State Intervention and Small–Scale Farming in Spain, 1939 – 1955. Case Studies of Wheat, Olives and Wine.

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ABSTRACT

This thesis analyses the influence of Francoist agrarian policy on agricultural output in Spain in the 1939-55 period. The focus is on the wheat, olive and wine sectors, and special attention is given to small-scale farmers. Agrarian policy included price-fixing, production quotas and rationing of consumption. In the historical literature, this policy is often blamed for the post-Civil War decline in output. Yet, the present analysis states that this interpretation is erroneous.

Producers and consumers circumvented intervention by creating a black market. When earnings from this source are included, value of output per unit of land remained close to pre-war levels. This also holds for small-scale farmers, although they benefited less from the black market than large-scale farmers did. It is then concluded that the decrease in wheat output was caused by lack of work animals and fertilisers rather than official prices. Intervention in the wheat sector was therefore desirable from a social viewpoint, but the system could have been improved.

Average olive oil output was only below the pre-war level immediately after the war. Consequently, state intervention was unnecessary after 1942-43 and could have been abolished long before it was finally done in 1952. Thus, the intervention in the olive sector is an example of state failure.

In the wine sector, policy aimed at increasing farm prices rather than decreasing consumer prices. Table wine consumption declined after the war, but this was counteracted by higher demand for high-alcohol white wine for the production of brandy and industrial alcohol. The winegrowers in Toledo successfully reacted by increasing output of high-alcohol white wine. Yet, the strategy led to overproduction, and state protection was increased in 1952-53.

Consequently, state intervention had different effects on different sub-sectors. However, in none of the cases did output decline significantly because of the price policy.

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LIST OF ABBREVIATIONS

CCEV = *Comisión de Compra de Excedentes de Vino* (The Commission for the Buying of Surplus Wine)

CGAT = *Comisaría General de Abastecimiento y Transporte* (The General Commissary of Transport and Trade)

HSGL = *Hermandad Sindical de Ganaderos y Labradores* (the Sindical Brotherhood of Farmers and Stockbreeders)

INE = *Instituto Nacional de Estadística* (The National Statisticical Institute)

INI = *Instituto Nacional de Industria* (The Nacional Institute for Industrialisation)

SNO = *Sindicato Nacional de Olivo* (The National Trade Union for Olive Oil. The SNO was originally called the "SVO")

SNT = *Servicio Nacional de Trigo* (The National Wheat Board)

SNVCB = *Sindicato Nacional de la Vid, Cervezas y Bebidas* (The National Trade Union for Wine, Beer and Beverages)

SRA = *Servicio de Recuperación Agraria* (the Agrarian Recovery Service)

SVO = *Sindicato Vertical de Olivo* (The Vertical Trade Union for Olive Oil. The SVO was later called the "SNO")

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INTRODUCTION

This thesis explores the relationship between political intervention in the economy and agrarian output in Spain between 1939 and 1955. In the 1940s and early 1950s, the Spanish economy was subject to widespread state intervention. This policy was driven by the aim of the Franco regime of achieving a high degree of economic self-sufficiency. In the historical literature, this economic policy has been identified as the main reason for Spain's poor economic performance in the post-Civil War period.[1]

In the 1940s, the agrarian sector in Spain employed approximately half of the active population and produced more than 30 percent of GDP. An understanding of the economic conditions in the agrarian sector in the 1940s is, therefore, crucial for the interpretation of the effects of state intervention on the economic development of Spain. The thesis focuses on the wheat, olive and wine sectors, emphasising the economic impact of the intervention in geographic areas where small-scale farming was prevalent.

From the end of the Civil War, it was compulsory for farmers to sell almost all of their production to a state monopoly at fixed prices. In real terms, these were below the pre-war level. Furthermore, producers were to some degree obliged to cultivate specific crops, with minimum target levels of output for key crops. The state's regulation of agriculture coincided with a significantly lower level of output than before the war, although the decline in output recorded in the contemporary statistics was partially offset by a thriving black market.[2] Finally, the removal of most of these controls in the early 1950s coincided with an increase in output.

Since the early 1970s, it has been common in the historical literature to understand the relation between the economic policy and the level of agrarian production as one of "cause and effect".[3] Several influential works by Carlos Barciela in the early 1980s supported this interpretation.[4] Mainly based on an analysis of the wheat sector, he argued that state intervention impeded output growth. According to this interpretation, the post-war decline in output was principally the result of a

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[1] See Sections 1.1. and 1.2.

[2] Yet, the pre-war peak agrarian output was not surpassed until 1956.

[3] This viewpoint was forwarded in Clavera et al (1973), which was one of the first comprehensive treatments of the political economy of early Francoism.

[4] Barciela (1981a) was the first analysis of the *Servicio Nacional de Trigo* (the National Wheat Board) which was the state monopoly responsible for the day to day intervention vis-à-vis the farmers. The argument on the relation between the economic politicy and the working of the agrarian sector was further elaborated in subsequent works: Barciela (1981b), Barciela (1983a), Barciela (1986b), and Barciela and García González (1983).

movement along the supply curve caused by the development of real prices paid to the farmers.

However, two important factors favoured the farmers and this calls into question any theory based solely on the development of official prices. First, a large black market existed where prices were much higher than official prices. Second, agrarian wages in the 1940s grew less than official prices paid to the farmers. Consequently, studies of the economies of individual large-scale farms tend to show that these experienced favourable conditions throughout the period.[5] This would suggest that official prices were not the dominant factor in determining the rentability of farms. Hence, the cause-effect relation between official prices and the level of production is, at least, debatable.

Small-scale farmers appear to have been those who benefited the least from the system of intervention. Hence, one of the main goals of this thesis is to analyse the economic consequences of the agrarian policy for this segment.[6] Focusing on the wheat, olive and wine sectors, the analysis is carried out at the national level and for the provinces of Cuenca, Jaén, and Toledo. These three crops covered a very large part of the post-war Spanish agrarian sector. Wheat was by far the most extensive crop in the period, while olives and grapes were the two most widespread perennial crops. While the cultivation, elaboration, commercialisation and consumption of almost all crops, including wheat and olives, were subject to intensive state control, this was not the case for the wine sector for most of the years. The analysis of the wine sector, therefore, makes it possible to some extent to carry out a comparative assessment of the impact of state intervention on the agrarian sector.

The selection of Cuenca, Jaén, and Toledo out of Spain's 50 provinces is based on the importance of the three crops in each of these areas. Cuenca is situated in the La Mancha region between Madrid and Valencia, and in the 1940s and 1950s, the province was predominantly an agrarian area. Traditional southern Spanish dry-land crops such as cereals, grapes, and olives dominated agriculture in Cuenca, like the rest of La Mancha. The largest amount of land was dedicated to wheat, and in the 5 years preceding the Civil War Cuenca was the province with the largest average output.

[5] Works forwarding this interpretation are Naredo (1981), Naredo (1983) and Naredo, Ruíz-Maya and Sumpsi (1977), and the viewpoint was also accepted in Simpson (1995).

[6] In the historical literature, it is normally accepted that small-scale farmers fared worse in the 1940s than large-scale farmers. The reasons are that small-scale farmmers gained less from the development of agrarian wages, and had a smaller relative marketable surplus that could be sold in the black market. Furthermore, small-scale farmers often lacked political connections that could facilitate the selling of a part of the production outside the control system.

Consequently, pre-war production was much greater than the provincial consumption. The social structure was characterised by very few large-scale farms and a relatively small proportion of landless farm labours in comparison with the south of Spain.

The second province is Jaén in Andalucía, which was Spain's most important producer of olive oil in the period. The importance of the cultivation of olives makes the province very useful for this study. Furthermore, the social structure of the province can be divided in two relatively well-defined areas which both had olives as the main crop. This means that within a limited geographical area it is possible to assess differences in the economic consequences of the agrarian policy for small and large-scale farmers cultivating the same crop.

Toledo is the last province and is located in the La Mancha region, which in the 1940s was the largest wine-producing area in Spain. Before the war, approximately six percent of the national production of wine came from Toledo, and grape cultivation was widespread among the small-scale farmers.

This thesis could have been restricted to a single province where all three crops were grown, but the use of several provinces compensates for the paucity of available sources. The Franco regime did not allow the existence of non-official organisations. Consequently, it was the central administration or other official organisations that produced almost all sources on the agrarian sector. Since all published material was censored before publication, printed reports are often poor in factual information and official publications dealing with agriculture are mainly concerned with technical aspects. A further obstacle for the investigator is that much unpublished material has never made it to the relevant archives, making what is available on the three provinces somewhat uneven. Spreading the scope to three provinces has therefore two main advantages: that the analysis covers a wider geographic area, and that there are increased possibilities of finding material for the different sub-sectors.

Since it is the aim of this thesis to explore the relationship between the political intervention in the economy and agrarian production, the conditions for the small-scale farmers cannot be seen as an isolated phenomenon. Several chapters are therefore devoted to the treatment of questions dealing with the agrarian sector at the national level. These chapters are important in their own right, as their findings make a significant contribution to the debate on the relation between state intervention and agrarian output. Yet, their conclusions also serve as an essential background to the analyses at the local level.

This thesis is organised in nine chapters. The first offers a review of the existing literature on the subject. As an introduction, the chapter starts with a short outline of the general economic development in the 1940s. This is followed by a detailed discussion of the literature on the agrarian sector.

The second chapter starts with a theoretical framework for the analysis of state intervention in the production and distribution of foodstuffs. The discussion deals with the case for and against state intervention in relation to the question of economic efficiency versus social welfare. The theory is then applied to the policies of a number of states during World War II, illuminating the range of possibilities that were open to the Franco government.

The next two chapters establish the broader national context for the provincial case studies that follow. Chapter 3 examines the conditions governing the official, the parallel and the black market for wheat. This includes a discussion of whether it could have been possible to increase significantly the output of both wheat and agrarian production as a whole. Chapter 4 looks at the market for olives and olive oil, much in the same way as the chapter on wheat. The reason for having separate chapters on the two crops is that in spite of state regulation being relatively similar in the two cases the consequences in many ways turn out to be rather different.

Chapter 5 marks the change from the national to the provincial level. It gives a background description of the environmental conditions as well as the composition of the agrarian sectors in Cuenca, Jaén and Toledo. These are then treated separately in Chapters 6, 7 and 8. In each of these, the relevant sub-sectors are the core of the study, but within the context of the whole of the agrarian sector.

Chapter 9 concludes the thesis with a general evaluation of the results of the preceding chapters. It is argued that the post-war level of agrarian output was not simply the product of a movement along the supply curve caused by falling official prices. In the case of wheat, the post-war decline in output was the outcome of a shift of the supply curve to the left caused by a lack of work animals and fertilisers. These factors led to a significantly smaller cultivated area and a simultaneous decline in yields. Consequently, the average farm income declined while the economic outcome for the individual farmer depended on his ability and/or luck to maintain a stable cultivated area and selling a part of his production in the black market. However, when black market earnings are included, the value of production in real terms per unit of cultivated land does not appear to have been significantly smaller in

the 1940s than before the Civil War. This result makes it relevant to analyse how the problem of supply was solved in the beginning of the 1950s.

Barciela maintains that this was due to the introduction of higher official prices and the relaxation of the controls from 1952-53. The implication is that these steps could have been taken earlier.[7] However, our conclusion that the post-war decline in output was the outcome of a shift of the supply curve to the left questions both of these interpretations. First, the factors that were in short supply – i.e. work animals and chemical fertilisers – were very difficult to replace before the early 1950s. Second, even small-scale farmers appear to have been able to maintain the level of income per unit of land. Finally, when fertilisers became available on a larger scale in 1949-50 production increased. This happened although the official prices paid to the farmers remained below the pre-war level in real terms.

Nevertheless, the agrarian policy of the Franco regime was far from optimal for increasing wheat production and its distribution. A parallel market was introduced around 1950 and this greatly increased the part of the output that was sold through legal channels. This initiative could have been taken much earlier if it was not for a politically-motivated opposition to a deregulation of prices. Yet, the gains in terms of increased production probably would have been limited. Nevertheless, the earlier introduction of the parallel market would greatly have increased the transparency of the market, to the benefit of producers, consumers and the state alike. The policy used in the case of wheat was therefore not the best possible, but its main effect was on the distribution of the produce rather than on the level of output. This is clearly at odds with the dominant interpretation found in the historical literature of the last twenty years.

In the case of olives, the situation was characterised by the fact that the main capital asset of this sub-sector – i.e. the olive trees – survived the Civil War practically unhurt. In this respect, olive farmers did not suffer from the same problems as the wheat farmers, i.e. that it was difficult to maintain the pre-war level of cultivated land. However, small-scale olive farmers were in a less favourable position to sell in the black market than the wheat growers were. On the other hand, the higher proportion of work done by wage labour in the olive sector improved the economic situation of olive farmers due to the decline in real wages after 1939. The net result of these developments appears to have been that both the value of production per unit of land

[7] See above in Footnote 4.

and the net income for the small-scale farmers remained at least at the pre-war level during the 1940s.

The official contemporary statistics show a decline in the yields of olives in the post-war years. However, the findings of this thesis indicate that this is likely to be mainly the result of underreporting to conceal the farmers' black market activities. There seems, therefore, not to have been a fall in production due to a movement along the supply curve caused by the level of official prices. The supply of olive oil per capita in the Spanish market in the 1940s was on average similar to the pre-war level. Nevertheless, it seems likely that in the first two or three years after the Civil War there was an inadequate supply, due to lower than average yields. In these circumstances, a regulation of the market could be justified from a social point of view.

State intervention seems to have had a limited economic effect on the small-scale olive farmers as well as on the level of production. Yet, it did introduce market distortions in the form of a relatively important black market. These results confirm the conclusion from a somewhat overlooked article by Naredo. He shows that production of olives and olive oil could be very profitable in the late 1940s and early 1950.[8] This was especially the case if the farmers also controlled the production of the oil, which, however, was seldom the case for the small-scale farmers.

Until now, the main study of the olive sector has been that of Tió.[9] This dealt mainly with the political aspects of the regulation of the sector rather than levels of output. Apparently, Tió is somewhat doubtful about the effect of the state's regulation on output. When compared to the results from this thesis, the doubt seem to be the consequence of an insufficient division of the analysis in two sub-periods – i.e. the early post-war years and the second half of the 1940s.

In the case of the wine sector, nothing so far has been done on either the period in the context of the agrarian policy or as a point of comparison with other crops. Hence, the results from this thesis are new when compared to the existing literature on the effects of the agrarian policy. As happened in the olive sector, the main capital asset of the agrarian part of the wine sector – the vines – survived the Civil War relatively unhurt at the national level. However, this was not the case in Toledo[10] where a combination of warfare and phylloxera led to an important decline in the productive area. After the Civil War, there was a decline in domestic consumption of

[8] Naredo (1983).
[9] Tió (1982).

wine as well as in exports. However, this was counteracted by a growth in demand for low-quality, high-alcohol wine used for distillation into brandy and industrial alcohol. The winegrowers in Toledo reacted to this change in demand by increasing the output of grapes, which produced high-alcohol white wine. The result was that the farmers received better prices in real terms than before the war. In spite of this, it took more than 20 years before vines occupied the same amount of land as in 1935. Although the wine sector was not subject to the same control as the wheat and olive sector, the situation was still not so attractive that a massive shift from yearly crops to grapes was carried out. According to the historical literature,[11] that would have been expected in a place like Toledo where the trend since the beginning of the 20th century had been exactly this process of substitution. The economic conditions in the wine sector changed in the early 1950s when two bumper harvests resulted in declining prices. This led to a shift in the Government's policy with the introduction of floor prices being the most important feature. The new policy ensured the continuos expansion of output.[12]

Seen as a whole, it becomes clear that the agrarian policy of the Franco regime was not the best possible in the 1940s. However, contrary to what has been stated in the economics literature, the main effect appears to have been on the distribution of the produce. The post-war decline in wheat production was not the result of a movement along the supply curve, but of a shift of the supply curve to the left due to lack of work animals and fertilisers. The production recovered only when the supply curve shifted back to the right with the better access to these two factors in the early 1950s. In this light, some sort of intervention in the wheat market was desirable from a social point of view. The alternative could a serious deterioration of the living standard of the poorer part of the population, especially since bread was a crucial ingredient in the diet. The necessity of securing an equal distribution of basic foodstuffs to the whole of the population was furthermore the common policy throughout Europe during and after World War II. On this point, the Spanish experience of state intervention was not an exception from contemporary political practices.

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[10] Nor was it the case in Cuenca, for that matter.
[11] Most notably the earlier mentioned works by Barciela.
[12] The process lasted until the early 1980s, when the sector was forced to reduce output when Spain became a member of the EEC.

CHAPTER 1: ECONOMIC CRISIS, STATE INTERVENTION, AND THE ROLE OF THE AGRARIAN SECTOR IN SPAIN, 1939-55

1.1: THE CRISIS IN THE SPANISH ECONOMY BETWEEN 1939 AND 1953

In 1939, the Franco regime inherited an economy where the agrarian sector was still very significant. More than half of the active population was employed in agriculture, and it produced almost a third of GDP output (Table 1.1).

Table 1. 1: GDP and employment composition in Spain, 1929-75.

GDP	1929	1940	1950	1960	1975
Agriculture	29	33	31	24	10
Industry	25	19	24	31	30
Construction	8	4	3	4	8
Services	38	44	42	42	52
Employment	**1929**	**1940**	**1950**	**1960**	**1975**
Agriculture	48	53	50	42	24
Industry	28	20	20	22	27
Construction	3	4	6	7	10
Services	21	23	24	29	50
(All figures in percent)					
Source: Prados de la Escosura and Sanz (1996), p. 368.					

Some changes in the structure of employment and output took place between 1950 and 1960. Yet, it was only in the 1960s that the process really accelerated, resulting in a notable decrease in the importance of the agrarian sector within the economy.

In Table 1.2 we see that in the composition and in the development of its GDP, the Spanish economy followed a pattern also seen in other southern European countries like Italy and Portugal. In all three countries agriculture continued to play a prominent role for a longer period than was the case in a more developed economy like the French. Both the agrarian and industrial sectors had been sheltered by protectionist policies since the latter part of the 19th century.[13] Consequently, the Spanish economy was relatively closed before the Civil War compared to other countries,[14] and, as we observe in Table 1.3, this characteristic was reinforced during the first half of the Franco regime.[15]

[13] The ongoing debate in the 19th century between free traders and protectionists was definitely settled in favour of the protectionists with the tariff of 1891; M.-J. González (1980), p. 82.

[14] Whether the relatively closed nature of the Spanish economy turned out to be an advantage in relation to the international economic crisis in the early 1930s has been the object of some debate in the economics literature. For a short outline of the discussion, see Prados de la Escosura and Sanz (1996), p. 361, and Hernández Andreu and García Ruiz (1996), pp. 249-253.

[15] As will be explained later, the process of closing the economy even further than was the case before 1935 was a deliberate ideological choice of the regime.

Table 1. 2: Origin of GDP at market prices in France, Italy, Spain, and Portugal, 1925-64.

	France			Italy		
Years	Agriculture	Industry[1]	Services	Agriculture	Industry[1]	Services
1925-29				37	30	33
1935-39	22[2]	36[2]	42[2]	29	31	40
1950-54	13	48	39	30/22[3]	37/36[3]	33/42[3]
1960-64	8	48	44	13	41	46
	Portugal			**Spain**		
Years	Agriculture	Industry[1]	Services	Agriculture	Industry[1]	Services
1925-29				29[5]	33[5]	38[5]
1935-39				33[6]	23[6]	44[6]
1950-54	31[4]	32[4]	37[4]	31[7]	27[7]	42[7]
1960-64	21	35	44	24[8]	35[8]	42[8]
(All figures in percent)						
1) Includes mining and construction.						
2) 1938 - calculation based on N.D.P.						
3) The first figure is for 1950/51, the second is for 1951/54. Meanwhile there was a change in concepts.						
4) 1953/54.						
5) 1929.						
6) 1940.						
7) 1950.						
8) 1960.						
Sources: Mitchell (ed.) (1992), and Table 1.1.						

Table 1. 3: Degree of openness - ((Imports + exports) / GDP) - of the Spanish, Italian, French, and British economy, 1830-1961.

Years	Spain[1]	Italy	France	United Kingdom
1830	6	...	8	22
1860	11	15	18	24
1870	...	16	24	44
1890	26	17	28	44
1913	24	24	33	48
1929	20	22	25	39
1938	13[2]	13	18	24
1950	4	18	21	36
1961	16	22	21	29
(All figures in percent)				
1) Peninsular Spain and Balearic Islands.				
2) Data for 1935.				
Source: Carrereas (ed.) (1986), p. 331.				

When analysing the Spanish economy after 1939, it is important to remember that these characteristics were not only the outcome of a long process, but were also the result of the peculiar type of regime emerging after the Civil War. The Franco regime was the product of the military coup of July 18, 1936. Failing to overthrow the Republican regime, the coup turned into a Civil War that lasted nearly three years. During the war, parts of the Republican zone went through a revolutionary process including collectivisation in the agrarian sector. In spite of the war and the

collectivisation movement, destruction in agriculture and industry does not seem to have been very widespread.

This Civil War was a comparatively "low technology war", and did not result in the massive destruction of larger cities, with the exception of Oviedo.[16] In the major industrial centre of Bilbao, the city's defenders did not destroy the factories before the rebels conquered it.[17] Nor did Barcelona and the other cities with some industrial production suffer from widespread destruction.[18] At the same time output from the agrarian sector did not diminish significantly in the part of the country controlled by the rebels. This was also more or less the case in the zone still governed by the Republic until 1938.[19]

In spite of the relatively limited damages caused by the war, it was a lengthy process to recover pre-war peaks in economic activities. It took until 1954 to recover the 1929 level of real GDP per head, until 1952 to reach again the 1930 peak in industrial output, and until 1957 to pass for good the level of agricultural output in 1934 (Diagram 1.1), and until 1954 to reach the 1929 level of real income per head.[20] Therefore, it appears necessary to explore other explanations for the extremely slow recovery of pre-war levels for these macroeconomic indicators.

One factor was that the end of the Civil War coincided closely with the outbreak of World War II, which meant a partial interruption of international trade. However, during World War I Spain had made relative gains from being a neutral country. Rising prices for its exports, more than made up for the decline in volume, leading to a substantial surplus in the balance of trade between 1915 and 1919.[21] This situation was not repeated between 1940 and 1945, although the balance of trade as well as the balance of payment showed a modest surplus. Even so, Spain fared worse than other non-belligerent countries in foreign trade earnings.[22] After 1945 there was a chronic deficit on the current account, which however, until the mid 1950s was counteracted by an influx of short term and long term capital (Diagram 1.2).

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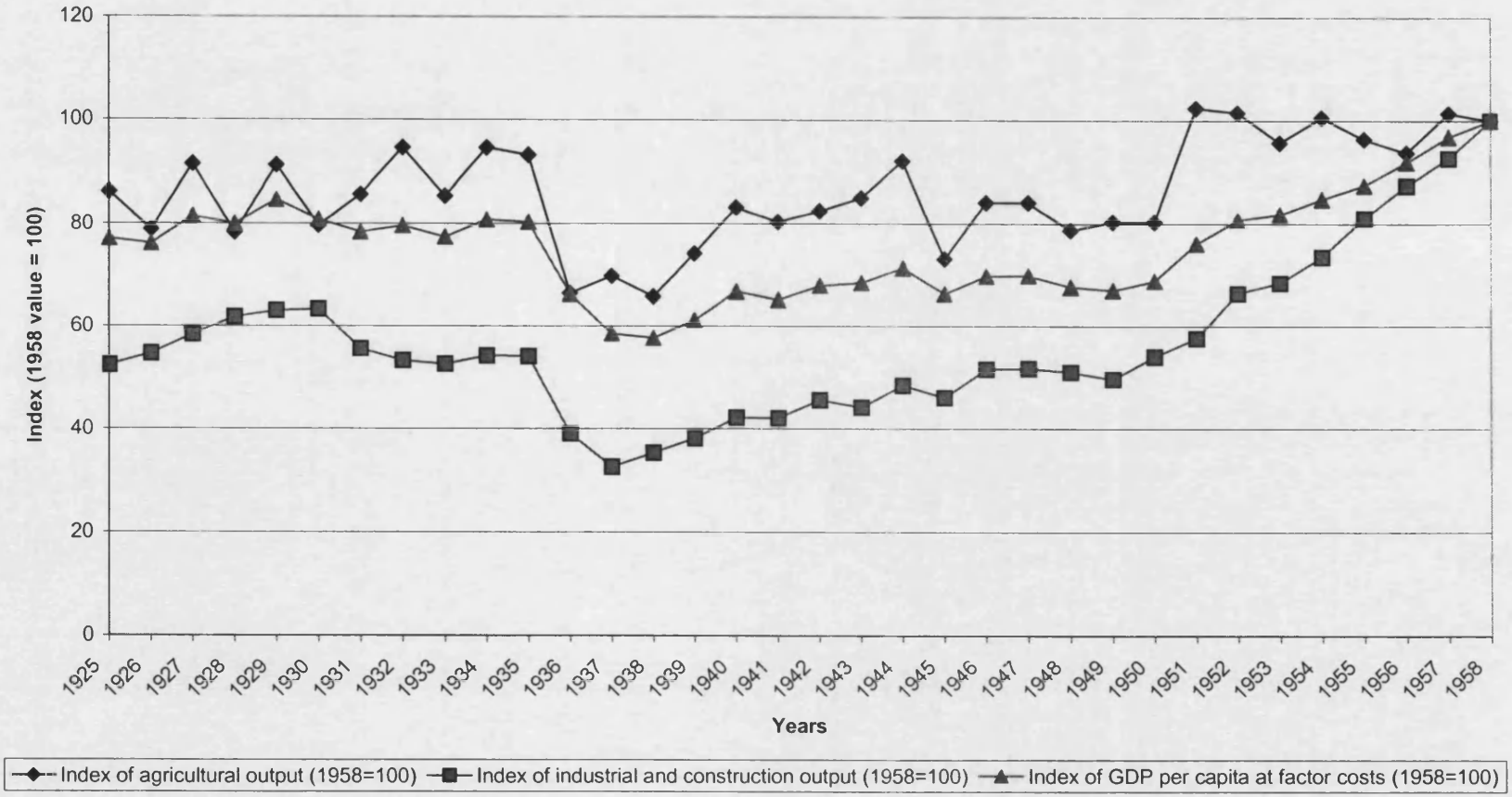
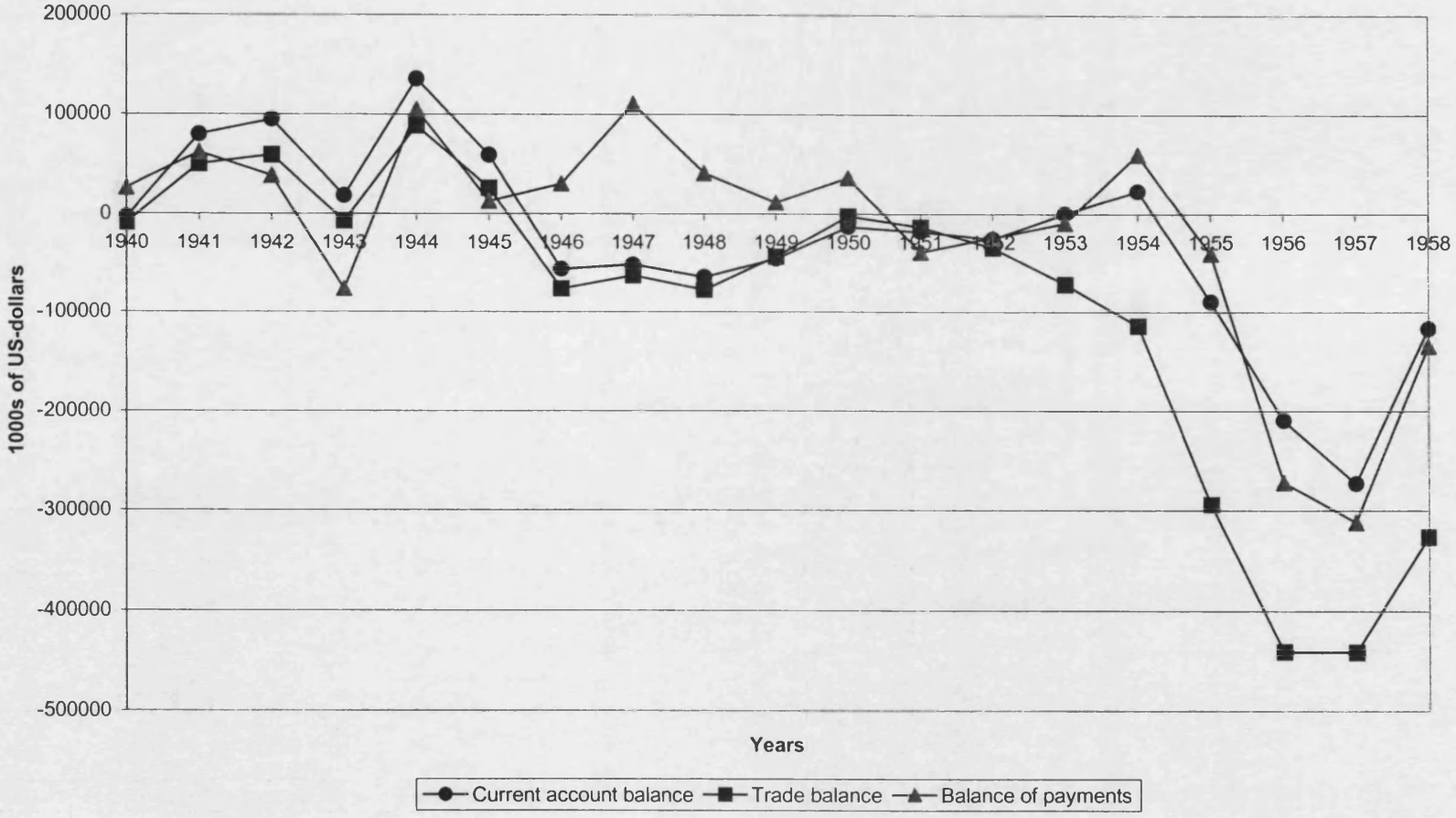
[16] Andrés-Gallego et al. (1989), p. 472.
[17] Fusi (1986), p. 318.
[18] Catalán (1995), p. 46-50; Vidal (1996), p. 441-442.
[19] Barciela (1983b), p. 657. Although this viewpoint is generally accepted in the historiography, dissident opinions still exist. In a book as recent as Vidal (1996), p. 443, the author maintains that the destruction in the agrarian sector was important. However, he does so without references to any literature on the subject, on a very weak statistical background, and without distinguishing between long lasting effects and short-term interruptions of production. However, he is far from the first author to do so, given that the low level of agrarian production in the 1940s was often blamed on wartime destruction by the propaganda of the Franco regime.
[20] Prados de la Escosura and Sanz (1996), p. 356.
[21] Carreras (ed.) (1986), p. 343.
[22] Catalán (1995), pp. 91-95, M.-J. González (1980), pp. 87-89.

Diagram 1.1: Indices of agricultural output, industrial output and GDP per capita in Spain, 1925-58 (1958=100).



Source: Prados de la Escosura (1995)

Diagram 1.2: Balance of payments, trade balance and current account balance for Spain, 1940-58



Source: Martinez Ruiz (1998).

Furthermore, to finance the war effort the Republican government had depleted the Spanish gold reserves, which were the third largest in the world before the Civil War. Hence, the Franco regime faced the problem of limited international reserves when it came to power in 1939, and although the situation had improved somewhat by 1945, it was far from satisfactory.[23] The result was that when export earnings decreased again after 1945, much-needed inputs and raw materials could not be obtained.[24]

Between 1946 and 1950, Spain passed through a period of international isolation which further exacerbated the situation. In February 1946, France closed its borders with Spain, and in December 1946 the United Nations approved a declaration urging its members to withdraw its ambassadors. The international attitude towards the Franco regime shifted again from the beginning of the 1950s, and the country was slowly readmitted into the international community. The international isolation had its background in the close links the regime had maintained with Italy and Germany from the outbreak of the Civil War until a relatively late date during World War II. Later, the reopening of international contacts coincided with the emergence of the Cold War when the western powers' strategic interests in Spain were raised.

Within this general picture, the domestic economy was characterised by persistently high levels of inflation between 1939 and 1951, with a yearly average of around 14 percent.[25] This is remarkable given that the government intended to maintain strict price and wage controls throughout the 1940s. In spite of the economic crisis, official figures for unemployment remained low throughout the period. The highest figure for unemployment is 475,000 in 1940 and the lowest was 107,000 in 1952 and 1953. Out of an active population of some 10 million, this gives an unemployment rate between 1.5 and 5 percent.[26] However, the statistics do not reflect the notorious underemployment in agriculture, which contained nearly 50 percent of the workforce.[27]

This brief description has given a quite depressing picture of the Spanish economy in the 1940s. Starting from a very low level of foreign reserves in 1939, the

[23] In 1939 the reserves were 27 mill $ in gold, which by 1945 had increased to 110 mill $ in gold; Catalán (1995), p. 93.

[24] This problem of the balance of trade was further aggravated by the overvaluation of the peseta, caused by the government's setting of the exchange rate at an unrealistic level - see Catalán (1995), pp. 158-160 and 169-174; M.-J. Gonzalez (1980), p. 112-114.

[25] Based on retail prices, M.-J. González reached the figure of an annual rate of inflation of 14 percent, while Prados de la Escosura and Sanz, using the GDP deflator reached the figure of 13 percent. M.-J. González (1980), pp. 36-38; Prados de la Escosura and Sanz (1996), p. 368. The highest rates of inflation were found in 1941-43, 1945-47 and 1950-51.

[26] In 1940, the active population was 9,220,000 while it was 10,793,000 in 1950; Mitchell (ed.)(1992), pp. 153 and 164.

opportunity of World War II to increase export earnings was not enough to solve Spain's economic problems. The crisis in agriculture caused a low level of export earnings and, at the same time, made it necessary to increase imports of foodstuffs in several years. Meanwhile, with the possibilities of imports constrained, the industrial sector suffered from a lack of raw material and capital goods. This double crisis in agriculture and industry went together with persistent inflation regardless of the government's intent to control prices and wages. This situation only improved from 1951 when aid from the United States helped to overcome bottlenecks in production. Industry and agriculture recovered pre-war levels, and the same occurred with real GDP and real income per head.

The historiography on the post-war economy has to a large degree dealt with the reasons for the poor economic performance asking questions like: Was the Civil War the main reason for Spain's economic problems in the 1940s? How did World War II affect the Spanish economy? What were the economic effects of the international isolation in the late 1940s? Was the economic policy of the Franco regime adequate for the circumstances?[28] Although these questions are difficult to answer completely, there is a broad agreement in the literature in blaming most of the post-war problems on the economic policies of the Franco government.

1.2: THE POST-WAR QUEST FOR INDUSTRIALISATION

The 1939-59 period is known as the "autarky years" of the Franco regime, but the literature generally distinguishes two sub-periods in the political economy of this era. The first running from 1939 to 1951 and the second from 1951 to 1959, with the change being that a gradual liberalisation of the economy took place after 1951 accompanied by economic growth.[29] The following description mainly focuses on the 1940s and early 1950s, which are at the core of the thesis. In this period the Spanish economy was subject to extensive political control. This can be seen as a response to the special economic problems that faced a country which had only recently emerged from a Civil War and in a situation where the rest of Europe was also at war.

But a second factor was also important in enacting widespread control over the economy: The Franco regime's strong nationalistic ideology. In the sphere of economic policy, this meant that a strong emphasis was placed on what was

[27] See Table 1.1.
[28] See Catalán (1995), pp. 41-59, for a short outline of these discussions.

considered economic independence from foreign powers. This was supposed to be gained through import substitution of basic industrial products, foodstuffs and raw materials, strict control of foreign trade, and a clear priority of which sectors were to be subsidised by the state.

In the historiography there has been a long discussion about whether this state intervention in the economy should be interpreted primarily as the result of the necessities imposed by the international conditions in the 1940s or as an intentional act of the regime.[30] However, in recent years there seems to be a relatively broad consensus among researchers favouring the latter interpretation.[31] As a result of this, the discussion has focused on the overall rationality of the economic policy, on the appropriateness and extent of the selected measures, on the duration of the intervention, and - not least - on the economic, social and structural consequences of the policy.

Concerning the economic priorities of the regime, we saw in Table 1.2 that the industrial sector of the Spanish economy in 1939 was relatively small when compared to countries such as France and even Italy. To the new government, this fact was at odds with the political desires for Spain being an economically, politically and militarily independent nation. According to Francoist ideology, the 19th Century liberal political system and a supposed absence of entrepreneurial skills in the Spanish population was to blame for this lack of industrialisation. The consequence of this line of thought was that the new authoritarian state should promote industrial development. The aim was to secure the supply of manufactured goods, raw materials and energy, improve the balance of payments, and obtain external military independence.

The creation in 1941 of the state holding *Instituto Nacional de Industria* (INI) - i.e. the National Institute for Industrialisation - was an important move in the pursuit of the regime's economic goals. The rationality of national self-sufficiency was clearly stated in the preface and the first paragraph of the law that created the

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[29] Prados de la Escosura and Sanz (1986), pp. 362-368.

[30] See Gámir (ed.) (1980), pp. 46-54, and Catalán (1995), p. 72, Footnote 60, for aspects of this discussion in the 1960s and 1970s.

[31] See for example Barciela (1986b), pp. 388-389, Catalán (1992), pp. 374-375, Catalán (1995), pp. 70-74, Clavera et al (1973), pp. 46-54 and pp. 83-90, Gámir (ed.) (1980), p. 50, M.-J. González (1980), p. 83, Preston (1995), pp. 297-98, 344-45, 665, 682, 785-786, Tusell (1993), pp. 52-57, Velasco Murviedro (1981), pp. 391-406, Viñas (1984), pp. 210-234. A variation of this viewpoint is found in Martín Aceña and Comín (1992), p. 425. These authors maintain that although the ideology of the regime favoured a policy of economic self-sufficiency, it was also partly induced by the international circumstances.

holding.[32] Through the years, the INI became involved in a large range of productions and services, and especially in the early years, there was an emphasis on industries related to national defence and energy.[33]

Although this strategy was disputed within the regime, the quest for an import-substitution industrialisation was to have widespread consequences for the economic policy adopted towards other sectors of the economy, including agriculture. The period where the policy of the regime in general was most directed by the ideology of autarky that was behind the creation of the state holding was undoubtedly in the 1940s, and especially between 1945 and 1951. In this last period, Suanzes, who was the founder/director of INI, was also Minister of Industry and Commerce.

However, in terms of output only relative meagre results were obtained. Furthermore, it was a common feature of the activities of the INI that little attention was given to opportunity costs of the investments in war related industry, resulting in a massive misallocation of resources.[34] Contrary to earlier beliefs, recent research has furthermore shown that INI in some cases behaved as a competitor to private enterprise, rather than acting as a subsidiary. This was especially the case in what were considered essential areas, such as the motorcar and fertiliser industry and in the production of energy.[35]

The strategy of industrialisation followed in the 1940s had serious consequences for the economic development of the country. First, the misallocation of resources led scarce capital away from more productive sectors in a period of slow economic growth. Furthermore, the emphasis on military needs was probably not the most effective way of obtaining economic growth. Secondly, the concentration on industrial development led to the neglect of the modernisation of the agrarian sector. Imports of inputs and capital goods used in agriculture were restricted, regardless that these could have improved the nutritional standards of the population, boosted productivity, increased exports and reduced imports. Thirdly, the Francoist analysis of the situation implied the necessity of a strict control of allocation of inputs. This lead to a

[32] The text is re-printed in Martín Aceña and Comín (1992), p. 429. The inspiration for the INI was a mix of various origins. The Italian *Istituto per la Recostruzione Industriale* in its post 1937 version, where it was supposed to play an active role in the further development of Italian industrialisation, undoubtedly served as inspiration. Nevertheless, the idea of developing a strong defence related industry had grown independently in Spanish military circles in several decades before the outbreak of the Civil War, and was further developed during this conflict. San Román (1999), pp. 59-162.
[33] Catalán (1995), p. 223.
[34] Martín Aceña and Comín (1992), pp. 440-441.
[35] Gómez Mendoza and San Román (1997). See San Román (1999), pp. 189-298 for case studies of the actuation of the INI with regards to energy, motorcars and the aeronautic industry, in connection with, respectively, the ENCASO plant, the SEAT factory and the CASA factory.

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complicated system of import controls, licensing and so on, which fostered rent seeking and further undermined the productivity of the industrial sector.[36]

A problem for economic development in general, and industrialisation in particular, was that the quest for rapid industrialisation arose as part of a nationalistic approach to economic policy. Intending to keep state control over the economic activity of the larger companies, foreign investment was hindered, and foreign ownership of shares in Spanish companies was restricted to a maximum of 25 percent.[37] As part of the same strategy, foreign companies established in Spain were harassed if their production was considered of vital interest to Spanish economic independence.[38]

Furthermore, there was a strong corporate element in much social and economic legislation, subjecting the labour market to fierce regulation. The suppression of independent trade unions was followed by the creation of "vertical trade unions", representing both employers and employees, which were then integrated into the state administration. The Ministry of Labour determined wages, and the leadership of the "vertical trade unions" was appointed from above right up to the end of the 1950s. The consequence for wage earners was a constant fall in real wages throughout the 1940s. In the agrarian sector a low point was reached in 1951, when real wages were close to 50 percent of the 1936 level (Table 1.4).[39]

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[36] Prados de la Escosura and Sanz (1996), pp. 362-369 .The conditions for the private sector was further complicated between 1948 and 1953, and then again from 1956 to 1959 by the introduction of a complex system of multiple exchange rates; M.-J. González (1979), pp. 149-152

[37] Prados de la Escosura and Sanz (1996), p. 364.

[38] An interesting example where political considerations overruled general economic interests is the Government campaign from 1940 to 1954 that led to the British *Rio Tinto Company* selling its mining operations in the province of Huelva to a Spanish conglomerate. In the official propaganda, the British company was called "The economic Gibraltar", and through a range of measures like the control of prices and wages, heavy loses were imposed on the company. As a result of this the company reduced output of copper from the mine, a consequence that was in palpable contrast to the official policy in the 1940s of producing at every cost; Gómez Mendoza (1994).

[39] Note that the nominal wages used for calculating real wages were the official minimum wages. However, Pérez Rubio found that in the *latifundio* areas, it was not uncommon that the employers paid even less; Pérez Rubio (1995a), pp. 106-107. Unfortunately, it is not possible to analyse the development of wage differentials between agriculture and industry in the 1940s, because no comprehensive statistics exist on the development of wages in industry at the national level in the period.

Table 1. 4: Index of real wages in the agrarian sector, 1940-59 (1936 = 100)

Years	Index of real wages	Years	Index of real wages
1940	82	1950	56
1941	73	1951	51
1942	72	1952	52
1943	74	1953	52
1944	73	1954	54
1945	72	1955	57
1946	63	1956	58
1947	60	1957	68
1948	56	1958	71
1949	53	1959	77
Source: Martínez Alier (1968), p. 27.			

The rationality behind the low level of real wages was to minimise costs both in industry and in agriculture. In the first sector, the purpose was to facilitate the industrialisation process, and in the second sector, it was to obtain cheaper foodstuffs for the urban population to avoid social unrest. All in all, the demand side was seen as secondary to the quest for industrialisation, which focused on the production of capital goods.[40]

The composition of the state budget during the early years of Francoism was a reflection of the priority given to national defence. Yet, it was hardly consistent with the wider goal of increasing economic growth through industrialisation. The importance given by the regime to defence and internal security is obvious in the 1940s, where the expenditure on these two posts, with the exception of 1941, accounted for between 40 percent and 60 percent of the state budget.[41] Given that the INI was financed outside the state budget, and that a substantial part of investments of the INI was in defence related industries, a remarkably large part of state funds was channelled in to this sector.

When the data on defence expenditure are broken down, it can be seen that the percentage spent on salaries was between 49 percent and 70 percent in 1940-44, and still between 45 percent and 54 percent in 1945-56. Given the low labour productivity of people employed in defence, relatively more expenditure on services and investments in capital goods would have been a better promoter of economic growth in the economy.[42] This, however, would have required a down-scaling of the army,

[40] Within the industrial sector, this policy principally favoured industry in the Basque Country. This produced more capital goods than the manufacturing sector in Cataluña, which mainly made consumer goods. González Portilla and Garmendia (1988), pp. 13-22.
[41] Olmeda Gómez (1988), p. 208.
[42] The figures include the army, the Civil Guard and the National Police; Olmeda Gómez (1988), pp. 217-218.

which in the light of continued social division of the country and the heavy army presence in the governments of the 1940s, was not a very likely outcome.[43]

When debt repayments and salaries for other state employees were added to the expenses on defence and security, little was left in the state budget for goods and services that could be instrumental in developing the economy. According to Comín, the size of the state budget was small compared to contemporary European standards. Hence, the problem with the budget was not so much a question of excessive taxation as a misallocation of the relatively few resources that the state handled.[44]

1.3: THE POST-WAR CRISIS IN THE AGRARIAN SECTOR

As mentioned before, agrarian policy of the Franco regime should be understood within the context of the overall goals of its economic policy. Given that the policy of rapid industrialisation had the highest priority, the fact that output of the agrarian sector did not recover its pre-war peak before 1956 might not be such a big surprise. Therefore, the evaluation of the "effectiveness" or "desirability" of the controls over the production, marketing and consumption of agrarian output cannot be based only on the immediate effects of this policy on the agrarian sector. The consequences for the rest of the economy have to be taken into account as well. However, before going into a discussion of the relation between economic policy and the level of output in agriculture, we will first look at the influence of the Civil War on the agrarian sector.

1.3.1: The Impact of the Civil War on Post-war Agrarian Output

The post-war years were characterised by a combination of lower levels of output and a relative increase in the demand for inferior goods due to the fall in real wages.[45] In response to this, rationing of basic foodstuffs started at the national level in 1939 and lasted until 1953. The Franco regime used to blame the low level of production on a

[43] Preston has characterised the post-war Spanish army as "an army of occupation", given that major parts were located next to population centres rather than at the frontiers. In this context, numbers rather than modern military equipment was important for the maintainance of public order. Salary costs were furthermore large due to the presence of a relative large officer corps that had been established during and after the Civil War. This provided Franco a strong base within the armed forces against possible political dissent from other high-ranking officers. Preston (1990), pp. 85-86, 131-162.

[44] Comín (1994), pp. 296-301.

[45] The official post-war statistics on the agrarian sector suffer from a problem of reliability. This is due to the existence of a large black market, which had the consequence that not all output was registered. The implications of this problem for the present thesis are discussed in Appendix 1.

mixture of Civil War damages and adverse weather conditions, but this type of explanation is not accepted nowadays.

