 22, 1294 April 9, pp. 437-439; no. 23, 1294 May 8, pp. 439-440; no. 27, 1295 November 8, pp. 447-449; no. 28, 1295 December 6, pp. 449-453. From 1285, there is frequent mention in the sources for repairs undertaken on the roads around Florence, particularly north of the city, to facilitate the urban grain supply. See above, Chapter 6.2.2. See also L. Conti, ed., 1996, *passim*. For evidence attesting to grain imports from Romagna in 1286, see De la Roncière, 1976, 4, p. 153; Pinto, 1978, pp. 81-82, n. 43. Both De la Roncière and Pinto were citing ASF, *Provvisioni Protocolli* 1, fol. 29r. For evidence of arrangements made by the commune of Florence to purchase 3000 *staria* of grain from Romagna in August 1291, see Gherardi, ed., 1896-1898, 2, p. 53 [1291 August 28]: 'Item, si videtur Consilio quod emptio salis facta de 20,000 stariis, ad rationem soldorum septem at denariorum quatuor pro stario, observetur, cum conditione quod venditor dicti salis conduci faciat 3000 staria grani de partibus Romandiole, ad venendum in Orto San Micchaelis, et 10,000 salis staria, retinendi in civitate Florentie et venendi pro eodem pretio, si Comuni expedierit'. Originally, Florence had sought to obtain 4000 *staria* of grain. See Gherardi, ed., 1896-1898, 2, p. 52. For evidence of grain imports of grain from Romagna in 1324, see De la Roncière, 1976, 4, p. 153, citing ASF, *Mercanzia* 1041, fol. 33. In the famine year of 1329, the communities in the valley of the river Sieve were encouraged to render repairs on the bridges crossing the river in order to permit the unhindered passage of grain from Romagna. See Pinto, 1978, p. 107, n. 139, citing ASF, *Missive* 4, fol. 48r. In the same year, the commune of Florence spent heavily to finance purchases of imported grain from Romagna, among other places. See Villani, bk. 10, chap. 118. A Florentine grain merchant also noted that cereals imported from Romagna was often available on the urban

cities of Romagna for some of its salt, which was channelled through Bologna.⁶³ In exchange, as already noted above, Florentine merchant-bankers were providing financial services in Bologna from as early as 1211, but Florentine cloth exports

grain market at Orsanmichele during and immediately following the famine of 1328-1330. In May of 1329, after having made numerous requests to the lords of Romagna in an effort to obtain permission to acquire grain in their territories, the commune of Florence finally was permitted to purchase 1500 *modia* of grain from Romagna. See Pinto, 1978, p. 325. For the earlier efforts of Florence to obtain permission to obtain grain from Romagna, see Pinto, 1978, p. 325, n. 1, citing ASF, *Missive* 3, fol. 92v; ASF, *Missive* 4, fols. 8r, 28v, 36v-37r, 48r. In 1330, the commune acquired grain from the Battifolle lords, who were centred in the valley of the river Lamone. See De la Roncière, 1976, 4, p. 154, citing ASF, *Mercanzia* 1049, fol. 19. In April 1331, imported grain from Romagna that had been held in storage was released on the market in Florence, in quantities of twenty *modia*. See Pinto, 1978, pp. 429, 432, 434. It had probably been among the grain for which the commune authorised the expenditure of 6000 *fiorini d'oro* in August of 1330. See Pinto, 1978, p. 414. By October 1331, the grain from Romagna was threatening to go bad and the commune obliged the bakers of the city to use this grain in the preparation of breads. See Pinto, 1978, p. 439. In October 1333, the Florentine commune purchased 600 *modia* of grain from Romagna for resale on the urban grain market. See Pinto, 1978, p. 490. Pinto noted that Florentine officials had received from the commune 4000 *fiorini d'oro* in September 1332 to purchase grain, and that almost all of this money was spent in the acquisition of this grain at fifteen *solidi per staria*. See Pinto, 1978, p. 490, n. 1, citing ASF, *Provvisioni* 26, fols. 51r-v, 63v-64v. Florentine officials again purchased grain from Romagna on behalf of the commune in December 1333. See Pinto, 1978, pp. 495-496. In the early months of the 1328-1330 famine, grain from elsewhere in Italy was transported through Romagna to Florence. Two thousand *salme* of grain from Apulia was delivered at the Lido di Ravenna early in 1328 and then transported across the Apennine Mountains to Florence. See Davidsohn, 1977, 4, p. 1187.

⁶³ In the early fourteenth century, the Guidi lords maintained in their territory near Dicomano a stockpile of salt, the 'canova salis in comitatu Belfortis', for their own use no doubt but perhaps also for resale. See Pirillo, 1995a, p. 68, n. 117, citing ASF, *Notarile antecosimiano* 9499, fols. 48v-49v, and 66v. The salt almost certainly came from the Adriatic Sea, perhaps from Comacchio or the Po-Adige Delta but also from elsewhere on the Adriatic coast, and the geographical position of the cities of Romagna afforded them a measure of control over the distribution of Adriatic salt in northeastern Tuscany. Bologna may have been especially active in the salt trade in the later thirteenth century, and the city evidently even used Florentine merchants to acquire salt for its own use and perhaps also for resale. Bolognese evidence dated from February 1290, for example, records an agreement to grant license to the Florentine merchant Lapus Scandicci to import into Bologna 30,000 'corbes sallis comunallis [...] de salle Cerviensi' over the next year and a half. See Arias, 1901a, app., no. 17, 1290 February 10, pp. 424-427. The *corba* was the standard unit of both liquid and dry measure at Bologna in the thirteenth century, and the dry capacity of the Bolognese *corba* in the early fourteenth century was equivalent to 0.8 hectolitres, or two Bolognese *staria*. The *corbe* of Faenza and Imola, although both two *staria* by the local measure, were nevertheless somewhat smaller, equivalent to about 0.7 hectolitres. See Zupko, 1981, p. 99. See also Evans, ed., 1936, p. 199. In this case, the salt evidently came from Cervia, a village on the Adriatic coast south of Ravenna, but Chioggia and Comacchio farther north also may have provided salt for Bologna. Evidence for imports of salt into Florence from Romagna occurs in an agreement of communal officials in Florence in August 1291 to accept delivery on 20,000 *staria* of salt, with the proviso that the merchant also deliver to Florence 3000 *staria* of grain. See Gherardi, ed., 1896-1898, 2, pp. 52-53, cited in full above. For evidence of an active trade in salt between Bologna and Venice towards the end of the thirteenth century, see Arias, 1901a, app., no. 46, 1298 March 1, pp. 497-498.

may have been more important.⁶⁴ From at least as early as 1255, Florentine cloth merchants were active in Bologna, and indeed they constituted the most prominent of all groups of foreign cloth merchants operating on the urban market at Bologna by 1270.⁶⁵ At the end of the thirteenth century, the importance of the Bolognese market for the Florentine cloth industry is attested by the fact that when a group of Florentine entrepreneurs formed a partnership for the manufacture and sale of cloth, they established workshops not only at several locations in their own city but also at Bologna.⁶⁶

Among foreign traders at Bologna in the later thirteenth century, the Florentines clearly held a privileged position, and a special tariff was reserved for Florentine traders at Bologna in the early fourteenth century.⁶⁷ Florentine woollen textiles also were being exported to Venice from as early as 1225, very likely through Bologna, and Florentine cloth is attested in Venetian customs records from 1265.⁶⁸ Commercial relations between Tuscany and Venice are documented

⁶⁴ For evidence of Florentine merchant-bankers operating at Bologna in the early thirteenth century, see again Santini, ed., 1887; Schiaffini, ed., 1954, pp. 3-15. Florentine money-changers are also attested at Bologna in 1243. See ASF, *Diplomatico*, Badia di Firenze, 1243 May 27. Florentine banking activities are again attested at Bologna towards the end of the thirteenth century in a treaty between Florence and Bologna that granted substantial concessions to Florentine bankers. See Arias, 1901a, app., no. 35, 1296 April 7-1296 September 23, pp. 467-472, esp. 470-472. The same treaty also accorded privileges to bankers from Pistoia, but an earlier provision by which the Bolognese had decided to grant immunity from reprisal to as many as four foreign Guelf merchants in order that they might serve the credit needs of students at Bologna clearly omitted the Ghibelline Pistoiese while allowing the possibility for Florentine bankers to fill that role. See Arias, 1901a, app., no. 19, 1291 June 20, p. 430.

⁶⁵ For evidence of Florentine cloth merchants operating and evidently resident at Bologna by 1255, see Santini, ed., 1952, *Capitoli*, no. 56, 1255 October 29, pp. 170-175. On Florentine cloth merchants in Bologna in 1270s, see Cuomo, 1977, pp. 336-339, 350-352. Customs records for Bologna from 1264 mentions only Milanese and northern European textiles, but Bolognese tariff data from 1272, 1279, and 1288 suggest a regular traffic in Florentine woollen textiles through Bologna during the last quarter of the thirteenth century. See Hoshino, 1980, p. 39, and tbl. 1, pp. 50-51, esp. 51. Certainly by 1279, Florentine merchants established in Bologna were selling a wide variety of fabrics both to Bolognese clients and to foreigners. See Gaudenzi, ed., 1888. If the Venetian evidence is any indication, traffic in Florentine woollen textiles on the market at Bologna may actually antedate considerably the first evidence for tariffs applied specifically to Florentine products. See below.

⁶⁶ ASF, *Notarile antecosimiano* 13363/M293, fols. 15v-16r, esp. 15v [1294 July 30].

⁶⁷ Astorri, 1998, p. 177; Frati, ed., 1903; Greci, 1978. See also below.

⁶⁸ On Florentine cloth exports at Venice in 1225, see Hoshino, 1980, p.66; 1983, p. 184. See also Cessi, ed., 1950, pt. 2, rub. 123, pp. 79-80, esp. 80 [1225 May]. For the tariff assessment on Florentine cloth at Venice in 1265, see Hoshino, 1980, pp. 38-39, 50.

already from the first quarter of the twelfth century.⁶⁹ Florentine merchants were also attending an annual market at Ferrara from at least as early as 1197, almost certainly passing through Bologna.⁷⁰ By the early fourteenth century, the trans-Appennine passage between Florence and Bologna evidently was supporting trade in a wide variety of items, including rose water, grammar books, lanterns, rice, and sugar.⁷¹

The development of the trans-Appennine passage between Florence and Bologna opened northern markets to Florentine exports and gave Florence access to the rich grain-producing regions north of the mountains. In addition, the trans-Appennine routes afforded the Florentines access to the port of Francolino on the river Po near Ferrara, and to the Adriatic ports of Ravenna, Cervia, Cesenatico, and Rimini.⁷² The passage between Florence and Bologna became the nexus for

⁶⁹ Commercial relations between Florence and Venice may have existed from the time of the emperor Henry V in the early twelfth century. See Weiland, ed., 1893, no. 102, 1111 May 22, pp. 152-154. An imperial charter granted in favour of Bologna a few years later contained a clause that was evidently designed to restrict the trading activities of Tuscan merchants, though the privilege makes no specific mention of Florentines. See Savioli, ed., 1784-1795, 1, pt. 2, no. 96, 1116 May 15, pp. 155-156, esp. 156. The Venetian chronicler Martin da Canal likewise noted that Tuscans were travelling regularly to Venice to conduct business already in the middle of the twelfth century, but once again no specific mention was made of Florentines. See Martin da Canal, chap. 26. Florentine relations with Venice are securely attested from the beginning of the thirteenth century, when a Venetian 'protomagister' concluded an agreement with the *podestà* of Florence. Unfortunately, the precise nature of the agreement is unclear. See Santini, ed., 1895, *Capitoli*, no. 37, 1201 August 14, pp. 72-73; Davidsohn, 1977, 1, p. 940. By 1245, Florentine merchant-bankers in Tunisia were undertaking exchange contracts with Venetians, consigning to the Venetians in Tunisia four thousand *bizantios* for exchange at Venice less than three months hence in the *denarii grossi* of Venice. See Morozzo della Rocca and Lombardo, eds., 1940, 2, no. 776, 1245 June 30, pp. 301-302; no. 777, 1245 September 20, pp. 302-304. At the beginning of the fourteenth century, Florentine merchant-bankers were active on the slave market at Venice. See Morozzo della Rocca, ed., 1950, no. 262, 1301 August 5, p. 97. They were also thoroughly involved in foreign exchange and other banking activities on the Rialto at Venice in the early fourteenth century, and Florentines were maintaining a residence at Venice certainly by 1348. See Mueller, 1997, pp. 255-265. Thirty-four Florentines are even known to become Venetian citizens during the first half of the fourteenth century. See Ell, 1976, pp. 70-74, esp. 72.

⁷⁰ In his deposition in an 1197 court case, 'Jacobus Anselmi' testified that he had attended the November market at Ferrara. See ASF, *Diplomatico*, Santa Maria Novella, 1197 April 29: 'dixit quod eo tempore quo erat mercatum de Ferrara mense novembris'.

⁷¹ These items, and over two hundred others, are mentioned in a document dating from 1317 that enumerates the duties to which merchandise conveyed through the territory of Bologna by Florentine merchants was subject. See Frati, ed., 1903. A similar document dating from 1351 gives a more complete range of goods passing through the market at Bologna, and it indicates that the tariffs to which Florentine merchants were subject typically amounted to only 40-50 per cent of the ordinary tariff. See Greci, 1978.

⁷² Astorri, 1998, p. 176. From at least as early as 1320, the Florentines evidently had negotiated with Bologna for the use of inland waterways between Bologna and Ferrara. See Davidsohn,

most commercial traffic between the Tyrrhenian and Adriatic coasts in north-central Italy, and it probably siphoned some of the religious traffic between Rome and the north from the via Francigena.⁷³ By 1279, the trans-Appennine routes between Florence and Romagna were also supporting commercial relations between Florence and Milan.⁷⁴ Before the later twelfth century, movement across the frontier between Florence and Bologna was inhibited by poor communications, brigandage, and the seigniorial exactions of lords independent of communal control. From the beginning of the thirteenth century, however, improved communications between Florence and Bologna, and more congenial relations between the Florentine commune and the rural lords north of the city facilitated a notable increase in commercial traffic across the mountains.

In Tuscany, Florence was no doubt the principal beneficiary of trans-Appennine commercial traffic.⁷⁵ By 1325, trade between Florence and Bologna through

1896-1908, 3, no. 728, 1320 January, p. 145: 'Bologna faciat actari canale, per quod mercantie Florentinorum conducuntur a civitate Ferrarie Bononiam ita, quod omne tempore mercantie Florentinorum per dictum canale comodius et abilius deferantur'. See also Davidsohn, 1896-1908, 3, no. 730, 1320, pp. 146-149, citing ASF, *Capitoli* 44, fol. 217, which lists the customs duties to be paid by Florentine merchants on a wide range of commodities on the canal between Bologna and Ferrara. The various ports of Ravenna in particular are attested frequently from the beginning of the twelfth century in Federici and Buzzi, eds., 1911-1931, *passim*.

⁷³ In the early fourteenth century, the overland route by way of Florence and the Appennine passes may have been for Pisa the most important means of communication with areas north of the Appennines. See Herlihy, 1958b, pp. 102-103. Increasingly in the second half of the thirteenth century, moreover, merchants of northern Italian cities were diffusing their own products on the markets of south-central Italy by means of the Bologna-Florence trans-Appennine passage and through the markets of the various Tuscan cities. On the diffusion of northern Italian exports in southern Italy through Florentine markets in the second half of the thirteenth century, see Hoshino, 1980, pp. 39, 42. Florentine commercial relations with northern Italian cities are clearly attested from 1279 in a treaty negotiated between Florence, Venice, Genoa, and all the cities of Tuscany, Lombardy, Romagna, and the March of Treviso. See Arias, 1901a, app., no. 8, 1279 April 9, pp. 400-404. In addition, administrators from Emilia-Romagna and Lombardy frequently held the office of *podestà* in Florence during the thirteenth century. The economic ascendancy of Florence and Venice, and improved communications between the two cities, also may have encouraged religious travellers to diverge from the via Francigena and to cross the Appennines between Florence and Bologna. The via Francigena was developed as the primary pilgrimage route between Rome and the north from the ninth century, after which the via Cassia fell into disuse. The trans-Appennine route between Florence and Bologna was never entirely abandoned, but traffic on the route certainly diminished after the opening of the via Francigena. On the via Francigena with an emphasis on Tuscany, see Stopani, 1984; 1986; 1988.

⁷⁴ Baroni, ed., 1992, no. 103, 1279 July 16, pp. 112-114; Pampaloni, ed., 1965, p. 514.

⁷⁵ Zorzi even suggested that the role of Florence in trans-Appennine commercial traffic was at least equivalent to the role of Pisa in Mediterranean commercial traffic. See Zorzi, 1994, p. 299. Other Tuscan towns may have tried to compete with Florence to garner a larger share of trans-Appennine commercial traffic. In 1225, for example, Pistoia negotiated a treaty with Modena that may have been designed to facilitate communications between the two cities and to siphon traffic from the

San Piero a Sieve was occurring on a daily basis.⁷⁶ The vitality of trans-Apennine trade between Florence and Bologna was owing in large measure to the generally amicable state of relations that consistently prevailed between the two cities. There were occasional disagreements, to be sure, but the relationship between the two cities was mostly friendly and in many respects complementary.⁷⁷ Like Florence, Bologna produced woollen textiles for export, but rather than compete directly against exports from Florence, the Bolognese industry sought to specialise in higher grades of textiles than the coarse and less expensive fabrics that were produced for export at Florence before about 1319. The efforts of the Bolognese industry to develop an export trade in higher quality cloth before the early thirteenth century were ultimately unsuccessful, and Bologna became an important market for Florentine cloth merchants in the second half of the century. Bologna and its neighbours were also the only Guelf city-states into the territory of which Florentine merchants were able to travel without traversing the territory of a rival city-state in Tuscany.⁷⁸ Moreover, Florence and Bologna lay on opposite escarp-

passage between Florence and Bologna, which was probably sustaining heavy use already by that time. See Pagnini, 1765-1766, 2, p. 20; Palmieri, 1918, p. 25. On the trans-Apennine roads between Pistoia and Emilia-Romagna, see Rauty, 1992, pp. 156-157. See also Schütte, 1901.

⁷⁶ Caggese, ed., 1921, bk. 4, rub. 54: '[...] ita quod venientes de Romandiola et de Mucello cum grano et aliis victualibus et aliis mercationibus, et alii qui vadunt cotidie et redeunt Bononiam et Florentiam [...]'].

⁷⁷ The disputes between Florence and Bologna discussed above regarding commercial reprisals were brief aberrations in an otherwise friendly relationship that extended into the fourteenth century.

⁷⁸ Unimpeded travel between Florence and the cities of Romagna nevertheless depended upon favourable relations between Florence and the powerful lords who controlled the principal passes across the Apennines north of the city. The Alberti dominated the routes in west, while the Ubaldini controlled the centre, and the Guidi held sway in the east. The Apennine passages thus offered Florentine merchants several different options not only in terms of roads but also in terms of jurisdiction. As long as relations with all of the lords were good and seigniorial exactions roughly equivalent, merchants probably used the route that best suited them, but poor relations with any one of them, increased risk of brigandage, or significantly higher tolls may have given merchants cause to seek an alternative route over the mountain. It is even possible that the Alberti competed with the Ubaldini to offer a more attractive option for commercial travellers between Florence and Bologna, and that the Guidi may have competed with the Ubaldini for a greater share of the traffic between Florence and Faenza. By the same token, the cities in Romagna offered the Florentines several different trading options. When relations with Bologna experienced a rare disruption, as they did in 1319 for example, the Florentines were able to turn to Imola for grain exports. See Ciasca, 1927, p. 540, n. 4; Davidsohn, 1977, 5, p. 529. For more on the trans-Apennine routes and seigniorial control over the routes, see below, Appendix 4.3.2.

but not necessarily friendly relations with all of them at the same time. When relations between Florence and the Ubaldini were strained, Florentine merchants probably were able to cross the mountains through territory dominated by the Alberti or by the Guidi. The Apennine passages offered several different options not only in terms of roads but also in terms of jurisdiction.

ments of the Apennine chain, and the mountains often functioned as a barrier not only to economic and political pressures, but also to climatic disturbances affecting agricultural production. As a consequence, Tuscany and Romagna only rarely suffered from severe subsistence crises concurrently.⁷⁹

The importance of the trans-Apennine passage in the Florentine economy is perhaps illustrated best by the intensification of the market network in the Mugello along the principal routes between Florence and Romagna in the later twelfth and early thirteenth centuries. Mangona, Scarperia, and Galliano, respectively, are among the first markets to be securely attested in the countryside north of Florence, and they are all attested as market towns for the first time during the last fifteen years of the twelfth century.⁸⁰ Borgo San Lorenzo was using its own commercial measure for grain before the end of the twelfth century, which suggests that Borgo San Lorenzo had developed into an important market town by 1200.⁸¹ Moreover, nine of the eleven markets securely attested for the first time within the confines of the dioceses of Florence and Fiesole during the first quarter of the thirteenth century were situated on routes that lay between Florence and the

⁷⁹ When famine struck in Tuscany in 1256, for example, Tuscan towns imposed export embargoes on grain to protect monopsony buying privileges in their own territories. Romagna, on the other hand, appears to have been unaffected by famine in 1256. For evidence of an export embargo imposed in 1256 by San Gimignano, see ASF, *Diplomatico*, San Gimignano, 1256 January 4. Starving peasants in the countryside of Lucca migrated across the Apennine ridge to Bologna in order to escape widespread famine in Tuscany in that year, while Florence was able to obtain large quantities of grain from Bologna to offset its own food supply shortage. See again Muratori, ed., 1723-1751, 18, col. 267, the pertinent passage from which is given above. When neighbouring towns in Tuscany erected barriers to trade in an effort to protect their own supplies of staple foodstuffs, in other words, Florence had recourse to imported cereals from Romagna. The so-called 'great famine' of 1315-1317, by contrast, had crossed the Alps from northern Europe into Lombardy and Romagna but its penetration into all but the northern fringe of Tuscany was barred by the Apennines. In the territory of Florence, the grain harvests in 1315 and 1316 were plentiful. On the southernmost extent of the famine, see Villani, bk. 9, chap 80: 'E in quello tempo la detta pestilenza contenne simigliante in Romagna e in Casentino infino in Mugello'. For more thorough treatments of the great famine of 1315-1317 focussing on the famine in northern Europe, see Lucas, 1930; Jordan, 1996. On the early fourteenth century chronicle accounts of famine, see Palermo, 1984. On good grain harvests in the Florentine countryside in 1315 and 1316, see Pinto, 1978, pp. 89-90. For an appreciation of the generally varying periodicity of famine in Tuscany on the one hand and Romagna on the other, drawing on chronicle sources, see Alexandre, 1987.

⁸⁰ For the earliest references to the markets at Mangona, see Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357, esp. 357. For the markets at Scarperia and Galliano, respectively, see ASF, *Diplomatico*, Riforgiamioni, Atti Pubblici, 1186 May 1, 1198 October 9.

⁸¹ The earliest known reference to the commercial measure of Borgo San Lorenzo occurs in an undated document of the twelfth century. See ASF, *Diplomatico*, Monache di Luco, twelfth century. The measure of Borgo San Lorenzo is attested frequently after the beginning of the thirteenth century. See below, Appendix 10.

mountains, and all but one of these were situated in the Mugello. The intensification of the market network in the Mugello was directly related to the expansion of trans-Appennine trade around 1200.⁸² The importance of market intensification lay in the fact that it facilitated the effective coordination of local, regional, and supra-regional trade.

7.3.2. Arezzo and central Italy

The expansion of Florentine trading relations towards the south in the upper valley of the river Arno, in the valley of the river Chiana, and in the upper valley of the river Tiber is securely attested only from the year 1218 when Florence concluded a commercial treaty with Perugia. Relations with commercial implications nevertheless can be dated from the beginning of the thirteenth century. Montepulciano submitted to Florentine control in 1202, for example, and the treaty of submission stipulated that no tolls were to be levied on Florentines in the territory of Montepulciano.⁸³ It is likely that Florence concluded another treaty with Arezzo in 1202 or perhaps very early in 1203 in as much as there survives from January 1203 a document listing the names of those who subscribed to the terms of an agreement between Florence and Arezzo mediated by representatives of Montepulciano.⁸⁴ The actual treaty itself has not survived, and the first secure documentary evidence of Florentine commercial relations with Arezzo dates from just after the middle of the thirteenth century. A chronicle report nevertheless indicates that Florence received imports of grain from Arezzo during the famine year of 1182.⁸⁵ Florentine access to Arezzo and to markets in south-central Italy depended on the safe pas-

⁸² On the intensification of the market network in the countryside north of Florence until about 1225, see above, Chapter 6.2.1. See also below, Appendix 7, tbl. 15.

⁸³ For evidence of the submission of Montepulciano to Florentine authority, see Santini, ed., 1895, *Capitoli*, no. 40, 1202 October 24, pp. 83-93. Montepulciano occupied a strategic position above the fertile valley of the river Chiana and the main roads to Umbria and Lazio, and friendly relations with Montepulciano were essential to Florentine trading interests. For Montepulciano, Florence was a potentially valuable ally. Already in 1174, the Florentines had supplied Montepulciano during their war with the Siennese. See Villani, bk. 5, chap. 6. Florence again came to the aid of Montepulciano in 1230, despatching to Montepulciano 1000 *modia* of grain during another conflict with Siena. See *Annales Florentini* 2, p. 41. The commercial treaty of 1218 between Florence and Perugia is discussed below.

⁸⁴ Santini, ed., 1895, *Capitoli*, no. 41, 1203 January, pp. 94-97.

⁸⁵ Stefani, rub. 50. Villani also noted that Florence had concluded a peace treaty with Arezzo in 1170 after a military confrontation between the two cities in November of that year. See Villani, bk. 5, chap. 5.

sage of Florentine traders through territory dominated by the Guidi counts around Montevarchi, which was probably guaranteed by treaties negotiated between Florence and the Guidi in the second half of the twelfth century.⁸⁶

The fact that Florence negotiated a commercial treaty with Perugia in 1218, a military treaty with Orvieto in 1229, and another commercial treaty with Città di Castello in 1232 also suggests that relations between Florence and Arezzo were for the most part friendly in the early thirteenth century. In the same way that Montevarchi provided Florentines access to Arezzo, the territory of Arezzo itself served as a conduit that afforded the easiest access not only to Perugia, Orvieto, and Città di Castello, but also to many other towns and cities in Umbria, the Marche, Lazio, Abruzzo, and even Apulia and Campania.⁸⁷ Friendly relations with Arezzo, or any rate the facility of unhindered passage through Aretine territory, were beneficial to Florentine commercial interests, precisely because Arezzo provided access to foreign markets for Florentine exports and also to potential sources of imported foodstuffs for the expanding urban population of Florence.⁸⁸

The countryside of Arezzo also possessed some of the richest land in Tuscany for cereal-culture, and the fertile plain in the valley of the river Chiana south of Arezzo probably had become an important source of grain for Florence by the end of the thirteenth century. During the period immediately following the famine of 1329, for example, Aretine grain was frequently available on the urban grain

⁸⁶ The texts of these treaties have not survived, but Florence negotiated a treaty with the Guidi counts in 1158 and again about fifteen years later, and it is likely that these treaties afforded Florentine merchants safe passage through Guidi territory. For a chronicle report of the 1158 treaty, see again Maragone, pp. 17-18, esp. 18; Pampaloni, ed., 1965, no. 2, 1158 June, p. 484. References to a treaty negotiated between Florence and the Guidi counts probably around 1176 occur in Passerini, ed., 1876, pp. 385, 391, 396-397, 399. See also above, Chapters 2.2.2, 6.1.2.

⁸⁷ Petralia, 1988, pp. 289-291; Yver, 1902, pp. 67-69; Gasparinetti, 1964-1966.

⁸⁸ The importance of the facility of safe passage through the territory of Arezzo for trade between Florence and the cities and towns of Umbria and the Marche may be illustrated by a treaty to restore peace between Città di Castello and Arezzo in the summer of 1290, after the cessation of hostilities between the Florentine Guelfs and the Ghibellines of Arezzo. The treaty includes a clause that guaranteed the citizens of Città di Castello access to Florentine markets even if Arezzo is engaged in war with the Florentines. See Pasqui, ed., 1899-1937, 2, no. 678, 1290 July 18, pp. 484-489, esp. 486: 'Salvo quod si Florentini facerent exercitum super Aretio vel terris Aretii, quod Castellani et comitatini possint dare et ire ad portandum mercatum exercitui Florentino. Salvo quod si predicti portantes mercatum comitatum Castellani alios offenderent se defendendo, non intelligatur propter ventum fore contra pacem'. Città di Castello evidently sought to circumvent the possibility of any future disruption to their trade with Florence such as the one that had occurred during the recently concluded war between Florence and Arezzo. For more on commercial relations between Florence and Città di Castello, see below.

market at Florence.⁸⁹ The evidence nevertheless suggests that the overriding importance of Arezzo with respect to Florentine trade lay in the control that Arezzo was able to exercise over access to the farther south. The legalistic language of the first commercial treaties between Florence and Arezzo is difficult to interpret, but attention appears to focus on passage through the territory of Arezzo rather than simply on transit between Florence and Arezzo.

Under an embattled Guelf regime in 1256, Arezzo was compelled to enter into a treaty with Florence evidently as a condition for obtaining a much needed loan of twelve thousand *libre*. The treaty included a reciprocal commercial clause that granted unhindered passage to citizens of either city conveying foodstuffs through the territory of the other city to their home city as well as a mutual exemption from tolls for a period of seven years.⁹⁰ Nearly thirty years later, when Arezzo was under Ghibelline rule and increasingly hostile towards the Guelf government in Florence, the anxieties expressed by Florentine communal officials during a food supply crisis were focused not so much on access to Aretine grain. The Florentines were much more concerned about the withdrawal by Arezzo of the exemption from tolls that the citizens of Florence had customarily enjoyed in Aretine territory.⁹¹ With the passage of time, these concerns were amplified,

⁸⁹ On large communal grain expenditures for grain imports from the countryside of Arezzo in 1329, see Villani, bk. 10, chap. 118. The so-called *Libro del biadaio* provides substantial evidence that the Florentines were importing grain from the countryside of Arezzo during and immediately following the famine of 1328-1330. Grain imports from the Aretine countryside into Florence are attested from May 1333. Further imports of grain from the countryside of Arezzo are attested in December of the same year. From about the beginning of 1334, Aretine grain was frequently available on the urban grain market in Florence, almost every day in certain months. See Pinto, 1978, pp. 478, 495-496, 500, 514, 516, 518, 519, 521, 528, 531, 534, 535. In 1347, the Florentine commune decided to establish a weekly market at Loro, situated in the upper valley of the river Arno below the Pratomagno, specifically in order to draw cereals, foodstuffs in general, and other merchandise from the Casentino and the Aretine countryside. See Pinto, 1978, p. 107, n. 140, citing ASF, *Provvisioni* 34, fols. 105v-106r: 'ad hoc ut ad dictum forum venirent granum, bladum, victualia et alie mercantie precipue de partibus Casentini et comitatus Aretii, confidentibus cum ipso comuni de Loro'.

⁹⁰ Santini, ed., 1952, *Capitoli*, no. 63, 1256 March 21, pp. 184-187: 'Item quilibet ditorum populorum possit et ei liceat per civitatem, terras et districtum alterius populi reducere et portare et deferri facere res commestibiles vivas et mortuas ad suam civitatem et populum, que reduceret et deferri faceret de terris et locis non subpositis alicui dictarum comitatum vel populorum, hinc ad septem annos proxime venturos'. The treaty also stipulated that Florence would exercise the privilege of naming both the *podestà* and the *capitano del popolo* of Arezzo for the next three years. For the loan, see Santini, ed., 1952, *Capitoli*, no. 55, 1255 September 27, pp. 167-170.

⁹¹ In May 1285, Arezzo notified Florence that the exemption from tolls enjoyed by Florentines in the territory of Arezzo had now elapsed, and that no extension would be forthcoming. See Gherardi, ed., 1896-1898, 1, p. 216 [1285 May 15]: 'Item, super litteris Comunis Aretii, transmissiis pro pedagogis exigendis in suo territorio a transeuntibus; et hoc cum dicant, terminum fore elapsum

though exemption from tolls had receded into the background, and the issue had now become security on the roads in the territory of Arezzo.⁹²

The evidence from the later thirteenth century strongly suggests that the importance of Arezzo to Florence lay in the geographical position of Arezzo and particularly in the ease with which the Aretines were able to disrupt Florentine trade further south along the old via Cassia.⁹³ The earliest commercial convention between Florence and a central Italian city, as already mentioned above, is the treaty negotiated in 1218 between Florence and Perugia. The treaty established the duties to be paid by the merchants of each city upon entering the territory of the other city, declaring that Florentine merchants were subject to a maximum duty fifty per cent higher than that to which the Perugians were subject. The treaty also stipulated that accounts between creditors and debtors, up to a maximum of 150 *libre*, were to be settled every four months, and that only the responsible parties would be required to stand judgement for contractual infractions.⁹⁴

de quo fecerunt gratiam Comuni Florentie de pedagiis non tollendis: cum non videatur Comune Aretii posse suas tollerare expensas'. Communal officials in Florence then decided to send two ambassadors to Arezzo in an evidently unsuccessful effort to garner a continuation of the exemption. See Gherardi, ed., 1896-1898, 1, pp. 216, 218, 220.

⁹² Gherardi, ed., 1896-1898, 1, p. 292 [1285 September 5]: 'Item, super litteris Comunis Aretii, continentibus in summa quod, si placeret Comuni Florentie, voluntas est ipsius Comunis Aretii quod aliqui Sapientes utriusque Communis se convenire debeant certo loco et tempore, per Comune Florentie ordinandis, ad providendum qualiter Florentini et Aretini possint ire securi in personis et rebus per utriusque Communis forciam et districtum, et maxime Aretii per forciam terre Montisvarchi'. A substantial lacuna in the source from which much of this evidence has been drawn precludes a closer consideration of the progression in the deterioration of relations between Florence and Arezzo, particularly with respect to the degree to which the problems regarding security on the roads and the withdrawal of Florentine toll exemptions figured in precipitating the decline. Whatever the exact nature of the disagreements between Florence and Arezzo, they culminated in the eruption of open hostility between the two cities in the summer in 1287. The evidence from discussions undertaken in Florence concerning the negotiation of a treaty with Arezzo late in 1290 after the cessation of hostilities is by no means conclusive, but it strongly suggests that concerns about traffic in foodstuffs through the territory of Arezzo figured very prominently in the breakdown in the relations between the two cities. It also demonstrates very clearly that the Florentines considered the free movement of foodstuffs from the territory of Arezzo integral to any treaty negotiated with Arezzo. See Gherardi, ed., 1896-1898, 1, pp. 503-510, 517-520.

⁹³ Dini also stressed the importance of Arezzo during the renaissance as the primary means of access for Florentine merchants to points farther south, especially to the port of Ancona on the Adriatic coast. In the fifteenth century, Florentine merchants were importing wool through Arezzo from Abruzzo, silk from Calabria, and saffron, grain, and oil from southern Italy, while exporting textile products. See Dini, 1986, p. 291.

⁹⁴ Santini, ed., 1895, *Capitoli*, no. 66, 1218 March 21, pp. 190-192; Bartoli Langeli, ed. 1983-1991, 1, no. 68, 1218 March 22, pp. 179-182. The treaty called for duties of two *solidi* on each *salma* of woollen cloth and eighteen *denarii* on each *salma* of linen cloth and 'salvaticume'. Duties of twelve *denarii* were to be paid on each *salma* of all other types of cloth and on 'torsica

Another more lengthy treaty was concluded between Florence and Perugia in 1235, when the Florentine ‘dominus Bartholomeus Nasus’ was serving as the *podestà* of Perugia.⁹⁵ The 1235 treaty reiterated the stipulations of the agreement of 1218 in somewhat altered form, and it added several new clauses regulating the repayment of debts and establishing procedures for the settlement of disputes. Most importantly, the new treaty amended the provisions concerning import duties whereby the merchants of both cities were now accorded the same treatment.⁹⁶ In both of these treaties, textiles appear to have been the principal items of exchange in the trading relations between Florence and Perugia in the early thirteenth century.⁹⁷

The Florentines also may have been importing cereal products and other foodstuffs from Umbria through the market at Perugia. During the famine year of 1256, for example, both Florence and Arezzo despatched ambassadors to Perugia in an effort to obtain license to export grain from the territory of Perugia. Ultimately, the requests of the Tuscan ambassadors were declined, perhaps because

cuniculorum’ and ‘variis laboratis’. A maximum total duty of ninety *libras* was to be charged to the Florentines entering the territory of Perugia, but a maximum of only sixty *libre* was to be levied on the merchants of Perugia when they entered Florentine territory.

⁹⁵ The Florentine *podestà* of Perugia was certainly in office in March 1235 when the treaty was negotiated, as the treaty itself indicates, but he had completed his term and had been replaced by May. For the treaty, see Bartoli Langeli, ed., 1983-1991, 1, no. 148, 1235 March 14, pp. 318-326. On the *podestà* of Perugia, see Giorgetti, 1993, p. 74. Florentines frequently served in the capacity of *podestà* of Perugia in the thirteenth and early fourteenth centuries. See Giorgetti, 1993, pp. 74, 106-107, 112, 113, 117, 131, 133, 136, 144. In addition, seven Florentines served as *capitano del popolo* in the first half of the fourteenth century. See Giorgetti, 1993, pp. 340, 357, 360-361, 369, 370-371, 375, 387.

⁹⁶ Whereas the treaty of 1218 established a maximum total duty of ninety *libras* for the merchants of Florence entering the territory of Perugia and only sixty *libras* for the merchants of Perugia entering the territory of Florence, the 1235 treaty set no maximum for the merchants of either city. Instead, it established a new rate for duties beyond one hundred *libras*, and the same conditions now applied to the merchants of both cities. After the total duty had reached one hundred *libras*, following the schedule of duties delineated in the 1218 treaty, import duties were to be paid at the rate of twelve *denarii* for each *salma* of merchandise regardless of type. The initial treaty of 1218, in other words, had favoured Perugia by establishing a lower maximum duty for which the merchants of Perugia were liable, but the 1235 agreement treated the two cities equally, suggesting that the bargaining position of Florence had strengthened considerably in the interim.

⁹⁷ Additional evidence supports the notion of an expanding export trade in woollen textiles in Florence. Various documents of the early 1260s from the papal chancellery bear witness to the efforts of pope Urban IV to constrain any further expansion of the woollen textiles industry in Florence while the city remained under a Ghibelline regime following the Guelf defeat at Montaperti. See Davidsohn, 1977, 6, pp. 859-860.

Perugia was protecting its own food supply.⁹⁸ The despatch of ambassadors by communal officials in Florence, a common response to a breakdown in normal relations, nevertheless suggests that Florence usually may have been able to obtain permission to purchase grain in the territory of Perugia. Before the last quarter of the thirteenth century, Perugia may have been a net exporter of foodstuffs, but exportations of foodstuffs from the territory of Perugia became subject to increasing restrictions from 1279.⁹⁹ An agreement negotiated between Florence and Perugia towards the end of the thirteenth century indeed contains a clause ‘pro victualibus’, which stated that the treaty in no way obliged either city to permit the exportation of foodstuffs from its territory.¹⁰⁰ Regular importations of livestock

⁹⁸ For evidence of the request, see Ansidei, ed., 1935, no. 1, [1256] January 21, p. 5: ‘Plac[uit] quod non concedatur anbasatoribus de Florentia et Aricio extraere aliquod bladum neque graxiam de civit[ate] nec de comitatu P[erusium], set forma quod loquitur de blado non ferendo debeat observari’. The text fails to give the year for this entry, but it may be dated securely on the basis of subsequent entries for which the year is given.

⁹⁹ Grundman, 1992, pp. 150, 174-177. Grundman associated the increasing restrictions placed on the exportation of foodstuffs by Perugia with the efforts undertaken by the city in 1278 to prohibit commercial reprisals. Perugia encountered strong resistance to its attempt to eliminate reprisals unilaterally, and several cities responded by forbidding the importation of foodstuffs from Perugia. Many Italian cities appear to have been adopting a more restrictive position towards the exportation of foodstuffs from their territories in the 1280s, however, and the increase in legislation restricting food exports from Perugia during the last two decades of the thirteenth century has parallels throughout north-central Italy. On the food supply policies at Perugia in the later thirteenth century, see also Blanshei, 1976, pp. 60-61. On the tightening of legislation to protect the food supply in Padua in the early fourteenth century, see Hyde, 1966a, p. 46. On the increasingly restrictive attitude towards staple food exports adopted by communal governments in Lombardy and the Veneto, see Peyer, 1951. Evidence from the third quarter of the thirteenth century nevertheless suggests that there probably existed a healthy trade between Florence and Perugia at the time. In the spring of 1260, as the conflict between Florence and Siena that would eventually culminate in the battle of Montaperti later that year was intensifying, Perugia received notice from Siena of the imposition of a ban on the transit of Perugians to Florence with any sort of merchandise. See Ansidei, ed., 1935, no. 157, 1260 April 29, pp. 178-179: ‘Quid placet [...], auditis litteris [...] missis a Pot[estate] et C[omune] Sene quatenus per civit[ate] et forciam P[erusium] deberet ban[niri] ne ullus de civit[ate] vel comitatu P[erusium] deberet transire Florentiam vel eius comitatum et forciam cum aliqua mercandandia vel alio modo quod stabilitum est per comitem Jordanum, et qui contrafecerit [...] debeat capi et detineri’. Later that year, virtually on the eve of the actual battle of Montaperti, Perugia sent ten ambassadors to Tuscany in the hopes of mediating a settlement between Florence and Siena. See Ansidei, ed., 1935, no. 238, 1260 September 2, pp. 254-255, esp. 255: ‘Plac[uit] [...] quod Potestatis cum x ambaxatoribus debeant ire Tusciam ad interponendum se de omni concordia et bono statu et pacifico Florentinorum et Senensium, et unus notarius vadat cum eius, dum nuncius mittatur ante sicut [dixit] D[ominus] Armanus’. As far as Perugia was concerned, the conflict between Florence and Siena, which erupted in the battle of Montaperti on 4 September 1260, was bad for business.

¹⁰⁰ Arias, 1901a, app., no. 32, 1296 January 20, pp. 460-461. The treaty nevertheless implies that the two cities had commonly traded in foodstuffs in the past, though it fails to indicate the commodities of exchange or their usual direction of movement. The treaty is not necessarily suggestive of a cessation of trade in foodstuffs, however, but merely indicates that Florence and Perugia

from Perugia nevertheless are documented at Florence from the famine year of 1329.¹⁰¹

In the meantime, Florence entered into a military alliance with Orvieto against their common enemy Siena in 1229, and more or less regular commercial relations between the two cities can be dated from about this time, perhaps as a result of an even earlier treaty.¹⁰² By 1259, moreover, the Spiliati merchant-banking company of Florence was maintaining a branch office at Orvieto, and they were joined by the Spini company by 1283, and by the Mozzi and Bardi companies by the early fourteenth century. Between 1228 and 1250, moreover, eight of the *podestà* at Orvieto had been Florentines.¹⁰³ Commercial relations between Florence and both Orvieto and Perugia may have been strengthened in 1276 by the formation of a Guelf league between the cities of Florence, Lucca, Siena, Orvieto, and Perugia.¹⁰⁴ Florence also may have concluded another treaty with both Perugia and Orvieto in the same year, providing mutual exemption from customs duties for the citizens of the respective cities.¹⁰⁵

wished to create special safeguards against the exportation of foodstuffs when local supplies were scarce without damaging their commercial relations.

¹⁰¹ De la Roncière, 1976, 2, p. 567; 4, pp. 142-143, n. 35.

¹⁰² For military alliances between Florence and Orvieto, see Santini, ed., 1895, *Capitoli*, no. 75, 1229 September 10 and 1235 July 4, pp. 215-219. An anonymous chronicler of Orvieto reported that Florence had formed an alliance with Orvieto in 1225 or soon thereafter. See the *Annales Urbevetani*, p. 127: 'Eodem anno [1225?] facta est societas inter Urbevetanos et Florentinos'. Another military alliance between Florence and Orvieto against Siena was concluded in 1251. See Santini, ed., 1952, *Capitoli*, no. 5, 1251 September 1-10, pp. 17-21; no. 6, 1251 September 10, p. 22; no. 7, 1251 September 10, pp. 22-23. Commercial relations between Florence and Orvieto are attested in a trade agreement dating from 1229 and guaranteeing the citizens of Orvieto the same freedom of movement through Florence and its immediately surrounding suburbs that Florentine citizens typically enjoy. See Fumi, ed., 1884, no. 189, 1229 March 9, p. 118. The Florentine chronicler Sanzanome, writing in the 1230s, also noted the presence of merchants from Orvieto in the territory of Florence in the early thirteenth century. See Sanzanome, p. 140: 'cum Urbevetani mercatores cum bestiis et rebus aliis per districtum Florentie secure transirent'.

¹⁰³ Waley, 1952, pp. 27-28, 48-49, 86-87, and p. 87, nn. 1-2.

¹⁰⁴ The formation of a Guelf league between these cities is noted in the admittedly late report of the sixteenth century chronicler Luca di Domenico Manenti. Unfortunately, it appears that no documentary evidence of the treaty has yet come to light. For the chronicle report, see Luca di Domenico, pp. 314-315, esp. 315: 'Detto anno [1276] era parte Salimbene in Siena rimessa da Carlo re de Napole. Così fu fatto la lega perpetua ad exaltatione de la Chiesa Romana, che furo Fiorenza, Siena, Luccha, Peroscia et Orvieto'.

¹⁰⁵ The only source for this agreement evidently is an admittedly late chronicle report, this one from the seventeenth century chronicler Pompeo Pellini and again as yet unsubstantiated in the documentary sources. See Pellini, 1666, 1, p. 286: 'Si legge solo, che dell'anno seguente [1276] Perugini, Fiorentini, e Orvietani convenissero insieme, che nessuno dei suoi cittadini passando

In 1285, communal officials at Florence confirmed an existing obligation to excuse the citizens of Orvieto from Florentine tolls.¹⁰⁶ The extant documentation unfortunately sheds little light on the products that Florence may have imported from Orvieto, but woollen textiles were almost certainly the most important Florentine exports available on the market at Orvieto. At the end of the thirteenth century, Florentine woollen textiles constituted about 52.5 per cent of all imported woollen textiles sold on the market at Orvieto, and from about 81.6 to 89.4 per cent of all fabrics imported from within the Italian regions.¹⁰⁷

Soon after relations are attested for the first time between Florence and Orvieto, Florence entered into an agreement with Città di Castello that was designed to eliminate commercial reprisals.¹⁰⁸ Subsequent trading relations between Florence and Città di Castello are not very well documented until the later thirteenth century, when Città di Castello concluded a treaty with Arezzo that guaranteed the citizens of Città di Castello access to Florentine markets even in the event that Arezzo was at war with Florence.¹⁰⁹ By the early fourteenth century, Florentine woollen textiles evidently were widely available throughout Umbria and northern Lazio. According to Pierre Toubert, Florentine merchant-bankers were already active in Rome and its environs in the later twelfth century.¹¹⁰

l'uno per lo territorio, e terre dell'altro, dovesse pagare sorte alcuna di gabella di qualunque qualità di mercantia si pagassero, di che vuol Cipriano Manente si facessero pubblici, e giurati instrumenti da tre notari, uno per ciascuna città; et che fosse fatta lega in perpetuo tra Siena, Firenze, Lucca, Perugia et Orvieto ad essaltatione et mantenimento dello stato di santa Chiesa'. Florence and Perugia certainly negotiated a mutual exemption from tolls in 1294. See Arias, 1901a, app., no. 24, 1294 September 10, pp. 440-444.

¹⁰⁶ Gherardi, ed., 1896-1898, 1, 1284/1285 February 10, p. 161: 'Si videtur dicto Consilio quod syndicus fiat pro Comuni ad promittendum sindaco Communis Urbisveteris, in civitate existenti, de pedagiis non tolendis'.

¹⁰⁷ Hoshino, 1980, pp. 68-69, and p. 98, tbl. 6, citing ASOrvieto, *Archivio notarile* 1, Registro del 1299.

¹⁰⁸ Santini, ed., 1895, no. 76, 1232 April 16, pp. 219-220; Vitelleschi, ed., 1904-1909, 2, no. 2, 1232 April 16, pp. 5-6.

¹⁰⁹ See again Pasqui, ed., 1899-1937, 2, no. 678, 1290 July 18, pp. 484-489, esp. 486. The pertinent passage is cited in full above. By the end of the first quarter of the fourteenth century, merchants of Città di Castello were purchasing Florentine cloth from the Rinucci merchant-banking company at Florence itself. See Hoshino, 1980, p. 72, citing ASF, *Carte del Bene* 63, fols. 110-141, *passim*. Much later, in the fifteenth century, there is considerable evidence that Florence was obtaining from Città di Castello substantial quantities of woad, a plant that the Florentines used for dyeing wool. See Lee, 1982.

¹¹⁰ In addition to the merchants of Perugia, Orvieto, and Città di Castello, merchants from Gubbio, Narni, Spoleto, and Rome also purchased Florentine cloth directly from Florence. Through Florentine merchants or through the merchants of these other towns and cities, the woollen textiles

The merchant-bankers of Florence were also active in the Marche before the middle of the thirteenth century. Florentine money-lenders are attested at Matelica from as early as 1241.¹¹¹ Merchants from Florence were selling woollen textiles on the market at Macerata from at least as early as 1245 but they were also maintaining a warehouse at Macerata for the purpose.¹¹² By 1281, Florence had also established commercial relations with Fabriano, a town strategically situated on the road to the Adriatic port of Ancona. A treaty dating from September of that year granted to Florence and Fabriano an exemption from tolls and duties in the territory of the other, perhaps to facilitate the passage of goods between Florence and the port of Ancona.¹¹³ Florentine cloth exports indeed may have been passing through Fabriano towards the port from as early as the middle of the thirteenth century. *La pratica della mercatura* of the Florentine merchant Francesco Balducci Pegolotti, evidently dated from no later than about 1340, clearly indicates that Florentine commercial relations with Ancona were firmly established by that time.¹¹⁴ Earlier evidence also indicates that Florentine merchants were active in

of Florence were available also at Amelia, Assisi, Orte, Sutri, Terni, Todi, Viterbo and in other minor centres in Umbria and Lazio by about 1325. See Hoshino, 1980, pp. 67, 69, 72. The Florentine presence at Spoleto is attested by the fact that a Florentine was serving as the treasurer of the duchy in 1284. See V. Villani, ed., 1988, no. 874, 1284 May, pp. 311-312. On the activities of Florentine merchant-bankers at Rome from the later twelfth century, see Toubert, 1973, 1, p. 618; Davidsohn, 1977, 1, 1192-1193. The larger Florentine merchant-banking companies were all operating at Rome during the early fourteenth century, and their activities are abundantly documented. See Renouard, 1938.

¹¹¹ Grimaldi, ed., 1915, 1, no. 72, 1241 July 10, p. 86.

¹¹² ASF, *Diplomatico*, Riformagioni, 1245 December 3. See also Davidsohn, ed., 1896-1908, 3, no. 29, s.d., pp. 9-10; Pratesi, 1915, pp. 335-336. Florentine cloth exports at Macerata in 1245 are discussed in Hoshino, 1980, p. 66; 1983, p. 184. By 1279, Florentines were collecting dues throughout the Marche on behalf of pope Nicholas III. See Castellani, ed., 1952, 2, 470-515; Aloisi, 1907. From 1282, Florentines also figured prominently as provincial treasurers in the records of Arcevia, situated on the principal thoroughfare between Gubbio and Senigallia on the Adriatic coast, and in acts redacted at Macerata. See V. Villani, ed., 1988, no. 822, 1282 March 5, p. 292. A Florentine is first attested as a provincial treasurer in the records of Arcevia from 1278, in a document redacted at Montolmo. See V. Villani, ed., 1988, no. 764, 1278 May 22, p. 272. Another Florentine appears as a witness to an act of 1280 redacted at Macerata. See V. Villani, ed., 1988, no. 807, 1280 December 4, p. 287.

¹¹³ For the commercial treaty between Florence and Fabriano negotiated in 1281, see Arias, 1901a, app., no. 9, 1281 September 13, pp. 404-407. Much later, by 1369, the woollen textiles industry in Fabriano itself had begun to produce certain types of high-quality fabrics *ad modum Florentinorum*, which is to say 'in the manner of the Florentines', that were by this time long familiar. See Hoshino, 1980, p. 145.

¹¹⁴ Evans, ed., 1936, pp. 156-161.

the grain trade at Ancona in the early fourteenth century.¹¹⁵ By the early fifteenth century, Florentine woollen textiles were commonly passing through Porto Recanati, situated just south of Ancona.¹¹⁶

Florentine merchants were active at Fermo, situated in the Marche near the Adriatic coast south of Ancona, from at least as early as 1278, and a Florentine merchant is attested at Urbino from at least as early as 1289.¹¹⁷ Wool exports from Florence were also available on the market at Ragusa, which is to say modern Dubrovnik, from at least as early as 1252, perhaps by way of Ancona, and Florentine merchant-bankers were active at Ragusa from the very beginning of the fourteenth century, if not earlier.¹¹⁸ The port at Ancona also may have served to facilitate Florentine trading relations in Abruzzo and Apulia, particularly with respect to the movement of bulky commodities such as grain from these regions. In Abruzzo, Florentine merchants were established at Sulmona and L'Aquila by the end of the thirteenth century, and Florentine wool traders were active in the region

¹¹⁵ ASF, *Notarile antecosimiano* 13364/M293, fols. 57r-v, esp. 57r [1302 May 16]. See also Davidsohn, ed., 1896-1908, 3, no. 396, s.d., pp. 81-82.

¹¹⁶ Hoshino, 1980, pp. 59-60, 174, 192, 224.

¹¹⁷ The chronicle report that attests to the activities of Florentine merchants at Fermo also indicates that their existence at Fermo was at least sometimes precarious. It should also be noted that the report is not contemporary but dates from after 1447. For evidence of Florentine merchants operating at Fermo in the service of the pope, see Antonio di Niccolò, chap. 378: 'Instrumentum depositi, facti per Iohannem de Cavedanis et Palmerium domini Falconis, syndicos communis Firmi, in manibus Mainecti Rainaldi et Framberti Piuvanelli de Florentia mercatorum domini Papae, de mandato domini Angeli de Vezosis domini Papae camerarii, de summa quatuor millium librarum ravennatensium, occasione iniurarium et excessuum ac offensarum factarum per comune civitatis Firmi provinciae Marchiae Rectori et hominibus Montis Sancti Petri; de anno Domini 1278, tempore Nicolai papae tertii; rogato Paulo de Reate, notario Camerae Apostolicae'. For evidence that Florentine merchants were victims of brigandage at Fermo in 1284, see Antonio di Niccolò, chap. 455: 'Instrumentum sumptus quarumdam condemnationum, factarum per dominum Sinibaldum de Aynarden de Trivisio, potestatem Firmi, contra Vinciguerram de Mercato, in duobus millibus libris ravennatensium; ex quo ipse, una cum quadraginta hominibus equestribus et pedestribus, derobavit quosdam mercatores Anconae, Florentiae et Senarum, et plures alios qui cum eis erant, de pannis ac aliis, prout in dicta condemnatione. Item contra Rainaldum et Albertinum de Camporo, condemnatos occasione ut supra; sub anno Domini 1284'. A Florentine merchant also appears as witness in a document dated from 1289 and redacted at Urbino. See V. Villani, ed., 1988, no. 987, 1289 December 2, p. 359.

¹¹⁸ On Florentine wool exports on the market at Ragusa, see Hoshino, 1980, p.66; 1983, p. 184. The evidence cited by Hoshino is published in Racki, ed., 1867, no. 7, 1252 March 13, pp. 133-134, esp. 133. Florentine fabrics are also mentioned in customs evidence for Ragusa dating from 1272. See Hoshino, 1980, p. 51. Representatives of the Scali merchant-banking company of Florence were supplying large quantities of grain to Ragusa already in 1303. See Krekic, 1961, no. 73, 1 October 1303, p. 178. The Peruzzi, Buonaccorsi, Bardi, and Acciaiuoli companies were also active in Ragusa during the first quarter of the fourteenth century, mostly in connection with the importation of cereals from southern Italy. See Krekic, 1977; 1979.

even before 1275.¹¹⁹ By the beginning of the last quarter of the thirteenth century, in other words, Florentine merchant-bankers were routinely operating well beyond the frontiers of Tuscany.

The conduit of Arezzo provided an important means of access to central and south-central Italy, especially to the fertile plains in the valleys of the rivers Chiana and Tiber, to markets for Florentine exports in cities such as Orvieto and Perugia, and to Adriatic ports such as Ancona. Moreover, the Arno and the Tiber were able to support the movement of bulky commodities by water, thereby reducing the costs of trade along the corridor. Florentine trading relations in central and south-central Italy were also facilitated by the Guelf political alignment that Florence shared with the cities of the region, and by the fact that the region for the most part lacked well developed export industries for woollen textiles.¹²⁰ Florentine access to these regions depended largely upon the state of relations between Florence and Arezzo, however, and these were often sufficiently tense to disrupt the inland movement of goods between Florence and the cities and towns of central and south-central Italy.

7.3.3. Sicily and southern Italy

Very much like Arezzo, the importance of Pisa in Florentine trade from the later twelfth through the early fourteenth centuries lay increasingly in the fact that the city afforded Florentine merchants the easiest access to the sea. The 1171 treaty,

¹¹⁹ The first evidence of Florentine traders in Abruzzo, according to Hoshino, dates from July 1271, when a group of Florentine merchants became the victims of brigands near Rocca di Cambio on the road between Sulmona and L'Aquila. See Hoshino, 1986, p. 67. By at least as early as 1299, the Angevin king Charles I had granted Florentine merchants export rights on grain from Abruzzo. See Davidsohn, ed., 1896-1908, 3, no. 320, 1299 August 30, p. 70. In the early fourteenth century, Florence was still obtaining grain imports from Abruzzo, although the quantities at issue were vastly smaller than those imported from Apulia at the same time. In an example cited by Hoshino and dating from the famine year of 1329, the Acciaiuoli merchant-banking company was authorised to export 145,000 *salme* of grain from southern Italy. Of that sum, only 25,000 *salme* were to be taken from Abruzzo, and the remaining 120,000 *salme* were to come from Apulia. It is in the movement of grain more than anything else that access to port facilities at Ancona would have been most important. The expansion of the Florentine wool trade in Abruzzo, according to Hoshino, depended more upon the development of the road network in the region and along the corridor running from L'Aquila through Rieti, Spoleto, Perugia, and Arezzo to Florence. See again Hoshino, 1986, p. 67. On Florentine merchants at L'Aquila and Sulmona in the later thirteenth century, see also Gasparinetti, 1964-1966.

¹²⁰ On the favourable circumstances created for Florentine trade by the political disposition of cities central and south-central Italian cities, and on the 'guelfizzazione' southern Italy, see above, Chapter 5.3.

discussed above, guaranteed Florentine citizens sea passage on the same terms offered to Pisan citizens. In the early thirteenth century, Florence and Pisa negotiated another treaty in order to facilitate the resolution of debts between their citizens.¹²¹ By this time, the movement of foodstuffs and other merchandise through Pisa and up-river on the Arno appears to have been well established. Port facilities are attested on the Arno at Empoli in antiquity and again in the later thirteenth century.¹²² A river port is also attested near Signa from the second half of the tenth century, and the commune of Florence had established a customs station at Signa by the early fourteenth century to facilitate the collection of import and export tariffs.¹²³

Other vessels designed exclusively for use on inland waterways plied the Arno from its mouth and at least as far inland as Figline in the upper valley of the river, and river boats were also used on the larger tributaries of the Arno.¹²⁴ The

¹²¹ Santini, ed., 1895, *Capitoli*, no. 61, 1214 May 27, pp. 175-177; no. 62, 1214 May 30, pp. 177-179.

¹²² On the port at Empoli, see above in this chapter.

¹²³ For evidence of the port at Signa in the second half of the tenth century, see Piattoli, ed., 1938, Piattoli, ed., 1938, no. 14, 964 July, pp. 40-45, esp. 42. A property conveyance redacted at Signa and dated from 1181 also describes the property at issue as 'petiam terre positam a porto'. See Mosiici, ed., 1969, no. 15, 1078 February 20, pp. 68-74, esp. 71; ASF, *Diplomatico*, Cestello, 1181 June. Port facilities at Ponte a Signa, which evidently consisted of several individual ports, are attested in several documents in the evidence for the abbey at Settimo from around the middle of the thirteenth century. See ASF, *Diplomatico*, Cestello, 1246 October 25, 1252 April 9, 1252 April 13, 1252 April 20, 1254 September 26, 1265 January 3. See also ASF, *Compagnie Religiose soppresse da Pietro Leopoldo* 405, pp. 336-337; ASF, *Compagnie Religiose soppresse da Pietro Leopoldo* 479, 302, fols. 23r-28r, *passim*. In addition, see De la Roncière, 1976, 3, pp. 858-859, 869-870; 4, pp. 269-272, nn. 163-173. Certainly by the middle of the fourteenth century, and probably much earlier, the port at Signa was being used by the Florentines to receive imported goods destined for the city. See De la Roncière, 1976, 4, p. 271, n. 172, citing ASF, *Mercanzia* 1102, fol. 95r: 'Stefano Zucchelli publicus vecturalis et piactaiuolus [...] conduit mercancias mercatorum de civitate Pissarum ad civitatem Florentie seu ad portum Signe'. On the customs station at Signa in the early fourteenth century, see Astorri, 1998, p. 156. For a later fourteenth century description of two distinct port installations pertaining to the abbey at Settimo, both probably situated near Ponte a Signa, see De la Roncière, 1976, 3, pp. 869-870, esp. 869, citing ASF, *Estimo* 340, fols. 24r-24v.

¹²⁴ Three types of vessels were used for river traffic on the Arno from the later thirteenth century to the early fifteenth century. According to De la Roncière, the largest of these was the *piatta*, a flat-bottomed barge. The *scafa* appears to have been a smaller boat designed for less considerable cargoes. The *noccolo beccuto*, or *noccola*, was evidently also smaller than the *piatta* and designed specifically for the movement of grain. On the various types of river-boats that plied the Arno, see De la Roncière, 1976, 3, p. 857. By the second quarter of the fourteenth century, construction on the Arno in the vicinity of Florence obstructed the movement of river-boats in the area of Signa. See De la Roncière, 1976, 3, pp. 856, 861. Early thirteenth century documents concerning trade on the river referred to river-boats simply as *naves* or *navaioles*. See Caturegli, ed., 1974, no. 47, 1209 February 14-1209 March 12, pp. 83-85; no. 48, 1209 February 16, 1209 March 12, pp. 85-

movement of wood on the Arno is attested from the early twelfth century, and the treaty negotiated between Florence and Pisa in 1171 further suggests that the movement of goods through the port of Pisa and on the river to Florence was by that time a well established practice.¹²⁵ Trade on the Arno between Pisa and Florence in the later twelfth century is also attested in a document from 1209 concerning tolls on the river at the *passagium* 'de Ricavo' over the previous forty years or thereabouts.¹²⁶ The *vecturales* of Florence, Lucca, Siena, and even Bo-

88. See also Bonaini, ed., 1854-1870, 3, pp. 1163-1165 [1219 July 9]. Port facilities on the Arno and on its larger tributaries in the territory of Florence are listed below, Appendix 6. See also above, Map 13.

¹²⁵ The sources of wood for the construction of Pisan naval vessels are mentioned in an early thirteenth century epic poem about the second Balearic war in 1113. Timber was abundant on the island of Corsica, according to the poem, but the nearby sources of Corvaia, near Pietrasanta in the territory of Lucca, and Luni, farther north near Carrara, no longer possessed supplies sufficient to satisfy the needs of the Pisan navy. The forests of the Mugello provided the wood for the sail yards of Pisan vessels, and the wood was transported by river, first on the Sieve and then on the Arno, to the boat yards of Pisa. See the *Liber Maiolichinus*, p. 10:

Quicquid tunc habuit memorisi Corsica ligni
Aut picis innumeros ratium defertur ad usus,
Lunensesque suo privantur robore silve.
Arboribus cesis remanet Curvaria rara;
Antennas que vela ferant, quod gestet easdem
Arboreum robur, celse tribuere Mucelle.
Ceditur omne nemus, cesum descendit ad undas.
Hoc varie fiunt diviso robore naves:
Gatti, drumones, garabi, celeresque galee,
Barce, currabii, lintres, grandesque sagene
Et plures alie variantes nomina naves.

For the 1171 treaty, see again Santini, ed., 1895, *Capitoli*, no. 4, 1171 July 2, pp. 5-6. In 1270, the Florentines granted Pisa an exemption from tariffs on goods exported from the countryside of Florence, mentioning wood in particular, and Pisans were certainly exporting wood from Legnaia two years later. For the Florentine grant of an exemption from tariffs on wood exported from the countryside of Florence to Pisa in 1270, see Terlizzi, ed., 1950, no. 198, 1270 May 2, pp. 108-115, esp. 112; also Davidsohn, ed., 1896-1908, 3, no. 70, s.d., p. 24. For evidence that Pisans were importing wood from the Florentine countryside in 1272, see Herlihy, 1958b, p. 24, n. 16, citing ASPisa, *Archivio degli Ospedale riuniti di Santa Chiara* 2515, fols. 118r, 136v. For evidence attesting to the transport of wood on the rivers Arno and Sieve in the early fourteenth century, see Caggese, ed., 1910, bk. 5, rub. 21, pp. 235-236. On the suppression of a toll on wood floated on the river Sieve towards the middle of the fourteenth century, see De la Roncière, 1976, 4, p. 289, n. 76, citing ASF, *Provvisoni Duplicata* 6, fol. 134r.

¹²⁶ The document records several depositions suggesting that the tolls charged about forty years earlier on merchandise transported on the river may have varied depending on the direction in which they were travelling. Three of the four witnesses stated that tolls on goods travelling towards Florence had once been set at only one *denarius* 'pro soma', but tolls on goods travelling towards Pisa were set at four *denarii* 'pro soma'. By about 1178, according to one of the witnesses, the tolls on the river were the same regardless of the direction of travel. Another witness was able to recall only that the tolls on the river had been equivalent for thirty-six years. Before about 1172, in other words, merchandise travelling on the river from Florence to Pisa evidently

logna were moving goods through Pisa from at least as early as 1219, and the evidence also indicates that goods were being transported from Pisa along the Arno to Florence by the same time.¹²⁷ By 1256, northern cloth was passing through the port of Pisa destined for Florence, and by the later thirteenth century, Florentine cloth exports were routinely transported on the river to Pisa.¹²⁸ Certainly by 1284,

had been subject to higher duties than goods travelling from Pisa to Florence. From about the beginning of the last quarter of the twelfth century, however, the increase in duties charged on goods travelling from Pisa to Florence put the river trade of the two cities on equal terms. The products mentioned in this document are grain, wine, and wood. See Caturegli, ed., 1974, no. 47, 1209 February 14-1209 March 12, pp. 83-85; Davidsohn, ed., 1896-1908, no. 1, 1209 March 12, p. 1. The document also addressed the related matter of tolls rendered in pepper between the 'bocca de Chiescine usque ad plebem de Lavaiano', which is to say between Cascine and Lavaiano. Another document addressed the matter of tolls assessed in salt 'super ripa de Blentina', or above Bientina. For the document concerning tolls at Bientina, see Caturegli, ed., 1974, no. 48, 1209 February 16, 1209 March 12, pp. 85-88.

¹²⁷ In the summer of 1219, the *artes vecturalium* of Florence, Lucca, Siena, and Bologna agreed to render tariffs on the movement of foodstuffs through the port of Pisa to one 'Gaitano quondam Alberti Bulsi et Rainerio eius filio et suis heredibus', to whom Pisa had evidently farmed the taxes. See Bonaini, ed., 1854-1870, 3, pp. 1163-1165 [1219 July 9]: 'Manifestum sit omnibus, quod Iacobus filius Gallighi de Florentia et Gerardus de Florentia quondam Federigi, rectores et capitanei vecturalium de Florentia et de comitatu et eius districtus, pro se et capitaneatus nomine, et pro Guglielmino de Florentia consocio eorum, et pro omnibus vecturalibus de Florentia et de comitatu et et eius districtus [...] et etiam suprascripti omnes, pro omnibus vecturalibus de Tuscia et de Bononia, et pro vecturalibus aliis qui Pisis venerint et exierint cum somis: concesserunt et permiserunt Gaitano quondam Alberti Bulsi et Rainerio eius filio, et suis heredibus, accipere et tollere pro unaquaque soma que de Pisis exierit, seu portabitur a suprascriptis vecturalibus vel ab aliquo eorum, denarios tres per unamquamque somam. Qui etiam suprascripti omnes rectores et capitanei pro se et capitanei nomine, et pro omnibus vecturalibus de Tuscia et de Bononia, et pro omnibus qui cum eis sunt vel erunt in sacramento artis vecturalium, et pro omnibus de eorum societate, per stipulationem sollempnem convenerunt et promiserunt suprascriptis Gaitano et Rainerio, recipientibus pro se et eorum heredibus, dare et solvere de unaquaque soma, pro pensatura, denarios tres pisane nove monete, scilicet unum denarium pensatori, quem suprascripti vecturales et eorum successores habebunt, et duos denarios suprascripto Gaitano et suis heredibus, vel cui ipse voluerit vel sui heredes voluerint; et quod decetero nullam somam portabunt nec extrahent de civitate pisana, vel subburgis ipsi vel aliquis eorum, nisi primo pensata fuerit sive ponderata ad pensas et cum pensis predicti Gaitani, et eius heredis; et debet esse qualibet soma usque in quingentas duodecim librarum, si placuerit illis vecturalibus qui pensari facient; set plus non possit [accipere]; et de unaquaque soma tam a supradictis quam ab aliis vecturalibus undecumque sint, debeant dari pro pensatura denarii tres, et non a mercatoribus; et quod unicuique vecturalium sub sacramento precipient qui eis sacramento tenentur vel in antea tenebuntur quod nullam somam de civitate pisana vel eis subburgis extrahent vel levabunt, nisi primo fuerit pensata ad pensas et cum pensis suprascripti Gaitani et eius heredibus [...] et quod pro suo posse facient ita quod navaioli qui vadunt per Arnum ad Florentiam, portabunt somas, quas portant, pensatas as suprascriptam pensam et ad idem pretium ad novos denarios pisanos; et quod defendant et iuvabunt omnes suprascriptos vecturales in eorum rationibus et iustitiis per totam civitatem pisanam et eius districtum'.

¹²⁸ A document dated from 1256 and recording the ratification of a treaty originally negotiated between Florence and Pisa in 1254 includes a clause limiting the customs charges that Pisa was able to impose on northern cloth passing through its port or its markets. The treaty also compelled the Pisans to relinquish to Florence various territorial possessions, and it granted the citizens of both

trade on the river between Pisa and Florence was also sufficient to afford the Florentines access to abundant food imports.¹²⁹

Florence and Prato safe passage through Pisan territory and exemptions from Pisan tolls beyond those to which the Pisans themselves were subject. In addition, the treaty obliged the Pisans to adopt the Florentine system of weights and measures for cloth and other merchandise. Florence and Prato evidently were able to exact these concessions from Pisa as repayment for debts owed by Pisa to Florentine and Pratese creditors. See Santini, ed., 1952, *Capitoli*, no. 66, 1256 September 24-25, pp. 189-204, esp. 190-193. An excerpt of a related document is published in Arias, 1901, app., no. 5, 1256 September 7, pp. 386-395. On Florentine exports sent to Pisa for resale in 1278, see Castellani, ed., 1952, 2, pp. 459-469, esp. 462-468. See also Ciasca, 1927, p. 513, n. 4. It is also possible to infer the existence of Florentine exports from even before the beginning of the thirteenth century in a court case concerning tolls on the Arno at Bientina in Caturegli, ed., 1974, no. 47, 1209 February 14-March 12, pp. 83-85; Davidsohn, ed., 1896-1908, no. 1, 1209 March 12, p. 1. The document is discussed above in this chapter. For a partial list of Florentine imports and exports through Pisa over the course of nearly a year in the early fourteenth century, see Ciasca, 1927, app., no. 20, 1320 November 16-1321 October 15, pp. 774-777.

¹²⁹ In 1284, the Florentine commune initiated a series of negotiations with the abbey at Settimo regarding the possessions of the abbey on the river Arno. The commune sought the removal from the river of mills and weirs pertaining to the abbey in order to facilitate the movement of food-stuffs on the river from Pisa to Florence, and the source clearly indicates that Florence was receiving substantial imports of food in this manner. Ultimately, the commune agreed to compensate the abbey at Settimo 11,000 *libre* for the removal of the waterworks in question. See Davidsohn, ed., 1896-1908, 3, no. 1195, 1284 May 15, pp. 235-236; ASF, *Diplomatico*, Cestello, s.d.: 'frumenti et bladi et piscium copia possit haberi in civitate Florentie'. In the early fourteenth century, the possessions of the abbey at Settimo on the Arno again became a subject of negotiation between the Florentine commune and the abbey. Communal officials believed that mills and other waterworks on the river both within the city and below the city were responsible for frequent flooding in the low-lying areas on the right bank of the river below the city. In 1331, the abbey at Settimo and the commune of Florence finally reached an agreement whereby the abbey consented to the destruction of some of its investments on the river in exchange for 3500 gold *floreni*, and the rental receipts on property at Semifonte and on eight money-changing tables in the *Mercatum novum* in the city. See Pirillo, 1995b, p. 84-85. See also De la Roncière, 1976, 3, 907-909; 4, pp. 307-308. The commune prohibited the operation of mills in the city between the Ponte Rubaconte and the Ponte alla Carraia already in 1308, and the proscribed zone was extended in 1322 and again in 1333, though the issue here probably was not so much flooding downstream but the possibility that mills and other waterworks could become dislodged in rising waters and cause damage to the bridges in the city. This may have been what actually happened in 1269, for example, when both the Santa Trinità and Carraia bridges were destroyed by debris carried on the river swollen from torrential rains. The restrictions imposed in 1308 and in 1322 evidently had little effect, as mills are documented in the proscribed zones through the first three decades of the fourteenth century. On legislation regarding urban mills in Florence in the early fourteenth century, see Muendel, 1981, p. 87 and p. 108, nn. 23-24; 1991, pp. 374-376, and pp. 386-387, nn. 49-60. On the flood of 1269, see Villani, bk. 7, chap. 34. For the legislation of 1308, see Barbadoro, ed., 1921-1930, 1, p. 401-402, esp. 401 [1308 September 20-21]: 'Item, provisionem factam de molendinis et piscariis non tenendis inter pontes Rubacontis et Carrarie in flumine Arni'. For the provisions of 1322, see Caggese, ed., 1910, bk. 4, rub. 6, pp. 172-174, esp. 173 [1322-1325]: 'Et non permittat vel patiatur dominus Capitaneus quod aliquod molendinum vel aliqua pischaria construat vel fiat in flumine Arni ex parte superiori Pontis Rubacontis versus orientem prope per trecenta braccia, et si facta fuerint faciat removeri'. On legislation enacted to restrict the operation of mills in the city after another damaging flood in 1333, see Gherardi, 1873, p. 243.

It is nevertheless clear that relations between Florence, a traditional ally of the papacy, and Pisa, a pro-imperial Ghibelline city, were by no means always congenial. In 1238, for example, the commune of Florence granted licenses of reprisal against Pisans on at least two occasions.¹³⁰ In 1251, moreover, the Florentines were compelled to negotiate with the Aldobrandeschi counts for the use of port facilities at Talamone and at Porto Ercole, situated on the Tyrrhenian coast south of Grosseto in territory dominated by the Aldobrandeschi. The Florentines were granted the right to maintain warehouses at the ports, transit privileges through Aldobrandeschi territory, and exemptions from customs duties and tolls in the territory.¹³¹ Later in the same year, Florence entered into a treaty with Genoa against the Pisans, all but confirming the suspicion that the Pisans were preventing the Florentines from using the more favourably situated port of Pisa.¹³² Towards the end of the thirteenth century, Florentine merchants were again compelled to by-pass the port of Pisa, this time arranging for the transport of goods from south-

¹³⁰ Santini, ed., 1895, *Miscellanea*, nos. 77-78, 1238 May 13, pp. 459-461; no. 85, 1239 October 8, pp. 467-469. See also ASF, *Diplomatico*, Cestello, s.d.

¹³¹ Fumi, ed., 1876; 1884, no. 298, 1251 April 30, pp. 194-195. See also Pampaloni, ed., 1965, no. 49, s.d., p. 501, citing ASOrvieto, *Codice de' Bustoli* 7, fol. 42. The Florentines evidently required the use of these ports again in 1271 when they obtained license to transport grain through Grosseto. See Davidsohn, 1977, 3, pp. 104-105; Davidsohn, ed., 1896-1908, 3, no. 73, 1271 July 13, p. 25. The Florentines were still using these ports in the early fourteenth century when poor relations with Pisa would not permit the use of the Pisan port. In 1302, a famine year, Pisa refused to allow the disembarkation at its port of two thousand *modia* of grain from Sicily and Apulia acquired mostly from Genoese merchants and destined for Florence. As a consequence, the Florentines were compelled to negotiate with Siena for access to the port at Talamone. Pinto has pointed out that such a solution for the Florentines could not have been very satisfactory. Talamone is situated about 180 kilometres south of Florence across undulating terrain, and it was serviced by insecure roads in bad repair in the early fourteenth century. See Davidsohn, ed., 1896-1908, 3, no. 423, 1302 October 19, p. 85; ASF, *Diplomatico*, Santo Spirito, s.d. See also Pinto, 1978, pp. 84-85, 91, 94. On the use of Talamone five years later, see De la Roncière, 1976, 2, p. 593; 4, p. 168, n. 107, citing ASF, *Provvisioni* 13, fol. 55r. Despite the poor communications between Florence and Talamone, the Florentines also found it necessary to use the port of Talamone on other occasions. In 1311, the Florentines sent to Siena Balduccio Pegolotti, whose son Francesco would be remembered for authoring *La pratica della mercatura*, to negotiate a treaty concerning the passage of Florentine merchants through Siennese territory to the port of Talamone. Other evidence from the same year indicates that all manner of goods were passing through the port. See Banchi, 1869-1870, pt. 2, pp. 82-84; pt. 5, no. 1, 1311 August 17, pp. 72-74, 124-129.