Barciela has given the question the most comprehensive treatment and he has argued that the Civil War only had a short-lived negative impact on post-war production, because physical destruction of the means of production was relatively modest. Although the war negatively affected the stock of work and rent animals, this was not an insoluble problem. Moreover, he notes that the decrease in the cultivated area between 1936 and 1939 was mainly occurring within yearly crops and that it would not be difficult to bring such land back into cultivation. Barciela moreover argues that large parts of the country were controlled by the rebels for the whole of the war, and were therefore not directly affected by military operations. Moreover, production in the Republican zone was relatively "normal" at least until 1938.[46] Barciela therefore agrees with M.-J. González that the largest impact of the Civil War on post-war agrarian production was probably the loss of labour due to deaths, exiles, and the politically motivated repression by the Francoist regime in the 1940s.[47]

To summarise: since the Civil War appears to have had a limited direct influence on post-war agrarian output, it was largely the economic policy of the 1940s that differentiated the post-war period from the pre-war years, and that caused the decline in agrarian production. Nevertheless, some disagreement on the subject can be found in the historiography. In a recent work, Simpson suggested shortly the possibility, that agrarian output in the 1940s was restricted by lack of fertilisers and work animals.[48] In relation to this discussion, one of the main purposes of the present thesis is to challenge the view that official prices were the main reason for the post-war decline in output. This will be done on the basis of an analysis of prices received by farmers when black market earnings are included, and an investigation into external constraints on agrarian output in the 1940s.

1.3.2: The Pillars of the System of Intervention: Price Controls, Production Quotas and Rationing

As we have seen, the Government tried to foster rapid industrialisation through import substitution and a strict control of the labour market. The agrarian sector was an

[46] Barciela (1986b), pp. 384-385.
[47] Barciela (1986b), p. 385, M.-J. González (1980), p. 90. A similar interpretation can be found in Clavera et al (1973), pp. 48-49.
[48] Simpson (1995), p. 247.

important component of this system. The low level of real wages in the 1940s and early 1950s demanded that the urban population was provided with cheap provisions to secure their physical survival and avoid social unrest.

An attempt to keep retail prices at the pre-war level was already made during the Civil War through granting local authorities power to determine prices locally. Nevertheless, it was not until March 1939 that the *Comisaría General de Abastecimiento y Transporte* (CGAT) – ("General Commissary of Transport and Trade") – was created. The CGAT was to conduct much of the state intervention in the domestic economy in the 40s and 50s.[49] A short look at the powers of this organisation reveals a lot about the nature of state intervention in the production and consumption of foodstuffs.

According to the regulations of the CGAT, it should control the demand for and supply of provisions through a temporary system of rationing and retail price controls. To fulfil this objective, it was gradually given a monopoly in organising the commercialisation of a large number of products.[50] After 1940 the CGAT counted on the *Fiscalía de Tasas*, a special court headed in each province by the Civil Governor, to punish infractions.[51] The main objective of the price controls was to constrain inflation. At first this was supposed to be possible through a decree ordering the maintenance of the prices at the same level as before the Civil War, totally ignoring the rise of prices during the conflict.[52] When this measure was insufficient to reach the desired goals, a widespread system of controls with production and consumption of foodstuffs was introduced in the following years.

Concerning the foodstuffs that were subject to intervention by the CGAT, a large part of the daily work was carried out by another state organisation, the *Servicio Nacional de Trigo* (SNT) – ("The National Wheat Board").[53] The rebel government had created the SNT in 1937. The then dominant perception about the wheat market was one of overproduction leading to falling prices.[54] Consequently, the policy

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[49] Clavera et al (1973), pp. 65-66. Until 1951, the CGAT was part of the Ministry of Industry and Trade. It thus became part of the Ministry of Trade, the latter constituting a separate entity from that date.

[50] In 1945 the products controlled by the CGAT was categorised below 54 different heads.

[51] Clavera et al. (1973), pp. 116-122. Although the political head of the Civil Governors was the Minister of Interior, the *Fiscalía de Tasas* was integrated in the Presidency of the Government.

[52] Clavera et al. (1973), pp. 123-126.

[53] SNT was part of the Ministry of Agriculture, although it worked on behalf of the CGAT from 1941.

[54] This interpretation had its origin in circumstances before as well as during the Civil War. In 1932, wheat prices fell dramatically, due to unnecessary imports of wheat by the government, and this led to massive protest by the wheat-growing farmers. Other factors at play were a general lack of statistical information, and that the area controlled by the insurrectionists contained a higher proportion of wheat

promoted by the SNT in 1937-38 was to reduce prices as an incentive to diminish production. The outcome of this policy was a serious underproduction in 1939 in relation to the needs of the newly reunited Spanish population.[55] Given that rapid industrialisation was the main goal of post-war economic policy, the official prices paid to agrarian producers in the 1940s were set, in real terms, at a lower level than before the Civil War. This happened in spite of a decline in the production.

The intervention had started with the control of the production of wheat, but later the SNT, on behalf of the CGAT, came to control the production, marketing and consumption of an ever-increasing number of agrarian products. A system of compulsory production quotas was enforced for bread grains. The quotas were minimum requirements that the farmers had to fulfil, and they were normally fined if they did not comply with the demands. However, the fulfilment of the production quotas did mean that farmers could sell the rest of their output in an uncontrolled market, since with few exceptions SNT was the only legal buyer of grains until 1950.

The bureaucracy involved in the regulation of foodstuff production did not stop with the CGAT and the SNT. At the local level, mayors played an important role in much of the day to day administrative tasks. The "representation" of the interests of the agrarian sector was entrusted to the official vertical trade unions. However, these had no legal rights to influence political decisions, which were made exclusively by the government.[56] The decision making process was therefore extremely centralised, with no direct means for either the consumers or the producers to influence it.

According to Barciela and García González the consequences of this system of intervention on the production of wheat can be summarised as follows:

a) There was an overall decrease in the total cultivated area.
b) The decrease in the cultivated area further depressed real wages in the agrarian sector.
c) There was an increase in the cultivated area of other crops than wheat, including the area dedicated to animal grazing.
d) The cultivation of wheat was de-intensified.
e) The supply of wheat decreased.

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land than of population. All this resulted in a too optimistic view of the situation at the national level; Barciela (1983b), pp. 666-667.

[55] Barciela (1983b), pp. 663-670.

[56] Aparicio (1980), pp. 34-36, 79, 92-93, 96-97, 104, 189-190, 193 and 196.

f) The small farms withdrew from the market.[57]

In response to the inadequacies of the rationing system, a large black market emerged to meet the demand for wheat and lasted throughout the 1940s.

1.3.3: The Working of the Black Market for Foodstuffs

According to Barciela's argument that economic policy was the reason for that agrarian output took so long to recover pre-war levels, the food market in the 1940s was characterised by disequilibrium between supply and demand.[58] This was an outcome of the prices being paid by the state to the farmers, which were fixed below their equilibrium levels, in a situation where the price elasticity of demand was very low. The result of this combination was a supply shortage and the emergence of a black market for basic foodstuffs where prices were significantly higher than in the rationing system. In some years, this process was reinforced by producer prices being set before any knowledge was available about the size of the harvest. This meant that a bad harvest led to a fall in the income of the producers, forcing them to work outside the official system to an even greater degree than in a normal year. Therefore, in years of bad harvests the supply through the rationing system fell relatively more than the decline in production and, consequently, the demand of black market products rose even further. In this way, the price system increased scarcity in the official market in years when production was lowest as well as augmenting the difference between official and black market prices.[59]

Until now, most historical work has focused on the black market for wheat.[60] Using information published by the SNT in the early 1960s, Barciela calculated that on average 55.7 percent of the marketable production[61] of the harvests between 1939 and 1949 was sold on the black market.[62] The second most popular item in the black market was probably olive oil.[63] There have been two attempts to estimate the total amount of olive oil sold in the black market: Tió made a rough "guestimate" saying

[57] Barciela and García González (1983), pp. 84-86.
[58] Barciela (1983a), pp. 285-302.
[59] Barciela (1983a), pp. 288-291.
[60] This is so because it was the crop cultivated on the largest amounts of land, the most sold item in the black market, and the centre of attention of the intervention by the SNT. Furthermore, bread was a primary commodity with a very low elasticity of demand.
[61] I.e. total output minus self-consumption and seed corn.
[62] Barciela (1981b), p. 27.

that on average 10-15 percent were sold in the black market.[64] The other attempt was made by Gutiérrez del Castillo but covers only the period 1940-44. She concluded that the black market of olive oil on average equalled 30,04 % of the legally marketed production[65] between 1940 and 1944.[66] Another study covering the province of Alicante between 1941 and 1950, reached a similar conclusion.[67] While the estimates by Barciela for the black market of wheat seem to be as good as possible considering the available information, the methodology used by Gutiérrez del Castillo contains some errors. These will be resolved in Chapter 4.

The general consequence for consumers was, as would be expected, an extraordinary difference between official retail prices and black market prices. Table 1.5 shows the black market prices for bread and olive oil in the city of Bilbao, when calculated as a percentage of the official prices for the same products. It can be seen that there was a decrease in the difference between the two at the end of the 1940s. The reason for this development could be various factors such as a better supply and/or higher prices in the official market, improved control of the black market by the police, a change in the demand patterns, or any combination of these. This will be discussed in the Chapters 3 and 4 for bread and olive oil respectively.

Table 1. 5: Black market prices in Bilbao for bread and olive oil as percent of official prices, 1941-51.

Years	Bread	Olive oil
1941	917	1294
1942	1286	509
1943	800	509
1944	686	336
1945	600	536
1946	545	893
1947	643	344
1948	457	337
1949	492	305
1950	492	287
1951	328	180
Source: González Portilla and Garmendia (1988), pp. 33-34.		

[63] The conditions here were slightly different from those governing the wheat production given that the price of the base product - the olives - was not fixed, which was the case of wheat grain. However, the price of olive oil was regulated in the same manner as the price of flour; Tió (1982), p. 88.

[64] This figure was reached in a rather curious way. The author started from a low estimate of the black market share of wheat - 25 percent of production - and divided this by 2, without explaining the reason for this procedure; Tió (1982), pp. 76-77. Note that this was done before Barciela calculated the relative size of the black market for wheat.

[65] I.e. legal domestic market plus exports.

[66] Gutíerrez del Castillo (1983), p. 161.

[67] Moreno Fonseret (1994), pp. 168-176.

Turning to the supply side of the black market, Naredo analysed this phenomenon and the amount of fraud involved in an article in 1981. His access to both the "official" and the "real" accounts of one *latifundio* in Southern Spain give a revealing portrait of the working of the black market. Legally, all farmers were obliged to report to the SNT the area in use every year. Falsifying these data was one way of reserving a part of production for the black market. In the case studied, the under-reporting of the cultivated area amounted to 17 percent of the land dedicated to wheat, and 41 percent of that dedicated to barley, oats, maize and different kinds of leguminous.[68] At the same time, cheating was also done in the reporting of the yields, with the result that 40.1 percent of the wheat harvest, and between 24.5 percent and 67 percent of the other products were not declared.[69]

The result was that the real value of harvests was around 330 percent of the official value, and Naredo suggests that this difference was not exceptional among the southern *latifundios*.[70] This clearly indicates that in spite of the low official prices paid by the SNT to the farmers, it was possible to have substantial earnings in the sector. However, this possibility seems to have varied substantially between different social groups and regions.

It can be supposed that the development of wages, prices received by the farmers and black market earnings had different repercussions to different social groups. If we ignore regional variations and concentrate on social stratification, it was the bottom of rural society, the landless farm labourers, who were likely to be the worst off given the decrease in real wages. Whether paid in cash or kind, the situation was probably quite desperate, and with very few, if any, possibilities of an extra income from the black market. This effectively left the families of the landless labourers close to starvation in years with a bad harvest when demand for labour was even lower than normal. Labourers who supplemented their wages with a small landholding producing for self-consumption or the black market were better off. Although still suffering from low real wages, they were as producers permitted to keep a quantity of the production for themselves, which eventually could be sold in the black market.

However, this group often seems to have relied on middlemen for black market transactions. First, they needed middlemen due to a lack of their own means of transportation to bring their produce to the urban population. Second, because they

[68] Naredo (1981), pp. 98-101.
[69] Naredo (1981), p. 102.

seldom were able to transform their crops on by themselves - for example, from grain and olives to flour and olive oil.

The dependence on middlemen also apply to the next level up, which was the family-size farms, including both those who did and did not employ occasional wage labour. In the cases where they were using outside labour, this group benefited from the decline in real wages. Those with a diversified crop structure would furthermore have the advantage of some insurance against a bad harvest in one crop.

The last group, the capitalist farmers employing large amounts of wage labour, were the ones who benefited most from the black market for a number of reasons. Given that they often controlled the local labour market through a quasi-monopoly of employment, they could sometimes pay lower wages than the official minimum to their labourers. Furthermore, if they had the means to transform the crops, they would then have no need of intermediates. Finally, due to their often-dominant local social position, they could either have the necessary connections to avoid the state's regulation and/or the money to pay the required bribes. On this point Leal et al. observed that the profitability of the agrarian sector suffered less from the low level of the official prices received by the farmers than it might appear at first. The reason for this was that, although prices were lower in real terms in the 1940s than before the Civil War, wages declined even further.[71]

Pérez Rubio highlighted this differential impact of agrarian policy among the social classes. Using oral sources from Extremadura, he found that among the poorer part of the agrarian population small-scale black marketing was seen as a necessary way of survival in difficult times. The poorer part of the population therefore considered their black market dealings qualitatively different from large-scale black marketing done by the large landowners.[72]

Regional differences should also be taken into account in any general description of the black market. It seems plausible that the higher the ratio of urban to rural population in a given area, the higher the gains to be made on the black market due to relatively higher demand and lower transportation costs.[73] Other factors to take

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[70] Naredo (1981), pp. 104-106.
[71] Leal et al (1985), pp. 44-46 and 64.
[72] Pérez Rubio (1995b), pp. 102-112.
[73] A feature of the official price system reinforced this tendency further. Grain sold through the SNT system was sold at the stock door to the millers and at the same price throughout the country. This meant that the millers had to pay for the transportation costs between stocks and markets. The result was that the millers preferred to buy "legal" grain close to urban areas whenever it was possible. But the same rules applied to the grain bought in the black market, raising the competition for grain close to urban centres, where cultivating normally was not very extensive; Barciela (1981a).

into consideration are the geographical and climatic characteristics of a given region. One such important aspect is the quality of the soil for specific crops, which leads to differences in yields and the possibility of growing a certain crop in a given area.

However, the conditions for black market activity also included that controls seem to have been enforced more consistently to the "stars" of the black market - i.e. wheat and olive oil. Consequently, it was probably relatively easier to sell other types of crops outside the official channels.[74] This implies that the gains per quantity in this second group of crops were not as high as those for wheat and olive oil. Nevertheless, the possibility of selling a larger quantity in the black market could make up for some of the difference. However, the analysis of the black market for other crops than wheat and olive oil is complicated by lack of comprehensive source material on prices and quantities sold in the black market.[75]

1.3.4: Capital Accumulation in the Agrarian Sector

What then was the effect on the agrarian sector of the opposing tendencies of low official prices and potentially high gains in the black market? First, it seems that it led to a widening of the income distribution within the sector, with the determining factor being whether one was employed, self-employed or employer. This feature appears to hold true despite any regional differences. Leal et al. have argued that the widening of the income distribution led to an overall increase of the financial capacity of the sector.[76] For the 1941-59 period, the authors reached the conclusion that the average financial capacity of the agrarian sector was approximately 12 percent of the value of total production, with the highest values found around 1950.[77]

However, the accumulation of capital mainly took place in the hands of the larger landowners who benefited from an increase in output prices relative to agrarian wages.[78] Yet, since there were huge regional differences in the social structure of the Spanish agrarian sector, it seems likely that there were large regional differences in the financial capacity, but until now, this has hardly been investigated.

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[74] Naredo (1981), pp. 98-101.

[75] In the analysis of the situation in the province of Cuenca in Chapter 6, various scenarios are constructed concerning the impact on value of production of black market sales of other crops than wheat and olive oil.

[76] The authors define financial capacity as the difference between saving and investment within the sector. A persistent positive financial capacity then leads to the accumulation of capital; Leal et al. (1986), p. 29.

[77] Leal et al. (1986), pp. 98-99.

[78] Leal et al. (1986), pp. 41-45.

At present, there exist only "one and a half" estimations of capital accumulation at a regional level. The first is for the province of Valladolid, but it is based on a proxy in the form of the development of the nominal value of shares deposited in the major banks of the city of Valladolid. Between 1939 and 1952 the nominal value more than trebled,[79] and the author interprets this result as confirming that there was a process of capital accumulation in the agrarian sector in the 1940s.[80]

The "half" example comes from the province of Valencia. In this case the author identifies a process of capital accumulation in the citrus fruit sector in the 1940s, but he does not offer a quantitative estimation of the magnitude of the process, nor a comparison with the pre-war experience.[81] Furthermore, Valencia was not very representative for the agrarian sector as a whole. Citrus fruits made up a large part of the agrarian production in Valencia, and, contrary to traditional crops like wheat and olive oil, these were mainly exported. As a currency earner and a crop with high demand elasticity outside Spain, it was not in the interest of the government to suppress prices for citrus fruits. Therefore, production was significantly less regulated than that of most other crops in the 1940s and early 1950s. This made it easier to earn an "honest" profit on citrus fruits production, and, consequently, lead to an increase in the productive area.[82]

As mentioned above, Leal et al. stated that the relative level of wages and prices was important for the process of capital accumulation in the agrarian sector in the 1940s. This factor can also be traced in the development of the situation for the sharecroppers. Pérez Rubio analysed this for the relatively large population of sharecroppers in Extremadura, and concluded that large landowners after 1940 were engaged in a continuos struggle to expel sharecroppers from their estates in favour of direct cultivating.[83] Naredo, Ruíz-Maya and Sumpsi, although drawing on much more limited empirical evidence from the province of Sevilla, also found that in the 1940s and 1950s direct cultivating turned out to be relatively more advantageous for the

[79] This equals an annual growth rate of almost exactly ten percent.
[80] Gutíerrez Hurtado (1987), p. 73. This book is explicitly influenced by Leal et al. (1986). However, the chosen proxy is problematic for at least the following reasons. First, because there is no comparison with pre-war figures. Second because the development of the market value of the shares is not considered. Third, because in an environment of relatively high inflation, as was the case in Spain in the 1940s, investment in shares might be more attractive than, for example, cash deposits. The inclusion of this factor in the analysis would therefore be desirable. Finally, although it might be argued that people from the agrarian sector were the owners of some of the shares, it was probably not the case that they were the only owners of shares in Valladolid. It is even possible that they did not constitute the main group of shareholders.
[81] Sorní Mañés (1980).
[82] Sorní Mañés (1980), pp. 149-152.
[83] Pérez Rubio (1995b), pp. 113-167.

landowner than sharecropping.[84] The overall result seems to be a continued process of eviction of sharecroppers in the *latifundio* areas after 1940. This led to a fall in the living standards of the sharecroppers, once they were turned into wage earners in the countryside.[85] Summarising, the picture that emerges is one where the conditions in the agrarian sector in the 1940s led to that at least large-scale farmers where able to increase income and savings, in spite of state intervention. It is therefore not clear that the economic conditions for the farmers in the 1940s should lead to a decrease in output.

Finally, Leal et al. argued that the accumulation of capital in the agrarian sector worked in favour of the industrialisation of Spain, through investments in industry via the banking system. This interpretation builds on the assumption that what Spanish industry lacked in the 1940s was investments rather than an internal market for its production. The authors maintain that the need for further investments was due to a low price elasticity of supply in the Spanish economy in the 1940s. In this situation an active demand-side policy based on the rural population was irrelevant and would only cause further inflation.[86] However, as early as 1956, de Torres forwarded a Keynesian interpretation of the problem. He contended that the predominance in 1940s Spain of small-scale enterprises principally producing for the home market made the purchasing power of the agrarian population vital to the industrialisation and economic development of the country.[87] A further examination of this question is beyond the scope of this thesis, which mainly deals with the conditions within the agrarian sector.

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[84] Naredo, Ruíz-Maya and Sumpsi (1977), pp. 34-41.
[85] Naredo, Ruíz-Maya and Sumpsi (1977), pp. 21-26.
[86] Leal et al (1986), pp. 15-16. If these considerations were in the minds of the members of the government, then the reason for the low price elasticity of supply side in the industrial sector is a crucial point in determining the economic logic of the policy. The answer to this question is related to the judgement of why crucial inputs in the industrial sector, such as energy and raw materials, were lacking, and which sectors of the industry were favoured by incentives and direct governmental help. As mentioned above, the focus of government industrial policy was especially on sectors related to defence and energy. The former was probably not the optimum way of boosting general economic growth. The second could have played an important role, had it not been for the very heavy investment required to obtain an absolutely insufficient amount of national produced energy. A related problem is the state regulation of the financial markets. In the 1940s and 1950s, regulation favoured a small group of large banks that obtained a large influence on the industrial sector, and lead to a weak market for bonds and shares. The overall influence of this policy in the financing of the industrial sector is hard to determine, given that it covers two opposite consequences. Firstly, a lack of a diversified financial market, and, secondly, a concentration of savings - i.e. potential investments - in a few banks, potentially making large amounts available for investments depending on the banks risk willingness; Lukauskas (1994), pp. 75-78.
[87] de Torres (1956), pp. XIV-XVI.

1.4: SUMMARY

Between 1939 and 1951 Spain passed through a prolonged economic crisis, which was reflected in most macroeconomic indicators. In spite of being neutral during World War II, Spain did not manage to rebuild a large stock of international reserves. With the agrarian sector in a prolonged crisis, export earnings decreased, making the imports of raw materials and much-needed capital goods very difficult. The situation was aggravated by a constant over-valuation of the peseta.

In these years, the government pursued a policy of rapid industrialisation with a special emphasis on defence-related sectors. A fundamental instrument in this process was the creation of the state-holding INI in 1941, which operated at very high costs in comparison to the results obtained. Behind the economic policy was a nationalistic ideology, which stressed state regulation of the economy. This led to complicated systems of licensing, control over pricing, the labour market, imports and exports, and disincentives for foreign investment. The resulting administrative system was utterly bureaucratic and opened the way for rent seeking activities.

The state budget did not have the capacity to foster single-handedly the development of the economy. Its ability was hampered by the dedication of a large amount of available resources to areas with low labour and investment productivity like national defence and internal security. In this situation, the government, in spite of attempting to keep prices down, was not able to avoid high levels of inflation.

The agrarian sector was clearly subordinate to the drive for industrialisation. The need to provide cheap foodstuffs so as to keep wages low was considered crucial by the government. This position lead to detailed controls of prices, production and consumption of foodstuffs. The farmers reacted by withdrawing a part of the production from the official market, channelling it into a growing black market. This opened up opportunities for illicit capital accumulation among the larger landowners.

From the beginning of the 1950s the situation gradually improved. External imbalances were reduced with the help of economic co-operation with the United States and a gradual integration into the international economy. This made much-needed imports of capital goods possible, resulting in increased industrial and agrarian output. At the same time, official agrarian prices paid to producers were increased, and output finally reached pre-war levels. This at last made it possible to abandon the system of rationing, which had existed since the end of the Civil War. Improvements

in supplies helped to moderate inflation, which although still being relatively high, was lower than it had been in the 1940s.

The prevailing interpretation of this development has centred on two aspects of agrarian policy in the 1940s: price-fixing and rationing. The introduction of a rationing system has been frequently resorted to in the 20th century by governments facing a shortage of commodities they consider vital.[88] In this situation, an attempt to increase output through an increase in the price paid to the producers would appear logical. On the other hand, the combination in Spain in the 1940s of a shortage of supply of basic foodstuffs, and the introduction of a ceiling on the prices paid to the producers appears to have an inherent lack of logic. As we have seen, it is exactly this apparent lack of logic which is often highlighted in the historiography, and used as a criticism against the agrarian policy in the 1940s. The present thesis will analyse to what degree this criticism is adequate. The point of departure for this is an examination of economic theory related to state intervention in agriculture. This will be followed by a short look at how this type of intervention was carried out in various countries in the 1930s and 1940s.

[88] This will be discussed in relation to World War II in Section 2.2.

CHAPTER 2: THE FOOD PRICE DILEMMA, AND STRATEGIES TO SOLVE IT IN RELATION TO WORLD WAR II

2.1: THE ECONOMICS OF THE FOOD PRICE DILEMMA

While the Franco regime was in many ways unique, it did not exist in a vacuum.[89] Widespread state control of the economy was prominent in the industrialised world in the 1930s and 1940s, either out of a perceived exceptional necessity in peculiar situations, or as a goal in itself. One reason behind increasing state intervention was the desire to secure a supply of basic foodstuffs in a war situation. This became clear during the course of the First World War. On several occasions, the absence of adequate supply due to declining national output and loss of imports had demoralising effects on troops and civilians, with subsequent risks of military inefficiency and/or social upheavals on the home front.[90] This lesson was learnt, although to varying degrees, by democracies and dictatorships alike in the 1930s and the 1940s, and control measures were widely used in belligerent and neutral countries before, during and after World War II.[91]

The interruption of international trade that accompanied the two World Wars of the 20th century often made a greater reliance on domestic food production and/or a shift in output composition necessary. In this situation, governments often faced what has been called "The food price dilemma" – i.e. how to keep farm prices high and food prices low.[92] On one side, it would be deemed necessary to protect the consumers from rising food prices due to a decline in supply. On the other side, it would be desirable to increase prices received by the farmers, to expand domestic production in order to compensate for the decrease in imports of foodstuffs and/or inputs.

The analysis of the economic and social effects of different approaches to the food price dilemma can best be understood when seen as a deviation from a situation with a competitive market with perfect information and no state intervention. In such circumstances, and seen from the point of view of economic efficiency, the correct level of prices in a given country should adjust to the border price criterion. That is:

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[89] This special nature of the regime includes its origin in a Civil War in the context of the pre-World War II struggle between fascism and democracy, as well as its longevity. The last point led it to adopt different attitudes to, for example, economic policy.
[90] See Offer (1989) for this aspect of World War I.
[91] Some examples of this are treated in Section 2.2.
[92] The formulation is from Timmer, Falcon and Pearson (1983), pp. 224-225.

> In such a world, any deviation of the domestic price from the international border price of a commodity, as either an import or export, reduces total economic welfare in the country because of dead-weight efficiency[93] losses in production and consumption.[94]

However, a government might dislike the consequences of following the border price criterion. Contemporary examples are the agrarian policies of the European Union and the United States, where the desire to secure food supplies, as well as political pressures to maintain income of farmers have led to a system of guaranteed minimum prices. The effect of such a policy is an income transfer from consumers to producers, a dead-weight efficiency loss in the economy, and an over-production that has to be stocked.[95]

The border price criterion can also be irrelevant if there is no international market for a given commodity. In such a situation, the domestic price will be determined by supply and demand in the internal market. Wartime restrictions of international trade can further decrease output of a commodity if these also affect inputs for the production.[96]

The combination of insufficient domestic production and a limit on imports due to external circumstances can lead to a sharp increase in prices if no substitute products are available. If the commodity furthermore is a basic staple, the result can be a social market failure, i.e. unacceptable social consequences for a part of the population.[97] Whether a social market failure occurs or not, will depend on several factors, such as the price elasticity of supply and the time gap between the introduction of higher prices and the subsequent increase in production.[98] Except in cases of a high price elasticity of supply and sufficient buffer stocks, the government might find itself in the food price dilemma. If this is the case, the outcome in the 20th

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[93] Dead-weight efficiency loss occurs when a reallocation of resources in an economy leads to a situation where "... somebody's welfare is reduced because of the misallocation of resources (...), but no one else benefits from this particular loss"; Timmer (1986), p. 45. Consequently, a dead-weight efficiency loss reduces the aggregate welfare of society.

[94] Timmer (1986), p. 13. Still, if the government want to encourage production by promising farmers that they will receive the expected border price, there can be substantial methodological problems of establishing how to calculate this; Timmer (1986), pp 73-100. However, the examination of how to set farm prices according to border price is omitted from the following analysis, because the international market for basic staples was very limited in the 1940s.

[95] For overall details of the US system, see Gardner (1992), pp. 85-88.

[96] Specifically in relation to agrarian production, major wars in the 20th century have led to a decrease in international trade with artificial fertilisers, due to the use of nitrogen in explosives.

[97] Middleton (1996), p. 54.

[98] Note that in the agrarian sector, the desired increase in production will require at least one growth season, even with a high price elasticity of supply.

century has often been price intervention including some sort of protection for the consumers.

In analytical terms the effects of a restriction on imports due to war conditions equal the imposition of a quantity quota on imports. To analyse how this works, it is first necessary to discuss briefly the price elasticity of supply in the agrarian sector, and both the size of this elasticity as well as the question of whether the elasticity is positive or negative are widely debated in the historiography.[99] However, the following four conclusions appear to be generally agreed upon. First, a positive price elasticity of supply appears to be the norm, although it can be negative in specific circumstances.[100] Second, the short-run price elasticity of aggregate supply is smaller than the long-run elasticity. Third, the price elasticity of supply of single crops is higher than the aggregate supply elasticity and, finally, non-price factors have to be taken into consideration especially in less developed countries.[101] For the moment being, we will therefore assume that the price elasticity of supply in Spain in the 1940s was positive and symmetrical.[102]

Standard economics then state that for a commodity with a positive price elasticity of supply and a negative price elasticity of demand, equilibrium in the market will occur at the point E where quantity Q_d obtain price P_d.[103] With international trade and world market prices P_w below the domestic equilibrium price P_d, imports will take place at P_w in the quantity $Q_2 - Q_1$.[104] If government action or war restrict imports to the amount $Q_4 - Q_3$, the supply curve will shift to the right to S' by this magnitude and a new equilibrium will occur at P_q. The quantity consumed will be Q_4, which is less than the amount that was consumed before import restriction Q_2, and the price will be P_q, which is more than the world market price before import

[99] An outline of the development of the main points of the discussion can be found in Askari and Cummings (1976), Chhibber (1989), Griliches (1960), Peterson (1979), and Schiff and Montenegro (1997).

[100] It has been argued that close to subsistence small-scale farmers in sub-Saharan Africa would react to increasing farm gate prices by selling less in the market but consuming more in the household. This will improve the living standard in the household and uphold monetary income. Platteau (1990), pp. 300-303.

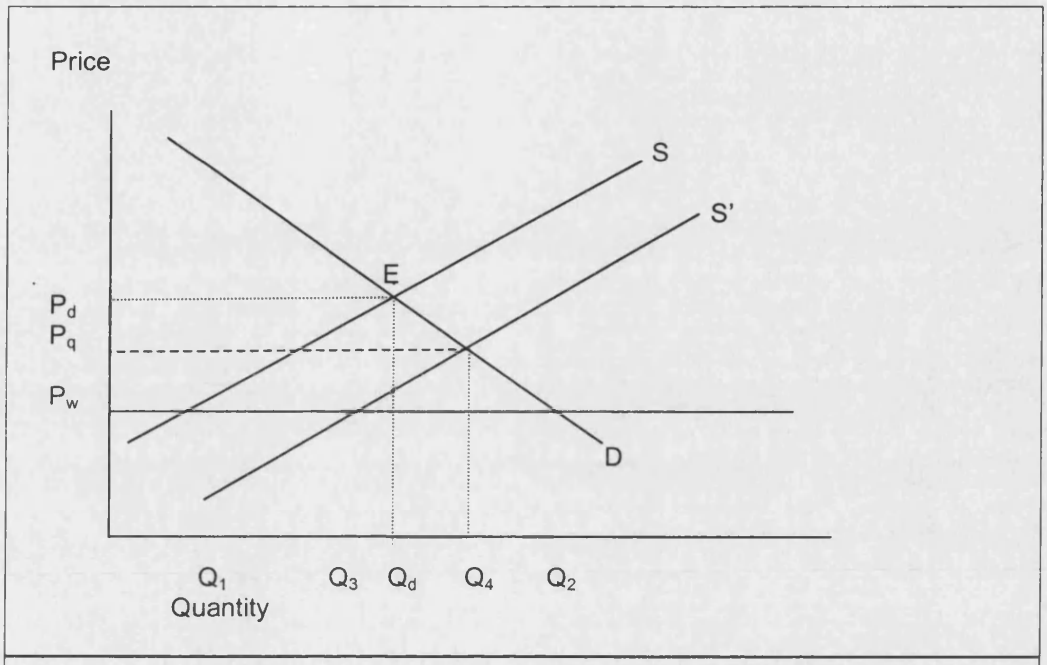
[101] See Footnote 99.

[102] The calculation of the price elasticity of supply in Spain in the 1940s is difficult due to deficient statistics. However, Astorquiza and Albiso analysed the 1959-85 period, and they found that the price elasticity of supply for wheat with regards to its own price and calculated over the cultivated dry land area was 0.36. Furthermore, they found that the cross price elasticity of supply for wheat with regards to the price of barley was -0.07. Astorquiza and Albiso (1993), pp. 76-78. The price elasticity of supply for wheat in Spain will be further analysed in Chapter 3.

[103] Note that in Spain in the years immediately before the Civil War, the market for a basic staple like wheat was characterised by equilibrium between domestic demand and supply. This was the outcome of a protective trade policy, while exports were not possible because the Spanish producers were not competitive in the international market.

restriction P_w. This means that after the introduction of trade restrictions, consumers will consume less at a higher unit price, and domestic producers will produce more at a higher unit price.

Diagram 2. 1: The effects on supply and demand of an import quota or a reduction in imports caused by international restrictions.



Source: The figure and the description are standard textbook material on the consequences of import quotas, normally in the context of protective trade policies. See for example Boyes and Melwin, (1996), pp. 984-986.

This new equilibrium can lead to socially unacceptable consequences for a government, if, for example, the new equilibrium price makes it impossible or difficult for a part of the population to buy the commodity. This can be a problem if it is an important ingredient in the diet with no obvious substitute. This problem can be aggravated further in the short term, given that it might take some time before the producers can supply the amount required for the new equilibrium to be established, due to the growth cycle of the crop. In these circumstances, a government might intervene in the price setting and/or the distribution of the commodity, but before analysing the available possibilities, we will first have a look at another context where state intervention is likely.

Price intervention, which regulates consumer prices, might also happen if a regime decides upon a course of forced industrialisation. Here it might find it appropriate to squeeze agrarian output prices, to make it possible to lower costs in the

[104] World prices are defined as border prices c.i.f.

industrial sector. This took place in Spain in the 1940s, but is also a phenomenon found in less developed countries in later years.[105] This type of policy has often been based on the following four assumptions:

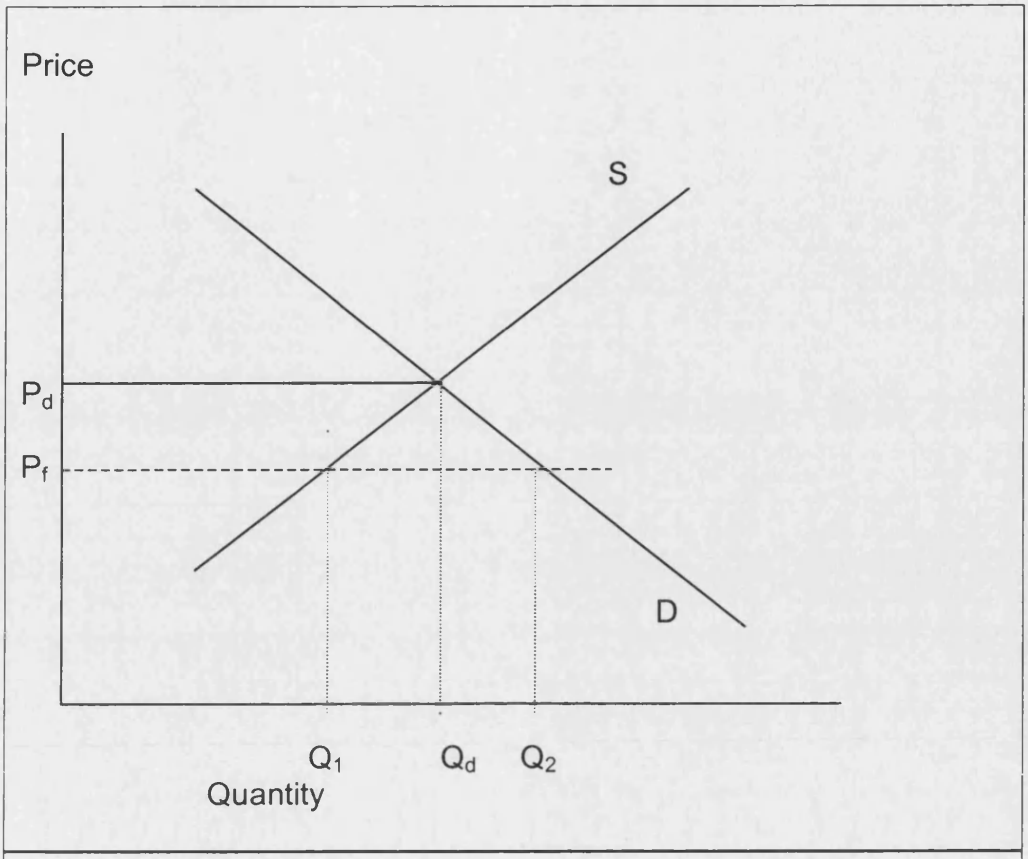
1) that aggregate agricultural production is not very responsive to price changes;
2) that the chief beneficiaries of higher prices would be the larger-size farmers;
3) that higher food and other agricultural-related prices such as clothing would most adversely affect low-income consumers; and
4) that manufacturing provides a more rapid means of growth, and that achieving that growth depends upon large transfers of income (profits) and foreign exchange from agriculture to manufacturing.[106]

Price discrimination against agriculture can take a number of forms, ranging from indirect measures such as exchange rate manipulation, selective tariffs, tax levels, and so forth, to direct measures, in the form of price fixing by the state.

It has been argued in the historiography that the main reason for the low level of agrarian output in Spain in 1940s was state discrimination against the agrarian sector. This was done by setting compulsory farm gate prices below the equilibrium price.[107] Leaving aside for the moment the question whether this interpretation is correct, the argument is as follows. In Spain before the Civil War, the market for basic staples was characterised by equilibrium between domestic supply and domestic demand with the price P_d being set by the market (Diagram 2.2). However, after the war the government fixed the price P_f at a level that was below the equilibrium, with the consequence that consumers increased demand to Q_2 and producers restricted output to Q_1. In the absence of imports this led to unsatisfied demand and it was required to introduce a quantitative rationing of consumption.

[105] In Spain, the strategy was designed with the purpose of increasing defence-related industry, but this is not necessarily the case. Whatever the reason behind the policy of industrialisation, it does not change the part of the argument that is relevant for this study. See Krueger (1992) for a summary of discriminatory policies against the agrarian sector in the less developed countries.
[106] Brown (1978), p. 84.
[107] See Section 1.3.

Diagram 2. 2: The effects of state fixed prices below the equilibrium price.



Source: Dell (1994), p.18-19.

Returning to the analysis of import restriction, a government that wants to protect consumers against the price increase connected with the decline in imports by fixing prices for example at the level P_w, will face the situation described in Diagram 2.2. If this happens, producers will react by maintaining output at the same level as before the reduction in imports. Consequently, aggregate supply will be even further restricted, while at the same time demand will be maintained at the level corresponding to the price P_w. In Diagram 2.1, this will lead to a supply shortage of $Q_2 - Q_3$, equalling the decline in imports. The result will be excess demand.

In this situation, the distribution of the available produce can take place in two different ways. One possibility is that the state establishes a rationing scheme, which limits the amount that can be purchased by each consumer, but entitles all consumers to a minimum amount of the commodity at state fixed prices. The alternative to administrative rationing is a "First come, first served" scheme where consumers receive the produce according to, for example, time spent queuing or privileged access to information about where and when the goods can be purchased.

In a situation with excess demand, it is possible that some consumers will be willing to pay more than the official price and that some producers will break the law and sell at this price. Whether this will take place depends on a number of factors. These includes the efficiency of the control system, the nature of the goods, the degree to which both consumers and producers are willing to take risks, the moral assessment in society of breaking the law, and so on. The markets where illegal transactions take place at higher than official prices are normally referred to as "black markets".

The economic consequences of price-fixing and a black market can vary widely according to the concrete government action, the market conditions, and the type of produce that is considered. The following description is therefore restricted to conditions often found in markets for basic foodstuffs. First, that consumers and producers are counted in large numbers, which means that total state control over the market is unlikely. Consequently, at least some consumers and producers can engage in black market trade if they decide to do so. In spite of the fact that the state cannot control all trade, it will still find it necessary to have a system of punishment, to maintain supply in the legal market. Without a threat of punishment, it is possible that there will be no supply in the legal market.

The large number of producers and consumers furthermore has the consequence that each of them only produces/consumes a small fraction of the total output, which leads to them being defined as price takers. A third factor to take into account is that the demand for basic foodstuffs is often price inelastic, since daily intake of the produce is required for survival.

Price-fixing by the state is then often found in one of the two following forms. It can either be decided that all transactions taking place at prices higher than the official price are illegal. Alternatively, trading at higher than official prices can be declared legal if the producer has beforehand sold a certain amount of output at the official price. The free market in the last system is normally referred to as a "parallel market", in contrast to a black market, which is illegal trade at non-fixed prices.

In practice it is possible to combine various sorts of price-fixing with different types of penalty systems, and the economic effects of state intervention vary to some degree according to the chosen combination. Dell has also shown that different price control systems lead to distinctly different output levels. Returning to Diagram 2.2, there is a situation where the state has fixed the price at P_f below the free market equilibrium price P_d, but the state is not able to control the market completely. This leads to that a part of output is sold at a higher price than P_f, and in analytical terms

this can take two forms, which, though, are not mutually exclusive. The first possibility is that black market supply is the result of an increase in output beyond Q_1, while the second is that only the quantity Q_1 is produced, but a part of this is sold in the black market. The last phenomenon is often described as "diversion" or "leakage". With diversion, a black market will lead to a decrease in the supply in the legal market, but that does not happen in the first example.[108] The effects on total output of a black market are different according to whether diversion takes place or not.

The simplest case is if there is no diversion. In this condition, all black market supply is the result of an increase in output above the level of Q_1. If diversion is possible, Dell has shown that a parallel market will increase output compared to a situation where no trade outside the regulated market is allowed.[109] This conclusion has a paradoxical consequence: if the goal is to raise output, it will be in the interests of the state to tolerate trade outside the regulated market if a part of the supply is not the result of diversion. However, it is not likely that a government would be able to declare this in public, since it would undermine the authority of the state to encourage violation of its own price control system.

A further problem for the political acceptance of a system which includes a parallel market, is that although aggregate output might increase in comparison with a system without a parallel market, this is not necessarily visible. Given the illegal nature of the black market, it can be difficult to estimate changes in aggregate output, and this estimation is further complicated in agriculture because climatic conditions cause yearly variations in output, thus obscuring the picture. For the administrator of the control system, the visible point of comparison will be aggregate output before and after the introduction/removal of a parallel market. However, the correct point of comparison is between output after the introduction/removal of a parallel market and the same situation without this change in policy. This however is a non-observable counterfactual.

Under price-fixing the changes in total welfare in society also vary according to the type of regulation and supply response, and once again the existence of a parallel market turns out to be an advantage for society. On one side, it can be shown that a price-fixing system, which prohibits all trade at non-official prices leads to a decrease in total welfare, when compared with a market without price-fixing, irrespective of the

[108] Dell (1994), p. 18.
[109] Dell (1994), pp. 63-64 and 68-70.

nature of the penalty system.[110] Nevertheless, the welfare loss is smaller in a situation with a black market, as opposed to one where price-fixing is perfectly enforced.[111] On the other side a price-fixing system, which allows trade at non-official prices in a parallel market, does not necessarily lead to a welfare loss when compared with a non-regulated market.[112]

However, the absence of welfare loss in the last model requires a design of the price-fixing system that might be difficult in the agrarian sector. The first condition is that the state is able to calculate a compulsory quota that the producers have to sell at the official price, where the official price equals the marginal cost of the last produced unit in the quota. This condition is difficult to fulfil when there are many producers with different production functions. The second condition is that the costs for the farmers resulting from breaking the law have to be money transfers, but may not include the use of real resources, which can lead to the production of other goods being prevented.[113]

An alternative way of dealing with the food price dilemma is to try to keep producer prices high and food prices low at the same time. However, this requires an intermediary – often in the form of a parastatal monopoly – which buys the produce from the farmers and sells it to the consumers at a loss, with the deficit being covered by the treasury. Such a system has the advantage of increasing output and supporting the poor consumers at the same time. However, such a system also involves income transfers that are not easily observable since these will normally by hidden in the state budget.

If the consequences for the consumers and producers are disaggregated between social groups, it furthermore becomes clear that across-the–board subsidies lead to a socially regressive re-distribution of income from the poor to the rich in society. Since large-scale farmers often sell a larger proportion of their produce in the market, they will benefit more from the high farm gate prices than smaller producers. Furthermore, if the goods under consideration have a positive income elasticity of demand, and if there is no rationing of consumption, it will be the consumers who are better off who will benefit most from the consumer subsidy.

A general consumer subsidy also carries the possibility of fraud and/or changes in consumption patterns. Fraud can take the form of producers selling to the state not

[110] Dell (1994), pp. 68-69.
[111] Dell (1994), p. 30.
[112] Dell (1994), pp. 64-66.
[113] Dell (1994), pp, 64-66.

only what they have produced on the farm, but also an amount bought at subsidised prices from the state agency. The produce can thereby enter a trade circle between the farmer and the state where the state loses money every time it buys back something which it had previously sold to the farmer at a lower price. The change in consumption pattern can arise if the commodity can be used both for human consumption and as fodder. Here the risk is that livestock farmers will buy the produce from the state and feed it to their animals, because the subsidy has made it cheaper than normal fodder.[114] In the worst case, the result will be a decline in the supply for human consumption.

An alternative to a general consumer subsidy is a targeted subsidy to the poorest part of the population. This involves establishing a dual price system, i.e. that the same commodity is sold at different prices to different social groups. This is a measure that is socially more progressive and, at the same time, cheaper for the treasury. The other side of the coin is that targeted subsidies are more difficult to administer. Means tests can be complicated to design. Moreover, they require a well-developed administrative system with a profound knowledge of the economic conditions of the population, to avoid the risk of some poor people being left without access to lower priced goods, if the administration is deficient. The easiest solution is to subsidise a commodity, which has a negative income elasticity of demand, or is only consumed by poor consumers, but this may not always be possible.[115]

Finally, the ultimate way of solving the problem of supply, so rationing and/or unsatisfied demand can be avoided, is to obtain a shift of the supply curve to the right, on a temporary or permanent basis.[116] This can take various forms, such as for example a subsidy on inputs or capital goods in the agrarian sector, the promotion of technical changes which increases the productivity of land, capital or labour, or a change in conditions in related markets, such as husbandry. The increase in calorific output can, in some cases, take place at the cost of the variety of the diet, if it includes shift in production patterns to fewer but high-calorific products.

To sum up, it can be said that the food price dilemma forces governments to choose between economic efficiency and social equity. Even the most efficient ways of price-fixing are likely to reduce total output when dealing with agriculture, or, in

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[114] Timmer (1986), pp. 108-111.

[115] Timmer, Falcon and Pearson (1983), pp. 202-206. A variation of this strategy was carried out in Spain after 1949, as will be described in Chapter 3.