¹³² Santini, ed., 1952, *Capitoli*, no. 8, 1251 November 10, pp. 24-28. Florence and Genoa had concluded another treaty in Genoa a few weeks earlier. See Pampaloni, ed., 1965, no. 52, 1251 September 23, p. 502. Florentine trading relations with Genoa no doubt antedate these agreements considerably. The 1184 treaty concluded between Florence and Lucca suggests that Florence had already negotiated a treaty of some sort with the Genoese by that time. Florentine merchants are well attested in the cartularies of Genoese notaries from the early thirteenth century, if not earlier, and a considerable number of Florentine merchant-bankings companies were operating there by about the middle of the thirteenth century. See Davidsohn, 1977, 1, p. 1178; 6, pp. 836-845.

ern France to either Marina di Pietrasanta or Motrone di Versilia, both situated on the Tyrrhenian coast north of Viareggio in the territory of Lucca.¹³³

Despite frequent eruptions of hostility, relations between Florence and Pisa nevertheless remained for the most part favourable to commerce, largely because Pisa benefited immensely from Florentine trade passing through its port, and the Pisan economy was able to sustain lengthy disruptions even less than the Florentine economy.¹³⁴ The port of Pisa afforded Florence its easiest means of access to the sea and to other Mediterranean markets, particularly in the Italian south but also in Provence.¹³⁵ Florentine trade in the south blossomed following the

¹³³ See ASF, *Diplomatico*, Arte dei Mercanti, 1296 September 13. The document is a contemporary copy of an act originally redacted at Nîmes in southern France by a Florentine notary. It records an agreement by which Florentine merchants from several prominent merchant-banking companies hired a vessel from the owner, a citizen of Marseilles, for the transportation of cloth from 'Acque Morte', or Aigues Mortes, situated at the mouth of the river Rhone west of Marseilles. In the previous year, according to Davidsohn, the total value of the cloth exported by several prominent Florentine merchant-banking companies through the port at Aigues Mortes amounted to about 1.375 million Florentine *libre*. Pegolotti mentioned Aigues Mortes, or 'Aguamorta' as he called it, in *La pratica della mercatura*. See Evans, ed., 1936, pp. 229-231. The Florentines were still using the port of Motrone to receive shipments of grain, honey, leather, salt, wool, and woollen fabrics from Aigues Mortes in the later fourteenth and early fifteenth centuries. The port of Motrone was also the destination of boats bearing goods from ports throughout the western Mediterranean by about 1400. On the port of Motrone from the eleventh to the fifteenth century, but drawing mainly on the later evidence from the Datini Archives at Prato, see Pelù, 1974b. For evidence of the use of the port by Florentine merchants in the early fourteenth century, see Davidsohn, ed., 1896-1908, 3, no. 423, 1302 October 19, p. 85; ASF, *Diplomatico*, Santo Spirito, s.d. On Florentine use of the port in 1307, see De la Roncière, 1976, 2, p. 593; 4, p. 168, n. 108, citing ASF, *Provvisioni* 13, fol. 55r. By the middle of the fourteenth century, the Florentines were maintaining a communal granary at Pietrasanta to store shipments of imported grain. See De la Roncière, 1976, 2, p. 593; 4, p. 168, n. 108, citing ASF, *Guidice degli appelli* 1817, 3, fol. 252r. In the later fourteenth century, the Florentines were also using the port of Piombino. On Florentine ports more in general, again based mainly on documentation from the Datini Archives and focussing on the later fourteenth and early fifteenth centuries, see Pelù, 1974b. On the fifteenth century in particular, see also Dini, 1986, pp. 287-288.

¹³⁴ Commercial relations between Florence and Pisa in the later thirteenth and early fourteenth centuries were marked by periodic disruptions, which may have entailed the suspension of previous agreements on tolls and tariffs, the issuance of licenses of reprisal, or the complete closure of the port of Pisa to Florentine trade. Disruptions to trade were settled by the frequent re-negotiation of commercial relations between the two governments.

¹³⁵ The Florentines probably were also using the port of Pisa as well as other Tyrrhenian ports to maintain trading relations with Genoa and the coastal cities of southern France by about the middle of the thirteenth century. Numerous Florentine artisans were working in Genoese textile workshops already in the early thirteenth century. Florentine merchants were active on the textile market at Genoa from at least as early as 1252, and Florentine consuls are attested at Genoa from the early thirteenth century. On numerous Florentine *tinctori* at Genoa in the early thirteenth century, see Lopez, 1936, p. 109. For references to Florentine merchants on the Genoese textile market from 1252, see Lopez, 1936, pp. 164-165, 168-169, 174-175, 176-177, 178-179, 180-181. For evidence of the Florentine consuls at Genoa in 1213, see Ferretto, ed., 1902, p. 111, n. 3. For

Angevin ascendancy to power in Sicily and southern Italy from 1265 to 1268, but the Florentine presence in the south clearly antedated the advent of the Angevins. Tuscan merchants had been active in Sicily and southern Italy from before the beginning of the thirteenth century.¹³⁶ The sources typically mention Pisans, or simply Tuscans, and the Tuscan designation is generally thought to have connoted

evidence of the Florentine consuls in the second half of the thirteenth century, see Ferretto, ed., 1902, no. 287, 1267 August 10, pp. 111-112; no. 603, 1271 June 6-10, p. 238. Florentine creditors are attested at Genoa around the middle of the thirteenth century. See Lopez, 1936, p. 143. The Cerchi merchant-banking company was maintaining a branch of at Genoa from at least as early as 1253, and Villano Stoldi, the father of the Florentine chronicler Giovanni Villani, was the Cerchi representative at Genoa in 1271. See Baggott, 1985, pp. 38, 40. Florentine fabrics are also attested at Genoa from at least as early as 1253. See Lopez, 1935, p. 179; app. 1 (Gianuino Predone), no. 137, 1253 March 29, p. 226. Florentine merchants, including members of the Cerchi company, were also present at Marseilles amidst a high concentration of merchants from Tuscany already before the middle of the thirteenth century, no doubt to receive goods transported from the Champagne fairs. Merchants from Tuscan towns operating at Marseilles in 1248 accounted for seventeen per cent of all foreign merchants working in the city at the time. See Pryor, ed., 1981, pp. 75, 76. On the business operations of the Cerchi merchant-bankers in general and at Marseilles in particular, see Baggott, 1985, pp. 35-64, esp. 40. The activities of one Florentine merchant working throughout Provence at the end of the thirteenth century are extensively documented in Castellani, ed., 1952, 2, pp. 708-803. Another Florentine merchant active in the second half of the thirteenth century spent part of his career in Provence. Guido Filippi dell'Antella worked at Genoa on behalf of the dell'Antella company for eighteen months from 1267. He worked at Venice in the company of one Rinuccio Cittadini and at Ravenna with his father as a moneylender from 1270 until about 1275. He then worked for a few years both at Florence and abroad again as an agent in the dell'Antella company. In 1278, he joined the Scali company and worked for the next twelve years in the kingdom of France and in Provence, in Italy at Pisa and at Naples, and also elsewhere in the Mediterranean region. He worked again in France on behalf of the Franzesi company for three years from 1291 and then evidently returned to Florence permanently. See Polidori, ed., 1843, pp. 5-7; Castellani, ed., 1952, 2, pp. 804-805. On the business operations of the dell'Antella merchant-banking family, see Baggott, 1985, pp. 64-72. Florentine merchants may have used Genoa as a base from which to receive northern cloths and to finish them for subsequent distribution to markets in southern Italy, mainly Naples. Florentine producers had even established their own textile workshops and warehouses at Genoa by the end of the third quarter of the thirteenth century. On the re-exportation of northern cloths from Genoa to southern Italy, see Lopez, 1936, pp. 73-75, esp. 75. For evidence that Florentine workshops were finishing northern fabrics at Genoa for distribution in southern Italy by 1275, see Ferretto, ed., 1902, no. 49, 1265 October 30, p. 18; no. 54, 1265 November 7, p. 20. For evidence of Florentine warehouses at Genoa, see Ferretto, ed., 1902, no. 135, 1266 June 19 and 20, p. 49; no. 609, 1271 June 24, p. 240. A Florentine residence at Genoa is attested in Ferretto, ed., 1902, no. 415, 1268 October 1, p. 167.

¹³⁶ The economic benefits that followed the advent of the Angevins in the Italian south are discussed briefly above, Chapter 5.3. On merchants of Lucca at Messina and Salerno already in 1182, see Abulafia, 1977, pp. 256-261. On Pisan commercial colonies in southern Italy, see again Abulafia, 1978. By the later twelfth century, individuals of Tuscan origin are attested as owners of urban property in Sicily and southern Italy. For complete references to documents concerning the ownership of property in Sicily and southern Italy by individuals of Tuscan origin, see Petralia, 1988, p. 290, nn. 6-8.

a citizen of Pisa.¹³⁷ By the later twelfth century, however, the Tuscan and even the Pisan designations no longer referred only to Pisans but also to other Tuscans travelling in the Mediterranean under Pisan jurisdiction.¹³⁸ This clearly has important implications for the early dissemination of Florentine trade in Sicily and southern Italy, especially if the tendency for individuals from elsewhere in Tuscany to identify themselves as Pisan in order to take advantage of privileges accorded to the Pisans was extended to manufactured goods.

Specific references to Florentine commercial activity in the Italian south occur only from the second quarter of the thirteenth century, and only rarely before about 1265. It is likely, nevertheless, that the gold used by the Florentine mint to strike the first *floreni* in 1252 initially had been obtained by Florentine merchant-bankers operating in the Italian south before the middle of the thirteenth century.¹³⁹ Davidsohn has noted the possibility of a Florentine settlement at Messina even before the beginning of the thirteenth century, and travel between Florence and Sicily is attested from 1197.¹⁴⁰ Merchant-bankers of Florence were engaged in money-lending at Brindisi in Apulia from at least as early as 1238.¹⁴¹ At Naples, Florentine merchant-bankers were maintaining a warehouse, or *fun-*

¹³⁷ In Sicily and southern Italy, according to Petralia, the terms Pisa and Tuscany, and accordingly Pisan and Tuscan, were synonymous for many decades in the twelfth century. See Petralia, 1988, p. 289.

¹³⁸ On the temporary adoption of Pisan citizenship by other Tuscans travelling in the Mediterranean in the later twelfth and thirteenth centuries, see again Jacoby, 1997, IV, p. 197, and p. 230, n. 38; Abulafia, 1987b, pp. 55-56. Yver also believed that references to Tuscan money-lenders in the *Constitutiones regni Siciliae* of Frederick II referred to Florentines. See Yver, 1902, p. 290.

¹³⁹ Laws restricting private rights to discoveries of archaeological artefacts in Italy often preclude the accurate publication of coin hoards and single finds, many of which are smuggled to Switzerland for sale. Nevertheless, one hoard unearthed at Pisa in 1925 and tentatively dated to the second half of the thirteenth century contained 119 debased gold *tari* of southern Italy as well as 16 gold *augustales* of Frederick II, alongside 91 gold *floreni* of Florence. The hoard is conserved at the Museo Nazionale San Matteo di Pisa. See Travaini, 1995, p. 367. An apparently isolated find of a gold Arabic coin, or perhaps a gold coin of Norman Sicily with Kufic epigraphy, was unearthed at Florence in 1987 in connection with the archaeological excavations in the Piazza della Signoria, but the details of the find are unclear. See Gorini, 1988, p. 604; Travaini, 1995, p. 367. At any rate, southern Italian gold coins were clearly circulating in Tuscany in the thirteenth century.

¹⁴⁰ On the possible existence of a Florentine settlement at Messina in the later twelfth century, see Davidsohn, 1977, 1, p. 1177; Abulafia, 1977, p. 261. For evidence of travel between Florence and Sicily before 1200, see ASF, *Diplomatico*, Santa Maria Novella, 1197 April 29.

¹⁴¹ Davidsohn, ed., 1896-1908, 3, no. 22, 1238 August 30, p. 7, citing ASPisa, *Opera della Primaziale*.

daco, by 1243.¹⁴² Three years later, Florentine merchants were conducting money-changing operations between Bologna and the fair, or ‘nundine’, at Bari.¹⁴³ A garment of Florentine manufacture is documented in a testament dated from Palermo in Sicily already in 1237, and Florentine woollen textiles are attested at Palermo again from just after the middle of the thirteenth century, alongside Lombard and Pisan fabrics.¹⁴⁴ In the summer of 1259, the Florentines hosted an ambassador of Manfred, the king of Sicily, and they consigned to the ambassador fifty *floreni* for an unspecified purpose.¹⁴⁵ Florentine trade in Sicily and southern Italy increased gradually through the middle decades of the thirteenth century, but it expanded enormously after the Angevins supplanted the heirs of Frederick II in the Italian south.

The Florentine merchant-banking companies extended considerable amounts of credit to Charles I of Anjou in support of his struggle for power in southern Italy, and the Angevin king responded by granting privileges to Florentine merchant-bankers operating throughout the *Regnum Italiae*.¹⁴⁶ In 1268, Charles conferred royal protection to any Florentines engaged in commerce in the Italian south.¹⁴⁷ In the following year, the king granted Florentine merchants safe-con-

¹⁴² Davidsohn, ed., 1896-1908, 2, no. 2327, 1243 November 4, p. 306: ‘interfui Neapoli in fundaco, in quo Florentini consueti sunt hospitari’.

¹⁴³ ASF, *Diplomatico*, Badia di Firenze, 1246 March 8.

¹⁴⁴ On a bequest of a cape or cloak ‘de Florentino’ at Palermo in 1237, see Monneret de Villard, 1946, p. 484. On Florentine woollen textiles at Palermo before 1257, see Hoshino, 1980, pp. 38, 50, 61, 82-83. Hoshino was working from customs data of imprecise date, but he recommended an attribution of no later than 1257. The evidence on which Hoshino was drawing is published in Pollaci Nuccio and Gnoffo, eds., 1892, p. 335: ‘Item de pannis vero lombardiskis pisaniskis et florentiniscis extractis per mercatores exteros recipit predicta doana pro qualibet pecia Tarenum l’. On the dating of the evidence, see La Mantia, 1906, pp. xviii-xix, n. 5.

¹⁴⁵ Lasinio, ed., 1905, p. 445 [1259 July 27]. The document in question describes Manfred as ‘principis sive regis Sicilie, et spetiali amico comunis et populi Florentie’.

¹⁴⁶ Florentine merchants were receiving safe-conduct to trade in southern Italy from the Angevin king Charles I from as early as the summer of 1265, which is to say even before Charles had decisively displaced the heirs of Frederick II in the Italian south. For the earliest example of safe-conduct privileges accorded to Florentine merchant-bankers in southern Italy, dated from Rome, see Terlizzi, ed., 1950, no. 4, 1265 August 5, pp. 3-4. On Florentine trade in southern Italy more in general, see again Abulafia, 1981; Yver, 1902. Unfortunately, the full range of Florentine merchant-banking activity in the Italian south after 1265 will remain forever obscured owing to the loss of a substantial amount of Angevin and Aragonese documentation in 1943. Yver in particular was drawing on documentation in the State Archives of Naples that is in large measure no longer extant.

¹⁴⁷ Terlizzi, ed., 1950, no. 26, 1268 February 10, p. 18.

duct in Apulia at Bari.¹⁴⁸ Simple guarantees of safe passage soon evolved into more conspicuous concessions, namely privileged access to commodities, and especially grain. In order to maintain access to the sea through the port of Pisa, and thus the ability to exploit their privileged trading status in the Italian south, the Florentines negotiated a treaty with Pisa in which they promised to intervene on behalf of the Pisans, whenever necessary, with both the pope and the Angevin king.¹⁴⁹ By the last quarter of the thirteenth century, Florence was importing large quantities of grain from Sicily through Pisa.¹⁵⁰ The Florentines also maintained

¹⁴⁸ For evidence of a safe-conduct rights granted by the Angevin king to Florentine merchants at Bari in Apulia, see Terlizzi, ed., 1950, no. 99, 1269 May 22, pp. 49-50. Two days later, the king prohibited any new and unjust exactions from Florentines. See Terlizzi, ed., 1950, no. 100, 1269 May 24, p. 50. Earlier in the same year, Charles I had revoked an order that had temporarily prohibited exports from the ports of the 'Terre Laboris' and of Abruzzo without special written permission. Merchants in good standing were now able export goods to destinations within the *Regnum*, to Byzantium, or, notably, to Pisa. See Terlizzi, ed., 1950, no. 95, 1269 April 5, pp. 47-48.

¹⁴⁹ Terlizzi, ed., 1950, no. 198, 1270 May 2, pp. 108-115, esp. 113-114: 'Item dictus syndicus Comunis Florentie, sindicatus nomine pro ipso Comuni, convenit et promisit dictis sindicis Comuni Pisani, pro ipso Comuni recipientibus: quod dictum Comune Florentie, ad requisitionem Pisani Comunis vel sui certi nuntii, suas partes interponet per suos ambaxatores et solempnes nuntios apud dominium Papam, quod predicta pax et concordia hinc inde contracta ratificetur per ipsum dominum Papam; et quod etiam suas partes interponet per suos ambaxatores et solempnes nuntios apud predictum dominium Regem Sicilie, quod ipse Rex bona fide et legaliter assistet Comuni Pisano in ipsa ratificatione, et absolutione sententiarum excommunications et interdictorum et processorum latorum contra Pisanos per summum Pontificem et eius nuntios obtinendo; et suum favorem et auxilium impertietur, prout ordinatum fuit inter procuratores et nuntios dicti domini Regis, vice et nomine sui, ex parte una, et syndicos Pisani Comunis pro ipso Comuni ex altera'. See also Davidsohn, ed., 1896-1908, 3, no. 70, s.d., p. 24. The treaty also included a clause in which the Pisans granted Florentine citizens and their merchandise free passage through the territory of Pisa and an exemption from tariffs on most goods conveyed by land or sea in Pisan territory, though the treaty made no provision for the free movement of grain or salt transported by Florentines. The Pisans probably excluded grain and salt from the provision not so much to prevent the Florentines from conveying these commodities through the port of Pisa but to enable the Pisans to levy tariffs and to make it easier for them to impose grain embargoes during periods of staple food shortage. The Florentines likewise granted Pisan citizens and their merchandise free passage through the territory of Florence, though grain was again excluded, along with olive oil. Florence also granted the Pisans an exemption from all tariffs, specifically mentioning wood, while Pisa reserved the right to impose tariffs on Florentines travelling through Pisan territory on the river Arno.

¹⁵⁰ In August 1276, the Angevin king Charles I notified his officials in Sicily that he had granted a group of Florentine merchants rights to export from the island eight hundred *salme* of grain to Florence, by way of Pisa, for the use and sustenance only of the Florentines. In exchange, the Florentine merchants were obliged to consign to the royal curia thirty *once* of gold for each one hundred *salme* of grain, which is to say a total of 240 *once* of gold. They had already rendered payment on half of this sum, and they were expected to consign the remaining half upon receipt of the grain. See Terlizzi, ed., 1950, no. 733, 1276 August 2, pp. 388-389. More than a month later, under identical conditions, two other Florentine merchants were granted license to export three hundred *salme* of grain from Sicily, and another Florentine merchant was granted export rights on six hundred *salme* of Sicilian grain, also under identical conditions. See again Terlizzi, ed., 1950,

their privileged access to surplus grain from Apulia even after the spring of 1282 when the outbreak of the war of the Sicilian Vespers disrupted Florentine trade with Sicily.¹⁵¹

Substantial grain imports from Apulia in particular are attested at Florence in the early fourteenth century, and Florentine merchant-bankers were active in the grain trade in Apulia throughout the first half of the century. These imports were no doubt intended to supplement local cereal production in the Florentine countryside and to offset occasional harvest shortfalls, but it is very likely that they were also designed to meet a growing demand for southern grains in northern Italian markets even under normal conditions.¹⁵² Importations of at least 26,000 *modia*

no. 737, 1276 September 21, pp. 402-403; no. 738, 1276 September 21, p. 404; no. 739, 1276 September 21, pp. 404-405. Florentine imports of Sicilian grain, rather than simply export rights, are attested from 1271. Florentine grain imports from Provence, which was also governed by Charles, are documented from the same year. See Davidsohn, 1977, 3, pp. 104-105; Davidsohn, ed., 1896-1908, 3, no. 73, 1271 July 13, p. 25. On the grain market in Sicily from the advent of the Angevin regime to the Sicilian Vespers, see De Bouïard, 1938.

¹⁵¹ By the early fourteenth century, according to Jones, surplus grain production in Apulia typically amounted to about 250,000 hectolitres per year, which is to say slightly more than 42,750 Florentine *modia*, or enough to satisfy the staple food requirements of about 85,000 people. See Jones, 1966b, pp. 384-385. See also Pinto, p. 79, n. 28. For evidence of export rights on grain from Apulia granted to Florentine merchants in the later thirteenth century, see Davidsohn, ed., 1896-1908, 3, no. 143, 1290 February 16, p. 40; no. 198, 1294 April 28, p. 48; no. 201, 1294 May 7, p. 49; no. 218, 1294 December 22, p. 51; no. 247, 1296 March 26, p. 57; no. 258, 1296 October 6, p. 59; no. 309, 1298 December 19, p. 69. The threat of disruptions to trade in grain from Apulia on the maritime route to Pisa after 1282 probably resulted in the increased use of Adriatic ports to receive shipments of Pugliese grain destined for Florence, although transit by sea from Apulia to Pisa appears to have been common before the war of the Sicilian Vespers. On the arrival of Pugliese grain in Florence through Romagna by way of the Adriatic port at the Lido di Ravenna, see Davidsohn, 1977, 4, p. 1187. From 1282, virtually all of the markets that had depended upon Sicilian grain to some extent prior to the Sicilian Vespers were affected by the outbreak of war. Angevin hostility to the newly installed Aragonese rulers rendered direct trade between Florence and Sicily especially problematic. Exports to Florence from Aragonese Sicily were actually prohibited, and even though the three largest Florentine merchant-banking companies were exempted from the prohibitions, they probably experienced substantial difficulties trading in what had certainly become an appreciably more hostile environment. By the early fourteenth century, Florence was again importing grain from Sicily. On the impact of the Sicilian Vespers on the Sicilian grain trade, see S. R. Epstein, 1992, pp. 270-272. On the Sicilian Vespers more in general, see Runciman, 1958. On imports of Sicilian grain in Florence at the beginning of the fourteenth century, see Villani, bk. 8, chap. 68.

¹⁵² It is important to recognise that certain grains cultivated in southern Italy constituted luxury food products for consumers in northern Italy. Hard-grain durum wheat (*triticum durum*), which appears as *grano ciciliano* in Florentine sources, was cultivated in the countryside of Florence and in north-central Italy more in general, though only to a limited extent and with limited results. An eighteenth century Tuscan agronomist, who also discussed the effects of meteors on the cultivation of durum wheat, wrote that the best results obtained only in the first harvest, after which the quality of the grain deteriorated, becoming closer in character to that of a common variety known as *grano comunale*, which is to say ordinary bread wheat, by the third harvest. See Targioni Toz-

of grain from Sicily and Apulia are attested at Florence in 1303, which probably amounted to nearly fifteen per cent of the total grain requirement in the territory as a whole for an entire year.¹⁵³ These imports may have been necessitated partly by a poor harvest in that year, but the quantities of grain exported from producing areas by Florentine merchant-banking companies frequently exceeded local requirements in Florence in the early of fourteenth century.

In 1309, the three largest merchant-banking companies in Florence collectively exported from Apulia 118,700 *salme* of grain, or about 1.42 million Florentine *staria*, probably enough to feed the entire urban population of Florence for more than a year. Just two years later, in 1311, the same three companies exported an astounding 220,000 *salme* of grain, or 2.64 million Florentine *staria*, enough to feed the entire urban population of Florence for two years. These were years of food shortage in Florence, but 1320 was not, and the three largest merchant-banking companies exported 140,000 *salme* of grain from Apulia in that

zetti, 1765, pp. 25-26; cf. Pinto, 1978, pp. 31-32. Presumably, the deterioration of the grain was caused by the adulteration of the seed with the seed from local varieties of grain, since durum wheat produces insufficient quantities of seed for subsequent planting when cultivated in Tuscany. For references to durum wheat cultivated in the countryside of Florence in the early fourteenth century, see Pinto, 1978, p. 31, n. 9. Durum wheat is well adapted to neither severe winter weather nor excessive water, and the Tuscan climate is capable of producing brief periods of sub-freezing temperatures in winter as well as high concentrations of rainfall particularly in spring and autumn. Durum wheat favours rather a warm and dry Mediterranean climate. Durum wheat may have been cultivated in Mediterranean Europe in antiquity, but Watson argued that classical historians and archaeologists have often interpreted evidence for emmer as referring to durum, and he has further argued that durum diffused into the Mediterranean from the Islamic world during the middle ages. The argument put forward by Watson leaves room for further debate, but it has not yet been strongly challenged. It is perhaps worth noting that the sort of food items for which durum wheat is commonly used, such as cous-cous and pasta, are not attested until the thirteenth century. On durum wheat in the Mediterranean in antiquity, see Jasny, 1944, pp. 17-28, 95-96; Moritz, 1958, xx-xxvi; Rickman, 1980, pp. 6-8. On the diffusion of durum wheat in medieval Europe, see Watson, 1983, pp. 20-23, and p. 157; 1981b, pp. 67, 79. See also below, Appendix 3.

¹⁵³ According to Villani, Genoese merchants brought to Florence 26,000 *modia* of grain from Sicily and Apulia at the request of the commune. Excessive rains in the previous year and a severe winter had caused widespread crop failure and the ruination of reserves, and grain prices were soaring as a result. Nevertheless, 26,000 *modia* probably would have been sufficient to satisfy the staple food requirements of about 52,000 people for one year, which is to say about half of the urban population of Florence or about fifteen per cent of the total population in the territory, calculated on an average requirement of one *starium* per person per month. On famine and food imports in 1303, see Villani, bk. 8, chap. 68; Stefani, rub. 240. On the freezing of the river Arno in January of the same year, see Giovanni di Lemmo, p. 162. De la Roncière dated these imports to 1302, based on the same evidence in the chronicles of Villani and Stefani. See De la Roncière, 1976, 4, pp. 153-156, esp. 153. Florence also imported grain from Apulia in 1304, though Compagni noted that grain imports in that year elicited complaints because the grain was adulterated. See Compagni, bk. 3, chap. 2.

year, or 1.68 million Florentine *staria*.¹⁵⁴ Regardless of conditions, however, these quantities were far in excess of the grain requirements in Florence itself.¹⁵⁵ Florentine merchant-banking companies were purchasing southern grain not only for the provisioning of Florence but also for resale in other Mediterranean cities and particularly on the lucrative grain markets of north-central Italy and Mediterranean Europe.¹⁵⁶

¹⁵⁴ On these and other exportations of the Peruzzi, the Bardi, and the Acciaiuoli companies from Apulia in the early fourteenth century, see Yver, 1901, p. 123, n. 2. See also De la Roncière, 1976, 4, pp. 139-140, n. 11; 4, pp. 153-156, esp. 153. The exportations of grain from Apulia in 1311 coincided with a severe shortage of staple foodstuffs in Florence from December 1310 to May 1311, and the earlier exportations of Pugliese grain in 1309 were perhaps accompanied by somewhat milder disruptions to the food supply in Tuscany. For evidence of the food supply crisis of 1310 and 1311, see Villani, bk. 9, chap. 12; Stefani, rub. 281. For evidence of high prices on the grain market at San Miniato al Tedesco in 1309, see Giovanni di Lemmo, p. 174. The relationship between the Pugliese *salma* and the Florentine *starium* was twelve to one, following the conversion given by Pegolotti around the year 1340 for 'staia rase', the level measure that was then regarded as the official measure of Florence. Pegolotti used the measure of Manfredonia, which was somewhat inferior to the measure of Barletta. According to Villani, the official measure of Florence was changed in 1343 from the *starium* 'al raso' to the *starium* 'al colmo', which was about 1.5 to 2 *libre* heavier than the *starium* 'al raso'. The *starium* 'al colmo' was being used in Florence already in 1341, however, and Pegolotti found it necessary to include both measures in his conversion for the Pugliese *salma*, noting that 100 *salme* of Manfredonia were equivalent to only 1050 *staria* 'al colmo' as opposed to 1200 *staria* 'al raso'. See Evans, ed., 1936, pp. 166-167; Villani, bk. 12, chap. 13. On the use of the *starium* 'al colmo' in Florence already in 1341, see Pinto, 1978, p. 15, n. 45, citing ASF, *Conventi soppressi* 108, San Domenico nel Maglio, 125, fol. 308r.

¹⁵⁵ As already suggested above, Chapter 4.1.2, net imports of food in Florence probably amounted to about ten per cent of aggregate food production per year under normal conditions. Even during periods of severe famine, food imports probably constituted less than twenty per cent of aggregate food production. At the height of demographic expansion at the end of the first quarter of the fourteenth century, the staple food imports in the territory of Florence probably amounted to about 504,000 *staria* per year under normal conditions and no more than one million *staria* per year under severe famine conditions.

¹⁵⁶ As already noted above, the Scali merchant-banking company of Florence was supplying large quantities of grain to Ragusa by 1303, and the largest Florentine merchant-banking companies were all active at Ragusa in the early fourteenth century, mostly in connection with the importations of grain from southern Italy. See Krekic, 1961, no. 73, 1 October 1303, p. 178. Members of the Scali company were also active in the early fourteenth century at Barletta, one of the principal ports of embarkation for grains exported from Apulia. Merchants of Barletta figure among the creditors of the Scali company in records concerning their bankruptcy. See Yver, 1902, pp. 311-312; Borsari, 1994, p. 71. On the port at Barletta as a major centre for the exportation of grain, see Yver, 1902, pp. 122-126, 166-167. On the activities of the largest Florentine merchant-banking companies at Ragusa in the early fourteenth century, see Krekic, 1977; 1979. At least one merchant of the Bardi company was granted license to sell grain on the Pisan market in the early fourteenth century, for example, and they were probably joined by the Acciaiuoli and the Peruzzi companies, both of which had merged some of their operations with those of the Bardi company in 1316. According to Hunt, the three major merchant-banking companies of Florence controlled much of the export of grain from the Angevin kingdom in southern Italy, and it was on the exploitation of this trade that these companies concentrated their activities. See Rossi-Sabatini,

In addition to wheat, the Florentines also obtained wool and livestock from southern Italy. Florentine merchants were purchasing wool in Abruzzo certainly by the early fourteenth century, and perhaps from as early as 1271, transporting it by land to Florence from l'Aquila through Rieti, Spoleto, Perugia, and Arezzo.¹⁵⁷ From at least as early as 1295, Florentine traders were also sending livestock to Florence from l'Aquila.¹⁵⁸ One Florentine merchant sent 50,000 goats and sheep from Apulia and other nearby areas to Florence between 1330 and 1336.¹⁵⁹ Most of these animals were no doubt slaughtered for their meat, but some of the sheep imported from the south also may have been earmarked for the cultivation of wool in the Florentine countryside.¹⁶⁰

Florentine trade with the Italian south depended largely upon access to the port of Pisa, and disruptions to Florentine access to the port were potentially severe. During the 1280s, for example, Florentine extra-regional trade throughout the Mediterranean suffered considerably under the combined weight of the war of

1938, p. 55; Yver, 1902, pp. 308-309; Hunt, 1994, pp. 3-4, 42-56, 243. Florentines were even importing grain to Montpellier in the early fourteenth century. See Reyerson, 1995, XII, pp. 150-151. By the later thirteenth century, Florentine merchant-bankers, including members of the Scali company, were also supplying Bologna with importations of various commodities. For evidence of license granted to a Florentine merchant to import salt into Bologna from the Adriatic port of Cervia, see Arias, 1901a, app., no. 17, 1290 February 10, pp. 424-427. In 1304, merchants of the Scali company were contracted by the commune of Bologna deliver 20,000 Bolognese *corbe* of grain to Bologna, which is to say about 64,400 Florentine *staria*, or enough grain to satisfy the staple food requirements of more than 5,000 people for an entire year. See Arias, 1901a, app., no. 52, 1304 May 25, pp. 507-509. On the relationship between the Florentine *staria* and the Bolognese *corba*, see Zupko, 1981, pp. 99-100, 275.

¹⁵⁷ See again Hoshino, 1986, pp. 67-69; Gasparinetti, 1964-1966.

¹⁵⁸ Davidsohn, ed., 1896-1908, 3, no. 237, 1295 September 23, p. 55.

¹⁵⁹ De la Roncière, 1976, 2, pp. 567-568; 4, p. 142-145, nn. 33-34, 44. By 1370, the importation of livestock from Apulia to Florence evidently had become a well established practice, but the imports were susceptible to disruption by political disturbances. See Stefani, rub. 723: 'Ancora fu carestia di carne, perocchè quell'anno era stata in Lombardia la guerra e in Toscana e in molte luogora, per la quale cagione non era venuto a Firenze bestiame di Apulia, donde ne solea venire assai'. See also De la Roncière, 1976, 3, pp. 1135-1136; 4, p. 412, n. 40.

¹⁶⁰ Working from a sample of fourteenth century records in the evidence for the *Mercanzia* of Florence, De la Roncière estimated that goats and sheep accounted for perhaps as much as 97.2 per cent of all livestock imports in Florence. Pork accounted for only 1.8 per cent of Florentine livestock imports, and beef accounted for only 0.6 per cent. The importation of livestock in Florence appears to have been undertaken largely by merchants working on behalf of Florentine butchers and tavern-keepers, which suggests that the Florentines used the imported sheep primarily as food products. Still, the sheep were no doubt sheared before they were taken to the slaughterhouse, and the wool sold to textile artisans. After the slaughter, their hides were used to prepare parchment. On the predominance of sheep and goats among livestock imports at Florence, see De la Roncière, 1976, 2, p. 567.

the Sicilian Vespers and an escalating conflict between Pisa and Genoa. In 1284, with maritime traffic in southern Italian waters already imperiled by hostilities between the Angevins and the Aragonese, the Genoese annihilated the Pisan fleet in a naval engagement at Meloria, a small island off the coast from Livorno. Continued engagements between the two powers nevertheless also threatened maritime traffic in the northern Tyrrhenian Sea.¹⁶¹ The consequences of these disruptions were exacerbated by the deteriorating relations between Florence and Arezzo, which were marked by the expulsion of the Guelfs from Arezzo in 1287, and which obstructed Florentine overland trade with the cities and towns of Umbria, the Marche, Lazio, and Abruzzo.¹⁶² The disruptions probably also intensified what may have been relatively minor perturbations in the food supply of Florence and other Tuscan towns, resulting in food supply crises in Florence at 1282, 1284, 1286, and 1288.¹⁶³

It is not within the scope of this work to consider in detail the disruptions to Florentine trade caused by the Sicilian Vespers, Meloria, and the breakdown in relations between Florence and Arezzo in the 1280s. Suffice it to say that the Florentines sought to preserve through intense diplomacy both access to the sea through the port of Pisa after Meloria and transit privileges through the territory of Arezzo after the expulsion of the Guelfs from the city. Ultimately, however, Florence was forced to enter into a series of costly military engagements with its Guelf allies against Pisa and Arezzo in order to restore its lines of trade.¹⁶⁴ In consid-

¹⁶¹ On the conflict between the Pisans and the Genoese, see Villani, bk. 7, chaps. 90-92.

¹⁶² On the expulsion of the Guelfs from Arezzo in 1287, see Villani, bk. 7, chap. 115.

¹⁶³ The disruptions to Florentine trade also may have been exacerbated by poor grain harvests in Apulia in the early 1280s. See Licinio, 1998, pp. 222, 224. Despite the theoretical availability of staple food imports from regions of surplus production, in other words, political conflicts disrupted the normal lines of distribution, impeded access to imported foodstuffs, and caused price volatility on the domestic market that effectively altered the entitlement structure within the market. On the political aspects of famine, see Arnold, 1988, pp. 43-46, 97-99; Devereux, 1993, pp. 66-85; Sen, 1981. On the famine of 1282, see Villani, bk. 7, chap. 88; Stefani, rub. 159; Malispini, chap. 236; Simone della Tosa, p. 212. On the famine of 1284, see Villani, bk. 7, chap. 97; Stefani, rub. 161; Simone della Tosa, p. 212. On a fire in grain market of Florence and the construction of a new grain market in 1284, respectively, see Malispini, chap. 244; Villani, bk. 7, chap. 99. On the famine of 1286, see Villani, bk. 7, chap. 111; Stefani, rub. 168; Simone della Tosa, pp. 215-216. On heavy rains and severe flooding in Florence December 1288, see Villani, bk. 7, chap. 126; Stefani, rub. 177; Simone della Tosa, p. 217. See also Pinto, 1978, pp. 81-82.

¹⁶⁴ Initially, Florentine diplomatic efforts to maintain open lines of trade through the port of Pisa were focused on supporting an aristocratic Guelf regime that came to power at Pisa immediately following the Meloria debacle in 1284. According to Cristiani, Pisa increasingly, though intermittently, adopted pro-Guelf initiatives after Meloria in an effort to facilitate trading relations with other Guelf city-states. See Cristiani, 1994. The Guelf government was driven out of Pisa in

eration of the high cost of overland carriage in such bulky commodities as grain, Florentine commercial relations with the deeper Italian south especially were contingent upon access to the sea, and the port of Pisa provided the most convenient outlet.¹⁶⁵

7.4. Conclusion

Florentine supra-regional trade developed along three main trajectories. In the north, Florence developed commercial relations with Bologna by the beginning of the thirteenth century and maintained a mostly friendly trading relationship with Bologna throughout the century. Florence also established trading relations with Faenza by 1204 and with Imola by 1238. Trans-Appennine trade between Florence and the cities and towns of Romagna afforded the Florentines access to important markets in Romagna for manufacturing exports, to surplus grain imports from Romagna, and to markets and Adriatic ports not only in Romagna but also in the Veneto and in Lombardy. Towards the southeast, perhaps by the beginning of the thirteenth century, Florentine traders gained access to the valleys of the rivers Chiana and Tiber, and to central Italian markets, through the conduit of Arezzo.

1288, however, and war ensued between Florence and its Guelf allies on the one hand, mainly Genoa and Lucca, and Pisa on the other. On the wars and their antecedents, see Villani, bk. 7, chaps. 98, 121-123, 137, 141, 148, 154; bk 8, chap. 2. On the wars between Florence and Arezzo in 1288 and 1289, see Villani, bk. 7, chap. 120, 124, 127, 131-132, 136, 138, 140. On the politically tense situation in Tuscany from 1285 to 1292, and on the Florentine position in particular, see Ottokar, 1974, pp. 129-198. On the measures undertaken by the Florentines in the early fourteenth century to maintain access to the sea through the port of Pisa, see Astorri, 1998, pp.

¹⁶⁵ Overland trade between Tuscany and southern Italy was sometimes used as an alternative to maritime trade. For evidence of travel between by mule from Lucca to Naples and then Barletta in 1246, see Petralia, 1988, p. 294, citing AALucca, *Diplomatico*, AL, no. 92, 1246 September 11. The cost of transport by sea was nevertheless much lower than the cost of land transport. Morley estimated the ratio between the varying costs of travel by sea, by river, and by land in antiquity to have been about 25:5:1, respectively. See Morley, 1996, pp. 63-68. Duncan-Jones estimated the ratio between the costs of travel by land and sea to have been as high as 34-42:1, but his estimate of the ratio between river transport and land transport was similar to that of Morley. See Duncan-Jones, 1982, p. 368. For medieval England between 1296 and 1352, Masschaele has recently suggested a cost ratio of 8:4:1 between transport of grain by land, river, and sea, respectively. See Masschaele, 1993; 1997, pp. 207-210. Other research has yielded somewhat larger differentials between the relative costs of land and water transport in medieval England. One study has demonstrated that carriage costs for wine in the west Midlands in the early fourteenth century were about six times greater than they were for transport on the river Severn. See Dyer, 1989, p. 309. This figure corresponds with the upper margin of costs for land transport observed by Masschaele, but another study has suggested that carriage costs for grain in the region of London around the year 1300 may have been anywhere from twelve to eighteen times greater than the cost of transport by water. See Campbell, Galloway, Keene, and Murphy, 1993, p. 60.

The Florentines used the river Arno to transport goods between Florence and Pisa, and they were using the port of Pisa as their primary outlet to the sea already before 1200. After the advent of the Angevins in Sicily and southern Italy in 1265, the Florentines used the port of Pisa to conduct a lucrative trade between Tuscany and the Italian south whereby manufactured goods were despatched from Florence and, in effect, exchanged for staple food imports.

Florence appears to have been precocious in the development of extensive supra-regional trading relations, though further research on the evolution of supra-regional trade elsewhere in Tuscany will be necessary to bear out the claim. The Florentines developed trading relations in distant markets to compensate for their inability to depend on much of their own hinterland for vital resources. The more powerful lords in the Florentine countryside were in direct competition with Florence for resources, and they sought to protect their monopsony privileges in their own subject territories. Most other Tuscan cities depended heavily on their own countrysides for vital resources, and they also resisted the efforts of Florentine traders to penetrate their markets. This forced the Florentines to seek entry in more distant markets outside of Tuscany through areas within the Florentine countryside that were dominated by rival seigniorial lords and through the territories of rival communal governments in Tuscany. The development of supra-regional trading relations by Florence along three main trajectories encouraged the rural lords who controlled the areas in the Florentine countryside along these trajectories to improve their own networks of distribution and exchange. The gradual integration of the various seigniorial market networks into a larger network centred on the city itself permitted the effective coordination of local, regional, and supra-regional trade.

8. Conclusions

From the later twelfth century and at least until the end of the first quarter of the fourteenth century, the city of Florence underwent a period of extraordinary demographic and economic growth. At the end of the twelfth century, Florence was overshadowed by Pisa, Lucca, and Siena in terms of both the size of its urban population and the vitality of its urban economy. By the early fourteenth century, however, Florence very clearly had become the dominant city in Tuscany and one of the largest and most economically dynamic cities in all of western Europe. The limited amount of evidence available for consideration of demographic growth at Florence before the Black Death suggests that the urban population of the city around the year 1338, and probably by about 1325, was perhaps as great as 120,000. In the countryside, the population had grown to perhaps 300,000, giving a density of population before the middle of the fourteenth century that was not achieved again in the Florentine countryside until well after the beginning of the nineteenth century.

Much of the population growth in the city of Florence depended on the immigration of surplus labour from the countryside, but urban demographic expansion at Florence also benefited from the migration of surplus labour from other parts of Tuscany. The urban population of Florence continued to grow in the second half of the thirteenth century after the populations of other Tuscan cities had stagnated. Some of the blossoming satellite towns of Florence in the peripheral regions of the Florentine countryside, such as Borgo San Lorenzo and Castelfiorentino, probably also attracted migrants from outside the territory of Florence. All of this suggests that Florence was already beginning to emerge as the dominant urban centre in Tuscany by about the middle of the thirteenth century.

Population growth at Florence and the increasing level of urbanisation in the territory as a whole from the later twelfth century until the early fourteenth century placed considerable demands upon the production of foodstuffs in the countryside. At the same time, urban demographic growth and the emergence of a large urban market in particular provided strong incentives for the intensification of agriculture. On the basis of the figures for population presented above, and taking into account the dimensions of the territory of Florence and the changing

relationship between the size of the population and amount of land in the territory, agricultural productivity increased significantly over the course of the thirteenth century. The extension of arable, technological change, specialisation, changes in estate management, the expansion of credit, and perhaps above all jurisdictional integration were among the more important developments that helped to stimulate improvements in agricultural productivity.

Much of the growth in agricultural productivity in the Florentine countryside doubtless stemmed from increased urban demand for foodstuffs that accompanied the expansion of urban manufacturing. The realignment of the labour force in the territory of Florence between the agrarian and non-agrarian sectors also engendered productivity improvements in agriculture, as surplus labour from the countryside immigrated to the city, where the demand for labour probably exceeded supply. The food supply requirements of Florence nevertheless were only partially satisfied with domestically cultivated staple foodstuffs. To obtain the balance of its requirements, Florence traded manufactured products, mainly woollen textiles, for staple foodstuffs, primarily grain. The earliest evidence for imported foodstuffs in Florence comes from the later twelfth century, but documented food imports in Florence are rare before the second half of the thirteenth century. By the end of the thirteenth century, however, Florence was importing foodstuffs regularly, and this ability to procure regular importations of foodstuffs depended upon the development of an export industry. The evidence suggests that the woollen textiles industry at Florence was already well developed by about the middle of the thirteenth century, and Florentine external trading relations are documented from the later twelfth century. Florentine textile products are attested on the market at Venice in 1225, at Macerata in 1245, at Lucca in 1246, and at Ragusa from 1253. By the end of the third quarter of the thirteenth century, Florentine textile merchants constituted the largest and most conspicuous group of foreign cloth merchants on the textile market at Bologna. Chronicle evidence from the early fourteenth century suggests, moreover, that the woollen textiles industry in the city provided employment for a large proportion of the urban population.

The expansion of Florentine supra-regional trade can be dated from before the beginning of the thirteenth century. Much of the early evidence for Florentine supra-regional trade survives in the form of reciprocal trade agreements between Florence and other Italian city-states or rural lords. These treaties, together with chronicles and other varieties of documentary evidence, suggest that Florentine

commercial relations in Italy expanded along three main trajectories: north through the Mugello and across the Apennine Mountains to the cities of Romagna and beyond; towards the southeast following the upper valley of the river Arno to Arezzo and then continuing east and southeast into Umbria Lazio, the Marche, and Abruzzo; and west along the lower Arno valley to Pisa, which in turn afforded access by sea to Genoa, Sicily and southern Italy. The more powerful lords in the Florentine countryside exploited the development of these lines of trade by establishing markets in the hinterland along their respective trajectories.

Florentine trade benefited immensely from the fact that Florence possessed the best access of all Tuscan cities to Romagna, and that it enjoyed consistently friendly relations with the cities of Romagna. Florentine fortunes were also assisted by the 'guelfizzazione' of central and southern Italy. The salient point that emerges from a consideration of the available evidence for Florentine trade, however, is that Florence persistently endeavoured to establish and to maintain open lines of trade. In the early thirteenth century, when its bargaining position was probably still relatively weak, the commune accepted evidently unfavourable terms of trade to gain access to certain external markets. The commune paid foreign city-states to withdraw commercial reprisals against its own citizens, and it was cautious in granting reprisals against foreigners, sometimes even providing foreigners with security from reprisals. The cautious approach adopted by the commune towards the granting of commercial reprisals also extended to other aspects of Florentine foreign relations. The commune employed military means to accomplish its objectives, to be sure, but only after exhausting all possibilities of a diplomatic resolution, and Florence appears to have been less eager to engage foreign powers militarily than its Tuscan neighbours. Florence behaved in such a manner because it was compelled to do so. Florence needed food imports to feed its population, and it needed a healthy export trade to be able to obtain the foodstuffs it required. Open lines of commerce were thus essential.

Florence was unique in Tuscany in several respects. In the first place, the territory of Florence included the dioceses of both Florence and Fiesole, and it constituted the largest territory in northern Tuscany. The diocese of Fiesole was divided into two parts, with the 'island' of Fiesole consisting of Fiesole itself and the countryside for the most part extending north and east from the town, and it was surrounded by the diocese of Florence. The rest of the diocese of Fiesole extended from the northern Casentino towards the southwest, across the Pratomagno, the Arno valley, and the Chianti, and it was bordered by the diocese of

Florence on its northwestern flank, and by the dioceses of Arezzo and Siena on its southeastern flank. This part of the diocese of Fiesole was separated from the 'island' of Fiesole by the diocese of Florence. The sheer size of the territory of Florence and ecclesiastical division within the territory rendered it difficult for Florence to exercise control in the territory. These factors also enabled the more powerful lords to extend their influence in peripheral regions of the territory.

Seigniorial power in the territory of Florence was already considerable in the eleventh century, but it expanded enormously in the early twelfth century. Count Guido Guerra inherited a substantial proportion of the estate of the countess Matilda when she died in 1115, and the Alberti counts inherited numerous properties and rights when the last of the Cadolingi counts died in 1113. The Ubaldini lords had also begun to consolidate a formidable presence in the Mugello north of Florence by the middle of the twelfth century. The Guidi counts possessed enclaves throughout the territory of Florence, but their power was concentrated towards the periphery of the territory around Poggibonsi near the frontier between Florence and Siena, around Montevarchi in the upper valley of the river Arno, and around Empoli in the lower Arno valley. The Guidi also controlled extensive properties in the eastern Mugello, in the Sieve valley around Dicomano, and in the mountains above Dicomano along the roads leading to Faenza and Forlì. The Alberti counts were dominant southwest of Florence in the upper Elsa and Pesa river valleys, and they controlled either escarpment of the Monti della Calvana to the north of the city. The Ubaldini occupied the central Mugello and controlled either entirely or in part the major trans-Appennine passes to Bologna, Imola, and Faenza. After suffering a debilitating military defeat at the hands of Florence in 1125, the bishops of Fiesole began to seek to disentangle themselves from Florentine control by transferring the seat of the see of Fiesole to the upper valley of the river Arno in the other part of the diocese.

Whereas lords in the countryside of the larger Tuscan cities tended to exercise power largely through urban institutions, the more powerful lords in the Florentine countryside were in direct competition with the city. The strength of seigniorial power in the Florentine countryside and the orientation of seigniorial interests around market centres in strategic locations towards the periphery of the territory made it difficult for Florence to exercise control in many parts of its own vast territory. This obliged Florentine merchants to pay seigniorial tolls and market dues when engaged in trade either in or through parts of the countryside under seigniorial control, and it exposed traders to greater risk and uncertainty, rendering

the costs of trade in parts of the territory prohibitive and discouraging investment. Florence thus was unable to exploit effectively the resources available in its own hinterland, which constrained urban demographic and economic growth in the twelfth century.

Jurisdictional fragmentation in the territory and the increased costs of trade that it entailed compelled Florence to develop trading relations in markets beyond the frontiers of their own territory to gain access to the resources necessary to sustain urban growth. Other Tuscan cities were not particularly well disposed to the notion of Florence siphoning vital resources from their countrysides, however, and they resisted Florentine attempts to enter their protected markets. Although merchants from other Tuscan cities certainly traded in markets outside their own territories, most Tuscan cities had not developed especially strong links with external markets. Pisa was the obvious exception, mainly because its own countryside was comparatively small and poor in resources, and access to the Tyrrhenian Sea enabled the Pisans to rely on maritime trade for its supply of vital resources. Other Tuscan cities tended to enjoy strong relations with their respective countrysides, and they depended very heavily on their own countrysides for the supply of vital resources. As a consequence, the communal governments of most other Tuscan cities were extremely sensitive to outside intrusion in their markets, and Florentine efforts to develop commercial relations within Tuscany thus met with only very limited success.

The Florentines therefore sought to develop trading relations in even more distant markets outside northern Tuscany across the Apennine Mountains in Romagna, to the south and southeast in the Tiber and the Chiana river valleys, and in Sicily and southern Italy through the port of Pisa. Access to these areas nevertheless traversed parts of the Florentine countryside that were under seigniorial control. To ensure favourable conditions for trade in external markets, it was therefore necessary for the Florentines to reach accommodations with the more powerful lords in the territory who controlled access to the trans-Apennine passages, the Tiber and Chiana valleys, and the lower Arno valley. The agreements afforded Florentine merchants and their goods a guarantee of security and exemptions from seigniorial tolls and market dues in parts of the countryside under seigniorial control. They also may have given Florentines a reasonable expectation that any commercial contracts concluded in seigniorial territory would be enforced.

Commercial relations between Florence and Pisa are thus attested for the first time in 1171, after the Florentines had concluded an agreement with the

Guidi counts in 1158 that probably afforded Florentine merchants safe passage through Guidi dominated territory around Empoli and an exemption from Guidi tolls and market dues. In the famine year of 1182, after another agreement with the Guidi in 1176, Florence received grain imports from both the Pisan Maremma, probably by way of Empoli, and Arezzo, probably through Guidi controlled territory around Montevarchi.¹ The movement of goods destined for Florence in the upper Arno valley also would have depended on favourable relations with Figline Valdarno, and it is noteworthy that the grain imports from Arezzo are attested only after the Florentines had blocked the attempt of the bishops of Fiesole to transfer the seat of their diocesan see to Figline. The earliest evidence for commercial relations between Florence and Bologna in 1203 is presaged by an agreement permitting Florentine traders safe passage through Ubaldini territory in the Mugello. The treaty negotiated between Florence and the Alberti counts in 1200 likewise made it possible for the Florentines to develop commercial relations with Volterra and San Gimignano in the early thirteenth century. It also enabled the bishops of Florence to exploit their existing possessions in the Elsa and Pesa valleys more easily, and it encouraged the bishops to invest substantially in the Elsa valley in the thirteenth century.

The degree to which guarantees of safe passage and exemptions from tolls and market dues through parts of the Florentine countryside that were under seigniorial control also afforded Florentine merchants access to vital resources in areas dominated by rural lords is unclear. Some of these areas nevertheless appear to have been among the most agriculturally productive lands in the territory. Control in the lower Arno valley around Empoli, for example, enabled the Guidi to control river traffic on the Arno while giving them dominion over some of the most fertile land in the Florentine countryside.² Seigniorial control in the Floren-

¹ As noted above, neither the 1158 nor the 1176 treaty between Florence and the Guidi counts survives. The 1158 treaty is attested in a chronicle report, and the 1176 treaty is attested in a court deposition dating from 1203, neither of which indicates that the respective treaties included guarantees of safe passage or exemptions from tolls and market dues. Presumably, however, both the 1158 treaty and the treaty of 1176 afforded Florentine merchants these benefits. On the agreements between Florence and the Guidi counts in the second half of the twelfth century, see above, Chapter 2.2.2.

² In 1260, the parish of Empoli was obliged to consign more grain than almost any other parish in the Florentine countryside for the provisioning of Montalcino during a Sienese siege. The list of parishes and their respective obligations for the provisioning of Montalcino omits parishes on the Sesto-Campi plain, but its coverage is otherwise complete. Among the parishes enumerated on the incomplete list, only San Pietro in Bossolo was required to make a larger consignment of grain than Empoli. See Paoli, ed., 1889, pp. 103-177.

tine countryside also limited the movement of labour towards the city, and it deprived the commune of revenue in the form of taxes and tributes. The promise of lower trading costs in the countryside, improved access to the resources within its own territory, and increased tax revenue provided incentives for Florence to attempt to remove seigniorial obstructions to urban control in the countryside.

By 1200, Florence had secured the submission of numerous rural lords to urban authority, whether by force or negotiated settlement. The Florentines had not yet subdued some of the more powerful lords in the countryside, but they had at least reached accommodations with them, typically after protracted and costly disputes. Some lords in peripheral areas of the countryside continued to resist Florentine encroachments, but most rural lords permitted the encroachment of urban authority because resistance had already proved so costly. Cooperation with Florence also yielded substantial dividends for lords from the sale of agricultural products and from exactions on Florentine trade. Like its seigniorial counterparts, Florence accepted cooperation rather than capitulation to avoid the high costs of continued conflict. Cooperation also gave Florentine traders greater security in seigniorial territory and improved access to seigniorial markets, which in turn reduced the costs of trade in and through seigniorial territory. Moreover, cooperation preserved the existing networks of distribution and exchange in the countryside. The persistence of seigniorial power in the countryside, even in its compromised form, nevertheless continued to deprive the commune of tax revenue, and it left the commune vulnerable to the vagaries of seigniorial disposition.

As urban expansion at Florence quickened in the early thirteenth century, the commune sought to erode even further seigniorial power in the countryside. Florence gradually increased its influence in the countryside, drawing most of the principal rural lords into the urban ambit and divesting them of much of their seigniorial power. In so doing, the city also inherited a fairly sophisticated trade infrastructure in the countryside, composed of several trading networks developed by rural lords mostly in the twelfth century. These networks were oriented around large rural towns situated towards the perimeter of Florentine territory, such as Empoli, Figline Valdarno, Montevarchi, and Poggibonsi. Over the course of the thirteenth century, as these market towns were decisively incorporated into the Florentine sphere of control, they developed into major secondary market towns in a broader network of distribution and exchange centred around the primary market at Florence itself.

The inheritance of a well developed trade infrastructure enabled Florence to integrate trade in the Florentine countryside with its regional and supra-regional trading relations. Economic expansion at Florence in the thirteenth century was driven increasingly by coordinated development in domestic trade between the city and its surrounding countryside on the one hand, and foreign trade at the regional and supra-regional levels on the other. By contrast, other Tuscan cities for the most part continued to rely upon their respective countrysides for the supply of vital resources, and their trading relations in external markets remained underdeveloped. The exception, once again, was the port city of Pisa, which depended more upon maritime trade with external markets for its supply of vital resources. In 1284, however, even Pisan naval power was irrevocably debilitated at Meloria, and the city languished. The coordinated development of local, regional, and supra-regional trade at Florence helps to explain why the Florentine economy outperformed the economies of other Tuscan cities and became the dominant city in Tuscany over the course of the thirteenth century.

Other Tuscan cities clearly expanded their regional and supra-regional commercial relations particularly after the beginning of the thirteenth century, but the development of regional and supra-regional trading networks by Lucca and Siena, for example, was neither as extensive as those of Florence nor as well coordinated with trade between the city and the surrounding countryside. Because of the central location of Florence in northern Tuscany, moreover, intra-regional trade in Tuscany and supra-regional trade beyond its frontiers tended to accentuate the dominant position of Florence in the region rather than to undermine it.

The hypothesis put forward that growth was later at Florence than at other Tuscan cities owing to the weakness of Florentine jurisdiction in the surrounding countryside and the inability of the city to depend on its own hinterland for vital resources clearly demands greater comparison with the situations at Pisa, Lucca, and Siena. The argument that the weak links between Florence and many parts of its hinterland encouraged the commune to establish extensive trading relations with more distant markets earlier than most other Tuscan cities likewise needs comparison. The point about the precocity of Florentine trade with distant markets, however, is not simply that Florentine merchants were engaged in trade outside of Tuscany before traders from Pisa, for example, because clearly they were not. What distinguished the supra-regional trade of Florence from that of other Tuscan cities is that Florence had cultivated relations that were both regular and intense in several

directions, which provided Florentine merchants with a wider variety of trading options than merchants from other Tuscan cities.

The establishment of supra-regional commercial relations nevertheless depended either upon the elimination of seigniorial control in strategic parts of the countryside or upon agreements with rural lords to permit Florentine traders safe passage through seigniorial territory and exemptions from seigniorial exactions. This lowered the costs of trade in and through areas controlled by rural lords. Having secured guarantees of security and toll exemptions, Florence duly established supra-regional trading relations along three main trajectories, which in turn strengthened the city in its relations with both rural lords in its own territory and other communal governments in Tuscany. The continued extension of urban control in the countryside engendered further reductions in costs arising from the specification and enforcement of contracts. The problem is that costs of this sort are for the most part invisible in the evidence for Florence in the twelfth and thirteenth centuries. Other trading costs arising from moral hazard and uncertainty are likewise virtually impossible to document.

The trading costs incurred by Florentine merchants that are perhaps most visible in the evidence concerns tolls and tariffs. Seigniorial exactions of this sort are often attested in imperial charters that granted rural lords the right to exact tolls, mooring fees, and market dues, but it is often impossible to determine from the sources the precise locations at which such charges were levied. These kinds of costs are also documented in submissions of rural lords to urban authority or in alienations of tolling rights to the communal government by rural lords. These records sometimes make it possible to determine roughly where the tolls were levied, but they rarely indicate how heavily these charges weighed on commercial exchange. It nevertheless would be useful to assemble what evidence there is for tolls in the Florentine countryside and even throughout Tuscany in the twelfth and thirteenth centuries. This would at least provide an indication of the constraints that Florentine traders faced both in exploiting the vital resources in the territory of Florence and in establishing commercial relations with markets beyond the confines of the territory.

Trading costs are also visible in the various systems of weights and measures that existed in the territory of Florence in the twelfth and thirteenth centuries, which suggests that Florentine traders incurred high measurement costs. Weights and measures clearly deserve more careful consideration since the harmonisation of weights and measures in the territory would have reduced the costs involved in

measurement, thereby lowering transaction costs. Transport costs and the use of waterways in the territory of Florence for the movement of goods, and investment in infrastructure, both seigniorial and communal, also merit greater attention than they have been given here.

This thesis has also discussed only briefly a number of other subjects that warrant further consideration, such as the transition in the territory of Florence from money rents to grain rents on both new and existing leases for landed property. Other important issues were scarcely mentioned at all, such as the exercise of justice in the Florentine countryside, the origin and evolution of rural communes, and the early development of the silk industry at Florence. Further research on the exercise of justice in particular may shed additional light on the attitude of seigniorial courts to Florentine trade and the enforcement of contracts by these courts. The dependence of rural lords on urban courts to settle disputes may also reflect more satisfactorily the expansion of Florentine jurisdiction in the countryside.

APPENDICES

1. Documentation

This appendix provides a brief overview of the unpublished evidence consulted in the course of this investigation. It also considers circumstances surrounding the production of the documentary sources and notarial practice more in general in order to explain the various rates of survival of different forms of documentation. The appendix concludes by listing all of the collections in the *fondo Diplomatico* of the State Archives of Florence that include charters dating from 1275 or earlier, and all of the notarial cartularies in the various *fondi* of the State Archives that contain acts dating from 1300 or earlier.

1.1. The sources

This study is based primarily upon published and unpublished sources of a documentary character. The unpublished evidence is found mainly in the State Archives of Florence, Archivio di Stato di Firenze (ASF). This material is supplemented by sources found in the Archives of the Cathedral Chapter of Florence, Archivio del Capitolo del Duomo di Firenze (ACF); and by those found in the Archiepiscopal Archives of Florence, Archivio arcivescovile di Firenze (AAF). Additional records dating from before 1300 are conserved in the Episcopal Archives of Fiesole, Archivio vescovile di Fiesole; and in the Church Archives of San Lorenzo of Florence, Archivio ecclesiastico di San Lorenzo di Firenze. Some ecclesiastical institutions in the Florentine countryside also maintain their own archival collections. These unpublished sources have been further supplemented by a wide variety of published documentary sources from archival repositories not only in Florence itself but throughout Tuscany. Recourse has also been made to a number of narrative sources for Florence and Tuscany from about the beginning of the twelfth century through the early fourteenth century.

The overwhelming majority of the pertinent documentation in the various archives consists of single parchment rolls, or charters, of which there are probably more than thirty thousand dating from the year 1300 or earlier in the ASF alone, about two thirds of which date from the period covered by this study. The actual number of relevant charters is somewhat less considerable, however, in as

much as a significant proportion of the documentation in the ASF pertains to areas that are actually peripheral to the territory of Florence, which is to say that certain of the collections consist of charters pertaining more to the territories of Volterra, San Gimignano, Siena, and Arezzo to the south of the city, or to the territories of Prato and Pistoia to the northwest. The removal from consideration of these charters reduces the figures for the total number of charters in the ASF pertaining to the Florentine countryside by perhaps as much as a third. The total number of charters pertaining to the Florentine countryside in the ASF that antedate the beginning of the fourteenth century is probably much closer to about 20,000. About 13,000 of these charters, conservatively speaking, date from the period from the beginning of the twelfth century through the third quarter of the thirteenth century.

The vast majority of the charters in the ASF for the twelfth and thirteenth centuries come from ecclesiastical collections. The geographical coverage of the evidence is therefore less than complete, concentrating around the larger rural monasteries but leaving large areas of the Florentine countryside poorly documented. The coverage is undoubtedly best in the Chianti, where the abbeys at Passignano, Montescalari, and Coltibuono all provide abundant documentation. The Mugello is also reasonably well documented, with collections coming from the abbeys at Buonsollazzo and Luco di Mugello. The western escarpment of the Pratomagno is documented in the evidence for the abbey at Vallombrosa, and the Settimo plain is covered in the sources for the abbey at Settimo. The documentation for ecclesiastical institutions in the city of Florence itself and its immediate environs is substantial, and a significant proportion of this material concerns the rural estates of these institutions rather than their urban and suburban possessions. The richest source collection of charters for the city is that of the abbey of Santa Maria, otherwise known as the Badia di Firenze. Other important urban and suburban collections are those of San Miniato al Monte, San Pancrazio, San Salvi, Santa Croce, Santa Maria Novella, Sant'Apollonia, Santa Trinita, and Santo Spirito. The most poorly documented area of the Florentine countryside is probably the valley of the river Elsa.

In addition to the charter collections in the ASF, the records of the *Compagnie religiose soppresse da Pietro Leopoldo* and the *Corporazioni religiose soppresse dal Governo francese* contain some extremely important collections. These records often include transcriptions of charters, including many for which the originals have been lost, as well as various registers, inventories, account books, notarial cartularies, and even histories. The records of the *Notarile ante-*

cosimiano also include numerous cartularies that contain acts dating from before 1300.

In the ACF, there are more than six hundred charters dating from the year 1300 or earlier, and three hundred and sixty-two of these date from the period between 1100 and 1275. There are, in addition, excellent seventeenth century transcriptions of all of the extant charters in the ACF as well as transcriptions of some charters that are no longer extant.¹ The ACF also contains at least two thirteenth century registers.² The principal source in the AAF for the twelfth and thirteenth centuries is an episcopal register of two hundred and eighty-six parchment folios that was redacted in 1323 and in which were collected abbreviated versions of all extant acts relating to the episcopal domain. This source, called the *Bullettone*, is not without the shortcomings that would accompany any such condensation, and these shortcomings condition the sort of information that can be gleaned from its entries. It is an exceedingly important source, nonetheless, in as much as the preponderance of the original documentation from which the abbreviated versions were drawn perished in a fire in the archiepiscopal palace in 1532 and the *Bullettone* thus provides the only remembrance of those acts.³

The charters themselves (*carte, cartule, instrumenta*) for the most part are formulaic records of simple conveyances of landed property, whether outright sales (*venditiones*), sales in remedy of an outstanding debt (*pro expedito debito*), donations (*donationes, offersiones*), exchanges (*permutationes*), leases (*libelli, locationes*), or various combinations thereof. They typically begin with a brief introduction which usually includes a religious invocation of some sort followed by the dating clause and then the main body of the document. The acts are gener-

¹ ACF, *Libri delle copie delle scritture antiche del nostro Archivio nel Capitolo fiorentino*, 3 vols. The first volume covers the years from 723 to 1299, the second from 1205 to 1298, and the third from 1300 to 1464. The transcriptions are cross-referenced with the extant charters.

² ACF, *Quaderno di debitori e creditori del 1270*; ACF, *Registro delle entrate del 1285*. Cf. Rotelli, 1988, pp. 22-23, 33, nn. 57-59.

³ A good copy of the *Bullettone* dating from the later fourteenth century is available in the ASF, and much of the text is published in Lami, ed., 1758. On the *Bullettone* in general, see Dameron, 1991, pp. 16-21, *passim*; Palandri, 1926, pp. 186-206. Note that the pagination in the ASF copy of the *Bullettone* is skewed. After page 200, the page numbers continue from 169 to 191. The page numbers given in the citation above are corrected for the error. For a comparison of the various versions of the *Bullettone*, see Dameron, 1989, pp. 40-46. Although it is generally accepted that the older documents in the AAF suffered the greatest losses in the fire of 1532, not all of the older material was lost. There still exist in the AAF numerous notarial cartularies dating from the later thirteenth and early fourteenth centuries. On the fire of 1532, see Palandri, 1926, pp. 179-185.

ally written in the first person in the name of the alienating party and identify the means of alienation (for example, *per hanc cartulam venditionis*), the receiving party, the extent of the alienation, and the property at issue usually with a description of its confines. The various terms of the contract generally follow, including any obligation or remuneration owed by the recipient of the property as well as a declaration from the alienating party to defend the rights of the recipient should the need arise. The contract also indicates the penalty to be rendered in the event that the terms of the contract should be broken. The main body of the act concludes with a statement of the site at which the transaction was first recorded and this is followed by an enumeration of those present, first the party for whom the act was redacted and then the witnesses, usually in the hand of the notary, and finally a notarial clause.⁴

Other kinds of documentation include imperial diplomas and papal bulls (*acta publica, privilegia*), dispute settlements (*compromissa, arbitria et lauda, lites et controversie*), depositions (*testimonia*), declarations of intent (*promissa*), estate inventories (*inventoria*), last wills and testaments (*testamenta*), judicial proclamations (*notitie judicati*), occasionally official correspondence, and various kinds of *breve*. These documents generally concern property, and mainly immovable property, as well as appertaining rights and privileges. The texts of the charters generally follow legalistic formulae, according to prescribed conventions, which may actually attenuate somewhat the evidential value of certain clauses that adhere to the various formulae, but deviations from the prescribed formulae assume a particular weight.⁵

⁴ Witnesses (*testes*) subscribed the acts in their own hands only very rarely. In as much as the formal redaction of an act in a parchment *cartula* or *instrumentum* probably occurred most often some time subsequent to the original redaction of the act as an *imbreviatura*, it would have been impractical in such instances to append the original subscriptions of the witnesses. On *imbreviatura*, see below. Partly for this reason, notaries were considered to possess *publica fides* which conferred the weight of law upon their own subscriptions in the name of the witnesses and indeed upon the acts themselves. It should be noted as well that the form and sequence of certain types of acts were somewhat at variance to the standard formula given here, and of course there were numerous more or less subtle variations for all types of acts, often simply as a matter of notarial style.

⁵ On the formulae current in Florence in the first half of the thirteenth century, see Masi, ed., 1943; Scalfati, ed., 1997.

1.2. Notarial practice

Despite the comparatively vast quantity of evidence that survives for the study of Florence and its surrounding countryside before the beginning of the fourteenth century, the extant documentation probably constitutes only a very small proportion of notarial activity. In the first place, it has been estimated that there were as many as six hundred notaries operating in Florence by the end of the thirteenth century, and such a number would have been capable of producing a volume of documentation many times that which has survived.⁶ Secondly, the parchment *cartule* and *instrumenta* that have come down to the present constitute not original acts but formal copies prepared at the request of an interested party.

Notaries entered the original acts as *imbreviature* in their cartularies, or notebooks, either directly from dictation or perhaps more commonly from *notule*, which is to say from loose cuttings of parchment or scraps of paper on which they took notes in the course of transacting business. When a cartulary became full, the notary probably deposited it in an archive of some sort, maintained perhaps by the notary himself or by the guild to which he belonged. These cartularies served as permanent records and also as potential sources of income for the notary in question in the event that a parchment copy of an act might be required. An *imbreviatura* entered in a notarial cartulary nevertheless was sufficient to confer upon an act the weight of law, and as a consequence, the formal redaction of an

⁶ Lansing, 1991, pp. 22-26, esp. 23-24. According to Villani, there were about six hundred notaries in Florence by the end of the thirteenth century and the figure was still the same at the time he was writing around 1338. See Villani, bk. 11, chap. 94. The figure of about six hundred notaries working in Florence at the end of the thirteenth century is probably sufficiently accurate and perhaps even conservative. The figure given by Villani for 1338 may refer only to urban notaries. Around 1280/1290, for example, four hundred and forty-two urban notaries and judges were inscribed in the *Ars iudicium et notariorum*, while another two hundred and forty notaries and judges inscribed in the guild worked in the countryside. See Plesner, 1934, p. 149. By way of comparison, there were only ninety-seven notaries and fifteen judges listed as having paid taxes in Siena in 1285. The occupation is known only for about twenty-five per cent of all taxpayers, however, and a figure closer to about four hundred and fifty perhaps would be more accurate. See Waley, 1991, pp. 16-18. The Milanese chronicler Bonvicinus de Riva reported that there were in his city an astounding 1500 notaries working in 1288. See Bonvicinus de Riva, chap. 3, pt. 18, p. 86. At least two hundred notaries were practising in Genoa in the same year, and two hundred and thirty-two Pisan notaries were paying taxes to the *Collegium notariorum* of that city in 1293. See Herlihy, 1958b, pp. 10-11, n. 23. Lansing has provided an incomplete list, based on the inventory to the collection in the ASF, of the notaries evidently working in the city of Florence itself in the thirteenth century whose cartularies have survived to the present. See Lansing, 1991, p. 245. This list was published previously in Sznura, 1975, pp. 157-158. On the notarial archives of Florence in general, see Pannella, 1934.

act in a parchment *cartula* or *instrumentum*, a charter in other words, may have been somewhat exceptional.⁷

The expense that was likely involved in the preparation of a parchment copy of an act would have further dissuaded its requisition, especially among the owners of relatively small estates with neither the resources nor the necessity to invest in something which, for them at least, may have seemed essentially superfluous. Many conveyances of landed property probably were never even recorded by notaries in the first place. Within social groups, the employment of a notary to document a land conveyance was often an unnecessary expense, because the community itself usually was able to provide controls sufficient to enforce undocumented agreements between community members. Notaries were much more important for recording commercial transactions in which each of the parties involved possessed inadequate information about the economic behaviour of the other party, in which the transacting parties were strangers, in other words. The fee paid to the notary was simply a transaction cost that was intended to provide insurance against uncertainty.

Quite in general, the acts most likely to be redacted in parchment copies and then to endure the passage of time were those that might have been employed to buttress a claim either to the ownership of landed property or to the rights to dues on long-term or perpetual leases of landed property.⁸ Parchment copies no doubt also served to facilitate the administration of what were frequently large and scattered estates, and it is very likely that such copies often were requested in the first place precisely with this view in mind. The fact that conveyances of landed prop-

⁷ On notarial practice in mediaeval Italy in general and last wills in particular, see S. A. Epstein, 1984, pp. 1-66. See also Herlihy, 1958b, pp. 1-20. Florentine notarial cartularies are extant only from the second quarter of the thirteenth century, but the notarial subscriptions of earlier parchments occasionally provides evidence for the redaction of acts first as *imbreviature* in cartularies or protocols from as early as the middle of the twelfth century. See, for example, ASF, *Diplomatico*, Badia di Passignano, 1154 gennaio: 'Ego Pax iudex idemque notarius huic instrumento ut superius legitur inposui completionem sicuti in protocollo scriptum inueni et ideo'. Elsewhere in northern Italy, the practice can be traced back to the very beginning of the twelfth century. See Herlihy, 1958b, p. 4. The first indication of a communal archive in Florence comes only in 1322, when the commune allocated three hundred *libre* for its construction. See Gaye, ed., 1839-1840, 1, app. 2, 1322 April 27, p. 464.

⁸ One entry in the cartulary of the notary Palmerio di Corbizo di Uglione, for example, concerns a promise to commission a parchment copy of an act of sale upon request. The recipient of a piece of property evidently had requested from the alienating party a record of the earlier acquisition of that property by the alienator in order to reinforce his own claim to that property. See Mosiici and Sznura, eds., 1982, no. 12, 1238 gennaio 3, pp. 76-77.

erty relating to large ecclesiastical and monastic estates constitute the bulk of the extant documentation in all likelihood reflects precisely the administrative function of these copies.⁹ The preparation of parchment copies of acts that recorded partnerships, money receipts, outright sales of mobile goods, advance payments in specie on future harvests, short-term leases, short-term credit arrangements, and debt remedies not involving landed property probably were much more rare, and at any rate such charters as these were less likely to have been retained once they had outlived their utility.¹⁰

The twelfth and thirteenth century charters extant in the various archival repositories of Florence and Tuscany thus constitute an exceedingly small proportion of contemporary notarial activity. For the territory of Lucca in the thirteenth century, for example, Andreas Meyer has compared the number of acts recorded in notarial cartularies that were rendered in parchment copies with the actual number of surviving parchment copies corresponding to these cartulary entries. He has estimated that the survival rate of parchments of ecclesiastical provenance from the later thirteenth century to the present stands at roughly about five per cent whereas the survival rate of parchments of secular provenance rests at only about one-tenth of one percent.¹¹ These estimates of course must be regarded with a measure of caution, but they are nevertheless instructive, and not least of all because they offer a puissant reminder of the degree to which a purely documentary conception of the distant past provides merely an echo, scarcely audible, of a voice forever lost.

Cartularies surviving from the thirteenth century also tend to suggest that land conveyances, proportionally speaking, were far more exceptional as acts than the extant charters would appear to indicate. In point of fact, the preponderance of

⁹ A passage from the *Bullettone* helps to illustrate some of the motivations that underlay the retention of such records. One of the two notaries responsible for the redaction of the register wrote that its compilation was intended to facilitate the consolidation of the various records of the estate in a single volume, to preserve the original records, and to safeguard the customary rights of the Visdomini, the noble house that was serving as caretaker of the episcopal estate during a vacancy in the episcopal office. See ASF, *Manoscritti*, 48BIS, folio 1r. See also Dameron, 1991, p. 18, citing AAF, *Bullettone*, folios 281v-282r.

¹⁰ With the advent of paper, the parchment sheets of old charters and cartularies often were employed to served as book covers, and there is in fact a collection in the *fondo Diplomatico* of the ASF designated as 'Coperti di libri', or book covers.