[116] Note that this can be done with or without the across-the-board consumer subsidy being implemented at the same time.

the case of across-the-board subsidies, require substantial financial outlays on behalf of the state. The existence of a black market might furthermore undermine social coherence and/or the authority of the government. However, leaving a part of the population without access to daily foodstuffs or other basic commodities might be considered politically unacceptable, and the economic losses and administrative problems can then be seen as necessary costs. The choice between economic efficiency and social equity can also be formulated as a selection between social market failure, as formulated by Stiglitz:

> For some type of public intervention, the full costs of government intervention, taking into account the inevitable public failures, may be less than the benefits arising from correcting (or improving upon) market failure.[117]

and government failure, as formulated by North:

> Economists (such as Professor Stiglitz) ordinarily take for granted a state that has created a set of rules of the game that are broadly conducive to economic growth. But not only are such rules still the exception (...) there is no guarantee that they will be perpetual even in the developed world (...).[118]

Given that governments might face financial, technical or political constraints to the scope of action that is open to them it is usually possible to criticise the strategy of a given government for being less than perfect. Consequently, the analysis should also include the question of what the viable alternatives would have been. This discussion will be a crucial in the analysis of the situation in Spain in the 1940s and early 1950s. However, before returning to Spain in the following chapters, we will first have a brief look at how other governments tried to solve the food price dilemma before, during, and after World War II.

2.2: THE REGULATION OF PRODUCTION, DISTRIBUTION AND CONSUMPTION OF BASIC FOODSTUFFS DURING WORLD WAR II

During World War II there was widespread state intervention in the economy with the purpose of securing national food supply and ensuring that all members of the population were receiving a minimum ration. The present section shows that the

[117] Stiglitz (1989), p. 56.
[118] North (1989), p. 109.

systems of intervention were not the same in all countries, given differences in political regimes, the relation between natural endowments and population size, trade possibilities, and so forth. Consequently, the intended - and non-intended – results regarding output, supply, distribution and costs also varied from country to country. The next four sub-sections describe state intervention in the agrarian sector and its consequences in the United Kingdom, Germany, and the USA before and during World War II, as well as in "Bizonia" after the end of the war.[119] The purpose is to show that state intervention in agriculture during and after World War II was often carried out on an ad hoc basis. Furthermore, it appears that success depended not only on the policy itself, but also positively correlated with the degree of modernisation of the agrarian sector and the economy as such. First, a modernised agrarian sector appears to be better prepared than a traditional one to shift output patterns and increase calorific output. Second, a diversified and large industrial sector will have an advantage in substituting imports that are not available in a war period. It is significant that when compared to the countries described in the following sub-sections, these conditions were not fulfilled in the case of Spain.

2.2.1: From external dependency to improved nutritional standards: The case of the United Kingdom

In the context of securing food supply during World War II, the case of the United Kingdom is often regarded as relatively successful, particularly in the light of the external circumstances. In spite of the fact that the country was highly dependent on imports of food,[120] few measures were taken to secure provisions before the outbreak of the war.[121] The supply situation was further complicated after the capitulation of France in 1940, which left the country dependent on a limited agricultural base and the hazards of transatlantic maritime transport of foodstuffs.

This led the government to adopt a policy that had three main objectives: a) to increase agrarian production, b) to avoid unacceptable inequality of consumption, and c) to control inflationary pressures.[122] To fulfil these goals, the policy included

[119] "Bizonia" is an often-used name for the Anglo-American occupation zones in Germany after 1945.
[120] In the 1930s, some two thirds of the consumed calories were imported, and for a basic staple like wheat, almost 90 percent of consumption was accounted for in this way. Olson (1963): p. 117.
[121] Olson (1963): pp. 43-44. A contemporary author went as far as to say that it was not until 1941 that agrarian policy worked well. Murphy (1943), pp. 266-267.
[122] Nash (1951): p. 200.

incentives to increase calorific output, a rationing system, and price controls for both producers and consumers.

The expansion of calorific output was stimulated through disincentives for most animal production as well as incentives for increasing vegetal production. These measures were relatively successful and led to a substantial increase in the amount of land under cultivation and total output of calories. The outcome was an improvement in the nutritional standards of large parts of the British working class during the war.[123] As far as the distribution of production was concerned, rationing was gradually introduced. Here it is notable that consumption of some basic staples, including bread, remained non-rationed during the war.[124] Finally, an across-the-board consumer subsidy for basic foodstuffs was introduced step by step. The procedure was that the state borrowed the money to pay for the difference between what the farmers received and what the consumer paid. This was done to maintain social stability, as well as to stimulate domestic production of foodstuffs without risking inflationary pressures due to wage demands. However, the control of inflation was not as successful as intended, and the consumer subsidy turned out to be quite expensive for the state.[125] Furthermore, the fixing of prices turned out to be problematic according to one of the participants in the planning of price controls:

> From what has already been said as to the circumstances in which the successive price decisions were made during the war, it will be clear that the individual price changes cannot be expected to fall into a completely logical pattern. Each set of decisions was to some extent a compromise, a result of conflicting influences. Thus we cannot take the individual price changes as conforming in any consistent fashion to official estimates of change in costs of production, or to cost changes modified by appropriate "incentives" for different producers.[126]

Although parts of the price policy were introduced on an ad hoc basis, the general results went in the desired direction. On the supply side, calorific output increased by 91 percent, the production of proteins grew by 106 percent, and the inflationary pressures were eased.[127] However the success had been obtained at the cost of a

[123] Olson (1963): pp. 120-130.
[124] Murphy (1943): pp. 270-273. Note, however, that bread was rationed in the UK after 1946. Farquharson (1985b), p. 120.
[125] See Nash (1951), pp. 206-236 for details of the price control system and the gradual introduction of its different elements.
[126] Nash (1951), pp. 214-215.
[127] Olson (1963), p. 125.

significant increase in state expenditure, and imports from the US continued to be necessary.[128]

2.2.2: State control and exploitation through conquest: The case of Nazi Germany

The lesson from World War I of the importance of food supply was maybe most acutely learnt by the Nazi regime in Germany. The result was that during a good part of the war there appears to have been a reasonable supply of food to the German population, but this was partly obtained at the cost of the population in occupied countries.

Already from the 1930s, the agrarian policy and part of the trade policy were directed with the aim of securing wartime supplies, and on a technical level this strategy to some degree resembled that of the British government. The policy included compulsory organisation of the farmers in the *Reichnährstand*, the preparation of total state control over agrarian output, trade agreements with countries in Eastern Europe,[129] rationing, price controls, and increase of calorific output through changes in the output composition.[130] However, on top of that, the plan for securing food supplies included that occupied Eastern Europe should be the granary for a German controlled continent. This last point, including the atrocities committed against the population of the occupied countries as well as the occupation by German citizens of the homes and land of those killed or deported, was a singular strategy amongst the belligerent countries in Europe.[131]

The outcome of this policy is difficult to evaluate exactly, due to lack of statistics, but it appears that with its perverted logic, it managed to secure reasonable provisions for the German population until approximately 1943. However, from this date, output declined at an accelerating rate, due to a lack of fertilisers, farm machinery, and labour.[132] The policy appears to have been more successful in Germany than in occupied Eastern Europe. First, because the war was fought outside Germany during most of the period. Second, because the shifting war fortunes left few years to "normalise" the situation in the occupied countries. Furthermore, the singular Nazi conception of "normalising" the situation in Eastern Europe included plundering,

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[128] Hirsch (1943), pp. 230-231 and Puhle (1985), p. 165.
[129] Lehmann (1985), pp. 29-31, and Overy (1994), pp. 21-22.
[130] Puhle (1985), pp. 40, 46.
[131] For the situation in Czechoslovakia and Poland, see Prucha (1985) and Luczak (1985).
[132] Lehmann (1985), pp. 36, 40-42.

as well as deportation and killing of the local population, which would not promote agrarian output.

2.2.3: From peacetime depression to wartime boom in the US

The negative effects of the depression in the 1930s led to state intervention in the agrarian sector as a part of the New Deal programme. The main goal was to secure farmers' income through state guaranteed minimum prices, and upper limits on the cultivated areas. This policy led to surplus output, and important buffer-stock existed at the outbreak of World War II.[133] The outbreak of World War II led to an increase in domestic demand and demand from the United Kingdom, as well as a decline in imports. In these circumstances, the government tried to increase output but also to keep consumer prices low to avoid inflationary pressures. To obtain this double goal, price subsidies were introduced for consumers, in the same way as in the United Kingdom. Farm prices were then calculated on the basis of the relative prices of agrarian and industrial goods.[134]

Price controls were not confined to the agrarian sector but covered large parts of the economy. In total there were more than 600 rent and price regulations during World War II, covering more than 8,000,000 articles. After the end of the war, Galbraith maintained that widespread price control had only been introduced when no other alternatives appeared viable. But the regulation "made no pretence to deal with particular disequilibria; it undertook, quite unequivocally, to fix prices *qua* prices."[135] However, the official prices were not always respected. The violations of the regulation included upgrading, falsification of records, cash at the side payment, payments for non-delivered goods, tie-in sales, quantity/quality deterioration, falsification of coupons, selling of rationed commodities without coupon-payment, and so on.[136]

The ability of the agrarian sector to satisfy not only an increase in domestic demand but also to deliver exports to allied countries indicates that the outcome of the policy was output growth. This was mainly obtained through an increase in the cultivated areas, a more intensive use of fertilisers, an improvement in seed quality,

[133] Hirsch (1943), pp. 229-230.
[134] Hirsch (1943), pp. 232 -242.
[135] Galbraith (1980), p. 4.
[136] Clinard (1952), pp. 10, 16-21.

and an acceleration of the mechanisation process.[137] However, this happened against a background of substantial buffer stocks at the outbreak of the war, and the under utilisation of land and capital that was the norm in the sector in the 1930s. Both these factors were an advantage in the process of responding to the increase in demand after 1939.

2.2.4: The industry versus agriculture dilemma: The case of Bizonia 1945-49

After the end of World War II, *Bizonia*, i.e. the Anglo-American occupation zones in Germany, was not able to produce sufficient foodstuffs to maintain an acceptable level of nutrition for the population. Consequently, rationing, which was introduced during the war, continued after 1945 and the area was heavily dependent on imports from the United States.[138] The British and American administrators in *Bizonia* adopted the strategy of shifting from husbandry to vegetal production, but with less success than in the UK during the war. The move was resisted by the farmers, who refused to slaughter more animals, after the Nazi regime had already pursued a policy of limiting animal production.[139]

During the last years of the war, a shortage of fertilisers was a major problem for the agrarian sector and this problem persisted after 1945. The simultaneous lack of agrarian and industrial output gave rise to a vicious circle of food-coal-food shortage. Lack of food meant that the labour force in the German mines produced less coal, due to low calorific intake and the time spent searching for food rather than working. With energy being a very important input in the production of farm machinery and artificial fertilisers, output of these commodities was below the desired level, and so it was difficult to raise the agrarian output.[140]

This vicious circle gives a clear example of the food-price dilemma, which was difficult to break in the specific circumstances of post-war Germany. It was politically unacceptable to increase rations for the German population beyond the level found in the allied countries, and paying higher prices to the farmers would jeopardise the situation for the population until agrarian output increased. At the same time, low

[137] Puhle (1985), pp. 165, 172-173.
[138] Farquharson (1985b), pp. 161-175.
[139] Farquharson (1985a), p. 57.
[140] Farquharson (1985b), pp. 120-133.

official prices paid to the farmers would lead to a decline in output, or a larger share of produce being sold on the black market.[141]

The vicious circle was only broken with the aid of the Marshall plan, which allowed food imports from the United States to enter Bizonia in the winter of 1948/49. The increase in rations led to a decline in black market prices, and more German produced food being sold through legal channels. Finally the improvement in the nutritional status of the workers in the mines led to an increase in coal output, and subsequently, industrial output, including inputs and capital goods for the agrarian sector.[142]

2.3: SUMMARY AND PERSPECTIVES FOR THE ANALYSIS OF THE SITUATION IN SPAIN IN THE 1940S AND EARLY 1950S

Economic theory suggests that price-fixing and rationing in the agrarian sector will reduce total welfare in a society when compared to a situation without these measures. In spite of this, price-fixing in agriculture has been widely used in the 20th century, for example to counter a perceived risk of social market failure, or with the purpose of fostering industrial growth. These two approaches reflect different attitudes towards price-fixing. It can either be seen as a temporary exception from the normal course of economic policy or as a desired procedure.

The experiences from World War II show that the contrast between the two approaches can be partly obscured in times of large-scale war. In such a case, increased levels of state intervention have often been seen as inevitable. Thus, the divergent opinions concerning price-fixing mainly show up as different degrees of interference in the economy. The second part of the chapter showed this as the opposition between, on one side, the German organisation of the economy, and on the other side, the approach taken by the United Kingdom and the United States. When the experiences from these three countries are compared to the Spanish economic policy in the 1940s and early 1950s, it is clear that politically, the course taken in Spain had more in common with German economic policy than with that of the United Kingdom and the United States.[143] Both Spain and Germany favoured widespread state control with the economy with the purpose of obtaining national self-sufficiency

[141] Farquharson (1985b), pp. 216-217.
[142] Farquharson (1985b), pp. 218-219.
[143] See Section 1.2 for a brief overview of the general economic policy of the Franco regime in the 1940s and early 1950s.

in key war-related sectors including agriculture. Even under the assumption that World War II had not broken out in 1939, it is likely that the Franco regime would have pursued a policy of extended state intervention in the economy in the 1940s. On the other hand, the experience from other European countries suggests that most types of regime governing Spain in the 1940s would have resorted to state intervention in the economy to alleviate problems of supply.

We have found that the situation faced by the governments in the 1940s can be seen as an example of the "food price dilemma", i.e. how to keep producer prices high to encourage production and at the same time keep consumer prices low to secure supply for all. The first part of this chapter suggested that there was no cost-free solution to the dilemma, while the second part demonstrated some of the conditions that eased the way out of the dilemma. The favourable conditions included a surplus capacity in agriculture, as well as a domestic industrial sector that could compensate for declining imports of inputs for the agrarian sector. Furthermore, it appears that high-productivity agriculture tends to adapt more easily than low-productivity agriculture to requirements of change in production patterns.[144]

All in all, the theory presented in this chapter will make it possible to evaluate the agrarian policy of the Franco regime within the context of the food price dilemma. This will be possible both as an assessment of the policy that was carried out, and as a discussion of which alternatives were open to the government. This analysis will cover both the questions of how to raise output, and of how to make an adequate distribution of the supply that was at hand. At the same time, the description of the various solutions to the food price dilemma tried in other countries will serve as a point of comparison for the advantages and disadvantages of Spanish agriculture to respond to agrarian policy. The two first points that will be dealt with is the questions of whether wheat output could have been increased significantly in the 1940s if the regime had opted for another policy, and whether the rationing system for wheat and bread could have been optimised.

[144] Milward (1985), pp. 13-14.

CHAPTER 3: PRICE INCENTIVES, CHEMICAL FERTILISERS, WORK ANIMALS AND THE POST-WAR DECLINE IN WHEAT OUTPUT

3.1: INTRODUCTION

In the historiography, much focus has been on wheat when analysing the consequences of the agrarian policy of the Franco regime.[145] This is not surprising since wheat was the most extensive crop, bread was an important part of the diet of the Spanish population, and because the black market for wheat was the largest in the sector in terms of value. Furthermore, due to a combined decline in cultivated area and average yields, output in the 1940s and the first half of the 1950s was significantly smaller than before the Civil War, as can be seen in Diagram 3.1.

Traditionally, wheat output levels in the 1940s have been interpreted in two different ways: as a movement along the supply curve due to declining prices, or as a shift of the supply curve to the left caused by a lack of inputs and capital. The widely accepted works of Barciela are representative of the first argument.[146] According to this line of reasoning, the prices set by the state led to a substitution of other crops for wheat, as well as a de-intensification of wheat cultivation.[147] Finally, this interpretation states that the supply problem was only solved in the early 1950s when prices paid to farmers by the state were increased and the market for agrarian products was liberalised.[148] As an alternative explanation, Simpson has suggested that the decline in output was the result of a shift of the supply curve to the left. He pointed to the possibility that it was the lack of fertilisers and work animals that was behind the decrease rather than the level of official prices.[149] A related observation was made by Leal et al. They observed that although the official prices paid to farmers in real terms were lower in the 1940s than in the 1930s, this coincided with an increase in the relative price of output to labour.[150]

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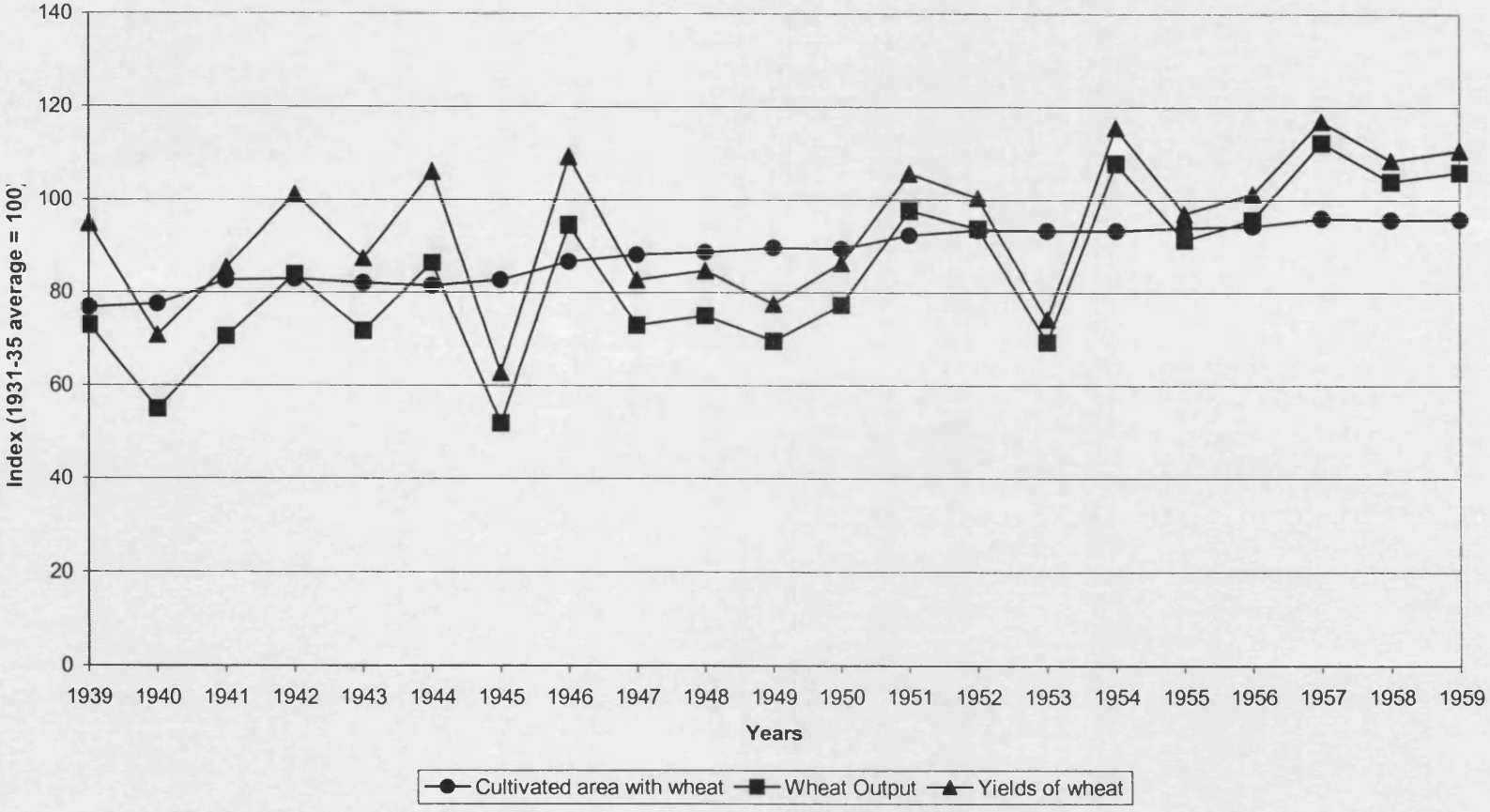
[145] See Section 1.3.
[146] See Barciela (1981a), Barciela (1981b), Barciela (1986b), and Barciela and García González (1983). References to the works of Barciela can be found in for example Harrison (1985), Prados de la Escosura and Sanz (1996), Richards (1999) and Simpson (1995).
[147] Barciela (1986b), p. 391-393.
[148] Barciela (1986b), p. 416.
[149] Simpson (1995), p. 247.
[150] Leal, et al. (1985), pp. 44-46 and 64.

Diagram 3.1: Index of the development of output, yields, and cultivated area with wheat in Spain, 1939-59 (1931-35 average = 100)



Sources: Carreras (ed.) (1986), Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35).

The main problem to be addressed in this chapter is which of these two theories is more accurate. This issue is important because it is fundamental for the understanding of the agrarian policy of the Franco regime in the 1940s, and, thereby, for the evaluation of the general political economy of the period. Furthermore, it will serve as a background for Chapter 6, which deals with wheat growing farmers in the province of Cuenca. The joint conclusions from these two chapters will make it possible to discuss if the economic policy of the Franco regime had special consequences for small-scale farmers in comparison with the rest of the agrarian sector.

The present chapter concludes that the main reason for the decline in output was a shift of the supply curve to the left due to a shortage of fertilisers and work animals.[151] Given the national and international conditions in the 1940s, these shortages were difficult to overcome. The absence of an intervention in the wheat sector would therefore have resulted in a social market failure, running the risk of large parts of the population experiencing a further deterioration of their living conditions.

Moreover, black market earnings counteracted the fall in official prices, and at the same time changes in relative prices received by the farmers appear to have favoured wheat cultivation at the cost of other yearly crops. Consequently, the decrease in wheat output cannot be ascribed to the substitution of wheat for other crops. A similar result is found in the issue of possible changes in land use in favour of animal husbandry. Although sheep breeding became more widespread, this factor does not appear to have been decisive for the decrease in wheat production.

Since work animals and fertilisers were scarce resources, a raising of the official wheat prices paid to farmers would not have been a *sufficient* condition for a higher wheat output unless it took place at the expense of other crops. Moreover, the study will demonstrate that between 1950 and 1952 higher official prices were not a *necessary* condition for obtaining a larger production. Thus, while there was a limited scope for increasing output, the analysis will show that it would have been possible to design the system of intervention in such a way that it would have encouraged less black market trading. It is therefore important to make a distinction between the effect of the agrarian policy on the level of production and on the distribution of production. The overall argument is broadly in line with what has been suggested by Simpson,[152]

[151] This result is in accordance with the interpretation suggested by Simpson. See Footnote 149.
[152] Simpson (1995).

and Leal et al..[153] On the other hand, the conclusions are at odds with the interpretation forwarded by Barciela, who argued that the level of official prices paid to the farmers in the 1940s was the main reason for the post-war decline in output.[154]

3.2: ABSOLUTE AND RELATIVE WHEAT PRICES RECEIVED BY FARMERS AND THEIR EFFECT ON OUTPUT LEVELS BETWEEN 1939 AND 1953

3.2.1: The increase in wheat prices in absolute terms in the 1940s when black market earnings are included

From Section 2.1 we know that in a situation with state fixed prices, the existence of a black market could in certain circumstances increase output. The principal condition that had to be fulfilled was that at least a part the produce sold in the black market was not the result of "diversion".[155] It is therefore significant that the SNT estimated in the early 1960s, that for the 1939-49 harvests 55.7 percent of the marketable production of wheat was sold in the black market.[156] It might have been the case that black market sales immediately after the end of the Civil War were mainly the result of diversion. However, the relative size of the black market makes it likely that from the early 1940s it was clear to farmers that earnings from this source could be included in the planning of production. Consequently, official prices paid to farmers might not have been that important for the level of output. This is supported by the fact that when rationing was abolished in 1952, official prices in real terms were some of the lowest since the end of the war.

If black market earnings were to work as an incentive to increase production, the gains from this source had to be worth the risk of being caught. The fact that such a high proportion of the harvest found its way to the black market indicates that the deterrent effect of the control system was limited. As mentioned in Chapter 1, a special court called the *Fiscalía de Tasas* was created in 1941 to deal with cases of black market activity. Unfortunately, no sources are available that give the total number of cases that were brought for trial at the institution. At the provincial level, the archive of the *Fiscalía Provincial de Tasas* in Teruel has survived, and this indicates that the risk of being caught was not very large. Close to 10,000 cases were

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[153] Leal et al. (1985).
[154] Barciela (1981a), Barciela (1981b), Barciela (1986b) and García González (1983).
[155] See p. 50.
[156] Servicio Nacional de Trigo (1963), Table C.-9-1.

brought before the *Fiscalía Provincial de Tasas* in the 1941-53 period, which only amounts to some 800 cases a year. However, among those caught were not only farmers selling in the black market, but also middlemen and consumers, as well as people trading in other rationed goods such as clothes and shoes.[157] With the provincial population being around 230,000 in the 1940s, this meant that approximately one third of a percent of the population was punished each year. In the light of the quantity and range of products that were sold on the black market, this figure is hardly impressing.

Although the non-fulfilment of the compulsory production quota is no proof of black market activity in itself, the sources suggest that there probably was a high coincidence between the two phenomena. Normally all farmers were fined if they owed more than 1000 kilos of their quota. However, the deterrent effect appears to have been small since examples can be found of people selling nothing to the SNT despite the fact that their production quotas sometimes reached 50,000 to 60,000 kilos.[158]

For those owing less than 1000 kilos, fines were imposed in a discretionary way. These would be based on a joint evaluation by the local SNT office and the Ministry of Agriculture in Madrid. Judging from the correspondence between the local SNT offices and Madrid, it is clear that the purpose of fining some of the farmers owing less than 1000 kilos was to inflict exemplary punishment where they saw fit.[159] The inefficient control of production had the consequence that the official price did not equal the average price received by the farmers. It is therefore crucial to determine what prices farmers received for their produce to accurately gauge the importance of the price policy on output. Unfortunately, almost all information on black market prices deals with consumer prices and not those received by farmers. However, based on oral and personal evidence, Barciela and García González judged that setting the black market price of wheat received by farmers at 250 percent of the official price was a conservative estimate for the 1939-53 period as a whole.[160] Applying this factor

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[157] Fiscalía Provincial de Tasas de Teruel: Fichas de los sancionados por la Fiscalía Provincial de Tasas y multas que se les han impuesto (1941-55).

[158] Servicio Nacional de Trigo: Resumen de deudores de cupos forzosos de trigo para la campaña 1950/51.

[159] This is for example explicitly stated in a letters from the Provincial Delegates of SNT in Palencia and Malaga to the SNT office in Madrid, both from May 30th 1951: Servicio Nacional de Trigo: Resumen de deudores de cupos forzosos de trigo para la campaña 1950/51. However, even this did not always take place, given that at least in one year in Cuenca, the Civil Governor of the province cancelled the fines imposed on the farmers for not fulfilling their production quota: Christiansen (1999), pp. 234-235.

[160] García González worked for the SNT in the 1940s.

to the share of output that the SNT estimated was sold in the black market, Barciela and García González calculated average nominal prices received by farmers (Column 3 in Table 3.1).[161] Note that the constant increase in nominal prices that can be seen in the table is not that telling for the economic situation of the farmers, given that Spain in the 1940s was characterised by high levels of inflation.[162] Since a farmer would spend at least a part of his income buying other goods whose prices also increased, it is necessary to take into consideration the development of the relative price of wheat to other goods in the economy.

Barciela and García González used a GDP deflator, with 1915 as its base year, for the conversion of nominal prices into real prices. However, it has been preferred to use Prados de la Escosura's price deflator for "agriculture, forestry and fishing" for the calculation of Columns 4 and 5 in Table 3.1.[163] This deflator is preferable to the 1915 GDP deflator because the base year is 1958, which is closer than 1915 to the period that is dealt with in the analysis. It can be supposed that farmers mainly spent their income on products from within the primary sector, rather than industrial products or service goods.[164] Hence, it is an advantage to use a deflator, which mainly covers the development of food prices.[165] Although this deflator might be too narrow to capture the development of all prices paid by farmers, it still appears to be more accurate than a GDP deflator.[166]

It is now possible to evaluate the development of average wheat prices received by the farmers. The average wheat price received by farmers in most post-war years was higher than the pre-war average when black market earnings are included and when prices are calculated in real terms (Column 7 in Table 3.1). Nevertheless, this average wheat price is not a precise measure of the exact level of prices received by the farmers.

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[161] In Barciela and García González (1983) the total price received by the farmers does not include earnings from black market sales in 1939 and 1940. Since the authors do not argue that the situation was different in these two years, the figures for these two years have been recalculated according to the method for the rest of the years.

[162] See Section 1.1.

[163] Prados de la Escosura (1995), vol. 2, pp. 131-134.

[164] The first inquiry into household expenditure patterns in Spain was made between March 1964 and March 1965. At this time farm households spent on average 55 percent of their income on foodstuffs, 15 percent on clothes and shoes, 6 percent on rent, 8 percent on household equipment and 5 percent on holidays and miscellaneous. Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1966). It can be assumed that an even higher proportion of income was spent on foodstuffs in the 1940s, where the average economic situation was far worse than in the 1960s.

[165] The deflator is also used to convert nominal prices to real prices in Chapters 4, 6, 7 and 8.

[166] Moreover, using the GDP-deflator from Prados de la Escosura has the consequence that official prices in real terms were higher than the pre-war average in most of the 1939-53 period, which is a highly unlikely interpretation.

Table 3.1: Official wheat price, estimated average price, index of official price and index of estimated average received by farmers per 100 kilo wheat.

Years	1 Official price paid to farmers1) (Current pts)	2 Amount of output sold in the black market (percent)	3 Estimated average prices received by farmers when black market sales are included (Current pts)	4 Official price paid to farmers (Constant 1958 pts)[2)]	5 Estimated average prices received by farmers when black market sales are included (Constant 1958 pts)[2)]	6 Index of official price received by farmers in constant 1958 pts. (1931-35 av. = 100)	7 Index of average price received by farmers in constant 1958 pts. (1931-35 av. = 100)
1931	47	-	47	513	513	94	94
1932	47	-	47	517	517	95	95
1933	47	-	47	574	574	105	105
1934	49	-	49	556	556	102	102
1935	47	-	47	563	563	103	103
1937	51	-	51	515	515	94	94
1938	63	-	63	549	549	101	101
1939	67	28	94	495	702	91	129
1940	85	31	124	490	717	90	132
1941	87	28	123	406	577	75	106
1942	96	38	151	375	589	69	108
1943	127	34	192	480	724	88	133
1944	163	34	246	529	799	97	147
1945	181	29	259	556	797	102	146
1946	177	31	260	444	650	81	119
1947	192	36	295	458	703	84	129
1948	252	37	392	574	892	105	164
1949	252	33	367	514	749	94	137
1950	252	21	331	453	596	83	109
1951	290	18	369	497	631	91	116
1952	376	24	511	662	900	121	165
1953	401	9	456	685	778	126	143

1) Official prices are national averages, except 1937 and 1938 where they are average prices in the part of Spain controlled by the rebels.

2) Constant prices were obtained by deflating current prices by "price index in agriculture, forestry and fishing" from Prados de la Escosura (1995).

Sources: Barciela and García González (1983): p. 94, Ministerio de Agricultura: *Anuario Estadístico de las producciones agrarias* (1931-35).

This is the result of the uniform black market premium in its calculation and partly due to the inherent problems involved in determining the relative size of the black market. The correct interpretation of Table 3.1 would therefore be that it indicates the likely level of discrepancy between the official prices and the average prices received by farmers.

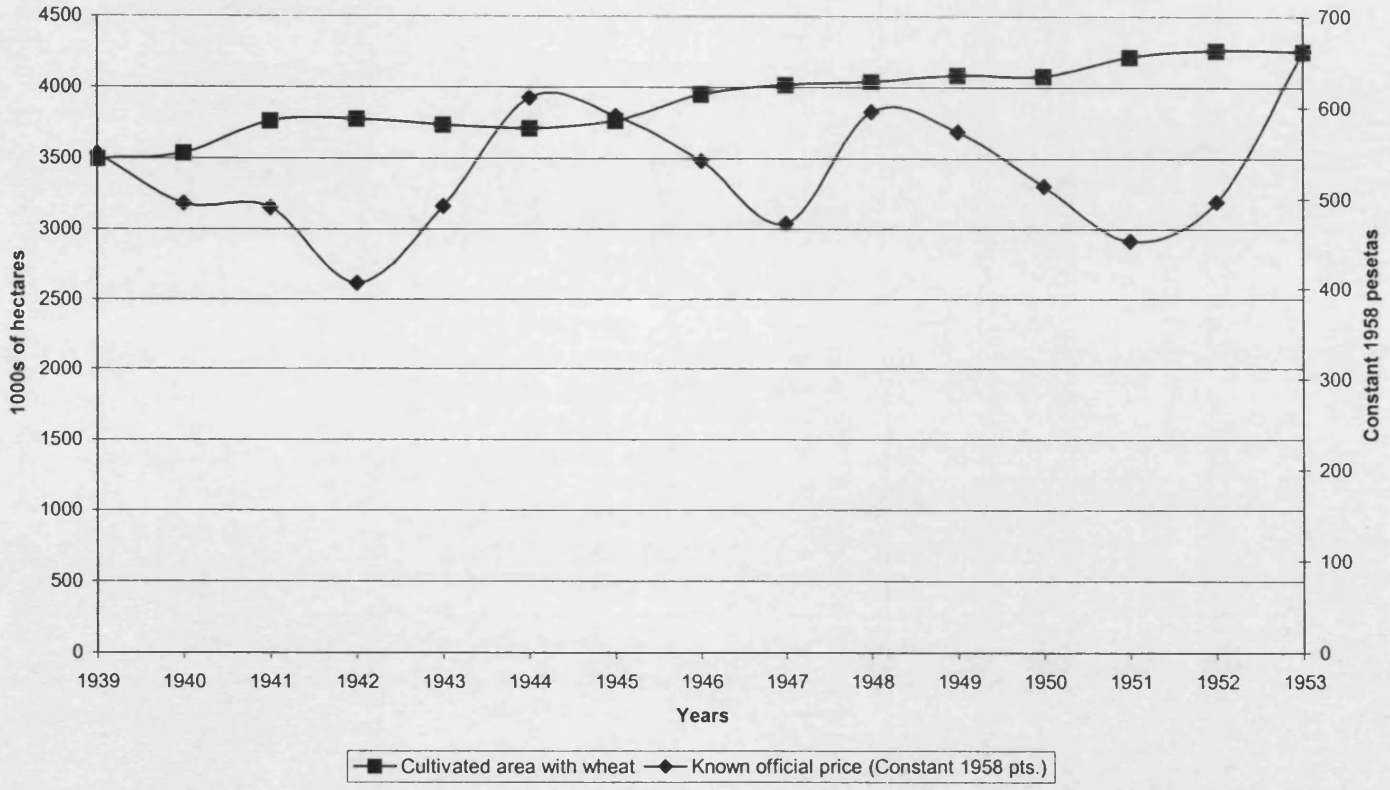
In any case, three factors demonstrate that this discrepancy might have been even larger than Table 3.1 shows. The first is that Barciela and García González maintain that the applied black market price is only a conservative estimate. Moreover, the calculation in Table 3.1 does not take into account that a part of what is registered in the statistics as farmers self-consumption could also have been traded in the black market. On top of that, Barciela and García González ignored the existence of a more diversified official market in 1950 and 1951 where a part of production fetched a higher price than what is indicated in the table.[167] It is therefore questionable that the level of output of wheat was principally determined by official prices.

Finally, it is important that the solution of the supply problem of bread did not happen alongside an increase in the official price of wheat. The abolition of the rationing of bread took place in the spring of 1952, it being a product of the 1951 harvest. Diagram 3.2 shows that in real terms the official price known to the farmers at the time of sowing was the second smallest since 1939.[168] In addition, Table 3.1 demonstrated that in real terms, the official price received for the 1951 harvest was just 3 percent above the average official price between 1939 and 1950. These two findings mean that the incentive from official prices to increase planned output in 1951 was smaller than in almost every year in the 1940s. At the same time, the encouragement from the official prices to sell in the official market rather than in the black market was similar to the average situation in the 1940s. The findings of this section seriously question the interpretation that the level of official prices paid to the farmers determined the level of wheat output. The two main points in the critique are: that the average prices received by the farmers in absolute terms were higher after the war than in the 1930s when black market earnings are included, and that the abolition of the rationing system happened at a time with low official prices.

[167] The conditions in the official market in 1950-51 are described in Section 3.6.

[168] At the time of sowing for the 1951 harvest, the last received price was 453 constant 1958 pesetas, while the average known price at the time of sowing between 1939 and 1950 was 528 constant 1958 pesetas.

Diagram 3.2: Area cultivated with wheat and official price known at time of sowing.



Sources Barciela and García González (1983), p.94. Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1939-40, 1943-53). Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950, 1950-1951, 1954-1955). Real prices were obtained using the deflator for "agriculture, forestry and fishing" from Prados de la Escosura (1995). See the discussion on p. 66 for the use of constant prices instead of nominal prices, as well for the choice of deflator. Note that between 1939 and 1942, and again from 1949 onwards, the official prices were announced at the beginning of the harvest, but between 1943 and 1948, prices were announced at the time of the sowing. The prices are the most recent information available to the farmer at the time of sowing

At the beginning of the section, it was assumed that at least a part of produce sold in the black market was not the result of diversion. It has only been possible to ground this hypothesis on indirect evidence on the conditions in the market for wheat. A more certain proof would require an investigation into the economies of individual farms, which is beyond the scope of this thesis.

3.2.2: The limited substitution of other crops and other types of agrarian land use for wheat in the post-war years

Diagram 3.1 demonstrated that the post-war decline in wheat output was the combined result of a smaller cultivated area and lower yields than in the 1930s. In theory, this trend in cultivation could be the outcome of changing relative prices, which made it more attractive to plant other crops than wheat or use the land for animal husbandry. Yet, the evidence does not support this interpretation. There exist some difficulties in accurately measuring changes in relative prices between wheat and other crops as there are insufficient data on black market prices and the relative size of the black market for crops other than wheat. Thus, we can only observe the changes in the allocation of land to different crops without knowing the accompanying shifts in relative prices.

Since wheat was by far the most widespread crop, only the following crops could act as substitutes on any significant scale: barley, rye, oats, maize, chickpeas, broad beans, green beans, carob beans, vetch and potatoes. Table 3.2 shows that before the war the total area cultivated with those 10 crops was slightly larger than the wheat area. For a period after the war, it appears that the cultivation of wheat lost its attractiveness for the farmers. Until 1946 the relative size of the area cultivated with wheat with regards to the other 10 crops was smaller than the pre-war average. Nevertheless, this temporary decline in the share of land used for wheat was not the principal factor behind the absolute decrease in the area cultivated. In fact, that the total post-war cultivated area was significantly below the pre-war average was almost doubly important.[169]

[169] The relative importance of the two factors can be calculated by constructing the following two counterfactuals. The first is to apply the share of land used for wheat between 1939 and 1946 to the pre-war total cultivated area. This would have resulted in a 306,000 hectares decrease in the average area cultivated with wheat between 1939 and 1946. The other counterfactual is to apply the pre-war share of land used for wheat to the total cultivated area between 1939 and 1946. This would have resulted in 571,000 hectares decrease in the average area cultivated with wheat between 1939 and 1946.

Table 3.2 shows furthermore that after 1941, the post-war cultivated area remained stable at around 90 percent of the pre-war average. This implies that the shift in land use for yearly crops did not lead to a change in the total area cultivated with the crops between the early 1940s and the late 1950s. An expansion of wheat output through an increase in the cultivated area would only have been possible at the expense of other yearly crops. The stability of the total cultivated area for the whole of the 1941-59 period is also interesting in relation to Barciela's interpretation of agrarian policy. He stated that the recovery in agrarian output that occurred in the early 1950s was the result of higher official prices and a liberalisation of the market. These measures then led to an increase in the area cultivated with wheat and a more intensive use of fertilisers.[170]

Table 3. 2: The development of the area cultivated with most the widespread yearly crops in Spain, 1931-59.

Years	Area cultivated with wheat	Area cultivated With other 10 yearly crops[1)]	Area cultivated with 11 main yearly crops.	Index of area cultivated with 11 main yearly crops	Area cultivated with Wheat as % of 11 crop total
	(1000s of Hectares)	(1000s of Hectares)	(1000s of Hectares)	(1931-35 average = 100)	(Percent)
1931-35	4557	5073	9630	100	47,3
1939	3496	4229	7725	80	45,3
1940	3535	4652	8187	85	43,2
1941	3762	4882	8644	90	43,5
1942	3776	5039	8815	92	42,8
1943	3736	4978	8714	90	42,9
1944	3711	4800	8511	88	43,6
1945	3766	4618	8384	87	44,9
1946	3950	4465	8415	87	46,9
1947	4017	4395	8412	87	47,8
1948	4041	4405	8446	88	47,8
1949	4086	4451	8537	89	47,9
1950	4080	4451	8531	89	47,8
1951	4214	4447	8661	90	48,7
1952	4262	4368	8630	90	49,4
1953	4256	4356	8612	89	49,4
1954	4260	4417	8677	90	49,1
1955	4288	4282	8570	89	50,0
1956	4305	4351	8656	90	49,7
1957	4378	4258	8636	90	50,7
1958	4365	4250	8615	89	50,7
1959	4368	4158	8526	89	51,2
1) Barley, rye, oats, maize, chickpeas, broad beans, green beans, carob beans, vetch and potatoes.					
Sources: Instituto Nacional de Estadística: *Anuario estadística de España* (1943); Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-60).					

[170] See Section 3.1 for an outline of Barciela's argument. It is especially noteworthy that he maintains that the liberalisation of the market for foodstuffs led to a general increase in the cultivated area. Yet this is done only on the basis of the development for wheat, barley, rye, oats and maize. (Barciela 1986b), pp. 420-421.

However, Table 3.2 at least questions this hypothesis, as the supposed incentive to increase output did not manifest itself in a larger cultivated area with the main yearly crops.[171]

The stability of the area cultivated with the main yearly crops after 1941 at about 90 percent of the pre-war average could be the result of a relative expansion of animal husbandry. Nevertheless, such a process of substitution does not appear to have been common in the 1940s and early 1950s. Cattle and sheep were the two species that could compete with yearly crops for the same land. Table 3.3 shows that there were some 10-15 percent fewer animals older than one year in the 1940s than before the war for cattle, while the number of sheep increased by some 20 percent in the same period.[172] When calculated on the basis of the combined living weight of the two species, the two opposing tendencies cancel each other out (Table 3.3).

The difference in the development of the number of animals in the two cases reflects different market conditions for some of the products obtained from these species. The combination of the post-war decline in the production of fodder crops,[173] with the lower level of living standards for both urban and rural population, was

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[171] As explained in Appendix 1, the statistics for the production and cultivated area of wheat, barley, rye and oats between 1939 and 1949 were adjusted upwards by the Ministry of Agriculture in the early 1950s. The lack of corrections for the other yearly crops opens the possibility that there was also an underestimation of the cultivated area. This means that if the data for the total cultivated area in Table 3.2 are inaccurate, the bias is against our hypothesis that the level of official prices was not the main cause for the post-war decline in production.

[172] Some confusion is possible about the number of animals in 1933 when compared to the 1940s. In the 1933 data, the total number of animals is divided in "adult animals" and "young animals" (*terneros/terneras*), while in 1940 the division is between "adult animals", "young animals" and "animals younger than 1 year" (*crias*). In subsequent overviews of the development of the number of animals, the 1933 data has then been understood to include "animals younger than 1 year", but this appears to be a mistake. In 1940 883,943 animals younger than 1 year plus 1,030,453 "young animals" were registered, while in 1933 only 964,931 "young animals" were registered. Furthermore, there were 2,171,459 cows in 1933 but only 1,722,945 in 1940. It does not seem likely that a smaller number of cows in 1940 had produced twice the number of animals younger than three years in 1933. An alternative source gives the number of some 4,215,000 cattle for 1935, in comparison with the 1933 data of 3,568,325. The difference is close to the number of animals that were registered in 1940 as "Animals younger than 1 year". We have therefore interpreted the 1933 data as being without "animals younger than 1 year". For the post-1940 data, the "Animals younger than 1 year" are not included in the original statistics. See Ministerio de Agricultura: "Tres estudios economicos": pp. 52-53, 75-80, and Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943), pp. 480-483, for the original statistics. See the 1958 edition of the *Anuario Estadístico de España*, p. 185 for the 1935 data, as well as for an example of the interpretation that the 1933 data includes the "animals younger than 1 year".

Note that 69 percent of the decline in the number of cattle between 1948 and 1955 recorded in Table 3.3 was found in only five provinces in the north-east of Spain: La Coruña, Lugo, Orense, Oviedo and Pontevedra. This might either be due to special circumstances at the local level and/or changes in the methodology or the quality of the statistics. We will not pursue the matter further since wheat was not very widespread in these provinces, and because 1955 is after the period with the most intensive state control of wheat production.

[173] Typical fodder crops were barley, oats and various leguminous plants.

probably detrimental to most animal production in the 1940s.[174] This is supported by the data in Diagram 3.3. Meat output from slaughterhouses in provincial capitals was 55 percent lower in the 1940s than between 1929 and 1935, and total meat production between 1950 and 1956 was 42 percent higher than in the 1941-49 period.[175]

Table 3. 3: Number of cattle and sheep, and accumulated living if the two species in Spain, 1933-55.

Years	Cattle older than 1 year	Index of number of animals (1933 = 100)	Adult sheep	Index of number of animals (1933 = 100)	Living weight [1)] (kilos)	Index of living weight (1933 = 100)
1933	3568625	100	13618645	100	2108382250	100
1940	3013428	84	16715567	123	2041149550	97
1942	3294000	92	16539110	121	2144555500	102
1948	3300180	92	15921303	117	2116137150	100
1950	3092491	87	16341821	120	2054087450	97
1955	2742037	77	15933140	117	1893471800	90
1) Calculation based on cattle weighing 400 kilos and sheep weighing 50 kilos.						
Sources: Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943, 1944-45, 1950, 1953, 1958); Ministerio de Agricultura: "Tres estudios económicos".						

Nevertheless, the economic conditions for sheep breeding appear to have improved after the war, in spite of intervention by CGAT.[176] The improvements of the economic situation was due to declining imports of raw cotton and wool for the Spanish industry, and increased exports of woollen cloths during World War II.[177] Although the number of sheep increased, this did not have a negative effect on the output of annual crops. 19 provinces accounted for close to 70 percent of the total number of animals. In these areas, the correlation coefficient between the increase in sheep and the increase in area cultivated with yearly crops between 1933 and 1950 is only – 0.10.[178]

[174] Engel's Law states that in general there is a positive correlation between income and the demand for superior foodstuffs such as meat.