¹¹ These findings were presented by Meyer at the Twenty-ninth International Congress of Mediaeval Studies at Western Michigan University, Kalamazoo, Michigan, in May 1994. See also Meyer, ed., 1994.

acts that have come down to the present in surviving thirteenth century cartularies and cartulary fragments often concern matters other than the conveyance of landed property. Loans, or *mutua*, actually constitute the greatest proportion of these acts, but evidently they were rendered in parchment copies much less frequently.¹² Creditors may have been inclined to commission parchment copies for their loans only when these loans involved considerable sums, or when they perceived a significant risk of default. It is also conceivable that the commissioning of such copies served an administrative function for professional moneylenders in much the same manner that parchment copies of land conveyances facilitated the management of large estates.¹³ At any rate, other sorts of credit operations such as credit purchases and advance purchases of goods in kind also appear with considerable frequency in the extant cartularies, but only very rarely in parchment. Credit operations in general tend to appear in parchment copies most commonly when a debtor evidently was unable to make restitution on a debt by the means stipulated in the original contract and thus was forced to alienate a piece of property *pro solvendo debito*, which is to say in order to satisfy the debt obligation.¹⁴

The extant cartularies also provide evidence for a variety of other relatively modest transactions not typically recorded in parchment *cartule* or *instrumenta*, particularly those of a more mercantile character. Records of contracts that concern banking transactions, business partnerships, obligations of various sorts, and purchases of mobile goods, as noted above, survive only rarely in parchment

¹² Several of the earliest surviving notarial cartularies from thirteenth century Tuscany have been published, and *imbreviature* which record the assumption of a debt through loans comprise more than twenty-five per cent of the acts in these cartularies, and sometimes nearly half. For the countryside of Florence, see Mosiici and Sznura, eds., 1982. For Lucca, see Meyer, ed., 1994. For Siena, see Bizzarri, ed., 1934; 1938. See also below. For a discussion concerning the various types of contracts found in the cartulary of the Sienese notary Appulliesis with particular attention given to the formulae employed, see again Bizzarri, ed., 1934, pp. xxvii-lxxi, esp. xli-xlvi on loan contracts. See also the introduction to Bizzarri, ed., 1938, written posthumously by Mario Chiaudano. For some examples of entries in the earliest surviving cartularies from the territory of Florence along with a discussion of early Florentine notaries, see Mosiici, ed., 1985.

¹³ The creditors in at least two of the loans for which the evidence has come down to the present in parchment copies evidently had Jewish backgrounds which suggests that they may have been professional moneylenders. See ASF, *Diplomatico*, Badia di Passignano, 1203 maggio 29, and 1216 aprile 20. It should be noted, however, that much of the evidence for such loans is not necessarily suggestive of either Jewish involvement or professional moneylending.

¹⁴ Examples of such acts rendered in parchment copies in the diplomatic sources for Florence in the twelfth and thirteenth centuries are far too numerous to cite here. For a discussion of contracts such as these, see Pinto, 1980.

copies.¹⁵ Such contracts are relatively common in notarial cartularies, however, and it may be worth considering the degree to which cartulary survivals may condition somewhat modern perceptions. Both Genoa and Siena, for example, are considered to have been precocious in commerce and banking. The question that arises concerns the degree to which the seeming precocity of these two cities in so far as commercial affairs were concerned is the product of the survival of early cartularies that tend to highlight commercial activity.

The early cartulary evidence for Genoa attests to an active commercial sector in the city already around the middle of the twelfth century, roughly from the very moment that the cartulary evidence begins, in other words. Genoese merchants were active in maritime trade in the Mediterranean and also in overland trade especially between the Mediterranean and the Champagne fairs.¹⁶ The cartulary evidence for Siena likewise attests to the intense commercial activities of Sienese merchants, particularly in the financial sector, both in Italy and in northern Europe by the end of the first quarter of the thirteenth century.¹⁷ For Florence, only one substantial cartulary fragment survives from before the middle of the thirteenth century, but the fragment contains acts redacted for the most part deep in the Florentine countryside, more than twenty kilometres from the Ponte Vecchio. The fragment certainly gives the impression of a relatively advanced agricultural economy and even provides some evidence for rural proto-industry, but it throws no light whatsoever on Florentine engagement in the sort of trading activities attested in the Genoese and Sienese cartularies.¹⁸ The early cartularies that survive from Genoa and Siena, by contrast, were for the most part penned by urban notaries.

¹⁵ Some notion of the wide variety of contracts recorded in notarial cartularies in mediaeval Florence in particular may be gleaned from the catalogue that accompanied a 1984 exhibition at the Medici Library in Florence concerning the notary in Florentine culture. See *Il notaio nella civiltà fiorentina*, pp. 191-221.

¹⁶ For studies of Genoese maritime trade in the twelfth century based mainly on the evidence found in extant notarial cartularies, see Byrne, 1930. See also Krueger, 1933; 1937. On the activities of Genoese merchants at the Champagne fairs, see R. L. Reynolds, 1929; 1931. See also Face, 1958; 1960; 1969.

¹⁷ For a brief discussion of Sienese commercial activity, see Bizzarri, ed., 1934, pp. lxii-lxxi. See also Von Roon-Bassermann, 1912. On Sienese banking in the thirteenth and fourteenth centuries, see Senigaglia, 1907-1908; English, 1988.

¹⁸ The cartulary fragment is published in Mosiici and Sznura, eds., 1982. The fragment itself was inserted into a cartulary of the later thirteenth century, which probably explains its survival. See the cartulary Ciuffoli Bonavere in ASF, *Notarile antecosimiano* C568a.

The image of a precocious commercial sector at both Genoa and Siena that was engaged in extra-regional trading activities already in the later twelfth and early thirteenth century no doubt is owing somewhat to the fortuitous survival of these early cartularies through a succession of wars, floods, and fires. The survival itself of early cartularies of urban provenance nevertheless attests to the early existence of institutions that facilitated the preservation of these cartularies. The birth of such institutions was necessitated by the economic climate of the city in question and perhaps especially by the increasing velocity of transactions for which the quill of the notary was warranted. These institutions developed also as a product of increasing literacy and reliance upon the written word, and improved management and administration techniques, but their birth was most of all contingent upon a rapid increase in commercial transactions in general. The fact that no Florentine cartulary of urban provenance survives from before the middle of the thirteenth century is suggestive of the weakness of such institutions at Florence.¹⁹

Finally, it may be worth noting a certain tendency towards frugality in notarial practice, with respect to both materials and time, after about the beginning of the second quarter of the thirteenth century. Notaries began to cut smaller pieces of parchment and they also began to employ smaller script, suggesting perhaps a more economical use of materials that involved a costly and lengthy preparation process, while the script itself appears more hurried. Notaries still possessed the capacity to draw meticulously crafted documents, but they had learned to write rapidly, lifting the quill from the parchment less frequently, and using smaller and more abbreviated script. Demographic and economic expansion at Florence also entailed an increasing velocity of business transactions that required the services of a notary. Notaries were perhaps learning that the meticulous preparation of parchment copies had appreciable opportunity costs, and they sought to minimise such costs whenever possible through the economical use of materials and time.

¹⁹ As noted above in Chapter 1, the earliest indication of a communal archive at Florence comes only in 1322, when the commune allocated three hundred *libre* for its construction. See Gaye, ed., 1839-1840, 1, app. 2, 1322 April 27, p. 464.

1.3. State Archives of Florence (Archivio di Stato di Firenze [ASF])

The following sections provide an indication of the evidence available for the study of the Florentine economy before 1300. The first part is an inventory of source collections in the State Archives of Florence, *fondo Diplomatico*, containing acts dated from before 1260. The second part is an inventory of notarial cartularies in the State Archives of Florence, *fondo Notarile antecosimiano*, containing acts dated from 1300 or earlier.

1.3.1. The diplomatic archives of Florence

The figures in parentheses give first the total number of pieces in the given collection, in italics, and then the years covered by the materials in the collections.

- Acquisto adespota (*101*, 1192-1786)
- Acquisto regio (*116*, 1098-1775)
- Adespote (*31*, 1082-1693)
- Adespote, coperte di libri (*1414*, 1048-1750)
- Adespote, provenienti dall'Archivio Centrale delle Corporazioni Religiose soppresse (*159*, 1033-1779)
- Aglietti, acquisto (*198*, 1249-1862)
- Arcetri, San Matteo, agostiniane poi francescane (*141*, 1224-1546)
- Archivio Centrale delle Corporazioni Religiose soppresse, Generale dei Contratti (*5622*, 1028-1774)
- Arezzo, Comune (*13*, 1114-1513)
- Arezzo, San Bernardo, olivetani (*1078*, 1204-1735)
- Arezzo, San Domenico, domenicani (*178*, 1203-1591)
- Arezzo, Santa Maria della Misericordia, fraternita dell'Ospedale di (*685*, 1209-1546)
- Arezzo, Santa Maria Novella, agostiniane (*23*, 1246-1583)
- Arezzo, Santissima Trinità, confraternita (*21*, 1217-1528)
- Arte dei Mercatanti (*1065*, 1207-1583)

- Bagni, acquisto (*2*, 1231, 1250)
- Baldovinetti, acquisto regio (*675*, 1162-1747)
- Barbetti, dono (*29*, 1227-1397)
- Bardi, Serzelli, non inserite nell'elenco cronologico (*174*, 1084-1260)
- Bardi, Pio Istituto (*97*, 1193-1807)
- Barga, Comune (*10*, 1228-1516)
- Barga, San Cristofano, propositura (*13*, 1256-1482)
- Baroni, acquisto e dono (*17*, sec. X-1757)
- Bartolozzi, famiglia (*5*, 1194-1438)
- Bencini, dono (*1*, 1258)
- Bernardi, acquisto (*3*, 119[?]-1417)
- Bigazzi, acquisto (*326*, 1079-1824)
- Biscazi, dono (?)
- Bonaini, acquisto (*13*, 1237-1797)
- Bonfazio di Firenze, Spedale di San Giovanni Battista (*1296*, 969-1733)

Borgo a Buggiano [o Buggiano] (37, 1177-1533)
 Borgo-Caratti, acquisto (9, 1675-1856)
 Borgo San Sepolcro, Comune (128, 1234-1704)
 Borgo San Sepolcro, San Francesco, minori (6, 1252-1414)
 Brighi, acquisto (40, 1186-1674)
 Brogialdi, dono (3, 1257-1455)
 Brunetti, famiglia (5, 785-1534)

Camaldoli, San Donato e Sant'Ilarino, ospizio (85, 1111-1543)
 Camaldoli, San Salvatore, eremo (4798, 780-1680)
 Canigiani-Cerchi, dono (610, 1225-sec. XVII)
 Caprilli, acquisto (1, 12[?]4)
 Caprini, acquisto (309, 1204-1418)
 Castiglione Fiorentino, Comune (545, 1198-1631)
 Checchi, acquisto (48, 1157-1829)
 Colle Val d'Elsa, Comune (293, 1115-1592)
 Coltibuono, Badia di San Lorenzo, vallombrosani (917, 943-1604)
 Conti, acquisto (40, 1197-1652)
 Cortona, Santa Chiara, francescane (75, 1199-1537)
 Cortona, Santa Maria dei Servi, serviti (31, 1260-1751)
 Cortona, Santa Maria della Misericordia (63, 1248-1598)
 Cortona, unione di vari luoghi pii (128, 1237-1582)
 Costantini, acquisto (166, 1204-1771)

Dainelli, acquisto (3, 1217-1418)
 Da Sommaia, famiglia (30, 1192-1630)
 Decime granducali (88, 1127-1769)
 Della Gherardesca, deposito (302, 1089-1858), non inserite
 Doccia (Fiesole), San Michele, francescani (72, 1232-1704)

Empoli, Santo Stefano, agostiniani (179, 1124-1733)

Falleri, dono (1, 1241)
 Ferrantini, acquisto (?)
 Fiesole, San Bartolommeo, badia detta dei rocchettini, benedettini (268, 1072-1734)
 Fiesole, San Domenico, domenicani (215, 1255-1700)
 Fivizzano, San Giovanni Battista, agostiniani (77, 1207-1710)
 Follini, famiglia (2, 1152, 1168)
 Fondati, acquisto (7, 1235-1270)
 Fontana, acquisto (12, 1206-1577)
 Fontani (27, 1255-1654)
 Franceschini, acquisto (184, 1201-1759)
 Fucecchio, Comune (225, 1183-1574)
 Fucecchio, San Giovanni Battista, collegiata (13, 1194-1462)

Galluzzo, San Lorenzo Martire, Certosa (973, 1241-1645)
 Gennarelli, acquisto (10, 1241-1755)
 Giorgi, acquisto (2, 989, 1437)
 Guastallo, acquisto (2, 1252, 1346)

Innocenti, Ospedale degli (1516, 970-1697)

Leonetti, dono (8, 1217-1694)
 Libreria Magliabechiana (287, 1194-1730)
 Luco di Mugello, San Pietro, monache camaldolesi (112, 1013-1295; appendice, 580, 995-1604)

Maccioni, dono (1, 1243)
 Magistrato Supremo ([?], 1109-1670)
 Maiano, San Martino, benedettine (39, 1132-1685)
 Malaspina, deposito (1500, 1094-sec. XVIII)
 Mannelli-Galilei-Riccardi, dono (928, sec. X-1783)
 Manni, acquisto (80, 1222-1705)
 Manni D.M., acquisto (236, 1226-1753)
 Marchi, acquisto (693, 1152-1796)
 Mariani, acquisto (45, 1056-1627)
 Mariotti, acquisto (75, 1039-1534/43[?])
 Martini-Taviani, famiglia (6, 1214-1432)
 Massa in Valdinievole, Comune (205, 1142-1525)
 Medici, famigli (2565, 1230-1733)
 Medici Tornaquinci, acquisto (3, 1240 luglio-dicembre)
 Menozzi, acquisto (297, 939-1824)
 Merlini, acquisto (62, 1257-1690)
 Merlotti, acquisto (134, 1256-1871)
 Miccinesi, acquisto (259, 1098-1731)
 Montalcino, Sant'Agostino, agostiniani (306, 1227-1670)
 Montecarlo, comunità di (?)
 Montecatini, Santa Margherita, agostiniani (?)
 Monte Comune (3376, 1216-1665)
 Montelatici, acquisto (25, sec. XIII-1811)
 Montepulciano, Comune (437, 1055-1726)
 Montepulciano, Sant'Agnese, domenicani e domenicane (?)
 Monte Oliveto di Firenze (?)
 Monticiano, Santi Pietro e Paolo, agostiniani (451, 1224-1729)

Nelli, acquisto (164, 1232-1745)
 Nidiaci, acquisto (28, 1185-1644)
 Nobili, dono (89, 1146-1843)

Ordine Gerosolimitano di Malta (146, 1191-1781)
 Orsanmichele, Capitani di (222, 1215-1510)

Pacini e Palagi, acquisto (128, 1118-1672)
 Pasqui, dono (132, 1259-1703)
 Passerini, dono (309, 995-1793)
 Passignano, badia di San Michele, vallombrosani (5481, 884-1706)
 Peruzzi de' Medici, deposito (183, 1209-1844)
 Pescia, Comune (60, 1177-1624)
 Pescia, San Michele, benedettine (44, 1238-1586)
 Pian Castagnaio, San Bartolommeo, francescani (33, 122[7]-1708)
 Pieri, acquisto (5, 1153-1837)
 Piombino, Corporazioni Religiose sopprese (134, 1216-1695)
 Pistoia, Comune (7783, 897 o 997-1753) (e S. Iacopo, opere)
 Pistoia, Patrimonio ecclesiastico (732, 801-1620)
 Pistoia, Potesteria (interessano Larciano) (53, 1219-1439)
 Pistoia, San Bartolommeo apostolo, badia detta dei rocchettini, benedettini (1093, 726-1604)
 Pistoia, San Benedetto, olivetani (1054, 1019-1547)
 Pistoia, San Domenico, domenicani (132, 1255-1533)
 Pistoia, San Francesco, minori (97, 1255-1686)
 Pistoia, San Gregorio, ospedale (526, 1164-sec. XV)
 Pistoia, San Lorenzo, agostiniani (1560, 1153-1612)
 Pistoia, San Mercuriale, benedettine (255, 945-1514)
 Pistoia, San Michele e Niccolao, benedettine (146, 1191-1600)
 Pistoia, Santa Chiara, clarisse (41, 1142-1454)
 Pistoia, Santa Maria degli Angioli, monastero di benedettine, detto da Sala (80, 1100-1606)
 Pistoia, Santissima Annunziata, serviti (243, 1243-1589)
 Pistoia, San Zenone, cattedrale, capitolo (1720, 857-1568)
 Pistoia, Vescovado (580, 941-1690)
 Poggibonsi, Comune (322, 1231-1435)
 Polverini, acquisto (814, 1048-1758)
 Portico, Santa Maria della Disciplina, agostiniane (80, 1221-1553)
 Prato, Ceppi, Opera pia (424, 1221-1662)
 Prato, Comune (134, 1274-1583)
 Prato, Ospedale della Misericordia e Dolce (1257, 1142-1591)
 Prato, Sacro Cingolo, opera (68, 1256-1561)
 Prato, Santa Maria della Carceri, chiesa e opera (66, 1190-1684)
 Prato, Santo Stefano, propositura (650, 1007-1691)
 Pratovecchio, San Giovanni Evangelista, monache camaldolesi (312, 1134-1520)
 Pupilli, Ufficiali dei (389, 1189-1656)

- Radicondoli, Santa Caterina delle Ruote, agostiniane (157, 1138-1612)
 Ricci, acquisto e famiglia (1004, 1167-1784)
 Riformagioni (6231, 771-1763)
 Riformagioni, Appendice (85, 1250-1759)
 Riformagioni, Atti Pubblici (4275, sec. XI-XVIII) a parte 7 voll.
 Riformagioni, Malaspina (51, 1218-1703)
 Riformagioni, Parte Guelfa (61, 1187-1526)
 Rinuccini, dono, pergamene Buondelmonti (580, 1156-1695)
 Ripoli, San Bartolommeo, badia vallombrosana (1529, 1007-1794)
 Rondinelli-Vitelli, dono (211, 1181-1831)
 Rosano, Santissima Annunziata, benedettine (140, 1015-1759)
- Salari, dono e acquisto (95, sec. XIII-1817)
 Salvi, dono (132, 1252-1747)
 San Clemente, agostiniane (88, 1227-1580)
 San Domenico dal Maglio, domenicane (272, 1221-1510)
 San Donato in Polverosa o a Torri, benedettine (397, 1184-1661)
 San Frediano in Cestello già Santa Maria Maddalena, cistercensi (2753, 816-1754)
 San Gimignano, Comune (450, 1118-1531)
 San Gimignano, San Girolamo, vallombrosane (49, 1075-1667)
 San Gimignano, Santa Chiara, clarisse (46, 1242-1648)
 San Gimignano, Santa Fina, ospedale (410, 1212-1535)
 San Gimignano, Sant'Agostino, agostiniane/i (6, 1255-1493)
 San Gimignano, Santa Maria, moastero di benedettine detto le Romite di Santa Caterina (146, 1197-1666)
 San Giovanni Evangelista, monastero di benedettine, detto Boldrone (70, 1212-1502)
 San Giovannino, Gesuiti (189, 1095-1699)
 San Marco, domenicani (334, 1145-1637)
 San Matteo, ospedale (656, 1206-1706)
 San Michele Visdomini, celestini (152, 1246-1614)
 San Miniato al Monte, olivetani (1216, 960-1726)
 San Miniato al Tedesco, Comune (189, 1172-1702)
 San Miniato al Tedesco, San Francesco, minori (5, 1349-1476)
 San Miniato al Tedesco, Sant'Iacopo, domenicani (59, sec. XII-1540)
 San Niccolò di Cafaggio, francescane (266, 1183-1632)
 San Pancrazio, vallombrosani (746, 1208-1717)
 San Pier Maggiore, benedettine (368, 1066-1750)
 San Salvatore of Mont' Amiata (?)
 San Silvestro, benedettine (302, 1211-1690)
 Santa Caterina, detta de' Covi, commenda, Ognissanti (422, 1059-1685)
 Santa Croce, minori (1052, 1181-1719)
 Santa Croce, Valdarno, Comune (19, 1224-1505)
 Santa Croce, Valdarno, Santa Cristiana, agostiniane (540, 1198-1517)
 Santa Felicita, benedettine (201, 1040-1543)
 Santa Lucia, domenicane (282, 1251-1664)
 Santa Maria a Fonteviva, degli Angioli, monaci camaldolesi (1699, 1047-1715)
 Santa Maria a Fonteviva, del Bigallo, Orfano trofio (908, 1213-1762)
 Santa Maria a Fonteviva, del Carmine, carmelitani (719, 1218-1739)
 Santa Maria del Fiore, opera (143, 1220-1618)
 Santa Maria della Badia, benedettini cassinesi (3272, 969-1763)
 Santa Maria Novella, domenicani (2140, 1094-1780)
 Santa Maria sul Prato, agostiniane (62, 1216-1651)
 Sant'Ambrogio, benedettine (192, 1141-1679)

- Sant'Apollonia, benedettine (754, 989-1773)
 Santa Trinita, vallombrosani (177, 1107-1694)
 Santa Trinita, pergamene della Badia di San Fedele di Poppi già a Strumi, acquisto (379, 992-1768)
 Santa Verdiana, vallombrosane (29, 1182-1677)
 Sant'Iacopo di Ripoli, domenicane (116, 1238-1633)
 Sant'Iacopo sopr'Arno, agostiniani e signori della Missione (172, 1170-1790)
 Santissima Annunziata, serviti (1818, 1067-1769)
 Sant'Orsola, francescane (133, 1078-1718)
 Santo Spirito, agostiniani (1483, 1170-1709)
 Santo Spirito sulla Costa, benedettine (8, 1237-1552)
 San Zenone, Capitolo di Pistoia (?)
 Scarperia, Santa Maria in Piazza, compagnia (220, 1209-1715)
 Schlichting, famiglia (2, 1168, 1492)
 Siena, San Vigilio, vallombrosani, le pergamene appartengono al Monastero di Montescali (931, 1030-1623)
 Soderini, acquisto (331, 1132-1711)
 Soldaini, acquisto (139, 1238-1851)
 Strozzi di Mantova, dono (908, 1210-1777)
 Strozzi-Galletti, acquisto (381, 1211-1780)
 Strozzi-Galletti, Uguccioni, acquisto (2227, 1008-1807)
- Targioni, famiglia (30, 1130-1587)
 Tidi, acquisto (302, 1250-1754)
 Torrigiani, legato (173, 1220-1597)
 Torrigiani, dono (390, 1136-1800)
- Ubaldini-Vai-Geppi, dono ([?], 1084-1808)
 Ugolini, acquisto (35, 1255-1709)
 Urbino (1021, 1063-1639)
 Urbino Pesaro (350, 1192-1696)
- Vaiano, Badia al San Salvatore a Vaiano ([?], 1261-1330)
 Vallombrosa, Santa Maria d'Aquabella, badia vallombrosana (2135, 790-1778)
 Verzoni, Muzzarelli, acquisto (114, 1108-1755)
 Volterra, Comune (2256, 780-1730)
 Volterra, San Andrea, olivetani (746, 1243-1712)

1.3.2. The notarial archives of Florence for the thirteenth century

The notarial archives of Florence for the thirteenth century

The following list provides both the old and the new numeration used by the State Archives of Florence for the notarial records in its collections. The old numeration is given first, then the new numeration, the name of the notary with his usual place of work, then the years covered by the particular cartulary.

1. 956/A943, Arrigo di Ianni [da San Gimignano], 1257-1262
2. 995/A981, Attaviano, o Ottaviano, di Chiaro [da Firenze], 1254-1275
996/A982, *Idem*, 1266-1291
997/A983, *Idem*, 1275-1295
3. 2276/B1262, Benciuenni di Gianni da Montelupo, 1292
4. 2354/B1340-2362/B1348 (9 vols.), Benintendi di Guittone, 1296-1347
5. 2440/B1426, Bernardo Buonaccorso [da Firenze], 1298-1305
6. 2476/B1462, Bernardino di Lanfranco [Fiorentino], 1280-1286
7. 2487/B1473, Bernardo di Rustichello [da Firenze], 1258-1299
8. 2962/B1948, Boccadibue Biagio [di Giovanni da Firenze], 1297-1308 ²⁰
2963/B1949, *Idem*, 1298-1306
9. 3140/B2126, Bondone di Ugucione [di Ranieri da Firenze], 1300-1304
3141/B2127, *Idem*, 1300-1304
10. 3180/B2166, Bonizzi Bonizzo [di Bonanno da Settimo], 1297-1350
11. 3541/B2527, Buonaccorso [di (...) da Firenze (...)], 1290-1294
12. 3788/B2574, Buono (del) Insegna, 1286-1288
13. 3827/B2813, Buto di Nuccio, 1289-1291
14. 3830/B2816, Boldrone da Civitella, 1296-1320
15. 3831/C1, Caccia di (...) da Gonfienti, 1293-1350
16. 4111/C102, Cantapecchi Giovanni [di Bergo di Buonfigliolo da Firenze], 1287-1297
17. 5471/C568a, Ciuffoli Bonavere, 1237-1293 ²¹
18. 6075/D45, Diotaiuti di Simone, Mucciano, 1296-1325

²⁰ This particular cartulary is published in De Angelis, Gigli, and Sznura, eds., 1978-1986. In addition to the two cartularies of Biagio Boccadibue noted here, there survives another cartulary from the same notary with acts dating from 1 April 1311 to 19 November 1314. See ASF, *Notarile antecosimiano* 2964/B1950.

²¹ Bound with the cartulary of Ciuffoli Bonavere is the cartulary fragment of Palmerio di Corbizo di Uglione, 1237-1238, which is published in Mosiici and Sznura, eds., 1982.

19. 6105/D53a, Diedi di Goffredo, 1284-1321
20. 6695/F66, Facciuoli Buonaccorso [di Salvi da Firenze], 1297-1300
6696/F66, *Idem*, 1300-1307
21. 8347/F651, Frosino di Chele, Monterinaldi, 1297-1330
8348/F652, *Idem*, 1297-1330
22. 9490/G364, Giovanni di Buoninsegna da Rignano, 1296-1299
9491/G364, *Idem*, 1300-1309
23. 9492/G365, Giovanni di Buoninsegna da Volterra, 1291-1304
24. 9493/G366, Giovanni di Buto [da Ampinana], 1299-1304
25. 9606/G409, Giovanni di Jacopo [da Carmignano], 1298-1307
26. 10896/G830, Guido [di (...)] da Leccio, 1294-1296
10897/G830, *Idem*, 1294-1307
27. 11079/I29, Iacopo di Dino da Carmignano, 1296-1308
11080/I30, *Idem*, 1276-1327
28. 11138/I54, Iacopo di Guido, Campi [Firenze], 1300-1306
29. 11250/I104, Ildebrandino or Dino di Benvenuto [da Firenze], 1276-1311
11251/I104, *Idem*, 1276-1311
30. 11252/I105, Ildebrandino di Accatto [di Firenze], 1269-1279
31. 11253/I106, Ildino di Buoncristiano [da San Gimignano], 1250-1256
32. 11484/L76, Lapo Gianni, 1298-1327
33. 11550/L99, Lasta di Giovanni [da Empoli], 1280-1283
34. 13363/M293, Matteo di Biliotto [Firenze], 1294-1296
13364/M293, *idem*, 1300-1314
35. 15527/O3, Opizzo di Pontremoli, 1296-1311
36. 17563/R40, Ranieri Baldesi, 1268-1278
37. 17572/R43, Ranieri di Buoninsegna [da San Gimignano], 1299-1301
38. 17577/R45, Ranieri di Cione [da Petrognano in Val d'Elsa], 1299-1300
39. 17869/R150, Ricevuto d'Andrea, Castelfiorentino, 1295-1306
40. 18003/R192, Rinuccio di Piero [da Magliano], 1279-1303
41. 19164/S733, Simone di Dino, Petrognano [d'Elsa], 1299-1303
42. 21108/V193, Vigoroso di Paradiso, 1259-1299
21109/V193, *Idem*, 1277-1289
21110/V193, *Idem*, 1280-1299

Notarile Appendice

Notai di Firenze e del dominio

43. 21353/Filza 1, 1269-1578
44. 21354/Filza 2, 1271-1449
45. 21355/Filza 3, 1279-1481

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Corporazioni religiose soppresse dal Governo francese 179 [Passignano], 36, for two notarial cartularies of ser Bonafede di Benedetto da Passignano, containing acts dating from 1277-1289 and 1295-1306, respectively; and for three notarial cartularies from the early fourteenth century; nos. 37-40 and 42-45 also contain several early fourteenth century notarial cartularies.

Corporazioni religiose soppresse dal Governo francese 260 [Vallombrosa], 122, for the notarial cartulary of Ser Azzo di Davanzato da Pelago, with entries dating from 1299 to 1319. The cover of the notarial cartulary is itself an early fourteenth century notarial cartulary fragment.

Diplomatico, Adespote, Coperti di libri (Archivio centrale delle corporazioni religiose soppresse), 1239 settembre 29, for a notarial cartulary fragment of a notary working in San Piero a Sieve.

Diplomatico, Adespote, Coperti di libri (Archivio centrale delle corporazioni religiose soppresse), 1256 - 1257, for the fragments of four notarial cartularies.

Diplomatico, varie, Riformagioni, 3 (cited by Lansing as *Diplomatico*, Riformagioni, Codice 20, which in fact is the manner in which it appears in the *spoglio* entry), entitled 'Frammenti di protocolli di vari notai antichi di Firenze dal 1261 al 1297', including:

Ser Aldobrandino vocatur Naso d'Accato Fiorentino, 1261-1265;

Ser Attaviano di Chiaro d'Accorso, 1292-1294;

Ser Guido di Mangiadori, 1291-1292;

Ser Giovanni di Bergo and Bonfigliuoli de Catepecchio, 1297.

Diplomatico, a quaderno, Strozzi-Uguccione, 1275 March 9, for a notarial cartulary fragment of the notary Risalitus filius olim Cambii working in Prato.

Diplomatico, a quaderno, Strozzi-Uguccione, 13th century, for a notarial cartulary fragment of a notary working mainly in Monteficalli.

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Lists of thirteenth century urban notaries whose work survives in the ASF have been published previously by Sznura 1975, pp. 157-158; and, following Sznura, also by Lansing, 1991, p. 245.

9.1.4. The composition of a notarial cartulary

The following tables are designed to give the reader an idea of the composition of a notarial cartulary in terms of the proportions of various types of acts. The tables use the earliest surviving cartulary from the countryside of Florence, an early cartulary from urban Lucca, and five early examples from the territory of Siena, three from the city and two from the Sienese countryside. All seven of the cartularies help to illustrate the fact that the charters on which this study is largely based, consisting mainly of land conveyances, formed a relatively small proportion of notarial activity.

Table 3. Notarial cartularies from Florence and Lucca

NOTARIES	Palmerio di Corbizo (Mosiici and Sznura, eds., 1982)		Ciabatto (Meyer, ed., 1994)	
	NO.	%	NO.	%
Redaction	Marcialla, Uglione (Florence) 1237 December 8 - 1238 August 22		Lucca 1226 December 9 - 1227 November 23	
	NO.	%	NO.	%
Loans in money	54	19.64	18	20.93
Loans on the harvest	38	13.82	36	41.86
Exchanges	—	—	3	3.49
Partnerships or money deposits	—	—	—	—
Purchases of cloth	1	0.36	3	3.49
Purchases of animal skins or hides	—	—	1	1.16
Purchases of livestock	6	2.18	—	—
Purchases of agricultural products	12	4.36	—	—
Purchases, donations, confiscations, and exchanges of immobile property	41	14.91	1	1.16
Leases of land or immobile property	7	2.55	2	2.33
Dowries and donations	1	0.36	4	4.65
Others	115	41.82	18	20.93
TOTALS	275	100	86	100

Table 4. Four notarial cartularies from Siena, 1221-1271*

SIENESE NOTARIES	Appuliese		Ildibrandino		Ugolino di Giunta				Federico di Giunta	
	Siena 1221, 1223		Siena 1227-1229		Siena 1252-1257		San Quirico 1251-1256		Sovicille 1268-1271	
Acts	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Loans in money	185	33.82	59	17.78	161	48.94	56	34.57	25	12.20
Loans on the harvest	20	3.66	11	3.31	14	4.26	31	19.13	—	—
Exchanges	44	8.04	31	9.34	11	3.34	3	1.85	—	—
Partnerships or money deposits	4	0.73	4	1.21	—	—	—	—	—	—
Purchases of cloth	48	8.78	52	15.66	—	—	1	0.62	1	0.49
Purchases of animal skins or hides	4	0.73	11	3.31	1	0.30	—	—	—	—
Purchases of livestock	22	4.02	11	3.31	6	1.82	11	6.79	5	2.44
Purchases of agricultural products	5	0.91	7	2.11	3	0.91	5	3.09	7	3.41
Purchases, donations, confiscations, and exchanges of immobile property	67	12.25	24	7.23	13	3.95	5	3.09	58	28.29
Leases of land or immobile property	19	3.47	11	3.31	42	12.77	5	3.09	9	4.39
Dowries and donations	10	1.83	11	3.31	1	0.30	6	3.70	28	13.66
Others	119	21.76	100	30.12	77	23.41	39	24.07	72	35.12
TOTALS	547	100	332	100	329	100	162	100	205	100

* Reproduced from Redon, 1973, p. 139, tbl. 4; 1982, pp. 43-95, esp. 65, tbl. 4. Cf. Mario Chiaudano, 'Introduzione', in Bizzarri, ed., 1938, pp. cx-cxi. Chiaudano extrapolated these figures from Bizzarri, ed., 1934; and Bizzarri, ed., 1938.

2. Population

The two tables in this appendix provide a means by which to compare some of the population estimates that have been put forward first for Florence and its surrounding countryside, and then for the urban populations of other towns in Tuscany.

Table 5. Population estimates for Florence and its countryside

	1280	1300	1338	1347	1350
DE LA RONCIÈRE¹					
CITY	100,000	110,000	100,000	90,000	32,000
COUNTRYSIDE	—	245,000	265,000	—	99,000
TOTAL	—	355,000	365,000	—	131,000
FIUMI²					
CITY	80,000	105,000	90,000	80,000	—
COUNTRYSIDE	—	245,000	280,000	—	—
TOTAL	—	350,000	370,000	—	—
HERLIHY³					
CITY	—	—	120,000	—	42,000
COUNTRYSIDE	—	—	300,000	—	—
TOTAL	—	—	420,000	—	—
DAY⁴					
CITY	85,000	105,000	120,000	—	—
COUNTRYSIDE	—	260,000	300,000	—	—
TOTAL	—	365,000	420,000	—	—

¹ De la Roncière, 1976, 2, pp. 659-696, and esp. tables 99 and 103 on pp. 677 and 696, respectively. In addition to the figures presented above, De la Roncière also gave some intermediate figures for the urban population of Florence in the early fourteenth century. For 1330, he gave a figure of 90,000; for 1340, 85,000; for 1348, 85,000; and for 1349, 32,000.

² Fiumi, 1950, pp. 105-118. Fiumi also gave intermediate figure of 75,000 for the urban population in 1340, and he gave a second figure of 76,000 for the urban population in 1347. Fiumi subsequently revised his estimates for the urban population somewhat, giving figures of 85,000 for 1280; 95,000 for 1300; and 76,000 for 1347. The figure for 1338 remained at 90,000. In the context of the revision, Fiumi also gave urban population figures of 50,000 for 1200; and 75,000 for 1260. See Fiumi, 1957-1959, pt. 2, pp. 463-465.

³ Herlihy and Klapisch-Zuber, 1985, pp. 64-69. Herlihy and Klapisch-Zuber actually gave an estimate for the rural population in the Florentine countryside between 280,000 and 320,000, using multipliers of 3.5 and 4.0 on the base figure of 80,000 provided by Villani as the number of men in the countryside of Florence who were able to bear arms. They did not give an estimate extrapolated from the figure of 70,000 provided by Villani for 1300, but the application of the same principles would give a figure between 245,000 and 280,000, or 262,500.

⁴ See above, Chapter 3, esp. tbl. 1.

Table 6. The populations of the primary cities and towns in Tuscany⁵

	Bairoch, Batou, and Chèvre, 1988, pp. 40-49.	Ginatempo and Sandri, 1990, pp. 105-115.	Pirillo, 1994.	Russell, 1972, pp. 39-52.	Other authors
Arezzo	1200 - 8000 1300 - 20000	1300/1338 - 20000/25000	1200/1249 - 8000 1250/1299 - 13000	1200/1230 - 8000 1290/1300 - 20000 (?)	1100 - 9000/12000 1200 - 12000/15000 1300 - 20000 ⁶
Colle di Val d'Elsa		1384 - 3500	1201 - 1806		
Cortona		1325 - 10000+/15000			
Firenze	1300 - 95000	1300/1338 - 100000/120000	1200/1249 - 15000/20000 1250/1299 - 100000 1300/1325 - 110000 1326/1345 - 110000	1172 - 10000 1200/1230 - 15000/20000 1290/1300 - 96000	1175 - 10000 1200 - 15000 1252 - 60000 1280 - 85000 1300 - 105000 1325/1328 - 120000 ⁷
Grosseto		1224 - 2500			
Lucca	1200 - 10000 1300 - 16000	1300/1338 - 20000/25000	1200/1249 - (10000) 1300/1324 - (30000)	1200/1230 - 10000 1290/1300 - 23000	

⁵ Standard characters refer to year, while bold characters refer to population.

⁶ Delumeau, 1996, 2, p. 916.

⁷ These figures are proposed above in Chapter 3.

	Bairoch, Batou, and Chèvre, 1988, pp. 40-49.	Ginatempo and Sandri, 1990, pp. 105-115.	Pirillo, 1994.	Russell, 1972, pp. 39-52.	Other authors
Massa	1300 - 3000	1300 - 8000/10000 1369 - 3000			
Montalcino		1233 - 3500			
Montepulciano		1202 - 3000	1202 - 2457		
Pisa	1000 - 9000 1200 - 17000 1300 - 38000	1300/1338 - 40000/50000	1200/1249 - 20000/25000 1250/1299 - 38000	1200/1230 - 15000/20000 1290/1300 - 38000	1228 - 25000/28000 1300 - (30000) ⁸
Pistoia	1200 - 11000 1300 - 11000		1200 /1249 - 11000 1250/1299 - 11000	1200/1230 - 11000 1290/1300 - 11000	1219 - 11000 1300 - 11000 ⁹
Poggibonsi	1200 - 5000 1300 - 3000				1225 - 6000 ¹⁰
Prato	1200 - 6000 1300 - 15000	1300 - 15000 1338 - 11000	1200/1249 - 5880 1300/1325 - 13170 1326/1345 - 10771	1200/1230 - 6000 1290/1300 - 9000	1288/1290 - 13925 1298/1305 - 14995 1322 - 12855 1327 - 12775 1339 - 10560 ¹¹

⁸ Salvatori, 1994, pp. 107-123, esp. 116-120. Salvatori gave no estimate for the population of Pisa in 1300, but she argued strongly that urban demographic growth at Pisa was probably negligible after about 1228. See Salvatori, 1994, pp. 120-123.

⁹ Herlihy, 1967a, pp. 72-77, esp. 73-75.

¹⁰ Fiumi, 1957-1959, pt. 2, p. 477.

¹¹ Herlihy and Klapisch-Zuber, 1985, pp. 61-64, based on data presented in Fiumi, 1968, pp. 35-111.

	Bairoch, Batou, and Chèvre, 1988, pp. 40-49.	Ginatempo and Sandri, 1990, pp. 105-115.	Pirillo, 1994.	Russell, 1972, pp. 39-52.	Other authors
San Gimignano	1200 - 5000 1300 - 8000	1300 - 8000	1326/1345 - 8435	1200/1230 - 5000	1227 - 3950/4375 1277 - 6000/6650 1332 - 7600/8500 ¹²
Siena	1200 - 12000 1300 - 50000	1300/1338 - 40000/50000	1200/1249 - (10000/15000) 1300/1325 - (50000)	1200/1230 - 10000/15000 1290/1300 - 52000	
Volterra		1327 - 9500/12000	1326/1345 - 12065		

¹² These figures represent my own extrapolations from the figures in Fiumi, 1961, pp. 149-159, esp. 153-154, following the assumptions delineated by Fiumi.

3. Cereal-culture

In Tuscany and throughout western Europe during the middle ages, cereals and cereal substitutes were the chief constituents of the diet. This appendix describes the varieties of cereal grains and cereal substitutes cultivated in the territory of Florence before the Black Death. It also considers the production capacity of the Florentine countryside. The discussion is based largely upon evidence from the more richly documented later thirteenth and early fourteenth centuries, and particularly on the *Libro del biadaio*, the memoir of an early fourteenth century grain merchant working on the urban grain market of Florence at Orsanmichele.¹ The appendix also makes substantial use of the section on cereals in the *Opus ruralium commodorum*, a farm manual written probably in the early fourteenth century by the Bolognese agronomist Petrus de Crescentiis.²

3.1. Cereal varieties

On the basis of the *Libro del biadaio*, four types of wheat grain were typically available on the urban grain market in early fourteenth century Florence at Orsanmichele: *grano ciciliano*, *grano calvello*, *grano comunale*, and *grano grosso*. The source also mentions several inferiore grains: barley (*orzo*), rye (*segale*), spelt (*spelta*), and three different varieties of millet (*miglio*, *panico*, *saggina*). In addition, several types of pulses were available on the urban grain market.³

3.1.1. Superior grains

Grano ciciliano has been identified as hard-grain durum wheat (*triticum durum*). The Tuscan climate is poorly suited for the cultivation of durum wheat, however, and most of the durum wheat available on the Florentine grain market was probably imported.⁴ As the adjective clearly suggests, a principal source of the durum

¹ The memoir is published in Pinto, 1978.

² Petrus de Crescentiis, bk. 3.

³ Pinto, 1978, pp. 160-161 and *passim*.

⁴ Durum wheat was cultivated in the Florentine countryside, though only to a very limited extent and with poor results. See Pinto, 1978, pp. 31-32. It is also worth noting, for example, that the Bolognese agronomist Petrus de Crescentiis, writing probably in the early fourteenth century and in the context of a similar climate, mentioned nothing any type of wheat grain bearing the characteristics of durum wheat.

wheat imported into Florence in the later thirteenth and early fourteenth centuries was Sicily, but Florentine merchant-bankers also imported durum from Puglia.⁵ Grain imports both Sicily and Puglia are attested at Florence from at least as early as 1271, though it is likely that Florentine merchant-bankers were importing southern Italian grain from even earlier.⁶

A substantial proportion of the imported grain arriving at Florence from southern Italy in the second half of the thirteenth century was intended to reduce pressure on domestic production in the Florentine countryside and to offset local harvest shortfalls.⁷ It is also likely that such imports were sometimes designed to meet a growing demand for southern grains even under normal conditions. In 1309, for example, the three largest merchant-banking companies in Florence collectively exported from Puglia 118,700 *salme* of grain, or 1.42 million Florentine

⁵ Abulafia pointed out that the designation *grano ciciliano* indicated grain coming not only from Sicily itself but from throughout the Italian south. See Abulafia, 1981, p. 385, n. 48.

⁶ On importations of grain from Sicily and Provence through Grosseto during the summer of 1271, see Davidsohn, 1977, 3, pp. 104-105; Davidsohn, ed., 1896-1908, 3, no. 73, 1271 July 13, p. 25. In addition, two Florentine merchants in Melfi requested and were granted licence to export 200 *salme* of millet from the port of Naples 'ad rationem de unciis auri quindecim ponderis generalis pro jure exiture quarumlibet centum salmarum' in October of 1271. On the same day, in similar fashion, two merchants of Lucca were granted leave to export 100 *salme* of millet that was in the port of 'Rocce Montisdraconis' but could be transferred to Naples in small boats for eventual transit to Lucca with the Florentine merchants. Only a few days earlier, the Angevin king Charles I answered what must have been a similar request from Siena, indicating however that famine in the kingdom had made it impossible to respond. Respectively, see Terlizzi, ed., 1950, no. 397, 1271 October 10, p. 217; no. 398, 1271 ottobre 10, pp. 217-218; no. 396, 1271 ottobre 7, pp. 217-217. The importations of such an inferior cereal as millet in 1271 were occasioned by the second successive year of famine in Tuscany. For evidence of famine at Florence in 1270, see Davidsohn, ed., 1896-1908, 2, no. 1222, 1270 December 7, p. 175. For the chronicle report of Simone della Tosa concerning high grain prices at Florence in 1271, see Manni, ed., 1844, p. 206. On Florentine merchant-banking activity in southern Italy before the middle of the thirteenth century, see above, Chapter 7.3.3.

⁷ Importations of grain from both Sicily and Puglia in 1304, for example, probably were necessitated by the poor harvest. According to Villani, Genoese merchants brought to Florence at least 25,000 *modia* of grain from Sicily and Puglia at the request of the commune. Excessive rains in the previous year had resulted in widespread crop failure, the ruination of reserves, and soaring grain prices. See Villani, bk. 8, chap. 68: 'Nel detto anno 1303 del mese di febbraio, i fiorentini tra loro furono in grande discordia, [...]. E per arrotta alla detta pestilenza du l'anno gran fame, e valse lo staio del grano alla rasa più di soldi ventisei di soldi cinquantadue il fiorino d'oro in Firenze, e se non che 'l comune que' che governavano la città si provviddono dinanzi, e aveano fatto venire per mano Genovesi di Cicilia e di Puglia bene ventisei migliaia di moggia de grano, i cittadini e' contadini non sarebbero scampati di fame: e questo traffico del grano, fu coll'altre una cagioni de volere rivedere la ragione del comune, per la molta moneta che vi corse, e certi, a diritto o a torto, ne furono calunniati e infamati'. Another Florentine chronicler, Marchionne di Coppo Stefani, put the figure for the amount of grain imported from Sicily and Puglia at 25,000 *modia*. See Rodolico, ed., 1903, rub. 240, pp. 89-90. The quantity of grain imported from southern Italy in 1304 probably would have been sufficient to satisfy about half of the urban demand, and it is reasonable to suppose that the entire amount was intended for consumption in the city.

staria. Just two years later, the same three companies exported an astounding 220,000 *salme* of grain, or 2.64 million Florentine *staria*.⁸ By any standard, these quantities were far in excess of requirements in Florence itself, and it is abundantly clear that Florentine merchant-banking companies were purchasing southern grain for resale in other Mediterranean cities and particularly on the lucrative markets of north-central Italy.⁹ In other words, imported durum wheat from southern Italy not only offset local supply perturbations. It also provided consumers in Tuscany with a staple food product that was not very amenable to cultivation in the Tuscan climate.

Andrew Watson, a scholar of medieval Islamic agriculture, has argued that durum wheat had only recently diffused into Mediterranean Europe from Islamic North Africa by the thirteenth century. The actual processes of this diffusion in the Islamic world are very difficult to trace, however, owing to the fact that the classical Arabic language provides no term with which to differentiate hard-grain

⁸ On the exportations of the Peruzzi, the Bardi, and the Acciaiuoli from Puglia in 1309 and 1311, see Yver, 1901, p. 123, n. 2; and De la Roncière, 1976, 4, pp. 139-140, n. 11. It should be noted here that Yver was working from records in the State Archives of Naples that were subsequently destroyed. The exportations of 1311 may have coincided with a severe shortage of foodstuffs in Florence from December 1310 to May 1311, but the earlier exportations in 1309 evidently were accompanied by no significant scarcity of foodstuffs in Tuscany. For evidence on the food supply crisis of 1310 and 1311, see Villani, bk. 9, chap. 12: 'Nello detto anno 1310, dal dicembre al maggio vegnente in Firenze ebbe grandissimo caro, che lo stajo del grano valse uno mezzo fiorino d'oro, ed era tutto mischiato di saggina. E in questo tempo l'arti e la mercatanzia non istette mai peggio in Firenze, e spese di comune grandissime, e gelosie e paure per l'avvento dello 'mperadore'.

⁹ The amount of grain imported from the Italian south by the three largest Florentine merchant-banking companies in 1309 would have been enough to satisfy the entire urban requirement for staple foodstuffs for more than a year. The amount imported in 1311 would have satisfied the entire urban requirement for more than two years. The relationship between the Pugliese *salma* and the Florentine *starium* was twelve to one, following the conversion given by Pegolotti around the year 1340 for 'staia rase', the even measure that was then regarded as the official measure of Florence. Pegolotti used the measure of Manfredonia, which was somewhat inferior to the measure of Barletta. According to Villani, the official measure of Florence was changed in 1343 from the *starium* 'al raso' to the *starium* 'al colmo', which would have been less than a kilogram heavier than the *starium* 'al raso'. The *starium* 'al colmo' was being used in Florence already in 1341, however, and Pegolotti found it necessary to include both measures in his conversion for the Pugliese *salma*, noting that 100 *salme* of Manfredonia were equivalent to only 1050 'staia colme'. See Pegolotti, pp. 166-167; and Villani, bk. 12, chap. 13. On the use of the *starium* 'al colmo' in Florence already in 1341, see Pinto, 1978, p. 15, n. 45, citing ASF, *Conventi soppressi* 108, San Domenico nel Maglio, 125, folio 308r. The quantity of grain exported by the largest Florentine merchant-banking companies from Apulia in 1309 especially in 1311, by any estimate, was probably nearly twice the amount that would have been required to feed the urban population of Florence at the time for more than a year. There can be little doubt that much of this grain was destined for resale on the various urban markets in Tuscany and throughout north-central Italy. In the early fourteenth century, for example, at least one merchant of the Bardi company was granted license to sell grain on the Pisan market, and they were probably joined perhaps to a somewhat lesser extent by the Acciaiuoli and the Peruzzi. See Rossi-Sabatini, 1938, p. 55.

wheats from soft-grain wheats. It is only when an author enters into a detailed description of a kind of wheat that the hard-grain variety can be clearly distinguished in the narrative sources.¹⁰ According to Watson, durum wheat appears to have originated either in Abyssinia or in the south-eastern corner of the Mediterranean basin, perhaps as a mutation from emmer (*triticum dicoccum*), a common wheat of ancient Egypt.¹¹ Durum wheat had diffused widely throughout the Islamic regions and neighbouring areas in the Mediterranean basin by the eleventh century. It was sown in Sijilmasa, in Iberia, and in Byzantine Anatolia. The cultivation of durum wheat in Sicily may have been introduced, or at any rate more thoroughly applied, during more than two centuries of Arab rule in Sicily, from the ninth century until the Norman conquest in the later eleventh century. By the thirteenth century, if not earlier, durum wheat had diffused across the Mediterranean to Christian

¹⁰ The term 'diffusion' is employed because it follows the terminology used by Watson, but the term may be somewhat misleading in that this particular grain evidently was not unknown in classical antiquity. The question concerns more the extent to which hard-grain durum wheat was cultivated in the early medieval west, and how well known it was outside the regions that were most suitable for its cultivation. According to Watson, nevertheless, the early medieval diffusion of hard-grain durum wheat was affected almost entirely through the medieval Islamic world. Only two archaeological finds from Byzantine Egypt supplement a record that otherwise derives largely from the Islamic middle ages. The identification of durum wheat specimens in the archaeological excavations at Karanis, or Kôm Aushîm, an Egyptian site dating from the later third to the early fifth century, has been interpreted variously. While Watson viewed the discoveries in the context the westward diffusion of durum wheat, classical scholars typically have understood the discoveries to indicate that durum wheat was cultivated in classical antiquity. On the early diffusion of hard wheat, see Watson, 1983, p. 21. On the grain specimens identified in the course of the excavations at Karanis, conducted from 1924 to 1931, see Boak, ed., 1933, pp. 87-88.

¹¹ Watson, 1983, p. 20, and p. 157, n. 5 and n. 8. Durum wheat (*triticum durum*) is a naked variety of the emmer group, the members of which can be identified by the fact that they all possess twenty-eight chromosomes. Emmer itself is a husked variety in the same group. The kernel of the husked varieties of wheat must be removed from the husk before they can be used in food preparations, while the kernel of the naked varieties disengages from the husk when it is removed from the stem. Husked varieties of the genus *triticum* are suitable for bread preparations, but only if the husk is removed without roasting. According to Jasny, both the naked and the husked varieties of the emmer group were used in classical antiquity, and durum was the predominant form of naked wheat, but the author fails to note the degree to which one or the other of the two subspecies predominated, if at all. In late antiquity, grains of the emmer group in general, and perhaps especially durum, appear to have lost ground to the softer grains of the spelt group, particularly *triticum vulgare*. Jasny further notes that the distribution of durum is limited by the fact that it is not able to endure severe winter weather, is easily damaged by excessive water, and tends to favour a mild and dry Mediterranean climate. In southern Italy in the second quarter of the twentieth century, durum wheat constituted slightly more than ten per cent of all wheat grown in Campania, about forty per cent of the wheat grown in Puglia and Calabria, and as much as ninety per cent of the wheat grown in Sicily and Sardinia. Durum wheat also accounts for an extremely high proportion of the wheat grown in northwest Africa, in Egypt, in Isreal/Palestine, in Syria, in Anatolia, in Thrace, and in the portions of the Iberian peninsula influenced by Mediterranean weather patterns. It is also the principal wheat in sub-Saharan east Africa and Mesopotamia. See Jasny, 1944, pp. 17-28, 95-96. See also Moritz, 1958, xx-xxvi; and Rickman, 1980, pp. 6-8.

Europe, and particularly to Italy where it was used to provide the basis for various types of pasta.¹²

The principal advantage of durum wheat over soft wheat lay in its versatility and longevity, and also in its high gluten content which indeed permitted the sort of binding necessary in the preparation of pasta. Like certain varieties of sorghum, durum wheat could be cultivated in steppe regions too arid for ordinary soft wheats, and its low water content enabled hard wheat and its by-products to be stored over extremely long periods without special preparation.¹³ In the medieval Islamic world, durum wheat provided the most common basis for cous-cous, and it was used in the preparation of a wide variety of gruels, porridges, and soups. Durum wheat also was used to make dumplings similar to those found in *gnocchi* and *Knödel*, as well as various pastries and puddings, and flat breads.¹⁴

In addition to hard-grain durum wheat, or *grano ciciliano*, other varieties of grain available on the Florentine grain market were *grano calvello*, *grano comunale*, and *grano grosso*. *Grano calvello* was the most expensive grain on the market.¹⁵ It was cultivated throughout Tuscany, was perhaps suitable for pasta preparations as well as the production superior breads and cakes, and can be identified specifically in the evidence for Siena from at least as early as 1248.¹⁶ *Grano*

¹² Linguistic evidence strongly suggests that even pasta itself had diffused across the Mediterranean from the Islamic world. Pasta preparations are first attested in Italy in Genoa towards the end of the third quarter of the thirteenth century, while Herlihy notes that pasta is first mentioned in the sources for Pisa in 1284. See Watson, 1983, pp. 21-23; Herlihy, 1958b, p. 39, n. 15. Notably, both Genoa and Pisa were port cities whose residents no doubt benefited from more frequent interaction with Islamic cultures from the southern shores of the Mediterranean. In the evidence for Florence, pasta preparations thus far have not been identified before 1325, though in this instance the pasta was prepared with *grano calvello* rather than hard-grain durum wheat. For the earliest reference that has yet come to light, see Pinto, 1978, p. 33, citing ASF, *Santa Maria Nuova* 4390, folio 3v [1325 agosto]. On *grano calvello*, see below. By the early fifteenth century, pasta-making was a recognised profession in Florence, and its practitioners were identified as *lasagnai*. See Fiumi, 1953, p. 214, citing *Statuta populi et communis Florentiae (1415)*, 2, p. 302.

¹³ Durum wheat constituted the primary grain cultivated in medieval Sicily, which interestingly had been part of the Islamic world from the early ninth century until the later eleventh century. At any rate, according to De Boüard, one of the main advantages of Sicilian grain lay precisely in the fact that it could endure exceptionally long periods in storage, even more than twenty years. See De Boüard, 1938, p. 484.

¹⁴ Watson, 1983, p. 20.

¹⁵ Davidsohn identified *grano calvello*, incorrectly, as another grain of southern provenance, from the *terra Calvelli* region of Lucania. See Davidsohn, ed., 1896-1908, 4, p. 312.

¹⁶ On *grano calvello* in general, see Pinto, 1978, pp. 32-33. On the appearance of *grano calvello* in the Sienese sources, see again Pinto, 1978, p. 33, n. 18, citing ASSiena, *Diplomatico*, Archivio generale, 1248 June 30. *Grano calvello* is well attested in the notarial sources for Florence in the later thirteenth and early fourteenth centuries. For an example of an early fourteenth century reference, see De Angelis, Gigli, and Sznura, eds., 1978-1986, 2, no. 204, 1300 marzo 5, pp. 5-7.

comunale refers to common soft-grain varieties of wheat that were most prevalent in the better soils of the Florentine countryside and were well-suited for the preparation of finer breads. *Grano grosso* was another soft-grain wheat, also suitable for baking, but inferior in quality to the better common wheat grains. Its main advantage lay in the fact that it was able to thrive in soils that were not very well-suited for the cultivation of the better soft-grain wheats.¹⁷

3.1.2. Inferior grains

Other grains cultivated in the Florentine countryside and sold on the urban grain market at Orsanmichele in the early fourteenth century included barley (*orzo* or *hordeum*), rye (*segale* or *secale cereale*), sorghum (*saggina*, *sorghum bicolor*, or *sorghum vulgare*), spelt (*spelta* or *triticum spelta*), and a variety of legumes and vetches such as broad beans (*fava* or *vicia faba*), chickling (*cicerchia* or *lathyrus sativus*), and tare (*veccia* or *vicia sativa*).¹⁸

Sorghum merits particular attention because, like durum wheat, it too is thought to have diffused into Mediterranean Europe from Islamic North Africa.¹⁹ Also known as great millet or buckwheat, sorghum had diffused into North Africa probably even before the Islamic period from the savanna lands of sub-Saharan Africa. This northward diffusion was not permanent, however, and the sorghum of the savanna was eventually displaced during the early Islamic period by more resilient varieties of sorghum that were diffused from India.²⁰ Pliny noted that a

Abulafia rightly observed, however, that references to the use of *grano calvello* in pasta preparations are difficult to explain. See Abulafia, 1981, p. 385, n. 48.

¹⁷ Pinto, 1978, pp. 30-31.

¹⁸ Pinto, 1978, pp. 34-35. In parentheses are given first the Italian designations, following the *Libro del biadaio*, and then the Latin designations. Rye and spelt were winter crops, sown in the autumn, and barley was sown somewhat later, during the period from December to the beginning of February. All three of these crops could be harvested from about the end of June, though barley was typically reaped first and rye last. Millet, panic-grass, and sorghum were spring crops, sown in March and April, and they were harvested at the same time as wheat in August and September.

¹⁹ According to Watson, asiatic rice (*oryza sativa*) also had diffused into the west through the Islamic world, but it was not very important in Tuscan agriculture during the middle ages, and perhaps least of all in the territory of Florence, mainly owing to the unsuitability of the climate and the terrain, and the relative absence in Tuscany of necessarily sophisticated systems of irrigation. In Italy, diffusion is thought to have been most pronounced in the lowland regions of the Po valley. See Watson, 1983, pp. 15-19, esp. 16, map 2.

²⁰ African sorghums, all of which are diploids, are not found today anywhere along the southern Mediterranean littoral. The varieties of sorghum cultivated in coastal North Africa are all tetraploids, and linguistic evidence suggests that they diffused from India during the early Islamic period, or perhaps a century or two earlier. By the early thirteenth century of the Christian era,

variety of black-grain sorghum had been introduced into Italy during his lifetime, but this introduction evidently failed to take hold. Sorghum reappears in the sources for north-central Italy only in the twelfth century, but the varieties then in evidence had either red or white grains rather than black grains. Petrus de Crescentiis appears to have been unaware of a black-grain variety.²¹ In the medieval Islamic world, sorghum typically was used to make cous-cous, gruels, porridges, and soups, and even lower-quality breads when mixed with the flour from other grains. The importance of this new variety of sorghum lay in its high yield ratios and its resistance to drought. It was able to thrive in the most marginal lands, in the poor and insufficiently irrigated soils of upper Egypt and on the fringes of the Sahara.²²

It is exceedingly difficult to assess the impact of this particular variety of sorghum in north-central Italy before the fourteenth century. In the extant documentation, and particularly in the evidence that dates from before about the middle of the thirteenth century, the varieties of millet cultivated in the Florentine countryside most often appear simply as *blada* or *blada minuta*.²³ Two types of millet that were commonly cultivated in the Florentine countryside appear in thirteenth century sources as *milium* and *panicum*, which is to say millet and panic-grass. Sorghum is attested at Lucca from as early as 1181 and it is attested in the countryside north of Prato in 1243.²⁴ From at least as early as 1320, sorghum was selling regularly on the urban grain market in Florence at Orsanmichele alongside

and perhaps sooner, sorghum of Indian provenance was grown in many parts of the Islamic west. See Watson, 1983, pp. 12-14.

²¹ Watson, 1983, p. 12, and p. 153, nn. 23-24. On the cultivation of sorghum in medieval north-central Italy in particular, see Petrus de Crescentiis, 1471, bk. 3, chap. 17 (*De milica*), folio 51r: 'De milica est enim quedam rubea alba item invenitur species que est albior[um] milio'.

²² Sorghum also may be eaten raw, either unground or ground into flour, and the seeds and stalks may be used to feed livestock. Certain varieties of sorghum may be used to make beer and other fermented beverages as well as syrups. Other practical uses for particular types of sorghum include the making of baskets, brushes and brooms, fencing, and thatch. Watson, 1983, p. 9, and p. 151, nn. 1-4.

²³ The term *bladum* was often used generically to refer to all cereals, though it was sometimes used to distinguish inferior grains such as millet from superior varieties. The term *blada minuta* was used frequently to designate cereals of the millet group owing to the diminutive character of the grains. See Pinto, 1978, p. 38.

²⁴ For an early reference to sorghum in the narrative evidence for Lucca from the third quarter of the twelfth century, see Sercambi, chap. 16. Sorghum is attested in the documentary evidence for Lucca from early in the second quarter of the thirteenth century. See Meyer, ed., no. 45, 1227 aprile 16, p. 245. For evidence from Vaiano in the valley of the river Bisenzio north of Prato, see Fantappiè, ed., 1975, no. 62, 1243 giugno 11, pp. 128-132, esp. 129. The Florentine references are cited below.

millet, panic-grass, and superior grains.²⁵ During the food supply crisis of 1310 and 1311, Villani reported that the grain coming into Florence had been adulterated with sorghum yet still brought a high price.²⁶ In the context of another supply crisis in 1328, a Sienese chronicler noted that a type of bread prepared with a mixture of wheat, barley, and sorghum was available alongside higher quality breads prepared wholly with superior grains, but the breads prepared from wheat mixed with inferior grains were much more economical.²⁷

3.2. The grain supply of Florence in the early fourteenth century

By the second quarter of the fourteenth century, grain production in the Florentine countryside was insufficient to meet the total grain requirements of both the city and its hinterland. In a frequently cited passage from the *Libro del Biadaiole*, the author states that grain production in the countryside of Florence was sufficient to meet the requisites of the city only five months per year.²⁸ Other evidence confirms that Florence was unable to satisfy its food supply requirements from the produce of its surrounding countryside. An anonymous chronicler describing the condition of Florence in 1339 states that the city typically was able to offset what was otherwise a perennial supply shortage and forestall famine only through imports of grain from neighbouring areas.²⁹ The view that Florence was not self-suf-

²⁵ Sorghum, appearing as *saggina* or *saina* (*sorghum vulgare*), is attested frequently in the *Libro del biadaiole*. See Pinto, 1978, *passim*. Panic-grass, or *panicum*, is mentioned specifically in the *Libro del biadaiole* as a grain chosen for chicken fodder. See Pinto, 1978, p. 39, n. 59, and pp. 355, 359. On the cultivation of cereals in general in the Florentine countryside in the early fourteenth century, see Pinto, 1978, pp. 29-47.

²⁶ On the food supply crisis of 1310 and 1311, see Villani, bk. 9, chap. 12.

²⁷ See Agnolo di Tura del Grasso, p. 484: 'El comuno fe' la dogana del pane, ed era di grano, d'orzo e di sagine mescolata, e pesava l'uno uncie 4, e vendevasi due quatrini l'uno. E anco il comune faceva fare del pane solamente di grano e pesava uncie 6 e valeva soldi due per l'uno'. See also Pinto, 1978, p. 38.

²⁸ Pinto, 1978, p. 317: 'Ma tanto bene posso io dire che la detta mi patria, Firenze, a la quale nonn è uno spazio di V mesi e ove sempre più vale la vittuallia ch'a nulla parte di Ytalia, nel detto tempo della fame poté essere che bastò a sostenere per sé sola la metà de' poveri Toschi colla provedenza e aiuto de' ricchi buoni cittadini e di loro danari [...]'.

²⁹ Frey, 1885, pp. 119-123, esp. 121-122. Wines produced in the territory of Florence were both abundant and of good quality, but grain production was insufficient in the absence of imports: 'Vina sunt hodie in territorio eius optima et abundant; et illud bladum quod in ea colligitur, optimum; tamen tante multitudini non sufficiens, sed a vicinis partibus quod deficit sic adimpletur, quod rarissime patitur carestiam. Oleum olivarum quoque peroptimum, quo melius inveniri non potest, et in maxime quantitate, ut non solum sibi sufficiat, sed de illo vicinis in magna quantitate ministrat. Caseus, et si non in maxima quantitate, tamen peroptimus et delicati saporis. Carnes habet optimas de animalibus domesticis et silvestribus in suo districtu nutritur. Pisces paucos habet, quamuis de aliis pertibus deferantur ad illam'.

ficient in grain even under normal conditions also finds support in the admittedly late testimony of a Venetian ambassador in the early sixteenth century, who wrote that the territory of Florence was able to produce a quantity of foodstuffs sufficient to sustain itself for only two thirds or perhaps three quarters of the year. For the balance of its requirements, Florence was compelled to depend upon its subject territories as well as imports from Montepulciano, Arezzo, and mainly Pisa.³⁰

Scholars have interpreted the passage in the *Libro del Biadaiolo* variously. According to Robert Davidsohn, the passage indicates that grain production in the Florentine countryside was able to satisfy the total grain requirement of both the city and the countryside only five months per year under normal conditions.³¹ Giuliano Pinto disagreed, however, suggesting that the author was referring only to the proportion of the urban grain requirement that was satisfied by production in the countryside, and he has taken this to mean that the countryside was self-sufficient in grain.³² Both Davidsohn and Pinto agreed that the author was writing about normal conditions. The interpretation of Davidsohn that agricultural production in the territory of Florence was able to meet only slightly more than forty per cent of the domestic demand for cereals is implausible. The interpretation of Pinto, whereby agricultural production in the countryside was able to satisfy nearly eighty-five per cent of domestic demand, is more credible, but even this seems low.

Pinto calculated that a presumed population of 200,000 in the Florentine countryside around the year 1338 would have required about 100,000 *modia* of grain per year, while an urban population of about 100,000 would have required roughly half of that amount.³³ Pinto based his calculations on an estimated *per capita* consumption of one *starium* of grain per month, or twelve *staria* per year.³⁴ On this basis, the total grain requirement of both the rural and urban sectors in the

³⁰ See Alberi, ed., 1839, p. 25: 'Circa gli alimenti e vettovaglie il territorio di Firenze non è sufficiente a produrre il tutto per un terzo o quarto dell'anno, ma li Fiorentini si prevalgono dei luoghi a loro soggetti, ed hanno grani da Montepulciano, da Arezzo, a principalmente da Pisa, perchè il territorio pisano è fertilissimo, e per questo hanno detta città molto cara'.

³¹ Davidsohn, 1977, 5, p. 238; Davidsohn, ed., 1896-1908, 4, pp. 307-315, esp. 312-313.

³² Pinto, 1978, p. 317, n. 1. See also pp. 75-79.

³³ See again Pinto, 1978, pp. 75-79. On the population of Florence and the surrounding countryside, Pinto was following Fiumi, 1950, in which Fiumi was extrapolating from various figures given by Villani. On the population in the countryside of Florence, see Fiumi, 1950, pp. 87-105. On the urban population, see Fiumi, 1950, pp. 106-118.

³⁴ Fiumi, 1953, pp. 207-217.

territory of Florence would have been about 150,000 *modia* per year. Before 1329, roughly 187.5 *modia* of grain were being sold daily on the urban grain market at Orsanmichele over about 275 market days per year, which is to say that annual sales on the urban grain market amounted to slightly more than 50,000 *modia* of grain.³⁵ This figure, averaged over the entire year, corresponds with the figure of 140 *modia* given by Villani for average daily grain consumption in the city around the year 1338.³⁶ According Pinto, and following the *Libro del Biadaiole*, the grain fields in the countryside of Florence must have been producing about 120,000 *modia* of grain per year before 1329, sufficient to meet all the needs of the countryside but only enough to satisfy about forty per cent of the annual urban requirement. In other words, Florence was experiencing a annual shortfall in production of about 30,000 *modia* of grain, roughly equivalent to the estimated requirements of the city over a seven month period.³⁷

The interpretation of Pinto is contingent upon the accuracy of the passage cited above from the *Libro del Biadaiole*. The passage in question dates from May 1329, during a severe food supply crisis in which grain prices soared by more than one hundred and forty per cent, and also at precisely the time of year when reserves from the previous poor harvest probably would have been running dry.³⁸ From at least as early as December 1328, measures were being taken to restrict the exportation of cereals from the territory of Florence.³⁹ Further measures were taken in April to combat traffic on the black market, speculation, and hoarding in

³⁵ According to the author of the *Libro del Biadaiole*, between 200 and 300 *bigonce* of grain were being sold daily on the urban grain market at Orsanmichele before the famine of 1329. Elsewhere in the text, the author noted that one *bigoncia* was equivalent to eighteen *staria*, which is to say three-quarters of a *modium*. See Pinto, 1978, pp. 346, 404-405. The daily traffic of about 150 to 225 *modia* of grain scattered over something between 270 and 280 market days per year thus amounts to an annual trade ranging from about 40,500 *modia* of grain per year to 63,000. For the number of market days, see Pinto, 1978, pp. 77, 194-195.

³⁶ Villani, bk. 11, chap. 94.

³⁷ Pinto, 1978, pp. 75-79.

³⁸ On grain prices in Florence from 1320 to 1335, see Pinto, 1978, pp. 47-70; De la Roncière, 1982, pp. 103-125. The average price per *starium* of grain on the urban grain market at Orsanmichele during the period from April to June of 1328, expressed in the *moneta parva* of Florence, was sixteen *solidi*, or one hundred and ninety-two *denarii*. By the same three month period in the following year, the average price per *starium* had risen to thirty-eight *solidi* and eight *denarii*, or four hundred and sixty-four *denarii*. Prices for other types of cereals increased accordingly.

³⁹ Florentine officials enacted measures compelling certain grain merchants of Poggibonsi to bring their cereals to Florence, and they prohibited the exportation of grain from Fucecchio and Santa Croce in the lower Arno valley to Pisa. See Pinto, 1978, p. 92, n. 87, citing ASF, *Missive* 3, fol. 93r; ASF, *Missive* 4, fol. 35r.

the countryside.⁴⁰ In May, it was even decided to pay a substantial premium on grain and other cereals imported from outside the territory.⁴¹ Quite clearly, communal grain reserves were under considerable pressure, and the rapid succession of pre-emptive measures in the winter and spring of 1328-1329 emphatically underlines the gravity of the situation. The extraordinary measure of communal intervention in grain prices was not taken, however, and the market was allowed to remain essentially free.⁴²

The author of the *Libro del Biadaio* was an expert grain merchant and his conception of grain consumption and production in the territory of Florence probably is about as accurate as might be hoped from what is, in the context of this particular passage at least, an essentially narrative contemporary source. The question arises, however, as to whether the author was referring to normal times in the passage in question or to circumstances peculiar to the moment at which he was writing. Both Davidsohn and Pinto agreed unequivocally that the author was referring to normal times. Amidst an atmosphere marked by soaring prices and communal intervention in the grain market, however, it is difficult to imagine that the assessment of the grain merchant was not coloured by the prevailing conditions. In the early fourteenth century, agricultural production in the Florentine countryside probably satisfied about ninety per cent of the total grain requirement in the territory in normal years, with virtually all the imports going to the city of Florence itself.

⁴⁰ Pinto, 1978, p. 92, nn. 88-89, pp. 294-296.

⁴¹ To encourage imports, the commune resolved to pay two *solidi* for each *starium* of grain coming from outside the territory of Florence, compared with only nine *denarii* for grain from within the territory. One *solidus* was to be paid for other cereals coming from outside the territory and only four *denarii* were to be paid for such cereals coming from within the territory. Pinto, 1978, p. 92, n. 91, citing ASF, *Provvisoni Protocolli* 6, fol. 349r.

⁴² Pinto, 1978, p. 93.

Table 7. The urban grain requirement of Florence, 1280-1340⁴³

	1280	c.1338
PER DAY	114 <i>modia</i> / 2743 <i>staria</i>	140 <i>modia</i> * / 3360 <i>staria</i>
PER WEEK	800 <i>modia</i> * / 19,200 <i>staria</i>	980 <i>modia</i> / 23,520 <i>staria</i>
PER YEAR	41,600 <i>modia</i> / 998,400 <i>staria</i> 41,701 <i>modia</i> / 1,000,830 <i>staria</i>	50,960 <i>modia</i> / 1,223,040 <i>staria</i> 51,100 <i>modia</i> / 1,226,400 <i>staria</i>
Sustainable population	83,000	102,000

Table 8. Cereal production in the Florentine countryside

		Total area of land under grain cultivation in hectares*					
		20,000	40,000	60,000	80,000	100,000	120,000
		5.13%	10.26%	15.38%	20.51%	25.64%	30.77%
Yield in kilograms of edible grain per hectare per year**	300	26,667	53,333	80,000	106,667	133,333	160,000
	400	35,556	71,111	106,667	142,222	177,778	213,333
	500	44,444	88,889	133,333	177,778	222,222	266,667
	600	53,333	106,667	160,000	213,333	266,667	320,000
	800	71,111	142,222	213,333	284,444	355,556	426,667
	900	80,000	160,000	240,000	320,000	400,000	480,000
	1000	88,889	177,778	266,667	355,556	444,444	533,333
	1200	106,667	213,333	320,000	426,667	533,333	640,000
		Theoretical sustainable population***					

* Amount of land in hectares under cultivation in cereal crops; the percentile figure below corresponds to the proportion of land in the territory of Florence as a whole based on an area of about 3900 square kilometres, or 390,000 hectares.

** Net of seed.

*** Theoretical sustainable population levels at given yields per hectare and hectares under cultivation in cereals, based on an average *per capita* grain requirements of one Florentine *starium* per month, or about 225 kilograms per person per year.

⁴³ Villani, bk. 11, chap. 94. The asterisk indicates the figures actually given by Villani. It is important to note that these figures probably take into account only the grain requirement of urban bakeries. They take no account of grain used in private ovens.

4. The road network

Over the course of the twelfth and thirteenth centuries, the infrastructural pattern in the territory of Florence was radically transformed in several dimensions. The metamorphosis was characterised first of all by the rediscovery, or at any rate the reapplication, of Roman building techniques in the construction of roads and bridges. Along with the embankment of rivers and streams, and the cutting of drainage and irrigation ditches, it was the reapplication of sophisticated road-building techniques in particular that helped to facilitate the descent of the principal arteries of transportation from the ridges and hillsides to the plains and river valleys in certain areas of the Florentine countryside.¹ Improved drainage conditions on the plains in turn facilitated increased agricultural exploitation in the most fertile lowland areas of the countryside and encouraged a demographic shift from upland regions to the plains.² In the territory of Florence, the descent of the roads and the redistribution of the rural population between upland and lowland regions also may have fundamentally altered the structure of seigniorial power in certain parts of the territory. The new arteries of transportation that evolved during the twelfth and thirteenth centuries avoided many of the centres of comital power, effectively excluding the great seigniorial lords of the upland regions in the Florentine countryside from the benefits of economic expansion.³

The transformation of the rural trade infrastructure in the territory of Florence was distinguished also by the integration of a number of relatively small and for the most part locally oriented networks of distribution and exchange into sev-

¹ Even within the Roman walls of northern and central Italian towns and cities, according to Ward-Perkins, the most significant infrastructural change that occurred in late antiquity and the early middle ages was the abandonment of Roman methods of road construction, owing largely to the decline of secular munificence after the Roman period. See Ward-Perkins, 1984, pp. 1-37, 185-186. In the later thirteenth century, Tuscan road-builders employed a variety of sophisticated techniques to overcome problems associated with laying roads over terrain susceptible to flooding. Roads were elevated above the level of the surrounding terrain and raised slightly along the centre to induce runoff. Elevated roads were reinforced with trees planted at regular intervals along their length, and they were finished with a top layer of stone. See Herlihy, 1958b, pp. 96-97. On the descent of the roads from the ridges and hillsides to the plains and river valleys, see below.

² The data for a demographic shift from upland regions to the plains in the territory of Florence from the thirteenth century are insufficient to confirm this particular notion, but developments of this sort can be observed in the evidence for both Pistoia and Perugia. For Pistoia, see Herlihy, 1967a, pp. 50-51. For Perugia, see Blashei, 1976, p. 39.

³ This particular observation was first made by Enrico Fiumi. See Fiumi, 1957-1959, pt. 2, pp. 469-473, esp. 471; 1977, pp. 91-95, esp. 93.

eral larger networks that were more regional in scope and increasingly oriented towards the expanding urban market in the city itself. The integration of the networks of distribution and exchange within the territory of Florence was also accompanied by the coordinated expansion of local, middle-distance, and long-distance trade. The most important trade routes radiated from Florence along three trajectories, one to the north in the direction of Bologna, Faenza, and Imola, another to the south in the direction of Arezzo, valleys of the rivers Chiana and Tiber; and another to the west in the direction of Pisa, which also provided the easiest means of access to Provence and the Italian south.

Owing to the nature of the documentation for medieval Florence and its surrounding countryside, however, it is virtually impossible to monitor directly infrastructural development in the Florentine countryside during the period under investigation. It is therefore necessary to explore infrastructural development in the territory of Florence during the twelfth and thirteenth centuries in an indirect manner through examination of some of its constituent parts. Among the primary elements in the trade infrastructure of the Florentine countryside were of course the roads and bridges over which resources drawn from the hinterland travelled first to rural markets or seigniorial collection centres, then to larger secondary markets, and perhaps thence to the primary market in the city.⁴ Accordingly, markets and seigniorial collection centres were also integral elements in the trade infrastructure in the countryside of Florence.⁵ Religious hospitals, hostelries, and other such facilities were particularly important infrastructural elements, primarily as places of lodging for both religious and commercial travellers but occasionally also as centres for the collection of rents in kind and perhaps even as impromptu markets or *emporia*.⁶ Mills were also essential ingredients in the rural trade infrastructure of Florence owing to the role that they played in the provisioning of staple foodstuffs and in the manufacture of woollen textiles, the latter of which was the most important industry of the city.⁷ Other important components in the

⁴ Bridges in the Florentine countryside are catalogued below, Appendix 9.5. See also De la Roncière, 1976, 4, pp. 296-301.