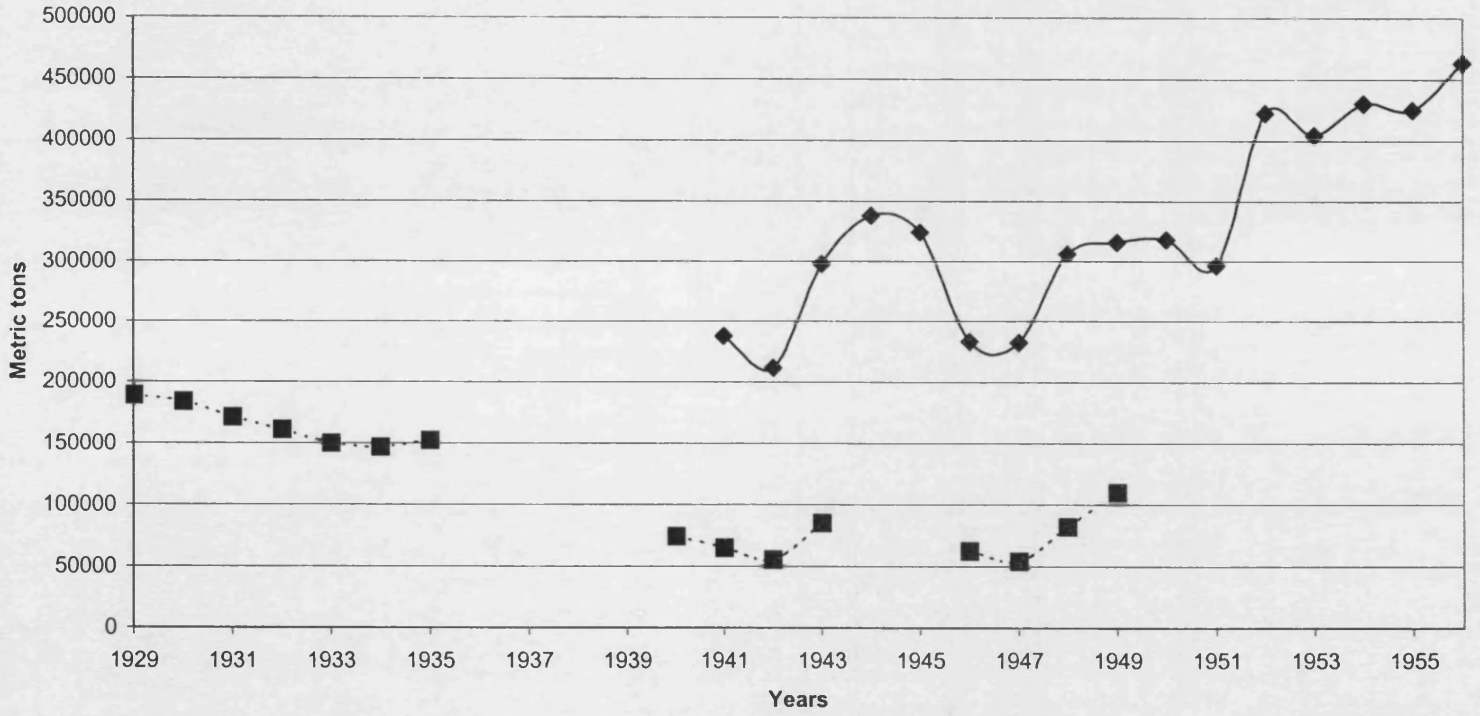
[175] Unfortunately, the data for the 1929-56 period are contained in two discontinued series, but the picture still remains clear. Note that the retail price for meat was controlled by the CGAT in the 1940s, but a black market also existed: Cámera Oficial de Comercio, Industria y Navegación de Bilbao: *Memoria Comercial* (1944-49).

[176] Barona (1948), pp. 372-373. The official trade union repeatedly demanded a liberalisation of the market: Monter Garcia (1949), p. 689 and p. 714.

[177] Catalán (1995), pp. 175-179; Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956)*, pp: 56-57.

[178] The 19 provinces are those with more than 2 percent of national total of sheep in 1933, i.e. Ávila, Badajoz, Burgos, Cáceres, Ciudad Real, Córdoba, Cuenca, Guadalajara, Huesca, León, Navarra, Palencia, Salamanca, Soria, Teruel, Toledo, Valladolid, Zamora, and Zaragoza. The picture is the same when using data for 1948 instead of 1950. Instituto Nacional de Estadistica: *Anuario Estadístico de España*" (1950, 1952); Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1948, 1950); Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950, 1950-1951).

Diagram 3.3: Meat output in Spain, 1929-56.



Sources: Instituto Nacional de Estadística: Anuario Estadístico de España (1943, 1958); Mitchell (1992).

In sum, the stable level of aggregate living weight of sheep and cattle and the limited inverse correlation between the increase in the number of sheep and the development of the area cultivated with yearly crops, suggest that the post-war decline in wheat output was not the result of a competition for land from animal husbandry.

3.3: THE LACK OF WORK ANIMALS IN SPAIN AFTER THE CIVIL WAR

It has been argued in the historiography that crop substitution and official prices were the two main reasons behind the post-war level of wheat output.[179] However, the present chapter has demonstrated that this interpretation is doubtful. The next step will be to analyse alternative factors that could restrict wheat output in the 1940s. In Table 3.2 we saw that the total area cultivated with yearly crops was virtually stable from 1941 to 1959, so that the aggregate expansion or retraction of the crops was close to zero. At the same time, the total cultivated area in the 1940s was below the pre-war level and could not be explained by the use of land for animal husbandry. It turns out that the reason behind the decrease in the cultivated area was a reduction in the number of work animals as a product of the Civil War. As the agrarian sector in Spain was not yet mechanised, this was an important constraint on agrarian output.

The two main species used as work animals were mules and cattle, but rather than being substitutes, the two animals were to a certain degree complementary. In 1933, the Ministry of Agriculture ascribed this to the variances in natural conditions and social organisation that characterised the agrarian sector:

> The logic consequence is that cattle are widespread in places where natural conditions favour animal husbandry and where urban concentration is small. On the other hand, mules dominate in locations where the climate is harsh and where the urban concentration is high, which are factors that imply that cultivated land is far from the homes of the farmers and that land plots are disseminated. Only changes in the last factors would lead to a bigger number of cattle as a work animal, which many agronomists and zoologists think would be an advantage.[180]

The result was large regional variations in the relative share of cattle and mules, with cattle being less suited to the natural conditions and the social organisation in large

[179] See Section 3.1.
[180] Ministerio de Agricultura: "Tres estudios económicos", p. 57. (Own translation)

parts of central and southern Spain.[181] Since this was the main area for cereal cultivation, production of these crops depended to a large degree on the available number of mules.

The Civil War led to a 10 percent decline in the number of animals, and it was very difficult to recover the pre-war figures in the 1940s.[182] The importance of the decline is indicated by the fact that the relative reduction in the cultivated area with the 11 main yearly crops was also 10 percent (Table 3.2). Consequently, the ratio of mules per cultivated area with yearly crops remained constant from the early 1930s to 1950.

Yet, in 1939 it did not appear to be a major problem to recover the pre-war number of animals. With an increase in demand for mules, prices for fodder crops controlled and with less competition for land use, the breeders of mules should have been able to increase prices and reduce costs at the same time. In normal circumstances, this should increase mule output, but three problems worked against this. The first problem was structural, the second was the result of international events, and only the last one originated in decisions taken by the Franco government.

The structural problem was related to the stock of animals in Spain. Production of mules requires an adequate stock of horses and donkeys, and there was a shortage of horses since they were seldom used as work animals in Spain. Consequently, the animals on hand did not have the required characteristics for being good breeding animals for mules, and pre-war practice was to import young mules, mainly from France and the United States.[183] A recovery of the pre-war number of work animals based on the existing stock of breeding animals in Spain was therefore not feasible.

The problem originating in the international environment was the eruption of World War II. Transatlantic trade was interrupted, while at the same time the war led to a sharp increase in the demand for draft animals for military use, especially for the German invasion of the Soviet Union in 1941. Hence, the continued import of work animals to Spain, let alone a larger volume than before the Civil War, was not

[181] Since horses and donkeys were mainly used for riding and as freight animals, the Ministry of Agriculture did not consider them when they in 1933 estimated the relative amount of work animals that were cattle and mules. The largest amount of cattle was found along or close to the Atlantic coast, with 99 percent in Santander, 89 percent in the Basque Country, 87 percent in Galicia, 81 percent in León and 77 percent in Asturias. Mules dominated in the central and southern parts of the county, with 94 percent in Levante, 90 percent in Castilla la Nueva and Albacete, 89 percent in Aragón, 69 percent in Extremadura and 66 percent in Eastern Andalucía. See Ministerio de Agricultura: "Tres estudios económicos", pp. 56 and 95.

[182] In 1933 there were 1,019,756 mules older than three years, while the average for 1940, 1942, 1948 and 1950 was approximately 924,000: Ministerio de Agricultura: "Tres estudios Económicos"; Instituto Nacional de Estadística: *Anuario Estadístico de España*" (1943, 1944-45, 1952).

possible. This is reflected in import data, which also reveals that imports had already declined in the early 1930s, when compared to the late 1920s (Diagram 3.4).

The third factor was the introduction of a price ceiling for mules in 1942, which complicated the situation for the breeders.[184] Given that the number of mules on a farm was relatively easy to control, price controls probably worked as a damper on production, even though there was also a black market for this commodity. It is hard to argue that the Franco regime could have done much to correct the two first problems between 1939 and the end of the 1940s. This left the regime with the option to increase the national production through a liberalisation of prices and/or a technical program of improvement in the stock of animals. Even so, as late as in 1947 there was apparently still no initiative on the last point, in spite that this apparently could increase the number of surviving foals by 50 percent over a number of years.[185]

It is clear that the price policy did not favour an increase in the stock of mules. However, given the other problems just described, it appears that the recovery of the pre-war level of animals in all cases would have been a lengthy process. Moreover, we have seen that the possibility of substituting mules for cattle was limited in the cereal sector. In this way, lack of mules became an important restriction on wheat output throughout the 1940s, and the government had only limited possibilities to solve this problem.

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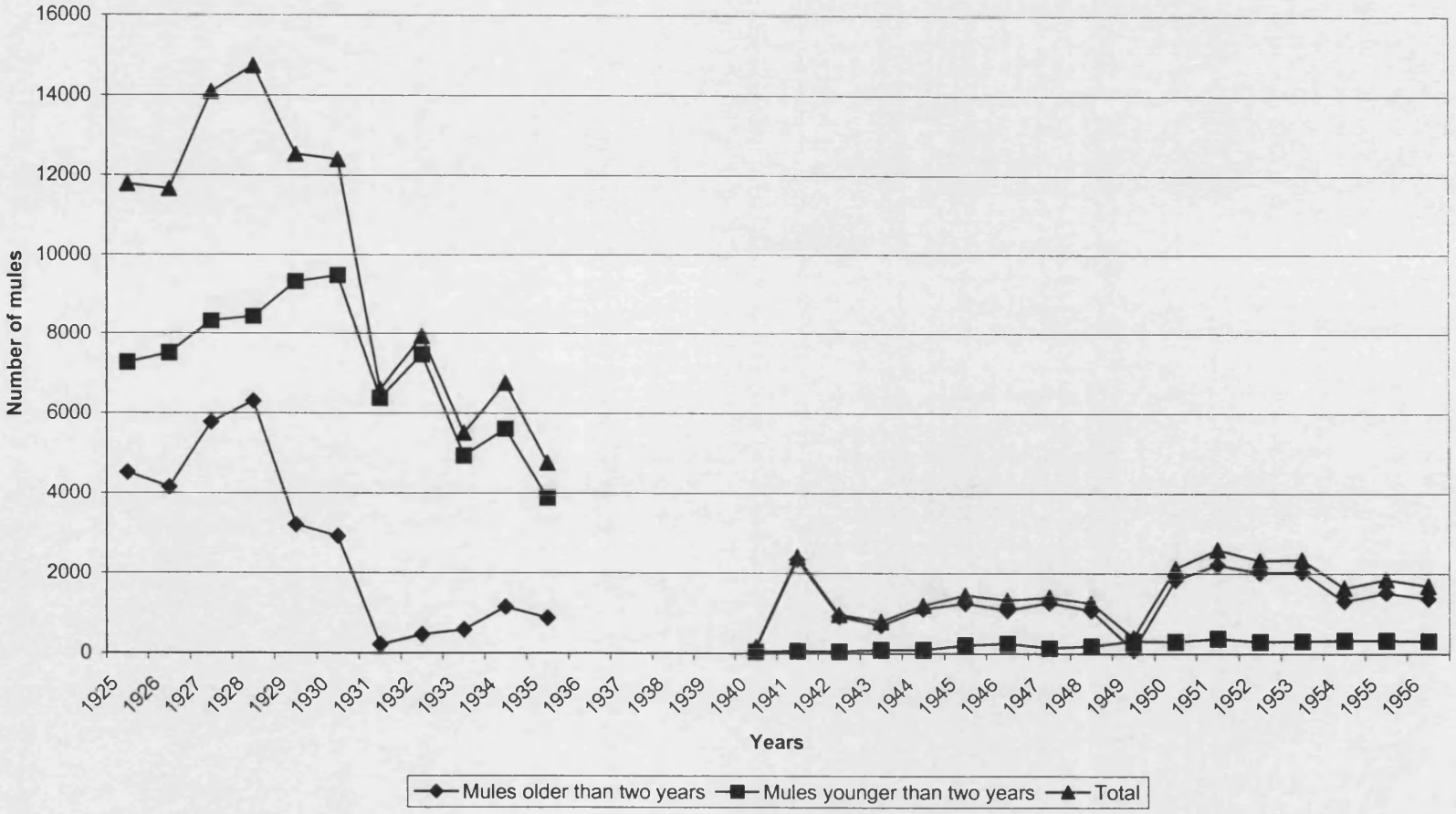
[183] Serrano (1943): p. 43.

[184] In October 1942 the official maximum price for a mule was set at 10,000 pesetas. This ceiling remained unchanged until May 1947, when it was raised to 15,000 pesetas: Consejo Económico Sindical de Cuenca: Informe, dated 22nd of May 1946, s.p.; Consejo Económico Sindical de Cuenca: Situación actual de la agricultura, dated 23rd of September 1947, s.p. It was the *Junta Superior de Precios* that decided to increase the price ceiling, and the procedure gives an impression of the erratic way official prices were set. It appears that the decision was the result of conflicting interests from various actors. In the file from the meeting where it was decided to raise the price there is a note from the Civil Governor of Toledo saying that the 1942 prices were not respected, a suggestion from the Ministry of Defence that trade and prices should be liberalised and a petition from the *Sindicato Ganadero* asking for prices to be increased by at least 90 percent. Furthermore there is a counter-suggestion from the Ministry of Agriculture stating that if prices of mules were increased, the same should apply to the prices paid to the farmers, along with a declaration that a 50 percent increase in the prices for mules would be the maximum that was acceptable. Apparently without further discussion, the maximum price was then increased by 50 percent. Junta Superior de Precios: Acta de la reunión celebrada el dia 7-5-47.

[185] Seculi Brillas (1947): pp. 158-162.

Diagram 3.4: Imports of mules to Spain, 1925-56.



Source: Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956).*

3.4: CHANGES IN THE INTENSITY OF CULTIVATION

The development of the number of work animals was not the only factor that affected wheat output in the post-war period. Two other elements have to be considered as well: the availability of fertilisers and the development of the relative price of wheat to labour. In the case of fertilisers, this section will demonstrate that external constraints, in the form of limits on imports of nitrogenous products had a strong negative effect on wheat output in Spain until 1949. On the other hand, it will also be revealed that the development of prices and agrarian wages clearly favoured wheat farmers at the cost of workers. Everything else equal, this would increase production.

3.4.1: The lack of chemical fertilisers in the 1940s

Table 3.4 shows that after the end of the Civil War there was a sharp decrease in the fertiliser usage per unit of cultivated land. The decrease in the usage of fertilisers along with their later revival around 1950 had an important influence on wheat output. This is reflected in that the correlation coefficient for the 1940-57 period between the five years moving average of the yields of wheat and the usage of nitrogen and phosphates is 0.85 and 0.77 respectively. However, the official price of wheat in the 1940s does not seem to have influenced the usage of fertilisers, as it increased before the official prices did.

The development of the post-war fertiliser output was to a large degree beyond the control of the Franco regime. Before the war, the domestic industry was able to satisfy the demand for phosphate fertilisers. Nonetheless, according to Robles Teigeiro production fell after the war due to a combination of difficulties with the replacement of capital in the industry and a 50 percent decline in the import of phosphate rock.[186] The result was that it took until 1952 to re-establish the 1935 level of output.

[186] Robles Teigeiro (1992), pp. 195-196. Between 1931 and 1935, the average imports of phosphate rock was 534,255 tons per year. Yet, from 1940 to 1947, imports oscillated around 200,000 tons per year, until they sharply increased in 1948 to more than 400,000 tons, and finally reached approximately 850,000 tons in 1956. Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956)*, p. 33.

Table 3. 4: Index of the use of fertiliser in Spain, 1940-57 (1931-35 average = 100).

Years	Kilos of Nitrogen per hectare of wheat, barley, rye and oats.	Kilos of Phosphate per Hectare of wheat, barley, Rye and oats.
1940	40	77
1941	36	71
1942	32	65
1943	34	30
1944	28	32
1945	20	62
1946	35	32
1947	40	41
1948	40	80
1949	54	93
1950	127	105
1951	105	114
1952	176	127
1953	160	137
1954	195	147
1955	269	166
1956	268	175
1957	239	195
Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-57); Robles Teigeiro (1992), pp. 193 and 197.		

The pre-war demand for nitrogenous fertilisers was almost entirely satisfied by imports. For military reasons, these were drastically reduced with the outbreak of World War II.[187] In the 1940s, establishing a state-controlled industry capable of producing nitrogenous fertilisers and explosives for military use was highly placed on the agenda of the INI. Even so, the jealousy of the INI towards private enterprise worked as a constraint on output.[188] The availability of imports did not improve immediately with the end of World War II given that a world-wide shortage prompted the International Emergency Food Council to regulate international trade of fertilisers until 1949.[189] In the meantime, Spain was allocated 25 percent of her necessities, while other countries with import needs were given 80 percent of their requirements.[190] Consequently, it seems unlikely that the majority of farmers in the 1940s even faced the possibility of considering whether the relative prices of artificial fertilisers and wheat made it attractive to increase their usage of the former.

[187] Between 1931 and 1935 the Spanish production of nitrogenous fertilisers was less than 5 percent of domestic usage: Gallego Martínez (1986), p. 222.

[188] See Gómez Mendoza (1997) for the plans of the INI to create an industry capable of producing nitrogenous fertilisers and explosives.

[189] See International Emergency Food Council (1947), pp. 52-61 for a short description of the reasons for the shortage of nitrogenous fertilisers.

[190] Gómez Mendoza (1997), p. 25. The treatment of Spain was probably the result of its international isolation. The Spanish government asked for an import quota of 93,000 metric tons in 1946-47 and 126,000 metric tons in 1947-48, but received only 27,800 metric tons and 31,600 metric tons: International Emergency Food Council (1947), pp. 62-63.

While it might be argued that government action for increasing fertiliser output was sub-optimal from a technical point of view, there was hardly anything they could do about the international situation.[191] It is significant in relation to the timing of renewed growth in wheat output that usage of fertilisers already surpassed the pre-war level per hectare in 1949-50. This was before the market was liberalised and at a time when official prices for wheat in real terms were still below the pre-war average. Hence, official wheat prices do not appear to have determined the use of fertilisers for wheat cultivation in the 1940s.

The smaller yields in the post-war years equalled a shift of the supply curve to the left, but less fertiliser would also result in a steeper supply curve. In the short run, the easiest way for a farmer to react to changing prices would be to regulate the amount of fertilisers that is used on the land rather than to alter the amount of land under cultivation. The difference is that a change in the use of fertilisers can be made at infinitely small steps while it is more complicated to increase or decrease the cultivated area. When the work capacity of the existing stock of animals is exhausted an increase would require a larger number of work animals. At least for small- and medium-scale farmers this would require an important investment. Similarly, a decrease in the cultivated area would either equal to using less than the full potential of the stock of work animals or a reduction in their number. Consequently, the farmers' overall possibilities of response to changes in prices would be more rigid after the decline in the availability of artificial fertilisers.

3.4.2: The increase in the relative price of wheat to labour

Another factor that could be detrimental to wheat output was a decline in the employment of labour for post-sowing caretaking of the crops. Yet, this does not appear to have been economically attractive for small-scale farmers nor for large-scale farmers. For small-scale farmers tilling their own land, a reduction in the working of the land would only be desirable if alternative employment generated a growth in income. This was difficult to obtain because in most rural areas in Spain in the 1940s alternative employment was scarce outside the harvest season. Small-scale farmers therefore had few ways of increasing total earnings other than the non-monetary expenditure of improving the yields on his own land through post-sowing work.

[191] An increase of nitrogenous fertilisers would have been economically sound in the short run in the 1940s. Yet, the Spanish industry had not been competitive in the international market in the 1920s and

For the large-scale farmers, post-sowing care taking of crops involved the employment of wage labour. This makes it necessary to analyse the development of the relative price of wheat to labour (Table 3.5). Even when using official prices it is clear that the relative price of wheat to labour increased significantly after the war.[192]

Table 3. 5: The development of the relative price of wheat to labour, 1936-53.

Years	Index of real official wheat price paid to the farmers (1935 price = 100)	Index of real wages in the agrarian sector (1936 salary = 100)	Index of relative price of wheat to labour (1935-36 = 100)
1940	87	82	106
1941	72	73	99
1942	67	72	92
1943	85	74	115
1944	94	73	129
1945	99	72	137
1946	79	63	125
1947	81	60	136
1948	102	56	182
1949	91	53	172
1950	81	56	144
1951	88	51	173
1952	118	52	226
1953	122	52	234
Sources: Martinez Alier (1968): p. 27; Tables 1.5 and 3.1.			

The favourable post-war evolution of the relative price of wheat to labour is reflected by that relatively more land was cultivated directly by the owners, while a large number of sharecroppers were evicted in the period.[193] It is therefore not likely that wheat output declined in the 1940s because of a general reduction of labour inputs.

3.5: SOCIAL MARKET FAILURE IN THE MARKET FOR WHEAT AND BREAD, 1939-49.

So far the analysis has shown that the post-war decline in wheat output was due to the lack of fertilisers and work animals, which shifted the supply curve to the left as well as making it steeper. By examining some characteristics of the market for wheat and bread, it will be argued that the absence of regulation of the market for bread would have led to an example of social market failure. The ramifications of this conclusion

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1930s, which was the main reason for the limited production in this period.

[192] Unfortunately, the base year for the two series is not the same, but this does not change the fact that the relative price of wheat to labour increased after the war. First, we expect that the wages in 1936 were at least as high as in 1935, due to the result of the general elections in February 1936 where the Popular Front coalition won on a left wing program. Second, as the wheat prices used in Table 3.5 are official prices, they underestimate the wheat price received by the farmers. Both these factors will further increase the relative price of wheat to labour in the 1940s.

[193] See Section 1.3.4.

make it necessary to reconsider the agrarian policy of the Franco regime in the 1940s in light of what in Section 2.1 was defined as the "food price dilemma".

The post-war decline in wheat output obviously affected consumption, but this was probably not felt equally for different parts of the population. It is likely that farmers were better able to maintain the pre-war level of consumption than the urban population, who experienced a rather grim situation according to the analysis of calories supplied through the rationing system.[194] In the city of Bilbao, adult males in the poorest part of the population received in the 1944-49 period between 800 and 1250 calories in the daily rations. The figures were slightly higher in the mining districts, where rations contained between 1000 and 1300 calories per day. In all cases it was only approximately half of the daily recommendations.[195]

It is hardly surprising that between 1941 and 1949 black market prices for bread varied from 457 percent to 1286 percent of the official price.[196] Within these levels of consumption, demand for bread in the black market is likely to be inversely correlated with the amount of bread provided through the rationing system. This appears to have been the case since the correlation coefficient between the amount of wheat per capita sold through the rationing system and the marketable part of the production of wheat sold in the black market is –0.80.[197] From the point of view of the farmers, this meant that black market demand was a function of calories supplied through the rations.

This left the state in a position where a decline in the share of wheat sold in the black market would require increased supplies through official channels. This could be obtained through either an increase in imports or an increase in the share bought from the farmers. Concerning the last point, the analysis has shown that lack of fertilisers and work animals made it difficult to increase production between 1939 and 1949. The possibilities for the state to increase the relative share of wheat that went through the official channels were therefore limited. The two main tools at hand were increasing the prices paid to the farmers and/or applying more coercive power. These two parts together constitute the food price dilemma described in Section 2.1.

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[194] Leal, et al. stated that the variation of the harvest mainly affected the size of the marketable surplus rather than the farmers' self-consumption: Leal, et al. (1986), p. 35.

[195] Cámera Oficial de Comercio, Industria y Navegación de Bilbao: *Memoria Comercial* (1944-49). The number of calories in the rations is an estimate, given that the calorific values are difficult to fix for some of the less important categories of food.

[196] González Portilla and Garmendia (1988), pp. 33-34.

[197] See Servicio Nacional de Trigo (1962), Tables C.-8-1 and C.-10-1 for the data on the size of the rations per capita and the relative size of the black market for wheat. Note that the amount of bread sold through the legal market was not only a function of the harvest, but also of net imports and changes in stocks.

An increase of the prices paid to the farmers would increase the supply through the rationing system, but also the prices paid by the consumers. Furthermore, it is to be expected that the high relative price in the black market would lead to that the increase in official supply relatively smaller than the increase in prices. Total wheat output would also grow since the relative price of wheat to other crops would increase but the growth would take place at the expense of other crops competing for the same land. This equals a shift of the supply curve to the left for the other crops, and would result in an increase in prices before a new equilibrium between demand and supply was reached. Since a price increase was not possible in the official market, it would take place in the black market.[198]

The net result would be a change in the distribution of income between consumers. Wheat consumers would experience an increase in official price, a growth in supply through the rationing system and a decrease in black market prices. The net result for the individual consumer depends on the share of consumption that comes from the rations. The larger the share coming from the rations, i.e. the poorer the consumer, the more the increase in official prices would have been felt. As explained in Section 2.1, an increase in the prices paid to the farmers included the serious risk of a deterioration of the living standards of the poorest part of the population. The establishment of an equilibrium between supply and demand for wheat in the 1940s would therefore include the risk of unacceptable social consequences in the short run. At the same time, consumers of substitutional products, such as livestock farmers buying barley, would also be worse off if they bought a part of their produce in the black market.

The other possible strategy for the state to obtain more supply through the rationing system would have been to strengthen the enforcement of its regulations. With the total number of producers and consumers in the millions, complete control of all commercial activity was not realistic. Even leaving this point aside, the application of more coercive power in a situation without a parallel market will leave total output unchanged as was described in Section 2.1. It can therefore be argued that neither increased control with the black market nor an increase in the official price of wheat would have solved the overall supply problem.

[198] The lack of fodder crops was a recurrent subject in the contemporary discussion, but the subject attracted less attention than the lack of crops for human consumption: Moreno Luque (1944).

3.6: THE CREATION OF A PARALLEL MARKET AS A SOLUTION OF THE FOOD PRICE DILEMMA

Although there was a limited scope for increasing wheat output in the 1940s, it is clear that the distribution system could have been improved. In Section 2.1 it was argued that in a situation with social market failure it could be desirable from a social point of view to introduce a dual price policy. The purpose would have been to give the poorest consumers access to cheap foodstuffs without jeopardising total output through low producer prices. In Section 2.1 we moreover saw that if a parallel market existed along the black market, the result would be an increase in total output. A variety of such a dual price system was in fact introduced in Spain in the form of a parallel market for wheat. Probably because of the political climate in the 1940s, the parallel market opened as late as 1950, although economic theory and contemporary evidence show that this was long overdue.

A closer look at the data for the relative size of the black market reveals the positive influence of the parallel market. The black market was significantly smaller in 1950 than between 1939 and 1949, in spite of the fact that the official price paid to farmers in real terms was 12 percent lower in 1950 than in 1949. Furthermore, the absolute size of the two harvests was not that different.[199] The difference between the two years was the extension of an already existing minor parallel market for wheat. From 1948, wheat grown on land categorised as "improved land" could be sold legally at free prices to certain industries, as well as to some public and private institutions. In October 1949 it was decided to extended this parallel market from the 1950 harvest onwards:

> Once the farmer has sold the compulsory quota (to the SNT), he can then sell the rest for bread making to consumers or collectives who so wish through the SNT. In this case, the consumers are converted to *reservistas* in the following way: The price of the sales will be for free contraction among the participants, but the farmer has to hand in the corresponding part of wheat to the SNT, which then, through the manufacturers, delivers the corresponding flour to the consumer, after he has handed in his bread coupons from his ration book(...).[200]

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[199] See Table 3.1 for the official price in the two years. In nominal terms, the official price was 252 pesetas per 100 kilos in both years. In 1949, SNT controlled 725,110 tons of wheat out of a harvest of 3,035,000 tons, while in 1950 it controlled 1,289,015 tons out of a harvest of 3,374,000 tons: Barciela (1981b), p. 32.

[200] *Alimentación Nacional*, vol. 154, 25th of October 1949, p. 2.(Own translation)

It was this extension which was behind the large increase in 1950 in the share of wheat that went through legal channels. This can be deduced from information provided by the SNT (Table 3.6).

Column 3 shows that the farmers as a whole still did not fulfil their production quotas. Nevertheless, Column 6 demonstrates that those of them who had fulfilled their quota, and therefore had the right to sell wheat in the parallel market as well, delivered a significantly larger "surplus production" than anticipated.[201] It took some months after the 1950 harvest before the market adjusted to the new conditions, with the result that the price in the parallel market of wheat remained higher than expected by the CGAT. In this space of time the farmers often declined to sell in the parallel market at the price they were offered, but from December 1950 the farmers started to sell bigger quantities in the parallel market causing prices to fall.[202]

The establishment of a parallel market was an advantage to producers, consumers and administrators. For the producers the possibility of selling a part of the production at freely negotiated prices had the benefit of obtaining higher than official prices without the risks involved in dealing in the black market. For the consumers it was an improvement that the price of bread could be set relative to the individual opportunity cost of queuing in the rationing system. This was so because not all members of a family had to shift from receiving rations to being *reservists*. Within a family it was therefore possible to set the average price paid for bread by letting some members buy their bread through the rationing system and others doing it in the parallel market. Furthermore, the consumers would no longer pay the specific transaction costs inherent in the black market. Moreover, less people would have to be fed through the rationing system, so that the rations for those remaining could be increased. Finally, the control mechanism became easier for the administrators to handle since a significant part of the former black market was legalised.

In sum, the parallel market worked as a consumer subsidy for the part of the population for whom the opportunity cost of queuing was the lowest. The producers paid for the subsidy since they were forced to sell a part of their production to the SNT below market price.

[201] See Section 1.3.2 for details on the intervention system.
[202] *Alimentación Nacional*, vol. 180-181, December 10th 1950, pp. 5 and 34.

Table 3.6: Expected and obtained amount of wheat bought as, respectively, production quota and surplus production in 1950. The data describe the situation by 15 January 1951

	1	2	3	4	5	6	7	8	9
Provinces	Production quotas	Fulfilled quota	Fulfilled quota as percent production quota	Expected surplus output	Realised surplus output	Realised surplus output as percent of expected surplus output	Amount of wheat expected to be controlled by the SNT	Amount of wheat actually controlled by the SNT	("8"/ "7")*100
	(Metric tons)	(Metric tons)		(Metric tons)	(Metric tons)		(Metric tons)	(Metric tons)	
Álava	10000	9790	98	4250	4010	94	14250	13800	97
Albacete	5750	8160	142	2500	4400	176	8250	12560	152
Alicante	1580	1820	115	670	470	70	2250	2290	102
Almería	1470	1690	115	630	310	49	2100	2000	95
Ávila	-	-	-	-	-	-	-	-	-
Badajoz	62830	58820	94	26920	45400	169	89750	104220	116
Baleares	1750	2280	130	750	4670	623	2500	6950	278
Barcelona	-	-	-	-	-	-	-	-	-
Burgos	63850	64810	102	27350	28460	104	91200	93270	102
Cáceres	21550	18820	87	9200	17500	190	30750	36320	118
Cadiz	28350	25920	91	12150	14820	122	40500	40740	101
Castellón	3430	3670	107	1470	2290	156	4900	5960	122
Ciudad Real	12450	10860	87	5300	9700	183	17750	20560	116
Cordoba	26000	24700	95	11400	37110	326	37400	61810	165
Coruña	-	-	-	-	-	-	-	-	-
Cuenca	-	-	-	-	-	-	-	-	-
Gerona	6650	6840	103	2850	3050	107	9500	9890	104
Granada	16280	17070	105	6970	19700	283	23250	36770	158
Guadalajara	19250	17650	92	8650	18600	215	27900	36250	130
Guipúzcoa	880	1010	115	370	210	57	1250	1220	98
Huelva	7000	4960	71	3000	1300	43	10000	6260	63
Huesca	6650	8420	127	2850	13060	458	9500	21480	226
Jaén	5600	5270	94	2400	5980	249	8000	11250	141
Las Palmas	-	-	-	-	-	-	-	-	-
León	-	-	-	-	-	-	-	-	-
Lleida	25250	14910	59	10800	400	4	36050	15310	42
Logroño	12150	11190	92	5120	3920	77	17270	15110	87

Table 3.6: (Continued) Expected and obtained amount of wheat bought as, respectively, production quota and surplus production in 1950. The data describe the situation by 15 January 1951.

	1	2	3	4	5	6	7	8	9
Provinces	Production quotas	Fulfilled quota	Fulfilled quota as percent production quota	Expected surplus output	Realised surplus output	Realised surplus output as percent of expected surplus output	Amount of wheat expected to be controlled by the SNT	Amount of wheat actually controlled by the SNT	("8"/ "7")*100
	(Metric tons)	(Metric tons)		(Metric tons)	(Metric tons)		(Metric tons)	(Metric tons)	
Lugo	1400	1400	100	600	600	100	2000	2000	100
Madrid	3500	6170	176	1500	5970	398	5000	12140	243
Málaga	13480	10790	80	5770	1260	22	19250	12050	63
Murcia	4200	4490	107	1800	1880	104	6000	6370	106
Navarra	-	-	-	-	-	-	-	-	-
Orense	-	-	-	-	-	-	-	-	-
Oviedo	-	-	-	-	-	-	-	-	-
Palencia	49700	47010	95	21250	34900	164	70950	81910	115
Pontevedra	140	140	100	60	60	100	200	200	100
Salamanca	38250	33460	87	16350	18960	116	54600	52420	96
St. Cruz de T.	-	-	-	-	-	-	-	-	-
Santander	-	-	-	-	-	-	-	-	-
Segovia	14900	16530	111	6400	15790	247	21300	32320	152
Sevilla	54250	48950	90	23250	29430	127	77500	78380	101
Soria	14000	15130	108	6000	23490	392	20000	38620	193
Tarragona	3430	570	17	1470	230	16	4900	800	16
Teruel	7150	6970	97	3050	8150	267	10200	15120	148
Toledo	-	-	-	-	-	-	-	-	-
Valencia	5670	5800	102	3420	2520	74	9090	8320	92
Valladolid	-	-	-	-	-	-	-	-	-
Vizcaya	1400	1510	108	600	730	122	2000	2240	112
Zamora	20300	12220	60	8700	8860	102	29000	21080	73
Zaragoza	42000	33740	80	18000	21160	118	60000	54900	92
Total	**612490**	**563540**	**92**	**263820**	**409350**	**155**	**876310**	**972890**	**111**

Source: Servicio Nacional de Trigo: Resumen de deudores de cupos forzosos de trigo para la campaña 1950-51.

Given the advantages of the parallel market, the question arises why this was not introduced earlier. The answer has to be found in the culture of intervention which dominated the political system.

In 1946 the economic policy was dominated by a plan for a "campaign for the reduction of the costs of living". Consequently, the director of the CGAT, Rufino Baltrán, launched the idea at a meeting in the *Junta Superior de Precios* in September 1946 that it would be possible to solve the inflationary pressures by restoring relative prices to the situation in the 1931-35 period. The suggested procedure to reach this goal consisted in finding the product among the basic necessities which had experienced the lowest increase in price since 1935. The 1946 prices of the other commodities should ideally be their 1935 prices multiplied by the same factor. The next step was to compare this "harmonious" price scale with the actual prices in 1946. A given price should then remain unchanged if it was lower than the calculated "harmonious price". On the other hand, in the cases where the prices were actually higher than on the list, the state should reduce the price to the desired level.[203]

However, when the *Junta Superior de Precios* discussed the plan in the autumn of 1946, the idea of setting an equal relative price level for all products was partially abandoned. Instead it was agreed to temporarily admit higher levels for products in short supply.[204] A meeting held on October 31st produced an explanatory note about the plan, which said:

> The *Junta Superior de Precios*, considers that it is possible to gradually reach a harmonious level of prices for food products at a minimum level that is technically acceptable. However, the authorities should know that it is difficult to maintain this in practice without severe discipline.[205]

At least it can be said that this affirmation was more realistic than the general design of the plan.

Even in the *Junta Superior de Precios* there were voices that doubted the viability of the plan. Carlos Rein Segura, the Minister of Agriculture, presented a note at a meeting on October 4th where serious doubts were cast about the viability of the proposed procedure. The main objection was that the transferring of pre-war relative prices to a period of state-determined prices would ignore the changes in a number of

[203] Junta Superior de Precios: Acta de la reunión celebrada el día 9-9-46, and Acta de la reunión celebrada el día 16-9-46.
[204] Junta Superior de Precios: Acta de la reunión celebrada el día 4-10-46.

factors that were important for production. As a result, the proposed reduction in prices would be very difficult to enforce in practice, and only an initial minor reduction in prices could be the first step in a long-term project.[206]

While the political agenda in 1946 excluded the introduction of a parallel market, its inauguration in 1950 met with some resistance. The new measure was commented upon with considerable interest, and the diversity of opinions even found its way to the strictly controlled press. They went from demands for further liberalisation to calls for the reinstatement of the former system. From the discussion, it appears that the partial liberalisation of the wheat market was disputed even in government circles.[207]

On one side, Rein Segura - still the Minister of Agriculture - said in an interview in *Arriba* in March 1951 that the new measure had been a success in 1950, with even better results expected for the 1951 harvest.[208] Nevertheless, one month later *Alimentación Nacional* published a leading article defending the return to a higher degree of state intervention. It cited from a recent speech by Franco where he said "intervention is the only defence for the poor".[209] An article with the heading "The poor luck of the free markets" appeared in the same volume of the journal. At any rate, within a broader context of a gradual liberalisation of the economy in the first half of the 1950s, the partial liberalisation of the production, distribution and consumption of foodstuffs eventually got the upper hand.

3.7: THE PRICE RESPONSE TO OFFICIAL PRICES

It has been argued in this chapter that the black market for wheat was not supplied exclusively by diversion, and that farmers planned production based on black market earnings. Unfortunately, it was only possible to build this assumption on indirect evidence. This makes it relevant to analyse the likelihood and implications of the counterfactual, i.e. that farmers planned production exclusively based on official prices between 1939 and 1953. If farmers behaved in this way, it should be possible to establish a relation between the two variables.

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[205] Junta Superior de Precios: Acta de la reunión celebrada el día 31-10-46: "Proyecto de nota aclaratoria la propuesta de orden de la presidencia, sobre reducción y armonia de precios", pp. 1, 4-5.
[206] Junta Superior de Precios: Acta de la reunión celebrada el día 4-10-46; Secretaría Técnica del Ministerio de Agricultura: Informe.
[207] See for example *Alimentación Nacional* vols. 157, 166, 169, 176, 177, 179, 182 - all from autumn/winter 1950 - for comments and references to opinions voiced in other newspapers.
[208] Reproduced in *Alimentación Nacional*, Vol. 188 (25 March 1951).

The normal practice is to estimate the price elasticity of supply, but the calculation is complicated by the fact that there was a large black market in the period.[210] The Ministry of Agriculture corrected the official statistics for the 1939-49 period, but the yearly figures cannot be expected to be totally accurate.[211] Yet, it appears that the errors mainly affects output data, and the estimation of farmers supply response has therefore to be based on the data for the cultivated area. However, this procedure is not only convenient in these specific conditions. It also has the advantage that it makes it possible to avoid "noise" in the results due to random climatic variations that affect output. This advantage is generally recognised in the economics literature. Hence, a well-established research trend uses cultivated area as a proxy for planned output.[212]

The standard textbook definition of price elasticity of supply is that it measures the relative effect on output of a one-percent change in prices paid to producers. Yet, in agricultural economics, other variables than the own price of the crop are normally included in the estimation. Such variables often includes the price of substitutional crops, the price of inputs if they differ between the crops or changes significantly over time, technological trends and so forth.[213]

It is therefore necessary to consider what the most likely substitutional crop was for wheat in Spain in the 1940s, and barley appears to be the most obvious candidate for three reasons. First, it was the second most extended crop in the period. Second, wheat and barley could be cultivated on the same land using the same tools. Finally, the same inputs were used for the cultivation of the crops. Farmers would therefore be able to make year-to-year shifts between wheat and barley.[214] It is now possible to make the first test of whether farmers planned output exclusively based on official prices between 1939 and 1953. This will be done estimating the own price

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[209] *Alimentación Nacional*, Vol. 190 (25 April 1951).

[210] As noted by Colman, the following estimates are strictly speaking not an analysis of the price elasticity of supply, but of the price elasticity of output. Farmers will usually consume and/or stock a part of output. This is therefore not the same as "supply", which is conventionally defined as the amount offered for sale in a market. Nevertheless, estimations of the price elasticity of "supply" in agriculture is mostly based on output data, as will also be the case here. Colman (1983), pp. 201-202.

[211] See Appendix 1 for details.

[212] Over the years, a large number of researchers have dealt with price elasticity of supply in agriculture, and the result has been a number of different estimation techniques. Apparently, the selection of procedure has often been pragmatically based on the availability of data! Descriptions of different methodologies, as well as a large number of results can be found in Askari and Cummings (1976), pp. 52-218.

[213] See Askari and Cummings (1976), pp. 52-218.

[214] Astorquiza and Albiso (1993), p. 26.

elasticity of supply for wheat and the cross price elasticity for wheat with respect to the price for barley.

Yet, at the time of sowing farmers do normally not know the price they will receive after the harvest. In the economics literature, a great deal of attention has been paid to the issue of how to solve this problem. Various models have been proposed based upon the assumption that farmers plan output on rational expectation about the price they will receive. Moreover, it is normally assumed that the expectations are the result of prices in earlier years, with the most recently received prices carrying the heaviest weight in the formation of the expectation.[215]

However, for the 1943-48 harvests in Spain, official cereal prices were announced at the time of sowing, and the expectation about the official price would therefore automatically be fulfilled. Yet, for the remaining years farmers had only a limited possibility to draw on earlier experiences about the level of official prices. In these years, official prices were set by the state at the time of the harvest. On the other hand, in the pre-war period prices were determined in the market. The experience with prices announced at the time of the harvest was therefore limited to the years between 1939 and 1942 and between 1949 and 1953. Consequently, it has been assumed that farmers planned output based on the official price paid in the preceding harvest, in the years where prices were not pre-announced.

Thus, in the first test of farmers supply response to official prices, it will simply be assumed that the cultivated area with wheat in the year "t" is a function of the expected official price of wheat and barley, i.e. that:

$$CA_{w,t} = f(P_{w,t^*}, P_{b,t^*})$$

with

$CA_{w,t}$ = the area cultivated with wheat in year "t"

P_{w,t^*} = the expected/pre-announced official wheat price in year "t"

$Pb_{,t^*}$ = the expected/pre-announced official barley price in year "t"

To calculate the price elasticity of supply, an OLS-regression has therefore been computed, with $CA_{w,t}$ as the dependent variable and P_{w,t^*} and $Pb_{,t^*}$ as the independent variables. All nominal prices were transformed into real prices, using the price deflator for "agriculture, forestry and fishing" by Prados de la Escosura.[216] All data on cultivated area and prices have furthermore been converted into natural logarithms to

[215] Askari and Cummings (1976), pp. 25-51.

avoid the problem of units. This has the advantage that the price elasticity of supply is directly given by the coefficients of the variables.[217] Yet, Table 3.7 demonstrates that the explanatory power of the model is very limited. The coefficients of the variables have the expected sign, but non of the variables are statistically significant.

This might not be so surprising since changes in land use for widespread crops normally do not take place at a very fast rate. Said in another manner, it is highly plausible that land use in the previous harvest period had an important influence on land use the following year. The second test of farmers supply response to official prices will account for this factor. It will be assumed that the cultivated area with wheat in the year "t" is a function of the official price of wheat and barley, and the area cultivated with wheat and barley in the previous year:

$$CA_{w,t} = f(P_{w,t^*}, P_{b,t^*}, CA_{w,t-1}, CA_{b,t-1})^{218}$$

with

$CA_{w,t-1}$ = Area cultivated with wheat in the year "t-1"

$CA_{b,t-1}$ = Area cultivated with wheat in the year "t-1"

The Durbin-Watson statistic for this equation is inconclusive as to whether there is auto-correlation at the 5 percent level.[219] The regression was therefore re-estimated using the Prais-Winsten method.[220] The result in Table 3.7 show that the second model has a large explanatory power, but this is almost exclusively driven by the variable $CA_{w,t-1}$. Moreover, the estimation produces counter intuitive results, such as a negative price elasticity of supply for wheat and a positive cross price elasticity. Yet again, none of these two variables are statistical significant.

Finally, Astorquiza and Albiso have made an estimate of the price elasticity of supply for wheat for the 1959-85 period. These authors also used the cultivated area as a proxy for planned output. They stipulated that the cultivated area could be expressed in the following terms:

$$CA_{w,t} = f(P_{w,t-1}, P_{b,t-1}, CA_{w,t-1}, CA_{b,t-1}, DV73)^{221}$$

with

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[216] See page 66 for the use of constant prices instead of nominal prices, as well for the choice of deflator.

[217] Lim Lin Shu (1975), pp. 12-13.

[218] Strictly speaking we are then not estimating a "price elasticity" since other variables than the price enters the equation. The following shall therefore be interpreted as the likely output response to a change in prices under specific conditions concerning the cultivated area in the year "t-1".

[219] The Durbin-Watson statistic is 2.25, and there are 15 observations and four variables excluding the constant.

[220] This was carried out using SPSS-software.

$CA_{w,t}$ = the area cultivated with wheat in year "t"

$P_{w,\,t-1}$ = the wheat price in real terms received by the farmers in year "t-1"

$P_{b,\,t-1}$ = the barley price in real terms received by the farmers in year "t-1"

$CA_{w,\,t-1}$ = the area cultivated with wheat in year "t-1"

$CA_{b,\,t-1}$ = the area cultivated with barley in year "t-1"

DV73 = a dummy variable to account for special conditions in the year 1973. The variable takes the value one in 1973, and zero in the rest of the years.

Based on this Astorquiza and Albiso constructed an OLS-regression with $CA_{w,t}$ as the dependent variable and the rest of the factors as independent variables.[222] Nominal prices were converted to real prices, while absolute figures were used for the data on the cultivated area. The model appears to have a high explanatory power, and the coefficients of the variables $P_{w,\,t-1}$ and $P_{b,\,t-1}$ have the expected sign. Moreover, the variable $P_{w,\,t-1}$ turns out to be significant at the 5 percent level (Table 3.7).

When the results from the 1939-53 period are compared with the 1959-85 years, there are both similarities and differences. The main similarity is that land use in a given year exerts a strong influence on land use in the following year. Obviously, the main difference concerns the estimated price elasticity of supply. While the own price was important for the planning of output in the later period, this was not the case in the earlier period. Furthermore, in the second estimation for the 1939-53 the coefficients of the own price elasticity and the cross price elasticity had the "wrong" sign.