⁵ Both rural markets in the Florentine countryside and urban markets at Florence are listed below, Appendix 9.7. See also De la Roncière, 1976, 4, pp. 343-347.

⁶ Hospitals in the Florentine countryside are enumerated below in Appendix 9.8. See also De la Roncière, 1976, 4, pp. 311-319. For hostelries in the countryside of Florence in the early fourteenth century, see Sartini, ed., 1953.

⁷ For a list of water-mills in the Florentine countryside, see below in Appendix 9.9. See also Muendel, 1984, p. 218, fig. 1.

trade infrastructure in the Florentine countryside included *castella* and *curtes*, rural monasteries, and rural parish churches, all of which serve in varying degrees as indicators of centres of habitation, agricultural production, rent collection, and estate administration. These were also places at which notarial acts were regularly redacted, which is itself suggestive of economic activity and reflects a degree of infrastructural significance.

In this appendix, attention will focus above all on roads and bridges, rural markets and seigniorial collection centres, and hospitals and hostelries. Both flour mills and fulling mills have already been discussed in various contexts, and only occasional reference to them is necessary here. *Castella*, *castra*, and *curtes*, as well as rural parish churches and rural monasteries typically reflect the older manifestations of the trade infrastructure in the Florentine countryside.⁸ Their arrangement serves more to illustrate the main lines of communication in the territory of Florence before the so-called ‘rivoluzione stradale del dugento’ and the descent of the roads in certain parts of the territory of Florence from the ridges and hillsides to the plains and river valleys.⁹

4.1. Roads and bridges

Because roads often were employed in land conveyances as geographic points of reference to delineate the confines of the particular piece of property at issue, they are perhaps the most visible ingredients of the infrastructure in the extant documentation from the twelfth and thirteenth centuries. Although bridges also served as geographic points of reference, they are far less ubiquitous than roads in the surviving evidence partly because they were simply fewer in number but also because they lacked the utility of roads to mark property boundaries. Bridges are specific topographical points generally without contiguity to the entire length of a piece of landed property, and as a consequence they appeared in the documentation for the Florentine countryside most commonly as a means by which to identify the general location of a particular piece of property or perhaps as the site

⁸ On *castella* and *castra* in the Florentine countryside in the twelfth and thirteenth centuries, see Francovich, 1973. The locations of churches and monasteries in the countryside of Florence at the end of the thirteenth century are indicated on the map that accompanies Guidi, ed., 1932.

⁹ The phrase ‘rivoluzione stradale del dugento’ refers to a lengthy article published in 1938 by the Danish historian Johan Plesner, which, despite its flaws, is nevertheless regarded as a classic piece of historical scholarship. See Plesner, 1938.

at which a contract was recorded. Roads are rather less specific as features of the topography and as such were less useful in establishing the general location of a piece of property, but their linear aspect rendered them ideal markers of property boundaries.

Roads are most commonly designated in the sources simply as *vie* or *strade*, and somewhat less commonly as *vie publice* or *strade publice*. The term *via* may refer to a road of either private or public character and of widely varying importance, while a *via publica*, quite naturally, always indicated a public road, but not necessarily a road of any greater importance than a *via*. It may have been a road of strictly local importance, a regional thoroughfare, or even a major artery of inter-regional communication. The term *strada* or *strata*, on the other hand, is thought to have been a somewhat more specific designation. It originally referred to a *via* that was covered with a *stratum* of some sort of material, in other words a paved road, sometimes also called a *silex*. Roads of this sort typically occupied a position of some consequence, either along the course of old Roman consular roads or along important arteries of regional and inter-regional communication. After about the middle of the twelfth century, according to Thomas Szabó, the term *strada* was employed more and more by the nascent communal administrations as a specific designation for a master road, and many of the more important roads that typically had been termed *vie* came to be identified as *strade*.¹⁰ The terms remained interchangeable, nevertheless, and roads identified in the sources

¹⁰ On roads in Tuscany in general with an emphasis on the territories of Pistoia and Siena, see the articles collected in Szabó, 1992. On the terminology of the sources, see Herlihy, 1958b, pp. 96-97; Szabó, 1992, pp. 73-74. According to Szabó, this change in terminology may have been a reflection of a change in the manner in which roads were conceived, particularly with respect to their public character. The dissolution of public power in northern Italy following the Carolingian epoch was accompanied by a steady deterioration of the network of roads and bridges in the Italian north and even the complete abandonment of many roads and bridges. The maintenance of roads and bridges, when undertaken at all, increasingly became the concern of more local institutions such as church canons, hospitals, monasteries, and private consortia. After the middle of the twelfth century, however, roads and bridges once again became matters of public interest, owing largely to the emergence of the communes and perhaps also to the rebirth of Roman law and the *Corpus Iuris Civilis* which proffered a distinct conception of the public character of roads and bridges, thereby providing the emperors with a legal mechanism by which to attempt to recover some measure of control in northern Italy. See again Szabó, 1992, pp. 82-83. It is nevertheless arguable, however, that a public conception of roads and bridges was never completely lost during the early middle ages. According to Charles M. De la Roncière, the distinction in notarial instruments of the later thirteenth and fourteenth centuries between simple *vie* on the one hand and *strade* and *vie publice* on the other was a very real one. See De la Roncière, 1976, 3, p. 843; 4, p. 257, n. 53.

of the thirteenth and early fourteenth centuries simply as *vie* still may have been important thoroughfares.¹¹

4.2. The Plesner thesis

According to Johan Plesner, the old Roman roads in the territory of Florence and their early medieval remnants typically avoided the lowland plains and river valleys, especially in parts of the countryside more distant from the city. Lowland areas were subject to flooding and were often impassable in wet weather. The older passages sought instead the protection of the ridges and hillsides soon after leaving the city and they often took circuitous routes to circumvent the lowest plains. These old roads are attested in the existence of such places as Quarto, Quinto, Quintole, Sesto, Settimo, Settimello, Decimo, and Vigesimo, which had taken their names from the old Roman milestones that occupied the same sites, even though these places are almost invariably situated at distances from the city that seem not to correspond to Roman measures. Plesner believed that the apparent contradiction rested first of all in the fact that each Roman milestone in the territory of Florence marked not one but two Roman miles, which is to say about 2960 metres rather than 1480 metres. Secondly, the older routes were often compelled to follow circuitous passages in order to avoid the natural obstacles posed by both marshy lowlands and high mountains, seeking instead elevated ground along the lower ridges and hillsides.¹²

Both of these arguments have been challenged by Szabó, who noted that the ‘double-mile’ scheme proposed by Plesner for Florence would have been unique in Roman Italy. Moreover, the actual arrangement of towns with place-names deriving from Roman milestones conforms to the ‘double-mile’ scheme rather less neatly than Plesner argued. Szabó suggested that the location of these modern towns may be, and may have been in the middle ages, somewhat removed from the Roman road network and the milestones from which the names originally derived. In other words, places with names derived from Roman milestones may not have developed necessarily on the actual sites of the milestones themselves or

¹¹ See, for example, Pirillo, 1995a, pp. 46-47.

¹² For the general outline of the argument, see Plesner, 1938, pp. 5-11.

even in their immediate vicinity.¹³ The argument put forward by Plesner also places much weight on the arrangement of parish churches in the territory of Florence, and the notion that the parish churches in the Florentine countryside were responsible for the maintenance of roads and bridges within the territory of their parish. The sometimes peculiar position of the parish churches and parish boundaries, according to Plesner, may be explained in relation to the paths followed by the principal thoroughfares that ran through the territory in late antiquity and the early medieval ages.¹⁴ Many of the parish churches cited by Plesner, however, are first attested only after the beginning of the eleventh century, and other research undertaken for the most part in Lombardy confirms that the arrangement of parish churches became fixed only in the twelfth century.¹⁵

The Plesner thesis clearly is not without its shortcomings, and to those noted by Szabó might be added the problem of chronology. In general, the 'rivoluzione stradale del dugento' was in most parts of the Florentine countryside already well under way before 1200, particularly on the plains around the city of Florence itself and in the lowlying areas around the larger towns that were emerging in the Florentine hinterland. In addition, the demise of the upland routes in the countryside was neither as sudden nor as complete as Plesner argued. Although the importance of the older roads that followed the hillsides and ridges in the territory of Florence diminished considerably over the course of the thirteenth century, these roads and the markets that they serviced continued to play a vital role in the Florentine economy in the early fourteenth century. Despite the shortcomings of the Plesner thesis, its author must be credited for what was a brilliant intuition. Plesner identified a fundamental feature in the change from an early medieval road network in the territory of Florence to a later medieval road network, which is to

¹³ On the shortcomings of this aspect of the argument put forward by Plesner for the development of the road network in the Florentine countryside, see Szabó, 1992, pp. 263-268. For another interesting critique, see Hardie, 1965, pp. 123-128.

¹⁴ Plesner, 1938, pp. 19-29.

¹⁵ Based on an admittedly rudimentary analysis, Szabó was able to date only twenty-one parish churches in the dioceses of Florence and Fiesole from before the turn of the millennium, and fifteen of these were attested for the first time only in the tenth century. The nature of the early documentation no doubt has much to do with the difficulty involved in establishing the existence of many parish churches before the beginning of the eleventh century. Szabó concedes that a more rigorous consideration of the matter very likely would facilitate the establishment of the earlier existence of many of these parish churches. The analysis of Szabó nevertheless suggests that the arrangement of parish churches and their territories evolved over the course of the early middle ages. Szabó, 1992, pp. 263-266. Fiumi also expressed reservations about this aspect of the argument proffered by Plesner. See Fiumi, 1957-1959, pt. 2, p. 446, n. 10; 1977, pp. 68-69, n. 10.

say the descent of the main arteries of transportation from the hillsides and ridges to the plains and river valleys in certain parts of the Florentine countryside. The descent of the principal roads in the territory was also accompanied by a demographic shift and an alteration in the structures of seigniorial power.

4.3. The master roads

By the later thirteenth century, however, improved drainage conditions on the plains and innovations in the techniques of road construction facilitated in many places the descent of the principal arteries of transportation in the territory from the ridges and hillsides to the low-lying plains and river valleys.¹⁶ The advent of these more direct and more easily negotiated lowland passages relegated many of the upland routes to a secondary role in the rural infrastructure of Florence. Several of the previously important centres of distribution and exchange situated along the upland routes entered into a period of slow decline from the later twelfth century, while new centres in the river valleys began to undergo extraordinarily rapid development. It was only towards the beginning of the thirteenth century, for example, that such towns as Castelfiorentino, Certaldo, Empoli, Figline, Montevarchi, Poggibonsi, Dicomano, Borgo San Lorenzo, and San Piero a Sieve began to emerge as the dominant centres of distribution and exchange in the Florentine countryside.¹⁷ The rural centres that enjoyed the most profound development over the course of the thirteenth century were almost invariably situated in the river valleys at important junctions and along the 'master roads' that radiated out from the city of Florence towards Pisa, Prato, Bologna, Faenza, Arezzo, Siena, and Volterra.¹⁸

¹⁶ On the reclamation of lowland areas in the territory of Florence, see Plesner, 1938, pp. 92-101. On road-building techniques in late thirteenth century Tuscany, see Herlihy, 1958b, pp. 96-97. See also Bonaini, ed., 1854-1870, 1, *Breve Pisani Communis* (1286), bk. 4, rub. 17, pp. 490-492; 2, p. 433.

¹⁷ On the growth of towns in the river valleys in the territory of Florence with respect to infrastructural development, see Fiumi, 1957-1959, pt. 2, p. 471-473, esp. 471; 1977, p. 91.

¹⁸ The sources mention the existence of 'seven master roads' in the territory of Florence as early as 1285. See Gherardi, ed., 1896-1898, 1, p. 294. The seven master roads that radiated out from the city of Florence in the later thirteenth century were probably the roads for (1) Pisa by way of Ponte a Signa and Empoli; (2) Prato, Pistoia, and Lucca; (3) Bologna by way of either the valley of the torrent Marina from Calenzano to Barberino di Mugello and the Passo di Futa, or by way of San Piero a Sieve and the Osteria Bruciata or the Giogo di Scarperia; (4) Faenza by way of Borgo San Lorenzo, Razzuolo, and Marradi; (5) Arezzo by way of San Donato in Collina and Figline Valdarno; (6) Siena and the Chianti by way of San Casciano in Val di Pesa and Poggibonsi; and

4.3.1. The lower valley of the river Arno and the Sesto-Campi plain

Plesner believed that the old Roman road from Florence to Pisa, or at any rate the early medieval road, avoided the Settimo plain by skirting the low hills to the south. From the southern end of the Ponte Vecchio, according to Plesner, the old road took a route that crossed the river Greve at Ponte all'Asse and then passed through Giogoli and traversed around the upper reaches of the torrent Vingone. The route followed the hillside above the left bank of the Vingone towards San Martino alla Palma, and descended the ridge above the Vingone to the parish church of San Giuliano a Settimo.¹⁹ The old road then continued through Santa

(7) Volterra by way of Castelfiorentino and Gambassi. By the end of the first quarter of the fourteenth century, the number of 'master roads' in the territory had grown to ten. See Caggese, ed., 1910, bk. 4, chap. 8, p. 175-181, esp. 175: 'Que strate et vie mastre sunt hec, videlicet: via et strata que summitur a porta seu Burgo Sancti Nicholai per quam itur in Vallem Arni; strata de Chianti que summit initium a pilastro ubi est crux ultra ponticellum de Ricorboli; strata per quam itur Pratum et incipit a ponte seu Burgho Sancti Pauli; strata de Sexto per quam itur Pratum et incipit a porta de Campo Corbolino; strata per quam itur ad Sanctum Petrum de Sieve, versus Bononiam et versus Gallianum et Sanctam Aghatam, et incipit a porta seu Burgho Sancti Laurentii; strata per quam itur ad Burghum Sancti Laurentii de Mucello, que summitur ab hospitali Sancti Galli; strata per quam itur ad Pontem de Sieve at vadit versus Decomanum et incipit a Burgo Sancti Petri Maioris; strata per quam itur ad Sanctum Cassianum, Podium Boniççi et Sanctum Donatum in Pocis; strata de Giogholis que summitur a porta seu Burgho Sancti Petri in Gattolino; strata per quam itur Pisas que summitur a porta seu Burgo Sancti Frediani'.

¹⁹ In this instance, Settimo refers not to the abbey of Settimo, which is situated not very far from the river and virtually in the middle of the Settimo plain, but rather to the parish church of San Giuliano a Settimo, situated farther to south at the base of a hill ridge that rises above the torrent Vingone. See Plesner, 1938, pp. 41-43; Lopes Pegna, 1962, p. 234. On the location of the parish church of San Giuliano a Settimo, see Repetti, 1833-1845, 5, pp. 288-290. The available evidence from the later twelfth to the early fourteenth century leaves no doubt that the principal thoroughfare from Florence to Pisa passed through the parish centre. A hospital at Corticelle in the parish of San Giuliano a Settimo is attested at least from as early as 1186, and the public road that passed through the parish centre is attested from at least as early as 1226. For the hospital at Corticelle, see ASF, *Diplomatico*, Cestello, 1186 January 26, 1204 September 5, 1226 August 16. See also ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 479, 302, folios 21v-22r, recording several pertinent acts dated from 1114 to 1226. For the public road, see again ASF, *Diplomatico*, Cestello, 1226 August 16. See also ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 479, 302, folio 13v, 1304 July 17, which records a purchase of a piece of property in the 'popolo' of the parish of San Giuliano a Settimo bordering the 'strata publica qua itur pisas'. The same act records the purchase of another piece of property in the 'popolo' of the parish of San Giuliano a Settimo bordering a 'via que appellatur via maggio'. It is very likely that the designation *via maggio* refers to a major road, a *via maioris*. Another *via maggio* is attested from the year 1317 in the vicinity of Vespignano in the Val di Sieve, about midway between Borgo San Lorenzo and Vicchio. See Pirillo, 1995a, p. 42, n. 28, citing ASF, *Notarile antecosimiano* 7871, folio 12r [1317 October 18]. In the city of Florence itself, yet another *via maggio* is attested in the Oltrarno between a square appertaining to the Frescobaldi and the church of San Felice from the end of the first quarter of the fourteenth century. See Caggese, ed., 1910, bk. 4, chap. 28, p. 194. The most common route taken between Florence and Settimo during the early middle ages is less certain.

Maria a Castagnolo and San Martino a Gangalandi to the river Arno at Ponte a Signa. There is little doubt that such a route existed in the thirteenth century, but by the end of the century, and almost certainly much earlier, the initial segment of the most commonly used route from Florence to Pisa had assumed a path that cut more directly across the Settimo plain. It went through Monticelli, Legnaia, San Lorenzo a Greve, and passed the tenth century abbey of San Salvatore di Settimo, to the parish seat of San Giuliano a Settimo, whence it joined the older route descending towards the important market town of Ponte a Signa.²⁰

According to Lopes Pegna, however, the Roman road between Florence and Ponte a Signa may have followed a somewhat less circuitous passage than the one delineated by Plesner. Lopes Pegna argued that the Roman road passed through Monticelli and Legnaia, where a public road is attested from at least as early as 1225, to Ponte a Greve, and then continued on the right bank of the Vingone through Casellina, and Olmo to the parish church of San Giuliano a Settimo. The road then followed the common route through Santa Maria a Castagnolo and San Martino a Gangalandi to Signa. See again Lopes Pegna, 1962, p. 234. For evidence of a public road at Legnaia in 1225, see Santini, ed., 1895, *Capitoli*, no. 73, 1225 October 8 and November 28, pp. 207-210, esp. 207. The presence of the abbey of Settimo virtually in the middle of the plain from its founding in the later tenth or early eleventh century at least suggests that the plain was generally passable by that time, and indeed Elio Conti has shown that the area was heavily cultivated and thoroughly irrigated already in the tenth century. Documents of the twelfth and early thirteenth centuries nevertheless occasionally refer to the area around the abbey of Settimo as a *padule*, or marsh, and evidence from the early thirteenth century clearly illustrates the existence of a public road going through San Martino alla Palma. Of course, these designations very easily could have been anachronisms by that time. On the founding of the abbey of Settimo, see Vasaturo, 1962, pp. 463-464. On cultivation and drainage on the Settimo plain already in the tenth century, see Conti, 1965, pp. 69-70. For references to the *padule* on the Settimo plain, see ASF, *Diplomatico*, Cestello, 1134 December 20, 1237 October 6. In modern Italian, the term for 'marsh' is *palude*, but both *padule* and *palude* were used in medieval Latin, although the former tended to predominate. For evidence of a public road passing through San Martino alla Palma, see ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 405, no. B LXXIV, 1227 February 9, pp. 179-181; ASF, *Diplomatico*, Cestello, 1238 June 20; ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 405, no. B CLXXXVI, 1243 March 24, p. 312; ASF, *Diplomatico*, Cestello, 1244 November 26.

²⁰ De la Roncière, 1976, 3, p. 838; 4, p. 249, nn. 4-6. According to De la Roncière, a road at Monticelli is attested from 1298, at Legnaia from 1307, and at San Lorenzo a Greve from 1326. In addition, hospitals are attested along the lowland route at Ponte a Greve from 1258, and at Casellina from perhaps as early as the eleventh century. For the hospital at Ponte a Greve, see ASF, *Diplomatico*, Strozziiane Ugucione, 1258 September 18. For the hospital at Casellina, see Repetti, 1833-1845, 1, p. 509. Repetti also noted evidence for the establishment, or perhaps the re-establishment, of the hospital at Casellina in 1371. Ponte a Signa was an exceedingly important market in the Florentine trade infrastructure. Not only was it the primary market for agricultural products raised on the exceptionally fertile plains of Settimo and the lower Bisenzio, but it was also a point of disembarkation for imported goods transported along the river from Pisa. Port facilities in the vicinity of Ponte a Signa are attested from the later tenth century. For the earliest evidence of a market at Ponte a Signa, see Piattoli, ed., 1938, no. 190, 1149 October 1, pp. 453-455, esp. 453. See also ASF, *Diplomatico*, Cestello, 1252 August 10. For the earliest evidence of port facilities at Ponte a Signa, see Piattoli, ed., 1938, no. 14, 964 July, pp. 40-45, esp. 42. See also Mosiici, ed., 1969, no. 15, 1078 February 20, pp. 68-74, esp. 71; ASF, *Diplomatico*, Cestello, 1181 June.

Plesner sustained that the old road crossed the river Arno here at Ponte a Signa and followed a course above the right bank of the river, climbing to Artimino and then descending to join the river at Limite and crossing again to Empoli, the old Roman *emporium Arni*.²¹ Evidence from the thirteenth and early fourteenth centuries leaves no doubt, however, that a route from Florence to Pisa continued beyond Ponte a Signa on the left bank of the Arno. In the thirteenth century, the most important route on the left bank ascended the valley of the torrent Rimaggio to the south-southwest from Ponte a Signa, turned west towards Malmantile and San Pietro in Selve, and then descended towards the southwest to crossings of both the rivers Arno and Pesa at Montelupo.²² Another road on the left bank of the river Arno followed more closely the meandering path of the river through Porto di Mezzo, Brucianesi, and Lamole by the early fourteenth century.²³

²¹ Plesner acknowledged that his conclusions on this matter were by no means certain. His argument was based on the fact that the parish church of Signa was situated on the right bank of the river while the greater portion of its population resided on the left bank. See Plesner, 1938, p. 44.

²² De la Roncière, 1976, 3, p. 838; 4, p. 250, n. 11. The area west of the city on the left bank of the river Arno beyond Ponte a Signa is poorly documented before the later thirteenth century, and De la Roncière was drawing on evidence in early fourteenth century notarial cartularies. Nevertheless, a crossing of the river Arno between Montelupo and Capraia is attested already at the beginning of the thirteenth century. On the left bank, a road that was capable of sustaining wheeled transport attested between Ponte a Signa and a crossing of the river Pesa at Montelupo from 1322. For evidence of the bridge over the Arno at Capraia, see Santini, ed., 1896, *Capitoli*, no. 54, 1204 October 29, pp. 143-144, esp. 144. The existence of a bridge over the lower Pesa at Montelupo is attested from at least as early as 1322 in a reference to the construction of a new road between Ponte a Signa and the bridge over the Pesa at Montelupo. See Caggese, ed., 1910, bk. 4, chap. 10, p. 181: 'stratam novam et carecciam confectam a Ponte de Signa ad pontem Pese de Montelupo'. An important road at Montelupo is also attested in the *Liber extimationum* of 1269. See Brattö, ed., 1956, par. 336, p. 66. By the middle of the fourteenth century, Montelupo had become the site of one of the more important markets in the Florentine countryside. See Pinto, 1972, pp. 23-24, n. 45, citing ASF, *Abbondanza* 102, 8, folio 46v (1346 November 6). The route between Ponte a Signa and Montelupo through Malmantile is attested as a part of the primary route on the left bank of the Arno between Florence and Pisa in the fifteenth century. See Dini, 1986, p. 290.

²³ See De la Roncière, 1976, 3, p. 838; 4, p. 250, n. 10. The reference to the 'new' road between Ponte a Signa and Montelupo in the *Statutum Capitanei* in 1322, cited above, is difficult to reconcile with earlier evidence attesting to public thoroughfares between the two towns both adjacent to the river and farther inland through Malmantile. The reference probably refers to a newly constructed road that followed the path of either the coastal road through Porto di Mezzo or the road farther inland through Malmantile. The earliest evidence for port facilities at Porto di Mezzo dates from 1217, and it is likely that a significant road provided access to the port by that time. A public road extending from Ponte a Signa to Porto di Mezzo clearly existed by 1270. For the earliest evidence relating to Porto di Mezzo, see ASF, *Diplomatico*, Cestello, 1217 September 13. For evidence of a road in 1270 between Ponte a Signa and 'Mezzana', another name by which Porto di Mezzo was known, see ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, folio 25r. For evidence of a public road at 'Mezzana' by 1281, see ASF, *Compagnie religiose soppresse da Pietro Leopoldo* 479, 302, folio 24r. On the identification of 'Mezzana' with Porto di Mezzo, see Repetti, 1833-1845, 4, p. 611. The westward extension of a public road adjacent to

Beyond Montelupo, the road continued across the plains on the left bank of the Arno, crossing the torrent Orme at Pontorme to Empoli and then crossing the river Elsa at Ponte a Elsa.²⁴

North of the river Arno, according to Plesner, the old Roman road from Florence to Prato avoided the more direct passage across the plain through Peretola and Mezzana and angled to the north to contour around the lower reaches of the Monte Morello massif, passing through Trespiano, Quarto, Quinto, Sesto, Settimello, and Calenzano to join the river Bisenzio at Prato.²⁵ From Prato, the road probably continued towards the northwest through Montemurlo and Montale to Pistoia, as already noted above in chapter four, skirting the hills just above the plain.²⁶ Certainly by the end of the thirteenth century, however, two alternative passages to the northwest of Florence in the direction of Prato and Pistoia had been developed. The first of these two roads cut directly across the Sesto-Campi plain from the western gate of the Roman city of Florence through Peretola towards Campi Bisenzio, probably following the line of the Roman *decumanus maximus*, before veering north somewhat through Capalle and Mezzana to Prato.²⁷

the river beyond Porto di Mezzo is not attested from before 1322, which allows the possibility that the 'new' road between Ponte a Signa and Montelupo was merely a newly constructed continuation of the old coastal road. References to the coastal road from farther down river cited by De la Roncière invariably date from later in the fourteenth century. The public road through Malmantile, on the other hand, was clearly in existence just after the beginning of the fourteenth century. It is therefore plausible that the new road mentioned in the later evidence refers not to the principal road between Ponte a Signa and Montelupo through Malmantile but to a secondary route adjacent to the river that was extended for the first time beyond Porto di Mezzo. On the *strata nova* between Ponte a Signa and Montelupo, see again Caggese, ed., 1910, bk. 4, chap. 10, p. 181. For evidence of the *strata publica* through Malmantile and San Pietro in Selve dating from before 1310, see again De la Roncière, 1976, 4, p. 250, n. 11.

²⁴ The bridge at Pontorme is attested from the eighth century, and a stone bridge at Ponte a Elsa that probably had been constructed in the thirteenth century was destroyed by heavy rains and flooding on the river in 1308. On the bridge at Pontorme, see Repetti, 1833-1845, 4, pp. 541-543, esp. 541; and on the bridge at Ponte a Elsa, see Giovanni di Lemmo da Comugnori, p. 170. The bridge at Ponte a Elsa, over which traversed the 'stratum qua itur Pisas', was subsequently reconstructed, and it underwent repairs in 1340. For evidence of repairs on the bridge at Ponte a Elsa in 1340, see Masi, ed., 1934, p. 62, n. 2, citing ASF, *Libri fabarum* 19, folio 56. In the fifteenth century, this route continued on the left bank of the Arno towards Pisa by way of Capanne, Pontedera, and Cascina. From Empoli another road crossed the Arno and continued towards Pisa on the right bank of the river through Fuccechio, Santa Croce sull'Arno, Castelfranco di Sotto, Santa Maria a Monte, Bientina, and Vicopisano. See Dini, 1986, pp. 290-291.

²⁵ Plesner, 1938, pp. 30-31.

²⁶ See again Herlihy, 1967a, p. 23, nn. 25, 26; pp. 50-51, nn. 70, 71. See also Lopes Pegna, 1962, p. 221.

²⁷ Lopes Pegna has argued that traces of Roman 'centuriation' can be detected on the plain south of Prato. The centuriated plain was bisected by the *decumanus maximus*, a public road perhaps

This road probably was fully developed by about the beginning of last quarter of the thirteenth century, but other evidence suggests that it may have been opened much earlier.²⁸ From Peretola, another road diverged farther south, by-passing Prato completely and going instead directly to Pistoia by way of Brozzi and San Donnino.²⁹

4.3.2. The trans-Appennine passages

The trans-Appennine passages between Florence and Emilia-Romagna have received the most attention in the historiography of the Florentine infrastructure.³⁰ In antiquity, according to Plesner, the principal trans-Appennine passage from Florence to Bologna followed the old route through Sesto and Calenzano to Prato and then turned north to ascend the valley of the river Bisenzio through Vaiano towards Vernio. Plesner believed that the principal route across the Appennines continued not directly north towards Montepiano and Castiglione dei Pepoli but

twelve metres wide that was designed to service the fields on the plain. The old Roman road continued its direct route across the plain from Campi Bisenzio through San Giorgio a Colonica and Villa Calosi to Casone, going in the direction of Iolo San Pietro and Tobbiana. See Lopes Pegna, 1962, pp. 54-62, esp. 60-61. The medieval road through Peretola is attested from 1277, and the road through Capalle and Mezzana is attested from 1282. For evidence of the road through Peretola, see Castellani, ed., 1952, 1, p. 369. For evidence of the road through Capalle and Mezzana, see Gherardi, ed., 1896-1898, 1, p. 101: [25 September 1282] 'Item, super via lastricanda qua itur Pratum – De provisione strata Pratensis diructe inter Capalle et ulivum meczalle'.

²⁸ In the later twelfth century, a public road is attested southwest of Prato roughly along the line of the *decumanus maximus* at Tobbiana, and another road is attested on the northward extension of the Roman road from Campi Bisenzio to Prato at Mezzana. For evidence of the public road at Tobbiana, see Fantappiè, ed., 1977, no. 220, 1182 February 7, pp. 403-404, esp. 404; and for the road at Mezzana, see Fantappiè, ed., no. 204, 1176 February 4, pp. 377-379, esp. 378. The bishops of Florence were also investing substantially in the area in the area around Campi Bisenzio and Capalle at the very beginning of the thirteenth century. See ASF, *Manoscritti*, 48BIS, folios 66v-69r. Quite in general, the evidence for Prato gives the impression of a heavily settled plain by the end of the twelfth century. See Fantappiè, ed., 1977, *passim*.

²⁹ The road passing through Brozzi and San Donnino is attested in the first quarter of the thirteenth century. See De la Roncière, 1976, 3, p. 839; 4, p. 251, nn. 18 and 19. The growing importance of Peretola is attested by the existence of a developing market for real estate on the plain around Peretola already in the third quarter of the thirteenth century, and the village of Peretola itself was supporting a market for consumable products by 1348. For evidence of a developing market for real estate on the plain around Peretola, see ASF, *Diplomatico*, Caprini, acquisto, 1264 May 14. On the market for consumables at Peretola, see De la Roncière, 1976, 3, p. 954; 4, pp. 343-347.

³⁰ For the medieval period, in addition to the works cited below, see also Palmieri, 1918; Guidotti, 1987. The literature on the trans-Appennine passages in antiquity may also be approached through Barbieri, 1947; Lopes Pegna, 1962; Maetzke, 1941.

turned to the southeast and climbed the Monti della Calvina to Montecuccoli. The route then descended through Giratola to Vigesimo, near Barberino di Mugello, before turning north once again to ascend through Castel Miliari, San Gavino, and Santa Lucia towards the Passo della Futa.³¹ Another passage between the upper valley of the river Bisenzio and the western Mugello ran between Montepiano and Barberino di Mugello through the market town of Mangona.³² Certainly by the early fourteenth century, and no doubt also much earlier, the road that climbed the Bisenzio valley continued directly north beyond Vernio through Montepiano and Castiglione dei Pepoli, and then descended the valleys of the torrent Setta and the river Reno to Bologna. Suffice it to say that the trans-Appennine crossing above the upper Bisenzio valley presented physical difficulties that were by no means any more formidable than those encountered on the Futa.³³ The existence of these

³¹ Plesner, 1938, pp. 30-32.

³² Plesner failed to note this route between the upper valley of the river Bisenzio and the western Mugello, but De la Roncière pointed out that the route from Barberino di Mugello through Mangona to Montepiano was regular by about the beginning of the fourteenth century. See De la Roncière, 1976, 3, p. 839; 4, p. 251, n. 22. It is also clear that Montepiano and Mangona were sufficiently well-connected to sustain considerable investment by the monastery of Santa Maria di Montepiano in the area around Mangona already in the eleventh and twelfth centuries. Mangona appears to have become a centre of economic activity in the region by about the beginning of the twelfth century, and communal officials in the city of Florence thought enough of the town to seek its submission to Florentine authority before the end of the century. The economic importance of the town is suggested by the fact that notarial acts were being redacted at Mangona from at least as early as 1099. See for example Piattoli, ed., 1942, no.16, 1099 April 26, pp. 34-36, esp. 36; no. 17, 1101 August 25, pp. 36-37, esp. 36. The *castellum* of Mangona is attested from 1111 and it begins to appear as a site for the redaction of acts from 1162. For evidence of the *castellum* of Mangona, see Piattoli, ed., 1942, no. 29, 1111 October 22, pp. 57-59, esp. 58. For early evidence of notarial redactions at the *castellum*, see Piattoli, ed., 1942, no. 135, 1162 June, pp. 264-265, esp. 265. The citizens of Mangona submitted to Florentine authority in October 1184, and a market of some importance is attested at Mangona from earlier in the same year. For evidence of the submission of Mangona to Florence, see Santini, ed., 1895, *Capitoli*, no. 15, 1184 October 28, pp. 24-25. For the earliest evidence of the market at Mangona, see Piattoli, ed., 1942, no. 187, 1184 May 9, pp. 356-357, esp. 357.

³³ The maximum elevation attained on the direct passage from Vernio through Montepiano and Castiglione dei Pepoli is actually about one hundred metres less than the elevation achieved at the summit of the Futa. By the early sixteenth century, travellers between Bologna and Florence evidently favoured a crossing between the upper valleys of the torrents Setta and Stura, probably by way of the Futa. This route could be used to approach Florence either by way of Barberino di Mugello and the valley of the torrent Marina or more directly from Barberino di Mugello to San Piero a Sieve and thence to the city. The roads along an alternative route from Bologna by way of Firenzuola, Scarperia, and San Piero a Sieve, crossing the Apennines presumably at the Passo della Raticosa, was still considered inadequate for the movement of artillery. See Larner, 1990, pp. 147-148. In the early fifteenth century, the Florentine ambassador Rinaldo degli Albizzi typically made to journey between Florence and Bologna in two or three days, by way of Scarperia, Firenzuola, Pietramala, Cavrenno, Loiano, and Pianoro. See Guasti, ed., 1867-1873, 1, pp. 306-

passages between the upper valley of the Bisenzio and the western Mugello was probably owing more to the fact that the Alberti lords were dominant in both regions certainly until the end of the twelfth century. The roads between the two valleys thus were intended not so much to avoid the marshland of the Mugello plain, as Plesner believed, but merely to facilitate communications within a unified sphere of control and to circumvent tolls levied by other seigniorial lords.³⁴

Above Barberino di Mugello, the direct passage beyond the Futa to Pietramala and the Passo della Raticosa maintained an elevation greater than 800 metres and was often subject to fierce winds. Even in the nineteenth century, the route was still considered potentially dangerous, and it was probably avoided in all but the best conditions in the middle ages. The more heavily travelled route may have descended the upper reaches of the valley of the river Santerno to the market town of Cornacchiaia and then climbed the valley of the torrent Risano to Covigliaio and proceeded along the less exposed northern portion of the direct passage between the Futa and the Raticosa, protected from the zephyrs by the Sasso di Castro and Monte Beni.³⁵ From Cornacchiaia, an alternative route may have ascended the Risano to Pagliana, contoured far below Monte Beni to le Valli, and then climbed alongside the torrent Diaterna to Pietramala.³⁶ Once beyond the Raticosa, the route probably descended through Loiano towards the torrent of the Savena and then followed the Savena to Bologna.³⁷ Yet another route from Cornacchiaia may have avoided the Raticosa altogether by following instead the San-

307 (1418 October 1-4), 389 (1422 March 22-24), 395-397 (1423 April 9-12); 2, pp. 13 (1423 February 1-3), 43-44 (1423 February 23-25), 564 (1425 February 16).

³⁴ In the early fourteenth century, for example, the Alberti lords were using the passage from Barberino di Mugello through Mangona to Montepiano in order to facilitate arbitrage operations. See again De la Roncière, 1976, 4, p. 251, n. 4. See also Davidsohn, ed., 1898-1906, 3, nos. 255-256, p. 105, citing ASF, *Capitoli* 41, folio 121 [1307 September 24].

³⁵ Plesner, 1938, pp. 30-32. Repetti noted that the high passage from the Futa directly to Pietramala and the Raticosa was still a potentially dangerous proposition at the time that he was writing just before the middle of the nineteenth century, especially in the vicinity of Traversa, just south of the Sasso di Castro. See Repetti, 1833-1845, 2, p. 364. For evidence of a market at Cornacchiaia from just after the middle of the thirteenth century, see ASF, *Diplomatico*, Cestello, 1254 April 2.

³⁶ Sterpos, 1985, p. 10. Evidence for a hospital at Pietramala appears in the testament of bishop Hildebrand of Fiesole, dating from 1256. See Davidsohn, ed., 1896-1908, 4, p. 392.

³⁷ This route is mentioned in the *Statuti di Bologna* of 1288. See Fasoli and Sella, eds., 1937-1939, 1, bk. 4, rub. 77, pp. 233-235, esp. 234: 'de tenendo stratam de Lauglano securam qua itur Florentiam'.

terno and descending through Camaggiore and Castel del Rio towards Imola, whence the road to Bologna across the plain could be achieved.³⁸

The most common route to the Futa from Florence probably followed the old route to Prato only as far as Calenzano, then turned north-northeast to ascend the valley of the torrent Marinella to Legri, surmounted the Poggio di Cupo, and descended to San Giovanni in Petroio. The road then turned west-northwest to the market town of Latera, turned again to the north and continued through Barberino di Mugello and Vigesimo, and then climbed through Castel Miliari, San Gavino, and Santa Lucia towards the Futa.³⁹ By the time of Montaperti in 1260, according to Plesner, the most common route through the western Mugello may have ascended the valley of the torrent Marina rather than that of the Marinella, by-passing Legri and San Giovanni in Petroio and proceeding directly to Latera. A more careful consideration of the evidence suggests, however, that the route climbing the valley of the Marinella was still supporting a considerable volume of traffic in the later thirteenth and early fourteenth centuries.⁴⁰

³⁸ On horseback, the journey from Florence to Imola could be accomplished in less than two days, by way of Scarperia and the valley of the river Santerno. See Lerner, 1990, p. 157; Guasti, ed., 1867-1873, 1, pp. 218-219 (1412 May 26-27).

³⁹ Plesner, 1938, pp. 35-36. The importance of the region in the vicinity of Barberino di Mugello in the transportation network in the Florentine countryside is abundantly clear in the evidence for the western Mugello dating from the early thirteenth century. Latera, situated about three kilometres south of Barberino di Mugello on the right bank of the river Sieve, is attested as a market town from the very beginning of the century. Markets are attested at Combiate from 1209 and at Barberino di Mugello itself from 1217. For early evidence of the market at Latera, see ASF, *Diplomatico*, Badia di Passignano, 1201 February 1, 1212 May 1. For evidence of the market at Combiate see ASF, *Diplomatico*, Badia di Passignano, 1209 August 24. Combiate and its market were situated near the Croci di Calenzano, near the source of the torrent Marina, and possibly on the Poggio Castellaro. See Repetti, 1833-1845, 1, p. 789; Francovich, 1973, p. 89; Villani, bk. 5, chap. 30. The market at Barberino di Mugello is attested in ASF, *Diplomatico*, Stroziane Ugucioni, 1217 September 15. The abbeys of San Salvatore di Settimo and San Bartolommeo di Buonsollazzo had been interested in the area to the northwest of Barberino di Mugello from before the middle of the twelfth century, but these interests intensified dramatically by about the middle of the thirteenth century. From at least as early as 1246, the abbey of Settimo began to establish rights on properties that had presumably drifted out of its control in the area around Campo Miliario and San Gavino, and then, after about 1280, it began to accumulate property in the area around the Passo della Futa. By the early fourteenth century, the sometimes aggressive policies of Settimo in the area around the Futa brought the abbey into dispute with the communities of San Jacopo di Montale and San Martino di Castro. See ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 479, 302, *passim*. The primary importance of this passage is that it enable trans-Appennine traffic to by-pass areas of Ubaldini jurisdiction farther east above San Piero a Sieve.

⁴⁰ Plesner, 1938, p. 36. In the sources from the later thirteenth and early fourteenth centuries, it appears that the valleys of both the Marina and the Marinella were often identified simply as that of the Marina. The road alongside the torrent Marinella through Legri was reported to have been in extremely bad repair in 1295, from a market town near the confluence of the Marina and the

Another frequently used road to the north crossed the river Sieve in the vicinity of San Piero a Sieve and ascended a relatively mild gradient either to Sant'Agata or to the market town of Galliano and then continued more steeply to the Poggio dell'Osteria Bruciata.⁴¹ Plesner argued that the old route from the city went first to Quarto and then directly to San Piero a Sieve, presumably climbing the valley of the torrent Terzolle to Pratolino.⁴² By the beginning of the fourteenth century, however, a road to Pratolino went directly from Trespiano, roughly following the line of the modern via Bolognese.⁴³ From Pratolino, the road descended through Vaglia along the left bank of the torrent Carza and into the Mugello, crossing the Sieve either at the market town of San Piero a Sieve itself or else slightly upstream at Bilancino.⁴⁴ This route from Florence to the western margins of the Mugello plain very clearly had been developed in antiquity in order to establish a connection between Florence and the via Flaminia, a road probably of Etruscan origin that went between Arezzo and Bologna by way of the

Marinella, which is to say the Mercatale di Marina at Calenzano, to Fisciano. See De la Roncière, 1976, 3, p. 839; 4, p. 251, n. 21, citing ASF, *Provvisoni* 5, folio 103v: 'quaedam via posita in plebatu de Legri at in comuni di Leccio qua itur in Mugellum que dicitur Strata di Valdimarina est adeo vasta et dirupta [...] a Mercatale e Marina ad villam de Fisciano'. It may be noted here that Leccio, Legri, and Fisciano are all located in the valley of the torrent Marinella rather than that of the Marina, and the source clearly states that the disruptions lay along a the road between the Marina and Fisciano. Along with Carraia in the Marina valley itself, Legri in the Marinella valley was also obliged to render repairs on the road alongside the torrent Marina after 1295 in such a manner as not to impede the movement of foodstuffs from the Mugello towards Florence. See also Pinto, 1978, p. 107, n. 139, citing the same source. Once again, however, the Marina here actually refers to the Marinella. The market of Marina, probably situated at or very near the confluence of the torrents Marina and Marinella, is attested somewhat earlier in the late thirteenth century. See De la Roncière, 1976, 4, p. 346, citing ASF, *Diplomatico*, Santa Maria Nuova, 1287 July 16. Partly as a consequence of the persistent use of the valley of the Marinella, San Giovanni in Petroio continued to occupy an important position in the upper valley of the river Sieve, providing access to both San Piero a Sieve and Barberino di Mugello.

⁴¹ The branch passing through Galliano had become an important route to the Futa by the early fourteenth century when the commune of Florence made provision to increase the width of the road to enable travellers to pass more freely. See Repetti, 1833-1845, 2, p. 371. For evidence of the market at Galliano, see ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1198 October 9. Galliano is also attested as the site of a hospital from as early as 1090. See ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 479. A hospital at Sant'Agatha is attested in the *Liber extimationum* of 1269. See Brattö, ed., 1956, par. 447, p. 82

⁴² According to Plesner, the road serviced the parish church of San Cresci di Macioli, situated near Pratolino. See Plesner, 1938, pp. 33-34, 39-40.

⁴³ Sterpos, 1985, p. 10.

⁴⁴ Plesner, 1938, p. 33. The market at San Piero a Sieve is attested frequently in the early thirteenth century in the evidence for the abbey at Buonsollazzo. See ASF, *Diplomatico*, Cestello, 1205 March 30, 1217 August 13, 1222 October 10, 1223 September 29. See also ASF, *Diplomatico*, Adespote, Coperti di Libri, 1239 September 29.

Casentino and the Mugello.⁴⁵ The passage from San Piero a Sieve went through Sant'Agata and Montepoli to the Osteria Bruciata, while another route passed through Galliano and then ascended directly to Santa Lucia and the Futa or else turned to climb the Osteria Bruciata.⁴⁶ From the crossing of the Osteria Bruciata, the road descended to Cornacchiaia probably by way of Corniolo and Cabruciata and then climbed again through Pagliana either to Covigliaio or to Pietramala by way of le Valli.⁴⁷

By the early fourteenth century, however, the importance of the crossing above the Mugello plain between Sant'Agata and Cornacchiaia over the Osteria Bruciata had diminished considerably, and it may have been in decline already in the later thirteenth century.⁴⁸ Securely attested from 1221, the hospital of San Niccolò a Fonte Manzina, probably situated somewhere along the route over the

⁴⁵ Plesner believed that the route from Florence to San Piero a Sieve and its continuation to Pietramala and thence to the Raticosa and Bologna dated from the Lombard period or perhaps from only somewhat earlier, but it was more likely that this road was merely restored in the early middle ages after it had fallen into disuse. See Plesner, 1938, p. 33. According to Borgi, however, the variant that provided access from Florence to the old Etruscan road was abandoned during the second century CE in favour of the trans-Appennine passage to Faenza by way of Borgo San Lorenzo, the Colla di Casaglia, Marradi, and the valley of the river Lamone. See Borgi, 1976-1977, pt. 1, pp. 985-987, 1001.

⁴⁶ Sterpos hypothesised that the via Flaminia and the via Flaminia Minore between Arezzo and Bologna originally passed through Fiesole and Pratolino and then went through Galliano rather than Sant'Agatha on its way to the Osteria Bruciata. See Sterpos, 1985, p. 8.

⁴⁷ An itinerary relating to the Roman journeys of bishop Wolfger of Passau by way of a trans-Appennine crossing between Florence and Bologna sometime during the period between 1191 and 1218 clearly indicates a course that took him through Pianoro, Roncastaldo, and Sant'Agatha. Another itinerary that probably illustrates the circumstances that prevailed in 1236 mentions Cornacchiaia as an intermediate station in the passage between Florence and Bologna. Together, these two sources suggest a crossing in the early thirteenth century that passed through both Sant'Agatha and Cornacchiaia. See Sterpos, 1985, p. 8.

⁴⁸ It is perhaps worth noting, for example, that the *Statuti dell'arte degli albergatori* of 1334 includes Galliano in a list that delineates the various administrative districts and their constituent villages in the countryside of Florence, as recognised by the guild, but the list mentions neither Sant'Agatha nor Montepoli. Sterpos noted that the passage of the principal route between Florence and Bologna still traversed Cornacchiaia and le Valli even as late as 1296, and he believed that this signalled the continued use of the crossing of the Osteria Bruciata. It has been noted already, however, that the persistence of the passage of a trans-Appennine route through Cornacchiaia and le Valli also enabled travellers to avoid the exposed and potentially dangerous alpine road that went directly from the Futa to Pietramala and the Raticosa. Furthermore, Cornacchiaia and le Valli were included in the list of administrative centres in the *Statuti dell'arte degli albergatori* of 1334, while no mention was made of either Sant'Agatha or Montepoli. If the route surmounting the Osteria Bruciata was still used in the second quarter of the fourteenth century, it may have been that the ascent was typically negotiated not from Sant'Agatha but from Galliano. See Sartini, ed., 1953, pp. 156-157; Sterpos, 1985, p. 12.

Osteria Bruciata and perhaps at the pass itself, disappears from the sources after the end of the thirteenth century.⁴⁹ From the beginning of the fourteenth century, the most important Apennine crossing above the Mugello plain between Florence and Bologna was almost certainly the Giogo di Scarperia. This route ascended from San Piero a Sieve through Scarperia and climbed the Giogo before descending through Rifredo and Casanuova to the valley of the river Santerno.⁵⁰ The decline of the route over the Osteria Bruciata from Sant'Agatha was most precipitous after the establishment, or re-establishment, of the 'new town' of Scarperia, situated below the Giogo.⁵¹

The commune of Florence officially established Scarperia as a new town, or *terra nova*, only in 1306, but Scarperia was already an important market town in the later twelfth century.⁵² One of the reasons for the 'establishment' of Scarperia

⁴⁹ The hospital of San Niccolò a Fonte Manzina on the *Jugo Alpis* attested frequently after 1220 in the evidence for the abbey at Buonsollazzo, and evidence dating from 1229 indicates that a *strada florentina publica* crossed the Giogo at or very near the same point. For evidence of the hospital of San Niccolò a Fonte Manzina on the *Jugo Alpis*, see ASF, *Diplomatico*, Cestello, 1221 December 30, 1228 August 21, 1229 May 12, 1229 June 24, 1229 September 4, 1231 November 17, 1252 February 3, 1254 April 2, 1254 July 27, 1254 September 2. See also ASF, *Compagnie Religiose soppresse da Pietro Leopoldo* 479, 302, giving register entries for acts mentioning the hospital of San Niccolò a Fonte Manzina that date from 1236, 1273, and 1285. De la Roncière has also cited evidence for the hospital dating from the twelfth century, though the reference from the year 1221 cited above describes the hospital as new at that time: 'hospitalis novi de fonte manzina'. See De la Roncière, 1976, 4, pp. 311-319. For evidence of the *strada florentina publica*, see again ASF, *Diplomatico*, Cestello, 1229 June 24, 1229 September 4. A *via publica* at Fonte Manzina is attested in most of the other references cited above. The precise location of Fonte Manzina is unclear. De la Roncière, following Davidsohn, believed that the hospital of San Niccolò a Fonte Manzina was situated in Castro San Martino, in the upper valley of the river Santerno between the Passo della Futa and Cornacchiaia. See again De la Roncière, 1976, 4, pp. 311-319; Davidsohn, 1977, 7, p. 95. Sterpos, on the other hand, suggested that it was situated near Montaccianico, almost immediately northwest of Montepoli, a position that is admittedly difficult to reconcile with the location of the modern Giogo di Scarperia. See Sterpos, 1985, pp. 9. It is by no means necessary to suppose, however, that the medieval *Jugo Alpis* and the modern Giogo di Scarperia occupy the same position. The modern Italian term 'giogo', after all, simply refers to a summit, crest, or mountain ridge, and numerous places in the Florentine countryside bear such a designation.

⁵⁰ Documentation from the early fourteenth century suggests that the route between Florence and Bologna over the Giogo to Casanuova passed near Montaccianico. See Sterpos, 1985, pp. 12-14. Several scholars have stated, however, that the route over the Giogo di Scarperia was opened only in 1367. See Barbieri, 1947, pp. 113-114; Dini, 1986, p. 290.

⁵¹ Francovich, 1974, pp. 61-62.

⁵² In late April 1306, communal officials in Florence decided to found two new towns north of the city, 'una videlicet in Mucello et alia vero ultra Alpes'. See Friedman, 1988, app., no. 3, 1306 April 29, pp. 310-313, citing ASF, *Provvisioni* 12, folios 206r-v, 207v. The first of the new foundations was Scarperia, actually founded in September 1306, only about six months subsequent to the initial decree. The second of these new towns north of the city was Firenzuola, founded in

evidently may have been to facilitate greater security along the route between Florence and Bologna through a section of the Mugello dominated by the increasingly uncooperative Ubaldini lords.⁵³ In 1332, perhaps to encourage even further the development of the Scarperia road, which was becoming the principal thoroughfare from Florence to Bologna through the Mugello, the Florentine commune established Firenzuola, another new town situated north of the Giogo in the valley of the river Santerno east-northeast of Cornacchiaia.⁵⁴

The presence of the Ubaldini was less somewhat considerable in the eastern Mugello, and indeed the eastern Mugello constituted something of a frontier zone between the Ubaldini dominated western Mugello and an area farther east under the sway of the Guidi counts.⁵⁵ Perhaps partly as a consequence, and despite its position in the centre of the Mugello plain, Borgo San Lorenzo emerged over the course of the thirteenth century not as only the most important town in the Mugello but also as the fulcrum of the trans-Appennine passage between Florence and the farther north. In the early middle ages, according to Plesner, the valley of

1332. See Sterpos, 1985, pp. 12-13. On the new towns established in the Florentine countryside after 1300, see Friedman, 1974; 1988. See also Moretti, 1980; Higounet, 1962. The earliest evidence for the existence of a market at Scarperia can be found in ASF, *Diplomatico*, Rifformagioni, Atti Pubblici, 1186 May 1. For additional evidence from the early thirteenth century, see also ASF, *Diplomatico*, Rifformagioni, 1210 February 18.

⁵³ In 1309, the commune of Florence ordained that the route between Florence and Bologna through the Mugello must pass through Scarperia in order to guarantee the safety of travellers along the passage. See Sterpos, 1985, p. 13: 'cum ordinatum sit quod strata qua itur Florentia Bononiam currat per partes et terram sancti Barnaba que dicitur Scarperia et quod tuta et segura teneatur'. As Magna pointed out, the Ubaldini entered into open conflict with the commune of Florence rather later than such other feudal houses as the Alberti and the Guidi, and indeed relations between the Ubaldini and the Florentines oscillated between peaceful co-existence and outright hostility throughout the early thirteenth century. After about the middle of the century, however, relations between the Ubaldini and Florence worsened considerably, and the Florentines often despatched armies into the Mugello in an effort to quell the intransigent feudatories, though their successes were ephemeral at best. It was not until after the middle of the fourteenth century that the 'Alpes Ubaldinorum' rising to the north of the river Sieve could be considered truly Florentine. On the Ubaldini in the Mugello, see Magna, 1982.

⁵⁴ Sterpos suggested that both Scarperia and Firenzuola were 'established' in order to facilitate the construction and maintenance of a new road that was both more secure and less physically demanding. See Sterpos, 1985, p. 14.

⁵⁵ In addition the Ubaldini and the Guidi, the bishops of Florence and various monasteries of the Vallombrosan order were also prominent seigniorial powers in the region. The Florentine bishops were prominent in Borgo San Lorenzo and its environs. See ASF, *Manoscritti*, 48bis (*Bullettone*), folios 77r-90v. See also Dameron, 1991, pp. 77-79, 97-105, 159-167. On Vallombrosan interests in the valley of the river Lamone and the relationship between these interests and the development of the road network in the valley, see Pirillo, 1993, pp. 551-561. See also Vasaturo, 1962, esp. pp. 464-465, 471.

the river Sieve had perhaps constituted among the worst of the marshlands that the road network in the territory of Florence was compelled to avoid, yet Borgo San Lorenzo is unique in the territory as the only example of a parish seat situated in the centre of a plain. For Plesner, the unique position of this parish seat can be explained by the necessity to maintain the bridge that afforded a passage across the Sieve at this point. The nearby parish seat and market town of San Giovanni Maggiore, on the other hand, was charged with the maintenance of the old Roman road that continued to the northeast through the market towns of Pulicciano and Razuolo, climbed the Colla di Casaglia, and then descended through Crespino del Lamone to Marradi and Faenza.⁵⁶

⁵⁶ Borgo San Lorenzo may have been an important crossing of the river Sieve during the classical period, but it is evidently not attested in the middle ages until the tenth century, and considerable doubts have been raised concerning the identification of Borgo San Lorenzo with the antique Anneianum. On the arrangement of the parishes of Borgo San Lorenzo and San Giovanni Maggiore, see Plesner, 1938, pp. 37-39. On the course taken by the Roman road between Borgo San Lorenzo and Faenza, see Andreotti, 1927; Mansuelli, 1941-1942, p. 41; Borgi, 1976-1977, pt. 1, p. 1000; Mosca, 1992. Andreotti and Mosca have identified Anneianum not as Borgo San Lorenzo but as Badia Agnano, situated in the valley of the torrent San Godenzo between Dicomano and the village of San Godenzo itself. See Andreotti, 1927; Mosca, 1992, p. 183; Pirillo, 1995a, pp. 38-39. Elsewhere, Pirillo has expressed doubts about the identification of Anneianum with Badia Agnano, and he has suggested San Giovanni Maggiore as the site of the antique town. See Pirillo, 1993, p. 545, n. 18, and pp. 555-557. The market at San Giovanni Maggiore is attested in ASF, *Diplomatico*, Monache di Luco, 1209 February 28. For evidence of a market at Pulicciano in the early thirteenth century, see ASF, *Diplomatico*, 1225 February 14, 1229 December 15. For evidence of the market at Razuolo in 1322, see Pinto, 1978, p. 107, n. 140, citing ASF, *Provvvisioni* 19, folio 38v. According to De la Roncière, the market Razuolo was re-established in 1322, suggesting that it had been operating even earlier. See De la Roncière, 1976, 4, pp. 343-347. The re-establishment of the market at Razuolo may have been related to the contemporaneous efforts of the Florentine commune to assert its control elsewhere in the region at Ampinana and Casaglia. See Villani, bk. 9, chap. 174; Stefani, rub. 350. The region remained subject to violent struggles for control, however, and the area around Razuolo itself is described as 'desertus propter guerram viguit in partibus Mucelli' in 1330. See Pirillo, 1981, pp. 196-197, esp. p. 196, n. 72, citing ASF, *Provvvisione, registri* 114, folio 23r [1330 August 9]. In the later thirteenth century, under more favourable circumstances, the commune of Florence very clearly was regularly importing grain from Romagna by way of Marradi along this route. See again Gherardi, ed., 1896-1898, 1, pp. 217, 257. The area had fallen out of Florentine control in 1291 as a consequence of a military encounter between Florence and the Guidi counts. See again Pirillo, 1981, p. 183, n. 18, citing ASF, *Provvvisioni, registri* 3, folios 70v-71r [1292 April 29]. In the *Descriptio Romandiole* of 1371, the road between Florence and Faenza through Marradi is described as a master road. See Mascanzoni, ed., n.d., p. 155: 'Villa Marradi, que est in confinibus prope Alpes versus Tusciam supra stratam magistram, qua itur a Faventia Florentiam'. By the time of the composition of the *Descriptio Romandiole*, and probably also much earlier, another road between Florence and Faenza passed below the Rocca Mutiliane probably through the town of Modigliana. This road was not considered a *strata maestra*, though it may have functioned as an important secondary road servicing the Vallombrosan monastery of Santa Reparata, situated in the valley of the torrent Acerreta and attested from the early eleventh century. For evidence of the road passing below the Rocca Mutiliane, see again Mascanzoni, ed., n.d., p. 212: 'Castrum seu Roccha Mutiliane situm est in provincia Romandiole in montibus diocesis Faventie, supra quan-

From the Colla di Casaglia, another road went more directly north through Piedimonte and Palazzuolo sul Senio to Imola.⁵⁷ Between Florence and Borgo San Lorenzo, again according to Plesner, the most common route in antiquity may have taken the road going in the direction of Prato as far as Quarto, turned to ascend alongside the torrent Terzolle to Cercina and Pratolino, and then proceeded towards the Vetta le Croci. From the low pass, the Roman road may have descended alongside the torrent Fistona, through Gricignano and Campomigliaio. During the middle ages, however, the most common route between the Vetta le Croci and Borgo San Lorenzo more likely followed the torrent Faltona, as the presence of a baptismal church in the village of Faltona itself and also a public road going through both Larciano and Lutiano in the twelfth century indeed suggest.⁵⁸

Another major trans-Appennine passage between Florence and Romagna lay along the road that climbed the valley of the torrent San Godenzo from the important market town of Dicomano on the far eastern periphery of Mugello.⁵⁹

dam stratam qua itur in Tusciam et maxime Florentiam'. According to Vasaturo, the monastery of Santa Reparata is attested from at least as early as 1025, and it figures in the evidence for Florence from as early 1057. See Vasaturo, 1962, p. 465. See also Dolcini, 1976, pp. 87-89.

⁵⁷ Plesner, 1938, p. 38. South of Piedimonte, according to Plesner, this road was maintained by the parish of Misileo, which appertained to the diocese of Imola. On the location of Misileo, in the upper valley of the torrent Senio below Palazzuolo and on the frontier between Tuscany and Romagna, see Repetti, 1833-1845, 3, p. 223. By the later fourteenth century, Palazzuolo is attested as a market town. See De la Roncière, 1976, 4, pp. 343-347.

⁵⁸ Plesner, 1938, pp. 39-40. Plesner was not able to omit the possibility that the more direct route to the Vetta le Croci by way of Trespiano and the valley of the torrent Mugnone also may have been used in the early middle ages, but he stressed the absence of baptismal churches along the more direct passage. In antiquity, however, a route clearly followed the Mugnone, and the *Statuti dell'arte degli albergatori* of 1334 also very strongly suggest that a regular route to the Vetta le Croci climbed from Pian di Mugnone to Olmo and the pass by the early fourteenth century. For evidence of the route in the Mugnone valley dating from the early fourteenth century, see Sartini, ed., 1953, p. 157. For evidence of a public road at Larciano in the second quarter of the twelfth century, see ASF, *Diplomatico*, Monache di Luco, 1133 June 8, 1134 June 19, 1139 September 16. For evidence of a public road at Lutiano towards the end of the third quarter of the twelfth century, see ASF, *Diplomatico*, Monache di Luco, 1173 April 1. A road descending from Gricignano and Campomigliaio to Borgo San Lorenzo would have avoided both Larciano and Lutiano. On the other hand, a bridge at Gricignano is attested from 1307, suggesting perhaps that a road of some consequence still descended alongside the Fistona in the early fourteenth century. See Conti, ed., 1996, no. 9, 1307 April 11, p. 59.

⁵⁹ A market at Dicomano is attested from the early thirteenth century. See ASF, *Diplomatico*, Santissima Annunziata, 1211 June 5, 1212 March 7. De la Roncière has found another reference to the market at Dicomano from 1247, and he has noted that the market is abundantly documented from 1345. See De la Roncière, 1976, 4, pp. 343-347; 3, pp. 949-974, esp. 967-974. A bridge over the torrent San Godenzo at Dicomano is attested from the beginning of the second quarter of the fourteenth century. See again De la Roncière, 1976, 4, pp. 296-300.

From the confluence of the San Godenzo and the river Sieve, this route ascended the right bank of the torrent through the parish seat of San Bavello to the village of San Godenzo itself.⁶⁰ The primary road then left the torrent San Godenzo, continued over the Passo della Muraglione, and then descended in the direction of San Benedetto in Alpe, the valley of the river Montone, and eventually Forlì.⁶¹ At San Godenzo, a secondary road continued to follow the torrent San Godenzo to a high passage situated at well over one thousand metres, just below the massif of Monte Falterona, that afforded a means of access to the Casentino.⁶² The use of such an unlikely route was owing to the fact that the Guidi counts maintained a strong presence on both the northern and southern escarpments of the Falterona. The passage also enabled the Guidi to journey between the middle Sieve valley and the Casentino along a route that was not subject to foreign tolls.

⁶⁰ The passage of this road along the right bank of the torrent San Godenzo is attested by a bridge over the torrent Corella, just below San Bavello, 'in strata qua itur de Florentia Romandiolam'. See De la Roncière, 1976, 4, pp. 296-300, citing ASF, *Provvisioni* 41, folio 16v [1354].

⁶¹ The road between Florence and Forlì is described as a master road in the *Descriptio Roman-diole* of 1371. See Mascanzoni, ed., n.d., p. 228: 'Castrum Sancti Benedicti in Alpibus, est in quandam valle super flumen Casatici [i.e., the river Montone], et est super strata magistra qua itur in Tusciam et Florentiam'; and for another reference to the same road closer to Forlì, see p. 190: 'Castrum Castrocarii positum est in provincia Romandiole in diocesi Forliviense, in montibus supra stratam magistratam qua itur a Forlivo Florentinum'. The early fifteenth century Florentine ambassador Rinaldo degli Albizzi frequently undertook the journey between Florence and Forlì by way of the Montone valley in two or three days. See Lerner, 1990, p. 160; Guasti, ed., 1867-1873, 1, pp. 37-38 (1404 May 8-10), 43 (1404 June 3-5), 50 (1404 September 1-3). The trunk road between Florence and Forlì was joined just below the Passo della Muraglione by another road coming from Castel dell'Alpe. See again Mascanzoni, ed., n.d., p. 228: 'Castrum Alpium, est in Alpibus in quandam valle, in quodam monte forti, ubi est palatium, et est super flumana Raiboris et strata qua itur in Tusciam'. Rinaldo degli Albizzi used this road in 1402 to travel to Cesena, and he was able to accomplish the journey in only two days with the assistance of a guide. See also Lerner, 1990, pp. 160-161; Guasti, ed., 1867-1873, 1, pp. 14-15 (1402 June 24-26). This road may have afforded access to another major trans-Appennine crossing above Corniolo along a master road coming from Galeata. See Mascanzoni, ed., n.d., p. 219: 'Castrum Cornioli, est in Alpibus in quodam altissimo et inexpugnabili monte; habet roccham et turrim fortissimam et supra dictam roccham unam balistatam, que vocatur La Rovore; confinat cum Tuscia, Sancto Benedicto, Biserno et Premelcorio, habet transitum in Tusciam per stratam magistratam qua itur de Galeata in Tusciam'. See also Lerner, 1990, pp. 161-163. Evidence from the early thirteenth century also indicates that a much older road joined Galeata with points farther south. See Lasinio, ed., 1914, no. 1734, 1223 June 4, pp. 177-180, esp. 178-179: 'Curia et districtus Montisgranelli [...] et per stratam antiquam q. fuit inter districtum Balnei et Galliate'.

⁶² Just after the middle of the fourteenth century, a bridge is attested at San Godenzo situated 'in strata qua itur de Sancto Gaudenzo versus Casentinum'. See De la Roncière, 3, pp. 840-841; 4, p. 254, n. 33, citing again ASF, *Provvisioni* 41, folio 16v [1354].

Dicomano itself remained aloof direct Florentine control throughout the period under investigation and was instead subject to the Guidi counts.⁶³ The more common route from Florence to the Casentino followed the river Arno to Pontassieve and then climbed through Diacceto and Borselli to the Passo della Consuma.⁶⁴ The direct route between Florence and Dicomano left the river Arno at Remole and took an elevated passage that joined the valley of the river Sieve at Rufina, completely avoiding the territory the lower Sieve valley around Pontassieve.⁶⁵ The situation had changed by the end of the first quarter of the fourteenth century, when the common route between Florence and Dicomano clearly followed the river valleys, going along the right bank of the Arno to the mouth of the

⁶³ Even after the middle of the fourteenth century, strictly speaking, Dicomano and its environs remained for the most part subject to Guidi rule and outside the area over which the commune of Florence maintained jurisdiction. See Pirillo, 1995a, p. 62, n. 99, citing ASF, *Provvisioni, registri* 55, folio 51r [1367 August 19]. It was only towards the end of the third quarter of the fourteenth century that Florence was able to absorb into its own circuit of control the seigniorial lordships that occupied this part of the Sieve valley.

⁶⁴ Above Borselli, even in 1329, the land through which this passage traversed evidently was almost completely uncultivated. See De la Roncière, 3, p. 841; and 4, p. 254, n. 34, citing ASF, *Provvisioni* 25, folio 73 [1329 October]: ‘a domibus positis super dicta strata loco dicitur Borselli usque ad confines dicti comitatus versus casentinum [...] remanet quasi totum dictum terrenum incultum’. For more on the trans-Appennine passages in this region, albeit with an emphasis on the period from the later fourteenth to the early sixteenth centuries, see again Lerner, 1990, pp. 161-166. See also Bacci, 1986.

⁶⁵ On the basis of the arrangement of the parish churches in this part of the Florentine countryside, Plesner argued that the principal road joining the valley of the river Arno and lower valley of the river Sieve must have avoided the Sieve valley below Rufina. He suggested that the road followed an upland route running through or very the parish seats of Montefiesole, Doccia, and Santa Maria in Acone, all of which were situated in the diocese of Fiesole, and that the road then descended to the Arno valley at Remole. See Plesner, 1938, p. 40. The conjecture put forward by Plesner has been largely confirmed by De la Roncière, who argued that the route left the valley of the river Arno at Remole, climbed to Quona, and traversed the hillside below the Poggio di Bardellone first to Montefiesole and then to San Pietro a Strada before descending to Rufina. The road very likely crossed the river Sieve here at Rufina and then continued on the left bank of the river to Dicomano. A river crossing at Rufina is not attested in the sources for the period under consideration that have thus far come to light. Evidence for the reconstruction of a bridge at Bovino towards the end of the thirteenth century nevertheless suggests that this bridge was to be built at a distance of seven miles or just over eleven kilometres from existing bridges. A bridge at Sagginale, situated about eleven kilometres upstream from Bovino, is attested from at least as early as 1307. Rufina, on the other hand, is situated about eleven kilometres downstream from Bovino. On the passage of the route between Florence and Dicomano, see De la Roncière, 1976, 3, p. 840; 4, p. 252-253, nn. 29, 31. On the bridge at Sagginale, see De la Roncière, 1976, 4, pp. 296-300.

Sieve, crossing the Sieve at Pontassieve, and then ascending the left bank of the Sieve to Dicomano.⁶⁶

The desire of the Guidi counts to avoid foreign tolls also provided the *raison d'être* for another trans-Appennine route that crossed from the middle valley of the Sieve, near the frontier between the Guidi and Ubaldini circuits of seigniorial control, to Biforco in the upper valley of the river Lamone just a few kilometres southwest of Marradi. The exact passage taken by this road on its ascent from the Sieve valley is uncertain, but it is known to have crested the ridge above at the Passo del Scaelle and then descended the valley of the torrent Campigno to the river Lamone at Biforco, where it joined the trunk road between Borgo San Lorenzo and Faenza.⁶⁷ Biforco is attested as a Guidi possession both in the later eleventh century and in the early thirteenth century, and the Guidi had been exacting tolls on travellers and merchandise at Biforco from the later tenth century.⁶⁸

⁶⁶ The *Statuto del Capitano* of 1322-1325, for example, refers to the regular route between Florence and Dicomano as the 'strata per quam itur ad Pontem de Sieve et vadit versus Decomanum et incipit a Burgo Sancti Petri Maioris'. See Caggese, ed., 1910, bk. 4, chap. 8, p. 175-181, esp. 175.

⁶⁷ A road in the valley of the torrent Campigno has been identified in a document dating from 1321. See Pirillo, 1995a, p. 60, n. 90, citing ASF, *Notarile antecosimiano* 9498, folio 61r [1321 June 10]. The Passo del Scaelle itself is described as a crude and difficult passage by Matteo Villani in an account of a military engagement after the middle of the fourteenth century: 'Il camino ch'ellino avieno affare, tutto che non fosse lungo, era aspro e malagevole, però che venendo da Biforco a Belforte presso alle due miglia della valle, quinci e quindi fasciata dalle ripe e stretta nel fondo, dov'era la via, la quale si leva dopo alquanto di piano repente ad erta a maraviglia, involupata di pietre e di torcimenti, e tale passo è detto alle Scaelle, che bene concordia il nome col fatto'. See Matteo Villani, bk. 8, chap. 74. It may be reasonable to identify the Passo del Scaelle as the Giogo di Corella, in as much as *castrum* of Belforte is thought to have dominated the particular crossing. Moreover, according to Andreotti, the antique route of the *via Faentina* followed a course that suggests an identification of the Passo del Scaelle with the Giogo di Corella. On the *castrum* of Belforte, see Repetti, 1833-1845, 1, pp. 292-293. On the course of the antique *via Faentina*, see the map in Andreotti, 1927, p. 155. Pirillo evidently has suggested, however, that the crossing was situated below the Poggio del Scaelle, in the valley of the Campigno just north of the town of Campigno. See the map in Pirillo, 1993, p. 563. The Poggio del Scaelle itself is actually situated on the northern escarpment of the Appennine ridge at 830 metres above the right bank of the Campigno, which is to say slightly more than one hundred vertical metres below the Giogo di Corella. The elevation of the road in the valley of the torrent Campigno below the Poggio del Scaelle is less than 500 metres. The descent route on the southern escarpment of the ridge is uncertain, but evidence from the second half of the fourteenth century indicates that a road descending from the 'iugo alpium' in this region divided the jurisdictions of Ampinana and Belforte, and a 'strata de Belforte' demarcated the jurisdictional extent of the *districtus curie de Corella* in the early fourteenth century. For evidence of the road descending from the *iugo alpium*, see Guasti and Gherardi, eds., 1863-1899, 1, pt. 2, no. 84, 1374 June 13, p. 101-102. For evidence of the *strata de Belforte*, see Pirillo, 1995a, p. 53, n. 64, citing ASF, *Notarile antecosimiano* 11479, folio 18r [1312 August 4].

⁶⁸ According to Repetti, Guidi control of Biforco in the later twelfth and early thirteenth centuries is confirmed in imperial privileges conceded from emperors Henry VI and Frederick II, respec-

The Guidi also enjoyed intermittent control of the high pass on the Borgo San Lorenzo-Faenza trunk road at the Colla di Casaglia, but the intermediate station of Crespino del Lamone appertained to the Ubaldini. As a consequence, travellers using the principal thoroughfare between Borgo San Lorenzo and Faenza were obliged to pay three tolls within the space of less than twenty kilometres. The route over the Passo delle Scelle therefore was probably intended as a means by which to afford the Guidi and their subjects a trans-Appennine passage that was entirely under Guidi control.⁶⁹

The major trans-Appennine passages were bisected by an antique road that had originally formed a part of the *via Flaminia*. The path that this road actually followed is difficult to determine, but Paolo Pirillo has drawn attention to the relatively uniform position occupied by the parish churches above the left bank of the river Sieve. Fagna, San Giovanni Maggiore, Padule, and Botena all occupied a position between about fifty and one hundred metres above the course of the river, perhaps along the same major road, or *via maggio*, that is attested at Vespignano in the early fourteenth century.⁷⁰

tively. See Repetti, 1833-1845, 1, p. 326. On Guidi lordship at Biforcio and the collecting of rents in the area already in the tenth century, see Curradi, 1977, p. 45.

⁶⁹ At the time of the composition of the *Descriptio Romandiole* in 1371, control in the region was still contested by perhaps as many as six seigniorial powers, and *Descriptio Romandiole* itself mentions five of them. See Mascanzoni, ed., n.d., p. 253: 'Castrum seu Roccha Bifurchi, situm est in provincia Romandiole super strata magistra qua itur a Faventia Florentiam iuxta Alpes, cuius comitatus est in confinibus Castiglionchi, Faventie, territorii Ubaldinorum et comitatus Florentie'. The entry also contains a marginal note mentioning the Guidi counts, the fifth power in question: 'et fuit comitis Guidonis de Battifole'. In addition, as Mascanzoni has elsewhere noted, the Val-lombrosan order also maintained considerable proprietarial holdings in the region. See Mascanzoni, 1981, pp. 67-68. On the struggles for control between the commune of Florence and the Guidi counts in this region, see Pirillo, 1981, pp. 183-184, 196-197; 1995, p. 61.

⁷⁰ See Pirillo, 1995a, pp. 42-43. This road would have intersected with the trunk road between Borgo San Lorenzo and Faenza at San Giovanni Maggiore, which is also attested as the site of a market in the early thirteenth century. See again ASF, *Diplomatico*, Monache di Luco, 1209 February 28. On the *via maggio* at Vespignano, see again Pirillo, 1995a, p. 42, n. 28, citing ASF, *Notarile antecosimiano*, 7871, folio 12r [1317 October 18]. The route may have been part of the itinerary followed by the emperor Lothar in the autumn of 1137 when he travelled from Arezzo to Bologna by way of the Mugello but also avoiding the city of Florence. See Davidsohn, 1977, 1, pp. 625-626. As suggested above, the designation *via maggio*, found elsewhere in the Florentine countryside in the early fourteenth century denotes a major road. For evidence of a *via maggio* at San Giuliano a Settimo, see again ASF, *Compagnie Religiose soppresse da Pietro Leopoldo*, 479, 302, folio 13v [1304 July 17]. Yet another *via maggio* is attested from the end of the first quarter of the fourteenth century in the Oltrarno of the city itself, between a square appertaining to the Frescobaldi and the church of San Felice. See Caggese, ed., 1910, bk. 4, chap. 28, p. 194.

The mountains north of Florence, as noted, were dominated by three seigniorial lords: the Alberti of Prato and Mangona in the west, the Ubaldini in the centre, and the Guidi in the east. Florentine access to Romagna depended upon friendly relations with these lords, but not necessarily friendly relations with all of them at the same time. When relations between Florence and the Ubaldini were strained, Florentine merchants probably were able to cross the mountains through territory dominated by the Alberti or by the Guidi. The Apennine passages offered several different options not only in terms of roads but also in terms of jurisdiction.