The are to obvious interpretation of the results for the 1939-53 years. The first is that farmers did not plan output based on official prices, which is the viewpoint we have forwarded in this chapter. The second interpretation is that statistics on the cultivated area are inadequate for the analysis, due to the existence of black market. The size and the sign of the price elasticity of supply has been widely debated in the economics literature, but two arguments appear to be dominant.[223]

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[221] Astorquiza and Albiso (1993), Table 5, p. 78.

[222] The cultivated area with wheat and barley in the year "t-1" was expressed thorugh the ratio $CA_{w,\,t-1}/CA_{b,\,t-1}$.

[223] The topic has attracted considerable interest over the years, which probably has to do with its implications for economic policy choice. An outline of the main points of discussion can be found in Askari and Cummings (1976), Chhibber (1989), Griliches (1960), Peterson (1979), and Schiff and Montenegro (1997).

Table 3.7: Estimates of the price elasticity of supply for wheat, 1939-85.

Periods		R^2	$e_{p,w}$	$e_{p,b}$	rho
1939-53 (1) (OLS)	$\ln(CA_{w,t}) = 14.428 + 0.124*\ln(P_{w,t*}) - 0.003*\ln(P_{b,t*})$ (19.96)*** (1.03) (-0.74)	0.08	0.124	-0.003	
1939-53 (2) (Prais-Winsten)	$\ln(CA_{w,t}) = 2.975 - 0.040*\ln(P_{w,t-1}) + 0.015*\ln(P_{b,t-1}) + 0.930*\ln(CA_{w,t-1}) - 0.122*\ln(CA_{b,t-1})$ (1.70)* (-0.99) (1.15) (12.04)*** (-1.27)	0.95	-0.040	0.015	-0.302
1959-85 (OLS)	$CA_{w,t} = -173{,}584 + 29{,}350*P_{w,t-1} - 7{,}777*P_{b,t-1} + 4{,}733{,}700*(CA_{w,t-1}/CA_{b,t-1}) - 267{,}488*DV73$ (-0.59) (2.67)** (-0.43) (7.43)*** (-2.13)**	0.97	0.36	-0.07	

Numbers in parenthesis are t-student coefficients
* = Significant at 10 percent level.
** = Significant at 5 percent level.
*** = Significant at 1 percent level.

Sources: Astorquiza and Albiso (1993), Table 5, p. 78, Instituto Nacional de Estadistica: *Anuario Estadístico de España,* (1943), Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1939-53), Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950, 1950-1951).

First, the price elasticity of supply for single crops is higher than the aggregate supply elasticity. Second, the price elasticity of supply is in most cases positively correlated with technological and economic development.[224] The first point is in line with the analysis earlier in this chapter, which said that an eventual increase in wheat output in the 1940s could only happen at the expense of the output of other crops.

The implication of the second point is that the price elasticity of supply in the 1939-53 period is not likely to be higher than in the 1959-85 period, i.e. 0.36. This is quite important since a price elasticity of supply of 0.36 is far too small to explain the post-war decline of the area cultivated with wheat. From Table 3.1, it can be calculated that the average official price in real terms between 1939 and 1952 was less than 10 percent lower than the pre-war average. Even applying a price elasticity of supply of 0.36, the subsequent reduction in the area cultivated with wheat would be approximately 3 percent. This is less than one third of the actual reduction in the area cultivated with wheat, which on average was close to 13 percent between 1940 and 1953.[225]

Unfortunately, the quality of the data for the 1939-53 period limits the conclusion that can be drawn from this section. Nevertheless, the main impression is that official prices were not the main factor reason for the post-war decline in planned output.

3.8: CONCLUSIONS

The main purpose of this chapter was to discuss whether there existed a cause-and-effect relationship or a coincidence between, on one side, the level of the official prices paid to farmers, and, on the other, the level of wheat output. The main conclusion is that the level of official prices cannot be said to have been the main reason for the low level of output in the 1940s. The inefficiency of the control system vis-à-vis the farmers allowed the existence of a large black market. Consequently, the average price received by farmers was significantly higher than the official price. From the point of view of the desire to expand production the inefficiency of the control system can therefore be seen as a positive feature. The result is that the non-enforcement of the state's coercive powers increased output and market distortions at

[224] See Footnote 223. The introduction of highly specialised utilities for a specific crop would lead to a lower price elasticity of supply. Yet, in a largely non-mechanised sector as we find in Spain in the 1940s, there is not a relevant objection.
[225] See Diagram 3.1 for the development of the area cultivated with wheat between 1939 and 1959.

the same time, while a more effective control would have led to a smaller black market and less output.

The analysis also demonstrated that the lack of work animals and chemical fertilisers were the main reasons for the post-war decline in output. Since these problems were virtually insoluble in the 1940s, neither higher official prices nor a liberalisation of the market would have solved the supply shortage. With constraints on production, higher official prices would have increased returns to land and capital without producing more output. Obviously, the large-scale farmers would benefit most from this process, while the richest consumers would pay the largest part of the price increase. However, the poorest consumers would run the risk of ending up in a very precarious situation in the short run unless a subsidy to consumer prices was introduced. A total liberalisation of the market would have left the poor consumers even worse off, given that they would not even have been assured a minimum amount of foodstuff through the rationing system. In both cases, the result would be a socially regressive redistribution of income in a situation where the living standards for the poorest part of the population were already problematic.

As pointed out in Section 2.2, the potential problems of a free market for basic foodstuffs in wartime were generally recognised by the participants in World War II, and the situation in Spain cannot be seen as an exception. However, the analysis in the present chapter also indicated that the system of intervention in Spain in the 1940s left much to be desired. The extension of the parallel market in 1950 was a belated way of easing the problem of distribution of supply. Another possibility would have been to introduce an across-the-board consumer subsidy following the British model during World War II.[226] However, such a measure would have required a substantial outlay on behalf of the government. Both models had their problems, but could have increased the legally consumed part of the production without a negative effect on its size. This places a large portion of the blame on the regime. The "culture of intervention" in the 1940s was responsible for the late introduction of the indubitable advantages connected with the extension of the parallel market. In this light, the criticism found in much of the historiography stating that the agrarian policy was problematic turns out to be right, but for the wrong reasons. While little could have been done to increase the size of the cake, the distribution of it was clearly deficient.

[226] See Section 2.2.1 for the British experience with an across-the-board consumer subsidy.

CHAPTER 4: STATE INTERVENTION IN THE OLIVE SECTOR AS AN EXAMPLE OF "STATE FAILURE"

4.1: INTRODUCTION

This chapter examines some of the characteristics of state intervention in the olive oil sector between 1939 and 1952. To do this, it is first necessary to revise the official statistics on post-war olive oil output, as these appears to misrepresent the actual development. The modified data make it possible to calculate the size of the black market for olive oil in the 1940s, and to discuss whether state intervention was necessary to secure a normal supply situation.

The production, commercialisation and consumption of olive oil were subject to state intervention throughout the 1940s. Similar to what occurred in the wheat sector, this intervention included the compulsory selling of output to the CGAT at government fixed prices. Table 4.1 shows that these prices were in real terms below the pre-war level for most of the 1940s.[227]

Table 4. 1: Index of official prices for olive oil in real terms paid to producers.

Years	Index of olive oil price
	(1931-35 average price = 100).
1939	93
1940	101
1941	84
1942	81
1943	71
1944	72
1945	69
1946	67
1947	96
1948	87
1949	85
1950	96
1951	119
1952	115
1953	118
1) Nominal prices changed to real prices by the	
use of deflator for "agriculture, forestry and fishing"	
from Prados de la Escosura (1995).	
Sources: Ministerio de Agricultura: *Anuario*	
Estadístico de las Producciones Agrícolas	
(1931-35, 1939-40, 1943-53); Instituto Nacional	
de Estadística: *Anuario Estadístico de España* (1943).	

According to the official statistics, the post-war decline in official prices coincided with a level of output that was below the pre-war average, as demonstrated in

[227] See Section 3.2.1 for the discussion of the use of nominal versus real prices in the analysis as well as the choice of deflator.

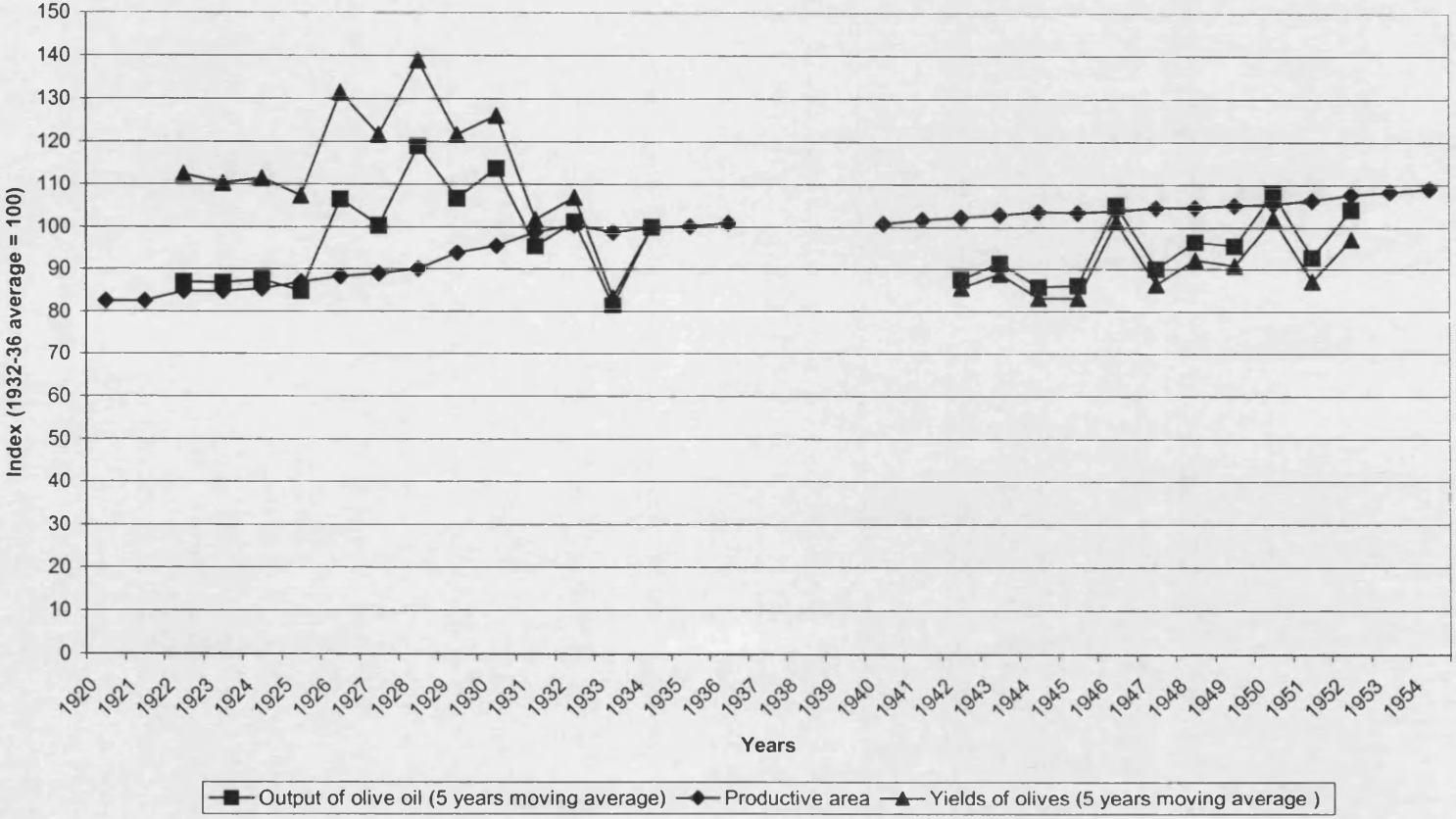
Diagram 4.1. Although the productive area continued to grow after 1940, this was more than offset by a reduction in average yields. At the outset, conditions in the olive sector in the 1940s therefore resembled those in the wheat sector. In both cases, we find state intervention - including the state's determining of prices below the pre-war level - a black market and a decline in output.

Nevertheless, the following analysis will show important differences between the two sectors regarding output, the size of the black market, consumption per capita, and the need for state intervention. First, the post-war decline in output that emerges from Diagram 4.1 was probably more apparent than real. This is related to the existence of a black market for olive oil in the 1940s and early 1950s, which was not completely reflected in the official statistics. Contrary to the case of wheat, post-war output of olive oil is not characterised by a shift of the supply curve to the left by external restrictions. Furthermore, although a black market existed for both olive oil and wheat, it was significantly smaller for the former than for the latter. While the black market for wheat on average amounted to approximately 55 percent of legal consumption between 1939 and 1949, the figure was only 2 percent for olive oil.[228] Finally, the combination of a limited decrease in output, black market trade and a simultaneous decline in exports had the effect of average post-war consumption of olive oil per capita being very close to the pre-war level. For the olive oil sector state intervention does not appear to have been necessary to secure adequate supplies for the general population.

While it was concluded in Chapter 3 that the post-war situation in the wheat sector required state intervention, since the alternative would have been a social market failure, intervention in the olive oil sector was an example of state failure. This difference is important for the understanding of the consequences of the Franco regime's agrarian policy in the 1940s, since it points to the need to distinguish between the different effects of its policy in different sectors.

[228] Barciela (1981b), p. 27.

Digram 4.1: Index of olive oil output, productive area with olives, and yields of olives, 1920-54.



Sources: Grupo de Estudios de Historia Rural (1991): *Estadísticas históricas de la producción agraria española, 1859-1935,* Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943-66), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-53).

4.2: A REVISION OF THE OFFICIAL FIGURES FOR OLIVE OIL OUTPUT BETWEEN 1939 AND 1950

The available statistics on olive oil output in the 1940s are probably incorrect, due to the existence of a black market. The 60 observation in Table 4.2 on relative black market consumer prices from 19 provincial capitals demonstrates that this market was persistent throughout the 1940-52 period. Prices were as high as up to 12 times the official price, and the simple average of the relative black market prices in Table 4.2 is almost four times the official price.

The SNT revised the original statistics on output for the four main cereals, but despite a general acceptance of the desirability of doing the same in the case of olive oil, such correction has never been made.[229] An evaluation of the likely margin of error in the original statistics will not only increase our comprehension of the outcome of the system of intervention. It will also lead to more accurate information about the relative size of the black market, and improve the knowledge about the economic situation of the olive-growing farmers. The following analysis will show a rough estimate of the magnitude of the underreporting of post-war output, stating that a 12 percent increase can be considered the upper limit for the 1940-52 period.

4.2.1: The stability of the cultivated area and the industrial yields, 1939-52

Diagram 4.1 shows that average olive oil output in the 1940s and early 1950s oscillated around 95 percent of the 1932-36 average.[230] As noted above, this was the result of a combination of a slight increase in the cultivated area and a decrease in average yields. When reworking the figures for the post-war output of olive oil, three factors have to be considered:

1) The productive area cultivated with olives
2) The industrial yields – i.e. the amount of olive oil obtained per unit of olives
3) The agrarian yields – i.e. the amount of olives obtained per unit of land

[229] See Barciela (1986a) for a short overview of the problems related to the official agrarian statistics of the 1940s.

[230] It was further below the five years moving average from the late 1920 due to the two exceptionally good harvests in 1928 and 1930. The yields for these two years turned out to be atypical in the 20th century, and the situation in the 1940s is best analysed using the 1932-36 average as a benchmark.

Table 4.2: Maximum black market retail price for olive oil as percent of official price en provincial capitals, 1939-51

Years	Alicante	Badajoz	Barcelona	Bilbao	Cáceres	La Coruña	Gerona	Huelva	Huesca	
1940	240	276	660	-	286	-	-	-	-	
1941	-	405	-	1294	-	-	-	-	-	
1942	-	400	-	509	-	-	-	-	-	
1943	-	308	-	509	-	-	-	-	-	
1944	-	225	-	336	-	-	-	-	-	
1945	250	455	-	536	465	-	-	-	-	
1946	-	1042	972	893	-	-	948	-	-	
1947	-	268	-	344	-	-	-	673	-	
1948	-	263	-	337	-	-	-	-	-	
1949	-	256	-	305	-	356	-	-	-	
1950	160	289	-	287	211	-	-	216	250	
1951	-	426	-	180	333	-	-	-	350	
1952	-	148	-	-	273	-	-	-	234	
Years	**Jaén**	**Lleida**	**Málaga**	**Murcia**	**Palencia**	**Sevilla**	**Soria**	**Tarragona**	**Toledo**	**Zamora**
1940	-	-	-	250	-	-	-	-	-	-
1941	-	-	-	-	139	395	-	-	-	400
1942	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	273	-
1945	-	-	238	229	-	-	-	-	435	-
1946	625	700	-	-	225	222	-	-	1100	750
1947	221	-	-	-	-	-	-	-	357	483
1948	158	-	-	-	-	-	-	-	316	352
1949	158	-	-	-	-	-	-	-	-	244
1950	144	-	305	260	-	-	286	239	-	212
1951	269	-	-	-	345	300	-	-	-	-
1952	-	-	-	-	-	-	-	176	-	-

Sources: Table 1.5; Cámara Oficial de Comercia e Industria de Gerona: *Memoria Comercial* (1946); Cámara Oficial de Comercio e Industria de Jaén: *Memoria Comercial y estudio sobre el desarrollo de los negocios en la Provincia de Jaén* (1946-51); Cámara Oficial de Comercia e Industria de Zamora: *Zamora 1936-1941*; Id.: *Zamora 1946-1950*; Cámara Oficial de Comercio, Industria y Navegación de La Coruña: *La economia coruñesa en los últimos años (1947-1949)*; Cámara Oficial de Comercio, Industria y Navegación de Lleida: *Memoria reglamentaria de trabajos y comercial de los años 1946 y 1947*; Cámara Oficial deComercio y Navegación de Barcelona: *Memoria Comercial* (1940, 1946, 1948, 1950); Instituto Nacional de Estadistica: *Reseña Estadistica de* ... Alicante (1958), Badajoz (1954, 1962), Cáceres (1957), Huelva (1960), Huesca (1955), Malaga (1956),Murcia (1962), Palencia (1964), Sevilla (1958), Soria (1958), Tarragona (1962), Toledo (1950).

The first two points are analysed here while the last one will be treated in the following section. The development of the productive area is the least complicated point to analyse. Due to the approximately fifteen years it takes for a newly-planted olive tree to enter production, changes in the productive area will normally be limited. The Civil War did not cause widespread destruction of the stock of olive trees, so by 1940 the productive area had increased by one percent compared to the 1932-36 average. This growth continued through the 1940s, and in 1952 there was eight percent more productive area cultivated with olives than before 1936. Given the continuity between the data for the pre- and post-war years, we will accept the official figures for the productive area cultivated with olives for the rest of the analysis.

The official statistics for industrial yields display that 1.6 percent more olive oil was obtained per unit of fruit between 1940 and 1950 than between 1932 and 1936.[231] This relative stability with only a limited increase is expectable and plausible. First, the system of intervention operated with a single quality of olive oil, which would have been an incentive to value quantity over quality. However, the scope for increasing the industrial yields was small since the amount of oil in the olives was almost constant from year to year. Second, the technological level of most of the oil industry in Spain in the 1930s had already made it possible to extract the maximum amount of oil from the fruit.[232] Given the constraints on changes in the industrial yields, changes in this factor will always be overpowered by the evolution of the agrarian yields. The following analysis, therefore, deals only with the combined agrarian and industrial yields measured as the amount of olive oil produced per unit of land.

4.2.2: The likely errors in the reporting of yields of olives between 1939 and 1952

Since the data on productive area and industrial yields appears to be reasonable trustworthy, an eventual underreporting of output is likely to appear in the agrarian yields. Yet, any analysis of this is complicated by the fact that these were very volatile even in normal circumstance.[233] The range of plausible yields is quite wide, and the

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[231] Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939-40, 1943-49); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).
[232] Zambrana Piñeda (1987), pp. 136-160.
[233] The most extreme illustration of this can be seen in the size of the harvest in the years between 1928 and 1931. With no significant change in the cultivated area the harvest of olives for olive oil was approximately 3,520,000 tons in 1928, 920,000 tons in 1929, 3,340,000 tons in 1930 and finally 620,000 tons in 1931; Tió (1982), pp. 354-355.

investigation has to be done in such a way that the influence of yearly fluctuations can be omitted. Thus, it is not possible to make an estimation of underreporting of olive oil output on a yearly basis but only for a longer period. Consequently, the calculation of the relative and absolute size of the black market can only be made as an average for the years were the necessary data are available, but not on a yearly basis.

The average yields of olive oil per hectare between 1940 and 1952 were 92 percent of the 1932-36 average. Yet, this hides huge variations at the provincial level, going from a decline of 60 percent in Cuenca to 65 percent increase in Zamora (Table 4.3). In spite of the large variations, yields relatively close to the pre-war levels are found in the majority of the main producing areas, including the three provinces with the largest average.[234] The large variations at the provincial level of the post-war yields looks suspicious in the light of that the data in Table 4.3 cover a 13 year period. In fact the expectation would be that post-war yields in general were close to the pre-war level, for the following reasons: the total area cultivated with olives remained stable; the technological level used for the extraction of olive oil from the fruit did not change; the methods employed for collecting the fruit from the trees also remained the same; and finally as artificial fertilisers were not often used for olives before the war, the post-war decline in the availability of this input would not have had a large effect on yields.[235] Hence, it is necessary to analyse the reasons for the development in the provinces where there was a sharp increase or a sharp decrease in the yields after 1940.

The relative large expansion of yields in Barcelona, Salamanca, Teruel and Zamora is counter-intuitive in an environment with a thriving black market, where the farmers would have been inclined to report as small a harvest as possible to the authorities. Still, the aggregate output of the four provinces was just 1.8 percent of the average pre-war total, and almost 70 percent of this was produced in Teruel. We will thus only have a short look at the situation there.

[234] Jaén, Córdoba and Sevilla produced approximately 50 percent of total average output between 1932 and 1936.
[235] Zambrana Piñeda (1987), pp. 128-129. See Section 3.4.1 for the lack of artificial fertilisers in Spain between 1939 and 1950.

Table 4.3: Index of average yields of olive oil, 1940-52 (1932-36 average = 100), provincial distribution of 1932-36 average olive oil output (percent), relative increase in productive area with olives, 1932-52.

Provinces	Index of yields of olive oil production (1940-52)	Percent increase in productive area between 1932-36 average and 1952	Percent of 1932-36 total average olive oil production.	Percent of 1940-52 total average olive oil production according to official statistics.
Cuenca	40	-5.8	1.3	0.5
Valencia	43	-4.3	2.3	1.0
Madrid	44	-10.4	0.8	0.3
Navarra	47	14.4	0.7	0.4
Ciudad Real	57	45.5	3.1	2.4
Toledo	61	13.4	1.6	1.2
Zaragoza	61	-8.3	4.1	2.5
Álava	61	46.2	0.0	0.0
Huesca	65	18.0	1.0	0.8
Baleares	66	-2.8	0.4	0.2
Logroño	69	45.0	4.5	4.1
Badajoz	69	16.3	0.8	0.6
Albacete	70	31.4	0.2	0.2
Ávila	71	7.1	0.3	0.2
Guadalajara	72	3.3	1.0	0.7
Lleida	85	1.0	3.5	3.1
Gerona	86	-33.3	0.5	0.3
Murcia	88	-12.4	1.0	0.8
Granada	89	13.7	3.3	3.4
Cádiz	89	1.4	5.4	5.2
Málaga	90	35.2	1.1	1.2
Huelva	92	6.0	1.4	1.4
Cáceres	93	2.8	2.0	2.0
Alicante	97	-10.3	1.7	1.6
Tarragona	99	9.4	4.0	4.4
Castellón	100	-6.5	1.4	1.4
Jaén	104	8.9	24.1	27.4
Sevilla	105	15.3	11.0	12.5
Córdoba	107	2.0	15.2	17.5
Almería	110	5.8	0.4	0.4
Barcelona	127	4.5	0.4	0.5
Salamanca	130	-36.9	0.2	0.2
Teruel	139	-21.9	1.3	1.5
Zamora	165	-28.2	0.0	0.0
Spain	**92**	**105.5**	**100.0**	**100.0**
Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939-40, 1943-53); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).				

The development of olive oil production in Teruel appears to have been the result of a change in the strategy of production. Before the war, olive oil from Teruel was renown for its high quality, while the policy of one quality/one price in the 1940s was an incentive to increase quantity at the expense of quality.[236] Consequently, it seems likely that at least a part of the unexpected increase in yields in the post-war years can be explained by an increase in the quantity at the cost of the quality of oil.

The significant decline in the official yields in a number of provinces after 1940 does not necessarily indicate that massive underreporting took place there. Yet, it is difficult to find an alternative explanation. First, climatic variations do not appear to be a likely reason for the different developments in the yields, since systematic climatic differences between the provinces are not probable over a period of more than ten years. This is even more so since Map. 4.1 shows no clear geographic pattern among the provinces with a large decrease in the post-war yields. Second, nor does the development in the productive area appear to be an adequate explanation. The correlation coefficient between, on one side, the relative increase in the productive area between the pre-war average and 1952, and, on the other side, the relative change in the yields is -0.43.[237] This could indicate that average yields declined in some provinces, because marginal land was put into cultivation or the trees had a younger age profile. Yet, the correlation coefficient is mainly driven by the data for Salamanca, Teruel and Zamora, and this obscures the initial picture. Table 4.3 showed that these three provinces produced an insignificant part of total output. At the same time, they experienced atypical high increases in the yields in the 1940s. If these three provinces are omitted the said correlation coefficient declines to –0.14. The significant decline in official yields in some provinces in the 1940s does therefor not appear to be the outcome of different developments in the productive area at the provincial level. Consequently, it is difficult to find a common factor that explains the sharp decline in the post-war yields in the provinces in the upper part of Table 4.3. This means that it is possible that at least a part of the decline in the official yields in some of the provinces disguise black market activity.

[236] Mangrané Escardó (1961), pp. 24-25. Between 1932 and 1936 the average yields in Teruel were only some 50 percent of the national average when calculated as the production of olive oil per hectare. It is likely that a part of this originated in the higher quality of oil obtained at the cost of small yields.
[237] See Table 4.3 for the data.

Map 4.1: Geographical distribution of olive producing provinces according to post-war development in yields

INDEX OF AVERAGE YIELDS OF OLIVE OIL, 1940-52 (1932-36 AVERAGE = 100)

INDEX: 41 – 60

INDEX: 61 – 80

INDEX: 81 – 100

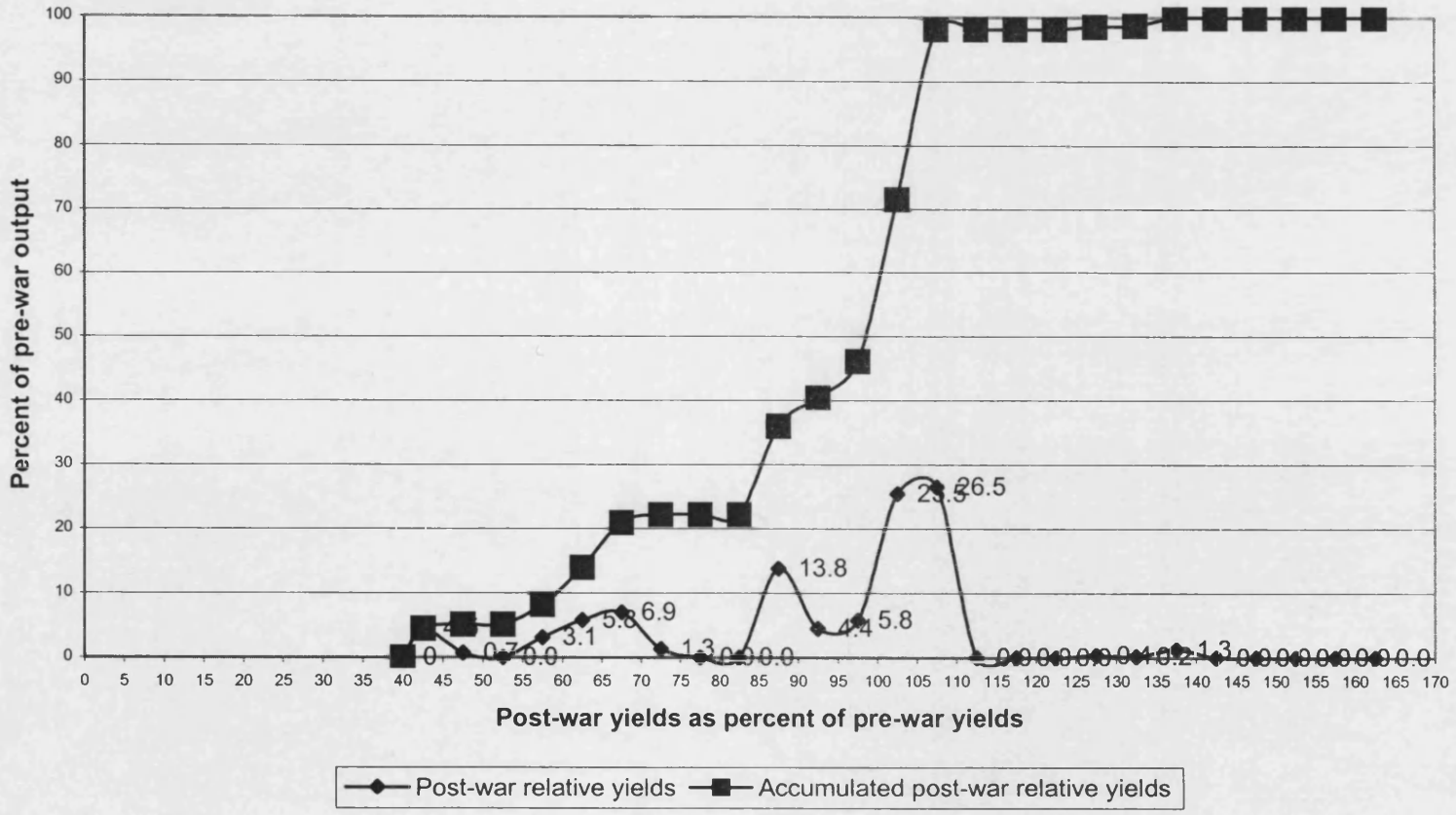
INDEX: 101 – 120

INDEX: 120 -

It has been argued that it is to be expected that the post-war yields of olive oil are close to the pre-war levels, and a correction of the official data for yields has to be based on this assumption. According to the official data in Table 4.3 a large proportion of post-war output was in fact produced in provinces where post-war yields were "close to the pre-war levels". Consequently, corrections of the official data can be limited to the provinces where post-war yields were significantly different from the pre-war level. In Diagram 4.2, the data from Table 4.3 have been grouped in intervals according to the relative size of the post-war yields. The question is then how to define the limits within which it can be said that the post-war yields were close the pre-war levels. The basic assumption is that there were small variations in the yields, and Diagram 4.2 demonstrates that there are only three intervals of relative post-war yields that includes more than ten percent of the pre-war output. They are those going from 85 to 90 percent, from 100 to 105 percent and from 105 to 110 percent. If all these are to be included in the range of "normal relative post-war yields" a symmetric definition of this concept will go from 85 percent to 115 percent of the pre-war level. The provinces in this interval accounted for almost 76 percent of average pre-war output and this increased to almost 83 percent of post-war output according to the official data.[238] "Normal relative post-war yields" can be defined more narrowly as going from 90 percent to 110 percent of the pre-war level. In this case, the provinces in this interval accounted for 62 percent of pre-war output, and almost 70 percent of post-war output according to the official statistics.[239] The more narrow definition still encompasses the two largest observations. On the other hand, the range of the normal yields will have to be increased beyond the 75 to 125 percent interval to include more provinces. It therefore appears appropriate to define "normal relative post-war yields" as either going from 85 to 115 percent, or going from 90 to 110 percent of the pre-war levels. Thus, it is now possible to establish a likely magnitude of the error in the official post-war yields of the "under performing provinces". With the data available this can be done in two ways: applying the post-war index of average yields in the provinces in the 90-110 percent interval to the average post-war cultivated area in the provinces in the 40-89 percent interval. Alternatively, it ca be done by applying the post-war index of average yields in the provinces in the 85-115 percent interval to the average post-war cultivated area in the provinces in the 40-84 percent interval. The result of these calculations can be seen in Table 4.4.

[238] See Table 4.3.
[239] See Table 4.3.

Diagram 4.2: Distribution of post-war yields of olive oil, 1940-52



Source: Table 4.3.

The results suggest that official output figures should be adjusted upwards by approximately 40,000,000 kilos. Since the original figure for total average olive oil output between 1940 and 1952 was 327,924,800 kilograms, the correction equals an increase of 12 percent.

Table 4. 4: Revised data on olive oil output, 1940-52

Interval of indices of post-war yields (See Diagram 4.2)	Average index of of post-war yields Within interval	1940-52 average cultivated area (hectares)	1932-36 average yields (kilos of olive oil per hectare)	1940-52 revised average yields (kilos of olive oil per hectare)
1	2	3	4	5
85-114.99	101			
40-84.99	60	522476	158	160
90-109.99	105			
40-89.99	71	775775	167	176
Interval of indices of post-war yields (See Diagram 4.2)	1940-52 revised Average output (kilos of olive oil)	1940-52 original average output (kilos of olive oil)	Absolute increase in 1940-52 Average output (kilos)	Relative increase in 1940-52 average output (percent)
	6 = "5" x "3"	7	8 = "6" - "7"	9
85-114.99				
40-84.99	83633500	49642200	33991300	68.5
90-109.99				
40-89.99	136673900	91619500	45054400	49.2
Sources: Ministerio de Agricultura: *Anuario Estadistico de las producciones agricolas* (1931-35, 1939-40, 1943-52); Instituto Nacional de Estadistica: *Anuario Estadístico de España (1943).*				

The decline in yields reported in the official statistics was deemed to be unlikely, but it cannot be rejected that more isolated decreases could have taken place. Consequently, the above estimate shall be considered as an upper limit. This point is further reinforced by the fact that the revision leads to a 50-70 percent increase in average yields in the affected provinces between 1940 and 1952, which is quite dramatic.[240]

The adequacy of the correction can be checked indirectly, through a comparison of the consumption olive oil per capita before and after the war. The data in Columns 5 and 6 in Table 4.5 demonstrate that even when using official data, post-war total availability per capita was only 4 percent below the pre-war level.[241] This was the outcome of changes in output, population growth, and a decrease in exports.[242]

[240] Nevertheless, when the original figures for total cereal output between 1939 and 1948 were revised by the Ministry of Agriculture, these included a 45 percent raise in the figure for barley and 35 percent augmentation in the case of wheat. See Appendix 1.

[241] Total availability includes olive oil supply through the legal channels and through the black market.

[242] With the exception of a few years, no data exists for the stock of olive oil. The availability of olive oil per capita has therefore been calculated as a five year moving average, as well as an average for the 1921-35 and 1940-52 sub-periods to neutralise the effect of year to year oscillations in output.

Table 4.5: Total and per person availability of olive oil in Spain between 1920 and 1954.

Years	Official data for olive oil output	Revised data for olive oil output[1)]	Exports of olive oil	Available olive oil (Official output data)	Available olive oil per capita (Official output data)	Available olive oil per capita (kilos) (Official output data)	Available olive oil (Revised output data)	Available olive oil per capita (Revised output data)	Available olive oil per capita (kilos) (Revised output data)
	(100s of kilos)	(100s of kilos)	(100s of kilos)	(100s of kilos)	(kilos)	(5 y. m. a.)	(100s of kilos)	(kilos)	(5 y. m. a.)
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1921	3169637	3169637	479763	2689874	12	-	2689874	12	-
1922	2760503	2760503	461152	2299351	11	-	2299351	11	-
1923	2891139	2891139	569096	2322043	11	12	2322043	11	12
1924	2988591	2988591	461284	2527307	11	11	2527307	11	11
1925	3351893	3351893	512521	2839372	13	10	2839372	13	10
1926	3275768	3275768	967006	2308762	10	13	2308762	10	13
1927	2301118	2301118	554529	1746589	8	12	1746589	8	12
1928	6656888	6656888	1193853	5463035	24	14	5463035	24	14
1929	1913187	1913187	513704	1399483	6	12	1399483	6	12
1930	6600885	6600885	1069027	5531858	23	13	5531858	23	13
1931	1149408	1149408	938586	210822	1	11	210822	1	11
1932	3511356	3511356	629616	2881740	12	12	2881740	12	12
1933	3488218	3488218	431532	3056686	13	9	3056686	13	9
1934	2916604	2916604	524029	2392575	10	-	2392575	10	-
1935	3130442	3130442	640653	2489789	10	-	2489789	10	-
1940	2086175	2336516	136641	1949534	7	-	2199875	8	-
1941	2846026	3187549	150738	2695288	10	-	3036811	12	-
1942	3826899	4286127	132618	3694281	14	11	4153509	16	12
1943	2372386	2657072	142046	2230340	8	11	2515026	9	13
1944	4135519	4631781	198757	3936762	15	11	4433024	16	12
1945	2752684	3083006	190806	2561878	9	10	2892200	11	12
1946	1885068	2111276	110646	1774422	6	13	2000630	7	14
1947	3882577	4348486	175464	3707113	13	11	4173022	15	12
1948	5709409	6394538	399887	5309522	19	11	5994651	22	13
1949	1489130	1667826	155307	1333823	5	11	1512519	5	12
1950	3878984	4344462	460211	3418773	12	12	3884251	14	14
1951	1715501	1921361	307121	1408380	5	10	1614240	6	11
1952	6049864	6775848	313051	5736813	20	11	6462797	23	12
1953	3051109	3051109	418261	2632848	9	-	2632848	9	-
1954	3480738	3480738	276061	3204677	11	-	3204677	11	-
1921-35 av.	3340376	3340376	663090	2677286	11.6	-	2677286	11.6	-
1940-52 av.	3279248	3672758	221023	3058225	11.1	-	3451735	12.6	-

1) Includes corrections for black market influence between 1940 and 1952 according to estimate in text.

Sources: Grupo de Estudios de Historia Rural (1991); Ministerio de Agricultura: *Anuario Estadístico de las producciones Agrarias* (1939-40, 1943-54), Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943); *Censo de la Población de España* (1920, 1930, 1940, 1950, 1960), Own elaboration.

In Columns 8 and 9, it can be seen that if official output figures are increased by 12 percent as suggested earlier, 1940-52 average availability of olive oil per capita becomes 8 percent higher than the average for 1921-35. It is difficult to evaluate whether an 8 percent increase in available supply, and thereby consumption is a likely event in the post-war years. At one side, pre-war consumption per capita was already twice as high as in Italy, and had been fairly stable for 15 years before the Civil War.[243] Furthermore, a part of demand was satisfied in the black market where prices were substantially higher than in the official market. Anything else equal, this should lead to a decline in demand. On the other side, olive oil was a basic good with high calorific content, so it is possible that the income elasticity of demand was negative.

Based on the evidence at hand, it is not possible to determine whether the 12 percent increase in official output figures between 1940 and 1952 is too high. However, given that method used for estimating the revision, it still appears safe to say that the 12 percent increase is likely to be the upper limit for a correction.

4.3: THE SIZE OF THE BLACK MARKET OF OLIVE OIL 1940-50

As mentioned in Section 1.3.3, two estimates by Tió and Gutiérrez del Castillo exist on the size of the black market for olive oil in the post-war years. While Tió guestimated that on average the black market accounted for some 10-15 percent of output in the whole period, Gutiérrez del Castillo calculated an average figure of 21.2 percent for the 1940-44 years.[244] Given that Tió reached his result in a rather impressionistic way, Gutiérrez del Castillo's figures are generally considered the best available and are normally referred to in the historical literature.[245]

The upper part of Table 4.6 contains the main data and the formula used by Gutiérrez del Castillo. She defined the size of the black market as being what remained when total output of olive oil was deducted the amount of oil that was controlled, in one way or another, by the CGAT. Although Gutiérrez del Castillo's methodology is adequate in principle, her calculations contain certain errors. After correcting for these faults, it is possible to re-estimate the size of the black market between 1940 and 1944, as well as to calculate the size of the black market for the 1940-50 period as a whole. The errors in Gutiérrez del Castillo's data concern the figures in Column 2 ("Exports") and in Column 6 ("Consumption of other vegetable

[243] International Institute of Agriculture (1939), Vol. 1, p. 158.
[244] Tió (1982), pp. 76-77 and Gutíerrez del Castillo (1983), p. 161.

oils"). The author did not possess data for exports for 1940 and 1944, and misplaced the data for the rest of the period by one year. The inclusion of the missing data increases aggregate exports of olive oil from 1940 to 1944 by approximately eighty-one percent, from 42,000 metric tons to 76,081 metric tons.[246] In the case of human consumption of other vegetable oils, a misinterpretation of the markets of oils and fats led Gutiérrez del Castillo to overestimate the amount of these that were distributed through the rationing system.

Table 4. 6: The relative and absolute size of the black market for olive oil in Spain, 1940-44.

Calculation from Gutiérrez del Castillo (1983). (All amounts in metric tons).						
	1	2	3	4	5	6
Years	Output	Exports	Change in Stocks	National supply of olive oil (1-2+3)	Amount of oils sold in legal markets	Consumption of other vegetable oils.
1940	208610	0	0	208610	158732	18002
1941	284602	0	0	284602	181147	17787
1942	382689	15000	-19250	348439	255111	26930
1943	237238	13000	45083	269321	239068	21977
1944	413441	14000	-25833	373608	298005	13258
1940-44 accumulated	**1526580**	**42000**	**0**	**1484580**	**1132063**	**97954**
	7	8	9	10	11	12
Years	Olive oil sold in legal markets (5-6)	Reserve to producers	Legal consump-tion of olive oil (7+8)	Black Market (4-9)	Black market as percent of legal consumption	Black market as percent of output
1940	140730	0	140730	67880	48.2	32,5
1941	163360	34424	197784	86818	43.9	30,5
1942	228181	49559	277740	70699	25.5	18,5
1943	217091	26243	243334	25987	10.7	11,0
1944	284747	16962	301709	71899	23.8	17,4
1940-44 accumulated	**1034109**	**127188**	**1131297**	**323283**	**27.8**	**21.2**
Revised figures based on corrections in Gutiérrez del Castillo data for "Production", "Exports", and "Consumption of other vegetable oils". (All amounts in metric tons).						
	1	2	3	4	5	6
Years	Output	Exports[1)]	Change in Stocks	National supply of olive oil (1-2+3)	Amount of oils sold in legal markets	Consumption of other Vegetable oils.[1)]
1940-44 accumulated	**1709770**	**76081**	**0**	**1633689**	**1132063**	**307**
	7	8	9	10	11	12
Years	Legal market Of olive oil (5-6)	Reserve To Producers	Legal consump-tion of olive oil (7+8)	Black Market (4-9)	Black market as percent of legal consumption	Black market as percent of output
1940-44 accumulated	**1131756**	**127188**	**1258944**	**374745**	**29.8**	**21.9**
1) See Appendix 2 for the revised yearly figures.						
Source: Gutiérrez del Castillo (1983): Tables 1, 2, 3, 4, and Anexo Tables 2 and 3; Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956)*; Own elaboration.						

[245] See for example Barciela (1986b), p. 394 and Zambrana Piñeda (1999), p. 4.

[246] The yearly data are 1940: 13,664 metric tons; 1941: 15,074 metric tons; 1942: 13,263 metric tons; 1943: 14,205 metric tons; 1944: 19,876 metric tons; Sindicato Vertical del Olivo (1950), p. 88.

In fact, only 307 metric tons of non-olive oil were sold through the rationing system between 1940 and 1944, as opposed to the 97,954 metric tons asserted by Gutiérrez del Castillo.[247] Viewed in isolation, the effect of these corrections is that the relative size of the black market diminishes. A further problem to deal with is that Gutiérrez del Castillo used the official contemporary statistics for her data on total output. Yet, in Section 4.2 it was found that these probably undervalue actual output by up to 12 percent on average between 1940 and 1952. Since this revision was only a rough estimate, it was not possible to calculate yearly figures for the underreporting. The output data for 1940-44 have therefore, been adjusted upwards by 12 percent over the period as a whole. The effect of this is an increase in the relative size of the black market.

The combined effect of these corrections can be seen in the lower part of Table 4.6. It is noteworthy that the new estimate of the relative size of the black market is close to that given by Gutiérrez del Castillo. This happens irrespectively of whether it is calculated as a percent of output or as a percent of the legal consumption.[248] Nevertheless, according to the new estimate, the absolute size of the black market is approximately sixteen percent larger than thought by Gutiérrez del Castillo.

When extending the study of the size of the black market for the period after 1944, the absence of data on changes in the stock of oil presents us with a problem. It can be assumed, though, that the accumulated change in stock between 1940 and 1950 was zero.[249] By doing this, it is possible to estimate the size of the black market for the 1940-50 period as a whole, as seen in Table 4.7. The main result is that the relative size of the black market was approximately twenty-five percent of legal consumption, or nineteen percent of marketed output. These numbers are below those for the 1940-44 period shown in Table 4.6.

[247] See Appendix 2 for further details.

[248] Note that if a 12 percent increase of the figures for total output is too high, the relative amount sold in the black market declines.

[249] It can be supposed that no significant stock was available in 1940 due to the introduction of rationing immediately after the Civil War. Furthermore, it seems likely that the available stock was close to zero at the end of 1950, after the harvests of 1949 had been very bad and the 1950 slightly above average. This last assumption is supported by the fact that after another small harvest in 1951, the prices in the black market increased sharply that summer. The accumulated change in stock can therefore be set to zero for the 1940-50 period. While it can be argued that the stock at the end of 1951 also was zero, the analysis has to be restricted to the 1940-50 period, since no data are available on the rationing system for 1951. For monthly data on official and black market prices in Jaén between 1946 and 1951, see Cámara Oficial de Comercio e Industria: *Memoria Comercial y estudio sobre el desarrollo de los negocios en la provincia de Jaén* (1946-51).

Table 4. 7: The relative and absolute size of the black market for olive oil in Spain, 1940-50.

(All amounts in metric tons).						
	1	2	3	4	5	6
Years	Production	Exports	Change in Stocks	National supply of olive oil (1-2+3)	Amount of oils sold in legal markets	Consump-tion of other Vegetable oils.
1940-50						
Accumulated	**35498763**	**2253064**	**0**	**33245699**	**26345623**	**614**
	7	8	9	10	11	12
Years	Olive oil sold in legal markets (5-6)	Reserve to producers	Legal consump-tion of olive oil (7+8)	Black Market (4-9)	Black market as Percent of legal consumption	Black market as percent of Output
1940-50						
Accumulated	**26345009**	**247188**	**26592197**	**6653502**	**25,0**	**18,7**
Sources: Data for "production" are 112 percent of the official data according to estimate in Section 4.2; "Export" data are from: Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956)*, p. 77; "Change in stock" is set to zero according to argument in text; "Amounts of olive oil sold in legal market" is composed of data for rationing to the civil industry, the military industry, to the colonies, to the civil population, and to the military personnel and their families. The amount of olive oil going to the industry is given by Gutiérrez del Castillo for 1941-44, and is set to 5 percent of the production for the rest of the years according to argument in Appendix 2. The rationing to the colonies is set to 5 percent of the amount going to the civil population in mainland Spain, on the basis of data from Gutiérrez del Castillo for 1940-44. This is in concordance with information in Sánchez-Duarte (1947). The rationing to the civil population in mainland Spain is given in Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-51), except 1940 and 1941, where data are from Gutiérrez del Castillo. The rationing to the military personnel and their families is given by Gutiérrez del Castillo for the whole period. Human consumption of other vegetable oils are set to twice the amount consumed in 1943, to account for this year and 1946, as explained in Appendix 2. The "Reserve to producers" between 1945 and1950 is set to 20.000 metric tons/year according to Sánchez Duarte (1947) p.10. For the 1940-44 period data are given by Gutiérrez del Castillo.						