4.3.3. The upper valley of the river Arno

The oldest route to Arezzo, by way of the old via Cassia, left early medieval Florence from the southern end of the Ponte Vecchio. According to Plesner, this road veered to the southeast soon after its exit from the city to seek the elevated ground between the Ripoli plain and the valley of the river Ema. The road then turned back towards the river Arno, passing through Quarto to Candeli, and then crossed the river to Girone and Quintole by means of bridge known in the early fourteenth century as the Ponte de' Fiesolani.⁷¹ The Roman road to Arezzo continued along

⁷¹ The bridge no longer exists, and it was evidently an anachronism already by the time that Villani was writing in the first half of the fourteenth century. Plesner suggested that Villani had been mistaken in his assumption that the bridge conveyed traffic from Rome to Fiesole and beyond, bypassing Florence altogether. See Plesner, 1938, p. 49, n. 1; Villani, bk. 1, chap. 57: 'perocchè la città di Firenze non si stendea nè era abitata di là dall'Arno, ma era tutta quà salvo che uno solo ponte v'avea sopra l'Arno, non però dove sono oggi, ma si dice per molti ch' era l'antico ponte de' Fiesolani, il quale da Girone a Candegghi: e quella era l'antica strada e cammino da Roma a Fiesole, e per andare in Lombardia e di là da' monti'. Plesner also pointed out that the existence of this bridge helps to explain an injunction dated from 1325 and directed towards the communities of Varlungo, Rovezzano, Sant'Andrea, and Settignano, admonishing them not to harass the community of Ripole, and likewise admonishing the community of Ripole to refrain from the same. See Plesner, 1938, p. 50; Caggese, ed., 1921, bk. 5, chap. 27, p. 381: 'Statutum et ordinatum est quod populi Sancti Andree et Sancti Angeli de Rovezzano et Sancti Petri de Varlungo et Santa Maria de Septignano non cogantur subire honora incendiorum et vastorum et derobationum et aliorum similium cum aliis populis plebatus de Ripole, qui sunt ab alia parte Arni; et e converso, dicti populi plebatus producti, qui sunt ab alia parte Arni ad supradicta vel aliquod predicatorum nullo modo cogantur vel teneantur subire vel esse [cum] quattuor supradictis vel aliquo eorum, cum inter se non possunt se iuvare vel trahere ad rumorem aliquem ex itinere obstante flumine Arno'. The existence of a bridge between Candeli and Girone by no means confirms the hypothesis put forward by Plesner, and indeed the verdict of Villani has been supported by Sterpos, who suggested that the via Flaminia may have taken a route that went from Arezzo to Fiesole and then to Bologna, crossing the river Arno at about this point. See again Sterpos, 1985, p. 8. According to Hardie, however, the old via Cassia originally followed course above the right bank of the Arno to Fiesole and thence along the northern fringes of the Arno plain to Lucca. Florence itself had been founded not on the via Cassia but a short distance from it, and the city was linked

the elevated right bank of the Arno to Remole and Pontassieve, where it crossed the river Sieve. The road then split, with one variant climbing a ridge to Diacceto and the Passo di Consuma before descending into the Casentino.⁷² The other variant turned to the south to assume a path that contoured the hillsides well above the plains alongside the Arno and below the crest of the Pratomagno, going through Pelago, Magnale, Pitiana, Reggello, Pian del Sco, Castelfranco di Sopra, Loro, Gropina, and San Giustino before descending to Arezzo.⁷³ The course taken by this road beyond Pontassieve helps to explain the importance of such places as Pelago and Magnale in the thirteenth century, and Castelfranco di Sopra and Loro in the early fourteenth century.⁷⁴

to the road almost immediately after its foundation. He further argued that neither the location of Florence nor any bridge that may have crossed the Arno between Candeli and Girone were owing to the existence of a road to Bologna. See Hardie, 1965. According to Lopes Pegna, the old via Cassia left the city from San Pier Maggiore and continued east along the right bank of the river Arno through Rovezzano and Varlungo to Remole. See Lopes Pegna, 1962, pp. 219-224. For evidence of a public road leaving the city on the right bank of the river in the early fourteenth century, see Davidsohn, ed., 1896-1908, 4, p. 394.

⁷² This is probably the route that the Florentine army used to launch their assault on Arezzo in 1289. See Compagni, bk. 1, chap. 9. On the Florentine offensive against Arezzo and the confrontation at Campaldino in June 1269, see also Oerter, 1968.

⁷³ Plesner, 1938, pp. 52-54. In the year 123 CE, under the emperor Hadrian, construction was initiated on a new passsge between Florence and Chiusi to replace the older route which was in poor repair. The new route, again according to Lopes Pegna, followed the left bank of the upper Arno, climbed to San Donato in Collina, then descended to Florence through Quattro Vie, l'Apparita, Bigallo, Quarto, and Ripoli, perhaps crossing the river by means of a Roman bridge from somewhere in the vicinity of Torre di San Niccolò. See Lopes Pegna, 1962, pp. 224-226.

⁷⁴ Pelago is identified as a market town from as early as 1188, and references to the market at Pelago are common in the thirteenth and early fourteenth centuries. Magnale is identified as a *castrum* from as early as 1103, and as a *burg* from at least as early 1247. From the later twelfth century, Magnale is also frequently identified as the site of notarial activity. Early thirteenth century documents refer to a bridge crossing the torrent Vicano at Pelago and to the antique road, or *via antica*, through Magnale. For early references to the market at Pelago, see De la Roncière, 1976, 4, pp. 343-347; Strà, ed., 1982, no. 69, 1224 November 14, pp. 134-141, esp. 139; ASF, *Diplomatico*, Vallombrosa, 1231 April 24; ASF, *Diplomatico*, Passerini, 1233 September 8; ASF, *Diplomatico*, Badia di Firenze, 1256 August 24. Numerous early fourteenth century references to the market at Pelago can be found in ASF, *Corporazioni Religiose Soppresse*, 260 [Vallombrosa], 122. For references to the *castrum* or *castellum* of Magnale, see Francovich, 1973, pp. 98-99. The first known reference to the *burg* of Magnale appears in ASF, *Diplomatico*, Vallombrosa, 1247 May 19, and such references become common thereafter. For the earliest known example of a notarial act originally redacted at Magnale, see ASF, *Diplomatico*, Vallombrosa, 1191 September 18. For the bridge over the torrent Vicano at Pelago, see ASF, *Diplomatico*, Vallombrosa, 1214 May 29. For the *via antica* at Magnale, alongside a *via publica*, see ASF, *Diplomatico*, Vallombrosa, 1210 May 31. Markets are attested along the route at Castelfranco di Sopra from 1332, and at Loro from 1306. On the establishment of a market at Castelfranco di Sopra, see ASF, *Libri fabarum* 15, folio 113v. On the existence of a market at Loro already in 1306 when the town was incorporated into the territory of Florence, see De la Roncière, 1976, 3, p. 956; 4, pp. 343-

Another route from Florence to Arezzo, perhaps also Roman, continued southwest from the Ponte Vecchio towards Giogoli, following the initial segment of the old Roman road to Settimo but then turning to the southeast towards Montebuoni, Quintole, and Impruneta. The road continued along the same trajectory, following a meandering path roughly parallel to the Rio Sezzate through Cintoia, passing below Montescalari, and crossing the high ridge at the Passo di Sugame at an elevation of more than four hundred metres.⁷⁵ The road then descended to the torrent Cesto and crossed the torrent at Ponte agli Stolli, proceeding through Gaville and Cavriglia to Mercatale Valdarno and Galatrona, probably crossing the torrent Ambra at Bucine, and continuing along the hillsides above the left bank of the river Arno to the plain of Arezzo.⁷⁶ Once again, the highland passage of this road helps to explain a relatively high concentration of market towns and services for travellers along the route and in some rather unlikely places.⁷⁷

347, esp. 345-346. The market privileges that Loro enjoyed were then confirmed towards the middle of the fourteenth century by the office of the *Abbondanza*. See again De la Roncière, 1976, 4, pp. 345-346, citing ASF, *Provvisioni, duplicata*, 7, folio 1v [1347]: 'licentia faciendi mercatum et forum de grano, blado et aliis victualibus et aliis mercantiis in dicto comuni de Loro [...] qualibet die mercurii in quondam campo seu platea posita juxta castrum de Loro'.

⁷⁵ By the later twelfth century, a public road giving access to the territory of the parish of Cintoia was referred to as the *strada vetera*. See ASF, *Diplomatico*, San Vigilio di Siena, 1197 April 30. The appellation of *strata vetera* may have come as a consequence of the opening of a new road slightly to the west of this route linking Impruneta with the upper valleys of the rivers Greve and Pesa by way of Strada in Chianti and Greve. Evidence for a public road passing through Strada in Chianti can be found in ASF, *Diplomatico*, San Vigilio di Siena, 1157 May 15, 1187 March, 1223 January 9. See also Camerani-Marri, ed., 1962-1963, pt. 1, no. 7, 1059 April 18, pp. 58-59, esp. 59. For evidence of a public road, a *via publicana*, that may have surmounted the Passo di Sugame in the later eleventh century, see again Camerani-Marri, ed., 1962-1963, pt. 4, no. 84, 1088 March 20, pp. 492-493, esp. 492. It is also possible, however, that the reference to the Sugame here concerns not the Passo di Sugame but the Poggio del Sugame, below which probably passed a road descending directly to the river Greve and leading eventually to a crossing of the river Pesa at Sambuca. For more on this road, see *infra*.

⁷⁶ Plesner, 1938, pp. 55-58.

⁷⁷ Markets are attested at Bucine from 1335, at Mercatale Valdarno from about the middle of the twelfth century, and at Montaio, near Cavriglia, from 1239. On the market at Bucine, see De la Roncière, 1976, 4, pp. 343-347. On the market at Mercatale Valdarno, see Pagliai, ed., 1909, no. 451, 115[...], p. 203. On the market at Montaio, see ASF, *Diplomatico*, Coltibuono, 1239 June 1. A hospital at Riofino, near Gaville, is frequently attested in the evidence for Passignano from about 1135 to 1180, but it disappears from the sources from just after the beginning of the last quarter of the twelfth century. See ASF, *Diplomatico*, Badia di Passignano, 1135 November 7, 1138 September 18, 1140 November, 1145 February, 1151 March 4, 1153 January 13, 1154 June 29, 1155 November 4, 1163 January, 1170, 1171 February. See also ASF, *Diplomatico*, Badia di Ripoli, 1178 January 1.

By the early fourteenth century, and no doubt even much earlier, the most common route between Florence and Arezzo very likely left the city from the Porta San Niccolò, went directly across the Ripoli plain, and then climbed through Bigallo and Quattro Vie to San Donato in Collina. This road, perhaps established by the Roman emperor Hadrian in the early second century CE, followed the variant passage of the old via Cassia.⁷⁸ From San Donato in Collina, it was possible to descend to crossings of the river Arno either at Rignano sull'Arno or at the market town of Incisa in Val d'Arno.⁷⁹ The road then continued along the left

⁷⁸ The road is attested in an inscription dating from Montepulciano in the year 123 CE, which indicates that Hadrian (76-138, emperor from 117) 'viam Cassiam vetustate collapsam a Clusinorum finibus Florentiam perduxit'. In as much as this section of the road was already in poor repair during the time of Hadrian, Hardie has speculated that the road may have been built much earlier, perhaps soon after the time of Augustus (63 BCE-14 CE, emperor from 27 BCE). See Hardie, 1965, p. 125. This route is clearly suggested by the *Statuto dell'arte degli albergatori* of 1334. See Sartini, ed., 1953, pp. 155-158, esp. 157. De la Roncière further noted that the *strada de Ripoli* is mentioned frequently in the account books of the Peruzzi merchant-banking company dating from the first quarter of the fourteenth century. See De la Roncière, 1976, 4, p. 254, n. 36; Saponi, ed., 1934, pp. 450, 473, 479, 485-488, 494-495, 511. It is also worth noting that the abbey of San Bartolommeo di Ripoli was established before the end of the eighth century on the Ripoli plain alongside the even more ancient church of San Pietro and near the site of an old Roman bath. Even if the plain had not been thoroughly drained by the time of the establishment of the abbey in the later eighth century, the mere presence of the abbey certainly would have encouraged land reclamation, and it is impossible to imagine that the plain remained impassable until the thirteenth century. On the new via Cassia established by Hadrian in 123 CE, see again Lopes Pegna, 1962, pp. 224-225. On the foundation of the abbey of San Bartolommeo di Ripoli, see Lami, ed., 1748, 2, pp. 1161-1163 [790 July 14]; Davidsohn, 1977, 1, p. 107. On the Roman baths at Bagno a Ripoli, see Lopes Pegna, 1962, p. 225. Repetti suggested, however, that the designation of Bagno a Ripoli derived from the frequent inundations that the plain had been accustomed to suffer. See Repetti, 1833-1845, 1, pp. 242-245, esp. 243. A hospital at Bigallo is attested in close proximity to the trunk road between Florence and Arezzo in the later thirteenth century. See Gherardi, ed., 1896-1898, 2, p. 405 [1294 April 28]: 'Item, pro fonte vivo, qui est ante hospitale Bigalli, in strata publica per quam itur Aretium reatando'. This perhaps refers to the hospital at Fonteviva that also appears in sources from before the middle of the century. See Davidsohn, ed., 1896-1908, 4, p. 392.

⁷⁹ A bridge over the river Arno at Rignano is attested in the *Statuto dell'arte degli albergatori* of 1334. See Sartini, ed., 1953, pp. 155-158, esp. 157. On the descent from San Donato in Collina to Incisa, see Davidsohn, 1977, 5, p. 369. For evidence of a bridge over the Arno at Incisa, see ASF, *Diplomatico*, San Vigilio di Siena, 1101 July 23. A market was re-established at Incisa towards the end of the thirteenth century. See De la Roncière, 1976, 4, pp. 343-347, citing ASF, *Provvisioni* 8, folios 71-74 [1297 June 7]. A hospital at Incisa is attested from just a few years earlier. See De la Roncière, 1976, 4, pp. 311-319; Orlandi, ed., 1955, 1, p. 332. By the end of the thirteenth century, and perhaps earlier, an important road followed the right bank of the Arno from Pontassieve to San Ellero, and the road probably continued to Incisa, passing through Rignano the market town of Leccio. On the road between Pontassieve and San Ellero, see De la Roncière, 1976, 3, p. 841; 4, p. 254, n. 37, citing ASF, *Provvisioni* 10, folio 107 [1299 September 25]: 'Via et strata per quam itur ad Sanctum Illarum posita juxta Arnum et incipitur ipsa strata a Ponte Sevis et protenditur usque ad Sanctum Illarum'. The significance of San Ellero lay in the fact that it was possessed port facilities even before the beginning of the thirteenth century. The existence of port facilities at San Ellero is attested in a document dated from 1193 for the con-

bank of the Arno through the market towns of Figline and San Giovanni Valdarno to Montevarchi, another market town, from which the route proceeded in the direction of Arezzo.⁸⁰

The importance of the route between Florence and Arezzo in the upper Arno valley lay in the fact that it provided the easiest means of access to points farther south in Umbria, the Marche, Lazio, and Abruzzo. Unlike the trans-Appennine routes, however, there existed no satisfactory alternatives to the Florence-Arezzo trunk road for gaining access to points farther south. Whereas Florentine mer-

veyance of real estate situated 'ad portum vecckium', bordered on one side by the land of San Ellero and another by the river Arno. See ASF, *Diplomatico*, Vallombrosa, 1192 January 26. For evidence of a market at Leccio from the last quarter of the twelfth century, see Pagliai, ed., 1909, no. 492, 1177 February p. 220; no. 509, 1187 December 30, p. 227. See also ASF, *Diplomatico*, Coltibuono, 1218 November 14; ASF, *Diplomatico*, Vallombrosa, 1255 November 17. In addition, the market at Leccio is frequently attested towards the end of the thirteenth century in Muzzi and Nenci, eds., 1988, *passim*, citing ASF, *Notarile antecosimiano*, G830, I-II, *passim*.

⁸⁰ The route on the left bank of the river Arno between Incisa and Montevarchi is again suggested by the *Statuto dell'arte degli albergatori* of 1334. See Sartini, ed., 1953, pp. 155-158, esp. 157. Markets are attested at Figline from just after the middle of the twelfth century, at San Giovanni Valdarno from 1188, and at Montevarchi from the early thirteenth century. For evidence of the market at Figline, see ASF, *Diplomatico*, Badia di Passignano, 1153 June 1, 1211 October 23; ASF, *Diplomatico*, Santissima Annunziata, 1261 August 2. Additional references to the market at Figline can be found in Santini, ed., 1895, *Capitoli*, no. 24, 1198 April 10, pp. 42-43; and Gherardi, ed. 1896-1898, 1, pp. 66, 69, 119, 121, 122, 154. De la Roncière has noted that the market at Figline is attested frequently in documents from the fourteenth century. See De la Roncière, 1976, 4, pp. 343-347. Figline is also attested as a port town from at least as early as 1186, and Matteo Villani noted the importance of the port of Figline in the food supply of Florence in the later fourteenth century. For evidence of port facilities at Figline before the end of the twelfth century, see Kehr, ed., 1904, no. 33, 1186 January 29, pp. 186-188; ASF, *Diplomatico*, Badia di Passignano, 1262 January 29, under which the document is mistakenly catalogued. For an additional reference to the port facilities at Figline, see ASF, *Diplomatico*, Badia di Passignano, 1195 March 27. On the role performed by the port of Figline in the food supply of Florence, see Matteo Villani, bk. 7, chap. 45: 'Ricordandosi i cittadini di Firenze come in tutte le gravi guerre ch'al loro Comune erano sopravvenute il borgo di Feghine riceva le percosse, e vedendo quanto il porto di quello luogo era utile affornimento della città, per la grande abbondanza della vittuaglia ch'a quello mercato continuamente veniva, diliberarono che'l borgo si murasse di grosse mura e di buoni torri, a facessevisi una grossa terra alla spese del Comune coll'aiuto delle circostanti vicinanze; e dato l'ordine del mese di dicembre del detto anno [1363?], e chiamati li ufficiali del mese di gennaio, cominciarono affare i fossi elle porte principali, e apresso a fondare le mura e le torri'. For evidence of a market at San Giovanni in Altura, which is to say San Giovanni Valdarno, see ASF, *Diplomatico*, Badia di Passignano, 1188 June 15, 1209 October 8, 1219 February 5; ASF, *Diplomatico*, Badia di Firenze, 1212 December 5. On the identification of the market at Altura as San Giovanni Valdarno, see Repetti, 1833-1845, 5, pp. 54-61, esp. 54-55. For evidence of the market at Montevarchi, see Francovich, 1973, p. 114, citing ASF, *Diplomatico*, Vallombrosa, 1169 March 13; ASF, *Diplomatico*, Badia di Passignano, 1207 March 13; ASF, *Diplomatico*, Stroziane Ugucioni, 1220 November 27. See also Santini, ed., 1952, *Capitoli*, no. 16, 1254 March 31, pp. 48-59, esp. 49; no. 18, 1254 April 6, pp. 62-64, esp. 63. This was very likely the road between Florence and Arezzo on which the Florentine commune decided in late August 1285 to render substantial repairs. See Gherardi, ed., 1896-1898, 1, pp. 281-282.

chants bound for markets in Romagna were able to adjust their routes to traverse jurisdictions most favourable to trade without much change in either the objective difficulty of the route or transport costs, merchants bound for markets in central and southern Italy enjoyed few such options. Florentine merchants bound for points south of Arezzo no doubt sometimes avoided the upper Arno valley, traversing instead the Chianti hills along the frontier between the territories of Siena and Arezzo, but adjustments of this sort increased substantially both the objective difficulty of the route and the cost of transport. Efficient inland trade between Florence and points south of Arezzo to a very large extent hinged upon the facility of safe passage through the territory of Arezzo.

Florentine inland trade with Umbria, the Marche, Lazio, and Abruzzo also depended upon the viability of the road network south of Arezzo, which may have become unusable during the early middle ages. The political fragmentation of Italy after the fall of Rome in the fifth century eventually rendered it impossible to follow any of the longitudinal Roman roads in Italy for their entire extension. The Lombards and the Byzantines in Italy developed their own road networks utilising portions of the Roman roads, but substantial tracts fell into disrepair. The via Cassia between Arezzo and Chiusi, for example, was virtually submerged beneath the stagnant waters overflowing the shallow banks of the river Chiana, only to resurface during the course of the twelfth century as the water was diverted into the Arno.⁸¹

4.3.4. The Chianti and the upper valley of the river Elsa

South of Florence, the roads going in the direction of Siena and Volterra followed the early medieval road from the Ponte Vecchio to a crossing of the river Greve near Giogoli and then ascended to the village of Romola situated on a ridge above the Greve. The road then divided, with one branch descending towards the west-southwest to the valley of the river Pesa and crossing the river at Cerbaia. From the Pesa, the road climbed another ridge, descended to the torrent Virginio, and then climbed again to Montespertoli and San Pietro in Mercato before descending once more to Castelfiorentino, the valley of the river Elsa, and the via Francigena.⁸² By the later thirteenth century, however, the most common route be-

⁸¹ Borgi, 1976-1977, pt. 1, pp. 1014-1015.

⁸² On the road through Romola and its continuation through Cerbaia, Montespertoli, and San Piero in Mercato, see Plesner, 1938, p. 45-47. The road at Giogoli and the via a la Romola are

tween Montespertoli and Castelfiorentino by-passed San Piero in Mercato to the south, going instead through Vallecchio.⁸³

From Romola, another branch turned towards the south and continued along the ridge between the rivers Greve and Pesa through Decimo, or San Casciano in Val di Pesa, and then angled to the southeast through Campoli, Sillano, and the market towns of Panzano and Grignano to Castellina in Chianti.⁸⁴ After crossing the Pesa at Cerbaia, the road between Florence and Castelfiorentino divided again, with the diverging branch turning to the southeast along the ridge between the Pesa and the torrent Virginio and proceeding through San Pancrazio to San Pietro in Bossolo and joining the other road to Siena at Castellina in Chianti.⁸⁵ Another road diverged from the Florence-Castelfiorentino trunk route at Montespertoli and followed an elevated passage towards the southeast well above the left bank of the Virginio, passing through San Piero in Mercato, Monte Albino, Lucardo, and probably also through the market town of Marcialla.⁸⁶

attested from at least as early as 1269 in the *Liber extimationum*. For evidence of the road at Giogoli, see Brattö, ed., 1956, par. 253, p. 55. For evidence of the 'via a la Romola', see Brattö, ed., 1956, par. 51, p. 27. The bridge at Cerbaia is attested from at least as early as 1295, in a document that refers to the officials of the bridge at Cerbaia. See Conti, ed., 1996, no. 3, 1295 October 22, pp. 49-50. See also De la Roncière, 1976, 4, pp. 296-301.

⁸³ De la Roncière, 1976, 3, p. 842; 4, pp. 255-256, nn. 43-46. For evidence of a 'strada fiorentina' through Vallecchio in 1264 and again in 1271, see Castellani, ed., 1952, 1, pp. 230-231.

⁸⁴ See Plesner, 1938, pp. 45-46; Lopes Pegna, 1962, pp. 238-241. For evidence of a market at Panzano in the early thirteenth century, see ASF, *Diplomatico*, Badia di Passignano, 1237 August 15. For evidence of a market at Grignano at the very end of the thirteenth century, see Muzzi and Nenci, eds., 1988, no. 264, 1299 August 8, pp. 354-355, citing ASF, *Notarile antecosimiano*, F652, folio 12v. The road between Sillano and Panzano and continuing to the river Pesa at Grignano is attested from at least as early as 1168 in ASF, *Diplomatico*, Badia di Passignano, 1168 May 4. A road at Sillano is attested also before the middle of the twelfth century in ASF, *Diplomatico*, Badia di Passignano, 1146 October 26. It is attested again just after the middle of the century in Pagliai, ed., 1909, no. 418, 1152 November 7, p. 189. See also Conti, 1965, pp. 264, 269, 272. The various references to important thoroughfares at Sillano may concern different roads. In the argument introduced by Plesner, for example, two major early medieval roads intersected at Sillano. On a road between the Pesa and the upper valley of the river Arno that ran through Sillano, see above.

⁸⁵ Plesner, 1938, pp. 47-48.

⁸⁶ A road of some import is attested at Lucardo from the early thirteenth century in ASF, *Diplomatico*, Badia di Firenze, 1207 April 13. Admittedly, this may have been a reference to the road running from San Pancrazio through Lucardo and San Lazzaro to Certaldo. On this road, see *infra*. Marcialla is attested as a major grain market from 1282, and the market at Marcialla is frequently attested in notarial acts between 1281 and 1301. The *Statuto dell'arte dei medici* of 1314 also indicates that the market at Marcialla, as well as the market at Poggibonsi, enjoyed an active trade in saffron, but there are indications that the importance of Marcialla as a major grain market was in decline in the early fourteenth century. There is only one earlier reference to a market at

By the early fourteenth century, and again probably earlier, two alternative passages to the south had been developed that made greater use of the river valleys. The first of these, roughly following the line of the modern via Cassia, the *autostrada* between Florence and Siena, went directly south from the city through Galluzzo and Certosa, crossing the river Greve at Montebuoni, and then continuing to Sant'Andrea in Percussina and Decimo at San Casciano in Val di Pesa. From Decimo, the road descended to the valley of the river Pesa and then continued along the valley floor on the left bank of the river as far as the crossing at Fabbrica before turning towards San Pietro in Bossolo, Tavarnelle in Val di Pesa, Barberino Val d'Elsa, San Martino a Colle, and Poggibonsi, where it joined the via Francigena.⁸⁷ Another route left Florence from the porta San Niccolò and went southeast to Ponte a Ema, continuing above the left bank of the river Ema through Grassina and Strada in Chianti and then joining the valley of the river Greve near Vicchiomaggio. The road then continued south through Greve and the market town of Panzano before turning southeast towards Monte Rinaldi, Radda in Chianti, and Gaiole in Chianti.⁸⁸

Marcialla that has thus far come to light, but a market of some sort appears to have been in operation at Marcialla from the second quarter of the thirteenth century. The cartulary fragment of Palmerio di Corbizo di Uglione dated from 1237-1238 contain numerous acts of a commercial character originally redacted at Marcialla, and one of its acts concerns a purchase of grain by 'Rinaldoctus vecturalis de Marcialla'. See Mosiici and Sznura, eds., 1982, no. 170, 1238 May 13, pp. 227-228. For evidence of a major grain market at Marcialla in the later thirteenth century, see Gherardi, ed., 1896-1898, 1, pp. 68-69. For evidence of an active trade in saffron in the market at Marcialla, see Ciasca, ed., 1922, chap. 19, pp. 28-29, esp. 28: 'Cum multi homines et persone ad forum Podii Bonizi et Marcialle eorum dirigant ad emendum crocum'. The decline of Marcialla as a major grain market in the early fourteenth century is suggested by the fact that Marcialla was not listed among the market towns to which the commune sent officials in the famine year of 1346 to discourage hoarding and speculation. See Pinto, 1972, p. 23; 1978, p. 113. The earliest reference to a market at Marcialla that has thus far come to light appears in the *Liber extimationum* of 1269. See Brattö, ed., 1956, par. 79, p. 31. For additional references, see also De la Roncière, 1976, 4, p. 346.

⁸⁷ De la Roncière, 1976, 3, p. 841; 4, p. 255, nn. 39-42. A crossing of either the river Ema or the torrent Grassina is attested at Grassina from the third quarter of the twelfth century, and a public road at Strada in Chianti is attested from just after the middle of the eleventh century. For evidence of the bridge at Grassina alongside the Ema, see ASF, *Diplomatico*, San Vigilio di Siena, 1160 May 17: 'tertiam partem unius petie terre posita al ponte a Grassina [...] a quarto latere decurrit yma'. For evidence of the public road at Strada in Chianti, see Camerani-Marri, ed., 1962-1963, pt. 1, no. 7, 1059 April 18, pp. 58-59, esp. 59.

⁸⁸ De la Roncière, 1976, 3, p. 841; 4, pp. 254-255, n. 38. Both Radda and Gaiole are attested as market towns before the middle of the thirteenth century. For evidence of the market at Radda in Chianti, see ASF, *Diplomatico*, Coltibuono, 1242 December 19. For evidence of the market at Gaiole in Chianti, see ASF, *Diplomatico*, Coltibuono, 1236 December 18. For further evidence of the market at Gaiole in the later thirteenth century, see Gherardi, ed., 1896-1898, 1, pp. 119, 121.

In addition to the trunk road between Florence and Castelfiorentino, mentioned above, the routes between Florence and the farther south were bisected by a variety of other routes that provided further means of access to the valley of the river Elsa and the via Francigena. At the very end of the thirteenth century, for example, provisions were made for the construction of a new road running between Scandicci on the river Greve to the ridge crest between the rivers Greve and Pesa and perhaps as far as the Pesa itself.⁸⁹ From San Pancrazio, situated on the crest of ridge between the Pesa and the torrent Virginio, an older road went towards the southwest, crossing the Virginio probably at Fornacette and then continuing through Lucardo and San Lazzaro to Certaldo. According to Plesner, it was this road and not the Florence-Castelfiorentino trunk road constituted the most important route to Volterra in the early middle ages and perhaps also in antiquity.⁹⁰

Another road between the rivers Pesa and Elsa went south-southwest from San Pietro in Bossolo through Tavarnelle in Val di Pesa, Barberino Val d'Elsa, and the parish seat of San Appiano towards Poggibonsi.⁹¹ The road between San Pietro in Bossolo and Poggibonsi later by-passed San Appiano, as already noted above, going instead by way of San Martino a Colle. From Barberino Val d'Elsa, it was also possible to descend to the Elsa valley by means of a number of smaller roads that had served commercial traffic between Florence and San Gimignano before the emergence of Poggibonsi as a major commercial centre.⁹² Another im-

⁸⁹ See Conti, ed., 1996, no. 4, 1299 August 26, pp. 50-54. This road certainly went as far as the Pian dei Cerri, but as De la Roncière noted, more than a few of the communities obliged to finance the construction of the road were actually situated beyond the Pian dei Cerri on the northwestern escarpment of the Poggio al Pino. Marciola, San Michele a Torri, and San Niccolò a Torri were among the communities obliged to finance the construction of the road, and their regular access to this road would have been contingent upon its elongation virtually to the Pesa. See De la Roncière, 1976, 4, p. 256, n. 46.

⁹⁰ Plesner, 1938, pp. 47-48. For evidence of an important road at Lucardo shortly after the beginning of the thirteenth century, see again ASF, *Diplomatico*, Badia di Firenze, 1207 April 13.

⁹¹ Plesner, 1938, p. 48.

⁹² According to De la Roncière, roads descended from Barberino Val d'Elsa through Poneta and Poppiano to Cusona, which was an important centre of exchange on the frontier between Florence and San Gimignano even as late as 1243. Another road descended to the valley or more likely to Poggibonsi through Linari, and yet another route descended to the crossing at Vico d'Elsa. On the routes between Barberino Val d'Elsa and the upper valley of the river Elsa between Vico and Poggibonsi, see De la Roncière, 1976, 3, p. 841; 4, p. 255, nn. 39-42. The emergence of Poggibonsi as a major market cannot be dated with any great degree of precision. Already in the later twelfth century, there was a system of weights and measures in use at Poggibonsi designated as that of Poggibonsi, which itself suggests the existence of a market, and it appears that Poggibonsi was a collection centre for grain already by 1191. For evidence of the measure of Poggibonsi, see

portant route joined the Pesa and the upper valley of the river Arno. From a crossing of the Pesa below San Pietro in Bossolo at Sambuca, this route continued east to the abbey at Passignano, climbed to a junction at Sillano, and then descended through the market town of Monteficalli to the river Greve.⁹³ The road

ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1172 January 2, 1175 October 26, 1200 July 22, 1208 April 14, and 1219 February 4. Grain storage at Poggibonsi is suggested in the name of one 'Ugolinus de granario', who is attested in an act deated from Poggibonsi in 1191. See ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1191 July 20; Davidsohn, ed., 1896-1908, 1, p. 156. The market at Poggibonsi is securely attested only in the later thirteenth century in numerous notarial acts redacted at the market between 1280 and 1283. See De la Roncière, 1976, 4, pp. 343-347, no. 39, citing ASF, *Notarile antecosimiano* R192, *passim*. In 1282, the consuls of Florence considered designating Poggibonsi as one of four principal supply centres in the territory for the provisioning of grain. Ultimately, this duty was given not to the market at Poggibonsi but to the market at Borgo San Lorenzo, no doubt owing to the close proximity of a Florentine market at Marcialla and to the fact that Poggibonsi had only recently submitted to Florentine jurisdiction. On the deliberations of the communal consuls of Florence concerning the designation of the principal supply centres, see Gherardi, ed., 1896-1898, 1, pp. 66, 68-69. The market is attested again in the early fourteenth century. See Ciasca, ed., 1922, chap. 19, pp. 28-29, esp. 28, already cited above. See also Pucci, ed., 1995, pt. 2, rubric 6, p. 107; pt. 2, rubric 23, p. 115; pt. 3, rubric 45, p. 139.

⁹³ The river crossing at Sambuca is abundantly documented in the evidence for the abbey at Passignano from just after the beginning of the last quarter of the twelfth century. See ASF, *Diplomatico*, Badia di Passignano, 1179 October 29, 1182 April 9, 1201 May 21, 1214 September 8, 1216 July 30, 1220 February 18, 1224 November 22, 1247 March 23. It is also possible that a market existed at Passignano from even before the middle of the twelfth century, based on evidence for rent payments and other exchanges undertaken in grain 'a stario venale de porta de pasiniano'. See ASF, *Diplomatico*, Badia di Passignano, 1146 August 1, 1154 June 15, 1155 June 17, 1187 May 5, 1192 March 15, 1194 February 27. See also ASF, *Diplomatico*, Stroziane Uguccione, 1211 March 3. Evidence for the use of a *starium antiquum* in the region around the abbey at Passignano in the later twelfth century can be found in ASF, *Diplomatico*, Badia di Passignano, 1193 June 23. After about the beginning of the thirteenth century, the system of weights and measures employed in the region around the abbey at Passignano was almost universally the system designated as that of Florence. As already noted, an important road is attested at Sillano from even before the middle of the twelfth century, see again ASF, *Diplomatico*, Badia di Passignano, 1146 October 26. See also, and once again, Pagliai, ed., 1909, no. 418, 1152 November 7, p. 189. Unfortunately, it cannot be determined whether these references concern the road that ran along the crest of the ridge between the rivers Pesa and Greve, south to Campoli and north to Panzano, or the road that joined the Pesa and the upper valley of the river Arno. The market at Monteficalle is securely attested from the thirteenth century and from perhaps as early as 1155. The earliest secure reference to the market at Monteficalle occurs in an undated cartulary fragment of the thirteenth century. See ASF, *Diplomatico*, Strozzi-Uguccione, *a quaderno*, secolo XIII. An earlier reference to the 'foro de Sancte Margarita' perhaps also concerns a market at Monteficalle held in the square of the hospital of Santa Margherita di Preiagna. See ASF, *Diplomatico*, Badia di Passignano, 1155 July 20; Repetti, 1833-1845, 3, pp. 390-391. The market is attested again in Muzzi and Nenci, eds., 1988, no. 248, 1299 January 31, pp. 339-340, citing ASF, *Diplomatico*, Badia di Passignano. The market is also attested from the second quarter of the fourteenth century in Sartini, ed., 1953, pp. 158, 245. According to Fiumi, the market at Monteficalle was situated at the foot of the hill of Montefioralle and it subsequently developed into the town of Greve, but it is more likely that the market at Monteficalle was originally situated well above the valley. As communications improved along the route that crossed the river Greve just below Monteficalle, market functions were transferred from the upland site to the more easily accessible river crossing.

crossed the river Greve, climbed towards the Poggio del Sugame, and then either descended towards Figline or joined the old high road between Florence and Arezzo near the source of the torrent Cesto.⁹⁴

The via Francigena itself crossed the Apennine ridge into the extreme northwest corner of Tuscany by way of the Passo della Cisa and then descended to Pontremoli where it joined the valley of the river Magra. The route followed the Magra valley through Sarzana to Luni near the mouth of the river and then assumed a trajectory roughly parallel to the Tyrrhenian coast through Pietrasanta and Camaiore before turning inland to Lucca. The road continued towards the east to Altopascio and then turned again towards the southeast in the direction of Fucecchio and crossed the river Arno to the imperial outpost at San Miniato al Tedesco. The road then undertook a course well above the left bank of the river Elsa through Calenzano, San Quintino, Coiano, Pieve a Chianni, Gambassi, Luiano, Pancole, and Strada to the commercial centre of San Gimignano.⁹⁵ In the early middle ages, the route continued above the Elsa through Badia a Coneo, Gracciano, and Abbadia di Isola to Siena, but another route descended from San Gimignano to Poggibonsi by the end of the eleventh century and then followed the valley of the torrent Staggia to Siena.⁹⁶

See Fiumi, 1957-1959, pt. 2, p. 470; 1977, p. 92. For references to the market at Greve, see De la Roncière, 1976, 4, pp. 343-347, no. 18.

⁹⁴ The crossing of the river Greve at the town of Greve can be dated with certainty only to the middle of the fourteenth century, but the bridge surely antedated the earliest references in the sources. For these references, see De la Roncière, 1976, 4, pp. 296-300. A public road either passed below the Poggio del Sugame or crossed the nearby Passo di Sugame on the Florence-Arezzo trunk route in the later eleventh century. See again Camerani-Marri, ed., 1962-1963, pt. 4, no. 84, 1088 March 20, pp. 492-493, esp. 492.

⁹⁵ The bibliography on the via Francigena is considerable, but see especially Stopani, 1984, 1986, 1988, with references to all but the most recent contributions on the subject. The crossing of the river Arno between Fucecchio and San Miniato al Tedesco is documented from the tenth century. See Stopani, 1988, p. 22, n. 29. A market at San Gimignano is securely attested from before the middle of the thirteenth century 'in foro de Montestaffoli', situated on a hill within the walls of the town, and Fiumi has suggested that San Gimignano was very likely the site of a market from the later ninth or early tenth century. See Fiumi, 1961, p. 19, n. 12. Evidence from Florence also indicates that San Gimignano was using its own system of weights and measures in the later twelfth century, which suggests the existence of a market of considerable dimensions by that time. See Enriques Agnoletti, ed., 1990, no. 236, 1193 November 25, pp. 156-159, esp. 157, 158. On weights and measures in San Gimignano, see Fiumi, 1961, p. 128, n. 13. On the via Francigena at San Gimignano more in general, see again Fiumi, 1961, pp. 28-30.

⁹⁶ For evidence of the route from San Gimignano in the direction of Poggibonsi already in the later eleventh century, see Schneider, ed., 1911, no. 99, 1080 September, p. 37: 'de Elsa fluvio ad strata Romea q. decurrit subto Bibbiano'. The village of Bibbiano is situated above the valley of the torrent Foci, about five kilometres southeast of San Gimignano and about the same distance

On the right bank of the Elsa, another system of roads evidently ran parallel to the via Francigena but traversed the territory of Florence rather than that of Volterra.⁹⁷ From San Miniato al Tedesco, according to Plesner, the Florentine variant of the via Francigena turned towards the east along the trunk road between Florence and Pisa, and crossed the Elsa at Ponte a Elsa.⁹⁸ The road continued towards the south-southeast through the parish seat of Monterappoli to the important market town of Castelfiorentino and thence through the parish seat of San Giorsole.⁹⁹ From here, the road probably climbed the valley of the torrent Agliena to Santa Maria a Bagnano, San Donnino, and Petrognano, all of which were briefly enclosed within the stronghold of Semifonte, before joining the road that ran between San Pietro in Bossolo and Poggibonsi.¹⁰⁰

By the end of the thirteenth century, and probably earlier, other variants of the via Francigena had descended from the more elevated route above the left

from Poggibonsi to the west-southwest. The confluence of the Foci and Elsa lies just about two kilometres west-northwest of Poggibonsi. On the location of Bibbiano, see Repetti, 1833-1845, 1, p. 509.

⁹⁷ Plesner, 1938, pp. 47-48, 62-64.

⁹⁸ A river crossing at Ponte a Elsa of stone construction was evidently reduced to ruins early in the fourteenth century, which at least suggests the existence of a crossing at Ponte a Elsa in the thirteenth century. See Giovanni di Lemmo da Comugnori, p. 170: 'Anno dominice incarnationis millesimo trecentesimo octavo, indictione sexta, in hyeme fuit magna pluvia; et ipso anno, de mense ianuarii, cecidit pons lapidum qui erat super flumen Else, loco dicto alla Torrebenni'. See also De la Roncière, 1976, 4, pp. 296-301. On the restoration of the bridge at Ponte a Elsa in 1340, see Masi, ed., 1934, p. 62, n. 2, citing ASF, *Libri fabricarum* 19, folio 56.

⁹⁹ Plesner, 1938, pp. 62-64. A market at Castelfiorentino is attested with certainty from 1269, and the existence of a system of weights and measures designated as that of Castelfiorentino in the second half of the twelfth century recommends a much earlier dating of the market. For evidence of a market at Castelfiorentino in 1269, see Brattö, ed., 1956, par. 65, p. 29. For evidence of a system of weights and measures at Castelfiorentino in the twelfth century, see ASF, *Diplomatico*, Stroziane Uguccioni, 1176 February 16.

¹⁰⁰ Semifonte very clearly was an important economic and military outpost near the frontier between the territories of Florence and Siena, and the commune of Florence expended considerable energy in a well-documented effort to wrest control of Semifonte during the last years of the twelfth century and the first years of the thirteenth century. The economic importance of Semifonte is attested by the existence of a system of weights and measures designated as that of Semifonte before the end of the twelfth century, and more concretely by evidence for a market at Semifonte from the same period. The measure of Semifonte is attested in ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1195 August; Enriques Agnoletti, ed., 1990, no. 247, 1197 July 3, pp. 175-177, esp. 176; Pagliai, ed., 1909, no. 532, 1197 August 30, p. 238. The market of Semifonte is attested in ASF, *Diplomatico*, Badia di Passignano, 1196 February 10; Pagliai, ed., 1909, no. 532, 1197 August 30, p. 238. Much of the evidence documenting the efforts of the Florentine commune to wrest control of Semifonte can be found in Santini, ed., 1895, *Capitoli*, nos. 13, 18, 27, 29-31, 33, 35-35, 38-39, covering a period from 1182 to 1202; Santini, ed., 1895, *Miscellanea*, no. 7, 1202 March 1, pp. 369-372. See also Salvini, 1969.

bank of the Elsa and had begun to follow more closely the course of the river. One variation went from San Miniato al Tedesco through Calenzano and San Quintino along the old passage and then turned towards the Elsa and assumed a course just above the low riverside plain on the left bank. The road passed below Castelnuovo and continued through Dogana just above the left bank of the Elsa to a crossing of the river at Castelfiorentino.¹⁰¹

From Castelfiorentino, it was possible to continue south on either side of the river. On the left bank, the route ascended to Varna and San Andrea in Gavignalla before joining the river again at Badia a Elmi, opposite Certaldo. The road continued through the villages of Santa Lucia, Cassero, Santa Maria a Villa Castelli, and Crocetta to Uignano, and then through Cusona to a crossing of the Elsa at Poggibonsi.¹⁰² From the river crossing at Castelfiorentino, another route went along the right bank of the Elsa through Petrazzi, Certaldo, and Vico d'Elsa to Poggibonsi.¹⁰³

¹⁰¹ De la Roncière has speculated on the significance of the place-name Dogana, which pertains to a village about three kilometres north-northwest of Castelfiorentino on the left bank of the river Elsa, suggesting that it belies a considerable volume of commercial traffic along this particular variant. See De la Roncière, 1976, 4, pp. 256-257, n. 47. A bridge over the Elsa at Castelfiorentino was constructed in 1280 to replace a low-water ford. See De la Roncière, 1976, 4, pp. 296-300; Stopani, 1984, p. 81.

¹⁰² The route is described in Stopani, 1984, pp. 78-81. The crossing of the Elsa at Poggibonsi is attested from 1331. See De la Roncière, 1976, 4, pp. 296-300, citing ASSiena, *Comune di Poggibonsi* 22, folio 78.

¹⁰³ In the later thirteenth century, the via Francigena was clearly passing through Certaldo. See ASF, *Diplomatico*, Sant'Apollonia di Firenze, 1282 April 4: 'Actum prope castrum Certaldi in strada publica francigena appellata'. See also Francovich, 1973, p. 87; Stopani, 1984, pp. 75-76. The bridge at Certaldo over which this road crossed the torrent Agliena is attested from shortly after the middle of the fourteenth century. See De la Roncière, 1976, 4, pp. 296-300, citing ASF, *Capitani di Parte, numeri rossi*, 109 [1358 June 12]. A bridge is attested also at Vico d'Elsa from the beginning of the thirteenth century, although it is uncertain as to whether the bridge in question crosses the Elsa or the torrent Avane. See Santini, ed., 1896, *Capitoli*, no. 38, 1202 April 3, pp. 73-77, esp. 76. Farther upstream on the right bank of the river, De la Roncière has noted the existence of an important road on the valley floor below both Poppiano and Linari. See De la Roncière, 1976, 3, p. 842; 4, pp. 256-257, n. 47.

5. Bridges

Table 9. Bridges in the Florentine countryside, 11th-14th centuries ¹

	RURAL BRIDGES	DATE	SOURCE
1	Agliana (Agnà)	1335 July 21	Sàntoli, ed., 1915, no. 832, pp. 473-474. ²
2	Agliana (?), 'ponte Boccii'	1382	Sàntoli, ed., 1915, no. 866, pp. 490-499, esp. 497. ³
3	Agliana (Calice), 'Pons qui dicitur lo ponte delle due archora'	1382	Sàntoli, ed., 1915, no. 866, pp. 490-499, esp. 497. ⁴
4	Altare (Ema)	1153 June 7	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
5	Bagnolo (Bagnolo)	1335 July 21	Sàntoli, ed., 1915, no. 832, pp. 473-474. ⁵
6	Barbarino (Cesto)*	1231 January 30	ASF, <i>Diplomatico</i> , Badia di Passignano.
7	Bonelle (Ombrone), immediately south of Pistoia	1283 November 13, 1283 December 6	Sàntoli, ed., 1915, no. 485, p. 325; no. 494, p. 328.
8	Borgo San Lorenzo (?), 'in loco qui dicitur ponticelli'*	1174 April 19	ASF, <i>Diplomatico</i> , Monache di Luco.

¹ On the location of most of these bridges, see above, Map 12. An asterisk in the column labelled 'rural bridges' indicates that the precise location of the bridge in question is unclear and that its location is not indicated on the map. In the same column, the name of bridge is followed, in parentheses, by the name of the waterway on which the bridge is situated, if it can be determined, and then by further information regarding the location of the bridge.

² The document records an arbitrated settlement between Florence and Pistoia concerning the boundary between Montemurlo and Montale: 'et ipsum flumen Angne oriens et progrediens ex rivis predictis et alveus seu lectus antiquus ipsius fluminis Angne sicuti trait et protenditur dictus alveus seu lectus antiquus dicti fluminis Angne usque ad pontem Angne qui est in territorio comunis Alliane super strata que ytur de civitate Pistoia ad terram Prati justa seu prope locum qui dicitur Casa Boccii et supra dictam stratam et pontem ext latere Montis Murli, et a dicto ponte quatenus pretenditur dicta strata versus terram Prati usque ad pontem Bangnuoli, qui est super dictam stratam, ita quod dicta strata usque ad dictum pontem Bangnuoli cum tota fovea existente secus dictam stratam ex latere Montis Murli sit territorium Alliane predictae'.

³ The document is a communal inventory for the countryside of Pistoia: 'ad pontem et juxta pontem qui vulgariter dicitur ponte Boccii in strata publica dicti comunis Pistorie sita in villa Agliane comitatus Pistorie'

⁴ 'Pons qui dicitur lo ponte delle due archora, situs super flumine qui vocatur Calicini [...] super strata publica dicti comunis per quam itur ad terram Prati, situs in Villa Agliana predicta'.

⁵ See the note above for the bridge at Agliana.

	RURAL BRIDGES	DATE	SOURCE
9	Borgo San Lorenzo (?), 'rius bictini', 'posita a ponte ughi'*	1242 February 10	ASF, <i>Diplomatico</i> , Monache di Luco.
10	Borgo San Lorenzo (Sieve)	1322-1324, constructed, wood	De la Roncière, 1976, 4, pp. 296-300, no. 48, citing ASF, <i>Notarile antecosimiano</i> C480, fol. 18v.
		1325, constructed, wood	Caggese, ed., 1921, bk. 5, rub. 118, pp. 444-445.
11	Bovino (Sieve)	1297 December 7, provisions for construction, wood	De la Roncière, 1976, 4, p. 301, citing ASF, <i>Provvisoni</i> 7, fol. 142; Gaye, ed., 1839-1840, 1, app. 2, p. 435.
		1298	De la Roncière, 1976, 4, pp. 296-300, no. 9, citing ASF, <i>Provvisoni</i> 7, fol. 142r.
12	'Cacazini' (Ombrone), near Bonelle, south of Pistoia	1283 November 13, 1283 December 6	Santoli, ed., 1915, no. 485, p. 325; no. 494, p. 328.
13	Cagnana/Canneto (Elsa), near Monterappoli	1254 September 10	Santini, ed., 1952, <i>Capitoli</i> , no. 22, pp. 78-86, esp. 83.
14	Calenzano, San Niccolò, (Chiosina and/or Marina)	1319*	De la Roncière, 1976, 4, pp. 296-300, no. 27, citing ASF, <i>Provvisoni Protocolli</i> 7, fol. 137r.
15	Campi (Bisenzio and/or Marina), various locations*	1325, wood	Caggese, ed., 1921, bk. 4, rub. 51, p. 343.*
16	Campi (Dogana), various locations*	1330*	De la Roncière, 1976, 4, pp. 296-300, no. 58, citing ASF, <i>Provvisoni</i> 116, 2, fol. 25.
17	Campigliano, quercia a (Ema), popolo di San Michele a Tegolaia	1358	De la Roncière, 1976, 4, pp. 296-300, no. 40, citing ASF, <i>Capitani di Parte</i> 109, 1358 April 18.
18	Camprato (Borro Grande), San Filippo di Barbischio	1297 February 4	Majnoni, 1981, p. 140; cf. ASF, <i>Diplomatico</i> , Badia di Coltibuono.
19	Candeli-Girone (Arno)	1325	Caggese, ed., 1921, bk. 5, rub. 27, p. 38.
20	Capalle (Bisenzio)	1302	De la Roncière, 1976, 4, pp. 296-300, no. 24, citing ASF, <i>Notarile antecosimiano</i> 154.

	RURAL BRIDGES	DATE	SOURCE
21	Capraia (Arno)	1204 October 29	Santini, ed., 1896, <i>Capitoli del comune di Firenze</i> , no. 54, pp. 143-144, esp. 144.
22	Castelfiorentino (Elsa)	constructed 1280, wood	Bori, 1907, p. 108.*
23	Cerbaia (Pesa)	1295*	De la Roncière, 1976, 4, pp. 296-300, no. 7, citing ASF, <i>Provviszioni</i> 5, fol. 103.
		1295 May 26*	Gaye, ed., 1839-1840, 1, app. 2, p. 429; and Lopes Pegna, 1962, p. 237.
24	Certaldo (Agliena)	1358	De la Roncière, 1976, 4, pp. 296-300, no. 41, citing ASF, <i>Capitani di Parte</i> 109, 1358 June 12.
25	Coltiora (Elsa)	1252 February 1	ASF, <i>Diplomatico</i> , Spedale di San Giovanni.
26	Cornicchiaia (Risano)	1294*	De la Roncière, 1976, 4, pp. 296-300, no. 8, citing ASF, <i>Provviszioni</i> 6, fol. 146r.
		constructed 1296, stone	De la Roncière, 1976, 4, p. 301, citing ASF, <i>Provviszioni</i> 6, fol. 146r.
27	Cornicchiaia (Santerno)	constructed 1296, stone	De la Roncière, 1976, 4, p. 301, citing ASF, <i>Provviszioni</i> 6, fol. 146.
28	Dicomano (Dicomano [?])	1327	De la Roncière, 1976, 4, pp. 296-300, no. 49, citing ASF, <i>Notarile antecosimiano</i> G367, 4, fol. 89.
29	Empoli, various	1350-1380	De la Roncière, 1976, 4, pp. 296-300, no. 57, citing ASF, <i>Guidice degli appelli</i> 1825, 2, 34.
30	Fabbrica (Pesa) ⁶	1350*	De la Roncière, 1976, 4, pp. 296-300, no. 59, citing ASF, <i>Missive Prima Cancellaria</i> 10, fol. 28v.

⁶ According to De la Roncière, the bridge was constructed to service the route between Florence and Poggibonsi. The exact location of the bridge is uncertain, but it was probably the Ponte Nuovo at Fabbrica.

	RURAL BRIDGES	DATE	SOURCE
31	Firenzuola (Santerno)	1332*	De la Roncière, 1976, 4, pp. 296-300, no. 33, citing ASF, <i>Provviszioni</i> 211, fol. 98.
32	Fontenella (Pesa)*	1124 June	ASF, <i>Diplomatico</i> , Badia di Passignano.
33	Giogole (Greve), ponte a l'asse, or Ponte Petriboni	1358	De la Roncière, 1976, 4, pp. 296-300, no. 31, citing ASF, <i>Capitani di Parte</i> 109, 1358 May 29.
34	Grassina (Grassina or Ema)	1160 May 17	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
		1286	De la Roncière, 1976, 4, pp. 296-300, no. 3, citing ASF, <i>Provviszioni Protocolli</i> 1, fol. 10r.
35	Greve, (Cine or Greve), near Mercatale a Greve, 'pons situs super flumine Cine', 'apud hospitale de Grieve'	1351 July 29	De la Roncière, 1976, 4, pp. 296-300, nos. 63-64, citing ASF, <i>Giudice degli appelli</i> 1865, 6.
36	Incisa (Arno)	1101 July 23	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
		1102	De la Roncière, 1976, 4, pp. 296-300, no. 20, citing A. Bossini, <i>Storia di Figline e del Valdarno superiore</i> , 2nd ed., Florence, 1970, p. 249.
37	Incisa (Viscelle), 'pontem super fossatu Viscelle (de strata, per quam itur Fighinum)'	1292 August 27	Gaye, ed., 1839-1840, 1, app. 2, pp. 423-424.
38	Legnaia, various (?)	1300	De la Roncière, 1976, 4, pp. 296-300, no. 26, citing SPC 973, fols. 21v, 46r, 24r.
39	Londa (Moscia)	?	Pirillo, 1984, p. 34.
40	Magnale (Vicano di San Ellero), San Niccolò	1113 February 7	ASF, <i>Diplomatico</i> , Vallombrosa.
41	Megognano (Avane), parish of San Giorzolè, 'al ponte a Megognano'	1327	De la Roncière, 1976, 4, pp. 296-300, no. 45, citing ASF, <i>Notarile antecosimiano</i> R45, 3, fol. 347r.

	RURAL BRIDGES	DATE	SOURCE
42	Montebuoni (Greve)	1325*	Caggese, ed., 1921, bk. 5, rub. 101, pp. 428-429.*
		constructed 1328, stone	De la Roncière, 1976, 4, p. 301, citing Davidsohn, ed., 1896-1908, 4, p. 444.
43	Montelupo (Pesa)	1322	De la Roncière, 1976, , 4, pp. 296-300, no. 47, citing Caggese, ed., 1910, bk. 4, rub. 10, p. 101.
44	Montemurlo (Agnà)	1335 July 21	Santoli, ed., 1915, no. 832, pp. 473-474. ⁷
45	Monte Rinaldi (Pesa)	1299 May 27, 1299 November 15, 1300 August 24, 1300 March 14, 1302 February 11	ASF, <i>Notarile antecosimiano</i> 8348/ F652, fols. 4v, 36v-38v, 69v-70r, 95r, 123r. ⁸
46	Montesassi (Sieve)	1295 February 9	Gaye, 1839-1840, 1, app. 2, p. 428.
		construced 1296, stone	De la Roncière, 1976, 4, pp. 296-300, no. 6; and p. 301, citing ASF, <i>Provviszioni</i> 5, fol. 30v.
47	Montevarchi (Tommè)	1286*	De la Roncière, 1976, 4, pp. 296-300, no. 4, citing ASF, <i>Provviszioni Protocolli</i> 1, fol. 10r.
48	Papissa (?), possibly near Larciano*	1151 July 13	ASF, <i>Diplomatico</i> , Monache de Luco.
49	Peretola, fosso (?), ponte a l'asse	1291	De la Roncière, 1976, 4, pp. 296-300, no. 18, citing ASF, <i>Provviszioni</i> 36, fol. 65v.
50	Petrino (?)*	1129 November 9	ASF, <i>Diplomatico</i> , Monache di Luco.
51	Petroio, (Pesa [?]), 'sancte marie maddalene de ponte petroio'*	1211 March 29	ASF, <i>Manoscritti</i> , 48BIS, fol. 12v.

⁷ See again the note above for the bridge at Agliana.

⁸ Three separate acts of the 15th of November in 1299 were originally recorded 'in flumine Pese iusta pontem de Monterinaldi', and three more of the 24th of August in 1300 were redacted 'al ponte de Monterinaldi'.

	RURAL BRIDGES	DATE	SOURCE
52	Poggibonsi (Gavignano), route between Poggibonsi-Florence	1319*	De la Roncière, 1976, 4, pp. 296-300, no. 52, citing ASSiena, <i>Comune di Poggibonsi</i> 6, cahier joint.
53	Poggibonsi (Casalino), route between Poggibonsi-Florence	1319*	De la Roncière, 1976, 4, pp. 296-300, no. 53, citing ASSiena, <i>Comune di Poggibonsi</i> 6, cahier joint.
54	Poggibonsi (Elsa), Marturi, 'pons Bonizi', 'pons de Elsa'	998 July 25	Cambi, 1995, app., no. 2, pp. 194-207, esp. 195-196; cf. ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1134	Cambi, 1995, app., no. 20, pp. 245-247, esp. 246; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1140 September 2	Cambi, 1995, app., no. 8, pp. 219-224, esp. 223-224; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista, 1068 November 1.
		1331	De la Roncière, 1976, 4, pp. 296-300, no. 54, citing ASSiena, <i>Comune di Poggibonsi</i> 22, fol. 78r.
		1332	Pucci, ed., 1995, bk. 3, rub. 99, p. 159; bk. 4, rub. 12, p. 166.
55	Poggibonsi (Staggia), 'pontis de Staggia'	1332	Pucci, ed., 1995, bk. 4, rub. 12, p. 166.
		1364, reconstruction	De la Roncière, 1976, 4, pp. 296-300, no. 55, citing ASF, <i>Provvisioni</i> 51, fol. 169.
56	Poggibonsi (Staggia), Calcinaia, 'pons Sancti Johannis'	1334 May 8	De la Roncière, 1976, 4, pp. 296-300, no. 56, citing ASF, <i>Notarile antecosimiano</i> M437.
57	Poggibonsi (?), 'pontis Guadi Morelli'*	1332	Pucci, ed., 1995, bk. 4, rub. 12, p. 166.
58	Poggibonsi (?), 'pontis Fracassini'*	1332	Pucci, ed., 1995, bk. 4, rub. 12, p. 166.
59	Poggibonsi (?), 'pontis de Lappeto'*	1332	Pucci, ed., 1995, bk. 4, rub. 12, p. 166.

	RURAL BRIDGES	DATE	SOURCE
60	Poggio a Caiano (Ombrone)	constructed 1329, wood	De la Roncière, 1976, 4, pp. 296-300, no. 29; and p. 301, citing ASF, <i>Provvisioni</i> 25, fol. 86v.
		1382	Santoli, ed., 1915, no. 866, pp. 490-499, esp. 497.
61	Pons Campuccii (Carza [?])	1334	De la Roncière, 1976, 4, pp. 296-300, no. 50, citing Sartini, ed., 1953, p. 156.
62	Pons Mali, (Pesa or Riovarlo [?])*	1193 May 14	ASF, <i>Diplomatico</i> , Badia di Passignano.
63	Pontassieve (Sieve)	1291 July 19	Gaye, ed., 1839-1840, 1, app. 2, p. 422.
		1299	De la Roncière, 1976, 4, pp. 296-300, no. 11, citing ASF, <i>Provvisioni</i> 10, foilo 107,
		1301 June 13	ASF, <i>Manoscritti</i> , 48BIS, fol. 136r.
		1319 December 7	ASF, <i>Manoscritti</i> , 48BIS, fol. 137v.
64	Ponte a Cesto (Cesto), Scampata	1341 June 5	Pirillo, 1992, pp. 191, 234, 241.
65	Ponte a Elsa (Elsa), Borgo Santa Fiore	constructed before 1307, probably 13th century, stone	Passerini, ed., 1876a, p. 170.
		1340 August 3-4	Masi, ed., 1934, p. 62, n. 2, citing ASF, <i>Libri fabarum</i> 19, fol. 56r.
66	Ponte a Ema (Ema)	11th century	Strà, ed., 1982, no. 18, pp. 34-37, esp. 35.
		1286	De la Roncière, 1976, 4, pp. 296-300, no. 2, citing ASF, <i>Provvisioni Protocolli</i> 1, fol. 10r.
67	Ponte agli Stolli (Cesto)	1300	De la Roncière, 1976, 4, pp. 296-300, no. 25, citing Repetti, 1833-1845, 2, p. 135. ⁹

⁹ The reference cited by De la Roncière mentions the Ponte agli Stolli, but the reference does not attest to the date of 1300 given by De la Roncière.

	RURAL BRIDGES	DATE	SOURCE
68	Ponte a Greve (Greve)	1258 September 18	ASF, <i>Diplomatico</i> , Stroziane Uguccioni.
		1266 May 25	ASF, <i>Notarile antecosimiano</i> 995/A981, fol. 43v. ¹⁰
		1288	De la Roncière, 1976, 4, pp. 296-300, no. 15, citing Lami, ed., 1758, 1, p. 261. ¹¹
		1340 August 3-4	Masi, ed., 1934, p. 62, n. 2, citing ASF, <i>Libri fabarum</i> 19, fol. 54.
69	Ponte alla Mandra (Cesto [?])*	1114 May 31	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
70	Ponte all'asse (Ema), exact location uncertain	1358	De la Roncière, 1976, 4, pp. 296-300, no. 60, citing ASF, <i>Capitani di Parte</i> 109, 1358 May 23.
71	Ponte a Pesa (Pesa), possibly Sambuca*	1209 December 22	ASF, <i>Diplomatico</i> , Badia di Passignano.
72	Ponte a Vigesimo*	1341 June 5	Pirillo, 1992, p. 219.
73	Pontelungo*	1341 June 5	Pirillo, 1992, p. 256.
74	Ponte Meleto*	1205 January 17	Strà, ed., 1982, no. 60, pp. 113-114, esp. 114.
		1205 November 2	ASF, <i>Diplomatico</i> , Passerini.
		1212 March 2	ASF, <i>Diplomatico</i> , Passerini.
		1227	Strà, ed., 1982, no. 75, pp. 157-159, esp. 159.
75	Ponte Rosso (Rosso), Figline	1341 June 5	Pirillo, 1992, p. 196.
76	Ponte Villiani (?)	1160 October 12	Appelt, ed., 1975-1990, 4, no. 1047, pp. 359-361; ASF, <i>Diplomatico</i> , Badia di Ripoli.
77	Ponticello (?)*	1341 June 5	Pirillo, 1992, p. 256.
78	Pontorme (Orme), Empoli*	8th century	Repetti, 1833-1845, 4, pp. 541-543, esp. 541.

¹⁰ 'Actum ad pontem Grevis de Scandiccio'.

¹¹ The source cited by De la Roncière mentions only the 'Hospitalis de Grieve', and there is no reference to a bridge in the source.

	RURAL BRIDGES	DATE	SOURCE
79	Poppiano (Sambra), near Sant'Appiano, 'al ponte ala Sambra'	1329	De la Roncière, 1976, 4, pp. 296-300, no. 46, citing ASF, <i>Notarile antecosimiano</i> R45, 3, fol. 436r.
80	Ramagliano, (Pesa), probably Sambuca*	1180 June 14, 1209 October 8	ASF, <i>Diplomatico</i> , Badia di Passignano.
81	Rapezzo (Santerno)	1332*	De la Roncière, 1976, 4, pp. 296-300, no. 32, citing ASF, <i>Provvisoni</i> 211, fol. 98r.
82	Remole (Sieci), Sieci-Remole	constructed 1297, stone	De la Roncière, 1976, 4, pp. 296-300, no. 10; and p. 301, citing ASF, <i>Provvisoni</i> 8, fol. 136r.
83	Rifredi (Terzolle)	1251	Lami, ed., 1758, 2, p. 950.
84	Rignano sull'Arno (Arno)	1295 April 5	ASF, <i>Notarile antecosimiano</i> 10896/G830, fol. 17r
		1334	Sartini, ed., 1953, p. 157.
85	Riomorti (Riomorti [?]), Ponticello [?]*	1253 March 4	ASF, <i>Diplomatico</i> , Cestello (Settimo).
86	Romanelli (?)*	1124 October 2	ASF, <i>Diplomatico</i> , Cestello (Settimo).
87	Sagginale (Sieve)	1307	De la Roncière, 1976, 4, pp. 296-300, no. 22, citing ASF, <i>Notarile antecosimiano</i> F480, fol. 10v.
88	Sambuca (Pesa)	1179-1247 ¹²	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1302 November 6	ASF, <i>Corporazioni religiose soppresse dal governo francese</i> 179, 36, no. 2, fol. 50v.

¹² The bridge over the river Pesa at Sambuca is attested frequently in the evidence for the abbey at Passignano certainly from 1152, and from perhaps as early as 1123, to 1247. For the pertinent references from 1152 to 1247, see ASF, *Diplomatico*, Badia di Passignano, 1152 October 10, 1179 October 29, 1182 April 9, 1195 February 27, 1201 May 21, 1208 September 17, 1214 September 8, 1216 July 30, 1220 February 18, 1224 November 22, 1247 March 23. An earlier reference attests to the existence of a bridge over the Pesa near the mill of San Pietro in Bossolo, which is probably the same bridge. See ASF, *Diplomatico*, Badia di Passignano, 1123 June, 1123 September. It is likely that this bridge was also referred to as the bridge of Ramagliano. For references to the Ramagliano bridge, see above.

	RURAL BRIDGES	DATE	SOURCE
89	San Bavello (Corella), between Dicomano and San Godenza, 'in strata qua itur de Florentia Romandiolam'	1354	De la Roncière, 1976, 4, pp. 296-300, no. 35, citing ASF, <i>Provvisioni</i> 41, fol. 16v.
90	San Casciano in Val di Pesa (Pesa)	1285-1300*	De la Roncière, 1976, 4, pp. 296-300, no. 13, citing Gherardi, ed., 1896-1898, 1, p. 255.
		1300 April 4	Gaye, ed., 1839-1840, 1, app. 2, p. 446.
91	San Donnino a Brozzi (Gavina), 'al ponte al guado', 'tre ponticelli'	1310	De la Roncière, 1976, 4, pp. 296-300, no. 44, citing ASF, <i>Notarile antecosimiano</i> A937, fol. 78v; ASF, <i>Capitani di Parte</i> 109, 1358 May 24.
92	San Godenzo (San Godenza), 'in strata qua itur de San Gaudentio versus Casentinum'	1354	De la Roncière, 1976, 4, pp. 296-300, no. 34, citing ASF, <i>Provvisioni</i> 41, fol. 16v.
93	San Martino a Campi, Bisenzio	1309, reconstruction	Repetti, 1833-1845, 5, pp. 106-107.
94	San Martino (?), curia Castelfiorentino	1359	De la Roncière, 1976, 4, pp. 296-300, no. 61, citing ASF, <i>Capitani di Parte</i> 110, 1359 April 4.
95	San Mauro (Bisenzio)	1358	De la Roncière, 1976, 4, pp. 296-300, no. 39, citing ASF, <i>Capitani di Parte</i> 109, 1358 May 24.
96	San Piero a Ema (Mezzano [?])	1169 November 3	Mosiici, ed., 1990, no. 97, pp. 318-319, esp. 318.
97	San Piero a Sieve (Sieve)	re-built 1285, wood	De la Roncière, 1976, 4, pp. 296-300, no. 1; and p. 301, citing Gherardi, ed., 1896-1898, 1, p. 195.
		1294 December 2 ¹³	Gaye, ed., 1839-1840, 1, app. 2, p. 427.

¹³ Probably San Piero a Sieve, 'pontis noviter fiendi supra flumen Sanctii in strata publica, per quam a civitate florentie itur Bononiam'.

	RURAL BRIDGES	DATE	SOURCE
97	San Piero a Sieve (Sieve) (cont.)	1322-1325, repairs	Caggese, ed., 1910, bk. 5, rub. 124, pp. 317-318.
		1325	Caggese, ed., 1921, bk. 4, rub. 54; bk. 5, rub. 118.
98	San Pietro a Bossolo (Virginio), parish, Ponte Virginio	1317	De la Roncière, 1976, 4, pp. 296-300, no. 42, citing ASF, <i>Notarile antecosimiano</i> B2768, fol. 35v.
99	Santa Cristina a Pimonte (Bisenzio), Ponte Petrino	1221	Repetti, 1833-1845, 4, pp. 143-144. ¹⁴
100	Sant'Andrea a Antica (Salceto), constructed by a mason of Sant'Andrea a Antica, between San Donato in Collina and Incisa sull'Arno	1359 March 7	De la Roncière, 1976, 4, pp. 296-300, no. 62, citing ASF, <i>Capitani di Parte</i> 110.
101	Scandicci (Greve)	1343	De la Roncière, 1976, 4, pp. 296-300, no. 30, citing ASF, <i>Missive Prima Cancellaria</i> 8, fol. 23r.
102	Signa (Arno)	1217-1265 ¹⁵	ASF, <i>Diplomatico</i> , Cestello (Settimo).
		1258 September 29	ASF, <i>Diplomatico</i> , Santo Spirito di Firenze.
103	Signa (?), popolo San Lorenzo, 'super stratam ... a civitate Flor. versus Pisam'	1358	De la Roncière, 1976, 4, pp. 296-300, nos. 37-38, citing ASF, <i>Capitani di Parte</i> 109, 1358 April 18
104	Torre di Mercatale Valdarno, (Caposelvi [?]), Ponte di Santa Reperata, Campo Romano [?]	1225 December 11	ASF, <i>Diplomatico</i> , Vallombrosa.
105	Vico d'Elsa, (Avane or Elsa)	1202 April 3	Santini, ed., 1895, <i>Capitoli</i> , no. 38, pp. 73-77, esp. 76.

¹⁴ See also the references above for the bridges at Petrino and at Petroio.

¹⁵ The bridge over the Arno at Signa is attested frequently in the evidence for the abbey at Settimo from 1217 to 1265. For the pertinent references, see ASF, *Diplomatico*, Cestello, 1217 September 13, 1245 May 17, 1246 October 25, 1252 August 10, 1253 December 30, 1254 September 26, 1265 January 3.

Table 10. River fords in the Florentine countryside

FORDS	RIVER	DATE	SOURCE
Cava de Lastris, 'in popolo canonicæ Fesulane in loco dicto alformello'	(?)	1294 August 15	ASF, <i>Notarile antecosimiano</i> 13363/M293, fol. 18v.
Guado 'Ciaccii (?)', probably near Empoli or Cerreto Guidi (?)	(?)	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Guado a la Porta, Antilla	Erna	1159 August 2	Mosiici, ed., no. 82, pp. 280-281, esp. 281.
Guado a Larciano	Faltona	1181 December 13	ASF, <i>Diplomatico</i> , Monache di Luco.
Guado a Tignano (?), near Castelfiorentino, 'Tignano' or 'Timignano'	Elsa	1222 February 4	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>), fol. 26r.
Guarlone, Varlungo	Affrico	late antiquity / early middle ages	Repetti, 1833-1845, 3, pp. 561-562; 5, pp. 678-680.
'Guato Ghisalberti'	(?)	1101 November	Conti, 1965, p. 265; cf. ASF, <i>Diplomatico</i> , Badia di Passignano.
'Vuado Isalberti, prope fluvio Pesa', near Passignano	Pesa	1086 March	Conti, 1965, p. 246; cf. ASF, <i>Diplomatico</i> , Badia di Passignano.

Table 11. Florentine urban bridges

URBAN BRIDGES	DATE	SOURCE
Ponte Vecchio	972 September	Lami, ed., 1758, 2, p. 1058.
Ponticello di San Frediano	12th century, probably about 1193	Santini, ed., 1895, <i>Miscellanea</i> , no. 5, pp. 368-369, esp. 368.
Ponte alla Carraia	1218-1220, construction	Villani, bk. 5, chaps. 41-42
Ponte a Torre	1322-1325	Caggese, ed, 1910, bk. 5, rub. 81. ¹⁶
Ponte Rubaconte, Ponte alle Grazie	1237, construction	Villani, bk. 6, chap. 26
Ponte Trinità	1252, construction	Villani, bk. 6, chap. 75.
Ponte Mugnone di San Gallo	1322-1325	Caggese, ed., 1910, bk. 4, rub. 8, pp. 175-181, esp. 180.
Ponticello di Ricorboli	1322-1325	Caggese, ed., 1910, bk. 4, rub. 8, pp. 175-181, esp. 175.
Ponte San Niccola	1332 July 30	Gaye, ed., 1839-1840, 1, app. 2, pp. 476-477.

¹⁶ 'Et quod nullus magnas propolocum ubi ordinatum est per fieri pontem a turri murorum insule iuxta arnum ad ultra Arnum, qui pons nominetur Pons Popolari'.

6. Ports, 11th-14th centuries

Table 12. River ports in the territory of Florence

RIVER PORTS	RIVER	DATE	SOURCE
Altafrontis, Florence	Arno, right bank	1279 December 15	Davidsohn, ed., 1896-1908, 4, p. 445.
Borgo Ognissanti	Arno, right bank	1277 September 9	ASF, <i>Diplomatico</i> , Com-menda Covi.
Borgo Ognissanti	Arno, right bank	1278 October 29	Pampaloni, ed., 1973, no. 58, pp. 100-102; cf. ASF, <i>Capitoli</i> 29, fol. 356[r].
Camarzio, Florence, eastern suburbs	Arno, left bank	1239	Vannucci, 1963-1964, pt. 1, p. 56, n. 151.
Camarzio, Florence, eastern suburbs	Arno, left bank	1275	Muendel, 1991, p. 368.
'Campo Grasi', Florence, eastern suburbs	Arno, right bank	1040 november 4	Piattoli, ed., 1938, no. 42, pp. 117-120, esp. 118. ¹
Castagnolo	Sieve/Stura	1153 January 8, 1154 January	ASF, <i>Diplomatico</i> , Badia di Passignano. ²
Chiusi, Incisa	upper Arno, left bank	1101 July 23	ASF, <i>Diplomatico</i> , San Vigilio di Siena.

¹ The document mentions donations of property 'posita prope civitate Florentia, seo terra et campo illo integro, quem fui genitore meo, qui est posito prope ipsa ecclesia [Sancti Remigii], qui vocatur campo Grasi, adque cum sestam portionem, quod est meam partem, de porto et terra in fluvio Arno, id est campo coiuncto, seo terris et rebus meis in loco Vuinciolo et in loco Uerzaria [...]'.

² The port is attested in the second document, and the location of the port is established in the first document.

RIVER PORTS	RIVER	DATE	SOURCE
Cogna (?), or Toma (?) ³	upper Arno, right	12th century	Santini, ed., 1895, <i>Miscellanea</i> , no. 5, 12th century, pp. 368-369, esp. 368; cf. ASF, <i>Diplomatico</i> , Ospizi di Camaldoli.
Dicomano	Sieve, left	1350 November	De la Roncière, 1976, 4, p. 273, n. 183, citing ASF, <i>Or San Michele</i> 251, fol. 2v.
Empoli	lower Arno, left	1297 June 13	Davidsohn, ed., 1896-1908, 3, no. 284, p. 64, citing ASF, <i>Capitoli</i> 35, fol. 105r.
Figline	upper Arno, left	1186 January 29	ASF, <i>Diplomatico</i> , Badia di Passignano, 1262 January 29. ⁴
Figline	upper Arno, left	1195 March 27	ASF, <i>Diplomatico</i> , Badia di Passignano.
Figline	upper Arno, left	1363	M. Villiani, bk. 7, chap. 45.

³ Santini transcribed the pertinent passage as follows: 'Cum verteretur controversia inter priorum di Camaldoli et ex una parte [*sic*] et Biliococzo ex altera parte de quibusdam pescariis positus in flumine Arni in portu de Conia apud rectores et consules fluminis Arni'. Davidsohn believed that Santini had transcribed the passage incorrectly, however, and that 'portu de Conia' should instead read 'portu de Toma'. Unfortunately, I have not seen the original document, but suffice it to say that the text, as transcribed by Santini, is somewhat confusing. The controversy evidently concerned not one weir, or *pescaria*, but several different weirs, though the weir situated 'in portu de Conia' perhaps lay at the centre of the dispute. Three of the weirs were situated in the area of San Frediano, on the left bank of the Arno in the western portion of the *Oltrarno* of Florence, 'a ponticello sancti Fridiani'. Another weir was situated 'sub terra Petri Scradii ad Pelago all'Avello', and other weirs were situated in locations that were not indicated in the document. The weir situated 'sub terra Petri Scradii ad Pelago' indeed may have been the same weir that was identified as situated 'in portu de Conia'. In the early fifteenth century, a place called Cognia is documented as a *podere* in the *grangia* of Pitiana, immediately south of Pelago in the upper Arno valley. The *podere* Cognia appears to have developed from the coalescence of several contiguous parcels of land that were being cultivated already before the middle of the fourteenth century. See Salvestrini, 1998, pp. 85 and 98, n. 56.

⁴ The document is a papal letter of Urban II erroneously attributed to Urban IV. See Kehr, ed., 1904, no. 33, pp. 186-188.

RIVER PORTS	RIVER	DATE	SOURCE
'Fonte al Porto in Arno' (?), Florence	Arno, left bank	1209 March 14	ASF, <i>Diplomatico</i> , Olivetani di Firenze.
'Fonte al Porto in Arno' (?), between the Ponte Rubaconte and the mills of S. Salvi, Florence	Arno, left bank	1297 June 13	Davidsohn, ed., 1896-1908, 3, no. 284, p. 64, citing ASF, <i>Capitoli</i> 35, fol. 105r.
Forche (?), Florence, eastern suburbs	Arno, probably right bank	1241 August 31	ASF, <i>Diplomatico</i> , Badia di Ripoli.
Legnaia, Florence, western suburbs	Arno, left bank	1272 August 15	Herlihy, 1958b, p. 24; Repetti, 1833-1845, 2, p. 672.
Legnaia, Florence, western suburbs, 'dogaium'	Arno, left bank	1292	ASF, <i>Compagnie religiose soppresse de Pietro Leopoldo</i> 479, 302.
Ponte a Signa	lower Arno	1252 April 20	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi	lower Arno	1239 June 19, 1246 October 25, 1252 April 13, 1265 January 3	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi	lower Arno	1252 April 9	ASF, <i>Compagnie Religiose soppresse da Pietro Leopoldo</i> 405, pp. 336-337.
Ponte a Signa, San Martino di Gangalandi, 'portus [...] filii olim Castraleonis [...]'	lower Arno	1252 April 9	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi, 'in loco qui dicitur al Sasso'	lower Arno	1252 April 9	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi, 'monasterii Sancti Salvatoris de Septimo'	lower Arno	1252 April 9, 1252 April 20	ASF, <i>Diplomatico</i> , Cestello.

RIVER PORTS	RIVER	DATE	SOURCE
Ponte a Signa, San Martino di Gangalandi, 'in loco qui dicitur lisschia'	lower Arno	1252	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> 479, 302, fol. 26v.
Ponte a Signa, San Martino di Gangalandi, 'portus quondam Gianni catenne'	lower Arno	1252 April 13	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi, 'boccha di Rimaggio'	lower Arno	1254 September 26	ASF, <i>Diplomatico</i> , Cestello.
Ponte a Signa, San Martino di Gangalandi	lower Arno	1268	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> 479, 302, fol. 25r.
Ponte a Signa, San Martino di Gangalandi, 'ubi dicitur a pecciosi'	lower Arno	1277	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> 479, 302, fol. 26r.
Ponte a Signa, San Martino di Gangalandi	lower Arno	1338	Jones, 1956a, p. 117.
Porto di Mezzo	lower Arno, left bank	1217 September 13	ASF, <i>Diplomatico</i> , Cestello.
Porto di Mezzo	lower Arno, left bank	13th century, probably 1279	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> 479, 302, fol. 24r.
Pontorme	lower Arno, left bank	1297 June 13	Davidsohn, ed., 1896-1908, 3, no. 284, p. 64, citing ASF, <i>Capitoli</i> 35, fol. 105r.
San Ellero	upper Arno, right bank	1192 January 26	ASF, <i>Diplomatico</i> , Vallombrosa.
San Piero a Sieve	Sieve	1350 November	De la Roncière, 1976, 4, p. 273, n. 183, citing ASF, <i>Or San Michele</i> 251, fol. 2v.
Santa Maria Soprarno, between the Ponte Vecchio and the Ponte Rubaconte	Arno, left bank	1314 February 5	De Angelis, Gigli, and Sznura, eds., 1978-1986, 1, p. xi, citing ASF, <i>Notarile antecosimiano</i> C465, fol. 117v.

RIVER PORTS	RIVER	DATE	SOURCE
Signa	lower Arno	964 July	Piattoli, ed., 1938, no. 14, pp. 40-45, esp. 42. ⁵
		1078 February 20	Mosiici, ed., 1969, no. 15, pp. 68-74, esp. 71
		1181 June	ASF, <i>Diplomatico</i> , Cestello.
Tempio, Corso dei Tintori, Florence, eastern suburbs	Arno, right bank	1271 July 14	Davidsohn, ed., 1896-1908, 4, pp. 444, 520; cf. ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1273 July 25	Pampaloni, ed., 1973, no. 100, pp. 177-179; cf. ASF, <i>Diplomatico</i> , Badia di Ripoli.

Table 13. Tyrrehnian Sea ports

SEA PORTS	DATE	SOURCE
Motrone di Versilia	1296 September 13	ASF, <i>Diplomatico</i> , Arte dei Mercanti.
Motrone di Versilia	1302 October 19	Davidsohn, ed., 1896-1908, 3, no. 423, p. 85; cf. ASF, <i>Diplomatico</i> , Santo Spirito.
Motrone di Versilia	1303 January	Davidsohn, ed., 1896-1908, 2, no. 1972, p. 256.
Motrone di Versilia	1307	De la Roncière, 1976, 2, p. 593; 4, p. 168, n. 108, citing ASF, <i>Provvisioni</i> 13, fol. 55r.
Marina di Pietrasanta	1296 September 13	ASF, <i>Diplomatico</i> , Arte dei Mercanti.

⁵ The document concerns a donation from the bishop of Florence to the cathedral chapter of properties 'posita in loco Exinea', which is generally understood as Signa. The donation includes revenues from tenants 'in villis nucupantes in loco Porto, Pagnano, Lecore, Labricini, Corliano, Dometiano, Barbarino, Sancto Angelo, Brutingnana, Ciolatico, vel per aliis villis [...]'. The term 'Porto' is again understood to refer to Signa.

SEA PORTS	DATE	SOURCE
Porto Pisano, near Livorno	1233 September 24	Carratori and Garzella, eds., 1988, no. 28, pp. 51-52.
Porto Pisano, near Livorno	1256 September 24 and 25	Santini, ed., 1952, <i>Capitoli</i> , no. 66, pp. 189-204, esp. 192.
Porto Pisano, near Livorno	1257 November 23, 1265 September 29	Carratori Scolari and Pescaglioni Monti, eds., 1993, no. 13, pp. 30-31, esp. 31; no. 41, pp. 88-90, esp. 89, 90.
Porto Ercole	1251 April 30	Fumi, ed., 1876; 1884, no. 298, pp. 194-195. See also Pampaloni, 1965, no. 49, p. 501, citing ASOrvieto, <i>Codice de' Bustoli</i> 7, fol. 42
Talamone	1251 April 30	Fumi, ed., 1876; 1884, no. 298, pp. 194-195. See also Pampaloni, 1965, no. 49, p. 501, citing ASOrvieto, <i>Codice de' Bustoli</i> 7, fol. 42
Talamone	1302 October 19	Davidsohn, ed., 1896-1908, 3, no. 423, p. 85; cf. ASF, <i>Diplomatico</i> , Santo Spirito
Talamone	1307	De la Roncière, 1976, 2, p. 593; 4, p. 168, n. 107, citing ASF, <i>Provvisioni</i> 13, fol. 55r.
Talamone	1328	Agnolo di Tura del Grasso, p. 483.

7. Markets in the territory of Florence, 11th-14th century

The catalogues of Florentine markets presented below build upon the list of markets in the countryside of Florence published by Charles M. de La Roncière nearly twenty-five years ago. De La Roncière identified fifty-four markets attested between 1008 and 1412 in the territory of Florence and in neighbouring territories subjugated by Florence for the most part over the course of the fourteenth century. For thirty of these markets, the earliest reference provided by De La Roncière dated from the fourteenth century.¹ The catalogue below adds considerably to the list compiled by De La Roncière, identifying a total of ninety-six markets in and around the territory of Florence, and in many cases pushing back first references from the fourteenth century to the thirteenth or even to the twelfth century.²

In the sources for medieval Florence, markets are typically attested as *mercata* or *fora*. Explicit attestations in land conveyances dating from the twelfth and thirteenth centuries are rare, however, occurring most commonly as geographic points of reference by which to identify the general location of a particular piece of property or more frequently the site at which a contract was made. The term *platea*, or *piazza* in modern Italian, probably also indicates a market of some sort, but the designation is more ambiguous, and it can refer merely to a broad avenue or open space. It is generally possible to identify a *platea* attested before 1300 securely as an important market only when it is either referred to as a 'platea communis' or corroborated by other evidence, typically an explicit reference to a *mercatum* or a *forum*. The term nevertheless identifies a meeting-place and probably also a site at which selling occurred in some form at least on a regular basis. Whereas *mercata* or *fora* probably functioned primarily as wholesale outlets at which banking and notarial services could be contracted, *platee* more likely were used for retail selling.

Weights and measures are often reliable indicators of markets. The use of local measures particularly for capacity frequently indicates the vitality of the markets in the towns after which the measures are designated. Of the nine local

¹ De La Roncière, 1976, 4, pp. 343-347.

² The area covered by the catalogue below, following De La Roncière, comprehends the dioceses of Florence and Fiesole plus areas subjugated by Florence in the early fourteenth century. The list designates as market towns those towns in the Florentine countryside for which local measures are attested, even if the town is not specifically attested as a market town. De la Roncière had not considered evidence for the use of local measures to imply the existence of a market. On local measures, see below.

measures securely attested within the dioceses of Florence and Fiesole in the twelfth and thirteenth centuries, excluding that of Florence itself, the existence of a market at the same site is securely corroborated in eight of the towns through an explicit reference to a *mercatum* or a *forum*.³ Paradoxically, evidence for the use of local measures becomes greater precisely during the period in which some of the more important rural markets in the Florentine countryside may have begun to abandon the use of local measures in favour of the measure that prevailed on the urban market at Florence. The coincidence stems from the fact that new leases for landed property from the later twelfth century increasingly required the tenant to consign an annual agricultural rent, typically in grain, while earlier leases more commonly stipulated that annual rents were to be paid in specie. The new leases often specified the measure according to which rents were to be consigned, but the decline of seigniorial power and the integration of rural markets with the increasingly dominant market at Florence probably entailed the gradual abandonment of local measures.

Rural markets are sometimes found in connection with *castella*, which makes it tempting to consider *castella* as potential indicators of markets. No market has ever been attested at the Buondelmonti *castellum* of Montebuoni in the middle ages, for example, but it is conceivable that the Florentine assault on the *castellum* in 1135 may have been motivated by the desire to quell the economic threat posed by the existence of an important rural market so close to the city.⁴ Aldo Settia nevertheless has argued against inferring markets from *castella* in the absence of additional supporting evidence. There undoubtedly were fortified market centres in the hinterland of Florence, and certain of the more strategically situated *castella* in the Florentine countryside developed into important rural markets, occupying a fundamental position in the urban food supply, but there were

³ Both markets and local measures for capacity are securely attested in the dioceses of Florence and Fiesole at Borgo San Lorenzo, Calenzano, Castelfiorentino, Dicomano, Empoli, Figline Valdarno, Gaiole in Chianti, Mangona, Pavanico, Poggibonsi, San Godenza, Semifonte, and Signa. Local measures are also attested at Passignano, but the existence of a market at Passignano is not securely corroborated by other evidence. Both markets and local measures for capacity are attested just beyond the frontiers of the dioceses of Florence and Fiesole at Ganghereto, Mercatale Valdarno, and Montevarchi in the upper Arno valley, and at Vernio in the upper Bisenzio valley.

⁴ A hospital was constructed at Montebuoni in 1095 'ad usum et suntum pauperum praeegrinorumque euntium et transeuntium', but the sources give no indication of a market. For the construction of the hospital at Montebuoni, see Camerani-Marri, ed., 1962-1963, pt. 4, no. 104, 1095 February 11, pp. 517-519, esp. 518. Giovanni Villani stated only that the Florentine assault on Montebuoni was prompted by the fact that the *castellum* lay near the city on an important road, where the Buondelmonti had been collecting a toll. See G. Villani, bk. 4, chap. 36.

not necessarily markets in every *castellum*. According to Settia, the precondition for markets was the stability of seigniorial power, and the most visible manifestations of such stability were *castella*. The primary functions of *castella* were indeed, for Settia, the extension and stabilisation of seigniorial power.⁵

The paucity of the sources for the period before about 1300, the circumstances of their production, and their uneven coverage of the Florentine hinterland clearly distort the image of rural market intensification in the twelfth and thirteenth centuries. Even in the city of Florence itself, the primary urban market is attested for the first time in medieval records only in the early tenth century, though a Roman *forum* is known to have existed on the same site in antiquity.⁶ Only two rural markets are attested within the confines of the dioceses of Florence and Fiesole before 1100, and only four before 1150, but five are attested for the first time between 1151 and 1175, nine between 1176 and 1200, and ten or eleven between 1201 and 1225. The increasing number of market attestations no doubt reflects a genuine intensification in the rural market network as well as the increase in the surviving documentation. It perhaps also reflects a change in notarial practice, which may have carried the redaction of notarial instruments increasingly away from the cloister and into the marketplace.⁷

The uneven coverage of the documentation perhaps presents even greater distortions. For the period under consideration here, certain areas in the countryside are more thoroughly documented than others, and records for some areas begin to survive only from the later thirteenth century. As a result, the market at Leccio, situated in the upper valley of the river Arno near the abbey at Vallombrosa, is documented from 1177, but markets at Montelupo and Montespertoli,

⁵ Settia, 1993, pp. 212-222.

⁶ The 'Mercatum Regis' at Florence, which became the 'Mercatum Vetus', or *Mercato Vecchio*, when another urban market was established in the city sometime before 1018, is attested for the first time in 931. For complete references, see the list of urban markets below. On the coincidence of the sites for the primary markets at Florence in antiquity and during the middle ages, see Ward-Perkins, 1984, p. 182.

⁷ The redaction of notarial instruments in the marketplace is important in distinguishing important secondary and tertiary markets from other markets closer to the bottom of the market hierarchy. There were probably more markets in the Florentine countryside during the thirteenth century than the eighty-nine noted in the list below. Many other towns no doubt possessed produce markets of some sort that are not attested in the surviving evidence, partly because not very much of the business transacted at these markets was recorded by notaries. Only the more important rural markets became centres for the kinds of economic activity that typically required the services of a notary. The markets at which notaries conducted business, in other words, were probably something different from simple produce markets.

both situated in a poorly documented part of the countryside, are securely attested for the first time only just before 1350. The market at Pelago, also situated near Vallombrosa, is comparatively well documented from 1188, but a market at nearby Pontassieve, another poorly documented town in the twelfth and thirteenth centuries, is attested only from 1408. Other rural markets that are clearly attested as important rural market centres in the richer evidence from the later thirteenth and early fourteenth centuries appear only sporadically as markets in the earlier documentation, while smaller markets sometimes assume a stature far beyond their importance. The following lists of rural and urban markets incorporate these and no doubt other shortcomings, but they nevertheless comprise perhaps the most extensive catalogue of Florentine markets attested before the middle of the fourteenth century.

Table 14. Market towns in the Florentine countryside ⁸

	RURAL MARKETS	DATE	SOURCE
1	Barbischio, Chianti, near Gaiole	1077 April	Pagliai, ed., 1909, no. 108, p. 54.
2	Barberino di Mugello, Mugello	1217 September 15	ASF, <i>Diplomatico</i> , Stroziane Uguccioni.
3	Belforte, eastern Mugello, near Dicomano	1326-1328*, 1328-1330*, 1354*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 17, citing ASF, <i>Notarile antecosimiano</i> G367, 3-4, <i>passim</i> ; G368, 1-2, <i>passim</i> ; G402, 3, fol. 43r.
4	Bibbiena, Casentino	1149 November, 1159 March, 1167 May 5, [1184-1190] March	Schiaparelli and Baldasseroni, eds., 1909, no. 1063, p. 191; no. 1141, p. 223; no. 1160, p. 231; no. 1274, p. 285.
		1203 January, 1203 February, 1206 December, 1207 March, 1220 May 1, 1227 October 29	Lasinio, ed., 1914, no. 1402, p. 13; no. 1407, p. 15; no. 1444, p. 33; no. 1449, p. 38; no. 1646, p. 131; no. 1858, p. 248.
		1245 May 10, 1249 February 12	Lasinio, ed., 1928, no. 2324, p. 127; no. 2385, p. 167.
4a	Bibbiena, Castelnuovo di Bibbiena ⁹	1221 September 13, 1227 March 15	Lasinio, ed., 1914, no. 1683, pp. 151-152, esp. 151; no. 1822, pp. 230-231, esp. 230.

⁸ For the locations of most of these market towns, see above, Map 14.

Notes for Table 14:

Market column:

* Identified as a secondary market of particular importance by De la Roncière.

Date column:

* Indicates not a specific market reference but a reference to a system of dry measurement, which is understood to imply the existence of a market.

† Indicates a confirmation of a reference to a market cited by De la Roncière when several attestations of the market occur in the same collection of documents. See the note for the source column below.

Source column:

* Confirms a reference cited by De la Roncière. For instances in which there are several attestations of the market from the same collection of documents, the date of the particular piece of evidence originally cited by De la Roncière is indicated in the date column. See the notes for the date column above.

⁹ The sources for this market refer simply to the market at Castelnuovo. They fail to establish a connection between Castelnuovo and Bibbiena, but other documents nevertheless refer to Castelnuovo di Bibbiena. For references to Castelnuovo di Bibbiena, see Schiaparelli and Baldasseroni, eds., 1909, no. 1311, 1194 December, p. 298; no. 1327, 1195 December, pp. 304-305.

	RURAL MARKETS	DATE	SOURCE
5	Borgo San Lorenzo, Mugello*	12th century*	ASF, <i>Diplomatico</i> , Monache di Luco.
		1202-1248* ¹⁰	ASF, <i>Diplomatico</i> , Monache di Luco.
		1218 March 3*, 1221 April 3*	ASF, <i>Diplomatico</i> , Cestello.
		1207-1256* ¹¹	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>).
		1282 February 23	Gherardi, ed., 1896-1898, 1, pp. 68-69.
		1317 dicembre 28	ASF, <i>Diplomatico</i> , Santo Spirito di Firenze.
		undated, but before 1323	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>), 206v.
		undated, but before 1323*	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>), 93v.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
		1322, 1348, 1374 - Tuesday	De La Roncière, 1976, 4, pp. 343-347, no. 2, citing ASF, <i>Notarile antecosimiano</i> L38, fol. 128v, 1322; ASF, <i>Cap. popolo</i> 71, fol. 52r, for 1348; ASF, <i>Stat. Borgo San Lorenzo</i> , bk. 3, rub. 2, for 1374; ASF, <i>Notarile antecosimiano</i> D79, fols. 41r, 55v, for the market day.

¹⁰ The dry measure of Borgo San Lorenzo is frequently attested in the evidence for the monastery at Luco di Mugello in the early thirteenth century. See ASF, *Diplomatico*, Monache di Luco, 1202 December 31, 1206 July 27, 1210 January 3, 1214 May 5, 1219 October 21, 1221 June 3, 1222 April 6, 1229 April 20, 1234 September 28, 1235 April 15, 1239 April 22, 1248 January 16.

¹¹ The dry measure of Borgo San Lorenzo is also well attested in the evidence for the estate of the bishops of Florence. For example, see ASF, *Manoscritti* 48BIS (*Bullettone*), fols. 83v [1224 August 24], 84r-v [1243 December 15], 84v [1240 November 30], 85r [1240 November 28], 85v [1240 November 28, 1240 March 15], 91v [1240 November 5, 1223 September 12], 93v [1213 August 23, 1253 February 24], 98r [1240 November 5], 98r-v [1207 August 28], 98v [1256 February 25], 99v [1236 June 6], 120r [1225 November 4],

1241 November 29*, *, 1256 February 26

	RURAL MARKETS	DATE	SOURCE
6	Bucine, upper Arno valley*	1335	De La Roncière, 1976, 4, pp. 343-347, no. 3, citing ASF, <i>Provviszioni</i> 27, fol. 18v.
		1207 March 1*	Fantappiè, 1980, p. 197, n. 33, citing ASF, <i>Diplomatico</i> , Monache di San Niccolò.
7	Calenzano, Mercatale di Marina, Marina valley, near Prato	1270 June 29	ASF, <i>Notarile antecosimiano</i> 2487/B1473, fol. 106v.
		1287 July 16	ASF, <i>Diplomatico</i> , Santa Maria Nuova.*
		1295	De La Roncière, 1976, 3, p. 839; 4, p. 251, n. 21, citing ASF, <i>Provviszioni</i> 5, fol. 103v.
8	Campoli, Mercatale	(?)	De La Roncière, 1976, 4, pp. 343-347, no. 4. ¹²
9	Cardetole, Mugello	1222 July 16	ASF, <i>Diplomatico</i> , Cestello.
		1239 September 29	ASF, <i>Diplomatico</i> , Adespote, Coperti dei libri.
10	Carmignano, lower Arno valley*	1225 January 10 (established), 1242 March 10	Santoli, ed., 1915, no. 227, pp. 173-176, esp. 173; no. 327, pp. 228-229, esp. 229.
		1283 September 5*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 8, citing ASF, <i>Notarile antecosimiano</i> 130, fol. 2r.
		1324 June 4	Guasti and Gherardi, eds., 1866-1893, 1, no. 1.58, pp. 41-44, esp. 42.*
		1340	De La Roncière, 1976, 4, pp. 343-347, no. 5, citing ASF, <i>Statuti di Carmignano</i> , bk. 4, rub. 35.
11	Casaglia del Mugello, 'Casale'	1273 March 4	ASF, <i>Diplomatico</i> , Compagnia di Santa Maria di Scarperia.
12	Castel dell'Alpe, upper Rabbi valley, Alpi di San Benedetto	1302*, 1388*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 10, citing ASF, <i>Notarile antecosimiano</i> G366, fol. 102v.

¹² De la Roncière has provided neither a date nor a source for this market. Presumably, he identified Campoli as a market solely on the basis of place-name evidence.

	RURAL MARKETS	DATE	SOURCE
13	Castelfiorentino, Elsa valley	1176 February 16*	ASF, <i>Diplomatico</i> , Stroziane Uguccioni.
		1269	Brattö, ed., 1956, par. 100, p. 34; par. 65, p. 29.
		1289 April 23*	Cioni, 1912-1915, pt. 3, no. 29, pp. 34-36, esp. 36.
		1315 November 3	AAF, <i>Mensa arcivescovile, Bulletoni</i> 3, fol. 59v.
		undated, but before 1323	ASF, <i>Manoscritto</i> 48BIS (<i>Bullettone</i>), fol. 208r.
14	Castelfranco di Sopra, upper Arno valley*	1332 November 24 (established)	De La Roncière, 1976, 4, pp. 343-347, no. 6, citing ASF, <i>Libri fabarum</i> 15, fol. 113v.
15	Castel San Pietro, Monte al Pruno, Passo della Consuma, Pian dell'Asentio	1329 October 11 (established)	De La Roncière, 1976, 4, pp. 343-347, no. 7, citing ASF, <i>Provvisioni</i> 25, fol. 73r.
		1329 October 11 (established)	Friedman, 1988, app., no. 12, pp. 327-329, esp. 328-329, citing ASF, <i>Capitoli</i> 32, fols. 70r-v.
		early 14th century	Pinto, 1978, p. 300, n. 1, citing ASF, <i>Provvisioni Protocolli</i> 6, fol. 73r. ¹³
16	Cavallina, Mugello, near Barberino di Mugello*	1370	De La Roncière, 1976, 4, pp. 343-347, no. 8, citing ASF, <i>Notarile antecosimiano</i> B693, fol. 72v.
17	Cavrenno, Santerno valley	1217 May 3	ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici.
18	Certaldo, Elsa valley*	1342*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 5BIS, citing ASF, <i>Notarile antecosimiano</i> 158, fol. 86r; M437, <i>passim</i> .
		1412 (established) - Wednesday	De La Roncière, 1976, 4, pp. 343-347, no. 9, citing ASF, <i>Stat. Certaldo</i> , rubric 62.

¹³ Pinto referred to this market as the market at Borselli, a town that is actually situated short distance below the Passo della Consuma towards Florence. The source cited by Friedman mentions Borselli, but it specifically states that the new town, in which the market was founded, was to be established on the Pian dell'Asentio, next to Monte al Pruno.

	RURAL MARKETS	DATE	SOURCE
19	Colle, Santa Maria in Chianti, Chianti, Ambra valley (?)*	1384	Latini, ed., 1914, rub. 11, pp. 141-143, esp. 142.*
20	Colle di Val d'Elsa	1210 April 11*	ASF, <i>Diplomatico</i> , Comune di Colle (Colle di Val d'Elsa).
21	Combiate, upper Marina valley	1209 August 24	ASF, <i>Diplomatico</i> , Badia di Passignano.
22	Corella, San Godenzo valley, near Dicomano	1310*, 1375*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 11, citing ASF, <i>Notarile antecosimiano</i> G366, 3, fol. 80r; N175, 2, fol. 32r.
23	Cornacchiaia, Santerno valley	1254 April 2	ASF, <i>Diplomatico</i> , Cestello.
24	Curlaccio (?), Avane	1233 August 22	ASF, <i>Diplomatico</i> , Badia di Passignano.
25	Dicomano, Mugello, middle Sieve valley*	1211 June 5, 1212 March 7	ASF, <i>Diplomatico</i> , Santissima Annunziata.
		1247 April	Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 104-109, esp. 106.
		1271 August 22	ASF, <i>Diplomatico</i> , Santa Maria Nuova.
		1295 October 1	ASF, <i>Diplomatico</i> , Patrimonio ecclesiastico di Firenze.
		1302*, 1326*, 1326-1327*, 1361-1375*, 1377*, 1377*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 12, citing ASF, <i>Notarile antecosimiano</i> G366, 1, fol. 111r; G367, fol. 54v; G367, 4, <i>passim</i> ; N175, 1-2, <i>passim</i> ; N175, 3, fol. 2r; N175, 2, fol. 75r.
		1345, 1367, 1406 - Saturday	De La Roncière, 1976, 4, pp. 343-347, no. 11, citing ASF, <i>Mercanzia</i> 1092, fol. 219, for 1345; ASF, <i>Provvisioni</i> 55, fol. 51, for 1367; ASF, <i>Stat. Dicomano</i> , fol. 127, 1406.

	RURAL MARKETS	DATE	SOURCE
26	Empoli, lower Arno valley*	1254 August 12†, 1254 September 10, 1255 May 6	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75; no. 22, pp. 78-86, esp. 78-79; no. 43, pp. 130-141, esp. 130-131.*
		1255 May 6*	Santini, ed., 1952, <i>Capitoli</i> , no. 43, pp. 130-141, esp. 133.
		1282 February 23	Gherardi, ed., 1896-1898, 1, pp. 68-69.*
		1325	Caggese, ed., 1921, bk. 5, rub. 102.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
27	Fabbrica, Pesa valley	1203 October 8, 1215 March 21, 1224 November 6, 1225 September 3†, 1225 January 7	ASF, <i>Diplomatico</i> , Badia di Passignano.*
		1291 June 5	AAF, <i>Mensa arcivescovile, Bullettoni</i> 2, fol. 24r.
28	Figline Valdarno, upper Arno valley*	1153 June 1, 1211 October 23, 1225 February 27*	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1192	De La Roncière, 1976, 4, pp. 343-347, no. 14, citing A. Bossini, <i>Storia di Figline e del Valdarno superiore</i> , 2nd ed., Florence, 1970, p. 251.
		1198 April 10	Santini, ed., 1895, <i>Capitoli</i> , no. 24, pp. 42-43, esp. 42.*
		1219 April 29	ASF, <i>Diplomatico</i> , Santa Maria Novella.
		1259 March 11	Santini, ed., 1952, <i>Capitoli</i> , no. 87, pp. 260-261.
		1261 August 2	ASF, <i>Diplomatico</i> , Santissima Annunziata.
		1264 September 2	ASF, <i>Diplomatico</i> , Varie, no. 3, fol. 9r.
		1282 February 23	Gherardi, ed., 1896-1898, 1, pp. 68-69.
		1282 November 13-24	Gherardi, ed., 1896-1898, 1, pp. 119, 121, 122.
		1284 January 24	Gherardi, ed., 1896-1898, 1, p. 154.

	RURAL MARKETS	DATE	SOURCE
28	Figline Valdarno, upper Arno valley (cont.)*	1302, 1347, 1370 or 1379 - Tuesday and Friday	De La Roncière, 1976, 4, pp. 343-347, no. 14, citing ASF, <i>Capitoli</i> 22, fols. 181-183, for 1302; ASF, <i>Guidice degli appelli</i> 1927, 2, fols. 9 and 18, for 1347; Stefani, rub. 827, for 1379; ASF, <i>Statuto di Figline</i> (revision dating from before 1408), fol. 3v, for market days.
		1329 April 18-1329 June 27, 1329 September 1 ¹⁴	Pinto, 1978, pp. 296-369, <i>passim</i> .
		1341 June 5	Pirillo, 1992, pp. 184, 186-187.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
28a	Figline, Piscinale, upper Arno Valley	1155 February 1	Pagliai, ed., 1909, no. 434, p. 195.
		1202 January 14	ASF, <i>Diplomatico</i> , Badia di Passignano.
29	Firenzuola, Santerno valley*	1332 (established)	Villani, bk. 10, chap. 199.*
		1373 November 10	Guasti and Gherardi, eds., 1866-1893, 1, no. III.151, pp. 183-185, esp. 185.*
		1373	De La Roncière, 1976, 4, pp. 343-347, no. 15, citing ASF, <i>Provvisoni</i> 61, fol. 177r.
30	Fucecchio, lower Arno valley	1209 October 29*, 1215 February 6*, 1224 March 17*, 1247 January 29*, 1248 October 6*	ASF, <i>Diplomatico</i> , Stozziane-Uguccone.
		1282 November 13-24	Gherardi, ed., 1896-1898, 1, pp. 119, 121, 122.
		1284 January 24	Gherardi, ed., 1896-1898, 1, p. 154.

¹⁴ In 1329, from the middle April to the end of June and then again at the beginning of September, the market at Figline is frequently attested in the *Libro del biadaiole*. See Pinto, 1978, pp. 296 [1329 April 18], 300-301 [1329 April 25], 303 [1329 April 28], 305 [1329 May 2], 307 [1329 May 5], 308 [1329 May 9], 309 [1329 May 12], 310-311 [1329 May 16], 315 [1329 May 23], 325 [1329 May 26], 330 [1329 May 30], 334 [1329 June 2], 341 [1329 June 9], 348 [1329 June 13], 355 [1329 June 20], 356 [1329 June 23], 358 [1329 June 27], 369 [1329 September 1].

	RURAL MARKETS	DATE	SOURCE
31	Gaiole in Chianti, Chianti (cont.)*	1215 September 21, 1236 December 18, 1256 October 11, 1259 April 9, 1262 January 3, 1262 March 29	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
		1329, 1343 - Wednesday	De La Roncière, 1976, 4, pp. 343-347, no. 17, citing ASF, <i>Notarile antecosimiano</i> U20, fol. 119v, for 1329; Paoli, <i>Della Signoria</i> 106, no. 220, for 1343.
		1343-1344*	De La Roncière, 1976, 1, p. 22; 4, p. 11, n. 19, citing ASF, <i>Guidice degli Appelli</i> 1817, 3, fol. 269r. ¹⁵
32	Galliano, Mugello*	1198 October 9	ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici.*
33	Ganghereto, upper Arno valley	1175 January 4	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1240 July 6*	ASF, <i>Diplomatico</i> , Vallombrosa.
34	Grignano, Chianti, Pesa valley	1299 August 8	ASF, <i>Notarile antecosimiano</i> 8348/F652, fol. 13v. ¹⁶
		1329, 1347, 1354, 1358 - Saturday	De La Roncière, 1976, 4, pp. 343-347, no. 18, citing ASF, <i>Notarile antecosimiano</i> U20, fols. 117v and esp. 197v, entry dated 1329 November 25, for the market day; ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 5v, for 1347; ASF, <i>Provvisoni</i> 41, fol. 83v, for 1354; ASF, <i>S.M.N.</i> 4416, fol. 6v, for 1358.
35	Incisa, upper Arno valley*	1297 (re-established after an interruption due to war)	De La Roncière, 1976, 4, pp. 343-347, no. 19, citing ASF, <i>Provvisoni</i> 8, fols. 71-74, 1297 June 7.

¹⁵ The source refers to an officer of the *Abbondanza* returning from 'partibus Gaiuole et Turris Sancte Liparate', where the grain harvest is measured 'ad misuram in Monte leviter misuratam'.

¹⁶ The market at Grignano is attested in two acts redacted on the same day, the second of which, a sharecropping contract, is published in Muzzi and Nenci, eds., 1988, no. 264, pp. 354-355, though the editors cite folio 12v, owing to an error in the original numeration of the folios.

	RURAL MARKETS	DATE	SOURCE
36	Isola, Mugello, near Dicomano	1302*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 13, citing ASF, <i>Notarile antecosimiano</i> G366, 1, fol. 91r.
37	Lastra a Signa, lower Arno valley*	1347	De La Roncière, 1976, 4, pp. 343-347, no. 20, citing ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 10r.
38	Latera, Mugello*	1201 February 1, 1212 May 1	ASF, <i>Diplomatico</i> , Badia di Passignano. ¹⁷
		1343, 1345 - Saturday in 1343	De La Roncière, 1976, 4, pp. 343-347, no. 21, citing ASF, <i>Provvisioni</i> 35, fol. 70v, for 1343; ASF, <i>Capitoli</i> 18, 2, fol. 61r, for 1345.
39	Leccio, upper Arno valley, near Rignano sull'Arno	1177 February, 1187 December 30	Pagliai, ed., 1909, no. 492, p. 220; no. 509, p. 227.
		1218 November 14	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
		1255 November 17	ASF, <i>Diplomatico</i> , Vallombrosa.
		1294 December - 1296 January 3 (numerous references)	ASF, <i>Notarile antecosimiano</i> 11896/G830, <i>passim</i> . ¹⁸
40	Lecore, lower Arno valley*	c.1320, 1362, 1376 (re-established) - Sunday, then Monday from 1362	De La Roncière, 1976, 4, pp. 343-347, no. 22, citing ASF, <i>Provvisioni</i> 50, fol. 28r, for the existence of the market from about 1320 and for the change of the market day from Sunday to Monday in 1362; ASF, <i>Provvisioni</i> 64, fol. 117v, for 1376.
41	Linari, upper Elsa valley, near Poggibonsi	1307 May 8*, 1308 December 21*, 1310 December 28*, 1314 June 12*, 1315 February 16*	De La Roncière, 1976, 3, p. 1004; 4, p. 360, n. 23, citing ASF, <i>Notarile antecosimiano</i> D77, fols. 1-4.

¹⁷ De la Roncière argued that the document of 1201 indicates that the market at Latera was a monthly market held on the first day of the month, but my reading of the source differs from that of De la Roncière. Whereas De la Roncière was able to read 'mercato kalendarum de Matrocepto de Latera', my own reading suggests 'mercato kolle de Matrocepto de Latera', and this reading is confirmed by the 1212 source. It may be noted, nevertheless, that both attestations of the market occur on the first day of the month.

¹⁸ Many sharecropping contracts from this cartulary and from another cartulary of the same notary, redacted 'apud mercatale Leccii', are published in Muzzi and Nenci, eds., 1988, *passim*.

	RURAL MARKETS	DATE	SOURCE
42	Loro Ciuffenna, Pratomagno*	1259 May 15	ASF, <i>Notarile antecosimiano</i> 21108/v193, fol. 1r. ¹⁹
		1306, 1347 (established, or re-established)	De La Roncière, 1976, 4, pp. 343-347, no. 23, citing ASF, <i>Provvisoni, Duplicati</i> 7, fol. 1v, for 1347. ²⁰
43	Mangona, near Vernio, western Mugello above the upper Sieve valley	1184 May 9 (2), 1186 January, 1186 September 8 (2), 1187 December 8, 1191 February 6, 1193 August 8†, 1194	Piattoli, ed., 1942, no. 187, pp. 356-357 and no. 188, pp. 358-359; no. 190, pp. 361-362; no. 193, pp. 365-367 and no. 194, pp. 367-369; no. 196, pp. 371-372; no. 204, pp. 384-385; no. 219, pp. 407-408; no. 225, pp. 416-417.*
		late 13th century*	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 7, no. 235.
44	Marcialla, near Tavar-nelle in Val di Pesa*	1269	Brattö, ed., 1956, par. 79, p. 31.
		1282 February 23	Gherardi, ed., 1896-1898, 1, pp. 68-69.*
		1286 May 30, 1289 February 10	ASF, <i>Notarile antecosimiano</i> 18003/r192, fols. 30v, 41r.*
		1302, 1347, 1357 - Thursday	De La Roncière, 1976, 4, pp. 343-347, no. 25, citing ASF, <i>Capitoli</i> 22, fols. 181-183, for 1302; <i>Giudice degli appelli</i> 1927, 2, fol. 8v, for 1347; ASF, <i>Podestà</i> 1041, fol. 39r, for 1357; ASF, <i>Notarile antecosimiano</i> B2771-2772, <i>passim</i> , for the market day.
		1314	Ciasca, ed., 1922, rub. 19, pp. 28-29, esp. 28.

¹⁹ The reference attests to the 'platea comunis' of Loro rather than to a market, but the expression is understood to indicate the place at which the market was held.

²⁰ De la Roncière failed to indicate precisely the source of the 1306 attestation, stating only that the grant of license in 1347 was a confirmation of rights recently conferred upon Loro by the *Abbondanza*, the communal office at Florence that succeeded the *Sex de blado*, or the *Sei della biada*.

	RURAL MARKETS	DATE	SOURCE
45	Mercatale Valdarno and Torre, San Illaro in Mercatale, upper Arno valley*	115(...)	Pagliai, ed., 1909, no. 451, p. 203.
		1208 December 11	Ascheri, ed., 1995, rubric 14, p. 46.
		1261 February 6	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
		1323 April 21, 1327 February 1	Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 184, 185.
		1335 October 25	Guasti and Gherardi, eds., 1866-1893, 1, no. IV.1, p. 191; cf. ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici.*
		1343-1344*	De La Roncière, 1976, 1, p. 22; 4, p. 11, n. 19, citing ASF, <i>Guidice degli Appelli</i> 1817, 3, fol. 269r. ²¹
46	Montagna Fiorentina, Castel San Niccolò, Pratomagno*	1392 June 17 (established) - semi-monthly, on the 15th and on the last day of the month	De La Roncière, 1976, 4, pp. 343-347, no. 27, citing ASF, <i>Stat. Montagna fiorentina</i> , fol. 41r, for the establishment of the market and the market day.
47	Montaio, Chianti, near Cavriglia	1239 June 1	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
48	Monteficalle, Montefioralle, Greve in Chianti, Greve valley*	1285 March 16, 1286 September 21, 1295 April 28	ASF, <i>Diplomatico</i> , Badia di Passignano. ²²

²¹ See the note for Gaiole in Chianti above.

²² Fiumi argued that the market at Monteficalle was originally situated at the foot of the hill of Montefioralle, in the parish of San Cresci, and that it developed into the town of Greve in Chianti. See Fiumi, 1957-1959, pt. 2, p. 470; 1977, p. 92. See also Repetti, 1833-1845, 3, pp. 390-391. The designation of the market as that of Monteficalle nevertheless suggests that it was originally situated on the hillside a short distance above the river crossing at Greve in the village of Monteficalle itself, the modern hamlet of Montefioralle. The market was probably transferred to Greve as communications and security in the area improved over the course of the thirteenth century, and particularly as commercial traffic between Florence and the Chianti intensified. After the transfer, the strictly local market at Monteficalle blossomed into a major secondary market at Greve, but extant references to the market preserve the name of the older market in the new location. Evidence for the market at Monteficalle in the *Statuti dell'arte degli albergatori* in 1334 and 1338 almost certainly concerns the market at Greve. See Sartini, ed., 1953, pp. 158, 245. The earliest secure reference to the market at Monteficalle is dated only from the later thirteenth century, but the *castrum* of Monteficalle is attested from 1119 when Passignano received a donation of rights in the *castrum*. For evidence of the *castrum* of Monteficalle, see ASF, *Diplomatico*, 1119 November 15. See also Francovich, 1973, p. 108.

	RURAL MARKETS	DATE	SOURCE
48	Monteficalle, Montefioralle, Greve in Chianti, Greve valley (cont.)*	1299 January 31	Muzzi and Nenci, eds., 1988, no. 248, pp. 339-340. ²³
		13th century	ASF, <i>Diplomatico</i> , Strozzi-uguccione, a quaderno.
		1300 March 4	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1334, 1338	Sartini, ed., 1953, pp. 158, 245.
49	Montelucio della Berardenga, Chianti, near Monte Calvo and San Martino al Vento*	1287 February 28 (established) - Monday	De La Roncière, 1976, 4, pp. 343-347, no. 28, citing ASF, <i>Provisioni Protocolli</i> 1, fol. 45r.
50	Montelungo, upper Arno valley, at the foot of the Pratomagno*	1260 February 28 - 1284 January 27 ²⁴	ASF, <i>Notarile antecosimiano</i> 21108/v193, <i>passim</i> .*
		1302, 1345 - Monday	De La Roncière, 1976, 4, pp. 343-347, no. 29, citing ASF, <i>Capitoli</i> 22, fols. 181-183, for 1302; ASF, <i>Camera comunale</i> 11, fol. 6r, for the market day in 1345.
51	Montelupo Fiorentino, lower Arno valley	1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
52	Monte Rinaldi	1305 December 9 - 1315 January 25 ²⁵	ASF, <i>Notarile antecosimiano</i> 8347/F651, fols. 28v-104r.
53	Montespertoli, Virginio valley*	1347, 1398 - Wednesday	De La Roncière, 1976, 4, pp. 343-347, no. 30, citing ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 8r, for 1347.
		1408	Latini, ed., 1914, p. 230 (<i>Statuto della lega di San Piero in Mercato del 1408</i> , bk. 2, rub. 4-5).*

²³ Muzzi and Nenci cite a sharecropping contract from this date in ASF, *Diplomatico*, Badia di Passignano, but there is no document for this date in the collection.

²⁴ The notarial cartularies of Vigoroso di Paradiso contain numerous references to the market at Montelungo. See also ASF, *Notarile antecosimiano* 21109-21110/v193, *passim*.

²⁵ From the 9th of December in 1305, the notarial cartulary of Frosino di Chele contains numerous acts redacted 'in foro de monterinaldi' or 'in mercatale de monterinaldi'. Many acts were redacted by the same notary before this date at Monte Rinaldi, but the earlier acts are invariably identified simply as *acta Montis Rinaldi*. See also ASF, *Notarile antecosimiano* 8348/F652, which contains acts redacted by Frosino di Chele from 1299 to 1304 and thus includes no references to the market at Monte Rinaldi.

	RURAL MARKETS	DATE	SOURCE
54	Montevarchi, upper Arno valley*	1169 March	Francovich, 1973, p. 114, citing ASF, <i>Diplomatico</i> , Vallombrosa. ²⁶
		1207 March 13	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1220 November 27	ASF, <i>Diplomatico</i> , Stroziane Uguccioni.
		1220*	Delumeau, 1996, 1, p. 55, n. 174, citing ACArezzo, <i>Carte di Santa Maria in Gradi</i> 125.
		1248	Villani, bk. 6, chap. 33; Paolino Pieri, pp. 24-25, esp. 24; <i>Gesta Florentinorum</i> , pp. 274-275. ²⁷
		1254 March 31	Santini, ed., 1952, <i>Capitoli</i> , no. no. 16, pp. 48-59.*
		1254 April 6	Santini, ed., 1952, <i>Capitoli</i> , no. no. 18, pp. 62-64. ²⁸
		1343, 1345	De La Roncière, 1976, 4, pp. 343-347, no. 31, citing ASF, <i>Mercanzia</i> 1084, fol. 12v, for 1343; ASF, <i>Abbondanza</i> 102, bk. 5, rub. 19, for 1345.
55	Monticelli, just outside Florence, towards Settimo*	1349	De La Roncière, 1976, 4, pp. 343-347, no. 32, citing ASF, <i>Provvisioni</i> 37, fol. 62r.
56	Montignoso, position not identified by De La Roncière, but probably situated between Gambassi and Volterra	1319 (suspended due to war)	De La Roncière, 1976, 4, pp. 343-347, no. 33, citing ASF, <i>Provvisioni</i> 16, fol. 130r.

²⁶ See also Francovich, 1973, p. 114, erroneously citing ASF, *Diplomatico*, Vallombrosa, 1169 March 13, which contains no reference to the market at Montevarchi.

²⁷ Paolino Pieri dated his entry to 1249, in which he stated that market was situated alongside the *castellum* of Montevarchi.

²⁸ The document with the initial date of 1254 March 31 cited immediately above appears to refer to two different markets at Montevarchi, one situated at the base of the *castrum* of Montevarchi and another situated next to an important road: 'et quartum partem pro indiviso terreni et mercatalis, ubi fuit mercatum, ad pedem castrum de Monteguarchi; et quartum partem pro indiviso terreni et mercatalis, ubi fuit mercatum, iuxta stratam prope domum que fuit Vitelli'. The document with the initial date of 1254 April 6 clearly identifies the markets as distinct, mentioning both an old and a new market at Montevarchi: 'quartam partem pro indiviso mercatalis veteris de Monteguarchi, et quartam partem pro indiviso mercatalis novi de Monteguarchi'.

	RURAL MARKETS	DATE	SOURCE
57	Orzale, Mugello, near Dicomano	1307-1314*, 1320*, 1330*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 14, citing ASF, <i>Notarile antecosimiano</i> G366, 3, <i>passim</i> ; G367, 3, fol. 15r; G367, 3, fol. 113r.
58	Palazzuolo, Val di Senio*	1373 November 10	Guasti and Gherardi, eds., 1866-1893, 1, no. III.151, pp. 183-185, esp. 185.*
59	Panzano, Chianti, between Greve and Castellina in Chianti	1237 August 15	ASF, <i>Diplomatico</i> , Badia di Passignano.
60	Passignano, Pesa valley, Chianti	1146-1194* ²⁹	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1211 March 3*	ASF, <i>Diplomatico</i> , Strozziante-Uguccione.
		1254 December 15	ASF, <i>Diplomatico</i> , Badia di Passignano.
61	Pavanico, Mugello, near Dicomano*	1310-1326*, 1328-1329*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 15, citing ASF, <i>Notarile antecosimiano</i> G366, 3, fol. 59r-G367, 4, fol. 8r, <i>passim</i> ; G368, 2, <i>passim</i> .
		1314, 1322-1325, 1328-1329, 1343 - Saturday	De La Roncière, 1976, 4, pp. 343-347, no. 35, citing ASF, <i>Notarile antecosimiano</i> B2781, fol. 26r, for 1314; ASF, <i>Notarile antecosimiano</i> B2784, <i>passim</i> , for 1322-1325; ASF, <i>Notarile antecosimiano</i> G368, 2, <i>passim</i> , for 1328-1329; and ASF, <i>Notarile antecosimiano</i> B2789, <i>passim</i> , for 1343.
		early 14th century*	De La Roncière, 1976, 3, pp. 1003-1004; 4, pp. 359-360, n. 22, citing ASF, <i>Notarile antecosimiano</i> G366-368.

²⁹ The dry measure of Passignano is attested frequently in the evidence for the abbey at Passignano in the second half of the twelfth century, but it is scarcely attested after 1200, which suggests that Passignano may have adopted the commercial measure of Florence by the end of the century. For references to the measure of Passignano, see ASF, *Diplomatico*, Badia di Passignano, 1146 August 1, 1154 June 15, 1155 June 17, 1187 May 5, 1188 September 4, 1192 March 15, 1193 June 23, 1194 February 27.

	RURAL MARKETS	DATE	SOURCE
62	Pelago, upper Arno valley*	1188 May 7†, 1319 January 10, 1347 May 7†	Repetti, 1833-1845, 4, p. 85-91, esp. 85; cf. ASF, <i>Diplomatico</i> , Vallombrosa.*
		1224 November 14	Strà, ed., 1982, no. 69 (2), pp. 134-141; cf. AMRosano, XIII, no. 21 [A].
		1231 April 24	ASF, <i>Diplomatico</i> , Vallombrosa.
		1233 September 8	ASF, <i>Diplomatico</i> , Passerini.
		1256 August 24	ASF, <i>Diplomatico</i> , Badia di Firenze.
		1300 October 28 - 1319	ASF, <i>Corporazioni Religiose Soppresse</i> , 260 [Vallombrosa], 122, <i>passim</i> . ³⁰
63	Peretola, lower Arno valley*	1349 January 20	De La Roncière, 1976, 4, pp. 343-347, no. 37, citing ASF, <i>Mercanzia</i> 1107, fol. 9r.
64	Petrona, Mugello*	1288 December 29†, 1294 November 17	ASF, <i>Diplomatico</i> , Compagnia di Santa Maria a Scarperia.*
		1311, 1345 - Wednesday, then Thursday by 1311	De La Roncière, 1976, 4, pp. 343-347, no. 38, citing ASF, <i>Capitoli</i> 22, fol. 146r; G. Bacini, <i>Bullettino storico-letterario del Mugello</i> 1, 1892, p. 42, for 1311.
65	Poggibonsi, Marturi, Elsa valley*	1172 January 2*, 1175 October 26*, 1200 July 22*, 1208 April 14*, 1219 February 4*	ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1208 January 25*, 1214 January 4*, 1260 February 18*	ASF, <i>Diplomatico</i> , Badia di Firenze.
		1280-1283	De La Roncière, 1976, 4, pp. 343-347, no. 39, citing ASF, <i>Notarile antecosimiano</i> 18003/R192, <i>passim</i> . ³¹
		1282 February [?]	Gherardi, ed., 1896-1898, 1, p. 66.*

³⁰ This particular source is the cartulary of the notary Ser Azzo di Davanzato da Pelago, which contains numerous references to the market at Pelago.

³¹ Numerous acts in this cartulary were redacted 'in Burgo vetere de Podiobonizi', but I have found no specific reference in the cartulary to the *mercatum* or *forum* of Poggibonsi during the period indicated by De La Roncière.

	RURAL MARKETS	DATE	SOURCE
65	Poggibonsi, Marturi, Elsa valley (cont.)*	1314	Ciasca, ed., 1922, chap. 19, pp. 28-29, esp. 28.
		1319 June 23 - Tuesday	Fiumi, 1961b, p. 83, n. 256, citing ASF, <i>Carte di San Gimignano</i> 265.
		1332	Pucci, ed., 1995, bk. 2, rub. 6, p. 107; bk. 2, rub. 23, p. 115; bk. 3, rub. 45, p. 139. ³²
		1334-1348*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 5, citing ASF, <i>Notarile antecosimiano</i> M492, 1, fol. 78v. ³³
		1345	De La Roncière, 1976, 4, pp. 343-347, no. 39, citing ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 7v.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
66	Pontassieve, in Castro Sant'Angelo, upper Arno Valley	1408	Masi, ed., 1934, p. 185, n. 3, citing ASF, <i>Statuta Populi</i> 22, col. 8, fol. 412.
67	Pontemeleto, upper Arno valley (?)	1205 January 17, 1227	Strà, ed., 1982, no. 60, pp. 113-114; no. 75, pp. 157-159; ASF, <i>Diplomatico</i> , Rosano, 1204 January 17, 1227. ³⁴

³² From the unpublished version of the same source, De la Roncière cited bk. 2, rub. 22; bk. 3, rubs. 9 and 69; bk. 5, rub. 21.

³³ Though he cites only a single reference, De la Roncière stated that the measure of Poggibonsi is attested constantly during the period from 1334 to 1348.

³⁴ The location of this market is unclear. Pieri suggested that the place-name 'Meleto' derives from the term 'malus' or 'melus', and in the upper Arno valley, he associated 'Meleto' with both Cavriglia and Rignano sull'Arno. See Pieri, 1919, pp. 242. He associated *foramala*, perhaps a corruption of *forum mali*, with the baptismal church of San Vito at Incisa sull'Arno. See Pieri, 1919, 285-286. Repetti noted that various locations bear the name 'Meleto', and he mentioned in particular Meleto dei Ricasoli in the Chianti, and Meleto d'Avane in the upper Arno valley near Cavriglia, which is also known as Pian-Franzese, but he makes no connection between the term 'Meleto' and Rignano sull'Arno. He further suggested that the bridge at Rignano seems not to have existed before the fourteenth century, and he makes no mention of a market at Rignano. See Repetti, 1833-1845, 3, pp. 186-187; 4, pp. 752-754, esp. 753. Internal evidence from the 1227 document suggests that Pontemeleto was associated with Rosano itself, though it fails to establish the same. The bridge nevertheless appears to have crossed the Arno at Rosano, and the market was probably held in a square on the Rosano side of the bridge, but the identification of the market with Rosano remains tentative.

	RURAL MARKETS	DATE	SOURCE
68	Poppi, Casentino	1190 August	Schiaparelli and Baldasseroni, eds., 1909, no. 1276, pp. 285-285, esp. 285.
		1227 April 25*	Lasinio, ed., 1914, no. 1828, p. 233.
		1233 June 17*	ASF, <i>Diplomatico</i> , Passerini.
		1302*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 18, citing ASF, <i>Notarile antecosimiano</i> G366, 1, fol. 103r.
69	Poppiena, Casentino, 'in foro S. Angeli de Poppiena'	1238 September 29	Lasinio, ed., 1922, no. 2163, pp. 27-28, esp. 28.
70	Pozzo, lower Sieve valley	1300*, 1375-1377*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 16, citing ASF, <i>Notarile antecosimiano</i> G366, 1, fol. 41r; G367, 3-4, <i>passim</i> ; G368, 1-2, <i>passim</i> ; N175, 2, fols. 34v, 84v.
71	Pulicciano, Mugello	1225 February 14, 1229 December 15	ASF, <i>Diplomatico</i> , Monache di Luco.
72	Radda in Chianti, Chianti	1242 December 19	ASF, <i>Diplomatico</i> , Coltibuono.
73	Rata, lower Sieve valley, near Contea	1152 May	Schiaparelli, ed., 1909, no. 1088, p. 201.
74	Razzuolo, Mugello*	1322 September 22 (re-established), 1330	De La Roncière, 1976, 4, pp. 343-347, no. 40, citing ASF, <i>Provvisioni</i> 19, fol. 38r, for 1322; ASF, <i>Provvisioni</i> 216, fol. 22v, for 1330.
75	Sagginale, ponte di, Mugello*	1304 January 27	Del Lungo, in Compagni, p. 189, n. 20, citing ASF, <i>Provvisioni</i> 12, fols. 125v-130v.; ASF, <i>Consulte</i> 4, fols. 42r, 43v.
		1306, 1344 - Thursday	De La Roncière, 1976, 4, pp. 343-347, no. 41, citing ASF, <i>Notarile antecosimiano</i> F480, 1, <i>passim</i> , for 1306; ASF, <i>Missive I Cancellaria</i> 8, fol. 78r, for the market day in 1344.

	RURAL MARKETS	DATE	SOURCE
76	San Bavello, San Godenzo valley	1300-1303*, 1330*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 9, citing ASF, <i>Notarile antecosimiano</i> G366, 1, <i>passim</i> ; G368, 3, fols. 35v, 70r. ³⁵
77	San Casciano in Val di Pesa (Decimo), Pesa valley*	1344-1346, 1347, 1356, 1360 October 3 - Monday	De La Roncière, 1976, 4, pp. 343-347, no. 42, citing ASF, <i>Abbondanza</i> 102, <i>passim</i> , for 1344-1346; ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 10r, for 1347; ASF, <i>Stat. San Casciano</i> , bk. 1, rub. 16, and bk. 2, rubs. 3 and 11, for 1356; ASF, <i>Mercanzia</i> 1134, for 1360 October 3.
78	San Donato in Poggio, Pesa valley*	1347	De La Roncière, 1976, 4, pp. 343-347, no. 43, citing ASF, <i>Giudice degli appelli</i> 1927, 2, fol. 8v.
79	San Giovanni Valdarno, San Giovanni in Altura, Castel di Pianalberti, upper Arno valley	1188 June 15, 1209 October 8, 1219 February 5	ASF, <i>Diplomatico</i> , Badia di Passignano. ³⁶
		1193 October 4	Pagliai, ed., 1909, no. 523, p. 234. ³⁷
		1212 December 5	ASF, <i>Diplomatico</i> , Badia di Firenze.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.
80	San Giovanni Maggiore, Mugello	1209 February 28	ASF, <i>Diplomatico</i> , Monache di Luco.

³⁵ In addition, the *stadium majus* of San Bavello is attested in 1302. See De la Roncière, 1976, 4, p. 9, n. 9, citing ASF, *Notarile antecosimiano* G366, folio 124[r].

³⁶ The document of 1188 indicates only that it was originally redacted 'in mercato' without specifying the particular market at issue, but surviving acts of the notary responsible for the redaction, one Bernardus, often worked in the *castrum de Plano Alberti*, where the market was probably held.

³⁷ The reference actually mentions a market at 'Sure', which is understood here to be San Giovanni Valdarno on the basis of the fact that the town was sometimes called San Giovanni in 'Arsura', a corruption of 'Altura'. 'Sure' is seen as a corruption of 'Arsura', but the identification is tentative.

	RURAL MARKETS	DATE	SOURCE
81	San Giusto in Salcio, Chianti, near Radda in Chianti	1153 June 7	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
82	San Godenza, below l'Alpe di San Benedetto*	1300-1308*, 1301-1327*, 1352*	De La Roncière, 1976, 1, p. 22; 4, p. 10, n. 12BIS, citing ASF, <i>Notarile antecosimiano</i> G366, 1-2, <i>passim</i> ; G367, fol. 136r; G402, 1, fol. 35r.
		1305, 1327-1328, 1357 - Friday	De La Roncière, 1976, 4, pp. 343-347, no. 44, citing ASF, <i>Notarile antecosimiano</i> G367, 2, fol. 37v and <i>passim</i> , for 1305; ASF, <i>Notarile antecosimiano</i> G368, <i>passim</i> , for 1327-1328; and ASF, <i>Provvisioni</i> 49, fol. 93v, for the market day in 1357.
83	San Piero a Sieve, Mugello	1117 June 13	Repetti, 1833-1845, 5, pp. 107-109, esp. 107. ³⁸
		1205 March 30, 1217 August 13, 1222 October 10, 1223 September 29	ASF, <i>Diplomatico</i> , Cestello.
		1239 September 29	ASF, <i>Diplomatico</i> , Adespote, Coperti di Libri
84	San Pietro in Mercato, near Montespertoli	1008	ASF, <i>Manoscritti</i> , 48BIS, <i>Il Bullettone</i> , fol. 7v; Lami, ed., 1758, 1, p. 246.*
		1123 March	ASF, <i>Diplomatico</i> , Badia di Passignano.
85	Santa Margherita, San Casciano di Montescalari	1155 July 20	ASF, <i>Diplomatico</i> , Badia di Passignano. ³⁹

³⁸ According to Repetti, the market at San Piero a Sieve is attested in a document of this date in ASF, *Diplomatico*, Cestello, but no document exists for this date in the collection.

³⁹ The market of 'Sancta Margarita' was located in the *populus* of Santa Margherita, which lay near the Vallombrosan monastery of San Casciano di Montescalari. For references to the church and *populus* of Santa Margherita that establish the location of the market in 'podio de cassciano', see ASF, *Diplomatico*, San Vigilio di Siena, 1197 April 30, 1230 March 13. This site probably corresponds with Santa Margherita a Sugame, attested from 1260 in the *Libro di Montaperti*. See Paoli, ed., 1889, p. 132. The identification of the market of Santa Margherita with the *populus* of the same name is supported by the fact that the 1155 document in which the market is attested concerns a donation between private individuals of three pieces of property, one of which was situated in the 'valle de aia alta'. The 1230 document concerns the sale of eight pieces of property located 'in popolo margarite ad cascianum', the first two of which were situated 'in loco qui dicitur al aiale'.

	RURAL MARKETS	DATE	SOURCE
86	Santerno, San Pietro di Santerno, Santerno valley, east of Firenzuola*	1265 June 3	ASF, <i>Diplomatico</i> , Camera Fiscale. ⁴⁰
		1266	Ildefonso di San Luigi, ed., 1770-1789, 10, p. 219.
		1312 August 2	ASF, <i>Diplomatico</i> , Compagnia di Santa Maria di Scarperia.
		1353 June 21	Ildefonso di San Luigi, ed., 1770-1789, 10, p. 278.
		1361	De La Roncière, 1976, 4, pp. 343-347, no. 46, citing ASF, <i>Capitoli</i> 22, fol. 111r.
		1368 May 22	Ildefonso di San Luigi, ed., 1770-1789, 10, p. 300.
		1374 June 16-17, 19	Guasti and Gherardi, eds., 1866-1893, 1, no. III.156, pp. 186-187.*
87	Scarperia, Mugello	1186 May 1	ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici.
		1210 February 18	ASF, <i>Diplomatico</i> , Riformagioni.
		1311 - Wednesday	De La Roncière, 1976, 4, pp. 343-347, no. 47, citing ASF, <i>Capitoli</i> 22, fol. 146r, for the market day; G. Bacini, <i>Bullettino storico-letterario del Mugello</i> 1, 1892, p. 42, for 1311.
		1346	Pinto, 1972, pp. 23-24, n. 45, citing ASF, <i>Abbondanza</i> 102, 8, fol. 46v.

⁴⁰ On the basis of his map for market locations in the Florentine countryside, De la Roncière evidently believed that the market town of Santerno was situated about four kilometres east of Firenzuola along the course of the river Santerno at a point near a turn in the river from an eastward direction to the northeast. See Map 19 in De la Roncière, 1976, 3, p. 955. The market at Santerno more likely corresponds to a market in the village of San Pietro di Santerno, just a little more than a kilometre east of Firenzuola. San Pietro di Santerno was controlled by the Ubaldini lords in the later thirteenth and early fourteenth centuries, and the foundation of Firenzuola in 1332 was probably intended precisely to challenge the market at San Pietro di Santerno.

	RURAL MARKETS	DATE	SOURCE
87	Scarperia, Mugello (cont.)	1368 October 21	Friedman, 1988, app., no. 8, pp. 318-321, esp. 320, citing ASF, <i>Diplomatico</i> , Compagnia di Santa Maria di Scarperia.
88	Semifonte, near Barberino Val d'Elsa, towards Certaldo	1195 August*	ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1196 February 10	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1197 July 3*	Enriques Agnoletti, ed., 1990, no. 247, pp. 175-177.
		1197 August 30	Pagliai, ed., 1909, no. 532, p. 238.
89	Signa, lower Arno valley*	1149 October 1	Piattoli, ed., 1938, no. 190, pp. 453-455.*
		1219 December 1*	ASF, <i>Diplomatico</i> , Badia di Firenze.
		1252 August 10	ASF, <i>Diplomatico</i> , Cestello; ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> 479, 302, fol. 23v.
		1258 September 29	ASF, <i>Diplomatico</i> , Santo Spirito di Firenze. ⁴¹
		1361/1362 (re-established) - Sunday	De La Roncière, 1976, 4, pp. 343-347, no. 49, citing ASF, <i>Provvisioni</i> 49, fol. 106r, for 1362 [?].
90	Staggia, Staggia valley, near Colle di Val d'Elsa*	1347*	De La Roncière, 1976, 1, p. 22; 4, p. 9, n. 4, citing ASF, <i>Guidici degli Appelli</i> 1822, 1, fol. 202r.
		1362 February 25, 27-28 (established)	Guasti and Gherardi, eds., 1866-1893, 1, no. v.95, pp. 276-277.
		1362 (established) - Friday	De La Roncière, 1976, 4, pp. 343-347, no. 50, citing ASF, <i>Provvisioni</i> 50, fol. 110v, for 1363 [?].

⁴¹ This particular source provides no explicit reference to the market at Signa, mentioning only the square of the bridge at Signa: 'Actum in platea pontis Signe'.

	RURAL MARKETS	DATE	SOURCE
91	Stia, Casentino, near Pratovecchio	1302*	De La Roncière, 1976, 1, p. 22; 4, p. 10-11, n. 18, citing ASF, <i>Notarile antecosimiano</i> G402, 1, fol. 72v.
92	Strumi, Pratovecchio, Casentino, near Poppi	1180 November, 1182 May	ASF, <i>Diplomatico</i> , Monache di Pratovecchio.
		1240 August 15*	Lasinio, ed., 1922, no. 2198, pp. 49-50, esp. 49.
93	Vicchio, Mugello*	1308 (established), 1326, 1344 April 30, 1344 August 28, 1351-1355 - Thursday	De La Roncière, 1976, 4, pp. 343-347, no. 52, citing ASF, <i>Notarile antecosimiano</i> B2784-2789, <i>passim</i> , for 1326-1346; ASF, <i>Notarile antecosimiano</i> D73, <i>passim</i> ; ASF, <i>Missive I Cancelleria</i> 8, fol. 78r, for the market day in 1344; ASF, <i>Capitoli</i> 18, fols. 27v-28r, for the re-establishment of the market in 1344; and ASF, <i>Notarile antecosimiano</i> G402, 2, fol. 69r, and 3, fols. 8, 11v, and 61, for 1351-1355.
		1334, 1338	Sartini, ed., 1953, pp. 157, 244.
94	Vicorati, lower Sieve valley, near Londa*	1375	De La Roncière, 1976, 4, pp. 343-347, no. 53, citing ASF, <i>Stat. Pozzo et Vicorati</i> , fol. 27r.
95	Villanuova, near Barberino di Mugello	1220 February 22	ASF, <i>Diplomatico</i> , Badia di Passignano.
96	Vinci, lower Arno valley*	1254 September 10	Santini, ed., 1952, <i>Capitoli</i> , no. 22, pp. 78-86, esp. 81.*

Table 15. Frontier markets in neighbouring territories ⁴²

FRONTIER MARKETS	DATE	SOURCE
Bargi, near the Lago di Suviana, Romagna Bolognese	1236 December 20	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 4, n. 106.
	1259 dicembre 20	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 5, no. 172.
Castel di Casio, Romagna Bolognese	1235 June 1	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 4, n. 100.
	1260 dicembre 1	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 5, no. 174.
	1261 maggio 1	ASF, <i>Diplomatico</i> , Bardi-Serzelli, scatola 5, no. 176.
Castel del Rio, Mercatale della Massa Alidosia, Santerno valley, Romagna Bolognese	c.1212	Larner, 1965, p. 22.
Castiglione Aretino, Castiglione Fiorentino, Chiana valley, between Arezzo and Cortona	1200 May	Schiaparelli and Baldasseroni, eds., 1909, no. 1369, p. 323.
Castiglione, probably Castiglione di Fatalbecco, upper Tevere valley, near Anghiari	1196 November*	Schiaparelli and Baldasseroni, eds., 1909, no. 1340, pp. 309-311, esp. 310. ⁴³
	1224 November 27, 1227 March 2, 1230 April 17	Lasinio, ed., 1914, no. 1770, pp. 196-197, esp. 196; no. 1820, p. 230; no. 1907, p. 274.
	1243 April 29*	Lasinio, ed., 1922, no. 2285, pp. 102-104, esp. 103.
Cavarzano, Pratese, northwest of Vernio	1193 May 11	Piattoli, ed., 1942, no. 218, pp. 404-407 (406).
Cerbara, upper Tevere valley, northwest of Città di Castello	1135 September	Delumeau, 1996, 1, p. 55, n. 174, citing Archivio della Canonica di Città di Castello.
Civitella in Val di Chiana, near Viciomaggio and between Badia Agnano and Badia al Pino	1219*	Delumeau, 1996, 1, p. 55, n. 174, citing ACArezzo, <i>Carte di Santa Maria in Gradi</i> 122.

⁴² This table provides references mainly from Florentine sources for markets situated just beyond the frontiers of the Florentine countryside.

⁴³ The commercial measure of Castiglione, 'ad starium venalem de Castelione', was identified by Delumeau as appertaining to Castiglione di Fatalbecco, located near Anghiari. See Delumeau, 1996, 1, p. 55, n. 174.

FRONTIER MARKETS	DATE	SOURCE
Galeata, Bidente valley, Romagna Forlese, near Civitella di Romagna	1224 June 20	Lasinio, ed., 1914, no. 1758, pp. 191-192, esp. 191.
Lucignano, Chiana valley, between Monte San Savino and Sinalunga	12th century*	Pagliai, ed., 1909, no. 549, p. 248.
	1249 January 25*	ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
Monte San Savino, Chiana valley	1202*	Delumeau, 1996, 1, p. 55, n. 174, citing ACArezzo, <i>Carte di Santa Maria in Gradi</i> 105. ⁴⁴
Prato	1107 December*	Fantappiè, ed., 1977, no. 102, pp. 198-200, esp. 199; cf. ASF, <i>Diplomatico</i> , Spedale di Prato.
	1183 February 26*	Rauty, ed., 1974, no. 42, pp. 63-64, esp. 64; cf. ASF, <i>Diplomatico</i> , Vescovado di Pistoia.
San Gimignano, Elsa valley	later 9th-early 10th century	Fiumi, 1961b, p. 19, n. 13.
	1193 November 25*, 1194 October 15*	Enriques Agnoletti, ed., 1990, no. 236, pp. 156-159; no. 239, pp. 162-164.
	1230-1248	Fiumi, 1961b, p. 19, n. 13, citing ASF, <i>Carte di San Gimignano</i> 12, fol. 12r; 24; 55, fol. 4r.
	1334 May 2-22	Fiumi, 1961b, p. 165, n. 97, citing Archivio comunale, San Gimignano, P 97.

⁴⁴ The commercial measure identified by Delumeau as appertaining to Monte San Savino, 'ad sestarium de Buiamonte', bore the name of an individual rather than the name of the town.

FRONTIER MARKETS	DATE	SOURCE
Vernio, upper Bisenzio valley	1221 May 20	Fantappiè, ed., 1975, no. 15, pp. 78-79, esp. 79. ⁴⁵
	1233 February 28*	Fantappiè, 1980, pp. 197-198, n. 35, citing Archivio Bardi presso i conti Guicciardini di Firenze, <i>Diplomatico</i> .
	1295 May 10*	Fantappiè, 1980, pp. 197-198, n. 35, citing ASF, <i>Diplomatico</i> , Bardi-Serzelli, no. 232.

⁴⁵ This particular source does not specifically mention Vernio, but reads '[...]dal Mercatale [...]', which has been understood to correspond to the town of Mercatale di Vernio.

Table 16. Chronology of first attestations of rural markets

1100 or earlier	1101-1150	1151-1175	1176-1200	1201-1225
Barbarischo	Bibbiena	Figline Valdarno	Borgo S. Lorenzo	Barberino di Mug.
S. Pietro in Mercato	Passignano	Ganghereto	Castelfiorentino	Cardetole
	San Piero a Sieve	Mercatale Valdarno	Galliano	Carmignano
	Signa	Santa Margherita	Leccio	Castelnuovo
		Montevarchi	Mangona	Castiglione
		Poggibonsi	Pelago	Cavrenno
		Poppi	S. Gio. Valdarno	Colle in Val d'Elsa
		Rata	Scarperia	Combiate
		San Giusto in Salcio	Semifonte	Dicomano
			Strumi	Fabbrica
				Fucecchio
				Gaiole in Chianti
				Latera
				Pontemeleto
				Pulicciano
				S. Gio. Maggiore
				Villanuova

1226-1250	1251-1275	1276-1300	1301-1350	1351 or later
Curlaccio	Calenzano	Casaglia del Mug.	Belforte	Cavallina
Montaio	Cornacchiaia	Grignano	Bucine	Colle S. Maria
Panzano	Empoli	Incisa in Val d'Arno	Castelfranco di Sop.	Montagna Fiorent.
Radda in Chianti	Loro Ciuffenna	Monteficalle	Certaldo	Palazzuolo
	Marcialla	Montelucio	Corella	Pontassieve
	Montelungo	Petrona	Firenzuola	Vicorati
	Santerno	Pozzo	Isola	
	Vinci	San Godenza	Lastra a Signa	
			Lecore	
			Linari	
			Montalpruno	
			Montelupo	
			Montespertoli	
			Monte Rinaldi	
			Monticelli	
			Montignoso	
			Orzale	
			Pavanico	
			Peretola	
			Razzuolo	
			Sagginale	
			San Bavello	
			S. Casciano	
			S. Donato in Poggio	
			Staggia	
			Vicchio	

Table 16. Probable seigneurial affiliation of rural markets

RURAL MARKET	SEIGNEUR	RURAL MARKET	SEIGNEUR
Barbischio (1077)	Guidi	Dicomano (1211)	Guidi
Passignano (1146)	Passignano	Cavremno (1216)	Ubal dini
Signa (1149)	Divided	Barberino di Mugello (1217)	<i>Cattani</i>
Figline Valdarno (1155)	Fiesole / Passignano (?)	Vernio (1221)	Alberti
Santa Margherita (1155)	Montescaliari	Montaio (1239)	Guidi
Mercatale Valdarno (115[...])	Guidi (?)	Radda in Chianti (1242)	Badia di Firenze / Guidi
Montevarchi (1169)	Guidi	Cornacchiaia (1254)	Ubal dini
Poggibonsi (1172)	Guidi	Empoli (1254)	Guidi
Ganghereto (1175)	Guidi / Ubertini	Vinci (1254)	Guidi
Castelfiorentino (1176)	Alberti	Montelungo (1258)	Guidi
Mangona (1184)	Alberti	Santerno (1265)	Ubal dini
Semifonte (1195)	Alberti	Montelucio (1287)	Florence
Galliano (1198)	Ubal dini	Loro Ciuffenna (1306)	Florence
Borgo S. Lorenzo (12th century)	Bishops of Florence	Montalpruno (1329)	Florence
Latera (1201)	<i>Cattani</i>	Firenzuola (1332)	Florence
Fabbrica (1203)	Passignano (?)	Castelfranco di Sopra (1332)	Florence
Pontemeleto (1205)	Guidi (?)	San Casciano (1344)	Bishops of Florence
Calenzano (1207)	Guidi	Montelupo (1346)	Florence
Combiato (1209)	<i>Cattani</i>		

Table 17. Florentine urban markets

URBAN MARKETS	DATE	SOURCE
Mercato Nuovo	1018	Lami, ed., 1758, 1, p. 863. ⁴⁶
Mercato Nuovo	1263 February 21	ASF, <i>Notarile antecosimiano</i> 995, fol. 25r.
Mercato Vecchio (probably), 'Mercatum Regis'	931 May	Lami, ed., 1758, 1, p. 84.
Mercato Vecchio (probably), 'Forum Regis'	1018 April 27	Lami, ed., 1758, 1, p. 42.
Mercato Vecchio	1018	Lami, ed., 1758, 1, p. 863.
Mercato Vecchio	1032 May 5	Mosiici, ed., 1990, no. 10, pp. 98-104.
Mercato Vecchio (probably)	1038 July 23	Schiaparelli, ed., 1990, no. 42, pp. 112-114, esp. 113.
Porta di Santa Maria, Campus Regis (probably), an annual market, neither the Vecchio nor the Nuovo	1024 April, 1026 April 16	Mosiici, ed., 1990, no. 6, pp. 76-82; no. 8, pp. 86-91.
Porta di Santa Maria	1076 January 9	Piattoli, ed., 1938, no. 89, pp. 226-228, esp. 227.
Rubaconte, livestock market	1178	Villani, bk. 4, chap. 8. ⁴⁷
Rubaconte, livestock market	1261 September 17	Davidsohn, ed., 1896-1908, 4, p. 519; ASF, <i>Notarile antecosimiano</i> 995, fol. 11r.
Rubaconte, livestock market	1264 April 5	ASF, <i>Notarile antecosimiano</i> 995, fol. 27v.
Rubaconte, livestock market	1271 June 13	Muzzi and Nenci, eds., 1988, no. 58, pp. 173-174; Davidsohn, ed., 1896-1908, 3, no. 72, p. 24; ASF, <i>Notarile antecosimiano</i> , 995/A981, fol. 91r/92r. ⁴⁸

⁴⁶ The existence of the Mercato Nuovo by 1018 is implied by the explicit reference to the Mercato Vecchio recorded in 1018. According to Davidsohn, the first explicit reference to the Mercato Nuovo comes in 1076, though the market attested in 1076 almost certainly was not the Mercato Nuovo but another market situated just outside the early medieval walls of the city. The market attested in 1024 and 1026, and identified by Mosiici as an annual market located just outside the city walls, probably is the market attested in 1076.

⁴⁷ Villani gives a date of 1078, but this date is clearly erroneous since it is given in the context of a construction of a new circuit of walls. Villani himself notes that this new circuit of walls joined the river in the west at the Rubaconte bridge, and it is well known that the walls following the path described by the author were constructed during the period from 1172 to 1175.

⁴⁸ After folio 83, a small piece of parchment is inserted into the cartulary, which is numbered both 83BIS and 84. The succeeding folio is numbered both 84 and 85, and the folios thereafter follow this dual pattern of numeration.

URBAN MARKETS	DATE	SOURCE
Ognissanti, livestock market	13th century (?)	Sznura, 1975, p. 80.
Ognissanti, livestock market	1300 September 16	AAF, <i>Mensa arcivescovile, Bullettoni</i> 3, fol. 14r.
Ognissanti, livestock market	1325 (established)	Caggese, ed., 1921, bk. 4, rub. 14. ⁴⁹
Ognissanti, livestock market	1355 (established)	Masi, ed., 1934, p. 185, n. 3, citing ASF, <i>Statuto del podestà</i> , bk. 4, rub. 12.
Orsanmichele, the urban grain market	1282 February 23	Gherardi, ed., 1896-1898, 1, pp. 68-69.
Orsanmichele, the urban grain market	1282	Villani, bk. 7, chap. 99.
Santa Croce, livestock market	1325	Caggese, ed., 1921, bk. 4, rub. 16, p. 311. ⁵⁰
Santo Spirito, grain, flour, bread market	1333 November 15 (established)	Pinto, 1978, p. 493.

⁴⁹ On the establishment of annual livestock at Florence in 1325, see also Caggese, ed., 1921, bk. 5, rub. 116: 'forum et nundine [...] de equis, equabus, ronçinis, ronçinabus, mulis, mulabus, asinis, asinabus, que durent sedecim diebus, scilicet VIII diebus ante festum Sancti Johannis mensis iunii et octo diebus post ipsum festum, in eo loco ubi dominis Prioribus et Vexillifero iustitie'. Unfortunately, the source is unclear on the location of the fair, but it probably refers to the fair established at either Ognissanti or Santa Croce.

⁵⁰ See above, n. 49.

8. Hospitals in the territory of Florence, 11th-14th century

The catalogue of rural hospitals in the territory of Florence presented below, like the catalogues for markets above, expands upon the list of hospitals published by De La Roncière in 1976. De La Roncière identified 136 hospitals attested between the eleventh and the fourteenth centuries in the territory of Florence or in areas subjugated by Florence by the end of the fourteenth century.¹ The catalogue below again adds to the list compiled by De La Roncière, identifying a total of 208 hospitals and in some cases pushing back first references from the fourteenth century to the eleventh century.²

Medieval 'hospitals' were not necessarily synonymous with their modern namesakes but were more typically places offering temporary accommodation of some sort, usually closer in form and function to a public house or an inn than to a hospital. Many *hospitales*, *hospitia*, *xenodochia*, and other such facilities nevertheless also provided lodging, food, and care for the destitute and infirm. Regardless of their primary function, virtually all hospitals were centres of economic activity at some level. Even exclusively religious hospitals often controlled large estates, serving as centres of estate administration and sometimes as collection centres at which agricultural rents were consigned. Hospitals also may have been the scenes of impromptu markets or *emporium*. Rural hospitals in particular were nevertheless places of lodging for both religious and commercial travellers, which makes them useful indicators of major roads.³

Before the twelfth century, the terminology of the sources in regard to both travellers and accommodation facilities was rather homogeneous and tended to emphasise the religious aspect of travel and hospitality. The most common desig-

¹ De La Roncière, 1976, 4, pp. 311-319.

² Neither this catalogue nor the list compiled by De La Roncière included urban hospitals, but an incomplete list of thirty-five urban hospitals is given in La Sorsa, 1902, pp. 172-173.