Although the black market continued to be important in the olive oil sector throughout the 1940s, the relative size of the black market for oil was clearly smaller than in the case for wheat.[250]

4.4: STATE INTERVENTION IN THE OLIVE SECTOR AND THE EFFECTS ON PRODUCTION AND OFFICIAL SUPPLY OF OLIVE OIL

The system of intervention in the production, commercialisation and consumption of olives and olive oil in the 1940s was extensive and affected producers, industrialists, merchants and consumers. Compared with the intervention in the wheat sector, there were both similarities and differences. The first were that the state, in theory, controlled consumption of the produce as well as prices paid at all stages of the production process. Likewise, rationing until 1952 regulated consumption. In the rationing system, consumers were given coupons that gave them the right to buy a

[250] When referring to the article by Gutíerrez del Castillo, Barciela had stated that the quantity of olive oil sold in the black market was close to the amount of oil sold in the legal market: Barciela (1986b), p. 394. This appears to be incorrect since from Tables 4.7 it can be calculated that the legal market on average was four times as large as the black market between 1940 and 1950.

fixed amount of oil per month. The main difference compared to the wheat sector was that the intervention mainly dealt with the process of elaborating the oil rather than directly with the farmers growing the crop.

The reasons for this can be attributed to the different characteristics of the crops and in the infrastructure involved in the processing of wheat grain and olive fruit. The fact that the olive fruit starts to putrefy quickly after being picked from the tree, with a subsequent loss in the quality of its oil was a well-known fact.[251] At the same time, the alternative of leaving the fruit on the trees also had negative consequences for its quality in the form of a higher acidity and smaller yields for that harvest year and the subsequent one.[252]

For the individual farmer, this meant that he had to bring his fruit to the presses as quickly as possible after its collection. Collectively speaking, in any given region all of its olive farmers had to go through this process in a condensed period of time. Consequently, unlike wheat farmers, the olive growers could not choose to store their harvest while waiting for an increase in black market prices. This probably explains why production quotas, which were so problematic and conflictive in the case of wheat, were not enforced in the olive sector during most of the 1940s.

The focus for the intervention in the production of olives was therefore not the farmers but the presses. This was very convenient for the state for two reasons. First, because the number of presses was much less than the number of farmers. Second, because the pressing of the fruit took place within a period of a maximum of 40 to 60 days, it was easier to control than cereal grinding, which could happen throughout the year.

However, the olive farmers were still subject to some regulation of their harvest. Before the harvest, they had to declare to the local *Junta Agrícola* the expected size of the harvest and where the pressing was going to be made. After making this declaration, the farmer received a legal conduct to transport his fruit as well as the right to receive a higher than normal ration of olive oil for self-consumption.[253] The price the farmer received for his produce was set by the *Junta Local de Precios* (The Local Price Committee) in each municipality. The *Junta Local de Precios* consisted of one farmer who pressed his own fruit, one representative from the buyers of the olives

[251] In the late-19th and early-20th century an important factor in the improvement of the quality of the olive oil was the increase in the pressing capacity, which made it possible to press the fruit much faster after it was collected. A contemporary author suggested that the fruit should not be stored for more than a week before pressing: Guillén-García (1917), p. 95.
[252] Guillén-García (1917), pp. 83-85.
[253] Tió (1982), p. 90.

and one representative for the sellers of the olives. The last two were both selected by the provincial delegate of the *Sindicato Nacional del Olivo*. The *Junta Local de Precios* was presided by either the mayor or by the president of the local section of the HSGL, if such a section existed.[254]

Concerning working conditions, regulations stipulated that the harvest had to be paid by piecework, unless it could be argued that this was not possible. This would be to the advantage of the farmer, given that the wages paid per amount of fruit collected was lower when paid as piecework than when paid at a daily rate. The process of gleaning, which had often been a part of the worker's salary, was made compulsory but was prohibited without a specific contract between the workers and the farmer.[255]

As regards olive oil, it was intervened in a way that resembles the case for wheat. This meant that the pressers needed permission to work and that the prices were set in all parts of the commercialisation process. Moreover, trade and transport of the finished product were illegal without prior authorisation from the CGAT.[256] The degree of intervention was similar for the main sub-product of the pressing, the *orujos grasos*.[257] This was sold as fodder and to the extractor industry, where most of the remaining oil was separated from the remains of the fruit. The *orujo* oil that was produced in this way was mainly used for industrial purposes, but in years of scarcity, a small part was also used for human consumption after being refined.[258] The *orujo* oil, regardless of its purpose, was also regulated by a system of intervention until the 1950-51 harvest.

Yet, as analysed in Section 4.3 the extensive control system could not avoid the emergence of a large black market for olive oil in the 1940s. This combination appears to be somewhat paradoxical taking into account that Table 4.5 demonstrated that the average supply of olive oil per capita between 1940 and 1952 was very close to the pre-war levels. Nevertheless, it is also worth noting that the development of the level of output suggests that it might have been reasonable to introduce a rationing system immediately after the Civil War.[259] In circumstances, where the stocks were probably exhausted, the transport system was in poor condition, and where the first

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[254] Tió (1982), p. 89.
[255] Tió (1982), p. 91.
[256] Tió (1982), pp. 92-93.
[257] The *orujos grasos* is the residue left after the pressing of the fruit. This mass still contained an amount of oil that could not be extracted by mechanical pressure alone, but also required the use of chemicals.
[258] Se Appendix 2 for a description of the use of *orujo* oil for industrial use and human consumption.
[259] Out of the first five harvests after the end of the Civil War, the first and the fourth were quite small, the second was fair, and the third and the fifth were better than average.

post-war harvest was below average a strong case could be made for state intervention. Yet, from the 1942 harvest onwards, the supply of the domestic market per capita was similar to the pre-war situation. This normalisation of overall supply is supported by the evolution of relative black market prices for olive oil in provincial capitals demonstrated in Table 4.3. After an initial period of relatively high black market prices, with the exception of 1946 these decrease throughout the period.[260] Moreover, Table 4.5 indicates that when the rationing system was abolished in 1952, it happened after a harvest that, although the best since 1940 was not very different from the 1948 harvest. Hence, the existence of the intervention system until 1952 appears to have been unnecessary and was probably the result of the "culture of intervention" in the state bureaucracy described in Section 3.7. Hence, the system of intervention thereby became a factor in the maintenance of an inadequate supply of olive oil in the official market.

At the same time, the existence of a black market did not increase total output of olive oil as opposed to what was argued took place in the wheat sector. In Chapter 2, we described the necessary conditions for this to take place. It would be necessary that at least a part of the supply in the black market was not the outcome of diversion, but the outcome of farmers also reacting to black market prices. However, in the case of olives, farmers could not respond to black market price incentives in the short run because it takes years to put new plantations into production, and since the supply of fertilisers was restricted.

The state failure that we have found in the olive sector is clearly different from the social market failure in the wheat sector in Chapter 4. The existence of a black market for olive oil unnecessarily complicated the supply situation for consumers, especially in the many provinces with little or no production of olive oil where direct access to producers was limited.[261] As explained in Chapter 1, trading in products subject to state intervention required authorisation from the authorities, and, except in special circumstances, permission was not given to individuals to transport their goods across provincial boundaries.[262] These circumstances probably made non-authorised transports between provinces particularly costly due to the increased risk of being

[260] Both the 1949 and the 1951 harvests were smaller than that of 1946. Yet, while no stocks were likely to be available in 1946, since the 1945 harvest was also below average, this was not the case in 1949 and 1951, where the preceding harvests had been better than average. See Table 4.5.

[261] Approximately fifty percent of average output of olive oil came from Jaén, Córdoba and Sevilla: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-52).

caught, or subsequently, to the payment of large bribes to the officials of the state's control system.

At the same time, for the individual consumer the option of travelling to other provinces to buy in the black market was time consuming and costly. With the possible amount of goods that could be transported by an individual, the unit price would obviously go up in relation to the distance travelled.

4.5: CONCLUSIONS

The present chapter concluded that official statistics were likely to underreport average olive oil output between 1940 and 1952 by up to 12 percent. Yet, irrespectively of whether this correction was included, average post-war output turned out to be very close to the pre-war level. This is a result, which is significantly different from what we saw in the case of wheat. The main reason for the different output levels was not official prices, but the dependency of wheat cultivation on work animals and artificial fertilisers, which were in short supply in the 1940s.

It was also possible to estimate the relative and absolute size of the black market for olive oil between 1940 and 1950. This turned out to be approximately 19 percent of total output, or 25 percent of legal consumption. Although the analysis demonstrated that the black market for olive oil was important, it was relatively far smaller than in the case of wheat.

The introduction of a rationing system in 1939-40 might have been sound due to lack of stocks and the destruction of a part of the infrastructure in Spain. Nevertheless, given the level of output and the subsequent availability of olive oil per capita in most of the 1940s, there seems to have been no economic or social reason for continuing with the intervention system after 1942. State intervention in the olive oil sector does therefore appear to be an example of state failure, which led to unnecessary market distortions and complicated the situation for producers and consumers alike. This is a conclusion that is very different from the case of wheat. Moreover, it points to the importance of distinguishing between different sectors when investigating the effect of the Franco regime's agrarian policy on output and distribution. When compared to the existing historical literature, this is clearly a new and important result.

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[262] In the case of olives, farmers were only allowed to bring the fruit to mills in the same province for grinding, unless it would be far easier to carry out the milling through crossing to the neighbouring province.

Compared with Tió's study on edible oils in Spain, the conclusions of this chapter clarify an aspect of his interpretation. On the one hand, Tió states that although the production between 1940 and 1945 was smaller than before the war, the difference was not so big that it should have led to a general shortage.[263] On the other hand, he also maintains that the lack of fats in the post-war years, especially for industrial purposes, made it necessary for a system of rationing to be established.[264] We have now seen that the overall supply to the population in the 1940s was, in most years, comparable to the pre-war period. Thus, rationing could have been abandoned much earlier than it was. But while the intervention system created an unnecessary feeling of scarcity in the case of human consumption, there was a real scarcity of fats for industrial use. Still, this last phenomenon can hardly be attributed to the system of intervention as it was mainly the result of the international situation in the 1940s and early 1950s.[265]

[263] Tió (1982), pp.79-80.

[264] Tió (1982), p. 111. In a discussion of this question, Llopis Agelán forwarded the statement that since there was a system of rationing there must have been a scarcity of olive oil: Llopis Agelán (1994), p. 49. This though appears to be a circular argument given that the official consumer price was below the equilibrium price.

[265] As pointed out by Tió, other European countries – such as Germany, Belgium France and Italy – also failed to recover pre-war levels of consumption of non-olive oil as late as 1955: Tió (1982), pp. 110-111.

CHAPTER 5: THE PHYSICAL ENVIRONMENT AND THE SOCIAL STRUCTURES OF THE AGRARIAN POPULATION IN CUENCA, JAÉN, AND TOLEDO

5.1: INTRODUCTION

The three provinces selected for analysis at the local level are Cuenca, Jaén and Toledo. All three provinces are located in the part of Spain where dry-land farming of traditional Mediterranean crops, such as cereals, olives and vine, made up the dominant sector of agricultural produce. Their respective locations can be seen in Map 5.1, with Cuenca and Toledo in the La Mancha region in Central Spain and Jaén located in Andalucía in the South.

As described in the Introduction, the combination of the most extended crops as well as the social structure of the relevant agrarian sub-sectors determined the choice of these specific places. This means that it would have been possible to analyse other provinces with similar characteristics, without changing the general outline of the thesis. These provincial studies are therefore not an analysis of each of the provinces for their own sake, but an examination of the respective agrarian sub-sectors exemplified by these regions. However, it is still necessary to describe some basic characteristics of these areas as a background for the more detailed analysis, which will follow in the Chapters 6, 7 and 8. Although we have to be aware that while wheat, olives and vine were, and still are, important crops in Cuenca, Jaén and Toledo, other products were also grown. Furthermore, although small-scale farmers were of some significance in both Jaén and Toledo, it was only in Cuenca that these constituted the most numerous group of farmers. For these two reasons, it is not possible without prior considerations to analyse the data on an aggregate level for each of the provinces when we work on the development of the respective sub-sectors. Therefore, this Chapter also serves to delimit the sub-sectors that will be at the core of the further analysis in the Chapters 6, 7 and 8.

Map 5.1: The geographical location of Cuenca, Jaén and Toledo

This chapter consists of two main parts. The first is a introduction to some of the general characteristics of the agrarian population in three provinces within a national context. In the second part, we will take a closer look at each province individually, focusing on their physical traits and internal complexities.

5.2: THE GENERAL SOCIAL STRUCTURE OF THE AGRARIAN POPULATION

5.2.1: The development of the population

As we study the development and the characteristics of the population in the three provinces, a number of common features appears. The first of these concerns the total population that in all three cases climaxed in 1950 (Table 5.1)

Table 5. 1: Population and emigration in Cuenca, Jaén and Toledo, 1900-80.

Years	Population			Emigration		
	Cuenca	Jaén	Toledo	Cuenca	Jaén	Toledo
1900	249696	474490	376814	N/A	N/A	N/A
1910	269634	526718	413217	6813	-744	10495
1920	281628	592297	442933	11452	-21579	14621
1930	309526	674415	489396	14319	8088	19805
1940	333335	753308	480008	11911	-1263	45536
1950	335719	765697	527474	34489	75430	9923
1960	315433	736391	521637	57917	152267	67850
1970	247158	661146	468925	58344	183201	97426
1980	215875	627598	471806	21280	90688	27435
Sources: Censo de la población de España (1900-80)						

Due to high rates of emigration after 1950, we see a significant decline in total population. While the loss of population in the 1950s and 1960s was considerable, a similar trend occurs in most of the agrarian provinces throughout mainland Spain.[266] The emigration was partially the result of the strong seasonal character of the demand for labour in agriculture. Seasonal unemployment was a major problem for a large proportion of workers, who fled the countryside when emigration became a viable option after 1950.[267]

A further point of interest is the development of the population between 1930 and 1940. In spite of the war, we see both in Cuenca and in Jaén that the census data for 1940 registered more inhabitants than in 1930, though this is not the case for

[266] Molina Ibañez (1988), pp. 89-95.

[267] The minor increase in population in Toledo after 1970 is undoubtedly due to its proximity to Madrid, which makes the northern part of the province a possible residential area for people working in the capital. Ministerio de Agricultura: *Mapa de Cultivos y aprovechamientos de la Provincia de Toledo*, p. 50.

Toledo.[268] The reason for this difference is likely to be found in the fact that the province of Toledo was divided in two parts by the battlefront throughout the Civil War. Therefore, we could expect that both the number of casualties and refugees were higher here than in Cuenca and Jaén. Yet, one must use the figures contained in the 1940 census with caution. The reason is that people who were missing, still performing military service, and those who were imprisoned or in concentration camps were included in the totals.[269] However, it is almost impossible to estimate the margin of error.

5.2.2: Land distribution and the agrarian population

In the period under consideration, agriculture was by far the most dominant sector in all three provincial economies. As late as 1970, close to 50 percent of the active population were employed in farming, which was significantly higher than the national average (Table 5.2).[270]

[268] The effect of the Civil War on the availability of labour in the agrarian sector in each province will be discussed in the respective chapters.
[269] Reher and Valero Lobo (1995), pp, 51-54.
[270] The census data, with the exception of 1960, shows a very low female participation rate in the labour market, so the 1960 figures has been adjusted to make the data comparable. This has the result that the figures in Table 5.2 only show the male occupational structure, and this counts for all following statistics on employment based on official records. Note that in rural areas it was normal for females to take on seasonal wage employment.

Table 5. 2: Percentage of active male population in Cuenca, Jaén, Toledo and Spain employed in agriculture, 1920-70.

Provinces	1920	1930	1940	1950	1960	1970
Cuenca	84	78	79	74	71	53
Jaén	77	66	67	64	65	54
Toledo	79	71	82	65	70	46
Spain	**59**	**46**	**51**	**48**	**40**	**29**
Sources: Censo de la población de España (1920-70).						

Given that small-scale farmers are in the focus of this study, it is not only the portion of the active population employed in agriculture, which interests us, but also the composition of this group. Several variables are worth noting in relation to this:

1) The relative number of labourers to farmers.
2) The regional differences of these factors.
3) The different types of farms, including size, crop structure and need for hired labour.
4) Developmental trends over a period of time

Several primary and secondary sources are available to investigate these questions. Nevertheless, not all sources are available for all three provinces and the information from different sources do not always provide the same form of information.[271]

Starting the analysis on a general level, Table 5.3 shows that the distribution of land varied between the three provinces with Cuenca clearly being the province where land was most equally allocated in 1930. However, the picture we get from Table 5.3 is somewhat misleading because it does not take into account several factors. First, the sheer size of the area can obscure variances in soil quality and mix different socio-economic situations in the same group. Second, due to the range of the categories in which the data are organised, as for example the case of owners with, respectively less than five hectares and owners with 50 hectares that are placed in the same group. While the first amount of property on dry land would be insufficient to sustain a family, this would not be the case with 50 hectares.

[271] This is probably due to problems with methodology. One problem is distinguishing between farmers and labourers. Persons without any access to land can be easily categorised as labourers. However, there is a border definition problem regarding people cultivating an amount of land which does not require hired labour, yet what they produce is not (always) sufficient to sustain the needs of a whole family. A distinction could be made by the main source of income, but this is difficult to establish and can vary from year to year. An alternative could be according to farm size, but aspects such as the fertility of land and the possibility of sharecropping or renting of land makes data on ownership of land

Table 5. 3: Distribution of property in Cuenca, Jaén and Toledo, 1930.

Cuenca	Small property	Medium and large property	Very large property	Total
	(0-50 Ha)	(50-500 Ha)	(> 500 Ha)	
Owners	34439	1046	80	35565
Id. in percent	96,83	2,94	0,22	100
Land (Hectares)	308822	55411	11163	375396
Id. in percent	82,27	14,76	2,97	100
Jaén	Small property	Medium and large property	Very large property	Total
	(0-50 Ha)	(50-500 Ha)	(> 500 Ha)	
Owners	96114	2729	418	99261
Id. in percent	96,83	2,75	0,42	100
Land (Hectares)	629477	298988	387892	1316357
Id. in percent	47,82	22,71	29,47	100
Toledo	Small property	Medium and large property	Very large property	Total
	(0-50 Ha)	(50-500 Ha)	(> 500 Ha)	
Owners	104934	3724	524	109182
Id. in percent	96,11	3,41	0,48	100
Land (Hectares)	844639	249871	384009	1478519
Id. in percent	57,13	16,90	25,97	100
Source: Rodríguez Labandeira (1991), pp. 437-439.				

A third factor is that the data does not cover the whole province in the case of Cuenca.[272] Fourthly, when dealing within the aggregate the data does not take into account regional differences, or differences between different sub-sectors. In the fifth place, it would be better if the data dealt with the number of exploitation rather than the number of owners. As part of an owner's property could be rented out, it would be more exact to base one's figures on the exploitation of the land as it could account for such complexities.[273] It is not until 1962 that nation-wide statistics on the agrarian sector was produced again, and it is not until then, that data are given for the number of exploitations.[274]

Although we can not escape the inherent difficulties in constructing an all-encompassing definition, the figures in Tables 5.3 and 5.4 indicate that an expectable concentration of land took place in all three provinces between 1930 and 1962.[275]

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problematic. Similar difficulties arise concerning the distinction between small-scale and large-scale farmers.

[272] It was only approximately 20 percent of the land that was surveyed in Cuenca.

[273] A similar problem occurs, when we use another often referred to source – Carrion, where the data for 1930 concerns the number of plots. The problem in using this method is that in all three provinces the number of plots exceeds by far the number of people working in the agrarian sector, given that many exploitations consisted of more than one plot. The data from Carrion therefore underestimates the concentration of land. See Carrion (1975), Estado Nº 1).

[274] Although this information post-dates the period of this study, we can still use the information to get an idea of the changes that took place in the meantime.

[275] In the case of Jaén, a comparison between Tables 5.3 and 5.4 shows that the number of, respectively, owners and exploitations with more than 50 hectares is nearly 2,800 in 1930 and around 3,100 in 1962. At the same time there is an increase in the total amount of land they posses from some 700,000 hectares in 1930 to about 800,000 hectares in 1962. Meanwhile, in 1930 there were 96,114 owners with less than 50 hectares, while in 1962 we find 83,618 exploitations with less than 50 hectares. At the

However, as already pointed out, the figures only give a rough indication of the development given the different concepts of "owners" and "exploitations" in the two cases.

Table 5. 4: Distribution of property in Cuenca, Jaén and Toledo, 1962.

Cuenca	< 50 Ha.	50-500 Ha	>500 Ha.	Total
Exploitations	53369	1179	2686	57234
Id. in percent	93,25	2,06	4,69	100,00
Land (Hectares)	569128	238947	742402	1550477
Id. in percent	36,71	15,41	47,88	100,00
Jaén	< 50 Ha.	50-500 Ha	>500 Ha.	Total
Exploitations	83618	1212	1632	86462
Id. in percent	96,71	1,40	1,89	100,00
Land (Hectares)	419314	243549	561802	1224665
Id. in percent	34,24	19,89	45,87	100,00
Toledo	< 50 Ha.	50-500 Ha	>500 Ha.	Total
Exploitations	61355	1525	2477	65357
Id. in percent	93,88	2,33	3,79	100,00
Land (Hectares)	504170	313450	496274	1313894
Id. in percent	38,37	23,86	37,77	100,00
Source: Ministerio de Agricultura: *Censo agrario 1962.*				

In spite of these statistical problems, it appears clear that at least one-third of the total land belonged to farms with less then 50 hectares as late as in 1962.[276] It must furthermore be supposed that this figure was higher at the beginning of the 1930s, as this was before the process of concentrating the land into fewer hands accelerated.

In sum, the available data on land only permits us to conclude at the moment that small-scale farming was relatively more important in Cuenca than in the two other provinces. Moreover, there appears to be a process of land concentration between 1930 and 1962. We will therefore proceed to an analysis of the composition of the agrarian population.

The census data in Table 5.5 confirms the higher proportion of small-scale farming in Cuenca than in the two other provinces. Furthermore, there was a decline in the relative number of labourers to farmers in the post Civil War years, which is in

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same time, these owners possessed 629,477 hectares in 1930, while the exploitations in 1962 covered only 419,314 hectares in 1962.
In the case of Toledo we see that the number of, respectively, owners and exploitations with more than 50 hectares remains at a comparable level of close to 4,000 between 1930 and 1962. At the same time there is an increase in the amount of land they posses from 630,000 hectares in 1930 to 810,000 hectares in 1962. Meanwhile, the data for the farms with less than 50 hectares indicates that these should have declined in numbers from slightly above 100,000 in 1930 to about 60,000 in 1962. At the same time, they experienced a decline in the land they cultivated from almost 850,000 hectares in 1930 to only 500,000 hectares in 1962.
It is not possible to make a similar comparison in the case of Cuenca due to the incomplete data for 1930. This point will be further examined in Section 5.3.1.

[276] Note that the term "belonged" is deliberately vague, so that it covers both land that was owned, rented or cultivated as well as sharecropping.

agreement with the finding on increased emigration and concentration of land in the same period.[277]

Table 5. 5: Occupational structure in the agrarian sector in Cuenca, Jaén and Toledo, 1920-70.

(All figures in percent).						
Cuenca	1920	1930	1940	1950	1960	1970
Workers[1)]	73,7	N/A	N/A	66,5	N/A	52,2
Farmers[2)]	26,3	N/A	N/A	33,5	N/A	47,8
Jaén	1920	1930	1940	1950	1960	1970
Workers[1)]	91,0	N/A	N/A	88,2	N/A	85,1
Farmers[2)]	9,0	N/A	N/A	11,8	N/A	14,9
Toledo	1920	1930	1940	1950	1960	1970
Workers[1)]	78,9	N/A	N/A	81,9	N/A	65,8
Farmers[2)]	21,1	N/A	N/A	18,1	N/A	34,2
1) Includes non-wage workers.						
2) Owners, tenants and sharecroppers.						
Sources: Censo de la población de España (1920-70).						

When compared to the national context in the 1930s, the 9:1 ratio of workers to farmers in Jaén was quite typical of the situation in Andalucía. Cuenca with a ratio of 3:1[278] was in an intermediate position between that of Andalucía and those provinces in Central and Northern Spain,[279] where the ratio was close to 1:1. Finally, in Toledo we find a 4:1 ratio, which is between that of Andalucía and that of Cuenca.[280]

However, Table 5.5 also reveals the different pace of the relative decline in the number of workers to farmers in the three provinces. This was the result of the different crop structure in the three provinces. The highest ratio of workers throughout the period is found in Jaén, undoubtedly due to the difficulties in the mechanisation of the cultivation of olives compared to, for example, cereals. Similarly in the case of Toledo, the difficult transition to mechanising vine cultivation is the probable explanation for the slower decline in the ratio of workers to farmers here than in Cuenca.

We are now able to summarise shortly the general development of the agrarian sector in the Cuenca, Jaén and Toledo. Throughout our main period of study, the agrarian sector continued to employ the majority of the active population. In spite of the fact that all three provinces were already experiencing emigration before the Civil

[277] Based on local sources Reher reached a result which, on one side shows a similar level of workers to farmers in Cuenca, and to a certain degree also confirms the development over time: Reher (1988), p. 30.
[278] This resembles the situation in provinces as for example Valladolid, Valencia, Alicante, Huesca and Zaragoza.
[279] Such as for example Guadalajara, Burgos, Soria, Lleída, León, Zamora, Santander and Orense.
[280] Rodríguez Labandeira (1991), pp. 440-441.

War, the total population continued to grow until 1950. However, from approximately this year, emigration began to outstrip the natural population growth.

The decline in the relative number of workers to farmers, especially after 1950, together with a concentration of the land testifies to a general modernisation and mechanisation of the sector. Nonetheless, due to technical reasons, the process of mechanisation was much more pronounced in Cuenca than in Jaén and Toledo.

5.3: SPECIFIC CHARACTERISTICS OF THE AGRARIAN SECTOR IN THE THREE PROVINCES

5.3.1: Cuenca

Normally the province is divided in three geographical regions - La Mancha, La Sierra, and La Alcarria - based on variations in natural environment.[281] However, although there is agreement on the basic characteristics of each region, different authors delimit the regions in slightly different ways.

La Sierra, that is "The Mountains" is the most elevated area of the province, with altitudes from 1100 meters to 1800 meters. The landscape is ragged, making it only partially useful for agriculture, but it contains a notable extension of woods.[282]

La Alcarria in the north-western part of the province is less mountainous than La Sierra and is located approximately at 800 to 900 meters of altitude.[283] Compared to La Sierra there are relatively less forests and the earth suffers from some erosion.[284] La Mancha, which is approximately the southern half of the province, is a part of the great central plateau in Spain, and here the land is cultivated in a higher degree than in the other two areas. Both the physical landscape and the predominance of the cultivation of cereals, and especially wheat, makes this part of the province similar to other provinces in Central Spain, such as Albacete, Ciudad Real and Toledo. On the other hand, La Alcarria and La Sierra share similarities with areas in neighbouring provinces like Guadalajara and Teruel.

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[281] Reher (1988), pp. 23-24, for the division in the three regions and the basic characteristics of each.
[282] In the 1980s close to 70 percent of the exploited area was used for forestry, González Cárdenas (1988), p. 54.
[283] "Alcarria" roughly translates into "high lying, open less fertile land".
[284] In the 1980s woods occupied close to 20 percent of the exploited area, González Cárdenas (1988), p. 54.

Map 5.2: The province of Cuenca (Note that the exact territorial division is disputed. According to Gonzáles Cardenas (1988), p. 59, La Alacarria is smaller than shown in this division, which is from Reher (1988), p. 18.

When analysing the regional differences of the agrarian sector, the lack of uniform statistics becomes apparent again. Even so, some general conclusions can be made that can serve as guidelines for the rest of the analysis. One important point is that the relative number of large-scale farms was limited in all three regions, but, said that, they were more important in La Mancha than in La Alcarria and La Sierra, as shown in Table 5.6.

Table 5. 6: Relative number of farms in Cuenca, 1943-46

(All figures in percent)			
	La Sierra	La Alcarria	La Mancha
Large farms	1,0	0,3	3,2
Family farms	17,5	22,5	23,6
Small farms	81,5	77,2	73,1
Source: Organización Sindical: *Datos estadísticos.*			

However, the figures in Table 5.4 indicate that in 1962 farms with less than 50 hectares only possessed some 36 percent of the total agricultural land. This appears to contradict with the data on the relative importance of the small-scale farmers in Tables 5.5 and 5.6. The problem arises because the calculation in Table 5.4 do not distinguish between cultivated and non-cultivated land, with the last heading including forestry.[286] When this is taken into account, as in Table 5.7, it turns out that some 65 percent of the cultivated land in 1962 belonged to farms with less than 50 hectares.

Table 5. 7: Distribution of land use according to crops and farm sizes in Cuenca, 1962.

(All figures in Hectares)						
Crops	< 1 ha	1-10 ha	10-50 ha	50-100 ha	>100 ha	Total
Wheat	138	17185	97501	30288	54046	199158
Barley	174	8992	33862	8556	15060	66644
Grapes	901	18871	35209	8896	14634	78511
Olives	691	11106	27879	6003	7332	53011
Leguminous	230	5928	26082	7938	12632	52810
Others	736	7105	45068	11666	13994	78569
Total cultivated	**2870**	**69187**	**265601**	**73347**	**117698**	**528703**
Fallow land	181	20471	124519	39611	64324	249106
Non-cultivated	404	15565	70330	39106	647263	772668
Total	**3455**	**105223**	**460450**	**152064**	**829285**	**1550477**
Relative distribution of cultivated land (Percent)	0,58	13,09	50,24	13,87	22,26	100,00
Source: Ministerio de Agricultura: *Censo Agrario 1962.*						

[286] The municipalities own a very important part of the large-scale exploitations of forestry. The consequence is a structure of the ownership of land where small- and medium-sized farms coexists with public owned large-scale exploitations. Hence, a large proportion of the high quality land is in the hands of the small and medium-scale farms. The structure found in Cuenca is different from that of the southern part of the La Mancha region, where large-scale farms are mainly in private hands, Mata Olmo (1988), pp. 171-173.

The statistics in Table 5.8 about the employment structure in the agrarian sector in 1953 basically gives the same picture as what was shown in Table 5.6. The main points are that the group of "family farmers" is important in all areas, as well as that there is an inverse relationship between the relative number of family farmers and the relative number of male workers. We also see that although there are a higher proportion of "Larger farmers" in La Alcarria than in La Mancha, the proportion of "Regular hands" and "Non-regular hands" is higher in La Mancha than in La Alcarria. This points to the fact that the larger farms were more labour intensive in La Mancha than in La Alcarria, which confirms that the land was more intensively cultivated in La Mancha than in the two other regions.

These structural differences between the regions appear to have been constant throughout the period of our study, which can be seen in the figures from Reher in Table 5.9.[287] For the early to mid-1940s we have information that makes it possible to distinguish between a number of different types of farms according to size, crop and employment structure, as well as the physical environment in which they were located.[288]

Among the conclusions, which can be drawn from Table 5.10 is that the dividing line between "small farms" and "family farms" depends on the region where the farm is located.[289] As a rule, land in La Mancha appears to generate more income than land in the other regions. This can be seen in the case of how much land is necessary to qualify for the heading "family farms" as opposed to "small farms". This seems to be connected with differences in the crop structure in the three regions. While more land in La Alcarria and La Sierra was dedicated to pasture and woods, in La Mancha we see more land used for cultivation.[290]

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[287] Note that the figures are not without problems: 1) they are based on a relatively small sample, 2) it is unclear how to interpret the category "others", and 3) there are relatively large time spans within each category. In spite of this, the general picture confirms what we saw in Tables 5.5, 5.6 and 5.8.

[288] The criteria used for selecting "typical farms" are not explained in the source. The data that is reproduced in Table 5.10 appears to have been an answer to a questionnaire, which appears to have been sent out from the *Organización Sindical*, i.e. the official "trade-unions". However, the purpose of the survey is not stated in the source. The local branch of the *Organización Sindical* compiled the data, which, in theory, was the representative of the respective sectors. It can therefore be supposed that the information was collected by persons with a good knowledge of the subject. Unfortunately, it has not been possible to find similar information for Jaén and Toledo.

[289] Note that the relative size of the figures for the value of production might not reflect the exact relation of the net income of the farms, due to differences in cost structure.

[290] It should be noted that there are also two examples from La Mancha of "large farms" with important areas dedicated to pasture side by side with the mainly cereal growing farms.

Table 5. 8 Agrarian sector employment structure in the Province of Cuenca in 1953.

(All figures in percent)									
Regions	1	2	3	4	5	6	7	8	9
	Large farmers (owners)	Large farmers (tenants)	Family farmers (owners)	Family farmers (tenants)	Share-croppers	Regular hands (males)	Non regular hands (males)	Non regular hands (females)	Total hired labour (6+7+8)
La Alcarria	7,5	4,8	35,1	13,5	3,3	14,6	15,8	5,4	35,8
La Sierra	2,0	2,0	58,1	7,6	3,0	5,2	17,6	4,4	27,2
La Mancha	7,0	2,5	25,0	8,6	1,8	14,7	29,5	10,8	55,1
City of Cuenca	15,6	9,5	11,1	25,4	0,0	24,0	14,3	0,0	38,3
Total	6,2	2,9	32,9	9,4	2,3	13,0	24,7	8,6	46,3
Source: Instituto Nacional de Estadística: *Reseña Estadística, Cuenca, 1958.*									

Table 5. 9 Occupational structure of the active population employed in agriculture in the province of Cuenca - excluding the city of Cuenca, 1926-70.

(All figures in percent)						
	La Sierra		La Alcarria		La Mancha	
	1926-50	1951-70	1926-50	1951-70	1926-50	1951-70
Workers	19,0	28,0	18,8	8,1	47,5	40,1
Farmers [1)]	60,0	66,9	59,3	82,0	44,5	45,1
Others	21,0	5,2	21,9	10,0	7,9	14,8
Persons in sample	663	172	691	271	818	474
1) Owners and tenants.						
Source: Reher (1988), p. 31						

Table 5. 10: Normal farm types in Cuenca, 1943-46.

La Sierra	Small farms	Family farms	Family farms	Family farms	Large farms
Size (Ha.)	6	11	48	46	570
Cereals (%)	81	91	30	31	13
Leguminous (%)	12	1	3	1	0
Olives (%)	0	0	0	0	0
Wine (%)	0	0	0	0	0
Pasture (%)	0	0	67	66	87
Woods (%)	0	0	0	0	0
Others (%)	7	8	0	2	0
Work animals	N/A	0	N/A	N/A	N/A
Other animals	0	0	100 sheep	N/A	500 sheep
Hired labour	0	0	2 + 2 casuals	0	8
Estimated value of 1946 prod. (pts.)	4500	8930	26000	25000	80000

Mountainous part of La Alc.	Small farms	Family farms	**La Alcarria**	Small farms	Family farms	Large farms	Large farms
Size (Ha.)	20	76		22	81	379	1726
Cereals (%)	43	34		64	35	28	5
Leguminous (%)	2	3		5	0	0	1
Olives (%)	5	12		23	2	2	1
Wine (%)	0	4		0	0	0	0
Pasture (%)	49	39		9	62	69	0
Woods (%)	0	0		0	0	0	93
Others (%)	2	8		0	0	1	1
Work animals	N/A	3 mules		N/A	3 mules	N/A	N/A
Hired labour	0	2		0	2	N/A	20
Estimated value of 1946 prod. (pts.)	10000	30000		8000	32000	50000	196000

Table 5.10 (continued): Normal farm types in Cuenca, 1943-46.

La Mancha	Small farms	Family farms	Family farms	Large farms	Large farms	Large farms	Large farms	Large farms
Size (Ha.)	6	20	57	96	268	530	762	2850
Cereals (%)	64	70	47	51	85	71	69	18
Leguminous (%)	5	0	11	11	0	18	18	1
Olives (%)	0	0	7	6	12	2	1	0
Wine (%)	32	30	35	0	3	5	10	3
Pasture (%)	0	0	0	31	0	0	0	66
Woods (%)	0	0	0	0	0	0	0	12
Others (%)	0	0	0	0	0	2	2	0
Work animals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other animals	0	0	0	0	0	400 sheep and goats	1000 goats and sheep	0
Hired labour	0	0	0	N/A	N/A	N/A	N/A	N/A
Estimated value of 1946 prod. (pts.)	16000	30000	32700	74500	100000	650931	715328	20000

Source: Organización Sindical de Cuenca: *Datos Estadísticos.*

In conclusion, it is possible to generalise about the agrarian sector in Cuenca between 1920 and 1970. Throughout the period, the agrarian sector was by far the most important regarding employment. It was not until 1970 that the part of the active population employed in agriculture declined to 50 percent. Together with the massive emigration after 1950, this makes Cuenca a rather typical province in Central Spain.

Although the data was somewhat conflicting, the ratio of workers to farmers was small throughout the period, with the highest level reaching approximately 3:1 in the pre-war period. The data on land distribution in general confirms the findings of the worker to farmer ratio, i.e. that small and family farms were the most widespread types both in numbers and covered area during the main period under investigation. The most equal land distribution was in La Sierra, followed by, respectively, La Alcarria and La Mancha, and this pattern did not change between the 1920s and the 1960s. Physical environment determined some general patterns in crop structure in the three regions, although no perfect characterisations can be made. Regarding "Small farms" and "Family farms", it was often the case in La Sierra and La Alcarria that an important part of the exploited area was dedicated to pasture and/or forestry. This was not so often the case in La Mancha, where the main crops were cereals along with leguminous, wine and olives. Regarding the "large farms" located in La Mancha there were both some, which only grew cereals, leguminous, olives or wine, but also others that had important parts of the land dedicated to pasture. On the other hand, in La Alcarria and La Sierra these types of farms used their land predominantly for pasture and wood.

In conclusion, it seems acceptable to regard the cereal-growing sector in the province as mainly made up of small-scale and family farms, although some larger farms also existed in La Mancha. It can be assumed that the cereal sector was sufficiently homogeneous within the province to carry out the rest of the analysis using aggregated data from the provincial level.

5.3.2: Jaén

The province of Jaén can be divided into a number of relatively well-defined areas, with characteristics that, at least partially, coincide with the varieties of agrarian

development.[291] In the periphery, there are three mountainous areas, respectively "Sierra Morena", "Sierra de Segura and Sierra de Cazorla", and "Sierra Magina". Between these regions, the valleys of the Guadalquivir River, as well as other minor rivers, dominate the central part of the province.

Sierra Morena is in the northern and north-eastern part of the province bordering the great central plain of La Mancha. It is characterised by a warm climate with limited precipitation and poor soil, which makes forestry and grazing important in the area. However, the cultivation of olives are of some importance in the foothills towards the east.

The neighbouring mountains of Sierra de Segura and Sierra de Cazorla in the eastern part of the province have a colder and more humid climate than Sierra Morena. Forestry is important in the northern part, while olives are found towards the south of the region.

Sierra Magina in the southern part of the province facing the province of Granada is also characterised by a humid and cold climate, although less humid than in Sierra de Segura and Sierra de Cazorla. The mountainous parts of the province are mainly used for forestry, while the growing of olives becomes more common towards the Guadalquivir and Guadiana Menor valleys north and east of the mountains. Between the mountains, there are several minor valleys where the land is used for a number of different crops.

Finally, La Campiña is the central part of the province stretching from la Loma de Úbeda and Sierra de Segura in the east to the border of Córdoba province in the west, and is dominated by the Guadalquivir valley. This area, with relatively fertile soil and some extension of irrigation, is heavily cultivated, with cereals and olives being the most important crops.[292]

In general, the climate and the soil in Jaén are suitable for the cultivation of olives by Spanish standards. In the winters, the temperature seldom falls below the minimum required by the crop, and precipitation, although scarce for many other crops, is just about adequate for olives.

[291] Obviously, the degree that physical environment determined agricultural development depends on the period under consideration, and the following refers to the largely non-mechanised situation in the province in the first half of the 20th century.

[292] Instituto Nacional de Estadística: *Reseña estadística de la Provincia de Jaén, 1956*, pp. 186-187.

Map 5.3: The province of Jaén

Consequently, the yields of olives were higher in Jaén than the national average for the period with which we are concerned. The favourable conditions for the cultivation of olives made Jaén the province with the largest amount of land used for the growth of the crop in Spain in the 1940s. This status has remained the same up to the present.

From Tables 5.3, 5.4 and 5.5 we remember that the distribution of the property was far from being as equal in Jaén as was the case in Cuenca.[293] Because of this, Jaén was among the provinces included in the Agrarian Reform Bill of the Second Republic, which aimed to redistribute land to the landless labourers and long-time tenants.[294] The cancellation of the redistributive reforms of the Second Republic after the Francoist victory and the difficulties of mechanisation of the cultivation of olives had the effect that the ratio of workers to farmers remained close to 8:1 in 1950. As late as 1970, it had only fallen to 6:1.[295]

In light of this, the information presented in Table 5.11, where the ratio of workers to farmers is less, points to the possibility that a number of the workers also cultivated a small plot of land. Still they probably earned their main income from wages.

Table 5. 11: Occupational structure of the agrarian population in Jaén, 1953.

	Number of persons	As percentage of total agrarian population	As percentage of farmers
Large scale farmers (owners)	19271	10,20	22,13
Large scale farmers (tenants)	4748	2,51	5,45
Small scale farmers (owners)	42341	22,40	48,62
Small scale farmers (tenants)	7150	3,78	8,21
Sharecroppers	13575	7,18	15,59
Labourers in fixed employment	17603	9,31	N/A
Casual labourers (men)	84304	44,61	N/A
TOTAL	188992	100,00	100,00
Source: Instituto Nacional de Estadística: *Jaén. Reseña Estadística, 1953*, p. 234.			

The province can be divided further into three zones with different ratios of landless workers to small-scale farmers[296] and an increasing proportion of small-scale farmers among the agrarian population[297] as can be seen in Table 5.12.[298] The three zones are:

[293] But at the same time, land distribution was more equal in Jaén than in most other provinces in southern Spain.
[294] See Malefakis (1976) for the classical description of the background for the Agrarian Reform of the Second Republic, as well as the political and social tensions that the reform created in the 1930s.
[295] See Table 5.3 above.
[296] This includes owners either paying less than 50 pesetas in land tax for land exploited directly by them or paying less than 25 pesetas in land tax for land ceded to tenants. It also includes tenants and sharecroppers cultivating less than 10 hectares of dry land or less than 1 hectare irrigated land: Garrido González (1990), Vol. 2, p. 473.
[297] Please note that the figures for small-scale farmers in Table 5.12 are a combination of physical extension of the farms cultivated by the farmers and the value of the land. The consequence of this is

a) Sierra Morena

b) La Campiña and areas in Sierra de Cazorla and Sierra de Segura bordering with La Campiña

c) Sierra de Cazorla and Sierra de Segura, and Sierra Magina.

These regional differences in the size of property were also found among the olive-growing farmers. On one side, the largest number of farms with under 10 hectares were found in Sierra de Segura and Sierra Magina. On the other side, it was in La Campiña that most olive growing farms with more than 150 hectares were located.[299]

Table 5. 12: Absolute and relative number of landless labourers to small-scale farmers in Jaén, 1933-34.

Zone	1 Small-scale farmers	2 Landless labourers	3 "2"/"1"
1) Sierra Morena	2922	10066	3,44
2) Sierra de Cazorla and Sierra de Segura	3544	4772	1,35
3) Sierra Magina	5720	9384	1,64
4) La Campiña	10443	23981	2,30
5) Municipalities with land in both zone 2 and 4	1172	2668	2,28
6) Id. in both zone 3 and 4	3428	8336	2,43
Provincial total	27229	59207	2,17
Source: *Censo campesino* 1933 and 1934, reproduced in Garrido González (1990): Vol. 2, pp. 473-477.			

Considering that the large-scale farms were much more important in Jaén than in Cuenca, it is important to establish that olives were an important crop among the small farmers. Unfortunately, I have not been able to localise data similar to those for Cuenca regarding "typical farms", so it is necessary to look for other sources. It this respect it is helpful that it is time-consuming to bring new olives into cultivation. Going back to the 19th century and the beginning of the 20th century, the expansion of the olive plantations in Jaén was a process in which both small and large-scale farmers participated. While the initial extension of olives was mainly the result of the expansion of smallholdings, its continued growth in the late 19th century and the beginning of the 20th century led to large landholdings increasingly planting olives.[300]

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that the sheer size of the exploitation is not the single factor determining their classification, and this therefore is different from the categorisation we have seen for example in Tables 5.3 and 5.4.

[298] Note that the figures in Table 5.12 only cover approximately 60 percent of the male population employed in the agrarian sector.

[299] Ministerio de Agricultura: *Inventario agronómico del olivar*, Vol. II: *Provincia de Jaén*, pp. 39-40. The data refers to 1962, but there is no indication that this pattern should have changed since the 1940s.

[300] Jiménez Blanco (1986b), pp. 472-478.

Although, there is a relatively long time gap between the start of the 20th century and the beginning of the 1960s, the existence of olives on both small and large farms appears to have been a shared phenomena. The information from the 1962 agrarian census given in Table 5.13 shows that a large proportion of the land on small farms was used for olives and that the relative importance of olives declined with the size of the farm.

Table 5. 13: Distribution of land use according to crops and farm sizes in Jaén, 1962.

(All figures in Hectares)						
Crops	< 1 ha	1-10 ha	10-50 ha	50-100 ha	>100 ha	Total
Olives	6780	98075	118233	41286	74454	338828
Wheat	1429	25189	32442	12754	31991	103805
Barley	610	12163	15768	6019	15893	50453
Leguminous	791	12678	13958	5027	10389	42843
Others	1635	7207	5675	1793	7517	23827
Total cultivated	**11245**	**155312**	**186076**	**66879**	**140244**	**559756**
Fallow land	361	13342	28468	12356	39109	93636
Non-cultivated	145	5909	18456	14988	531775	571273
Total	**11751**	**174563**	**233000**	**94223**	**711128**	**1224665**
Olives as %						
of Total	57,70	56,18	50,74	43,82	10,47	27,67
Source: Ministerio de Agricultura: *Censo Agrario 1962.*						

On this basis, it appears that a large number of the small farmers produced olives and the main destination of their produce must have been the market rather than self-consumption for all but the smallest farmers.[301]

Even though it is located in Andalucía where large-scale landowners in general possessed relatively much more land than in, for example, Central Spain, in Jaén the small-scale and medium-scale farmers were also a significant group of the agrarian sector. We have also seen that the relative importance of the cultivation of olives was higher the smaller the farm size, which makes the province a proper subject for this thesis. However, it is necessary to be aware of that in absolute terms most olives were found on large-scale farms. In the further analysis it can not automatically be supposed that data, for example on the development of cultivated area with olives on the provincial level also applies specifically to the situation for small-scale farmers. The solutions to this problem will depend on the question asked, so various strategies will be used to deal with this problem in Chapter 7.