³ On hospitals and accommodation facilities for religious and commercial travellers in medieval Tuscany more in general, see Szabó, 1992, pp. 285-319. Several hospitals in the Florentine countryside are attested as centres for the collection of rents, but see ASF, *Diplomatico*, Badia di Ripoli, 1230 January 24. This document, which pertains to the abbey of Santa Trinita dell'Alpi situated high in the southern Pratomagno in the diocese of Arezzo, lists thirteen separate perpetual leases in which the tenants were to render an annual payment in grain 'apud hospitalem quercie fresenaie'. On hospitals as sites of economic activity more generally, see Szabó, 1992, pp. 307-308. With respect to rural hospitals as indicators of major roads, about two-thirds of the 134 medieval hospitals in the Florentine countryside identified by De la Roncière were situated on the so-called 'master roads'. See De la Roncière, 1976, 3, pp. 921-925, esp. 921.

nation for a traveller was the term *peregrinus*, which had referred to any traveller in foreign lands in antiquity, but it assumed the connotation of religious pilgrim in the course of the early middle ages. The most common designation for a place offering accommodation facilities was the term *xenodochium*, which indicated simply a place of refuge for foreigners at the beginning of the middle ages, but it came to refer to a centre of assistance for all types of needs, particularly for religious travellers and for the poor and infirm. The term *hospitalis* began to appear in the sources for the first time only in the early eighth century and initially it also referred primarily to places of refuge for pilgrims.

The homogeneous nature of the terminology perhaps obscures the reality, however, and it is well known, for example, that commercial travellers frequently abused the privileged status of religious pilgrims to avoid the payment of customs charges and tolls. It is only in the twelfth century with the increasing volume of the surviving evidence and especially with the advent of communal documentation that a broader terminology emerges in which commercial travellers and places of lodging more or less intended specifically for them become more conspicuous. Among the forms of hospitality available to commercial travellers which begin to appear with increasing frequency after the beginning of the twelfth century were the *albergus*, *domus*, *fondacum*, *hospitium*, and *taberna*.⁴

⁴ See again Szabó, 1992, pp. 285-319.

Table 19. Hospitals in the Florentine countryside⁵

	RURAL HOSPITALS	DATE	SOURCE
1	Altopascio, Rosaria [Fucecchio]	1183 May 29	ASF, <i>Diplomatico</i> , Fucecchio, Comune.
		1203	Passerini, ed., 1876, p. 391.
		1235 May 15	ASF, <i>Diplomatico</i> , Santo Ste- fano di Empoli.
		1100-1260 ⁶	ASF, <i>Diplomatico</i> , Stroziane Uguccione.
2	Avanelle, burgo, Sant'Antonio	1323	De La Roncière, 1976, 4, pp. 311-319, no. 2, citing ASF, <i>Notarile antecosimiano</i> B2768, fol. 128v; B2771, fol. 227r.
3	Barberino Val d'Elsa, Santa Maria	1348 June 1	De La Roncière, 1976, 4, pp. 311-319, no. 3, citing ASF, <i>Notarile antecosimiano</i> R2772.
4	Barberino Val d'Elsa, Santa Magdalena	1364 July 15	De La Roncière, 1976, 4, pp. 311-319, no. 4, citing ASF, <i>Notarile antecosimiano</i> G382.
5	Bibbiano, Val d'Elsa	997 January	Schiaparelli, ed., 1990, no. 11, pp. 36-40, esp. 38.

⁵ Notes for Table 18:

Date column:

† Indicates a confirmation of a reference to a market cited by De la Roncière when several attestations of the market occur in the same collection of documents. See the note for the source column below.

Source column:

* Confirms a reference cited by De la Roncière. For instances in which there are several attestations of the market from the same collection of documents, the date of the particular piece of evidence originally cited by De la Roncière is indicated in the date column. See the notes for the date column above.

⁶ The hospital at Altopascio is abundantly documented in the ASF, *Diplomatico*, Stroziane Uguccione, from the beginning of the twelfth century through 1260, and there are no doubt additional attestations for the periods both preceding and following the period covered here. See ASF, *Diplomatico*, Stroziane Uguccione, 1103 June 28, 1144 April 22, 1152 February 29, 1156 March 15, 1175 May 12 1179 August 12, 1209 October 29, 1215 February 6, 1230 January 20, 1231 September 27, 1233 May 10, 1234 August 22, 1235 September 8, 1236 August 1, 1236 December 28, 1241 April 29, 1245 October 29, 1246 October 14, 1247 January 29, 1248 October 6, 1249 October 6, 1257 January 17, 1258 August 26, 1260 July 7, and 1260 November 26.

	RURAL HOSPITALS	DATE	SOURCE
6	Bigallo	1251 September 15	Fineschi, ed., 1790, pp. 145-147, esp. 147.
7	Borgo San Lorenzo	12[6]8 (?) September 8	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>), fol. 81r.
		1273	De La Roncière, 1976, 4, pp. 311-319, no. 6, citing Lami, ed., 1758, 2, p. 737. ⁷
8	Botena, Santo Stefano	1327 August 13	De La Roncière, 1976, 4, pp. 311-319, no. 7, citing ASF, <i>Notarile antecosimiano</i> B2784.
9	Brozzi	1311	De La Roncière, 1976, 4, pp. 311-319, no. 8, citing ASF, <i>Notarile antecosimiano</i> A937, fol. 106r.
10	Brusciana, San Matteo di San Bartolomeo a	1377	De La Roncière, 1976, 4, pp. 311-319, no. 9, citing ASF, <i>Estimo</i> 340, fol. 159r.
11	Cafagio, San Michele (near Laterino ?)	1136, 1209 February 10	ASF, <i>Diplomatico</i> , Badia di Ripoli.
12	Calcinaia, Poggibonsi	1173 March	Cambi, 1995, app., no. 51, pp. 277-307, <i>passim</i> ; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1174 December 20	Cambi, 1995, app., no. 53, pp. 309-316, esp. 310; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		[1176] September 18	Cambi, 1995, app., no. 55, pp. 319-323, esp. 323; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista, 1175.
13	Calcinaia, curia Poggibonsi, 'sive mansio Sancti Johannis Jerosolimitani Pontis Sancti Johannis'	1334 May 8	De La Roncière, 1976, 4, pp. 311-319, no. 10, citing ASF, <i>Notarile antecosimiano</i> M437.
14	Calcinaia, curia Poggibonsi, Santa Maria della Scala	1334	De La Roncière, 1976, 4, pp. 311-319, no. 11, citing ASF, <i>Notarile antecosimiano</i> M437, 1334 November 23.

⁷ I have been unable to corroborate the reference in the source cited by De la Roncière.

	RURAL HOSPITALS	DATE	SOURCE
15	Calenzano	1172 September 13	ASF, <i>Diplomatico</i> , Archivio Generale.
		1269	Brattö, ed., 1956, par. 270, p. 58.
16	Calenzano, San Laz-zaro de Colle	1343	De La Roncière, 1976, 4, pp. 311-319, no. 12, citing AVF, <i>Ordinations</i> 8, 5.
17	Calzaiolo, near Bib-bione, 'juxta pedem castellaris de Bibione non multum longe a flumine Pese'	1146 April 15†, 1150 March 6	ASF, <i>Manoscritti</i> 48bis, <i>Bullettone</i> , fol. 52v.*
18	Calzaiolo	1228 June 3	ASF, <i>Diplomatico</i> , Cestello.
19	Campi	1355	De La Roncière, 1976, 4, pp. 311-319, no. 13, citing ASF, <i>Notarile antecosimiano</i> , ser Meringhi Jacopo, 1, fol. 98r.
20	Campoluccio, San Jacopo di Sant' Eusebio	13th century	Davidsohn, ed., 1896-1908, 4, p. 398; ASF, <i>Diplomatico</i> , Mercatanti, secolo XIII.
21	Campolungo di Carnano (?)	1252 February 22	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
22	Candeli, Sant'Andrea	1276-1277	Guidi, ed., 1932, no. 175, p. 11.
		1302-1303	Giusti and Guidi, eds., 1942, no. 12, p. 4.*
23	Caporsoli (?)	1302-1303	Giusti and Guidi, eds., 1942, no. 882, p. 48.
24	Capraia, San Pietro	1188 September 11	Schneider, ed., 1911, no. 339, pp. 131-132.
		1189	De La Roncière, 1976, 4, pp. 311-319, no. 16, citing Lami, ed., 1758, 2, p. 985. ⁸
		1276-1277	Guidi, ed., 1932, no. 446, p. 20.
		1302-1303	Giusti and Guidi, eds., 1942, no. 473, p. 25.
25	Caprilia, 'ospitale vetero' (?)	1116 January	ASF, <i>Diplomatico</i> , Badia di Passignano.

⁸ I have been unable to corroborate the reference in the source cited by De la Roncière.

	RURAL HOSPITALS	DATE	SOURCE
26	Carcheri [Ginestra], San Martino	1310	De La Roncière, 1976, 4, pp. 311-319, no. 17, citing ASF, <i>Notarile antecosimiano</i> B482, fol. 73v.
27	Carmignano	1293 September 11	De La Roncière, 1976, 4, pp. 311-319, no. 18, citing ASF, <i>Notarile antecosimiano</i> 130.
28	Casellina e Torri, pieve di Settimo, lower Arno valley, 'in loco dicto Corticella'	1096	Repetti, 1833-1845, 1, p. 509.*
29	Casellina e Torri	1371 (new foundation)	Repetti, 1833-1845, 1, p. 509.*
30	Casignano, Santa Maria	1299	De La Roncière, 1976, 4, pp. 311-319, no. 21, citing Orlandi, ed., 1955, 1, p. 332. ⁹
		1302-1303	Giusti and Guidi, eds., 1942, no. 1039, p. 55.
31	Castelfiorentino, Santa Croce	1352	De La Roncière, 1976, 4, pp. 311-319, no. 22, citing ASF, <i>Orsanmichele</i> 146.
32	Castelfiorentino, Santo Spirito di (probably Societatis S. Spiritus de Sancta Viridiana)	1378	De La Roncière, 1976, 4, pp. 311-319, no. 23, citing ASF, <i>Alienazione beni ecclesiastici</i> 355, fol. 201r.
33	Cerbaia Val di Pesa, Santa Caterina	towards 1300 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 25, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 198.
34	Cerbaiola, San Leonardo, lower Arno valley, near Empoli	12th century	Repetti, 1833-1845, 1, p. 653.*
		1302-1303	Giusti and Guidi, eds., 1942, no. 36, p. 5.

⁹ My own reading of the source cited by De la Roncière does not corroborate the existence of this particular hospital, though the note for no. 257 in Orlandi, ed., 1955, 1, pp. 331-332, mentions the hospital of Santa Maria del Borgo dell'Incisa.

	RURAL HOSPITALS	DATE	SOURCE
35	Cerbaiola, San Giovanni, lower Arno valley, near Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 65.
		1255 May 6	Santini, ed., 1952, <i>Capitoli</i> , no. 43, pp. 130-141, esp. 131.
		1260 August 17	Paoli, ed., 1889, p. 117.
36	Cerreto Guidi	1363	De La Roncière, 1976, 4, pp. 311-319, no. 27, citing ASF, <i>Notarile antecosimiano</i> , app., 83, fol. 51r.
37	Certaldo, Santa Maria	1340	De La Roncière, 1976, 4, pp. 311-319, no. 28, citing ASF, <i>Notarile antecosimiano</i> 158, fol. 42v.
38	Certaldo, Santa Maria di Fori	1377	De La Roncière, 1976, 4, pp. 311-319, no. 29, citing ASF, <i>Estimo</i> 340, fol. 142v.
39	Cesto, 'hospitale pontis Cesti in curte de Fighine qui locus olim vocabatur Barbarino iuxta fluvium quod vocatur Cesto' (see below, under Figline)	1104 February, 1126 January 3, 1136 February 1, 1231 January 30, 1253 January 4	ASF, <i>Diplomatico</i> , Badia di Passignano.
40	Cigheritti	1189	Lami, ed., 1758, 2, p. 957-958, esp. 957.
41	Citrina (?)	1154 April 5	ASF, <i>Diplomatico</i> , Badia di Passignano.
42	Classa (?)	1163 November	ASF, <i>Diplomatico</i> , Badia di Ripoli.
43	Colle di Val d'Elsa, Santo Spirito	1207 February 10, 1217 December 31 (founded between these two dates)	ASF, <i>Diplomatico</i> , Comune di Colle.
44	Coltibuono	1211 February 3, 1235 January 29, 1239 July 31, 1252 February 22	ASF, <i>Diplomatico</i> , Badia di Coltibuono.

	RURAL HOSPITALS	DATE	SOURCE
45	Combiate, parish of Legri, San Nazario a Celso, or Vigesimo, near Barberino di Mugello	1078 May	Repetti, 1833-1845, 1, p. 789; cf. ASF, <i>Diplomatico</i> , Badia di Passignano.*
		1120-1234 ¹⁰	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1178 January 1	ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1276-1277	Guidi, ed., 1932, no. 157, p. 11.
		1302-1303	Giusti and Guidi, eds., 1942, no. 13, p. 4.
46	Corella, San Bartolomeo	1340	De La Roncière, 1976, 4, pp. 311-319, no. 31, citing ASF, <i>Notarile antecosimiano</i> L39, fol. 175.
47	Cornio, San Niccolò (?)	1104-1265 ¹¹	ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici.
		1276-1277	Guidi, ed., 1932, no. 164, p. 11.
		1302-1303	Giusti and Guidi, eds., 1942, no. 20, p. 4.
48	Cortebuona, San Niccolò (?)	1276-1277	Guidi, ed., 1932, no. 543, p. 23.
		1302-1303	Giusti and Guidi, eds., 1942, no. 631, p. 32.
49	Corticella (see also above, under Casellina e Torri)	1096, 1113, 1132	ASF, <i>Compagnie Religiose soppresse da Pietro Leopoldo</i> 479, 302.
		1186 January 26, 1204 September 5, 1226 August 16	ASF, <i>Diplomatico</i> , Cestello.

¹⁰ The hospital at Combiate is abundantly documented from 1120 to 1234 in the ASF, *Diplomatico*, Badia di Passignano. It disappears from the Passignano evidence thereafter, but it is subsequently attested elsewhere. For the Passignano evidence, see ASF, *Diplomatico*, Badia di Passignano, 1120 January, 1121 July, 1140 April, 1145 January, 1153 January 8, 1170, 1201 February 1, 1202 January 19, 1209 August 24, 1210 August 10, 1212 January 3, 1212 May 1, and 1234 September 7.

¹¹ The hospital at Cornio is abundantly documented in ASF, *Diplomatico*, Riformagioni, Atti Pubblici 1104 November 25, 1157 January 2, 1186 May 1, 1198 October 9, 1207 October 18, 1221 May 15, 1221 May 20, 1235 December 10, 1238 June 18, 1239 May 2, 1239 July 2, and 1265 December 11.

	RURAL HOSPITALS	DATE	SOURCE
50	Cortine	1333	De La Roncière, 1976, 4, pp. 311-319, no. 32, citing ASF, <i>Notarile antecosimiano</i> B700, 1333 December 29.
51	Dicomano, burgo	1328	De La Roncière, 1976, 4, pp. 311-319, no. 33, citing ASF, <i>Notarile antecosimiano</i> G368, 2, fol. 98v.
52	Empoli, 'Domus pauperum hospitalis de Empoli'	1282 May 6	ASF, <i>Notarile antecosimiano</i> 11550/L99, fol. 21r.*
53	Empoli, 'fuori della porte del noce', Societatis discipline della Croce ecclesie Sancti Augustitini	1377-1378	De La Roncière, 1976, 4, pp. 311-319, no. 35, citing ASF, <i>Alienazione beni ecclesiastici</i> 355, fol. 178r.
54	Empoli, Societatis Annunciate plebis	1378	De La Roncière, 1976, 4, pp. 311-319, no. 36, citing ASF, <i>Estimo</i> 340, fol. 157v.
55	Farneto	1329 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 37, citing ASF, <i>Notarile antecosimiano</i> G368, 2, fol. 138v.
56	Fiesole, Santa Katerina	1361	Lami, ed., 1758, 2, p. 1364.
57	Figline, 'ospitale de Figline posito prope flumen Cesto vocatur' (see <i>supra</i> , Cesto)	1115 January 1	ASF, <i>Diplomatico</i> , Badia di Passignano.
58	Figline, San Domenico	1279	Orlandi, ed., 1955, 1, no. 172, pp. 20-21, 247-250; Schiaffini, ed., 1954, p. 238.*
59	Figline, Compagnia della Croce	beginning of the 14th century	De La Roncière, 1976, 4, pp. 311-319, no. 40, citing A. Bossini, <i>Storia di Figline e del Valdarno superiore</i> , Florence, 1970, p. 202.
60	Figline, San Lorenzo	1331	De La Roncière, 1976, 4, pp. 311-319, no. 41, citing ASF, <i>Notarile antecosimiano</i> B549, fol. 14r.
61	Figline, comunis	1331	De La Roncière, 1976, 4, pp. 311-319, no. 42, citing ASF, <i>Notarile antecosimiano</i> B549, fol. 28r.

	RURAL HOSPITALS	DATE	SOURCE
62	Figline, Societatis Virginis Marie	1332	De La Roncière, 1976, 4, pp. 311-319, no. 43, citing ASF, <i>Notarile antecosimiano</i> B549, fol. 9v.
63	Figline, Santo Spirito	1333	De La Roncière, 1976, 4, pp. 311-319, no. 44, citing ASF, <i>Notarile antecosimiano</i> B549, fol. 59r.
64	Figline, Societatis presbiterum	1378	De La Roncière, 1976, 4, pp. 311-319, no. 45, citing ASF, <i>Alienazione beni ecclesiastici</i> 355, fol. 219r.
65	Firenzuola 'ad hospitalitatem et receptionem pauperum' (a 1 - strata)	1338 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 46, citing ASF, <i>Notarile antecosimiano</i> , Lando Ubaldini, 2, fol. 278r.
66	Fonte Manzina	before 1229, probably 12th century	Davidsohn, 1977, 7, p. 95.
		1221-1273 ¹²	ASF, <i>Diplomatico</i> , Cestello.
		1236, 1273, 1285	ASF, <i>Compagnie Religiose soppresse da Pietro Leopoldo</i> 479, 302.
67	Galliano	1090	ASF, <i>Compagnie Religiose soppresse da Pietro Leopoldo</i> 479, 302.
		1348	Ildefonso di San Luigi, ed., 1770-1789, 10, p. 267.*
68	Galluzzo, Santo Stefano (?)	1129 February 24	ASF, <i>Diplomatico</i> , Badia di Passignano
69	Gambassi	1285	De La Roncière, 1976, 4, pp. 311-319, no. 50, citing Isolani da Montignoso, in <i>Miscellanea storica della Valdelsa</i> 27, 1919, p. 11.
70	Gangalandi, 'prope fossatum Rimagii et prope stratam publicam'	1361	De La Roncière, 1976, 4, pp. 311-319, no. 51, citing ASF, <i>Provvisioni</i> 49, fol. 24r.

¹² The hospital of San Niccolò at Fonte Manzina is abundantly documented from 1221 to 1254 in ASF, *Diplomatico*, Cestello. The evidence from 1221 suggests that the hospital was new at that time, though Davidsohn has dated the hospital to the twelfth century. For the thirteenth century evidence, see ASF, *Diplomatico*, Cestello, 1221 December 30, 1228 August 21, 1229 May 12, 1229 June 24, 1229 September 4, 1231 November 17, 1252 February 3, 1254 April 2, 1254 July 27, and 1254 September 2.

	RURAL HOSPITALS	DATE	SOURCE
71	Gattaia, Santa Maria e Jacopo	14th century (?)	De La Roncière, 1976, 4, pp. 311-319, no. 52, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 234.
72	Gaville, San Michele, 'positum apud castrum Gavilli'	1327	De La Roncière, 1976, 4, pp. 311-319, no. 53, citing ASF, <i>Notarile antecosimiano</i> p392, fol. 4r.
73	Girone	1204	Passerini, ed., 1876, p. 396.
74	Greve in Chianti	1288 October 5	Lami, ed., 1758, 1, p. 261.
75	Impruneta, Muliermala, 'ad usum et suntum pauperum preregri-norumque euntium et transeuntium'	1095 February 11	Camerani Marri, ed., 1962-1963, pt. 4, no. 105, pp. 519-520, esp. 519.
76	Incisa, Santa Maria (then San Domenico) del borgo	1295	Orlandi, ed., 1955, 1, p. 332.*
77	Incisa, Hospitale de	1302-1303	Giusti and Guidi, eds., 1942, no. 883, p. 48.
78	Lastra a Signa, San Benedetto	1291 September 13	Langolis, ed., 1905, nos. 6060-6092, pp. 815-816, esp. 815.*
79	Lastra a Signa, dei dominicani	1347 (foundation)	Orlandi, ed., 1955, 1, p. 401.*
80	Sant'Angelo Legnaia, del Cappone	1383	De La Roncière, 1976, 4, pp. 311-319, no. 57, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 68.
81	Linari, Santa Maria	1313 May 20	De La Roncière, 1976, 4, pp. 311-319, no. 58, citing ASF, <i>Notarile antecosimiano</i> D77, 3.
82	Magnale, San Niccolò (?)	1113 February 7	ASF, <i>Diplomatico</i> , Vallombrosa.
83	Mamugnano, Memoragno, Memugnano, Munignano (?)	1129 March, 1136 July 19, 1144 July, 1146 February, 1147 March (Memugnano)	Pagliai, ed., 1909, no. 339, p. 154; no. 363, pp. 164-165; no. 391, p. 176; no. 402, p. 181; no. 397, pp. 178-179
		1194 June 14 (Mamugnano), 1225 December 11 (Memoragno)	ASF, <i>Diplomatico</i> , Vallombrosa.

	RURAL HOSPITALS	DATE	SOURCE
83	Mamugnano (cont.)	1198 April 10 (Mamugnano) ¹³	Santini, ed., 1895, <i>Capitoli</i> , no. 24, pp. 42-43, esp. 43.
		1219 September 7, 1233 December 28, 1245 March 17 (Munignano)	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
84	Marcialla	1394	De La Roncière, 1976, 4, pp. 311-319, no. 59, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 268.
85	Massapagana	12th century	De La Roncière, 1976, 4, pp. 311-319, no. 60, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 239.
		1229 October 16	ASF, <i>Diplomatico</i> , Strozziiane Uguccione.
86	Misileo	1163 November 5, 1196 December	ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1203 April 3	ASF, <i>Diplomatico</i> , Vallombrosa.
87	Monte Aguto in Mugello, dei domini-cani	1318	Orlandi, ed., 1955, 1, p. 397.*
88	Montaione, Santa Lucia	1255 May 6	Santini, ed., 1952, <i>Capitoli</i> , no. 43, pp. 130-141, esp. 132.
		1377	De La Roncière, 1976, 4, pp. 311-319, no. 62, citing ASF, <i>Estimo</i> 340, fol. 125r.
89	Monte al Pruno, San Nofrio	1377	De La Roncière, 1976, 4, pp. 311-319, no. 63, citing ASF, <i>Estimo</i> 338, fol. 56r.
90	Montebuoni, 'positus et constructus in loco ubi dicitur Muliermala, iusta castrum Monteboni'	1095 February 11	Camerani-Marri, ed., 1962-1963, pt. 4, no. 104, p. 517-519, esp. 518.*
		1167-1212 ¹⁴	ASF, <i>Diplomatico</i> , San Vigilio di Siena.

¹³ The document was dated in correctly by Santini. The date indicated in the document itself, 'anno MCLXXXVIII, XVII kalendas madii', corresponds to 1198 April 15.

¹⁴ The hospital at Montebuoni is abundantly documented between the years 1167 and 1212 in the evidence for the monastery of Montescalari in ASF, *Diplomatico*, San Vigilio di Siena. The hospital disappears from the Montescalari evidence thereafter, but other evidence attests to its continued existence in the later thirteenth century and at the very beginning of the fourteenth

	RURAL HOSPITALS	DATE	SOURCE
90	Montebuoni (cont.)	1276-1277	Guidi, ed., 1932, no. 162, p. 11.
		1279 June 17	Muzzi and Nenci, eds., 1988, no. 107, pp. 217-218, esp. 217, citing ASF, <i>Notarile antecosimiano</i> 1104, fol. 12r.
		1302-1303	Giusti and Guidi, eds., 1942, no. 18, p. 4.
91	Montegualdo (Montevarchi ?)	1195 February 6	ASF, <i>Diplomatico</i> , Badia di Passignano.
92	Montelupo, Virginis Marie sive della tagliata	1319	De La Roncière, 1976, 4, pp. 311-319, no. 65, citing ASF, <i>Notarile antecosimiano</i> L38, fol. 7r.
93	Montelupo, dei dominicani	1330 (foundation)	Orlandi, ed., 1955, 1, pp. 383-385.*
94	Montemarciano, upper Arno valley	1346	Repetti, 1833-1845, 3, p. 423.*
95	Montepiano	1139 February, 1181 November 26, 1181 [November 26], 1184 April 19	Piattoli, ed., 1942, no. 64, pp. 123-124, esp. 124; no. 178, pp. 343-344, esp. 344; no. 179, pp. 344-346, esp. 345; no. 185, pp. 353-354, esp. 354.
96	Monte Politano (?)	1108	Piattoli, ed., 1938, no. 156, pp. 378-380, esp. 379-380.
97	Monteputano, San Salvatore (?)	1276-1277	Guidi, ed., 1932, no. 342, p. 17.
		1302-1303	Giusti and Guidi, eds., 1942, no. 230, p. 14.
98	Monteripaldi, Ema valley	1138	Repetti, 1833-1845, 3, pp. 506-507.*
99	Montevarchi	1254 April 6	Santini, ed., 1952, <i>Capitoli</i> , no. 18, pp. 62-65, esp. 63.

century. For the Montescalari evidence, see ASF, *Diplomatico*, San Vigilio di Siena, 1167 August 20, 1169 April 8, 1173, May 7, 1175 January 25, 1179 February 28, 1179 April 18, 1179 December, 1180 August 31, 1188 June 8, 1188 July 24, 1193 October 29, 1203 January 17, 1205 December 3, and 1212 April 2.

	RURAL HOSPITALS	DATE	SOURCE
100	Montevarchi, Sant' Angelo alla Genestra	1247 April	Ildefonso di San Luigi, ed., 1770-1789, 8, pp. 104-109, esp. 106.
		1283	De La Roncière, 1976, 4, pp. 311-319, no. 69, citing Repetti, 1833-1845, 2, p. 445.
101	Montevarchi, Virginis Marie Peregrinationis	1348	De La Roncière, 1976, 4, pp. 311-319, no. 70, citing ASF, <i>Notarile antecosimiano</i> , app., 76, fol. 22r.
102	Montevarchi, Sant' Antonio	1363 (?)	De La Roncière, 1976, 4, pp. 311-319, no. 71, citing ASF, <i>Notarile antecosimiano</i> , app., fol. 12; Repetti, 1833-1845, 3, pp. 544.
103	Monticelli, San Niccolò a, San Biagio (dependent of the Società Santa Maria del Bigallo)	1329 (foundation)	Carocci, 1968, 2, p. 387.*
104	Montici, Santa Margherita a, Santa Trinità in pian di Giullari	14th century (?)	De La Roncière, 1976, 4, pp. 311-319, no. 73, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 99.
105	Musce (?)	1177 January 29	ASF, <i>Diplomatico</i> , Vallombrosa.
106	Novoli, San Jacopo a, near San Piero a Sieve, 'Fosse lupai'	1335 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 115, citing G. Bacini, <i>Bullettini storico-letterario</i> 2, 1893, p. 14.
107	Orto, Figline (?)	1230 February 12	ASF, <i>Diplomatico</i> , Badia di Passignano.
108	Osmanoro, pieve di Brozzi, Santa Croce	1256 January 26 (foundation)	Davidsohn, eds., 1896-1908, 4, p. 405; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.*
		1258	Davidsohn, eds., 1896-1908, 4, p. 405; cf. Fineschi, ed., 1790, p. 147-148. ¹⁵

¹⁵ The source cited by Davidsohn, the will of 'Dominus Lottaringus filius q. Orlandini de Monte Aguto', does not explicitly attest to the existence of a hospital at Osmanoro. The source indicates that the lord wishes to leave in his will a gift of three *libre* to the 'Fratribus Cruciatibus de Osmanoro'. See Fineschi, 1790, pp. 147-148, esp. 148.

	RURAL HOSPITALS	DATE	SOURCE
109	Osmanoro, San Francesco, 'juxta stratam publicam', Petriuolo, parish of Brozzi	1309	De La Roncière, 1976, 4, pp. 311-319, no. 76, citing ASF, <i>Notarile antecosimiano</i> A938, fol. 15r.
110	Osmanoro, San Bernardo	1352	De La Roncière, 1976, 4, pp. 311-319, no. 77, citing ASF, <i>Orsanmichele</i> 146.
111	Padule, San Jacopo (parish of San Martino a Scopeto)	1326 July 15	De La Roncière, 1976, 4, pp. 311-319, no. 78, citing ASF, <i>Notarile antecosimiano</i> B2784.
112	Pagliareccio	13th century	De La Roncière, 1976, 4, pp. 311-319, no. 79, citing Lami, ed., 1758, 1, p. 159. ¹⁶
113	Paracapello, Crespino (?)	1160 October 12	ASF, <i>Diplomatico</i> , Badia di Ripoli.
114	Passignano	1123 June, 1190 August 18 17	ASF, <i>Diplomatico</i> , Badia di Passignano.
115	Patrignone (?)	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 69.
116	Peraine, Pietro Fastello, near Staggia di Valdelsa (?)	1120 December, 1123 March, 1124 February, 1140 April, 1148 October	ASF, <i>Diplomatico</i> , Badia di Passignano.
117	Percussina, San Lorenzo, popolo Sant'Andrea	1376	De La Roncière, 1976, 4, pp. 311-319, no. 80, citing ASF, <i>Provvisioni</i> 64, fol. 186v.
118	Peretola, Societatis Sancte Marie del Ponte	1350 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 81, citing ASF, <i>Provvisioni</i> 36, fol. 65v.
119	Perticaia, San Cristofano	1357 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 82, citing BNCF, <i>Magliab.</i> 37, 303, p. 108.
120	Petrognano, pauperum	1286	De La Roncière, 1976, 4, pp. 311-319, no. 83, citing ASF, <i>Notarile antecosimiano</i> R192, fol. 32v.

¹⁶ I have been unable to corroborate the reference in the source cited by De la Roncière.

¹⁷ The document of 1123, redacted at Puppiano, indicates that the hospital was situated near Passignano, adjacent to the river Pesa and near a bridge crossing the river.

	RURAL HOSPITALS	DATE	SOURCE
121	Piagna, or Preiagna, Santa Margherita, Monteficalle	1218 July 2	ASF, <i>Diplomatico</i> , Strozziiane Ugucione.
		1299	Lami, ed., 1758, 2, p. 1503.*
		13th century	Repetti, 1833-1845, 3, pp. 390-391.
		1302-1303	Giusti and Guidi, eds., 1942, no. 1153, p. 60.
122	Pian Alberti, Ubaldo	1131-1236 ¹⁸	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1239 October 8†, 1285 November 8, 1286, January 12, 1286 March 10	Repetti, 1833-1845, 5, p. 55; cf. ASF, <i>Diplomatico</i> , Badia di Passignano.*
		1276-1277	Guidi, ed., 1932, no. 906, p. 41.
		1302-1303	Giusti and Guidi, eds., 1942, no. 877, p. 48.
123	Pietramala	1256	Davidsohn, ed., 1896-1908, 4, p. 392, citing AVFiesole, <i>Notarile</i> , 1246-1258.*
124	Poggibonsi, Marturi	1089 March 4, 1099 June 20	Cambi, 1995, app., no. 12, pp. 230-232; no. 13, pp. 232-238, esp. 232-236. See also ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
125	Poggibonsi, Marturi, 'iuxta ponte Bonizi'	1134	Cambi, 1995, app., no. 20, pp. 245-247, esp. 246; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1140 September 2	Cambi, 1995, app., no. 8, pp. 219-224, esp. 223-224; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista, 1068 November 1.

¹⁸ The hospital of Ubaldo at Pian Alberti is abundantly during the period from 1131 to 1236 in the evidence for Passignano in ASF, *Diplomatico*, Badia di Passignano. The hospital disappears from the Passignano evidence thereafter, but it is documented elsewhere again in the later thirteenth century and at the very beginning of the fourteenth century. For the Passignano evidence, see 1131, 1145 May, 1175 January 4, 1188 January 6, 1191 January 31, 1195 February 6, 1202 January 14, 1207 March 13, 1212 May 13, 1223 September 11, 1224 August 20, 1225 October 24, 1227 June 20, 1231, 1233 December 30, 1235 January 27, 1235 December 8, and 1236 May 11.

	RURAL HOSPITALS	DATE	SOURCE
126	Poggibonsi	1181 January 6	Cambi, 1995, app., no. 72, p. 343; ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
		1302-1303	Giusti and Guidi, eds., 1942, no. 35, p. 5.
		1332	Pucci, ed., 1995, bk. 3, rub. 49, pp. 140-141, esp. 141.
127	Poggibonsi, 'hospitalis novi dicte terre Podii-boniçii'	1332	Pucci, ed., 1995, bk. 5, rub. 35 [18], p. 177.
128	Poggibonsi, 'hospitalis comune Podii-boniçi'	1332	Pucci, ed., 1995, bk. 4, rub. 12, p. 166.
129	Poggibonsi, 'hospitium Plebis'	1332	Pucci, ed., 1995, bk. 1, rub. 56, p. 94.
130	Poggibonsi, de misericordia, then San Nicolò (approx. 1333) del Borgo	1331/1333 (the latter of which was the date of a new foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 88, citing ASF, <i>Notarile antecosimiano</i> M437, ---- July 30; Neri, 'Per la storia di Poggibonsi', <i>Miscellanea storica della Valdelsa</i> 8, 1900, p. 185.
131	Poggibonsi, de misericordia	1332	Pucci, ed., 1995, bk. 1, rub. 48, p. 88.
132	Poggibonsi, 'hospitali pauperum de Casamarturi'	1332	Pucci, ed., 1995, bk. 5, rub. 40 [23], p. 179-180, esp. 180.
133	Poggibonsi, 'ad usum hospitalionis pauperum'	1334 November 23	De La Roncière, 1976, 4, pp. 311-319, no. 89, citing ASF, <i>Notarile antecosimiano</i> M437.
134	Poggibonsi, Societatis Virginis Marie (perhaps the same as above, no. 87)	1378	De La Roncière, 1976, 4, pp. 311-319, no. 90, citing ASF, <i>Alienazione beni ecclesiastici</i> 355, fol. 209v.
135	Poggibonsi	1390 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 91, citing ASF, <i>Notarile antecosimiano</i> , app., 62, fol. 45r.

	RURAL HOSPITALS	DATE	SOURCE
136	Poggio (San Donato in Poggio, San Godenzo a Campoli, or Poggio al Vento ?)	1140 March	ASF, <i>Diplomatico</i> , Badia di Passignano.
137	Pontassieve, Santa Maria	14th century (?)	De La Roncière, 1976, 4, pp. 311-319, no. 92, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 329.
138	Ponte a Fuецchio	1224 March 17	ASF, <i>Diplomatico</i> , Strozziiane Ugucione.
139	Ponte a Greve	1258 September 18	ASF, <i>Diplomatico</i> , Strozziiane Ugucione.
		1276-1277	Guidi, ed., 1932, no. 350, p. 17.
		1302-1303	Giusti and Guidi, eds., 1942, no. 457, p. 24.
		1307 February 14	ASF, <i>Compagnie religiose sopresse da Pietro Leopoldo</i> 479, 302.
140	Ponte a Signa	1257 March 10	ASF, <i>Diplomatico</i> , Cestello.
141	Ponte della Valle, upper Arno valley, near Arezzo	1109 March 27, 1163 November 5, 1178 May 5, 1193 January 18, 1238 September 14 ¹⁹	ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1233 July 2	ASF, <i>Diplomatico</i> , Vallombrosa.
142	Ponte Petrorio, San Jacopo, parish of Filettole	1296	Lami, ed., 1758, 1, p. 260.*
143	Ponticolo, near Vaiano, Val di Bisenzio	1112 April 18, 1249 April 5	ASF, <i>Diplomatico</i> , Badia di Passignano
		1119 September 1, 1122 April 17, 1147 November, 1183 April 2, 1229 December 2, 1239 September 18, 1240 November 28, 1251 January 23	ASF, <i>Diplomatico</i> , Badia di Ripoli.

¹⁹ The document of 1109 indicates that the hospital was situated adjacent to the bridge at Ponte della Valle: 'ad pontem de valle qui est in flumo Arno'. The document of 1178 indicates that the hospital was also situated adjacent to the mill of Badia Agnano: 'ospitalis que est ibi iuxta molendinum abbati deagnano'.

	RURAL HOSPITALS	DATE	SOURCE
141	Ponte della Valle, upper Arno valley, near Arezzo	1109 March 27, 1163 November 5, 1178 May 5, 1193 January 18, 1238 September 14 ²⁰	ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1233 July 2	ASF, <i>Diplomatico</i> , Vallombrosa.
142	Ponte Petrorio, San Jacopo, parish of Filettole	1296	Lami, ed., 1758, 1, p. 260.*
143	Ponticolo, near Vaiano, Val di Bisenzio	1112 April 18, 1249 April 5	ASF, <i>Diplomatico</i> , Badia di Passignano
		1119 September 1, 1122 April 17, 1147 November, 1183 April 2, 1229 December 2, 1239 September 18, 1240 November 28, 1251 January 23	ASF, <i>Diplomatico</i> , Badia di Ripoli.
144	Pontorme, Santa Maria	1334	De La Roncière, 1976, 4, pp. 311-319, no. 95, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 332.
145	Quercia Fresenaire	1230 January 19, 1230 January 24	ASF, <i>Diplomatico</i> , Badia di Ripoli.
		1142	
146	Quintole, San Pietro a, Girone	1201	De La Roncière, 1976, 4, pp. 311-319, no. 96, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 342.
		1203	Passerini, ed., 1876, pp. 396-397, esp. 396. ²¹
147	Radda in Chianti	1328	De La Roncière, 1976, 4, pp. 311-319, no. 97, citing ASF, <i>Notarile antecosimiano</i> U20, fol. 90r.

²⁰ The document of 1109 indicates that the hospital was situated adjacent to the bridge at Ponte della Valle: 'ad pontem de valle qui est in flumo Arno'. The document of 1178 indicates that the hospital was also situated adjacent to the mill of Badia Agnano: 'ospitalis que est ibi iuxta molendinum abbati deagnano'.

²¹ One of the witnesses in a 1203 court case was 'Ugolinus, conversus hospitalis de Girone'.

	RURAL HOSPITALS	DATE	SOURCE
148	Razzuolo	1215 September 3	Santini, ed., 1895, <i>Miscellanea</i> , no. 15, pp. 379-380, esp. 379.
149	Renacci, upper Arno valley,	1346	Repetti, 1833-1845, 3, p. 423.*
150	Ricorboli, Santa Maria	beginning of the 14th century	De La Roncière, 1976, 4, pp. 311-319, no. 99, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 111.
151	Rifredi, ad pontem, Santa Lucia, Sant'Eusebio	1251	Lami, ed., 1758, 2, pp. 948-950.*
152	Riofino, near Gaville, torrent Cesto	1135-1171 ²²	ASF, <i>Diplomatico</i> , Badia di Passignano.
		1174	Repetti, 1833-1845, 2, p. 414.*
		1178 January 1	ASF, <i>Diplomatico</i> , Badia di Ripoli.
153	Ripalta	1251 March 2	Santini, ed., 1952, <i>Miscellanea</i> , no. 14, pp. 283-284, esp. 284; cf. ASF, <i>Diplomatico</i> , Cestello, 1250 March 2.
154	Ritalo (Gangareto ?)	1250 July 6	ASF, <i>Diplomatico</i> , Badia di Ripoli.
155	Rosano, Santa Maira	1179 December 31	Strà, ed., 1982, no. 44, pp. 85-87, esp. 86, citing ASF, <i>Diplomatico</i> , Rosano, XII, no. 88 [A].
		1197 May 31	Strà, ed., 1982, no. 52, pp. 101-102, esp. 101, citing AM Rosano, XII, no. 29 [A].
		1203	Passerini, ed., 1876,
		1227 June 13	Strà, ed., 1982, no. 74, pp. 153-156, esp. 154, citing AM Rosano, XIII, no. 69 [A].

²² The hospital of Riofino is abundantly documented from 1135 to 1171 in the evidence for Passignano in ASF, *Diplomatico*, Badia di Passignano. The hospital disappears from all Florentine sources and is not attested after 1178. For the Passignano evidence, see ASF, *Diplomatico*, Badia di Passignano, 1135 November 7, 1138 September 18, 1140 November, 1145 February, 1151 March 4, 1153 January 13, 1154 June 29, 1155 November 4, 1163 January, 1170, and 1171 February.

	RURAL HOSPITALS	DATE	SOURCE
156	Sagginale, ponte a, Santa Maria	1319	De La Roncière, 1976, 4, pp. 311-319, no. 103, citing ASF, <i>Notarile antecosimiano</i> L38, fol. 7v.
		1324	De La Roncière, 1976, 4, pp. 311-319, no. 103, citing ASF, <i>Orsanmichele</i> 248, 1324 November 1
157	Sambuco, San Lazzaro	1290 February 13	Langolis, ed., 1905, nos. 2063-2072, pp. 365-366, esp. 366.*
158	San Casciano, Santa Cristina	1278-1279	Schiaffini, ed., 1954, p. 237.*
159	San Casciano Val di Pesa, 'hospitale Domine Mate loco dicto Magliola'	undated, before 1323 (though De La Roncière has dated the hospital to 1287)	Lami, ed., 1758, 2, p. 752.*
160	San Casciano, dei dominicani	1301 (foundation)	Orlandi, ed., 1955, 1, no. 179, pp. 22-23, 325.*
161	San Casciano, San Lorenzo	1362 (foundation)	De La Roncière, 1976, 4, pp. 311-319, no. 108, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 315.
162	San Donato in Collina	1341	De La Roncière, 1976, 4, pp. 311-319, no. 109, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 206.
163	San Donato in Poggio, comunis	1376	De La Roncière, 1976, 4, pp. 311-319, no. 110, citing ASF, <i>Notarile antecosimiano</i> B693; ASF, <i>Registrum comunis Sancti Donati in Pocis</i> , fol. 7r.
164	San Frediano (Firenze)	1252 November 30	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>).
165	San Gallo	1251 September 15	Fineschi, ed., 1790, pp. 145-147, esp. 146.
166	San Giovanni, 'quod vocatur Sanctum Al-lucçum', lower Arno valley	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 69.
167	San Giovanni Valdarno, dei dominicani, upper Arno valley	before 1387	Orlandi, ed., 1955, 2, p. 31.*

	RURAL HOSPITALS	DATE	SOURCE
168	San Godenzo, Societatis pro alendis Christi pauperibus	1301	De La Roncière, 1976, 4, pp. 311-319, no. 112, citing ASF, <i>Notarile antecosimiano</i> G366, fol. 64v.
169	San Miniato al Monte	1318	De La Roncière, 1976, 4, pp. 311-319, no. 113, citing ASF, <i>Notarile antecosimiano</i> A183, fol. 28r.
170	San Piero a Sieve	1184 June	ASF, <i>Diplomatico</i> , Monache di Luco.
		1275	De La Roncière, 1976, 4, pp. 311-319, no. 114, citing L. Chini, <i>Storia antica e moderna del Mugello</i> , 4 vols., reprint of the 1875-1876 edition, 1969, 1, pt. 2, p. 116.
171	San Pietro in Mercato, 'hospitale Gelli'	1176 February	ASF, <i>Diplomatico</i> , Stroziane Uguccione.
172	San Quirico a Ruballa, Fonteviva or Bigallo	1214 (?)	Davidsohn, ed., 1896-1908, 4, p. 392; cf. ASF, <i>Diplomatico</i> , Riformagioni, Atti Pubblici, a quaderno, 1245 March 8.
173	San Stefano in Pane	1188 May 29	Lami, ed., 1758, 2, pp. 956-957, esp. 957.
174	Sant' Albino	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 66.
175	Santa Maria a Bagnano	1322	De La Roncière, 1976, 4, pp. 311-319, no. 1, citing ASF, <i>Notarile antecosimiano</i> B2768, fol. 124r.
176	Santa Maria Nuovoli	1162	De La Roncière, 1976, 4, pp. 311-319, no. 74, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 107.
177	Sant' Agatha	1269	Brattö, ed., 1956, par. 447, p. 82.
178	Sant' Appiano, Santa Niccola di Cortenuova (comune Linari)	1299	Lami, ed., 1758, 1, p. 537.*
		1302-1303	Giusti and Guidi, eds., 1942, no. 631, p. 32.

	RURAL HOSPITALS	DATE	SOURCE
178	Sant'Appiano, Santa Niccola di Cortenuova (comune Linari) (cont.)	1330	De La Roncière, 1976, 4, pp. 311-319, no. 116, citing ASF, <i>Notarile antecosimiano</i> 147, 2, fol. 140v; see also above, under Cortenuova.
179	Sant'Ellero	1192 January 12, 1228 February 12	ASF, <i>Diplomatico</i> , Vallombrosa.
180	Scalelle	1326	De La Roncière, 1976, 4, pp. 311-319, no. 117, citing ASF, <i>Notarile antecosimiano</i> G367, 4, fol. 24r.
181	Scarperia, Santa Maria	1320 March 15	De La Roncière, 1976, 4, pp. 311-319, no. 118, citing ASF, <i>Diplomatico</i> , S. Maria di Scarperia.
182	Selvapiana, Marina valley, near Affrico	1072 January 1	Repetti, 1833-1845, 2, p. 657.
183	Selva reggia, San Pietro, parish of Macioli	1299	Lami, ed., 1758, 2, p. 1501.*
		1302-1303	Giusti and Guidi, eds., 1942, no. 917, p. 50.
184	Semifonte	1192 December 24, 1192 December,	ASF, <i>Diplomatico</i> , Badia di Passignano.
185	Semifonte, San Giovanni	1302-1303	Giusti and Guidi, eds., 1942, no. 32, p. 5.
186	Seprina (?)	1215 March 29	ASF, <i>Diplomatico</i> , Vallombrosa.
187	Sesto, 'hospitale de Sexto'	1192 December 9	ASF, <i>Diplomatico</i> , Strozziiane Uguccione.
188	Sesto, San Jacopo, Società del Bigallo di Firenze	1352	De La Roncière, 1976, 4, pp. 311-319, no. 121, citing ASF, <i>Provvisioni</i> 39, fol. 165
189	Sesto, San Martino a, dei dominicani	1333 (foundation)	Orlandi, ed., 1955, 1, p. 405.*
190	Signa, San Giovanni Gualberto e Onofrio	1376	De La Roncière, 1976, 4, pp. 311-319, no. 123, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 380.

	RURAL HOSPITALS	DATE	SOURCE
191	Signa, San Mauro a, San Francesco ai colli alti	14th century	De La Roncière, 1976, 4, pp. 311-319, no. 122, citing C. Calzolari, <i>La chiesa fiorentina</i> , Florence, 1970, p. 382.
192	Spongiolo, Spunzola, 'diocesi faventina' (?)	1187 January 6, 1209	ASF, <i>Diplomatico</i> , Vallombrosa.
193	Strada	1237 October 6	ASF, <i>Diplomatico</i> , Cestello.
194	Superna, 'Aretina diocesi', near Montevarchi (?)	1241 October 15	ASF, <i>Diplomatico</i> , Strozziiane Ugucione.
195	Tagliaferro	1218 March 3	ASF, <i>Diplomatico</i> , Cestello.
196	Tavarnelle, dei domini-cani	1340 (foundation)	Orlandi, ed., 1955, 1, pp. 418-419.* ²³
197	Tignano	1378	De La Roncière, 1976, 4, pp. 311-319, no. 125, citing ASF, <i>Alienazione beni ecclesiastici</i> 355.
198	Trespiano, San Bartolomeo	1258	Davidsohn, ed., 1896-1898, 4, p. 392; cf. Fineschi, ed., 1790, p. 147.* ²⁴
		1302-1303	Giusti and Guidi, eds., 1942, no. 910, p. 50.
199	Valcortese, Arbia valley	1131 January, 1173 November 12, 1182 August, 1185 April	Pagliai, ed., 1909, no. 347, p. 157; no. 487, pp. 218-219; no. 502, p. 224; no. 506, p. 226.
200	Valle, San Jacopo, parish of San Donato in Poggio	1298	Lami, ed., 1758, 1, p. 254.*
201	Valle Curiale (?)	1185 April	Pagliai, ed., 1909, no. 528, p. 236.

²³ For this hospital, De la Roncière incorrectly cited Orlandi, ed., 1955, 1, pp. 218-219. See De la Roncière, 1976, 4, pp. 311-319, no. 124. For additional references to the hospital at Tavarnelle, see Orlandi, ed., 1955, 1, no. 366, p. 76.

²⁴ The source cited by Davidsohn, the will of 'Dominus Lottaringus filius q. Orlandini de Monte Aguto', implicitly attests to the existence of a hospital at Trespiano in a gift forty *solidi* bequeathed to the 'Malatis & Infectis de Trespiano'. See Fineschi, 1790, pp. 147-148, esp. 148.

	RURAL HOSPITALS	DATE	SOURCE
202	Verzaia	1319	De La Roncière, 1976, 4, pp. 311-319, no. 128, citing ASF, <i>Notarile antecosimiano</i> L38, fol. 7
203	Vespignano, San Salvatore	1321	De La Roncière, 1976, 4, pp. 311-319, no. 129, citing ASF, <i>Notarile antecosimiano</i> L38, fol. 71v.
204	Vespignano, Santa Maria a Muccone, at the foot of Vespignano, a 1 - strada	1377	De La Roncière, 1976, 4, pp. 311-319, no. 130, citing ASF, <i>Estimo</i> 338, fol. 90ff.
205	Viabuia, San Jacopo, parish of Santa Maria Impruneta	1291 June 1	Langolis, ed., 1905, no. 5226, p. 727.*
206	Vico, in castro de, Societatis Sancte Marie	1340	De La Roncière, 1976, 4, pp. 311-319, no. 132, citing ASF, <i>Notarile antecosimiano</i> T546, fol. 69r.
207	Vigliano, San Jacopo, near Tavarnelle in Val di Pesa	1299	Lami, ed., 1758, 1, p. 531.*
208	Villore		Repetti, 1833-1845, 5, p. 784.*

9. Water-mills in the Florentine countryside, 11th-14th centuries

Mills were critical elements of the trade infrastructure in the Florentine countryside, particularly with respect to satisfying the staple food requirements of the city. Because mills exploited hydraulic power, their location was conditioned largely by geography, but the overall efficiency of any given mill also depended on its accessibility. The location of mills was also conditioned by demand. In and around Florence, the demand for hydraulic power was based first of all on demand for staple foodstuffs, namely cereal products, and secondly on industry. In the countryside of Florence, the use of mills specifically for industrial purposes appears to have been greatest in remote areas towards the periphery of the territory. The sources for the twelfth and thirteenth centuries rarely provide detailed information about mills. It is often impossible to determine whether they were horizontal or vertical mills, whether vertical mills were undershot or overshot, or whether mills were fulling mills or flour mills.

Table 20. Water-mills in the Florentine countryside

RURAL MILLS	DATE	SOURCE
Altare (Ema), near San Polo in Chianti	1102 January, 1109 June 17, 1117 December 9	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Ascianello (Tobiano, possibly Tavaiano)	1269	Brattö, ed., 1956, par. 445, pp. 81-82.
Asciano (?)	1269	Brattö, ed., 1956, par. 101, p. 34.
Avana (Carza)	1122 October 6	ASF, <i>Diplomatico</i> , Cestello.
Barberino di Mugello (Stura)	1269	Brattö, ed., 1956, par. 483, p. 87.
Barbischio (?)	1296 January 14	Majnoni, 1981, p. 140; cf. ASF, <i>Diplomatico</i> , Badia di Coltibuono
Bifonica (Greve)	1212 April 2	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Borgo San Lorenzo (Elsa di Mugello), Castiglione in popolo di Santa Maria	1269	Brattö, ed., 1956, par. 500, p. 90.
Bucine (Ambra)	1241 October 15	ASF, <i>Diplomatico</i> , Strozziiane Uguccione.

RURAL MILLS	DATE	SOURCE
Calenzano (Marina)	1269	Brattö, ed., 1956, par. 477, p. 86.
Calenzano (Marina)	1307 July 19	De Angelis, Gigli, and Sznura, eds., 1978-1986, 3, no. 586, pp. 102-103, esp. 102.
Calzaiolo (Pesa)	1176 January 25, 1183 June 1, 1192 March 3	ASF, Manoscritti, 48BIS (<i>Il Bullettone</i>).
Calzolaria (Cesto)*	1253 February 24, 1254 April 17, 1256 August 7	ASF, <i>Diplomatico</i> , Badia di Passignano.
Camano (Elsa), Castelfiorentino	1269	Brattö, ed., 1956, par. 81, p. 31.
Campi Bisenzio (Bisenzio)	1269	Brattö, ed., 1956, par. 320 and 322, p. 65.
Campodonico (Pesa)	1193 March 14	ASF, <i>Diplomatico</i> , Badia di Passignano.
Campo Mulino (Agnà), Aretino	1240 July 6	ASF, <i>Diplomatico</i> , Badia di Ripoli.
Camporata (Massallone), near Gaiole in Chianti	1427	Papaccio, 1996, 2, no. 42, pp. 373-376.
Campo Streda (Arno or Streda), Cerreto Guidi	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Capalle (Bisenzio)	1198 May 10, 1201 July 4, 1204 January 11, 1208 February 25, 1239 July 12, 1264 March 11	ASF, Manoscritti 48BIS (<i>Il Bullettone</i>).
	undated, but before 1323	ASF, <i>Manoscritto</i> 48BIS (<i>Bullettone</i>), fol. 208r.
Cappiano, San Lorenzo di (Arno), upper Arno valley	1296 September 19	ASF, <i>Notarile antecosimiano</i> 10896/G830, fol. 100v.
Casalle, possibly Casalle Botti (Pesa)	1179 October 29	ASF, <i>Diplomatico</i> , Badia di Passignano.
Casale Botti (Pesa), Mulino Botte	1335/1336	Papaccio, 1996, no. 8, pp. 256-260, esp. 259.
Castagnolo (Sieve and/or Stura)	1153 January 8, 1154 January	ASF, <i>Diplomatico</i> , Badia di Passignano.
Castel Castagnaio (Arno), Casentino	1269	Brattö, ed., 1956, par. 387, p. 74.
Castel Castagnaio (Vincena), Casentino	1269	Brattö, ed., 1956, par. 387, p. 74.

RURAL MILLS	DATE	SOURCE
Castellina (Elsa [?]) Poggibonsi	1222 July 5	ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
Cellole (Virginio)	1238 April 9	Mosiici and Sznura, ed., 1982, no. 136, pp. 197-199, esp. 198.
Cepperello (?)	1269	Brattö, ed., 1956, par. 111, p. 35.
Certaldo (Elsa)	1269	Brattö, ed., 1956, par. 57, pp. 27-28, esp. 28.
Chiusi, Incisa sull'Arno (Arno)	1101 July 23	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Cintoia (Cesto), Chianti	1202 March 11	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Cintoia, (Arno), near Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Cistio (?)	1278	Ildefonso di San Luigi, ed., 1770-1789, 10, p. 221-222, esp. 222.
Colle di Val d'Elsa (?)	1209 April 27	ASF, <i>Diplomatico</i> , Comune di Colle (Colle di Val d'Elsa).
Colle Pietre (Arno), Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Dudda (Dudda)	1138 March, 13th century	Pagliai, ed., 1909, no. 374, pp. 168-169; no. 543, p. 245.
Empoli (Arno)	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Figliano (Bosso)	1256 September 9	ASF, <i>Diplomatico</i> , Monache di Luco.
Fonte al Porto (Arno)	1209 March 14	ASF, <i>Diplomatico</i> , Olivetani di Firenze.
Frassi (Staggia)	1203 June 4	Santini, ed., 1895, <i>Capitoli</i> , no. 47, pp. 124-127, esp. 125.
Funticcole (Fontercoli), Mulino di Vistarenni	1074	Pagliai, ed., 1909, no. 88, p. 45.
Ginestra (Pesa)	1251 March 2	Santini, ed., 1952, <i>Miscellanea</i> , no. 14, 1251 March 2, pp. 283-284, esp. 284; cf. ASF, <i>Diplomatico</i> , Cestello.
Giuncheto (Arno), Signa	early 14th century	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> , 479, 302.

RURAL MILLS	DATE	SOURCE
Grevisana (Greve)	1173 May 7	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Grignano (Pesa)	1175 February 3, 1212 October 16, 1250 September 11 ¹	ASF, <i>Diplomatico</i> , Badia di Passignano.
	1292, 1300 August 29	ASF, <i>Corporazioni religiose soppresse dal governo francese</i> 179, 36, no. 2, fols. 3r, 37r.
Gualcherie (Greve), near Impruneta**	1279 August 1	Muzzi and Nenci, eds., 1988, no. 109, p. 219; cf. ASF, <i>Notarile antecosimiano</i> , 1104, fol. 14r.
Impruneta (Malo, Greve)	1113 April 25	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Impruneta (Greve)	1257 August 13	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Isola , Isola di Barocci (Pesa)	1113 April, 1166 September 11	ASF, <i>Diplomatico</i> , Badia di Passignano.
Lappeggi (Ema)	1219 January	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Latera (?)	1289 September 7	Majnoni, 1981, p. 139; cf. ASF, <i>Diplomatico</i> , Badia di Coltibuono.
Laterina (Oreno), Aretino	1238 September 14	ASF, <i>Diplomatico</i> , Badia di Ripoli.
Laterino (Ema), near San Piero a Ema	1104 September 5	Mosiici, 1990, no. 46, pp. 199-201, esp. 200; cf. ASF, <i>Diplomatico</i> , Olivetani di Firenze.
Lecchi, Montelucio (Masselone)	1306 November 9	Majnoni, 1981, p. 141; cf. ASF, <i>Diplomatico</i> , Badia di Coltibuono.
Loro (Ciuffenna)	1259 May 18	ASF, <i>Notarile antecosimiano</i> 21108/v193, fol. 1r.
Lucignano (Virginio)	1269	Brattö, ed., 1956, parr. 263 and 266, p. 57.

¹ Papaccio has identified additional references to the mill at Grignano in the evidence for Passignano dating from 1112 or 1113 to the early fourteenth century. See Papaccio, 1996, 2, no. 10, pp. 266-270, esp. 268.

RURAL MILLS	DATE	SOURCE
Luco di Mugello (Bosso)	1107 March 1, 1110 November 14, 1185 August 2, 1224 January 25, 1239 April 22	ASF, <i>Diplomatico</i> , Monache di Luco.
Magnole (Arno)	1299 July 10	De Angelis, Gigli, and Sznura, eds., 1978-1986, 1, no. 196, pp. 194-195, esp. 195.
'Maino del Piovano in curte Castillionkii' (?)	1236 October 22	Santini, ed., 1895, <i>Atti di giurisdizione</i> , no. 43, pp. 265-266, esp. 266; cf. ASF, <i>Diplomatico</i> , Stroziane Uguccione.
Marina (Marina)	1203 March 21	ASF, <i>Diplomatico</i> , Cestello.
	undated, but before 1323	ASF, <i>Manoscritto</i> 48BIS (<i>Bullettone</i>), fol. 208r.
Moci (Massallone [?])	1181 May (2)	Pagliai, ed., 1909, no. 499, p. 223; no. 500, p. 224.
Molendina Maiora (Arno), Gangalandi	early 14th century	ASF, <i>Compagnie religiose soppresse da Pietro Leopoldo</i> , 479, 302.
Molezzano (Muccione)	1223 September 12	ASF, <i>Manoscritti</i> , 48BIS (<i>Il Bullettone</i>).
Molezzano (Muccione)	undated, but before 1323	ASF, <i>Manoscritti</i> 48BIS (<i>Bullettone</i>), 206v.
Molinaccio, Piazza (Pesa)	1254 March 1	ASF, <i>Diplomatico</i> , Badia di Passignano; cf. Papaccio, 1996, no. 9, pp. 261-265, esp. 264.
Molinaccio, Piazza (Pesa)	1084 September, 1322 November 16	Papaccio, 1996, no. 9, pp. 261-265, esp. 264; cf. ASF, <i>Diplomatico</i> , Badia di Passignano
Molino di Sesta (Massoleone), near Molinlungo	1172	Pagliai, ed., 1909, no. 485, p. 218.
Montemignaio (?)	1239 August 9	ASF, <i>Diplomatico</i> , Stroziane Uguccione.

RURAL MILLS	DATE	SOURCE
Montemurlo (?)	1254 April 15	Santini, ed., 1952, <i>Capitoli</i> , no. 16, pp. 48-59, esp. 55.
Mucciano (Pesa), Mulino di Maiano*	1125 - 1217 ²	ASF, <i>Diplomatico</i> , Badia di Passignano.
Mulino dell'Abate (Pesa), Mulino Vecchio or Mulino Nuovo, Passignano	1149 November 27, 1187 August 27, 1188 January 6, 1234 January 24 ³	ASF, <i>Diplomatico</i> , Badia di Passignano.
Mulino dell'Albero (Virginio), San Pietro in Mercato	1123 March ⁴	ASF, <i>Diplomatico</i> , Badia di Passignano.
Mulino dell'Albero (Virginio), San Pietro in Mercato	1269	Brattö, ed., 1956, par. 195, pp. 46-47.
Mulino di Sotto, Lilliano (Carfini), near Poggibonsi	1181 November 9	Cambi, 1995, app., no. 71, pp. 342-343. Cf. ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista; Papaccio, 1996, 2, no. 48, pp. 394-397.
Mulino Vecchio, Cintoia (Cesto)	1061 March	Camerani-Marri, ed., 1962-1963, pt. 1, no. 8, pp. 60-61, esp. 60.
Munignano (Arno)**	1219 September 7, 1245 March 17	ASF, <i>Diplomatico</i> , Badia di Coltibuono.
Muriccia (?), Paterno, Pieve a Pitiana	1085 July	ASF, <i>Diplomatico</i> , Vallombrosa.
Pagnano (Arno), near Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.

² The mill at Mucciano is attested frequently in the evidence for the abbey at Passignano from 1125 to 1217. For precise references to the mill at Mucciano dating from 1173 to 1217, see ASF, *Diplomatico*, Badia di Passignano, 1173 October 14, 1173 January 31, 1174 July 30, 1174 February 19, 1175 March 23, 1176 August 26, 1178 March 17, 1183 July 30, 1188 January 6, 1189 July 30, 1192 September 18, 1195 April 30, 1216 April 20, 1216 March 1. Additional references to the mill at Mucciano in the evidence for Passignano dating from 1125 to 1217 have been noted in Papaccio, 1996, 2, no. 1, pp. 226-230, esp. 229. Papaccio has identified the mill attested in a document dated from 1217 July 17 as that of Mucciana, but the reference clearly concerns the mill of Ramagliano at Sambuca. See below.

³ For additional references to Mulino dell'Abate dating from 1179 to the end of the fifteenth century, see Papaccio, 1996, 2, no. 5, pp. 243-248, esp. 246.

⁴ Papaccio has identified the mill to which this reference pertains as the mill of Podere del Mulino in the commune of Tavarnelle in Val di Pesa, but the document clearly states that the mill is situated in the territory of the parish of San Pietro in Mercato. See Papaccio, 1996, 2, no. 55, pp. 419-421.

RURAL MILLS	DATE	SOURCE
Palagio (Marinella di Legri)	1202 January 13, 1202 February 21	ASF, <i>Diplomatico</i> , Cestello.
Panicallia, <i>Gualchiera</i> (Cesto [?])	1195 March 27	ASF, <i>Diplomatico</i> , Badia di Passignano.
'Pelago de Molino' (?)	1086 August	Camerani Marri, ed., 1962-1963, pt. 4, no. 78, pp. 484-485, esp. 485,
Petrazzo (Pesa), directly north of Sicelle, near Panzano	1234 September 10	ASF, <i>Diplomatico</i> , Badia di Passignano; cf. Papaccio, 1996, 2, no. 7, pp. 252-255.
Perdecena (Pesa), Mulino di Particino, Sambuca	1179 October 29	ASF, <i>Diplomatico</i> , Badia di Passignano; cf. Papaccio, 1996, 2, no. 4, pp. 240-242, esp. 242.
Pergolato (Pesa)	1159 November 24, 1184, 1185 January 27	ASF, Manoscritti, 48BIS (<i>Il Bullettone</i>).
Perustella (?)	1150 March 6	ASF, Manoscritti, 48BIS (<i>Il Bullettone</i>).
Petroia di Ramagliano (Pesa), Sambuca	1179 October 29	ASF, <i>Diplomatico</i> , Badia di Passignano.
Petroio (Arno, Ansano), Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Pianalberto (Arno)	1223 December 11	ASF, <i>Diplomatico</i> , Badia di Passignano.
Piano Maggiore (Arbia), near Canonica a Cerreto, Senese	1163 February 13	Pagliai, ed., 1909, no. 460, pp. 206-207.
Poci, Molin Vecchio (Arbia), near Castellina in Chianti and Radda in Chianti	11th and 12th century	Papaccio, 1996, 2, no. 35, pp. 350-353, esp. 352; cf. ASF, <i>Diplomatico</i> , Badia di Coltibuono, Badia di Firenze
Poggiale (Cesto), near Pavelli	1139-1253 ⁵	ASF, <i>Diplomatico</i> , Badia di Passignano.

⁵ The mill at Poggiale is attested frequently in the evidence for Passignano. See ASF, *Diplomatico*, Badia di Passignano, 1139 March 6, 1146 December 27, 1167 February 11, 1183 May 11, 1195 March 27, 1253 January 4. Papaccio has identified additional references to the mill at Poggiale in the evidence for Passignano dating from the later eleventh century and the later twelfth century. See Papaccio, 1996, 2, no. 29, pp. 331-333, esp. 332.

RURAL MILLS	DATE	SOURCE
Poggibonsi (Elsa [?])	1107 July 24	Cambi, 1995, app., no. 13, pp. 232-238, esp. 236; cf. ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista, 1099 June 20.
Poggibonsi (Elsa)*	1114	Cambi, 1995, app., no. 16, pp. 241-242; cf. ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
Poggibonsi (Elsa), 'duobus molendinis qui vocantur Molendina Florentie'***	1179 April	Cambi, 1995, app., no. 67, pp. 336-337; cf. ASF, <i>Diplomatico</i> , Spedale di San Giovanni Battista.
Poggibonsi (Elsa)	1269	Brattö, ed., 1956, par. 57, pp. 27-28, esp. 28.
Poggio di Caniccio, Cetine Vecchio (Arno)	1097 October 14	Camerani-Marri, ed., 1962-1963, pt. 5, nos. 118-119, pp. 91-94, esp. 91 and 93.
Ponte a Greve (Greve)	1263 February 13	Muzzi and Nenci, eds., 1988, no. 23, p. 142; cf. ASF, <i>Notarile antecosimiano</i> , A981, fol. 24r.
Ponte a Sambuca (Pesa)	1195 February 27, 1243 August 21,	ASF, <i>Diplomatico</i> , Badia di Passignano.
Ponte alla Valle (Arno), Aretino	1109 March 27, 1178 May 5	ASF, <i>Diplomatico</i> , Badia di Ripoli.
Ponte a Signa (Arno)	1245 May 17, 1246 October 25, 1253 December 30, 1265 January 3	ASF, <i>Diplomatico</i> , Cestello.
Porto di Mezzo (Arno)	1217 September 13	ASF, <i>Diplomatico</i> , Cestello.
Prato Beccaio, San Quirico, Castel di Casio (Limentra [?]), probably the Limentra di Treppio , Bolognese*	1161 January 12	Piattoli, ed., 1942, no. 129, pp. 252-253; cf. ASF, <i>Diplomatico</i> , Bardi-Serzelli.
Querceto di Sesto (Rimaggio)	1232 October 24, 1235 May 16	ASF, Manoscritti, 48BIS (<i>Il Bullettone</i>).
Querceto di Sesto (Rimaggio)	1269	Brattö, ed., 1956, par. 462, pp. 84-85.

RURAL MILLS	DATE	SOURCE
Ramagliano, Mulino di San Paolo (Pesa), Sambuca	1123-1217 ⁶	ASF, <i>Diplomatico</i> , Badia di Passignano.
	1294 March 7	ASF, <i>Corporazioni religiose soppresse dal governo francese</i> 179, 36, no. 2, fol. 16v.
Rifredo (Veccione)	1243 September 18	ASF, <i>Diplomatico</i> , Monache di Luco.
Rignano sull'Arno (Arno)	1225 December 11	ASF, <i>Diplomatico</i> , Vallombrosa.
	1295 April 5, 1295 October 8	ASF, <i>Notarile antecosimiano</i> 10896/G830, fol. 17r, 45r.
Rondine (Arno), Aretino	1189 March	ASF, <i>Diplomatico</i> , Badia di Ripoli.
Rosano (Riolensis), 'molino [de Riolensis ...] qui decurrit a Bagnolo'	(1099?) September (24-30?)	Strà, ed., 1982, no. 17, pp. 31-34, esp. 32-33, citing ASF, <i>Diplomatico</i> , Rosano, XI, no. 96 [B]. ⁷
Rosano (?), 'in loco Pratule'	1162 January 2	Strà, ed., 1982, no. 38, pp. 71-73, esp. 72, citing AMRosano, XII, no. 102 [A].
Rosano (Arno)	1193 December 11	ASF, <i>Diplomatico</i> , Rosano.
Rosano (Arno [?]), 'loco qui dicitus est Bagnuolum'	1197 March 1	Strà, ed., 1982, no. 51, pp. 98-100, esp. 99, citing AMRosano, XII, no. 36 [A].
Rossole (?)	1269	Brattö, ed., 1956, par. 462, pp. 84-85.
Rovezzano (Arno), Sant'Angelo	1298 December 8, 1299 March 9	De Angelis, Gigli, and Sznura, eds., 1978-1986, 1, no. 121, p. 129; 1, no. 155, pp. 159-160, esp. 160.

⁶ The mill of Ramagliano at Sambuca is attested frequently in the evidence for the abbey at Passignano from 1123 to 1217. For the precise references, see ASF, *Diplomatico*, Badia di Passignano, 1123 September, 1124 August, 1124 February, 1149 November 27, 1151 March 21, 1152 July 20, 1179 March 24, 1180 July 21, 1182 April 9, 1195 April 12, 1214 September 8, 1217 July 17. Further references to the mill of Ramagliano at Sambuca, dating from 1123 to the early fifteenth century, are noted in Papaccio, 1996, 2, no. 3, pp. 235-239, esp. 237-238.

⁷ The source citations given by Strà for documents in the ASF retain the catalogue designations of the AMRosano.

RURAL MILLS	DATE	SOURCE
Salivolpe (Virginio)	1238 June 21	Mosiici and Sznura, ed., 1982, no. 201, pp. 250-251.
San Cristoforo a Viciano (Greve)	1269	Brattö, ed., 1956, par. 76, p. 30.
San Donato a Lociano (Rimaggio), Sesto Fiorentino	1269	Brattö, ed., 1956, par. 521, p. 93.
San Giorgio di Poneta (Greve), Impruneta	1279 September 3	Muzzi and Nenci, eds., 1988, no. 111, p. 220; cf. ASF, <i>Notarile antecosimiano</i> , 1104, fol. 15v. ⁸
San Martino alla Palma (?)*	1251 March 6	ASF, <i>Diplomatico</i> , Cestello.
San Martino a Scopeto (Sieve)	1245 September 16	ASF, <i>Diplomatico</i> , Stroziane Uguccione.
San Martino di Campi (Bisenzio)	1269	Brattö, ed., 1956, parr. 320 and 322, p. 65.
San Martino in Valle (Greve)	1269	Brattö, ed., 1956, par. 201, p. 48.
San Niccolò di Marciana (Doccia [?])	1147 March	Pagliai, ed., 1909, no. 402, p. 181.
San Piero a Ema (Ema)	1122 February 15, 1196 May 5	Mosiici, 1990, no. 60, pp. 230-233, esp. 232; no. 131, pp. 395-396, esp. 396.
San Piero in Avananò (Massallone [?])	1138 May 12	Pagliai, ed., 1909, no. 377, p. 170.
San Pietro a Bossolo (Pesa)	1123 June, 1123 September, 1124/25 February	ASF, <i>Diplomatico</i> , Badia di Passignano.
San Pietro di Quintole (Arno [?])	1269	Brattö, ed., 1956, par. 75, p. 391.
San Polo in Rosso (Arbia)	1203 June 4	Santini, ed., 1895, <i>Capitoli</i> , no. 47, pp. 124-127, esp. 125.
San Salvi (Affrico, Arno)	1247 April 25, 1248 May 2, 1249 May 24	ASF, <i>Diplomatico</i> , Badia di Ripoli.
San Salvi (Arno)	1187 April 29, 1234 November 6, 1239, 1251 March 25, 1251 June 11	ASF, <i>Diplomatico</i> , Badia di Ripoli.

⁸ Muzzi and Nenci have given a summary of the act rather than a transcription.

RURAL MILLS	DATE	SOURCE
San Stefano in Pane (Terzolle)	1269	Brattö, ed., 1956, par. 464, p. 85.
Sant'Agata (Cornocchio)	1269	Brattö, ed., 1956, par. 450, p. 82.
Santa Maria a Bagnano (Agliena)	1269	Brattö, ed., 1956, par. 98, p. 33.
Santa Maria a Ripa (Arno), Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Santa Maria a Sciano (Elsa [?])	1269	Brattö, ed., 1956, par. 101, p. 34.
Santa Maria di Quinto (?)	1269	Brattö, ed., 1956, par. 484, p. 89.
Santa Maria Novella in Chianti (Pesa), possibly Mulino di Battidenti	1161 October 12	Mosiici, 1990, no. 86, pp. 291-293, esp. 292; cf. ASF, <i>Diplomatico</i> , Olivetani di Firenze.
Sant'Andrea di Nuovole (Greve)	1269	Brattö, ed., 1956, par. 177, p. 44.
Sant'Andrea a Morgiano Rimaggio [?]	1279 August 1	Muzzi and Nenci, eds., 1988, no. 133, p. 239-241, esp. 240; cf. ASF, <i>Notarile antecosimiano</i> , 1104, fol. 78v. ⁹
Sant'Ilaria (Marina)	1269	Brattö, ed., 1956, par. 509, p. 91.
San Vito (?)	1139 January	ASF, Manoscritti, 48BIS (<i>Il Bulettono</i>).
Selva, la Selvaccia (Vicano di Pelago)	1224 August 28	Strà, ed., 1982, no. 69 (1), pp. 134-141, esp. 136, citing AMRosano, XIII, no. 21 [A].
Sesto Fiorentino (?)	1269	Brattö, ed., 1956, par. 530, p. 94.
Signa (Arno)	1269	Brattö, ed., 1956, par. 331, p. 66.

⁹ The act containing the reference to the mill at Sant'Andrea a Morgiano is not actually transcribed in Muzzi and Nenci, but the editors noted the reference in their introduction to the succeeding act from the same notarial cartulary, which is transcribed here. Muzzi and Nenci indicated in the introduction that the mill was situated in the 'fossato di Rimaggio', but I have been unable to identify a watercourse in the vicinity of Sant'Andrea a Morgiano bearing the name of 'Rimaggio', despite the ubiquity of the appellation for smaller watercourses in the Florentine countryside. The mill may have been situated either in the river Ema itself, on the borro di Sant'Andrea, or on the northern tributary of the borro di Cascianella.

RURAL MILLS	DATE	SOURCE
Sovigliana (Arno), Empoli	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 68.
Tegolaia (Ema)	1219 January 31	ASF, <i>Diplomatico</i> , San Vigilio di Siena.
Tornano, Montelucio (Massallone), near Sano, Lecchi, and Ponte a Stielle	1155 February 15	Pagliai, ed., 1909, no. 438, p. 197; cf. Papaccio, 1996, 2, no. 41, pp. 369-372
Torre di Mercatale Valdarno, Santa Reperata (Caposelvi [?]), Campo Romano*	1215 March 29	ASF, <i>Diplomatico</i> , Vallombrosa.
Vagliari (Pesa)	1179 October 29, 1222 September 12	ASF, <i>Diplomatico</i> , Badia di Passignano.
Vespignano (Sieve)	1269	Brattö, ed., 1956, par. 499, p. 82.
Vignale, Mattio (Carza)	1254 October 4	ASF, <i>Diplomatico</i> , Cestello.
Vinci (Streda)	1254 August 12	Santini, ed., 1952, <i>Capitoli</i> , no. 20, pp. 65-75, esp. 69.

10. Weights and measures

The early development of the Florentine surface measure was delineated for the most part by Elio Conti in the 1960s, but there still remains much confusion over both surface measures and measures of capacity.¹ The basic unit of measure in the territory of Florence both for surface area and for capacity was the *starium*, or *staiò*, twenty-four of which composed a *modium*, or *moggio*.² The surface measure of the *starium* was calculated variously. One measure of surface area in the territory of Florence, and probably the oldest, was the *starium ad seminandum*, which is thought to have been based originally on a measure for capacity and corresponded roughly to the amount of land that could be sown with one *starium* of grain. The actual amount of land that could be sown with a given amount of seed depended upon soil fertility and the character of the land more in general. In undulating terrain, which requires relatively dense planting of the seed, a *starium* of land would have contained less surface area than on the plain, where it is possible to spread the seed more thinly. By the beginning of the fourteenth century, the dry measure of the *starium* used at Florence contained 24.4 litres (0.244 hecta-litres), or about 18 kilograms, but this measure clearly differed from the dry measure used at Florence around 1200.³

¹ Conti, 1965, pp. 98-102. Cf. Davidsohn, 1977, 1, pp. 1161-1165. For weights and measures in the territory of Arezzo, see Delumaeau, 1996, 1, pp. 49-56, 71-74. For Prato, see Fantappiè, 1980, pp. 191-198. For Siena, see Cammarosana, 1974, pp. 335-350; Redon, 1994, p. 7.

² Certainly by the beginning of the twelfth century, twenty-four *staria* composed a *modium*. On the composition of the *modium* in the Chianti towards the middle of the eleventh century, see Pagliai, ed., 1909, no. 34, 1043 January, pp. 18-19, esp. 19: 'de ipsa terra et vinea, qui de ipsa sortes pertinet, modiorum uno ad vinti et quatuor istaria faciunt modio ad legitimo sistario per granum sementandum'. The fact that it was necessary to indicate the number of *staria* in the *modium* nevertheless suggests the existence another measure for the *modium*, and there is attested in the territory of Arezzo in the eleventh century a superficial measure for the *modium* of sixteen *staria*. See Delumeau, 1996, 1, p. 51, n. 148. The *starium* of the thirteenth century was itself composed of twelve *panora*, each of which was composed of twelve *pugnora*. One *panorum* was the amount of land required to produce twelve handfuls of grain (*pugnora*), or enough to produce one loaf of bread. See below. In addition to the *starium* and the *modium*, other measures of surface area and of capacity are also attested in the evidence for Florence. The *imina*, for example, is occasionally attested as a surface measure particularly in the eastern part of the Florentine countryside. See ASF, *Diplomatico*, Vallombrosa, 1191 May 3, 1204 April 6. The *scafium*, a dry measure containing eighteen *staria*, was sometimes used in the Chianti. See ASF, *Diplomatico*, Badia di Passignano, 1151 March 22; Badia di Firenze, 1256 October 17. The *scafium* is also attested in the Aretine countryside in the eleventh century. See Delumeau, 1996, 1, p. 54, n. 165.

³ On the dry measure for grain used at Florence in the fourteenth and fifteenth centuries, see Zupko, 1981, p. 275; Martini, 1883, 1, p. 207; Conti, 1965, p. 98, De la Roncière, 1976, 1, pp. 22-

In the twelfth and early thirteenth centuries, there still existed several different measures of capacity in the territory of Florence. Florence used its own system of dry measure, based on the *starium Florentinum*, but the Florentine measure changed sometime in the twelfth century and perhaps again in the early thirteenth century.⁴ In addition to the Florentine system of dry measure, several market towns in and around the territory of Florence employed their own systems of measurement.⁵ It is by no means certain that all of the various designations for the

26. This was probably the 'staio al colmo', which was introduced at Florence in 1341 or 1342. The 'staio al colmo' is discussed further below. On average, about six *staria* of grain 'al colmo', each containing 24.4 litres or 18 kilograms, would be necessary to sow one hectare of land, which is to say that one *starium* would be sufficient to sow one sixth of a hectare. The 'staio al colmo' clearly was not, however, the measure of capacity on which the *starium ad seminandum* was originally based.

⁴ The change is attested in references to the *starium antiquum* of Florence. The earliest references that I have seen to the *starium antiquum* of Florence can be found among a group of undated documents probably redacted in the twelfth century. See ASF, *Diplomatico*, Monache di Luco, 12th century, no. 4. The first securely dated reference in the evidence for the Florentine countryside to a *starium antiquum* other than that of Passignano, which is discussed below, appears in a document from 1211, but it cannot be certain that reference pertained to the Florentine *starium*. See ASF, *Diplomatico*, Santissima Annunziata, 1211 June 19. For the earliest securely dated reference to the *starium antiquum* of Florence, see ASF, *Diplomatico*, Cestello, 1219 April 30. For additional references to the *starium antiquum*, see ASF, *Manoscritti*, 48BIS (*Il Bullettone*), fols. 50v-51r, 1246 May 30; fol. 131v, 1289 December 4. In the later thirteenth century, there was also a 'little' *starium*, which had perhaps evolved from the *starium antiquum*. See ASF, *Manoscritti*, 48BIS (*Il Bullettone*), fol. 52v, 1267 February 10: 'ad starium piccholum'. By the early fourteenth century, documents were referring to at least two different measures of the *starium antiquum*. For a reference to rents to be rendered partly according to the Florentine measure and partly according to various measures of the *starium antiquum*, see ASF, *Manoscritti*, 48BIS (*Il Bullettone*), fol. 137r, 1303 June 20: 'duodecim staria et cum dimidio grani ad rectum starium florentinum et duos stiauolos antiquos plenos et duos semi plenos'. The undated twelfth century document cited above probably corresponds to one new measure of capacity introduced at Florence towards the end of the twelfth century, while references to the *starium antiquum* of Florence in documents dated from 1219 and thereafter signal the introduction of another new measure in the early thirteenth century. A lease contract dated from 1208 required the tenant to consign to the lord annual grain payments 'ad rectum starium nunc currens Florentie', which perhaps refers to a measure introduced before 1200. See ASF, *Diplomatico*, Monache di Mugello, 1208 January 22. For additional references to grain payments *ad starium Florentinum nunc currentem*, see ASF, *Diplomatico*, Cestello, 1221 December 30, 1228 January 23; Monache di Mugello, 1219 December 27, 1236 September 9, 1244 October 9, 1249 March 29, 1251 April 8; Badia di Passignano, 1224 August 20, 1227 August 11; Riformagioni, 1254 September 4; Olivetani di Firenze, 1237 October 3, Vallombrosa, 1236 September 16. Another document dated from the Mugello in 1239 suggests that the measure of Florence may have changed yet again around 1227. The document refers to grain payments that were to be rendered 'ad starium Florentinum quod currebat a iam sunt duodecim anni'. See ASF, *Diplomatico*, Monache di Luco, 1239 September 17.

⁵ The abbey at Passignano had its own system of dry measure around the middle of the twelfth century, and a new dry measure had developed by the later twelfth century. For evidence of grain consignments *ad starium de porta de Passignano* around the middle of the twelfth century, see ASF, *Diplomatico*, Badia di Passignano, 1146 August 1, 1154 June 15, 1155 June 17. The appearance of a new dry measure at Passignano before 1200 is suggested by lease contracts in which the

systems of dry measurement used in and around the territory of Florence actually indicated distinct measures of capacity, but at least some of the measures used in rural market towns were clearly distinct.⁶ When it is possible to determine the relationship between rural measures and the measure that prevailed on the urban market at Florence, Florentine measures were typically greater.⁷ One property

tenant agrees to render annual payments in grain *ad starium antiquum de porta de Passignano*. See ASF, *Diplomatico*, Badia di Passignano, 1193 June 23, 1208 February 1. The *starium antiquum de Passignano* is discussed further below. In addition to Passignano, distinct measures of capacity, or at any rate distinct designations for measures of capacity, are attested in the later twelfth and early thirteenth centuries at Borgo San Lorenzo, Calenzano, Castelfiorentino, Colle di Val d'Elsa, Empoli, Ganghereto in upper valley of the river Arno, Mangona, Montevarchi, Poggibonsi, Semifonte, and Signa. For Borgo San Lorenzo, see ASF, *Diplomatico*, Monache di Luco, 12th century (undated), 1202 December 31, 1206 July 27, 1210 January 3, 1214 May 5, 1219 October 21, 1221 June 3, 1222 April 6, 1229 April 20, 1234 September 28, 1235 April 15, 1239 April 22, 1248 January 16. See also ASF, *Diplomatico*, Cestello, 1218 March 3, 1221 April 3. For Calenzano, see Fantappiè, 1980, pp. 197-198. For Castelfiorentino, see ASF, *Diplomatico*, Stroziane Uguccioni, 1176 February 16. For Colle di Val d'Elsa, see ASF, *Diplomatico*, Comune di Colle, 1210 April 11. For Empoli, see Santini, ed., 1952, *Capitoli*, no. 43, 1255 May 6, pp. 130-141, esp. 133. For Ganghereto, see ASF, *Diplomatico*, Vallombrosa, 1240 July 6. For Mangona, see Fantappiè, 1980, pp. 197-198. For Montevarchi, see Delumeau, 1996, 1, p. 55, n. 174, citing ACArezzo, *Carte di Santa Maria in Gradi* 125, for the year 1220. For Poggibonsi, see ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1172 January 2, 1175 October 26, 1200 July 22, 1208 April 14, 1219 February 4; ASF, *Diplomatico*, Badia di Firenze, 1214 January 4; 1260 February 18. For Semifonte, see ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1195 August; Enriques Agnoletti, ed., 1990, no. 247, 1197 July 3, pp. 175-177, esp. 176; Pagliai, ed., 1909, no. 532, 1197 August 30, p. 238. For Signa, see ASF, *Diplomatico*, Badia di Firenze, 1219 December 1. The Camaldolese convent of San Pietro di Luco di Mugello also appears to have used its own measure of capacity in the early thirteenth century. For a grain payment of 'unius steriorum grani ad starium celle monasterii' rendered to the convent in 1210, see ASF, *Diplomatico*, Monache di Luco, 1210 January 7. Another measure attested in the countryside of Florence was the *starium annone*. See ASF, *Diplomatico*, Cestello, 1253 March 31; Monache di Luco, 1202 December 31, 1239 April 22; Badia di Ripoli, 1226 July 18; San Vigilio di Siena, 1194 March 2. See also the act dated from 1242 March 23 in ASF, *Diplomatico*, Monache di Luco, *a quaderno*, 1222 July 17-1291 November 16. The *starium annone* is further attested in ASF, *Manoscritti*, 48BIS (*Il Bullettone*), fol. 16v, 1268 May 7; fol. 79v, 1210 March 15; fol. 85r, 1240 November 30; fol. 93v, 1213 August 22. Other measures of capacity were used in neighbouring territories. Local measures are attested not only in larger towns such as Arezzo, Pistoia, Prato, San Gimignano, and Siena, but also in smaller towns such as Usella, and Vernio. See again Fantappiè, 1980, pp. 197-198. Market towns such as Borgo San Lorenzo and Empoli in the Florentine countryside were still using local systems of dry measurement alongside the Florentine system in the fourteenth and early fifteenth centuries. See Conti, 1965, pp. 101-102, nn. 19-20.

⁶ In the eastern Mugello near Dicomano in the early fourteenth century, for example, the *starium* of Orzale was equivalent to the *staria* of San Godenzo and Pavanico. On the equivalence of the *staria* of Orzale and San Godenzo in 1307, see De la Roncière, 1976, 4, p. 11, n. 21, citing ASF, *Notarile antecosimiano* G366, 3, fol. 5[r]. On the equivalence of the *staria* of Orzale and Pavanico in 1314, see De la Roncière, 1976, 4, p. 10, n. 15, citing ASF, *Notarile antecosimiano* G366, 3, fol. 100v. In 1375, on the other hand, the Florentine *starium* contained 1.25 *staria* of San Godenzo. See De la Roncière, 1976, 4, p. 11, n. 21, citing ASF, *Mercanzia* 1169, fol. 215v.

⁷ In 1347, for example, the *starium* of Florence contained 1.17 *staria* of Staggia. See De la Roncière, 1976, 1, p. 22; 4, p. 9, n. 4, citing ASF, *Guidici degli Appelli* 1822, 1, fol. 202[r]: 'modius

alienation dated from the Mugello in 1222 indicates that the person selling the property had been collecting an annual grain rent on the property according to a *starium* that was less than the Florentine *starium* but greater than the *starium* of Borgo San Lorenzo. Another document, a perpetual lease dated from the Mugello six years later, indicates that this *starium* was the *starium antiquum* of Florence.⁸ Certainly the *starium antiquum* of Florence, and probably also the measure that superseded the *starium antiquum* at Florence in the early thirteenth century, contained less grain than the fourteenth century *starium* of 24.4 litres.⁹

grani ad starium de Staggia est minoris quantitatis seu capacitatis quam modius Florentinus ad starium Florentinum starium trium cum dimidio vel circa'. By 1377, the *starium* of San Gimignano was likewise considerably smaller than that of Florence. See De la Roncière, 1976, 4, p. 11, n. 21, citing ASF, *Estimo* 340, folio 139v: 'modia XI et staia XVIII di San Gimignano che sono al fiorentino moggia VII di grano'. In other words, one Florentine *starium* was equivalent to 1.68 *staria* of San Gimignano. The relationship before about 1340, when the official measure of Florence was changed from the 'staio al raso' to the 'staio al colmo', was probably only slightly different, with one Florentine *starium* equivalent to 1.60 *staria* of San Gimignano. See Fiumi, 1961b, p. 128, n. 13. On the change from the 'staio al raso' to the 'staio al colmo' at Florence around 1340, see below.

⁸ For the alienation of property that carried an annual grain rent measured according to a *starium* that was less than the Florentine *starium* but greater than that of Borgo San Lorenzo, see ASF, *Diplomatico*, Monache di Luco, 1222 April 6: 'omni anno ficti nomine de mense augusti sex staria grani ad starium minus florentinum et maius starium burgensis'. For the lease of property in exchange for an annual grain rent according to the *starium antiquum* of Florence, see ASF, *Diplomatico*, Monache di Luco, 1229 April 20: 'dare et soluere omni anno in perpetuo in mense agusti tria staria boni et puri grani ad starium anticum Florentie quod starium est maius burgensis et minus florentie ficta nomine'. The changeable nature of the systems of dry measurement in and around the territory of Florence in the early thirteenth century is further attested in references to grain payments to be rendered according to the *starium currens*. For a lease contract from the Mugello indicating that annual grain rents were to be rendered in the current *starium* of Borgo San Lorenzo, see ASF, *Diplomatico*, Monache di Luco, 1214 May 5: 'ad starium burgensis nunc currente'. For leases indicating that the Vallombrosan abbey of Santa Maria Reperate, located in the diocese of Faenza near Marradi in the valley of the river Lamone, was requiring annual grain rents to be rendered according to the *starium currentem*, see ASF, *Diplomatico*, Badia di Ripoli, 1221 January 27, 1236 January 13, 1236 February 9. In as much as the unit of dry measure in the territory of Faenza was the *mezinum*, the *starium* mentioned in these leases was probably the *starium* of either Florence or Borgo San Lorenzo. For evidence of leases granted by the abbey for annual payment in grain according to the current measure of Faenza, see ASF, *Diplomatico*, Badia di Ripoli, 1244 April 10: 'ad mezinum currente de Faventia'.

⁹ Interestingly, some leases stipulate that grain rents were to be paid always according to the measure in which they were contracted, and that they were neither to decrease nor to increase. See ASF, *Diplomatico*, Monache di Luco, 1208 January 22: 'sex staria boni grani ad domum ipsius Nicholai ad prata ad rectum starium nunc currens Florentie nec minuere nec crescere debeant starium'. Other leases stipulated that rents were to be paid according to the measure current at the time that payment came due. See ASF, *Diplomatico*, Cestello, 1205 Marche 30: 'unum starium de grano et unum starium de ordei annualiter bona sine malitia addrictum starium florentinum pro tunc erit'.

Alongside the *starium ad seminandum* existed another measure of surface area called the *starium ad cordam*, which was not based directly on a measure of capacity but on a geometric measure of surface area, and it was probably used for the most part on the plain where the essentially uniform character of the land rendered seed based measurements unnecessary. In the early fifteenth century, the area of land comprised in a *starium ad cordam* was only about a third of that comprised, on average, by the *starium ad seminandum*.¹⁰ The *starium ad cordam* appears to have evolved from another earlier measure of capacity that contained about a third of the volume of the early fourteenth century *starium*, or enough to produce a dozen loaves of bread, the *starium de panis duodecim ad granum seminandum*, each of which required the grain of a dozen handfuls of grain.¹¹ This *starium* was perhaps equivalent to the *starium ad pedem de porta Sancti Pancratii*, based on a Lombard unit of length called the *pedex*, which measured about 55 square centimetres.¹²

¹⁰ According to Conti, the *starium ad cordam* was still being used as a measure of surface area in the Florentine countryside in the eighteenth century. The 'stioro', as it was then called, measured 525 square metres, which is to say about one third of the measure of the *starium ad seminandum* of Florence around the beginning of the fifteenth century. On the measure of the *stioro*, see Zupko, 1981, p. 281; Martini, 1833, p. 207. An early fifteenth century document confirms that one *starium* of land 'ad granum sementandum' was equivalent to thirty-six *panora* of land, or three *staria*, 'ad rectum mensuram corde civitatis Florentie'. See Conti, 1965, p. 99, n. 4, citing ASF, *Diplomatico*, Santissima Annunziata, 1404 June 2. The *starium ad seminandum* of the early fifteenth century, however, probably was not the same as the *starium ad seminandum* of the twelfth and thirteenth centuries, because it was based on a measure of capacity that changed over time. See below. For evidence of surface measurements according to the *starium ad cordam* on the plain around Figline in the upper valley of the river Arno, see ASF, *Diplomatico*, Badia di Passignano, 1202 June 30, 1230 December 16. For similar evidence on the Settimo plain, see ASF, *Diplomatico*, Cestello, 1251 September 10, 1251 September 25, 1260 September 22. According to Fantappiè, who was writing about the system of surface measurement in the territory of Prato, the introduction of a geometric system of surface measurement belies a highly fragmented pattern of landholding, an upsurge in agricultural production, a more articulated land market, and above all increased local autonomy. See Fantappiè, 1980, pp. 192-193.

¹¹ Conti, 1965, p. 99.

¹² According to Giovanni Villani, the *pedex* as a unit of measure derived from the unusual length of the foot of the Lombard king Liutpand, which was only somewhat less than the Florentine *braccio*. See G. Villani, bk. 2, chap. 9: 'Dopo Alberico regnò re de' Longobardi Eliprando il quale fu grande come gigante, e per grandezza del suo piede si prese la misura delle terre, e chiamasi ancora a' nostri tempi piè d'Eliprando, il quale è poco meno d'un braccio alla nostra misura, così è intagliato alla sua sepultura a Pavia'. The Florentine *braccio* measured 58.4 centimetres, which makes the account of the origin of the *pedex* given by Villani somewhat fantastic, but a *pedex* of about 55 centimetres nevertheless fits very well into a system of surface measurement based on the *starium ad cordam*. On the length of the Florentine *braccio*, see Zupko, 1981, pp. 40-49; Martini, 1833, 1, p. 206. At Florence, the measure of the *pedex* was etched into the stone walls of the city near the gate of San Pancrazio. See Piattoli, ed., 1938, no. 106, 1082 February, pp. 265-267, esp. 266: 'Tamen decernimus eam, et a pedes, que signatum est in petra que posita

Another measure of surface area was the *starium de panis decem*, which was clearly distinct from the *starium de panis duodecim* in the later eleventh century.¹³ The *starium de panis decem* may have been related to a measure of capacity called the *starium decimale*.¹⁴ By 1289, the *starium decimale* appears to have been equivalent to roughly half of the *starium Florentinum*.¹⁵ The *starium de panis decem* also appears to have corresponded to the dry measure of the *starium antiquum de Passignano*, which was considered in the fourteenth and early fifteenth centuries to have been slightly more than two times smaller than the *starium Florentinum*.¹⁶ In other words, the dry measure of the *starium antiquum de Passi-*

est in muro iuxta porta Sancti Pancrati'. The *pedex* was the twelfth part of *pugnora*, which itself was one twelfth of a *panora*, which was one twelfth of a *starium*, as already noted above. The *starium ad cordam* measured about 525 square metres, as also noted above, and accordingly, one square *pedex* of 0.55 metres multiplied three times by 12 yields 522.7 square metres. See Conti, pp. 99-100.

¹³ A document dated from 1089 records the donation of several pieces of property to the cathedral chapter of Florence. Two of the properties are given measurements, but one is measured according to the 'sistario ad pedem de porta', which is to say the *starium de panis duodecim*, while the other is measured according to the 'sexstarium de decem panibus'. Unfortunately, the document provides no information concerning the relationship between the two surface measures. See Piatoli, ed., 1938, no. 136, 1089 June 14, pp. 332-335, esp. 332-333.

¹⁴ The identification of the dry measure of the *starium decimale* with the superficial measure of the *starium de panis decem* is by no means certain. The *starium decimale* may have been the unit of dry measure used in the territory of Florence for payments in kind of ecclesiastical tributes. Twelfth and early thirteenth century leases sometimes required the tenant to render annual payments or tributes of one tenth of the total agricultural output from the property to which the lease appertained. See ASF, *Diplomatico*, Cestello, 1131 May 21, 1159 November 24, 1205 March 30; Badia di Passignano, 1174 March 10. A dispute settlement arbitrated by the archdeacon of Florence in the early thirteenth century required the church of San Giorgio to render an annual 'decimam siue beneficium' in grain and wine, 'pro decima', to the abbas of the convent at Luco di Mugello. See ASF, *Diplomatico*, Monache di Luco, 1217 June 26. In the early thirteenth century, the *starium de panis decem* may have corresponded to another measure of capacity called the *starium annone*. See ASF, *Diplomatico*, Stroziane Ugucione, 1212 February 5: 'hoc est servitium quod Fosavus de Milglerino annualiter vel alio [...] facit [...] et rebus venditis supra in dicto monasterio in duobus annis quatuor caseos et triginta ova et anona unum starium ad stario decem panibus et unam spalla et duos panes'. For additional references to the *starium annone*, see above.

¹⁵ Conti based this estimate on reductions in rents on perpetual leases on the episcopal estate from the *starium decimale* to the *starium Florentinum nunc currentem* in several recognitions of episcopal lordship from the valley of the river Elsa in 1289. See Conti, 1965, p. 101, citing an unpublished *tesi di laurea* presented to the Facoltà di Lettere of the Università degli studi di Firenze (V. Cirri, *Le «recognitiones» di Ricovero di Aldobrandino da Campoli [1289]*, 1959-1960), which I have not seen. Several of these reductions nevertheless are published in Cioni, ed., 1912-1915.

¹⁶ Records dating from 1341 and thereafter suggest that a newly introduced measure of capacity called the 'staiò grosso' was 2.14 to 2.20 times larger than the *starium antiquum de Passignano*. See Conti, 1965, p. 102, n. 21, citing ASF, *Corporazioni religiose soppresse dal Governo francese* 179, 44 ('Protocollo di ser Giovanni di Buonafede, 1341-1347'), fol. 38r, 1341 January 9. Conti was also citing evidence from the later fourteenth and early fifteenth centuries in ASF, *Corporazioni religiose soppresse dal Governo francese* 179, 52, fols. 3r, 37r, 57v, 81r. A single reference

gnano contained about 8 kilograms of grain, or a quantity sufficient for the preparation of ten loaves of bread.¹⁷ In the later twelfth century, the *starium antiquum de Passignano* evidently was equivalent to the *starium* of Florence, which at that time would have been the *starium antiquum Florentinum*.¹⁸ The *starium de panis decem* evidently was preceded by another measure of surface area called the *starium de panis octo*, which is attested in a single document of the early eleventh century and presumably corresponded to the amount of land necessary to cultivate enough grain to produce eight loaves of bread.¹⁹

The picture presented here is far from complete, but it is at least sufficiently clear to permit a few observations. It may be noted, for example, that much of the confusion over measures of surface area in the territory of Florence stems from the fact that surface measures were related in one way or another to measures of capacity. The various measures of capacity used at Florence from the beginning of the eleventh century to about the middle of the thirteenth century were constantly evolving, however, and they display a constant upward tendency over time. This steady upward trend probably reflects both the efforts of landlords to increase

from 1299 suggests that the *starium Florentinum* used at the end of the thirteenth century was only 1.88 times greater than the *starium antiquum de Passignano*. See again Conti, 1965, p. 102, n. 21, citing ASF, *Corporazioni religiose soppresse dal Governo francese* 179, 11, fol. 18v. In the early 1340s, a new measure of capacity was introduced at Florence, and the *starium* of 1299 probably reflects the earlier measure. According to Villani, the official measure of Florence was increased from the 'staio al raso' to the 'staio al colmo' only in 1342. The increase was by 1.5 to 2 *libre*, or by .51 to .68 kilograms, based on the Florentine *libra* of .34 kilograms. For the account of the increase, see Villani, bk. 12, chap. 13: 'Ancora si recò la misura dello staio, ove si facea al colmo, perchè vi si commettea frodo si recò a raso, mettendo quello più del colmo nel raso, e più da libbra una e mezza in due lo staio del grano. E questo anno valse lo staio de grano soldi venti, e il seguente anno del 1343 valse lo staio del grano soldi venticinque'. On the measure of the Florentine *libra*, see Zupko, 1981, p. 133. If the official increase from the 'staio al raso' to the 'staio al colmo' occurred in 1342, as the account of Villani indicates, then the 'staio al colmo' evidently was being used unofficially at Florence already in 1341, when both the 'staio grosso' and the 'staio al colmo' are first attested. On the use of the *starium* 'al colmo' at Florence already in 1341, see Pinto, 1978, p. 15, n. 45, citing ASF, *Corporazioni religiose soppresse dal Governo francese* 108, 125, fol. 308r.

¹⁷ Conti, 1965, p. 102.

¹⁸ A lease contract dated from 1188 and pertaining to property at Mezzola, situated above the left bank of the river Greve near Monteficalle, required the tenant to render an annual payment of four *staria* according to the measure that prevailed at Mezzola or three *staria* according to the measures of Florence and Passignano. See ASF, *Diplomatico*, Badia di Passignano, 1188 September 4: 'Quattuor staria de fabis starium de illa terra uel tres ad starium de Florenzie uel Vikio del Abate'.

¹⁹ Davidsohn, 1977, 1, p. 1162, n. 6, citing ASF, *Diplomatico*, Badia di Passignano, 1037 March 17: 'sistariorum duodecim ad stario de octo pani ad grano seminandum ad justa mensurata de duodecimos pedes et ad pedes qui dicitur Liuprandi rex'.

revenues from agricultural rents and productivity improvements in agriculture as peasants turned from extensive methods of cultivation to more intensive practices.²⁰ Even increases in measures of capacity that stemmed from seigniorial initiative were very likely intended to capture the benefits of increased productivity. The persistence of older forms of dry measure alongside newer measures perhaps reflects successful efforts by peasants to resist seigniorial pressure and to retain the benefits of improved productivity.

The evolution of surface measurements used at Florence is less straightforward, but it is plausible that measures of surface area were originally based on the the number of loaves of bread that a given piece of land was capable of producing. One *starium* of land measured according to the *starium de panis decem* thus was the measure of a parcel of land capable of producing ten loaves of bread, or about 5 kilograms of grain. If this surface measure was consistent with the original measure of the *starium de panis duodecem*, then one *starium* of land measured according to the *starium de panis decem* should have originally contained 437.5 square metres. If the *starium de panis decem* was related to the dry measure of the *starium decimale*, however, then the *starium de panis decem* should have been able to produce at least 8 kilograms of grain by the early thirteenth century. The relationship between the *starium de panis decem* and the *starium decimale*, to the extent that there was one, therefore must have developed at some point after the *starium de panis decem* ceased to correspond to the dry measure with which it was originally associated. Between the eleventh century and the early thirteenth century, in other words, the productive capacity of a parcel of land measured at one *starium de panis decem* may have increased by about sixty per cent.

²⁰ On increases of measures of capacity as means by which to generate higher revenues from agricultural rents. See Kula, 1986, pp. 112-113, 127-160. In the countryside of Lucca in the twelfth and thirteenth centuries, however, the bishops of Lucca often paid for the right to increase rents on their estate. See Osheim, 1977, p. 103, 156-159.

Table 21: Measures of surface area and capacity

DRY MEASURE	DATE	VOLUME	WEIGHT	SURFACE MEASURE
	attested 1037	5.3 litres	4 kgs.	Starium de panis octo. (350 square metres)
	widely attested, 11th-12th centuries	6.7 litres	5 kgs.	Starium de panis decem. (437.5 square metres)
		8.0 litres	6 kgs.	Starium de panis duo- decem; ad pedem de porta Sancti Pan- cratii; ad cordam = Stioro (18th century). (525 square metres)
Starium Burgensis	12th cen- tury	less than 10.7 - 11.3 litres	less than 8 - 8.5 kgs.	
Starium annone	attested 1194-1268	10.7 - 11.3 litres	8 - 8.5 kgs.	Starium de panis decem.
Starium decimale	attested 1221-1297	10.7 - 11.3 litres	8 - 8.5 kgs.	Starium de panis decem.
Starium antiquum de Passignano	by 1146	10.7 - 11.3 litres	8 - 8.5 kgs.	Starium de panis decem.
Starium antiquum Florentinum, plenum vel semi plenum (?)		10.7 - 11.3 litres	8 - 8.5 kgs.	Starium de panis decem.
Starium de Passignano	by 1193			
Starium Florentinum	by 1219			
Starium 'al raso'	before 1340	20.0 - 21.3 litres	15 - 16 kgs.	
Starium 'al colmo'	1341/1342	24.4 litres	18 kgs.	
	1404	24.4 litres	18 kgs.	Starium ad seminandum (1575 square metres)

11. Currency

Before the middle of the thirteenth century, the monetary system in Tuscany followed the Carolingian system introduced in northern Italy in the later eighth century. The Carolingian system was based on the *libra*, which contained 20 *solidi*, and each *solidus* contained 12 *denarii*. Both the *libra* and the *solidus* were moneys of account, and only the *denarius* was an actual coin. The *denarius* of Carolingian northern Italy was a coin of fine silver that originally weighed about 1.3 grammes with a diameter of about 1.5 centimetres. After an early reform of the coinage in 793 or early 794, the weight was increased to about 1.7 grammes and the diameter was increased to about 2.0 centimetres.¹ By the beginning of the eleventh century, the coinage of the various Carolingian mints in northern Italy had evolved considerably. The coinage of the mint at Lucca, the principal coinage of Tuscany, lost about 40 per cent of its total weight by the beginning of the reign of Henry III in 1039, but it still contained 0.9 fine silver. The succeeding century and a half would witness a further decline in the weight standard of the Lucchese *denarius* as well as a marked reduction in its silver content.

In the later eleventh century and through much of the twelfth century, contracts for the conveyance of landed property in the territory of Florence, if they stipulated that payment was to be rendered in any particular coinage, almost invariably specified the coinage of Lucca, the *denarius Lucensis*.² Some contracts specified that payment was to be rendered in silver and other mobile goods according to a system of value based on the coinage of Lucca.³ Towards the end of the third quarter of the twelfth century, however, Florentine land conveyances began to stipulate that contracts were to be settled in the coinage of either Lucca

¹ The introduction of the Carolingian system of coinage in Italy is summarised in W. R. Day, 1997, pp. 27-29, with references to the pertinent literature.

² It should be stressed that many contracts from this period specified merely that payment was to be rendered in *denarii boni* or *denarii spendibili*.

³ For example, see ASF, *Diplomatico*, Passerini, 1104 November 21: 'argenteum vel alias mobilia pro valente bonorum denariorum lucensium soldorum novem'; Badia di Passignano, 1151 March 4: 'inter argenteum et alias mobilia de rebus ipsius ospitalis in valente soldos duodecim bonorum denariorum lucensis monete'; Sant'Apollonia di Firenze, 1159 June 30: 'inter argenteum et alias mobilia in valente bonorum denariorum lucensium libras octo'.

or Pisa, and after about 1175, most contracts stipulated that payment was to be rendered only in Pisa coinage.⁴

Pisa evidently had begun to strike its own coinage in 1151, when the coinage of Pisa is first attested in Pisan documents, and the right of Pisa to issue its own coinage was confirmed in 1155 by the German emperor Frederick I Barbarossa.⁵ Stipulations at Florence from the early 1170s that payment was to be rendered in the coinage of either Lucca or Pisa should be seen in the context of a commercial treaty negotiated between Florence and Pisa in 1171, which compelled the Pisans to share the profits of its mint with the Florentines.⁶ Certainly

⁴ For examples of contracts stipulating that payment was to be rendered in the coinage of either Lucca or Pisa, see ASF, *Diplomatico*, San Vigilio di Siena, 1173 May 7: 'pro pretio sedecim solidorum bonorum denariorum Lucensium ac Pisanorum'; San Vigilio di Siena, 1174 February 9: 'pro pretio trium librarum bonorum denariorum Lucensium et Pisanorum'; Monache di Luco, 1173 March 5: 'Bonorum denariorum Lucensium et Pisanorum'.

⁵ For the earliest reference to the *denarius* of Pisa, see Caturegli, ed., 1938, no. 423, 1151 August 25, p. 290-291, esp. 290: 'Pretium receperunt Pisanorum monete, quod nunc currit, solidos CCC'. Antoni recently noted a thirteenth century *exemplum*, or copy, of a document dated from 1149 stipulating that payment was to be rendered in the money of Pisa, and he suggested that the document attests to an issue of coinage from the Pisan mint before 1150. See Antoni, 1979, p. 147. The fact that the document is a thirteenth century copy, however, allows the possibility that the copyist was merely rendering an unfamiliar stipulation of price in a manner more familiar to him. For the confirmation of Pisan minting rights in 1155, see Appelt, ed., 1975-1990, 1, no. 119, 1155 August 25, pp. 200-202, esp. 202: 'Pisano igitur populo inter alia munificentie nostre opera dedimus et hanc pragmaticam sanctionem in perpetuum confirmavimus percussuram monete, ut videlicet habeat Pisana civitas nunc at in perpetuum ius et potestatem monetandi et cudendi proprium nummismata habeatque ipsa moneta cursum per banni nostri auctoritatem et sit dapsilis non solum in civitate Pisana, verum etiam in cunctis Ytalie partibus nec sit licitum ulli persone maiori minorive, non duci, non marchioni nec in aliqua dignitate homini constituto Pisanam monetam contradicere vel a suo cursu prohibere, set liceat Pisano populo iuxta utilitatem suam et temporibus opportunitatem monetam suam immutare et tam de graviori ad levius pondus quam de leviori ad gravius ipsum nummismata transferre'.

⁶ Santini, ed., 1895, *Capitoli*, no. 4, 1171 July 2, pp. 5-6, esp. 6: 'Et medietatem logorie monete Pisane civitatis eis dabo in sempiternum, et scriptum eis presentialiter inde faciam ad dictum eorum sapientis'. The passage is widely understood to have obliged the Pisan mint to consign half of its profits, or 'rents', to Florence. See Davidsohn, 1977, 1, pp. 768-770, esp. 768; Herlihy, 1974, pp. 185-186, esp. 185; Ceccarelli Lemut, 1979, pp. 58-59, esp. 58; Matzke, 1993, p. 171. Even the Pisan chronicler Bernardus Maragone appears to have understood that the terms of the treaty entitled Florence to half of the profits from Pisan mint, though he wrote that the Pisans granted to Florence 'medietatem Lucane monete'. This probably because he regarded the coins struck at the Pisan mint as Lucchese coins, which is to say coins as that were indistinguishable from those struck at Lucca. See Maragone, p. 53. It is also interesting to note a Florentine document dating from 1170 stipulating that payment was to be rendered in the small old *denarii* of Lucca. See ASF, *Diplomatico*, Badia di Passignano, 1170: 'Centum librarum bonorum denariorum minorum veterum Lucensium'. This perhaps corresponds to the *denarius* struck at Lucca until about 1160. See Matzke, 1993, pp. 162-167.

by 1176, the coinage of Pisa was considered the official currency of both Florence and Siena.⁷

In 1181, Lucca and Pisa entered into a monetary convention as part of a more general commercial and political treaty. The convention dictated that the mints of Lucca and Pisa were to share their profits equally, that the coinage of each city was to circulate freely in the territory of the other city, and that the coins of the two cities were to be clearly distinguishable.⁸ In the same year, the Siense evidently began to strike their own coinage, probably following the standard of the Pisan coinage.⁹ In 1184, Florence negotiated a treaty with Lucca that entitled

⁷ Cecchini, *et al.*, eds., 1932-1991, 1, no. 14, 1175 March 22, pp. 20-26, esp. 25: 'Item monetam Pisanum, quam modo Florentini habent, vel aliam rationabilem quam in antea adquisierint, faciam bannire in civitate Senensi eiusque comitatu et ut predicti homines eam accipiant et tollant in arringo, consules Senensium precipient suis civibus per sacramentum et cambiatoribus precipient per sacramentum, ut eorum cambium portent ad monetam pisanum'. The Siense thus also adopted the coinage of Pisa as their official currency in 1176, but they were evidently striking their own coinage within a little more than five years. See Cammarosano, 1974, p. 301, n. 79, citing ASS, *Diplomatico*, San Salvatore di Lecce, 1181 December.

⁸ There are two different versions of the treaty, one redacted for the Pisans containing the Lucchese concessions and another redacted for the Lucchese containing the Pisan concessions, and they are both dated according to both the Pisan and the Lucchese styles of dating. The treaty to which the consuls of Lucca swore, which contained the Lucchese concessions, included a clause indicating that the coinage of Lucca was to be struck in the name the emperor Henry II while the coinage of Pisa was to be struck in the name of either Frederick I or his predecessor Conrad III. This identified the coinage of each city with the emperor who had originally granted the respective city minting rights. The same version of the treaty also stated that the coinage of Pisa was to be larger in diameter and of a different colour than the Lucchese coinage. Herlihy suspected that this particular clause was a later addition to the text, in as much as the *denarii* of Lucca and Pisa display no appreciable difference with respect to size and colour after 1181. The Pisan chronicler Maragone also explicitly stated that the *denarii* of Lucca and Pisa were to be of the same weight and colour. See Maragone, p. 72: 'et li Pisani similmente debbono fare a detti Lucchesi, et la moneta del colore et medesimo peso, et da una parte il nome dello impera'. See also Herlihy, 1974, pp. 181-182, nn. 30-31. A document of 1183 nevertheless describes the new Lucchese *denarii* as brown in colour. See immediately below. At any rate, the inscription 'H' for Henry on the Lucchese *denarii* and 'F' or 'C' for Frederick or Conrad on the Pisan *denarii* rendered the coins distinguishable. For the version of the treaty containing the Pisan concessions, see Corsi, 1980, no. 2, 1181/1182 June 16, pp. 52-60, esp. 54-55; Ceccarelli Lemut, 1979, app., no. 3, s.d., pp. 107-114. For the version containing the Lucchese concessions, see Corsi, 1980, no. 3, s.d., pp. 61-68, esp. 61-63; Ceccarelli Lemut, 1979, app., no. 2, s.d., pp. 99-106.

⁹ See again Cammarosano, 1974, p. 301, n. 79. Herlihy believed that the earliest references to the coinage of Siena dated from about 1190, and he thus associated the appearance of the Siense *denarii* with a reform of the Pisan coinage around 1190. Certainly in the early thirteenth century, the coinage of Siena was considered to be equivalent to a new issue of Pisan coinage. For evidence of parity between the *denarii* of Pisa and Siena in the early thirteenth century, see Schneider, ed., 1908, no. 535, 1215 July 2, pp. 236-238, esp. 237: 'libras MMCCLL denariorum Senensium vel novorum Pisanorum'. See also Herlihy, 1974, pp. 183-184. On the reform of the Pisan coinage around 1190, see below.

Florence to half of the revenues from the Lucchese mint stemming from charges levied against Florentine citizens on coinage brought to the Lucchese mint for re-striking.¹⁰

As a result of the 1181 convention between Lucca and Pisa, the mints of both cities issued new *denarii*, and the new issues appear to have been accompanied by a debasement of the currency.¹¹ The extent of the debasement of the Pisan *denarius* is unclear, but the coinage of Lucca lost perhaps as much as fifty per cent of its value between 1165, when the *denarii* of Lucca and Pisa evidently had been equivalent, and 1195.¹² In the evidence for Florence, the earliest indication that the Lucchese coinage had been devalued occurs in 1170 in a reference to the small old money of Lucca.¹³ By 1191, the cathedral chapter of Lucca was attempting to restructure existing rents collected on its estate in order to compen-

¹⁰ Santini, ed., 1895, *Capitoli*, no. 14, 1184 July 21, pp. 20-23, esp. 22: 'Et dabo Florentinis consilibus vel Florentine potestati aut rectori vel dominatori a comuni populo electi vel eorum misso vel dare faciam medietatem de omni lucro, quod lucratus fuero de cambio de foco quod Florentini cives et homines eorum districtus et comitatus et episcopatus ad monetam Lucanam ad fondendum duxerint vel miserint, sine fraude, abstracta prius inde medietate quam Pisani habere debent et omnes expensas, que inde facte erunt sine fraude'.

¹¹ The new issue of Pisa is signalled in a reference to 'bonorum denariorum Pisane nunc correntis veteris monete libras quattuor' in 1182. See Ceccarelli Lemut, 1979, p. 62, n. 41, citing Archivio della Certosa di Calci, 1182 September 20. For a reference to a new Lucchese coin in 1183, see Schiaparelli and Baldasseroni, eds., 1907-1909, 2, no. 1225, 1183 November 7, p. 261: 'denariis Lucensis novis et brunis'. At Lucca, twenty *solidi* in new *denarii* corresponded to eighteen *solidi* in the old *denarii*, representing a devaluation of more than ten per cent. See Guidi and Pellegrinetti, eds., 1921, no. 5, 1183, pp. 23-25: 'In mense februarii habuimus LXXXIII libr. Ex quibus [...] et Bonacolto III libr. de preteritis den. et XX sol. de X libr. quas mutuavit postea et XVIII sol. in monetis pro cursore'.

¹² In 1164, the value of one silver mark of Cologne was equivalent to forty-eight *solidi* in the *denarii* of either Lucca or Pisa, or 576 *denarii*. See Herlihy, 1974, pp. 176-177, n. 17, citing Imperiale di Sant'Angelo, ed., 1938, 2, no. 4, 1164 September 16, pp. 10-13, esp. 13: 'argenti fini, marciam Colonie pro solidis LVI denariorum ianuensium; unciam de marche Papie de marinis melchis et barbarugiis pro marche argenti; et similiter pro marche argenti soldos XLVIII lucensium de Pisa vel Lucca'. According to Casaretto, the mark of Cologne weighed less than 234 grammes and probably about 229.5 grammes, whereas Davidsohn put the weight of the mark of Cologne at 233.8 grammes. According to Luschin von Ebengreuth, however, the weight of the mark of Cologne was between 215.5 and 228.3 grammes in the twelfth century and then 229.5 grammes in the thirteenth and fourteenth centuries. If the mark weighed 215.5 grammes in 1164, then each *denarius* of both Lucca and Pisa would have contained about 0.37 grammes of silver, but they may have contained as much as 0.40 grammes of silver based on the figure for the weight of the mark used by Davidsohn. See Casaretto, 1928, p. 37; Davidsohn, ed., 1896-1908, 4, pp. 316-317. On the weight of the silver mark of Cologne in the twelfth century, see Cipolla, 1975, pp. 41-42; Luschin von Ebengreuth, 1926, pp. 163-164, 167.

¹³ ASF, *Diplomatico*, Badia di Passignano, 1170: 'Centum librarum bonorum denariorum [mi]nutorum veterum lucensium'.

sate for the decline in the value of Lucchese *denarius*.¹⁴ An act dated from Lucca in 1195, moreover, demanded payment in the coinage of thirty years earlier, which was considered to have held twice the value of the money that was then in circulation.¹⁵

The coinage of Pisa probably was also progressively debased in the later twelfth century, but it is not clear that the pattern of debasement at Pisa followed developments at Lucca. In 1164, the Pisan *denarius* may have contained 0.37 grammes of silver, but it appears to have contained about 0.19 grammes of silver by 1179.¹⁶ After 1181, stipulations that payment could be rendered in the coinage of either Lucca or Pisa virtually disappeared from land conveyances in the evidence for Florence, and it is likely that the disappearance was owing to the fact that the *denarii* of the two mints were no longer equivalent.¹⁷ At any rate, the

¹⁴ Ultimately, however, the cathedral chapter was compelled to promise not to seek to restructure rents owing to the debasement of the coinage. See Guidi and Parenti, eds., 1910-1933, 3, no. 1642, 1191 August 23, pp. 98-100, esp. 99: 'Item fecerunt eis finem et refutationem et perdonationem atque transactionem et pactum de non petendo de toto quod predicti canonici possint requirere pro deterioratione monete Luc[ensis] pro eo quod hucusque [sic] debitam vel consuetam pensionem ad presentem monetam solverunt'.

¹⁵ Guidi and Parenti, eds., 1910-1933, 3, no. 1728, 1195 gennaio 21, pp. 181-184, esp. 181: 'Lambertus confitetur habere et negat facere debere et si deberet facere, negat facere debere, nisi dederit sibi pro canonica libr. LX, ad bonam monetam, que fuit a XXX annis retro, vel duplum de presenti moneta, salvo suo iure in superflo'.

¹⁶ As noted above, the silver mark of Cologne was equivalent to 576 *denarii* of either Lucca or Pisa in 1164, which corresponds to a silver content of about 0.37 grammes. By 1179, according to Ceccarelli Lemut, the silver mark of Cologne was equivalent to 1128 Pisan *denarii*, which corresponds to a silver content of only about 0.19 grammes. See Ceccarelli Lemut, 1979, pp. 69-70. See also Cipolla, 1975, p. 42.

¹⁷ Whereas the silver content of the Lucchese *denarius* appears to have declined to 0.12-0.13 grammes after 1181, the Pisan *denarius* appears to have contained about 0.17 grammes. One of the more perplexing problems concerns the utter failure of Gresham's Law in Tuscany. All other things being equal, Gresham's Law dictates that debased coinage will tend to displace finer issues, but the money of Pisa appears to have become more firmly established as its standard departed from that of Lucca after 1181. On the silver content of the Lucchese and Pisan *denarii* after the monetary convention of 1181, see Matzke, 1993, pp. 174-177. On the disappearance of stipulations for payment in the coinage of either Lucca or Pisa, see Herlihy, 1974, p. 182. There were, nevertheless, sporadic references in the Florentine sources to payments in the money of either Lucca or Pisa after 1181, though the occasional use of the equation after 1181 may have been more a matter notarial conservatism than an indication of parity. For examples of the persistence of the equation, see ASF, *Diplomatico*, Badia di Passignano, 1195 April 30: 'Pro pretio XIII librarum bonorum denariorum Pisane seu Lucensis monete'; 1196: 'inter argentum et alias mobilia pro valente bonorum denariorum Pisane seu Lucensis monete soldos quadraginta'. Notwithstanding these few examples, most land conveyances in the Florentine evidence stipulated that payment was to be rendered in the coinage of Pisa, that is, if they specified any particular coinage at all.

denarius of Pisa clearly became the dominant coinage for commercial transactions at Florence from about 1181.¹⁸ The mint at Pisa almost certainly issued a new coinage in 1190, which was worth about fourteen per cent more than the coinage of the previous issue. The appearance of a new Pisan *denarius* is first attested in a reference to the 'old money' of Pisa, and then in numerous references to new coinage.¹⁹

In the early thirteenth century, Pisa may have altered its coinage once again. In 1204, for example, there occur several references in the evidence for Florence that intimate the appearance of a new coinage, and other sources suggest that Pisa had debased its *denarius* by about nine per cent probably in 1203.²⁰ Another new

¹⁸ Documents redacted on the frontier of the territory of Florence often stipulated that payment was to be rendered in the coinage of other cities. North of Florence, in the valley of the river Santerno, payment was often effected in the coinage of Bologna. See ASF, *Diplomatico*, Riformagioni, Atti Pubblici, 1234 September 20, 1235 December 10, 1239 May 2. Evidence from the abbey of Santa Maria Reperate, situated northeast of Florence above the valley of the river Lamone near the town of Marradi, indicates that payments were often rendered in the money of Ravenna. See ASF, *Diplomatico*, Badia di Ripoli, 1208 April 15, 1223 May 1, 1223 June 6, 1235 September 6, 1235 November 22, 1236 January 13, 1236 February 9, 1238 May 28, 1244 April 10. In the Chianti, payments were sometimes effected in the coinage of Siena.

¹⁹ For the earliest reference to the old money of Pisa, see Caturegli, ed., 1938, no. 590, 1190 October 1, p. 461: 'Pro pretio III librarum veteris monete'. For references to the new money of Pisa in the evidence for the countryside of Florence, see ASF, *Diplomatico*, Spedale di San Giovanni Battista, 119[...]: 'solidos quinquaginta bonorum denariorum pisane nove monete'. A document dated from Pisa in 1192 states that one *solidus* of the new money, which is to say twelve *denarii*, was worth fourteen *denarii* of the old money. See Ceccarelli Lemut, 1979, p. 62, n. 43, citing ASPisa, *Casalini*, no. 52, 1192 March 17: 'libras quinquaginta bonorum denariorum Pisane nunc currentis veteris monete ... alias libras quinquaginta bonorum denariorum eiusdem monete, alias libras centum tres bonorum denariorum eiusdem monete, vel tot denarios Pisane nove monete que bene valeant totam iamscripta pecunia, computato unoquoque soldo nove monete denarios quatuordecim veteris monete'. In other words, as Ceccarelli Lemut noted, the total of amounted to 203 *libre* in the old money or 174 *libre* in the new money. See also Herlihy, 1974, pp. 182-182, nn. 33-34, citing ASPisa, *Diplomatico*, San Lorenzo alla Rivolta, 1192 March 17. Another document of 1192 specifically refers to a payment in 'moneta infortiata'. See Ceccarelli Lemut, 1979, p. 62, n. 44, citing ASPisa, *Carte Lupi, Fonti*, 1, 1, p. 792. Ceccarelli Lemut associated the references from 1190 and immediately thereafter with the convention of 1181 and the subsequent new issue of coinage, but the references very likely concern a distinct coinage issued probably around 1190. The silver content of the new *denarius* of Pisa, according to Ceccarelli Lemut, was 28.5 per cent, or about .20 grammes of a coin that weighed, on average, 0.70 grammes. See Ceccarelli Lemut, 1979, p. 64.

²⁰ A document of 1202 suggests that the silver content of the Pisan *denarius* at the time was 0.195 grammes, which corresponds roughly with the silver content of the new *denarius* of about 1190, but another source dated from 1204 suggests that the *denarius* of Pisa contained only 0.177 grammes. Between 1202 and 1204, in other words, the Pisan *denarius* depreciated by slightly more than nine per cent. The silver content of the Pisan *denarius* in 1202 can be established from a treaty between Florence and Montepulciano that required Montepulciano to consign to the Florentines an annual tribute of ten silver marks, 'decem marcas argenti', or fifty *libre* in good Pisan money, 'quinquaginta libras bonorum denariorum Pisanorum'. See Santini, ed., 1895, *Capitoli*,

issue of the Pisan mint is perhaps signalled around 1213, when there again appears in the Florentine sources a cluster of references to the 'old money' of Pisa.²¹ A further debasement of Pisan coinage may have occurred around 1220, after which appears another cluster of references to the 'old money' of Pisa.²² By 1226, the silver content of the Pisan *denarius* appears to have been improved by nearly six per cent over the value of the coinage circulating in 1203 and by more than twenty

no. 40, 1202 October 24, pp. 83-93, esp. 83. The silver content of the Pisan *denarius* in 1204 is based on the report of Bishop Wolfer of Passau, who travelled through Florence during the summer of 1204 and noted that five marks were equivalent to twenty-seven and a half Pisan *libre*. See Jesse, ed., 1924, no. 370, 1203-1204, pp. 249-252, esp. 251: 'Aput Florentiam 5 marc. pro 27 tal. et dim. pisanorum'. The debased coinage appears to have been issued at Pisa between about the end of October in 1202 and the beginning of August in 1203, when the earliest references to the 'new money' of Pisa in the evidence for Florence. Curiously, stipulations for payment in the new money of Pisa never disappeared from Pisan documents after the early 1190s. They continued through the last decade of the twelfth century and through the early decades of the thirteenth century, but references to the new money of Pisa appear only sporadically, and in clusters, in the evidence for Florence. One explanation is that the system of accounting used at Pisa was based on the new *denarius* of about 1190 and remained so despite subsequent changes in the coinage, while another possibility is that the formulation 'new money' was a notarial convention used in the sense of 'current money'. For a reference to the 'old money' of Pisa in Florentine sources, see ASF, *Diplomatico*, Olivetani di Firenze, 1203 February 13: 'VIII librarum bonorum denariorum veteris Pisane monete'. For references to the 'new money' of Pisa, see ASF, *Diplomatico*, Cestello, 1204 August 1 (redacted at Pisa, and therefore corresponding to 1203 on the Florentine and modern calendars): 'librarum sexdecim bonorum denariorum Pisane nove monete'; ASF, *Diplomatico*, Spedale di San Giovanni Battista, 1204 August 3: 'Pro pretio soldorum centum novem denariorum nove Pisane monete'. A reference to the 'new money' of Pisa dating from 1209 perhaps concerns another new issue, but it is only a single reference, and thus it may pertain to the same new issue struck around 1204. For the reference, see ASF, *Diplomatico*, Stroziane Uguccone, 1209 October 29: 'pro pretio et merito XXVII solidorum bonorum denariorum Pisane nove monete'.

²¹ For example, see ASF, *Diplomatico*, Stroziane Uguccone, 1212 February 5: 'pro pretio scilicet librarum trigintatres bonorum denariorum expendibilium monete Pisane veteris'; 1216 July 2: 'pro pretio librarum octo bonorum denariorum Pisanorum veterorum'; 1216 October 19: 'pro pretio librarum octo bonorum denariorum Pisanorum veterorum'; 1218 November 19: 'libras decem bonorum denariorum Pisanorum veterorum'. See also ASF, *Diplomatico*, Monache di Luco, 1213 April 25: 'denarii Pisane veterorum pensionis nomine'; '1214 April 25: 'denariorum Pisanorum veterorum'; 1214 December 14: 'denariorum Pisanorum veterorum'.

²² An imperial charter issued by Frederick II to Poggibonsi in 1220 confirming the donation of an eighth part of Poggibonsi to Siena obliged the men of Poggibonsi to render a payment to the 'castellan' of San Miniato al Tedesco of either five hundred *libre* in Pisan coinage or eighty marks of fine silver 'ad pondus Colonie'. This suggests that 120,000 Pisan *denarii* were struck from each mark of silver, which gives a silver content of about 0.153 grammes of silver per coin. See Huillard-Bréholles, ed., 1852-1861, 2, pt. 1, unnumbered, 1220 November 25, pp. 37-40, esp. 37-38. For references to the 'old money' of Pisa dating from between 1220 and 1225, see ASF, *Diplomatico*, Cestello, 1221 December 30, 1221 March 31, 1222 July 16; Mannelli-Galilei-Riccardi, 1223 January 7; Vallombrosa, 1225 December 11. The debasement may have stemmed from a monetary convention concluded between Pisa and Lucca in 1217. See the chronicle report of Tholomeus Lucensis, p. 105: 'Eodem anno Lucani et Pisani concordaverunt simul de moneta cudenta, ut in prephato registro continetur, et specialiter de moneta Bonalberghi condam Tancredi.

per cent over the value of the coinage circulating in 1220, and it evidently maintained a similar standard for the next decade.²³ In 1229, however, the mint at Pisa clearly was striking a multiple of the *denarius*, the *grossus*, and the correspondence between the *denarius* and the *grossus* suggests that the *denarius* may have declined in value by the that time or shortly thereafter.²⁴

²³ A document dated from 1226 indicates that one silver mark was equivalent to 1248 Pisan *denarii*, which suggests that each coin contained between 0.1815 and 0.1875 grammes of silver, depending upon the weight of the mark. See the act dated from 1226 August 20 in ASF, *Diplomatico*, Riformagioni, Atti pubblici (a quaderno), 1209. Luschin von Ebengreuth put the Florentine mark at 226.623 grammes, while Davidsohn used the mark of Cologne, which he put at 233.812 grammes. For the thirteenth and fourteenth centuries, however, Luschin von Ebengreuth put the weight of the mark of Cologne at 229.456 grammes. See Luschin von Ebengreuth, 1926, p. 167; Davidsohn, ed., 1896-1908, 4, pp. 316-317. In 1237, the *denarius* of Pisa appears to have held roughly the same standard, despite the suggestion that a new Pisan *denarius* may have appeared at about the same time. A document dated from Florence in that year equates fifty *libre* of pure silver to 400 *libre* in Pisan coinage, which is to say 96,000 Pisan *denarii*. See Santini, ed., 1895, *Atti di giurisdizione*, no. 47, 1237 November 19, p. 269: 'in libris quinquaginta boni et puri argenti vel in extimatione librarum CCCC denariorum Pisanorum'. Bernocchi suggested that a *libra* of pure silver probably would have contained fifty per cent more silver than the silver mark, and thus would have weighed 350.718 grammes. Accordingly, the Pisan *denarius* of 1237 would have contained 0.1826 grammes of silver, which corresponds roughly with the figure from 1226. Elsewhere, however, Bernocchi acknowledged that the Florentine *libra* weighed 339.542 grammes. See Bernocchi, 1974-1985, 3, pp. 132-133. Zupko, Martini, and Luschin von Ebengreuth have all put the weight of the Florentine *libra* at about 339 grammes, which would give a silver content of only about 0.1765 grammes. Zupko gave a figure of 0.339 kilogrammes for the Florentine *libra*, though he added that most cities had both a large and a small measure for the *libra*. Luschin von Ebengreuth gave a figure between 339.008 and 339.935 grammes, and Martini suggested 339.549 grammes. See Zupko, 1981, p. 133; Luschin von Ebengreuth, 1926, p. 167; Martini, 1883, 1, p. 207.

²⁴ The appearance of the *grossus* at Pisa by 1229 is suggested in references to the 'small money' of Pisa, which occur in the Pisan sources from that year. For example, see Caturegli, ed., 1974, no. 134, 1229 January 30, pp. 312-314, esp. 313: 'pro pretio librarum XII bonorum denariorum, nunc currentis Pisanorum minorum monete'; no. 141, 1230 March 23, pp. 334-337, esp. 335: 'pro pretio et nomine certi pretii librarum XXXIII denariorum Pisane minoris monete'; no. 159, 1232 May 7, pp. 369-370, esp. 369: 'pro pretio librarum IX denariorum novorum Pisane minoris monete'. The appearance of the *grossus* may have been signalled in the Florentine sources even earlier in a reference to the 'bonorum denariorum Flor[enorum] et P[isanorum]'. See ASF, *Diplomatico*, Mannelli-Galilei-Riccardi, 1228 August 31. The silver *grossus* of Florence often appears in later documents as the *florenus*, but references to Florentine *grossi* are otherwise unknown before 1237, and it is likely that the formulation reflects that status of Pisan coinage as the official coinage of Florence. For a document that refers to the *grossi* of Florence as 'florenos' in 1250, see ASF, *Diplomatico*, Commenda Covi, 1250 May 30. The *grossus* originally was equivalent to one *solidus*, or twelve *denarii*. Unfortunately, surviving Tuscan *grossi*, like *denarii*, are extremely resistant to accurate dating. Matzke suggested that the earliest issue of the Pisan *grossus* was associated with the reform of the coinage at Pisa in 1190, which would be analogous to developments at Venice a few years later, but the introduction of the *grossus* at Pisa in 1190 is supported neither by the documentary record nor by numismatic evidence. See Matzke, 1993, pp. 179-184. Bernocchi has suggested that the hypothetical weight of the *grossus* was nearly 2.5 grammes, and that the *grossus* was originally about 95 per cent fine, but this is not confirmed by the numismatic evidence. See Bernocchi, 1974-1985, 3, pp. 132-139. Extant examples of Tuscan

On the basis of the Florentine evidence, there appears to have occurred another change in the *denarius* of Pisa around 1236, when documents begin to specify that payments were to be rendered in the ‘old black money’ of Pisa.²⁵ The references to the black money of Pisa are very likely related to the introduction of the *grossus* at both Lucca and Florence during the same period.²⁶ Siena and Arezzo began to issue *grossi* soon thereafter, and the issues of all of the mints were struck according to the same standard by 1245.²⁷ The Pisan mint may have issued a new *denarius* by about 1236 that was calibrated to a new issue of the Pisan *grossus* and designed to bring both the *denarius* and *grossus* of Pisa into

grossi tend to weigh between 1.60 and 1.80 grammes and they tend to be between 84 and 91 per cent fine. One Pisan *grossus* identified as a specimen of the earliest issue is virtually pure, though it weighs a mere 1.19 grammes. Eliminating outliers, a mean weight of 1.70 grammes and a fineness between 84 and 91 per cent would yield a silver content of only 0.12 to 0.13 grammes per *denarius*. See Stahl, 1997.

²⁵ ASF, *Diplomatico*, Badia di Passignano, 1236 April 27: ‘pro pretio librarum trium et soldorum septem bonorum denariorum nigrorum veterorum Pisanorum’; 1236 February 8: ‘pro pretio quadraginta trium librarum bonorum denariorum Pisanorum nigrorum’; 1243 November 4: ‘pretio librarum quindecima et sol sex bonorum denariorum Pisanorum nigrorum’; Olivetani di Firenze, 1236 September 17: ‘libras centum quinquaginta tres bonorum denariorum in Pisanos veteros’; Monache di Luco, 1239 April 22: ‘bonorum denariorum Pisanorum veterorum nigrorum’. Ceccarelli cited an earlier reference to the ‘new black money of Pisa’ in the evidence for Siena, but she failed to give a date for the reference. Cf. Lisini, *Inventario delle pergamene*, pp. 221-222: ‘denariorum Pisanorum nigrorum bonorum’.

²⁶ The *grossus* of Lucca is attested from 1236, at which time it was equivalent to the *grossus* of Pisa. See Blomquist, 1986, p. 247, n. 9. The Florentine *grossus* is attested from 1237. See Davidsohn, ed., 1896-1908, 2, no. 172, 1237 September 8, pp. 27-28.

²⁷ The *grossi* of Pisa, Siena, Lucca, and Florence are all mentioned in a document dated from 1239. See Herlihy, 1974, p. 190; Zanetti, 1775-1789, 2, p. 416, n. (d). Evidence from 1245 and indicates that these four issues of *grossi* were at that time equivalent in value. See Davidsohn, ed., 1896-1908, 4, p. 317; Muzi, ed., 1844, 1, p. 56-57; Bernocchi, 1974-1985, 3, p. 135. The *grossus* of Arezzo is attested for the first time in 1242, and evidence from 1250, 1251, and 1259 indicates that Aretine *grossi* were equivalent in value to issues from the other four Tuscan mints by the middle of the thirteenth century. For the earliest references to the *grossus* of Arezzo, see Blomquist, 1986, p. 247, n. 9. For evidence of parity between the *grossi* of Florence, Pisa, Siena, and Arezzo in the evidence for Florence in 1250, see ASF, *Diplomatico*, Commenda Covi, 1250 May 30: ‘libras duas et denarios viginti inter Florinos Pisanos Senenses et Aretinos grossos argenteos valentes libras vigintiquinque pisanorum veterorum ad rationem duodecim denariorum Pisanorum veterorum pro quolibet predictorum denariorum grossorum’. For evidence of parity among the *grossi* of Pisa, Siena, Lucca, Florence, and Arezzo in 1251, see Schneider, ed., 1907, no. 632, 1251 March 1, p. 207. For 1259, see Davidsohn, ed., 1896-1908, 3, no. 45, 1259 July 29, p. 13. For additional bibliography on the Tuscan *grossi*, see Herlihy, 1954; Lopez, 1967; Grierson, 1971-1972.

line with the new issues of the mint at Lucca and Florence.²⁸ In 1252, when the mint at Florence issued its famous gold *florenus*, and at least until 1258, the *florenus* was equivalent to 20 silver *grossi*, which is to say 20 *solidi*, or 240 *denarii* in the coinage of Florence, Lucca, Pisa, Siena. By 1271, however, the value of the *florenus* had climbed sharply against the silver coinage of Florence, and it had risen against the silver coinage of Pisa by 1260, against the silver coinage of Siena by 1270, and against the coinage of Lucca by 1287.²⁹

²⁸ The transition also may have marked a passage from the Carolingian *libra* to the new *libra* of Tuscany. According to Bernocchi, the new *libra* was subdivided in the following manner:

1 <i>libra</i> =	12 <i>once</i> =	288 <i>denarii</i> =	6912 <i>grani</i> =	339.542 g.
	1 <i>uncia</i> =	24 <i>denarii</i> =	576 <i>grani</i> =	28.295 g.
		1 <i>denaro</i> =	24 <i>grani</i> =	1.1790 g.
			1 <i>grano</i> =	0.0491 g.

See Bernocchi, 1974-1985, 3, pp. 132-133.

²⁹ For the value of the *florenus* against the *denarii* of Florence, Lucca, Pisa, and Siena, see Spufford, 1986, pp. 1-3, 39-42, 50; Spufford and Wilkinson, 1977, pp. 21-24, 47-62. By 1256, the mint at Florence was also striking a small silver *denarius*. See ASF, *Diplomatico*, Badia di Coltibuono, 1255 March 14: 'pro pretio soldorum sex et denariorum sex bonorum denariorum Florentinorum parvorum'. See also ASF, *Diplomatico*, Vallombrosa, 1258 January 28: 'pro pretio soldorum quadraginta quinque bonorum denariorum Florentinorum parvorum'; Badia di Passignano, 1258 March 18: 'librarum decem bonorum denariorum Florentinorum miniorum'. Data regarding the standard of later thirteenth century *denarii* are not abundant, but two *denarii* of Arezzo from this period have been subjected to neutron activation analysis, and the results suggest a silver content between about nine and twelve per cent. The coins tend to weigh only about 0.52 grammes, which suggests that the later thirteenth century *denarii* of Arezzo contain only from 0.047 to 0.062 grammes of silver. See Stahl, 1988a, pp. 485-486. For the standard of early fourteenth century Tuscan *denarii*, see De la Roncière, 1973, pp. 252-258.

Table 22: Tuscan silver *denarii* of the Lucca and Pisa mints, 1039-1245 ¹

Provenance	Dating	Weight (grams)	Fineness (%)	Weight (grams AR)	Source
Lucca	Henry III (1039-1056)	1.05 g.	over 80%	0.80 - 0.95 g.	Matzke, 1993, p. 189, types H.1a and H.1b, nos. 22-24 (<i>denarius lucensis de rigo/ rugi/ rutii</i>).
Lucca	Henry III (1039-1056)	1.00	88% [882/1000 EDXRF]	0.88 g.	Matzke, 1993, p. 189, type H.1a, no. 22 (<i>denarius lucensis de rigo/ rugi/ rutii</i>).
Lucca	Henry IV (1056-1106)	1.05 - 1.10 g.	75-90%	0.79 - 0.95 g.	Matzke, 1993, p. 189, type H.2a, nos. 25-28 (<i>denarius lucensis de rigo/ rugi/ rutii</i>).
Lucca	Henry IV (1056-1106)	1.05 g.	86% [862/1000 EDXRF]	0.90 g.	Matzke, 1993, p. 189, type H.2b, no. 29.
Lucca	Henry IV (1056-1106) or Henry V (1106-1125)	0.95 g.	50%	0.475 g.	Matzke, 1993, p. 190, type H.3a, no. 34 (<i>denarius miçinus</i>).
Lucca	1129	—	—	0.38 g.	Schiaparelli and Baldasseroni, eds., 1909, no. 905, 1129 December 14, p. 121-122. ²
Lucca	1129 to c.1160	0.92 g. ³	over 40%	over 0.35 g.	Matzke, 1993, pp. 190-191, type H.4a, nos. 42-44 (<i>denarius lucensis infortiatus/affortiatus</i>).

¹ In the column for fineness, the silver content is given in terms of the percentage of silver *vis-à-vis* the total metallic content and, in cases where scientific tests have been performed on individual specimens, in parts per thousand. The scientific tests employed to determine fineness involved the measurement of the surface of individual coins with auxilliary ‘Energy dispersing x-ray fluorescent light’ analysis (EDXRF).

² The document, which records the transfer of a piece of property that was being held ‘in pignore [...] pro sol[idis] LXVIII de den[ariis] vetuli[s]’, stipulated that if the original owner of the property sought to recover the property using debased coinage, he would be required to settle the account at the rate of five debased *denarii* to every four of the old *denarii*: ‘Si iam dicta moneta in commutazione evenerit, rederet quinque pro quattuor’.

³ The weight of one examples of this type, no. 42, was reported by Matzke as only 0.79 grams.

Provenance	Dating	Weight (grams)	Fineness (%)	Weight (grams AR)	Source
Lucca	c.1160 to 1181/1182	0.87 - 0.92 g.	about 40%	0.35 - 0.37 g.	Matzke, 1993, p. 191, type H.4b, nos. 47-48 (<i>denarius lucensis comunis</i>)
Pisa	1164	—	—	0.37 g.	Imperiale di Sant'Angelo, ed., 1938, 2, no. 4, 1164 September 16, pp. 10-13, esp. 13.
Pisa	1179	—	—	0.19 g.	Ceccarelli Lemut, 1979, pp. 69-70; Cipolla, 1975, p. 42.
Pisa	1181/1182 to 1192 or c.1200 ⁴	0.80 - 0.85 g.	25%	0.175 g.	Matzke, 1993, p. 191, type H.4b, nos. 50-52 (<i>denarius pisanus</i> , type 1).
Lucca	1181/1182 to c.1200	0.80 - 0.85 g. ⁵	about 15%	0.12 - 0.13 g.	Matzke, 1993, p. 191, type H.5a, nos. 53-55 (<i>denarius lucensis brunus</i>)

⁴ Matzke claimed that Pisan *denarii* of this period were similar in terms of weight and fineness to those of Lucca, though Pisan *denarii* were certainly visibly distinguishable from those of Lucca after the monetary convention of 1181/1182, and they probably differed in terms of fineness if not weight. He also gave the terminal date for this type of *denarius pisanus* as either 1192 or about 1200. The question regarding the terminal date for this type of *denarius pisanus* hinges on whether references to the 'new' *denarii* of Pisa dating from 1190-1192 were intended to differentiate the coinage of this period from coins struck before the monetary reform of 1181/1182 or from the reform coinage. Evidence from 1192 indicating that one *solidus* of the new money was equivalent to fourteen *denarii* of the 'old' money nevertheless suggests that the new *denarii* contained about 16.6 per cent more silver per coin than the old *denarii*, while *denarii* struck before the 1181/1182 reform appear to contained about 9.2 per cent more silver than those struck after the reform.

, though the terminal date of the type of *denarii* struck at Pisa after the 1181/1182 monetary convention should be 1192, since twelve 'new' *denarii* of 1192 were equivalent to fourteen 'old' *denarii*.

⁵ According to Matzke, most specimens of this type weigh between 0.80 and 0.85 grams, but the single specimen measured for fineness, no. 54, weighed only 0.70 grams. The silver content of this coin, which is in a private collection, was measured at 14.9% through 'potentiometrische Titration' analysis.

Provenance	Dating	Weight (grams)	Fineness (%)	Weight (grams AR)	Source
Pisa	1192 to 1200	0.70 g.	28.5%	0.20 g.	Ceccarelli Lemut, 1979, p. 62, n. 43, citing ASPisa, <i>Casalini</i> , no. 52, 1192 March 17.
Pisa	1192/1200 - 1216/1217	0.70 g.	—	—	Matzke, 1993, p. 192, type H.5b, no. 57 (<i>denarius pisanus</i> , type 2).
Pisa	1202	—	—	0.195 g.	Santini, ed., 1895, <i>Capitoli</i> , no. 40, 1202 October 24, pp. 83-93, esp. 83.
Pisa	1204	—	—	0.175 g.	Jesse, ed., 1924, no. 370, 1203-1204, pp. 249-252, esp. 251.
Pisa	1216/1217 - c.1250	0.70 g.	—	—	Matzke, 1993, p. 192, type H.5b, no. 58 (<i>denarius pisanus</i> , type 3).
Pisa	1220	—	—	0.153 g.	Huillard-Bréholles, ed., 1852-1861, 2, pt. 1, unnumbered, 1220 November 25, pp. 37-40, esp. 37-38.
Pisa	1226	—	—	0.1875 g.	ASF, <i>Diplomatico</i> , Riformagioni, Atti pubblici (<i>a quaderno</i>), 1209 [act dated from 1226 August 20].
Pisa	1237	—	—	0.183 - 0.177 g.	Santini, ed., 1895, <i>Atti di giurisdizione</i> , no. 47, 1237 November 19, p. 269.
Pisa	1242	—	—	0.1948 g.	
Pisa	1245	—	—	0.1948 g.	

The are, obviously, several problems surrounding the interpretation of the price stipulations in land conveyances. They depend on an understanding of the coinage, but the coinage of Tuscany particularly in the later twelfth and early thirteenth centuries is still poorly understood. The silver *denarii* of Tuscany are extremely difficult to date, owing to the immobilisation of types.³⁵ Moreover, the state of knowledge concerning the silver content of Lucchese and Pisan *denarii* is based either on scientific tests of only a few samples or on documentation pertaining to the relationship between the coinage and the mark or the *libra*, which simply do not correspond, particularly after the introduction of the *grossus*.³⁶ The documentary evidence would suggest that the amount of fine silver in Pisan coinage remained essentially stable at about 0.19-0.2 grammes per coin from 1190 to 1228, but this suggests that the earliest *grossi* should have contained 2.28-2.4 grammes of silver per coin. Surviving specimens of Tuscan *grossi* from about 1250 typically weighed between 1.6 and 1.8 grammes, however, and even the fin-

³⁵ After 1181, as noted above, Lucchese *denarii* were struck in the name of the emperor Henry III, which was indicated on the coins by **H** in the centre of the obverse, while Pisan *denarii* were struck in the name of either Frederick I Barbarossa or Conrad, denoted by either **F** or **C** on the obverse. Subsequent issues continued to be struck according to the same type, which makes any chronological arrangement of the specimens problematic. The difficulties involved in dating Lucchese and Pisan *denarii* are further compounded by the fact that coins of the later twelfth and thirteenth centuries are not well represented in numismatic collections. Few hoards of Tuscan *denarii* from this period have come to light, which is at least partly due to the availability of larger fine silver coins for hoarding from about 1228 and to the availability of fine gold coins from 1252. Italian law also provides few incentives for maintaining the integrity of coin hoards, with the result that coin hoards are often dispersed and smuggled to Switzerland for sale. A notable exception is a hoard of 338 *denarii* primarily from the mint at Arezzo and dated probably from the later thirteenth or early fourteenth century. See Stahl, 1988a. Moreover, the coins themselves are not especially appealing from an aesthetic point of view, which has served to limit the interest of collectors and museum curators.

³⁶ The metallic content of gold coinage can be inferred relatively easily and inexpensively by testing for the weight and the specific gravity of the specimen, but specific gravity measurements of silver coinage are problematic owing to similarities in the specific gravities of silver and the base metals typically used as alloys. Silver coinage therefore can be analysed accurately only by means of expensive scientific tests such as neutron activation analysis or through chemical analyses that subject the specimen to damage. On the measurement of the metallic content of gold coins by means of the specific gravity method, see Hughes and Oddy, 1970; Oddy and Hughes, 1972.

est specimens contained less than 91 per cent silver.³⁷ It is not at all clear, in other words, that the documentary evidence for the relationship between coinage and the mark accurately depicts their relative values, probably because it fails to take into account minting costs.³⁸

³⁷ Equation (1) illustrates the hypothetical weight of the silver *grossus* with a silver content of 95 per cent on the basis of the relationship between the *denarius* of Pisa and the mark or *libra* as gleaned from the documentary record. Equation (2) illustrates the hypothetical silver content of the *denarius*, which is to say the twelfth part of the *grossus*, on the bases of the upper and lower margins of both the weight and fineness of the *grossus* as gleaned from the numismatic record.

$$\begin{aligned} (1) \quad \text{Denarius} &= 0.1948 \text{ g. AR} \cdot 12 = 2.3376 \text{ g. AR} \cdot (1.00/0.95) = 2.4606 = \text{Grossus} \\ (2a) \quad \text{Grossus} &= 1.60 \text{ g.} \cdot 0.84 \text{ AR} = 1.344 \text{ g. AR} / 12 = 0.1120 \text{ g. AR per denarius} \\ (2b) & 1.60 \text{ g.} \cdot 0.91 \text{ AR} = 1.456 \text{ g. AR} / 12 = 0.1213 \text{ g. AR per denarius} \\ (2c) & 1.80 \text{ g.} \cdot 0.84 \text{ AR} = 1.512 \text{ g. AR} / 12 = 0.1260 \text{ g. AR per denarius} \\ (2d) & 1.80 \text{ g.} \cdot 0.91 \text{ AR} = 1.638 \text{ g. AR} / 12 = 0.1365 \text{ g. AR per denarius} \end{aligned}$$

See again Bernocchi, 1974-1985, 3; Stahl, 1997.

³⁸ Very little is known about minting costs during the period under scrutiny. Seignuriage, which is to say profits, from the mint at Pisa in 1179 appear to have been twelve *denarii*, or one *solidus*, from every mark of silver that passed through the mint. See Ceccarelli Lemut, 1979, pp. 69-70; Violante, 1979, no. 1, 1173 December 29, p. 169; no. 2, 1173 December 31, p. 170. If the Pisan mint was obtaining 1128 *denarii* per mark of silver, as suggested above, then seignuriage would have amounted to about 1.06 per cent. At Venice in 1278, seignuriage was twenty-four *denarii*, and it had increased to twenty-six *denarii* by 1319. See Stahl, 1988b, p. 103.

12. Bishops of Florence, 1008-1321

(Dameron, 1991, p. 205 [Appendix A])

BISHOPS OF FLORENCE	DATES
Ildebrando (Ildebrandus)	1008-1024
Lamberto (Lambertus)	1025-1032
Attone (Atto)	1032-1046
Gerardo (Gerardus) [Pope Nicholas II, 1059-1061]	1046-1061
Pietro Mezzabarba (Petrus Mezzabarba)	1062-1068
Ranieri (Rainerius)	1071-1113
Goffredo (Gottifredus)	1113-1142
Attone (Atto II)	1143-1155
Ambrogio (Ambrosius)	1155-1158
Giulio (Julius)	1158-1182
Bernardo (Bernardus)	1182-1187
Pagano (Paganus)	1187-1190
Pietro (Petrus)	1190-1205
Giovanni da Velletri (Johannis Velletrus)	1205-1230
Ardingo (Ardingus Foraboschi)	1231-1247
Filippo Fontana (Philipus Fontana)	1250-1251
Giovanni de' Mangiadori (Johannis Mangiadori)	1251-1275
Iacopo Rainucci (Jacobus Castelbuono)	1286
Andrea de' Mozzi (Andreas Mozzi)	1286-1295
Francesco Monaldeschi	1295-1301
Lottieri della Tosa (Lotterius della Tosa)	1302-1309
Antonio degli Orsi (Antonius Orso)	1309-1321

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Manoscritti

48BIS (*Bullettone*)

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