[301] In Jaén between 1932 and 1936, the average production of olive oil was some 262 litres per hectare, while the estimated average consumption for the total Spanish population in the same years was some 12-14 litres per year. It would be possible for a family of 5-6 persons to cover its consumption needs in olive oil with less than half a hectare planted with olives. This holds even if the olive growing farmers had a significantly higher consumption than the average population.

5.3.3: Toledo

The province of Toledo can be divided in five regions according to differences in the natural environment, as shown in Map 5.4. Talavera, in the north-western part of the province, has a relatively poor soil and an important part of the land is used for pasture. Cultivated land is mainly used for cereals with a low productivity.

The soil in Torrijos, to the east of Talavera, is somewhat more complex, depending on whether you are on the left or right of the Alberche River. On the left bank cereal and vine are the dominant crops, while the land on the right bank is poor and mainly used for cereals and pasture.

The Tajo River Valley divides Sagra-Toledo, east of Torrijos. On the right bank is La Sagra, which is the northern extension of La Mancha rising slowly towards the province of Madrid. This is primarily planted with cereals, but we also find vin . On the left bank of the Tajo the land is less fertile and is partly used for pasture and forestry.

The region of La Mancha is the easternmost part of the province. It goes from La Mesa de Ocaña in the north[302] to the border with the province of Ciudad Real in the south and is a part of the great central plain in Spain. The whole of La Mancha, which includes parts of Toledo, Cuenca, Ciudad Real, and Albacete, is now the largest grape cultivating area in the world. However, cereals and olives are also important crops.[303]

Finally, the areas of La Jara, Montes de Navahermosa and Montes de Yébenes in the south and south-eastern part of the province are a mountainous region that continues into the neighbouring provinces of Cáceres, Ciudad Real and Badajoz. Between the hills and mountains the land is planted with cereals, grapes, olives, vegetables and fruits, but given the semi-mountainous nature of the region, there is a large cattle population in the areas where cultivation is difficult.

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[302] La Mesa de Ocaña is the extension of the La Alcarria region in the province of Cuenca, and as such shares some of the natural characteristics with this region. See Section 5.3.1, p. 129 for a short description of La Alcarria.

[303] The current limits of the district where it is possible to qualify wine for the "Denominación de Origen de La Mancha" does not follow the geographical limits of La Mancha as shown on the map. The "Denominación" includes a part of the region of Montes de Los Yébenes. Ministerio de Agricultura: *Mapa de cultivos y aprovechamientos de la Pronvincia de Toledo*, p. 64.

Map 5.4: The province of Toledo

The growing of grapes in Toledo is mainly found in La Mancha plus a minor area on the left bank of river Alberche in the region of Torrijos. This can be seen from the figures given in Table 5.14, where the province is divided in the seven regions just described.[304]

Table 5. 14: Distribution of cultivated land with grapes in Toledo, 1946.

Region	Grapes (Ha.)	Grapes in association with olives (Ha.)	Non-productive vine stocks (Ha.)
Talavera de la Reina	2223	654	179
Torrijos	11532	828	1456
Sagra-Toledo	3000	783	274
La Mancha	64911	4936	3477
La Jara	439	250	5
Montes de Navahermosa	255	75	0
Montes de Yébenes	2759	391	293
Total	**85119**	**7917**	**5684**
Source: Comisaría General de Abastecimiento y Transporte: *Mapas de Abastecimiento (Provincia de Toledo)* - 1946.			

From this data the predominant position of the La Mancha and Torrijos regions are very clear. In the rest of the regions, it is furthermore often the case that a large part of the cultivated area with grapes is concentrated in only a few municipalities.[305]

The province of Toledo was, like Jaén, among the provinces that were included in the agrarian reform of the Second Republic, which implies an uneven distribution of the land in the area. However, in Table 5.3 we saw that in 1930 owners with less than 50 hectares possessed 57 percent of the land. On one hand, this was some 10 percent more than in Jaén, but, on the other hand, it was well below the figure for Cuenca where this group accounted for 82 percent of the land. Together with the fact that in Toledo the amount of land concentrated in plots of less than 10 hectares was larger than in any other of the provinces included in the Agrarian Reform of the Second Republic, this implies a situation with a coexistence of small-scale and large-scale farms.[306]

This is not to say that the situation was uniform throughout the province. Smallholdings were found in the northern part of the districts of Escalona, Illescas and

[304] The total cultivated area with grapes in Table 5.14 fits relatively well with the data from the *Anuario Estadístico de las Producciones Agrícolas* from the Ministry of Agriculture. In the latter 84,992 hectares of productive vines and 7,866 hectares of non-productive vines were reported for 1946.

[305] In Sagra-Toledo one-third of the productive area was in Valmojado; in Talavera half of the productive area was divided between Cebolla and Montearagón; in La Jara two-thirds of the productive area was in Los Navalmorales; in Montes de Navahermosa all the vine cultivated un-associated with other crops was in Menasalvas, while all the vine cultivated in association with olives was in Navahermosa; and finally in Montes de Yébenes two-thirds of the productive area was in Orgaz. Comisaría General de Abastecimiento y Transporte: *Mapas de Abastecimiento (Provincia de Toledo)* 1946.

[306] Carrión (1972), p. 113.

Torrijos, and on the other side in La Mancha in the districts of Ocaña, Lillo, Quintana and Madridejos.[307] Significantly, an important characteristic of these areas in particular was widespread cultivation of grapes.[308]

Unfortunately, we do not possess information on the number of small-scale farmers on the regional level, nor data for the number of small-scale farmers that were cultivating grapes on a provincial or regional level from the 1930 or 1940s. This sort of knowledge only becomes available in 1962, and at that moment 55 percent of the total cultivated area with grapes was found on farms smaller than 10 hectares. At the same time the relative amount of land dedicated to grapes rose in inverse proportion to the size of the farm, as can be seen in Table 5.15.

On this background, we can conclude that the agrarian sector in Toledo was characterised by a dualism between small-scale and large-scale farms. The small-scale farms were to a certain degree concentrated in specific areas, where, at the same time, grape cultivation was most widespread.

Table 5. 15: Distribution of land use according to crops and farm sizes in Toledo, 1962.

(All figures in hectares)						
Crops	< 1 ha	1-10 ha	10-50 ha	50-100 ha	>100 ha	Total
Grapes	1592	33258	56878	14782	22717	129227
Olives	1484	22202	37900	13402	28665	103653
Wheat	255	16134	73315	30602	90403	210709
Barley	490	16022	42087	13823	33966	106388
Leguminous	364	9705	31697	10287	19155	71208
Others	701	9220	13636	6016	25191	54764
Total cultivated	**4886**	**106541**	**255513**	**88912**	**220097**	**675949**
Fallow land	386	20821	91379	42263	149835	304684
Non-cultivated	164	5222	19258	14720	293897	333261
Total	**5436**	**132584**	**366150**	**145895**	**663829**	**1313894**
Grapes as %						
of Total	29,29	25,08	15,53	10,13	3,42	9,84
Source: Ministerio de Agricultura: *Censo Agrario 1962.*						

Unfortunately, we do not have quantitative evidence for the 1940s, but the qualitative evidence from the 1930s, together with quantitative evidence from 1962, shows that the coincidence of small-scale farms and grape cultivation in the same areas was not accidental. Rather, it was, to a quite large degree, farmers with less than 50 hectares who were growing grapes in Toledo.

A minor proportion of the vine was found on larger farms. Yet, sufficient grapes were grown by small-scale farmers to make it acceptable to use aggregate data on the provincial, in the analysis of the situation for the small-scale winegrowers.

[307] A district is a smaller unit than a region. Illescas is located in the region of Sagra-Toledo, while Escalona and Torrijos are in the region of Toriijos.
[308] Carrión also noted this coincidence: Carrión (1972), pp. 113-114.

CHAPTER 6: THE WHEAT PRODUCTION CRISIS IN POST-WAR SPAIN: THE CASE OF CUENCA

6.1: INTRODUCTION

In the five years preceding the outbreak of the Civil War, the province of Cuenca had the largest annual average production of wheat of all Spanish provinces. Although the area hardly experienced any direct warfare, the general level of agrarian production was significantly smaller after 1939 than before the war. As can be seen in Table 6.1, this was especially the case for cereals including wheat, where average output of the latter between 1939 and 1949 was only 45 percent of the pre-war average. These conditions make Cuenca useful for the analysis of the connection between post-war agrarian policy and wheat output in provinces where small-scale farmers dominated the agrarian sector.[309]

Table 6. 1: Cereal output in Cuenca, 1931-49.

Crops	Output (100s of kilos)		
	1931-35 average	1939-49 average	1939-49 average as percent of 1931-35 average.
Wheat	2250575	1005282	45
Barley	1005904	518082	52
Rye	119507	102536	86
Oats	370700	193345	52
Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939-40, 1943-49, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).			

In Chapter 3, which dealt with wheat production at the national level, it was concluded that the supply curve of wheat shifted to the left, and that there was a simultaneous twist of the curve, making it steeper after 1939. These conclusions are confirmed by the analysis of the agrarian sector in Cuenca, which also experienced a lack of work animals and fertilisers in the 1940s.

Furthermore, the evidence in this chapter shows that the price policy in the 1940s cannot be considered the main cause for the low post-war level of wheat output. The post-war decline in real official prices paid to the farmers show up in the official statistics on the value of production. However, when estimated black market earnings are included in the analysis, the average value of production per unit of cultivated land in the 1940s remained similar to the pre-war level. In general, these conclusions are at

[309] For the relative importance of small-scale farmers in Cuenca, see Sections 5.2.1, and 5.3.1.

odds with Barciela's commonly accepted interpretation that stresses agrarian price policy as the main reason for the depressed level of wheat production in the 1940s.[310]

Since the relative crop composition remained stable, the post-war level of wheat production was mainly the result of an involuntary and unavoidable retraction of land from production and a simultaneous decline in the yields of the crops. For the small-scale farmers this meant that the economic outcome of the agrarian policy in the 1940s depended on the ability to obtain earnings from the black market, and the capital stock at the end of the Civil War. From the mid-1950s fertilisers became available again, and wheat output grew due to higher yields. In the case of large-scale farmers, this went hand in hand with increased mechanisation of the farms from the late 1950s. On the other hand, farmers with less than 50 hectares were only to a very small degree participating in this process before 1960.

6.2: THE AGRARIAN SECTOR BEFORE THE WAR: THE PREDOMINANCE OF CEREALS AND A LIMITED MODERNISATION

Before the Civil War, traditional Mediterranean dry-land crops dominated the agrarian sector in Cuenca. Wheat was by far the most widespread single crop, and as can be seen in Table 6.2, on average almost half of the value of agrarian production originated from this cereal.

Both the relative land distribution and the amount of tilled land were relatively stable between 1931 and 1935, with the exception of a notable decline in the land occupied by grapes as a result of the spread of phylloxera.

Table 6. 2: Average land use and relative value of output in Cuenca, 1931-35.

Crops	Average land use (Ha.)	Average land use (%)	Average relative value of output (%) [1)]
Wheat	272783	44,8	47,3
Other cereals	181916	29,9	21,2
Leguminous plants	19903	3,3	2,6
Vine	68801	11,3	5,8
Olives	38177	6,3	3,9
Others[2)]	26919	4,4	19,1
Total	608500	100,0	100,0
1) Value in current prices were changed to constant 1958 pesetas by deflator for "agriculture forestry and fishing" from Prados de la Escosura (1995). Average value calculated on basis of constant 1958 pesetas.			
2) The "Total" includes cultivated land only.			
Source: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).			

[310] See Section 1.3.2, p. 31 ff.

The relative importance of wheat shows in the fact that the provincial harvest on average amounted to slightly more than 5 percent of the domestic production.[311] This was the largest figure for any province, and production reached almost 500 percent of the internal consumption plus seeds.[312] The large relative volume of production in Cuenca was mainly due to the extension of cultivated area rather than exceptional natural conditions or widespread modernisation. Most work was still done by hand and/or animals,[313] and although the use of fertilisers had increased since the beginning of the century, it was still not widespread.[314] In Table 6.3 we see that the amount of fertilisers used in the province during the early 1930s was sufficient to cover the needs of approximately 140,000 hectares of cereals according to contemporary recommendations.[315] However, with the average area cultivated with wheat, barley, rye, and oats being some 435,000 hectares between 1931 and 1935,[316] a substantial part of the land was either not fertilised, or fertilised less than recommended.

Table 6. 3: Average yearly consumption of fertilisers in Cuenca, 1931-35.

Fertiliser	Active ingre-	Main use on	Maximum
	dients (tons)		covered area (Ha.)
Superphosphate	4051 (P_2O_5)	Wheat, barley	90020
Ammonium sulphate	382 (N)	Cereals	21746
Sodium nitrate	37 (N)	Cereals	1904
Potassium sulphate	231 (K_2O)	?	9280
Potassium chloride	70 (K_20)	?	2800
Compound fertilisers	873 (P_2O_5)	Wheat, barley,	14896
	90 (N), 65 (K_20)	market gardens	
		Total	**140646**
Sources: Ministerio de Fomento: *Materias fertilizantes empleadas en la*			
Agricultura, pp. 65-67, and "Appendix D"; Ministerio de Agricultura:			
Anuario Estadístico de las producciones agrícolas (1931-35); Gallego			
Martínez (1986), p. 224 - for amount of active ingredients in fertilisers.			

Still, the increase in the use of fertiliser after 1900 had made it possible to bring marginal land in Central Spain into cultivation. The negative aspect of this development was that one sixth of the area cultivated with wheat in Central Spain in 1936 was totally dependent on the use of fertilisers.[317] It is likely that this was also the

[311] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).
[312] Montojo Sureda (1945), p. 192. The specialisation in wheat contradicts Reher's affirmation that the production was mainly for consumption within the province; Reher (1988), p. 41.
[313] In the beginning of the 1930s, there were only 88 tractors, one traction engine, 118 stationary engines, 754 reapers and three harvesters in the province; Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1932); Ministerio de Agricultura: "Tres estudios económicos", pp. 71-77.
[314] Ministerio de Fomento: *Materias fertilizantes empleadas en la Agricultura*, pp. 70-71.
[315] The calculation of the "maximum covered area" in Table 6.3 rests on information from Ministerio de Fomento: *Materias fertilizantes empleadas en la Agricultura*, "Appendix C".
[316] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).
[317] Simpson (1995), pp. 120-124.

case in Cuenca. Here the *Consejo Económico Sindical* (the Economic Council of the Trade Unions) in the 1940s stressed that marginal land recently brought into use needed fertilisers to render any substantial yields.[318] The consequence of the limited mechanisation and the sub-optimal use of fertilisers was that the yields for the majority of the most widespread crops - including wheat, rye, oats, grapes and olives - were below the national average.[319]

6.3: LITTLE PHYSICAL DESTRUCTION IN THE AGRARIAN SECTOR DURING THE CIVIL WAR

To analyse the post-war development of wheat production, it is necessary first to have a short look at the influence of the Civil War on the agrarian sector as such. During the Civil War, Cuenca was located in the republican rearguard, and as such hardly experienced any direct warfare. However, one side effect of the war, namely a decline in the number of work animals turned out to be a powerful constraint on the level of agrarian output in the 1940s. Consequently, the overall development in Cuenca was in line with the national trend that we found in Chapter 3. With the exception of the reduction in the number of work animals, the results confirm the general accepted interpretation in the historical literature, which states that the Civil War had led to limited damages in the agrarian sector.[320]

Sources show that a relatively optimistic outlook dominated the contemporary evaluation of the situation in the agrarian sector. For example, when the *Diputación Provincial* (the Provincial Council) made a report in 1940 on war damages, they listed them as only:

> (...) some 200 buildings in the village of Tarancón are destroyed, as well as approximately 100 in Salvacañete, Cañete and Huélamo. Some are destroyed in Tragacete. Furthermore, almost all the churches in the province have been plundered and destroyed.[321]

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[318] See for example: Consejo Económico Sindical de Cuenca: Informe, dated 8th March 1946, p. 1, and Consejo Económico Sindical de Cuenca: Situación actual de la agricultura, p. 2.

[319] Barley was the only important crop where the yields were higher in Cuenca than the national average.

[320] Barciela (1986b), pp. 384-385; M.-J. González (1980), p. 90. For a detailed description of the arguments, see Section 1.3.1.

[321] Diputación Provincial de Cuenca: Ficha conteniendo los datos relativos a la situación de la corporación en el período de tiempo comprendido entre el 18 de julio de 1.936 y el 31 de diciembre de 1.939, que se remite en cumplimiento de lo ordenado en la circular del Iltmº señor Director General de Administracón Local de fecha 11 de marzo de 1.940, s.p. (Own translation)

This can hardly have constituted a major setback for the agrarian sector, and in 1940, the Civil Governor expressed the same opinion when he wrote:

> During the war production suffered a considerable decrease, and its influence was still felt last year, although the harvest of potatoes, barley, oats, rye, carobs, vetch, lentils, and other articles, increased. Intensive campaigns (...), however, have given to sowing fields with such a high intensity (...) that, with just a small help from natural factors, the next harvest will be not only as good as in the years before 1936, but in quantities will more than double the normal pre-war harvest. This will especially be the case for chickpeas, potatoes, and green beans.[322]

Nevertheless, the Civil War had led to a major reduction of output for almost all crops, and recovering pre-war agrarian output levels turned out to be a very lengthy process.[323] Starting with a short look at the main war related factors – such as lack of care taking, wartime collectivisation in the agrarian sector, the demographic development, and the decline in the number of work animals - the analysis shows that of these only the decline in the number of work animals had lasting negative impact on agrarian output.

A thirty-five percent decline in the area cultivated with the main crops between 1935 and 1940 was an important factor in determining the level of output immediately after the war, as can be seen in Table 6.4.[324]

Table 6. 4: Development of the area cultivated with the main crops in Cuenca, 1931-40.

(All figures in hectares)						
Crops	1931-35 average	1936	1937	1938	1939	1940
	cultivated area	cultiv. area	cultiv. area	cultiv. area	cultiv. area	cultiv. area
Wheat	272017	265000	229755	N/A	165300	161530
Barley	67050	76000	65457	N/A	47200	35675
Rye	23620	24000	21017	N/A	18650	16845
Oats	71637	65000	19620	N/A	42800	47100
Olives [1)]	33178	32793	32727	N/A	29087	31156
Grapes [1)]	55483	51555	51825	N/A	33697	33697
Leguminous [2)]	11521	12110	10041	N/A	5125	13893
Total	**534506**	**526458**	**430442**	**N/A**	**341859**	**339896**
1) The 1935 cultivated area. Grapes for wine production, and olives for oil production.						
2) Includes lentils, vetch, chickpeas, beans, peas, and green beans.						
Sources: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40);						
Ministerio de Agricultura: *Estadística de Cereales y Leguminosas* (1936, 1937); Ministerio de Agricultura: *Estadística de la Producción Olivera* (1936, 1937); Ministerio de Agricultura: *Estadística de la Producción Vitivinícola* (1936, 1937).						

[322] Gobierno Civil de Cuenca: Informe, pp. 4-5. (Own translation)

[323] The post-war development of output will be analysed in detail later in the chapter.

[324] As discussed in Chapter 1 and Appendix 1, the official statistics are not totally reliable for these years. Although the largest problems relate to output data, the figures in Table 6.4 might still overestimate the post-war decline in cultivated area.

Comparing the stability of the area cultivated with olives and the decline in the extension of grapes demonstrates that not all crops faired equally bad. Vines in Cuenca had already suffered from a phylloxera attack before the Civil War, but this was aggravated during the war due to lack of care taking.[325] The result was such that in 1940 the Civil Governor estimated that it would take another 3-4 years to replace the affected vines.[326]

Nevertheless, although the lack of care taking was important in the case of grapes, this was a particular circumstance determined by the perennial nature of the crop. It can hardly have had a long-term effect on the yearly crops, where the production cycles are much shorter. However, the war produced other consequences that were detrimental for the recovery of the agrarian sector. One such factor that might have been important in the short run was collectivisation in agriculture. Its negative effect on agrarian output could originate both from post-war politically-motivated repression against former members of the collectives as well as insecurity about ownership of land and capital during and after the war.

Although the information is incomplete, the existence of approximately 100 agrarian collectives in Cuenca at some time or another during the war seems to be a reasonable estimate.[327] Although the collectivisation was less widespread in Cuenca than in some other provinces, it was still important with government-recognised collectives controlling 435,467 hectares, equalling 26 percent of the total exploited land between 1931 and 1935.[328] Yet, with most collectivised land located in La Alcarria and La Mancha, where relatively more land was cultivated than in La Sierra, the collectivisation probably affected a larger part of the cultivated area than this figure suggests. Still, the negative effects of collectivisation and de-collectivisation were short-term, lasting only until property rights to land and capital were restored after the war.

To deal specifically with this aspect, the insurrectionists created in 1938 the *Servicio de Recuperación Agraria* (the "Agrarian Recovery Service", SRA). The purpose of the SRA was to solve problems in conquered territory related to doubts about ownership of land and capital, as well as to cultivate land temporarily where the

[325] Delegación Sindical Provincial: Untitled report dated 23 September 1939. Note that in 1931, vines occupied more than 72,000 hectares in the province.
[326] Gobierno Civil de Cuenca: Informe, p. 5.
[327] Based on local sources Rodrigo González reached a figure of 107 collectives with the majority located in La Alcarria and La Mancha, while Carrión states that the Republican government legally recognised 102 collectives. See Rodrigo González (1985), pp 94-97 and 106, and Carrión (1973), p. 136.

owner was absent.[329] In Cuenca, the SRA was active in 111 of the 292 municipalities,[330] equalling more or less the number of collectives during the war. This figure fits with the fact that it was often the case that there was only one all-encompassing collective in each rural municipality. The dissolution of the SRA by the end of 1940 indicates that the insecurity about property rights was largely resolved shortly after the war's conclusion.

Another factor that could have negatively affected agrarian output, but which is not reflected in contemporary reports, was the lack of labour due to deaths, exiles or imprisonment as a result of the Civil War and post-war repression.[331] Nonetheless, census figures and the data on birth and death rates in fact indicate that there were only limited demographic changes in relation to the war in Cuenca.

According to the census, the provincial population increased by some 20,000 persons between 1930 and 1940, though this figure is probably inflated.[332] Moreover, while the Civil War led to changes in the relative number of deaths and births, both rates quickly returned to pre-war levels, as can be seen in Table 6.5. Taken together this signifies a very limited change in the number of males employed in agriculture,[333] which went from 81,437 in 1930 to 80,186 in 1940.[334] It is possible that the latter figure is too high, but it does not seem likely that there was a general lack of labour in the sector during the post-war period.

Table 6. 5: Births and deaths in the Province of Cuenca, 1930-42.

Years	Births		Deaths		Births per
	Total	Per 1000 capitas	Total	Per 1000 capitas	100 deaths
1930	10500	34,80	5560	18,42	188,85
1931	10105	32,65	6310	20,38	160,14
1932	9759	31,25	5503	17,62	229,30
1933	10824	34,35	5329	16,91	196,98
1934	10038	31,57	5988	18,83	167,64
1935	9941	30,80	5648	17,50	176,01
1936	10181	31,38	5922	18,50	171,92
1937	10892	33,57	7075	21,80	153,95
1938	8661	26,69	7751	23,89	111,74
1939	5531	17,04	6585	20,29	83,00
1940	11705	34,57	5806	17,15	201,60
1941	7529	22,24	5878	17,36	128,10
1942	7471	24,41	4705	14,11	158,79
Source: Ministerio de Trabajo: *Cuenca. Reseña estadística 1943*, p. 156.					

[328] Carrión (1973), p. 136.
[329] Servicio de Recuperación Agrícola (1941).
[330] Servicio de Recuperación Agrícola (1941), p. 51.
[331] See Section 1.3.1, p. 31.
[332] See Section 5.2.1, p. 123.

Finally, and this turned out to be very important for agrarian production in the 1940s, the war caused a decline in the number of work animals. Mules and donkeys were the most affected species, with the growth in the number of cattle only being able to counteract this partially, as we see in Table 6.6.

Table 6. 6: Work animals in Cuenca, 1933-55.

Years	Mules older than 1 year	Mules older than 3 year	Donkeys	Horses	Cattle
1933	47991	45156	33511	3495	1509
1940	42396	41789	21303	1920	2092
1942	42688	41593	22897	2107	3417
1948	42297	N/A	21478	3610	5058
1950	41492	N/A	20118	3913	5200
1955	44748	N/A	23871	3865	1853
Sources: Ministerio de Agricultura: "Tres estudios económicos", pp. 71-78; Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943, 1944-45, 1950, 1958).					

Substitution of cattle for mules was often difficult.[335] This seems also to have been the case in Cuenca, where the number of cattle used as work animals was still only between 1,700 and 1,800 in the late 1940s, in spite of the lack of mules.[336]

Contemporary reports for 1939-40 from the local administration acknowledged the lack of work animals, fertilisers and land prepared for sowing.[337] Nevertheless, the impression was not of a catastrophic situation, nor was it foreseen that it would be very difficult to regain pre-war levels of production. In 1940 the *Diputación Provincial* wrote:

> The long war-period that the province of Cuenca suffered under the control of the reds has produced important changes, disorder, and a decline in the production. Nevertheless, there is no doubt that it will not take long before Cuenca recovers its equilibrium as a livestock and agricultural province. As a result production will surpass the statistical data that are given here,[338] which can be considered as the average between the abnormal decrease of these moments and the logical increase of the following years.[339]

The Civil Governor echoed this optimistic note, when he wrote:

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[333] See Footnote 270 for the necessity to restrict the analysis to male employment.
[334] *Censo de la población de España* (1930, 1940).
[335] See Section 3.3 for the constraints to substituting cattle for mules.
[336] Instituto Nacional de Estadística: *Anuario Estadístico de España* (1954).
[337] Gobierno Civil de Cuenca: Informe, p. 6.
[338] I.e. in the report by the *Deputación Provincial*, not those in Table 6.3.
[339] P. 10 in untitled report enclosed: Diputación Provincial de Cuenca: Ficha conteniendo los datos relativos a la situación de la corporación en el período de tiempo comprendido entre el 18 de julio de 1.936 y el 31 de diciembre de 1.939, que se remite en cumplimiento de lo ordenado en la circular del Iltmº señor Director General de Administracón Local de fecha 11 de marzo de 1.940.

> (...) at the time of the liberation it was necessary to confront serious problems. These should be apparent for those who try to get an idea about the situation in which Cuenca was left by the reds, and the following development in the province.
> The problems originated in the decrease of all classes of livestock during the Marxist period, as well as in the unfortunate sanitary conditions of the animals. Parallel to this[340], the increase of livestock has been encouraged and in general, the villages have responded with enthusiasm to the calls that have been made for this purpose. The result is that in many places people abstain from eating meat to avoid sacrificing animals, so it is hoped that the losses suffered during the war will be more than compensated for in relatively short time.[341]

Summarising it can be said that the observations in the contemporary reports, which stressed the interruption of the production process rather than physical destruction, are largely confirmed by the data. It was therefore expected by the local authorities that the recovery of the pre-war output levels would be a short process. Yet, lack of work animals and artificial fertilisers was to hinder the process until the early 1950s.

6.4: THE DELAY IN THE POST-WAR RECOVERY OF AGRARIAN PRODUCTION

In the first ten years after the end of the Civil War, the production of the majority of crops was significantly below pre-war levels. Often this was the result of the simultaneous decline in the cultivated area and yields, as recorded in Table 6.7.[342] This means that while there was a partial process of substitution among the yearly crops, it was far from sufficient to explain on its own the development of the production of wheat. This issue is the main topic under consideration in this Chapter.[343]

Although the conditions for cereal cultivation improved somewhat both in Cuenca and at the national level after 1950, the recovery process was very lengthy in both cases (Table 6.8). In none of the four main cereals was there a stable restoration of the pre-war level of production, even as late as 25 years after 1939. This was the result of a much slower revival of the cultivated area than yields.

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[340] I.e. a campaign for the vaccination of livestock.
[341] Gobierno Civil de Cuenca: Informe, p. 4.
[342] All data between 1939 and 1948 on the cultivated area, yields and production for wheat, barley rye and oats have been corrected for the influence of the black market; See Appendix 3, Sections 3.2 and 3.3.
[343] See Chapter 3 for the discussion of the process of substitution as a possible explanatory factor for the decline in wheat production at the national level.

Table 6.7: Output, yields, and area cultivated with the main crops in Cuenca, 1931-49.

Crops	Output (100s of kilos)			Cultivated area (Ha.)		
	1931-35 average	1939-49 average	Index of 1939-49 average (1931-35 average = 100.)	1931-35 average	1939-49 average	Index of 1939-49 average (1931-35 average = 100.)
Cereals						
Wheat[1)]	2250575	1005282	45	272783	176045	65
Barley[1)]	1005904	518082	52	67653	39012	58
Rye	119507	102536	86	23620	26750	113
Oats	370700	193345	52	71637	34554	48
Subtotal	N/A	N/A	N/A	435693	276361	63
Leguminous plants						
Carob beans	7491	5097	68	1593	1107	70
Lentils	1739	22633	1302	346	5056	1460
Grass peas[2)]	23114	18563	80	4144	5050	122
Vetch	41332	27714	67	7441	6102	82
Chickpeas	8682	20136	232	1802	6124	340
Beans[2)]	1420	1005	71	328	271	83
Id. (irrigated land)[2)]	11165	6576	59	1314	1064	81
Subtotal	N/A	N/A	N/A	16968	24773	146
Roots						
Potatoes	352032	129219	37	6380	3632	57
Id. (irrigated land)	517421	147103	28	4497	2466	55
Subtotal	869453	276322	32	10877	6098	56
Perennial crops						
Olives for oil production[3)]	237445	86541	36	33877	27623	82
Grapes for wine production[4)]	876573	482962	55	63291	34742	55
Subtotal	N/A	N/A	N/A	97168	62365	64
Total	N/A	N/A	N/A	560706	369598	66

Table 6.7 (Cont.): Output, yields, and area cultivated with the main crops in Cuenca, 1931-49.

Crops		Yields (100s of kilos per hectare)	
	1931-35	1939-49	Index of 1939-49 average
	average	average	(1931-35 average = 100.)
Cereals			
Wheat[1)]	8.25	5.71	69
Barley[1)]	14.87	13.28	89
Rye	5.06	3.83	76
Oats	5.17	5.60	108
Subtotal	N/A	N/A	N/A
Leguminous plants			
Carob beans	4.70	4.60	98
Lentils	5.02	4.48	89
Grass peas[2)]	5.58	3.68	66
Vetch	5.55	4.54	82
Chickpeas	4.82	3.29	68
Beans[2)]	4.33	3.71	86
Id. (irrigated land)[2)]	8.50	6.18	73
Subtotal	N/A	N/A	N/A
Roots			
Potatoes	55.18	35.58	64
Id. (irrigated land)	115.05	59.65	52
Subtotal	79.94	45.31	57
Perennial crops			
Olives for oil production[3)]	7.01	3.13	45
Grapes for wine production[4)]	13.85	13.90	100
Subtotal	N/A	N/A	N/A
Total	N/A	N/A	N/A
1) Includes an insignificant amount of irrigated land in the data for the cultivated area.			
2) Does not include data for 1941 and 1942.			
3) Does not include data for 1943.			
4) Does not include data for 1942.			
Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939-40, 1943-49, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).			

Table 6.8: Year for the post-war recovery of the 1931-35 average of output, yields, and area cultivated with the four main cereals inCuenca and Spain.

For output and yields the recovery is calculated as a the recovery of the 5-year moving average. In these cases the years in the table indicate the central year in such an average. The data are corrected for black market distortions between 1939 and 1949, according to procedure described in Appendix 3.

Crops	Output.		Yields.		Cultivated area.	
	Recovery of 1931/35 before 1962?		Recovery of 1931/35 before 1962?		Recovery of 1931/35 before 1964?	
	Cuenca	**Spain**	**Cuenca**	**Spain**	**Cuenca**	**Spain**
Wheat[1)]	No	1956-1957 only	From 1961	From 1955	No	No
Barley[1)]	No	No	From 1952	From 1960	No	No
Rye	1948-1956 only	No	From 1947	No	1948-1955 only	1941-1956 only
Oats	No	No	From 1948	From 1959	No	No
Total	N/A	N/A	N/A	N/A	No	No

1) Includes an insignificant amount of irrigated land.

Sources: Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943); Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-63); Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950-51).

Furthermore, it is significant that the recovery of the cultivated area was slower in Cuenca than in Spain as a whole. In Cuenca, the total area cultivated with the four main cereals between 1953 and 1961 was around 72 percent of the pre-war average. For the whole of the country, the similar figure was 90 percent of the pre-war level from 1951 onwards.[344] In Chapter 3, we argued that the national post-war level of wheat production was the outcome of a shift of the supply curve to the left. The following analysis of the process of crop substitution, the stock of capital goods, the availability of fertilisers, and the weather conditions in Cuenca lends support to this interpretation.

6.4.1: The Area Cultivatred with Wheat and Changes in Total Land Use

In the historical literature, it has been argued that one reason for the decline in wheat output in the 1940s was that changes in relative prices made it more profitable to use land for other purposes than wheat cultivation.[345] However, this interpretation was criticised in Chapter 3 on the ground that most land taken out of cultivation was left fallow rather than used for other crops or animal husbandry.[346] The same pattern appears in Cuenca, where only a minor part of the land that was taken out of cultivation in 1940s went to sheep grazing, while the rest was mostly left unused.

Among the four main cereals in Cuenca, rye was the only crop that at any time occupied more land between 1939 and 1964 than from 1931 to 1935. Since this was not even a permanent phenomenon, but only happened between 1948 and 1956, the main reason for the decline in wheat output in the 1940s can neither be found here or in any other large-scale crop substitution. The upper part of Table 6.9 shows an increase in the relative importance of the perennial crops and leguminous plants. However, the lower part of the table shows that it was not before the beginning of the 1950s that this increase was mirrored in an absolute increase in the cultivated area. This was so because the belated recovery of the cultivated area after 1939, more than counteracted the relative changes in land use.

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[344] Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-63), Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950-1951).

[345] See Section 1.3.2, p. 33.

[346] See Section 3.2.

Table 6.9: Changes in land use in Cuenca, 1931-62.

Panel A: Distribution of land use in Cuenca (1931-62). All figures are percent of total cultivated land in each 5-year period (Column 8).

Years	1 Wheat	2 Other cereals	3 Leguminous plants	4 Grapes [1]	5 Olives [1]	6 Others	7 Non cereal Total (3+4+5+6)	8 Cultivated total (1+2+3+4+5+6)	9 Meadows, pastures scrubland and wood	10 Fallow land
1931-1935	46	31	3	9 [2]	6	5	23	100	123	57
1939	42	30	2	10	10	7	28	100	229	52
1943-1947	40	27	7	11	9	5	32	100	232 [3]	51
1948-1952	43	26	5	13	9	4	30	100	228	46
1953-1957	44	25	4	14	10	4	31	100	180	N/A
1958-1962	42	22	5	16	10	5	36	100	157	N/A

Panel B: Distribution of land use in Cuenca (1931-62). All figures are percent of average total cultivated land 1931-35. (Row 1, Column 8)

Years	1 Wheat	2 Other cereals	3 Leguminous plants	4 Grapes [1]	5 Olives [1]	6 Others	7 Non cereal total (3+4+5+6)	8 Cultivated total (1+2+3+4+5+6)	9 Meadows, pastures scrubland and wood	10 Fallow land
1931-1935	46	31	3	9 [2]	6	5	23	100	123	57
1939	29	21	2	7	7	5	20	70	159	36
1943-1947	29	19	5	8	7	3	23	71	165 [3]	36
1948-1952	33	20	4	10	7	3	23	76	175	35
1953-1957	36	20	3	11	8	3	25	81	146	N/A
1958-1962	36	19	4	14	8	5	31	86	135	N/A

1) Including non-productive land. 2) Data for 1935 only.

3) Does not include data for 1944, which are inconsistent with the rest of the series. The figure for 1944 is substantially lower than the rest of the years, without being counterbalanced by an increase in land used for any other purpose.

Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939, 1943-62). Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1954-55).

Consequently, in the 1940s land previously used for cereals was taken out of cultivation altogether and classified instead as "meadows, pastures, scrubland and wood", and, within this category, mostly as "non-permanently uncultivated land" or "permanently uncultivated land".[347] The only other significant change in land use in the 1940s, which fell under the general heading of "meadows, pastures, scrubland and wood", was a 55,000 hectares expansion of "scrubland with pasture". This was reflected in a 23 percent growth in the number of adult sheep between 1933 and 1955, which followed the national trend of an increase in the number of sheep.[348] Given that the cultivated area declined by more than 100,000 hectares after the war, the expansion of sheep breeding is insufficient to explain this decrease.

The smaller extension of cultivated land in post-war Cuenca could either be the result of voluntary decisions by farmers due to a deterioration of the profitability of farming, or the outcome of external constraints on production. While the first is the standard interpretation in the historical literature,[349] the evidence in Chapter 3 pointed towards the second explanation at the national level.

6.4.2: The Shortage of Capital Goods

The analysis of the relationship between changes in land use and changes in the capital stock of the agrarian sector between 1939 and 1962 can be limited to a few factors.[350] Mechanisation was practically non-existent before the Civil War and this continued well into the 1950s.[351] Work animals were therefore a very important element of capital in the sector. It is therefore hardly surprising that the lack of work animals turned out to be an important constraint on the post-war production of wheat.

In Cuenca, mules were the most widely used animals in the agrarian sector, followed by donkeys. Neither cattle nor horses were employed with great

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[347] "Meadows, pastures, scrubland and wood" occupied on average 724,898 hectares in 1931-35. After the war the average figure grew to 967,928 hectares in 1943-47 and 1,026,610 hectares in 1948-52, before it declined again to 856,798 hectares in 1953-57 and 792,897 hectares in 1958-62; Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-62).

[348] The number of sheep in Cuenca went from 455,797 to 561,944 between these two years. Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-62); Ministerio de Agricultura: "Tres estudios económicos"; Instituto Nacional de Estadística: *Anuario Estadístico de España* (1958).

[349] See Section 1.3.2, p. 33.

[350] We have extended the analysis until 1962 because this was the year of the first agrarian census, which facilitates much more detailed information on capital stock than the annual statistics.

[351] See Footnote 313, p. 148 for the pre-war figures. The number of tractors in the province was 163 in 1950, 615 in 1956 and 2,595 in 1962. Consejo Económico Sindical de la Provincia de Cuenca: *Perspectivas de desarrollo económico de la provincia de Cuenca (en los proximos cinco años)*, pp. 27-28. Ministerio de Agricultura: *Censo Agrario 1962*, p. 19.

frequency.[352] The largest absolute decline among the work animals in the province was found among donkeys, but the authorities gave less attention to this problem than to the decline of mules. This was connected with the much smaller workload that could be carried out by donkeys, as well as the fact that donkeys were used for transport rather than fieldwork.[353]

The analysis in Section 3.3 has shown that at the national level it was difficult to recover the pre-war number of mules due to a combination of the international situation and the characteristics of the Spanish stock of breeding animals. The consistently low number of work animals in Cuenca in the 1940s suggests that these factors were also external constraints for the individual farmer in Cuenca.[354] Various sources confirm this interpretation.

In 1946, the *Consejo Económico Sindical* in Cuenca reported that black market prices for medium-quality mules were around twice the price in the official market for the best quality animals.[355] This phenomenon was apparently not restricted to Cuenca, since in the neighbouring province of Ciudad Real, the price for one mule went up to 20,000.[356] The situation remained the same during the following year, when the *Consejo Económico Sindical* in Cuenca said that prices were 50 to 150 percent higher than the legal maximum price for the best quality animals.[357]

For the farmers, the price of mules relative to what they received for their production was probably significant for the decision about whether to invest in more animals. The pre-war price of a mule was roughly the same as 5 metric tons of wheat, and by 1946 this amount of grain was worth 9,050 pesetas at official prices.[358] Although this was fairly close to the official maximum price of 10,000 pesetas per animal between 1942 and 1947, it was well below the prices in the black market. However, it is also necessary to take black market earnings from sales of wheat into account. Barciela and García González estimated that the average black market price

[352] Out of the almost 30,000 pairs of work animals registered in the province in 1948, 932 were cattle, 868 horses, 19,697 mules and 8,194 donkeys; Instituto Nacional de Estadística: *Anuario Estadístico de España* (1950).
[353] The work force of a donkey was approximately 60 percent of that of a mule; Estébanez Alvarez (1974), p. 274.
[354] See Table 6.6.
[355] Consejo Económico Sindical de Cuenca: Informe, dated 22nd May, 1946, s.p..
[356] Naranjo (1946), p. 1498. The official price was 10,000 pesetas.
[357] Consejo Económico Sindical de Cuenca: Situación actual de la agricultura, September 23rd 1947, s.p.. This is also comparable to the price of 60,000 pesetas for a couple of mules, which was reported in a meeting of the *Junta Superior de Precios*; Junta Superior de Precios: Acta de la reunión celebrada el dia 7-5-47.
[358] Naranjo (1946), p. 1498.

for wheat was about 250 percent of the official price in the 1940s.[359] In the mid 1940s, the farmers would have to sell approximately 70 percent of his marketable production in the black market to maintain the same relative price of mules to wheat as in the 1930s.

Selling 70 percent of the marketable part of production might not be impossible, but it was more than the national average, which oscillated around 50 percent in the 1940s. However, black market activity involved the risk of extra costs in the form of fines, confiscation and bribes. Therefore it does not seem likely that all farmers could buy mules at the same relative price to wheat as before the war. The size of the relative price increase would vary according to yearly price oscillations in the black market price for the two commodities.

In any case, the buying of a mule would be an important investment. In the mid-1940s, the official mule price of 10,000 pesetas would equal the gross value of production of a small farm or some two-thirds of that of a family farm.[360] In a place like Cuenca, where minor farms were widespread, the uncertainty of the rentability of such an investment due to the distortions in the market for agrarian production made the farmers economically vulnerable.

The influence of the decline in work animals on the cultivated area is difficult to quantify exactly due to heterogeneous statistical information from the pre-war and post-war years. The main problem is the absence of information from the 1930s on the number of donkeys for fieldwork. The data in Table 6.10 show that in the 1940s each "mule equivalent" tilled approximately 8.5 - 9 hectares. This fits very well with pre-war information that states that two mules[361] were required to exploit a farm of 30 hectares cultivated according to the traditional system of *año y vez.*[362]

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[359] Barciela and García González (1983), p. 94.

[360] Organización Sindical de Cuenca: Datos Estadísticos. Data are in Table 5.10. In the source the division between "small farms" and family farms" is based on average value of production. The distinction is that a "family farm" generates sufficient income to sustain a family, while this is not the case for a "small farm".

[361] In Table 6.10 a standardised team of work animals has been set to two mules.

[362] Ministerio de Agricultura: "Tres estudios económicos", p. 57. Cultivating *Año y vez* is using half of the land for cereals, a minor part for leguminous plants, and letting the rest lying fallow. Table 6.10 shows an relatively strong increase in the number of mule equivalents between 1940 and 1942, which was not reflected in a similar increase in the total number of work animals in Table 6.6. There appears to be two possible reasons for this paradox. The first is that relatively more animals were used for transport in 1940 than in the following years, due to destruction of capital in the transport sector during the Civil War. The second possible reason is that the statistics on mule equivalents employed in agriculture is deficient for 1940. It is not possible to decide which of the two reasons are correct. Yet, this is a minor problem given the homogeneity of the data for the rest of the years, as well as the consistency of the 1942-50 figures with pre-war information on a normal workload for a mule.

Table 6. 10: Number of "mule equivalents" employed in the agrarian sector in Cuenca and their work load per year in hectares, 1940-50.

Years	Teams of mules	Teams of donkeys	Teams of horses	Teams of cattle
1940	16750	5370	120	124
1942 [2]	20048	8350	303	267
1948	19697	8194	932	868
1950	18930	7764	1023	846

Years	Total number of mule equivalents [1]	Total cultivated area (hectares)	Hectares per mule equivalent
1940	40345	413693	10,3
1942 [2]	51069	429367	8,4
1948	52219	421614	8,1
1950	50323	464098	9,2

1) A "mule equivalent" is a mule or a horse. Donkeys and cattle are supposed to be able to carry out, respectively, 40% and 35% less work.

2) The cultivated area is for 1943 given insufficient data on the productive area with vine and olives for 1942.

Sources: Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-45, 1950, 1952); Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1940, 1948, 1950).

The question now is whether the workload per mule equivalent was higher or lower after the war than before. The analysis shows that there does not appear to have been a widespread under-exploitation of the work animals in the 1940s.

Since the percentage of the total cultivated area occupied by yearly crops was relatively stable before and after the war, it can be assumed that the need for mule equivalents per hectare was also stable.[363] If the same amount of land had been tilled by each mule equivalent in 1933 as the 1942-50 average, then the 609,505 hectares under cultivation in 1933 would have been tilled by the equivalent of approximately 71,000 mules. The figures on the number of animals in the province in 1933 in Table 6.6 suggest that such a number was not available. When calculated on the basis of the adult animals, there were only some 69,738 mule equivalents in the province in 1933.[364] Out of those, some of the cattle, donkeys and horses were probably used for transport rather than as work animals. In other words, the larger the amount of horses, cattle and donkeys that were used for non-tilling purposes in 1933, the larger the decline in the amount of land worked per mule equivalent after the Civil War.

It is not possible to determine the number of horses, cattle, and donkeys that were not used for tilling the land in 1933. However, the data for the 1940s show that it does not appear to have been more than 20 percent of horses and donkeys, but some 65 percent of the cattle. If the same was the case in 1933, each mule equivalent

[363] This can be calculated from Table 6.9. The yearly crops occupied 82 percent of the cultivated area between 1931 and 1935, 80 percent between 1940 and 1947 and 78 percent between 1948 and 1952.
[364] I.e. the number of mules older than three years and the total number of other animals from Table 6.6.

worked some 10 percent more land than the average between 1942 and 1950. Given that the average age of the work animals was higher in the 1940s than before the war,[365] which would reduce the average work potential per animal, a minor increase in the mule equivalents per hectare was expectable.

Based on the available evidence it cannot be denied that up to 10 percent more land was potentially cultivable with the available stock of animals between 1940 and 1950. However, beyond this potential 10 percent expansion, the number of work animals set a limit on the amount of land, which could be cultivated in the 1940s. Even if the land could be exploited to its full potential, it would have been totally insufficient to restore the pre-war situation since the total cultivated area was approximately 30 percent smaller in the 1940s than between 1931 and 1935.

After 1950, there was an increase in the amount of land under cultivation, the number of work animals and - finally in the late 1960s - the number of tractors.[366] The importance of the number of tractors on the amount of cultivable land is further increased by the fact that these were mainly found on the larger farms, as can be seen in Table 6.11.[367] This means that at the beginning of the 1960s the larger farmers had begun the process of substituting tractors for work animals, but most farmers with less than 50 hectares still depended on work animals. It would be interesting to know whether it was small-scale or large-scale farmers who were able to expand the cultivated area after 1950, but unfortunately the necessary data do not exist before 1962.

Table 6. 11: Distribution of exploitations, cultivated area, mule equivalents and tractors in Cuenca, 1962.

Size of exploitation	Exploitations	Cultivated area	Mule equivalents	Tractors
	(%)	(%)	(%)	(%)
<1 ha.	14,28	0,55	2,60	0,12
1 - <10 ha.	42,46	13,47	22,45	1,43
1 - <50 ha.	36,51	50,30	58,28	20,39
50 - <100 ha.	4,01	13,72	9,31	25,28
100 -> ha.	2,74	21,95	7,36	52,79
Source: Ministerio de Agricultura: *Censo Agrario 1962.*				

In Table 6.9 we saw that during the 1950s there was a downward trend in the relative importance of the land dedicated to yearly crops and a simultaneous upward trend in

[365] Consejo Económico Sindical: Informe, dated 8th March 1946, p. 1.
[366] See Tables 6.5 and 6.8.
[367] This distribution of the tractors corresponds rather neatly to a contemporary estimation that some 75-100 hectares, used for a combination of cultivation and livestock, were necessary to make the investment in a tractor profitable. Consejo Económico Sindical de la Provincia de Cuenca:

the land reserved for olives and grapes.[368] Furthermore, back in Table 5.7, we saw that small-scale farmers used a relatively larger part of their land for perennial crops than large-scale farmers, who, on the other hand dedicated a relatively larger part of this land to cereals.

In general, the cultivation of cereals lends itself much easier to mechanisation than olives and grapes. Although the introduction of tractors was a phenomenon that only appeared at the end of the 1950s, other types of mechanisation had been possible before that. By 1962, this had mainly taken place on farms larger than 50 hectares, especially in the cases of machinery, which substituted traditional labour intensive works connected with the harvesting of grains.[369]

In other words, large-scale farmers used their comparative advantage to mechanise cereal cultivation and, consequently, used a larger part of their land for these crops. On the other hand, the small-scale farmers had an advantage regarding the access to non-paid family labour and, subsequently, were more prone to use their land for the cultivation of grapes and olives. This process was reflected in the decline of the relative number of farm workers to farmers because of post-war emigration. It therefore seems likely that a large part of the expansion of the cultivated area in the 1950s took place on the larger farms, because they had the financial ability to carry out a mechanisation process.

6.4.3: The Post-war Decline in the Availability of Fertilisers and its Effect on Wheat Production

Chapter 3 described that the availability of chemical fertilisers, especially nitrogenous ones, decreased significantly in Spain after the Civil War. This was due to the interruption of international trade, the lack of sufficient domestic production capacity, and the absence of essential raw materials. Furthermore, the analysis showed that at the national level this was a very important factor in the decline in wheat output in the

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Perspectivas de desarrollo económico de la provincia de Cuenca (en los proximos cinco años), pp. 24-25.

[368] Vines and olives occupied 18 percent of the total cultivated area in 1931-35, 20 percent in 1940-47, 22 percent in 1948-52, 23 percent in 1953-57, and 26 percent in 1958-62 (Table 6.9).

[369] In Cuenca in 1962, farms with more than 50 hectares constituted 6,75 percent of the total farms and cultivated 38,71 percent of the area cultivated with wheat. However, they possessed 73 percent of the animal drawn reapers, 94 percent of the tractor drawn or self-moving reapers, 64 percent of the threshing machines and 66 percent of the bailing machines – Ministerio de Agricultura: *Censo Agrario 1962*.

post-war years. This pattern was also true in Cuenca: the steep fall in the availability of fertilisers had a strong negative influence on wheat production.

The only systematic data for the use of fertilisers in Cuenca in the decade following the Civil War cover the years from 1939 to 1942 (Table 6.12).

Table 6. 12: Consumption of fertilisers measured in P_2O_5, N and K_2O per area cultivated with cereals in Cuenca in 1931-35 and 1939-42.

Active Ingredients	Consumption of active ingredients (Tons)		Consumption per hectare cereals (kilos)	
	1931-35	1939-42	1931-35	1939-42[1)]
P_2O_5	4924	165	10,8	0,6
N	509	15	1,1	0,1
K_2O	366	28	0,8	0,1
1) 1939-49 average area cultivated with cereals.				
Sources: Ministerio de Agricultura: *Anuario Estadístico de las*				
Producciones Agrícolas (1939-40); Insituto Nacional de Estadística:				
Anuario Estadístico de España (1943-44); Tables 6.3 and 6.7.				

Even after taking into account the simultaneous decrease in the area cultivated with cereals, which was where fertilisers were mainly used, the post-war situation can only be described as a fall into the abyss. In fact, even allowing for the general decline in the availability of fertilisers, the conditions in Cuenca between 1939 and 1942 were far worse than the national average.[370]

It is not possible to say whether this situation continued throughout the 1940s, but there are some indications that this was the case. Firstly, between November 1944 and August 1952 the CGAT distributed fertilisers, which, compared to the pre-war situation, favoured regions producing citrus fruits.[371] Second, local data from the *Organización Sindical* (the official trade union) on the 1945 harvest noted the persistence of the problem.[372] In fact, although the distribution of fertilisers was liberalised in 1952, the pre-war level of fertilising was not reached in Cuenca before

[370] The situation in Cuenca was shared with that of some other provinces in Central Spain. For example, in Guadalajara, the consumption of superphosphate in 1940-41 was close to 10 percent of the pre-war level, in Toledo it was 3 percent and in Almería it was approximately 18 percent. On the other hand, the consumption of superphosphate was 104 percent of the pre-war level in Alicante, while Cáceres it was 129 percent in 1940 and 184 percent in 1941. The national average was 59 percent in both years; Ministerio de Agricultura: *Anuario Estadístico de las producciones Agrícolas* (1931-35, 1940); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).

[371] *Alimentación Nacional*, vol. 38, November 1944, pp. 14 and 28, and vol. 221, August 1952, p. 23. The prices continued to be regulated until the late 1950s.

[372] Apparently only 110 tons of superphosphate - equalling some 20 tons of P_2O_5 - were made available for the 1945 harvest; Consejo Económico Sindical de Cuenca: *Informe*, dated 1st May 1946. The contrast with the Government estimation from 1948 that 50,000 tons superphosphate - equalling some 9,000 tons of P_2O_5 – were needed, can hardly be bigger; Presidencia del Gobierno, Secretaria General para la Ordenación Económico-Social: *Programa de necesidades de la Provincia de Cuenca*, pp. 12-13.

the mid-1950s.[373] The consequence was that a significantly smaller area could be fertilised after the war than before in both absolute and in relative terms. The disproportionate decrease in the use of fertilisers in Cuenca and various other provinces in Central Spain throughout the 1940s was clearly at odds with that the officially pronounced aim of the Government was to maximise wheat output.

According to a report from the Ministry of Agriculture in 1921, the introduction of non-organic fertilisers on previously non-fertilised dry land used for cereals in Cuenca would result in an increase in yields of roughly 45 percent.[374] The exact increase would depend on the combination of fertilisers and manure, but it is possible to calculate an estimate of the decline in yields because of the post-war lack of fertilisers. According to Table 6.3, a total of 140,646 hectares could be fertilised before the war if only one type of fertiliser was used at a time, while this was reduced to 5,716 hectares after the war.[375] Before 1936 fertilisers were used mainly for wheat and barley, and the 140,646 hectares of land that could fertilised equalled 41.3 percent of the pre-war cultivated area with those two crops. In contrast to this, the 5,716 hectares of land that could be fertilised after the war equalled just 2.7 percent of the cultivated area with wheat and barley between 1939 and 1942.

Setting the average yields of non-fertilised land to 1.0 and the yields on fertilised land to 1.45, ceteris paribus the average pre-war yields were then:

$$0.59*1 + 0.41*1.45 = 1.19$$

and the correspondent post-war yields:

$$0.97*1 + 0.03*1.45 = 1.01$$

equalling a decrease of 15 percent.

This goes some way to explain the counter-intuitive coincidence that we saw in Table 6.8 of the post-war decline in the cultivated area and the yields for wheat and

[373] Estébanez Alvarez: (1974), p. 264. This was slower than for the whole of Spain, where, as shown in Chapter 4, the use of nitrogenous and phosphoric fertilisers reached pre-war levels in 1950/51.
[374] Ministerio de Agricultura: *Materias fertilizantes empleads en la Agricultura*, pp. 71-72.
[375] Since nitrogenous and phosphate fertilisers are complimentary, the use of more than fertiliser at the same land would increase the effect on yields, but the total fertilisable area would be smaller. However, given the predominance of the use of superphosphate, complimentary use of different fertilisers could only affect a minor part of the land, and we can safely ignore this in the calculation of average yields.

barley in the 1940s and for wheat in the 1950s.[376] However, it still leaves an unexplained decrease in the yields of a roughly similar magnitude.

Concerning the use of fertilisers according to farm size, no data are available before 1962, but some useful insights can still be gained.[377] Although the information in Table 6.13 shows that not all cultivated land was fertilised[378] and that the amount of fertiliser used was still below the optimum level, at least it exceeded pre-war levels.[379] Furthermore, there was a positive correlation between farm size and the intensity of fertiliser use. The difference in the relative use of fertilisers might have been the outcome of small-scale farmers having less access to credit, and difficulties in being supplied when the only bought small amount of fertilisers at a time.

Table 6. 13: Relative distribution of fertilised land according to farm size in Cuenca, 1962.

Farm size	Fertilised land (Ha.)	Fertilised land as percent of total cultivated land.
<1 ha.	1028	35,0
1 - <10 ha.	27522	38,4
10 - <50 ha.	119599	44,7
50 - <100 ha.	38340	52,5
100 -> ha.	77342	66,2
Total	**263831**	**49,6**
Source: Ministerio de Agricultura: *Censo Agrario 1962.*		

Together with the increase in the use of chemical fertilisers in the late 1950s, there had been a change in the composition of the fertilisers that were used. While the relative use of phosphoric fertilisers had declined, there had been a relative as well as absolute increase in the use of nitrogenous, potasio and compound fertilisers. This was a qualitative improvement compared to the 1930s, when phosphoric fertilisers dominated.[380]

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[376] In a situation where the farmers diminished the cultivated area, we would expect that it was the least fertile land that first was taken out of cultivation, with the result that yields per hectare should have increased.

[377] As was the case with machinery, no statistics exist on a provincial level for the use of chemical fertilisers between the early 1940s and 1962. However, at the national level, a big leap forward in the use of nitrogenous fertilisers did not take place until the late 1950s. Then the use of N increased by 112 percent between 1956 and 1962. Instituto Nacional de Estadística: *Anuario Estadístico de España* (1963).

[378] Note that these data include land fertilised with both chemical and organic fertilisers. Due to double counting, the sum of the amount of land fertilised with each of the different types of fertilisers exceeds the total fertilised land by 43 percent. Consequently, the data on the fertilised area are not easy to compare with the pre-war figures in Table 6.3, where manure was not taken into consideration.

[379] In 1962, 25 kilos of P_2O_5, 17 kilos of N and 11 kilos of K_20 were used on each fertilised hectare of land. This is below the optimum level, and at the same time still leaves a part of the cultivated land unfertilised. However, this is of less interest to us as our main concern is the comparison with the situation in the 1930s and 1940s.

[380] See Table 6.3.

Since the yields of wheat took much longer to reach pre-war level than those of barley, the decline and later recovery of the use of artificial fertilisers appears to have affected mainly wheat. Furthermore, the effect was on a magnitude that was more than sufficient to counteract the expected increase in average yields that would result from taking marginal land out of production. The approximately 210,000 hectares of wheat cultivated around 1960 was some 77 percent of the 1931-35 average. In spite of this, the first time yields of wheat in Cuenca exceeded the pre-war average was in 1957, with the second time being in 1960. This performance was below the national average, given that the national yields reached pre-war levels by the mid-1950s.[381]

It appears likely that the slow recovery of the yields of wheat was related to the fact that small-scale farmers used less artificial fertilisers then the large-scale farmers did and that the former constituted the predominant group in the province.

6.4.4: The Normality of the Weather Conditions

A final point to consider is the weather conditions in the 1940s. It was an argument favoured by the Franco regime that the frequent draughts during these years had been especially unfavourable to agrarian production. This explanation has been generally rejected in the historical literature.[382] In the specific case of Cuenca, it is difficult to argue that there was much difference between the weather conditions of the 1940s and the 1950s. Still, it appears that wheat was more dependent on optimal weather conditions than barley, rye and oats.

In 1946, an internal report by the *Organización Sindical* in Cuenca argued that the lack of precipitation was a general problem for the agrarian sector.[383] However, the data do not suggest that the 1940s were a decade of particular shortages of rainfall in the province. The average yearly precipitation of 522 mm between 1941 and 1949 was exactly the same as the 1901-30 average and just some six percent less than the 1950-60 average.[384] However, average figures and even yearly figures are both rather rough indicators. The average figures are problematic because the yearly variations

[381] Calculated as a 5 years moving average the pre-war average yields of wheat were only exceeded in 1961 in Cuenca, while this happened already in 1955 for the national aggregate.
[382] See Section 1.3.1, p. 30 ff.
[383] Consejo Económico Sindical de Cuenca: Informe, dated 1st May 1946, p. 1.
[384] Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-50). There is no data for 1939 and 1940.

were quite important.[385] The difficulty with the yearly figures is that they are also too general, as an example from the neighbouring provinces of Albacete and Ciudad Real shows. Fernández García calculated the co-variation between annual precipitation and yields of wheat as 0.1 for Albacete, and as -0.1 for Ciudad Real. This lack of a relation between precipitation and yields does not appear to be a robust result.[386]

Seasonal rainfall, with the crop year divided in four parts - sowing (September to November), hibernation (December to February), growing (March-May), and ripening (June-August) - turns out to be a more accurate indicator. The lower part of Table 6.14 shows a positive correlation between the percentage of yearly precipitation falling between March and May and the yields of wheat in the 1950-60 period. At the same time, there is a negative but weaker correlation between yields and the percentage of yearly precipitation in the three other periods.[387]

Table 6. 14: Seasonal distribution of rainfall in Cuenca, 1901-60, and correlation between seasonal rainfall and yields of wheat in Cuenca, 1943-60.

Distribution of rainfall	Part of yearly precipitation (Sept.-Nov.)	Part of yearly precipitation (Dec.-Feb.)	Part of yearly precipitation (March-May)	Part of yearly precipitation (June-Aug.)
	(Percent)	(Percent)	(Percent)	(Percent)
1901-30 average	28	25	33	15
1943-49 average[1)]	23	24	37	16
1950-60 average	25	26	31	19
1943-49 standard deviation	6	9	10	9
1950-60 standard deviation	12	10	10	6
Correlation coefficient between yields of wheat and seasonal precipitation 1950-60	Part of yearly precipitation (Sept.-Nov.)	Part of yearly precipitation (Dec.-Feb.)	Part of yearly precipitation (March-May)	Part of yearly precipitation (June-Aug.)
	-0,03	-0,25	0,42	-0,17
1) Does not include 1944 and 1945 for lack of data.				
Sources: Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-60); Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1943-53).				

This more refined measure makes it relevant to compare the percentage of the yearly precipitation in each season between 1901 and 1930, with the averages for 1943-49 and 1950-60. However, the conclusions that can be drawn are somewhat hampered by

[385] The minimum precipitation was 356.5 mm in 1944 and the maximum 890.1 mm in 1947. There is no yearly data for 1901-30.

[386] Fernández García (1988), pp. 76-77. The problem can also be illustrated with an example from Cuenca. The total precipitation for 1946 and 1948 was respectively 514.5 mm and 521.5 mm, which is very close to the average for the decade of 522 mm. In spite of this, the yields of wheat were 994 kilos/hectare in 1946 but only 457 kilos/hectare in 1948. The crucial difference was that in 1946, 57 percent of the precipitation fell between March and May, while in 1948, only 29 percent of the precipitation fell in the same months.

the fact that the data for 1944 and 1945 are incomplete, so few observations can be made for the 1940s as a whole. Furthermore, the exceptional dry 1945 harvest cannot be included, which might affect the figures on average distribution of precipitation between 1943 and 1949. It is therefore at best illustrative that the precipitation levels in the 1940s during the important March-May period seem to have been more favourable for the crops than in the 1950s (Top part of Table 6.14.)

Taking into account that the average figures might hide greater variations in the 1940s than in other periods, the standard deviation for the percentage of the yearly rainfall that falls in each season has been included. Again, the figures for the 1940s are problematic for the absence of data for 1944 and 1945, but again the results do not show a large difference between the different periods. Consequently, the weather conditions do not appear to have been detrimental to the level of wheat production in Cuenca in the 1940s.

6.5: THE DEFICIENCIES OF THE SYSTEM OF INTERVENTION, AND THE RISKS INVOLVED IN BLACK MARKET ACTIVITY

The effects of the price policy and the simultaneous development of factors such as the availability of work animals and fertilisers cannot be analysed adequately, without taking into consideration the day to day working of the intervention system. This is because a large number of farmers, consumers and administrators inside the system tried with some success to circumvent the control system for their own economic benefit. The following analysis shows that the variety of as well as scope for illegal activities in this field was substantial. This is an important argument against the interpretation which says that the official price policy was the main reason behind the post-war level of production of wheat. The conclusions on the effects of the price policy will have to include the range of possibilities that were open to the different actors to avoid various parts of the intervention system.

6.5.1: Flaws in the System of Intervention

As explained in Chapter 1, intervention rested on a system of production quotas. These were centrally assigned to each province, and within those, the farmers were

[387] Fernández García also looked for a relationship between absolute precipitation between December and March and yields of wheat, and found a correlation coefficient of 0.5 in Albacete, but it was 0.0 in

then given their individual quotas.[388] In some years the provincial office of the SNT assigned the quotas directly to the larger farmers, while for the small-scale farmers the quota went through an intermediate level, with the assignation of a production quota to each village. It was then the *Junta Agrícola* in each municipality that took the decision about the distribution among the farmers.[389]

The quotas were the minimum requirements that the farmers had to sell to the SNT, and the farmers were normally fined if they did not reach the determined goal. If the production was greater than the quota, it was also compulsory to sell the overflow to the SNT - with the exception of what could legally be sold in the parallel market after 1948.[390] A small production quota made it easier and cheaper to divert a part of the production to the black market, so the size of the quota was important for the average price received by the farmer for his produce. This made it crucial to gain access to the local decision making body - the local *Junta Agrícola.*

In the small rural communities it was very likely that all members of the *Junta Agrícola* would be farmers themselves, leading to the possibility of a conflict of interests when determining the quotas. How widespread the abuse of power by farmers in the *Juntas Agrícolas* was is difficult to say, but it is relatively easy to find instances of it in the reports from the Provincial Inspectors of the SNT. For example, in 1950 one *Junta Agrícola* assigned excessive compulsory quotas to farmers who were living in other villages than where they cultivated their land.[391] Another practice was for the members of the *Junta Agrícola* to allocate small quotas to themselves.[392] In some cases, these types of abuses led to the staff of the SNT having to recalculate the compulsory quotas.[393] Perhaps it was an attempt to curb the social power of the large-scale farmers, which in some years led to the SNT calculating the production

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Ciudad Real! Table 6.14 indicates that he analysed the "wrong" season.

[388] Unfortunately, it has not been possible to find a description of how the provincial quotas were calculated, and it has only been possible to locate the provincial production quotas for the 1950 harvest, and even these are incomplete (Table 3.6). Hence, it is impossible to say anything about the criteria used for allocating the quotas at the provincial and local level.

[389] The *Junta Agrícola* consisted of the mayor, a minor number of farmers, and the local head of the *Hermandad Sindical de Ganaderos y Labradores* (the Sindical Brotherhood of Farmers and Stockbreeders, HSGL) which was the official "trade union" for the agrarian sector.

[390] See Chapter 3.

[391] Servicio Nacional de Trigo: Informe quincenal – 2nd half of November 1950, from the *Inspector Provincial* assigned to the Provincial Headquarters in Cuenca.

[392] Servicio Nacional de Trigo: Informe quincenal – 1st half of October 1950, from the *Jefe Comarcal* in zone 1.

[393] Servicio Nacional de Trigo: Informe quincenal – 1st half of December 1950, from an *Inspector Provincial* of an unnamed zone.

quotas directly for farmers who cultivated more than a certain amount of land.[394] A more malicious interpretation would be that staff of the SNT would be better able to receive bribes and/or favour individuals for personal, political or other reasons. The possibilities of evading the system of intervention did not stop there. In 1950, a member of the SNT staff reported that some farmers bought wheat from other farmers and then sold it to the SNT at the price for the production exceeding the compulsory quota.[395]

Since the individual quotas were partly a function of the village quota - which was set by the SNT - disputes inevitably also rose over these as well. It was common that the local *Junta Agrícola* wrote to the SNT explaining that for some reason it would be impossible to fulfil the village quota without leaving the local farmers and their famil[illegible]starving in the following year.[396] The conflicts over this also led to the *Junta Agrícola* refusing to assign quotas in some villages.[397]

The efforts to reduce the quotas did not stop at the village level. We find that in 1948 the Provincial Delegation of the HSGL tried to obtain a reduction in the wheat quota for the whole province. During the process a local section of the HSGL sent a letter to the other sections urging that in each village a "realistic" quota was agreed upon by the farmers. However, as the SNT Provincial Inspector who reported the incident wrote:

> With this letter known by the farmers, there is no doubt that none of them will say that they can hand in more than the assigned quota. With a few exceptions, they will not even hand in the assigned quota (...)[398]

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[394] In Cuenca, the limit from which the SNT staff allocated the quota directly was 20 hectares of cultivated land in 1948, 14 hectares in 1950, and 10 hectares in 1951. No information on the limits have been found for other years, nor for other provinces.

[395] Servicio Nacional de Trigo: Informe quincenal – 2nd half of September 1950, from an *Inspector Provincial* of an unnamed zone.

[396] Excuses used by the local *Juntas Agrícolas* in their attempt to get a smaller village quota were plentiful. They included a heat wave (Casasimarro); drought, and night frosts late in the year (Arcas); drought, and lack of work animals and fertilisers (Belmonte); that a part of the land in the village belonged to farmers from other villages (Quintanar del Rey); that a part of the land was only cultivated due to explicit instructions from the SNT, and the subsequent harvest could not give a profit for the farmer (Iniesta). See Consejo Económico Sindical de Cuenca: Constitución de Juntas de Cupo Forzoso.

[397] See for example: Servicio Nacional de Trigo: Informe quincenal - from: 1st half of February 1948 from the *Jefe Comarcal* of Zone 2; 2nd half of August 1948 - unknown area; 2nd half of September 1948 from the *Jefe Comarcal* in Cuenca; 1st half of October 1948 from the *Inspector Provincial* in Zone 2; 1st half of October 1948 from the *Inspector Provincial* in Zone 3; 1st half of October 1948 from the Jefe Comarcal in Cuenca.

[398] Servicio Nacional de Trigo: Informe quincenal – 2nd half of October 1948 from the *Inspector Provincial*, working at the Provincial Headquarters in Cuenca. (Own translation)

The possibility of breaking the regulation of the cereal production for their own benefit also appealed to SNT staff. Aware of this, the central office of SNT in Madrid had National Inspectors who controlled the behaviour of the local staff.

One important function of the provincial and local SNT staff was to control the entrance and exit of goods in the SNT warehouses, where the produce was stored before it was sent to the industry for further elaboration. Several reports state that in spite of the importance of the task, this control was unsatisfactory.[399] National Inspectors reported instances of wheat stored in the SNT warehouses without being officially registered - i.e. bought illegally by the SNT employee in charge of the warehouse.[400] Another example of possible fraud by the SNT staff was the reporting of the imprisonment in 1946 of the head of the SNT warehouse in the village Villar de Domingo García.[401] Situations like this could be the result of SNT staff cheating the farmers, and/or they - together with the farmers - were cheating on the system of intervention.

All in all a picture arises where the relevant organisations and individuals tried to pass on the problems of the compulsory quotas to others and/or exploit the possibilities of illegal economic activity that emerged within the system of intervention. Even if it was possible to make a "fair" distribution of the quotas, and this is an assumption that is far from easy to make, the system put a high moral responsibility on those working in the bureaucracy. They had the power to determine the size of the quotas, and thereby to a certain degree their own earnings and those of the other farmers, in a situation where the gain of one would be the loss of another. As we have seen, and this can hardly be a surprise, many people did not live up to the "moral obligation" which accompanied the discretionary power to distribute income more or less at will.

In Chapter 3 it was argued that on the national level the existence of a black market could be a stimulus for increasing the level of production. The above analysis shows that while the laxity, corruptness and lack of homogeneity of the control system at the local level might have been a serious constraint on the income level of some farmers, others gained from the same conditions. This last group of farmers would

[399] See for example Servicio Nacional de Trigo: Informe, from the *Inspector Nacional* of the SNT in the Centre Zone, covering September, October and November 1946, as well as the corresponding report covering March, April and May 1948.

[400] See for example Servicio Nacional de Trigo: Informe, from the *Inspector Nacional* of the SNT in the Centre Zone, covering March, April and May 1946, and the similar reports covering June, July and August 1946, and December 1946 together with January and February 1947.

have had an incentive to increase output through illegal channels. Taken into consideration that close to 50 percent of the marketable surplus of wheat was sold on the black market in the 1940s, the group that benefited from that black market was probably quite numerous. So while a less flawed control system might have been desirable from a juridical point of view, it could have retarded growth in production levels.[402]

6.5.2: The Risk of Punishment in Relation to Black Market Activities

In the 1940s, farmers faced the dilemma of whether to deal in the black market or to comply with the system of intervention. The first option could lead to substantial economic gains, but it also included the risk of being caught and punished. The second route did not offer the same potential economic benefits nor the threat of punishment. The choice taken by the individual farmer would be dependent on his perception of the potential gains in the black market versus the risk involved.

It is difficult to say much about exactly how a farmer would arrive at his decision of whether to engage in black market dealings or not. However, some evidence exists on the outcome of the considerations, i.e. the amount of black market activity and the type of risk that was involved when a person chose to enter the black market. Here, the available evidence from Cuenca indicates that although it was not risk-free to enter the black market, the deterrent effect was limited both from a moral and economic point of view. Consequently, the participation rate in the black market among farmers appears to have been very high.

The archive of *Fiscalía Provincial de Tasas*, the special court that dealt with black market cases, would have been the most important source of information concerning the black market in Cuenca. Unfortunately, the archive has been lost due to a flooding.[403] However, a similar archive in the neighbouring province of Teruel exists and some examples of cases found there can shed some light on the functioning of the institution.[404]

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[401] Servicio Nacional de Trigo: Informe, from the *Inspector Nacional* of the SNT in the Centre Zone, covering March, April and May 1946.

[402] See Chapter 3 for the discussion about the possibility of introducing a less rigid system of intervention earlier than 1950, as well as the benefits that could have been the result of this.

[403] Letter from the Civil Governor of Cuenca to the author.

[404] As pointed out in Section 3.2, the archive contains some 10,000 cases for the 1941-53 period. It is lamentable that it has been beyond the scope of this thesis to analyse this rich source material in detail.

At the beginning of the 1940s, the smallest penalty that was imposed on people caught in possession of goods from or destined for the black market was a fine of 1000 pesetas.[405] This was a substantial amount considering that in the early 1940s the farmer received less than 100 pesetas for 100 kilos of wheat. In the same period, the average day wage for a worker in the agrarian sector oscillated around 10 pesetas, thus from the point of view of the consumer 1000 pesetas would have been a relatively large amount of money. In the archive of *Fiscalía Provincial de Tasas* in Teruel one can find examples of people being fined 1000 pesetas for the possession of 10 kilos of flour. Entering the black market involved therefore the risk of severe punishment for even minor offences, and this could have serious economic consequences for the offender.

In the first half of 1944, the provincial administration announced in the *Boletín Oficial de Cuenca* a number of auctions of property belonging to people who had fallen into debt to the state. In nine cases it was explicitly stated that the penalty was related to black market dealings,[406] and here unpaid 1000 peseta fines were covered through forced selling of the following objects:[407]

1) One residential house
2) One donkey (two cases)
3) Seven urban buildings
4) One work cart and one sewing machine
5) Eight plots of land used for cereal growing
6) One round table, one caldron, three chairs, two frying pans, two pots, one cultivated plot of land, and six plots of waste land
7) One plot of irrigated land, and three plots of non-irrigated land.

Finally, the auctioning of a 320m² plot covered one 10,000 peseta fine.[408]

Although the occupation of the persons whose goods were being sold was not stated, it is obvious that several of them were farmers when one considers that land and work animals were among the items up for auction. Although we do not know the economic situation of the people involved, the selling of land, work animals and even

[405] Fiscalía Provincial de Tasas de Teruel: Fichas de los sancionados por la Fiscalía Provincial de Tasas y multas que se les han impuesto (1941-55).
[406] A further 24 auctions are listed during 1944 in the *Boletín Oficial de Cuenca*, but without stating the reason for the unpaid debt to the public.
[407] Each case represents one fine of 1,000 pesetas.
[408] All information from *Boletín Oficial de Cuenca*, various dates, 1944.

household equipment suggests that the auction would leave the person concerned on the brink of ruin. Such an outcome could hardly have been compensated for with whatever eventual earnings could have been gained on the black market.

The archive of the *Fiscalía Provincial de Tasas* in Teruel also shows that the non-payment of a fine could result in imprisonment in a work camp. In this case, three months was apparently the normal sentence for a fine of 1000 pesetas.[409] For the persons involved this obviously equalled the loss of income in these three months and could affect the physical well being of the family of the offender.

When the farmer was assessing the risk of entering the black market the level of punishment would also have to be weighted against the risk of being caught. As explained in Chapter 3, the archive from *Fiscalía Provincial de Tasas* in Teruel clearly suggests that the risk of being punished was very limited. The direct control of the farmers included checking whether they fulfilled the compulsory production quotas. Although the non-completion of the production quota is not a proof of black market trade, the following example strongly suggests that there was a high correlation between the two phenomena. In March 1951, the central office of the SNT sent a list to the SNT office in Cuenca, naming 2,322 farmers that were to be fined for not fulfilling the compulsory production quota for wheat. These farmers all owed more than 1000 kilos of their quota and their aggregated debt was 5,449,889 kilos. Twenty-nine owed more than 10,000 kilos each, and the largest debt was for the considerable amount of 35,831 kilos out of a production quota of 49,966 kilos.[410] Nevertheless, these 2,322 farmers were only a fraction of the farmers that had not fulfilled their production quota. In fact, 19,023 farmers, - which is more than half of the wheat farmers in the province[411] - altogether owed 9,908,180 kilos of their quotas.[412] Although non-fulfilment of the production quota was not the same as black

[409] Fiscalía Provincial de Tasas de Teruel: Fichas de los sancionados por la Fiscalía Provincial de Tasas y multas que se les han impuesto (1941-55).

[410] Delegación Nacional del Servicio Nacional de Trigo: Resumen de agricultores deudores de cupos forzosos de trigo para la campaña 1950/51 - Cuenca.

[411] In 1955, the SNT registered 46,526 wheat-growing farmers in the province - Servicio Nacional de Trigo: *Veinte años de actuación*, pp. 40-41. However, this number seems inflated by double counting. If not, the ratio of farmers to workers was close to 1.5 to 1 in the mid 1950s, and this seems to be to high when compared to other sources, as described in Section 5.3.1, p. 131 ff.

[412] Unfortunately, the source does not mention the size of the production quota, but official wheat output in 1951 was 110,231,300 kilos. Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1951). As mentioned in Chapter 3 it was not the practice to fine all farmers with a quota debt of less than 1,000 kilos. In July 1951, the central office of SNT endorsed a list of 712 farmers, elaborated at the discretionary will of the local SNT office, who were to be fined. These 712 farmers had an average production quota of 907 kilos of wheat, of which they on average owed 759 kilos - almost 84 percent. See Delegación Nacional del Servicio Nacional de Trigo: Resumen de agricultores deudores de cupos forzosos de trigo para la campaña 1950/51, Cuenca.

market trading, the cases of non-completion suggests that this was often the case. At the same time, the fulfilment of the production quota could also coincide with black market trading, especially if the farmer had managed to obtain a small quota. The non-fulfilment of the production quota by approximately 10,000,000 kilos is difficult to explain by other factors than a widespread and persistent black market activity on behalf of the farmers, and an insufficient and inefficient control system.

In sum, it can be said that being caught trading in the black market could have disastrous economic consequences for the farmers, who could have their homes, land and work animals sold at auctions. At the same time, the large black market is also likely to have produced significant economic gains for some of them.

6.6: MAINTENANCE OF THE VALUE OF AGRARIAN OUTPUT PER UNIT OF CULTIVATED LAND BUT DECLINE IN THE TOTAL VALUE OF AGRARIAN OUTPUT

The post-war value of agrarian output is an important element in the analysis of the effects of the agrarian policy on wheat production in the 1940s. This is so because it relates directly to the question of how to describe the conditions for wheat production in the 1940s. Was the level of output the result of a shift of the supply curve to the left due to changes in the conditions that governed production? Or was there as a shift along the supply curve due to changes in prices received by the farmers? So far, the evidence given in this Chapter has demonstrated the existence of important external constraints on wheat output in Cuenca in the 1940s. These caused a shift of the supply curve of wheat to the left and made it steeper than it had been before the Civil War. These conclusions support the argument presented in Chapter 3 on the wheat sector at the national level. The analysis of the value of agrarian output in Cuenca then makes it possible to analyse whether the shift of the supply curve was accompanied by a shift along the supply curve of wheat after the Civil War. Here the data clearly suggest that this was not the case. When estimated black market earnings are taken into consideration, the value of agrarian production per unit of land in the 1940s remained close to that of the 1930s.

This parity is not immediately clear from the official statistics. The official data in Table 6.15 show that the post-war value of agrarian output in Cuenca was significantly less than the pre-war level when calculated in real terms. This also happened elsewhere in Spain, but the development was far worse in Cuenca than for

the country overall. Furthermore, the inclusion of black market earnings from wheat does not drastically alter the picture, although it obviously had the effect of bringing the post-war level closer to the pre-war situation.[413]

Table 6. 15: Index of value of agrarian production in Cuenca and Spain in constant 1958 Pesetas between 1939 and 1958 (1931-35 average value = 100).

Years	Cuenca	Spain	Cuenca	Spain
	(Original data)	(Original data)	(Corrected for black market of wheat)	
1939	56	85	62	93
1940	51	84	58	90
1941	53	93	59	99
1942	N/A	N/A	N/A	N/A
1943	46	76	59	86
1944	48	76	65	89
1945	38	68	46	76
1946	59	81	76	91
1947	45	74	55	85
1948	39	68	48	82
1949	44	69	52	80
1950	59	86	59	91
1951	72	107	72	112
1952	68	104	68	113
1953	58	97	58	100
1954	96	109	96	109
1955	79	97	79	97
1956	69	105	69	105
1957	93	107	93	107
1958	88	108	88	108
Current prices deflated by deflator for "agriculture, fishing and forestry" from Prados de la Escosura (1995). See Section 3.2.1 for the use of constant Pesetas and the choice of deflator.				
Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939-40, 1943-58).				

To get a more complete picture of the total value of the agrarian production in Cuenca it is necessary to include earnings from black market sales of other crops than wheat. Yet, this is no easy task as it is difficult to know which products were sold in the black market, in which quantities this happened, and at what prices. In general it seems that most products that were included in the rationing system also found an outlet in the black market. Unfortunately it has only been possible to locate evidence of this for the province of Cuenca for the months immediately after the Civil War. Between July and December 1939, the Provincial Delegation in Cuenca of the CGAT discovered some 750 cases of black market trade in potatoes, olive oil, straw, wine, sugar, livestock, wheat and bread.[414]

However, information does exist for some other parts of Spain covering almost all of the 1940s. In Andalucía, for example, Naredo found that there was a black

[413] See Appendix 3, Section 3.4 for the revision of the value of wheat output in between 1939 and 1953.
[414] Comisaria General de Abastecimiento y Transportes: Cuentas y jutificaciones de la Delegacion Provincial de Cuenca, July 1939 to January 1942.

market for wheat, barley, rye, oats, maize, rice, chickpeas, and various types of beans and olive oil.[415] Further information can be gathered from publications by a number of provincial Chambers of Commerce. These would include details about the black market and, along with the products found by Naredo, it was reported that potatoes, sugar, and lentils were also frequently sold in the black market.[416] Finally, in the neighbouring province of Teruel, where the crop structure was relatively similar to that of Cuenca, the *Fiscalia Provincial de Tasas* judged some 10,000 cases of black marketing dealing with almost every imaginable commodity between 1941 and 1952.[417]

The complex nature of the black market trade means that any estimate of the amount of earnings from it will suffer from a large degree of uncertainty. In face of this uncertainty, the following estimate is only a rough indication of the total value of agrarian production. Furthermore, taking into consideration the dominant position of cereals within the crop structure in Cuenca, the following estimates only deal with the consequences of the black market for wheat, barley, rye and oats on the value of total agrarian output. Consequently, the estimates probably err on the lower side, which, however, only strengthens the conclusion that emerges at the end of the analysis.

While the SNT compiled an assessment of the relative size of the black market for wheat in the 1940s, no similar calculation exists for barley, rye and oats. However, at the beginning of the 1950s the Ministry of Agriculture published revised production figures for these three crops between 1939 and 1949. This was done because the original figures did not take into account the part of the production that was sold in the black market. In the calculation behind Table 6.16 it has therefore been assumed that the black market amounted to the difference between the original and the revised production figures for barley, rye and oats.[418]

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[415] Naredo (1981), pp. 91-92.

[416] See for example: Cámera Oficial de Comercio, Industria y Navegación de Bilbao: *Memoria Comercial* (1943-51); Cámera Oficial de Comercio, Industria y Navegación de La Coruña: *La economia coruñesa en los últimos años. Memoria Comercia de la Cámara Oficial de Comercio, Industria y Navegación de La Coruña de los años 1945 y 1946*, p. 20; Cámara Oficial de Comercio e Industria de Jaén: *Memoria Comercial y estudio sobre el desarrollo de los negocios en la provincia de Jaén* (1948-51); Cámara Oficial de Comercio e Industria de Zamora: *Zamora 1946-1950. Memoria comprensiva de los aspectos más interesantes de la provincia referido a dicho período*, pp. 261-262.

[417] Fiscalia Provincial de Tasas de Teruel: Fichas de los sancionados por la Fiscalía Provincial de Tasas y multas que se les han impuesto (1941-55).

[418] In the case of wheat, the official figures for the black market exceeds the correction on output statistics. It is therefore possible that the size of the black market also exceeded the size of the corrections in the cases of barley, rye and oats. Yet, if this was the case, the definition of the size of the black market as the difference between the original and the revised figures introduces a bias in the calculation that goes against the argument in the present thesis.

Unfortunately, it has not been possible to find local evidence on relative black market prices for these three cereals. Yet, Naredo found that in La Campiña del Guadalquivir in Southern Spain, normal black market prices paid to the farmers for barley and oats in the 1940s were approximately 4-5 times the official prices.[419] On the basis of the information, each column in Table 6.16 represents a distinct scenario, where different relative black market prices are attached to the same relative size of the black market. In the first column, the production sold in the black market carries no premium; in the second the premium is 100 percent premium; in the third, the premium is 200 percent; and in the last column, the premium is 300 percent.[420]

Table 6.16 demonstrates that the original statistics probably underestimate the value of total agrarian production by at least 25 percent between 1939 and 1949. Between 1950 and 1953, the error in the statistics was likely to be somewhat smaller as the importance of the black market declined during these years. In spite of this, it is hardly plausible that the total value of the agrarian production in real terms could have reached the pre-war level in the 1940s. This was the case even if the figures in Table 6.16 probably are on the low side, since only the black market for cereals has been included in the estimation of total value of agrarian production.

However, it was not changes in relative and absolute prices that alone caused the post-war decline in the value of total agrarian production. A significant part of this development was the consequence of the decline in the total cultivated area, which between 1939 and 1949 was only some 70 percent of the 1931-35 average.[421] Accordingly, the value of production per cultivated hectare when calculated in real terms was almost as high in the 1940s as it was in the pre-war years. In Chapter 3 it was argued that the average price for wheat received by the farmers when black market earnings were included was not very different from the pre-war level. It has been shown that the total value of agrarian output per unit of cultivated land remained almost stable from the 1930s throughout to the 1950s.

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[419] Naredo (1981), pp. 91-92. Naredo did not provide information on the black market price of rye.

[420] The relative black market prices have on purpose been set below those given by Naredo. If relative black market prices in Cuenca were comparable to those given by Naredo, the bias in the calculations in Table 6.16 will go against the hypothesis of the present thesis. Given that the corrections for the production of barley, rye and oats only covers the 1939-49 period, it has not been possible to estimate the size of the black market for these three cereals after 1949. However, it can be supposed that the post-1949 black market was of limited importance since the system of intervention was abolished gradually in the following years.

[421] Respectively 608,465 hectares between 1931 and 1935 and 424,554 hectares between 1939 and 1949 when corrections for the black market are taken into account.

Table 6.16: Index of value of agrarian production in Cuenca 1931-49 calculated in constant 1958 Pesetas. Original data, and data including the value of wheat sold in the black market, as well as various estimates of the value of barley, rye and oats sold in the black market.

Years	Original data.	Wheat as in Table 6.15	Wheat as in Table 6.15	Wheat as in Table 6.15	Wheat as in Table 6.15
	No kind of black	No black market premium	100% black market pre-	200% black market pre-	300% black market pre-
	market included.	for revised harvest of	mium for revised harvest	mium for revised harvest	mium for revised harvest
		barley, rye and oats.	of barley, rye and oats.	of barley, rye and oats.	of barley, rye and oats.
	Index	Index	Index	Index	Index
	(1931-35 = 100)	(1931-35 = 100)	(1931-35 = 100)	(1931-35 = 100)	(1931-35 = 100)
1931	74	74	74	74	74
1932	106	106	106	106	106
1933	96	96	96	96	96
1934	108	108	108	108	108
1935	117	117	117	117	117
1939	56	62	62	63	63
1940	51	58	58	58	58
1941	53	60	60	60	60
1942	N/A	N/A	N/A	N/A	N/A
1943	46	62	64	66	69
1944	48	67	69	71	73
1945	38	47	50	52	54
1946	59	79	82	84	87
1947	45	57	57	59	60
1948	39	50	51	53	54
1949	44	53	54	56	57
1939/49	48	59	61	63	65
Current prices deflated by deflator for "agriculture, fishing and forestry" from Prados de la Escosura (1995). See Section 3.2.1 for the use of					
constant Pesetas and the choice of deflator.					
Sources: Table 6.15; Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943); Ministerio de Agricultura: *Anuario*					
estadístico de las producciones agrícolas (1939-40, 1943-49, 1951).					

In fact, it is even possible that - because of black market earnings - the value of agrarian production per cultivated hectare was at its highest level in the 1940s.[422] These conclusions clearly suggest that the low level of production of wheat in the 1940s was not the result of movements along the supply curve.

The post 1953 recovery still did not seem to be sufficient to recover the pre-war output level. Although the cultivated area increased, the total value of agrarian production between 1953 and 1958 was in real terms still only 80 percent of the 1931-35 average.[423] This means that the recovery of the agrarian sector in Cuenca was still not complete 20 years after the end of the Civil War. This conclusion is also significant in relation to the discussion of whether the crisis in wheat production in the 1940s was the result of the system of intervention. The situation after 1953 did not lead to a quick restoration of pre-war levels of production, although there was a gradual increase in output. This occurred through an increase in the cultivated area, which was possible when work animals and, later, tractors became available, and in the yields as farmers gained better access to artificial fertilisers. Work animals, tractors and artificial fertilisers were all in short supply in the 1940s. This demonstrates once again that in these years the output of wheat was more dependent on shifts in the supply curve rather than a shift along the supply curve.

6.7: CONCLUSIONS

The evidence presented in this chapter demonstrates that in Cuenca in the 1940s the supply curve for wheat became steeper and shifted to the left at the same time. This was due to lack of work animals and artificial fertilisers, while two other potential factors - changes in the labour market and in the weather conditions - had little effect on output. Although cereals occupied a smaller relative part of the total cultivated area after 1939, this was not because of an increase in the extension of other yearly or perennial crops. On the contrary, the post-war decline in the area cultivated with

[422] The absence of black market earnings from other crops, as well as the low estimate of the relative size of the black market for barley, rye, and oats, as witnessed in Table 6.16 further strengthen the argument.

[423] The average total value of agrarian production in the province was 2,913 million pesetas between 1931 and 1935, and 2,343 million pesetas between 1953 and 1958. The maximum in this last period was 2,716 million pesetas in 1957. All prices in constant 1958 pesetas, obtained by deflating current pesetas by producer price index for "agriculture, forestry and fishing" from Prados de la Escosura (1995). All data from Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* from the respective years.

wheat and other cereals was primarily the consequence of the abandoning of the cultivation of land altogether.

In light of the developments in the value of production per unit of land, voluntarily abandonment of land does not appear to be an economically rational decision. Total value of agrarian production calculated in real terms was significantly smaller in the 1940s than before the war. This even holds when black market earnings were included. However, this was principally the result of the decline in the cultivated area, and the post-war value of agrarian output per unit of land was similar in the 1940s to that of the 1930s. Hitherto, the analysis of black market earnings has showed that large-scale farms were able to increase profits substantially in the 1940s.[424] Yet, the evidence here proves that in an area of small-scale farms like Cuenca, black market earnings were also important.

In addition to this, the value of agrarian output per unit of land in the 1950s also stayed at a level close to that of the 1940s. Nevertheless, wheat output increased because of a larger cultivated area and higher yields. Consequently, higher official prices were not sufficient on their own to increase output in the 1940s, nor were they necessary for increasing output in the 1950s. Yet, a raise in the prices paid to farmers would have eased the economic condition for the small-scale farmer.

The best solution to the production crisis would have been an increase in either the availability of work animals or fertilisers. However, this was not only beyond the control of the farmers but also to a large degree beyond the capabilities of the government. The result was that the average small-scale farmer was worse off in the 1940s than before the war. Hence, farmers were forced either to enter the black market and/or to accept a deterioration of their living standards.

Finally, the analysis showed that for the individual farmer the economic situation in the 1940s then depended to a large degree on luck. First, the fortunes of an individual farmer were heavily dependent on the continued good health of his work animals. Second, by dealing in the black market, a farmer risked being fined and/or suffering the confiscation of a part of his production. In the cases where the farmers lacked the necessary luck regarding work animals and black market earnings, they faced the risk of acute proletarianization.

For the individual farmer, the shift from a system of intervention in the 1940s to a more liberalised market in the 1950s could lead to both an improvement and a worsening of his economic conditions. The outcome would depend on how he had

managed to adapt or persevere through the peculiar situation in the 1940s and the early 1950s. Again, after 1950, the access to work animals would be the crucial factor in the process of improving his economic condition.[425]

The increase in the availability of work animals and fertilisers after 1950 resulted in small-scale farmers returning to a way of cultivation that was close to the pre-war practice. The end of the 1950s and the beginning of the 1960s also witnessed a further increase in the use of fertilisers and machinery. However, this latter development was strongly linked to farm size with a near-absolute minimum of close to 50 hectares. This means that while the small-scale farmers after the mid 1950s found themselves in a situation that resembled their pre-Civil War status, the large-scale farmers were already moving on to the next stage of economic modernisation.

[424] See for example Naredo (1981).

[425] For the small-scale farmers, an increase in the cultivable area would be the most obvious way to improve their economic situation, given that both machinery and chemical fertilisers were still mainly used by large-scale farmers.

CHAPTER 7: THE STABILITY OF THE OUTPUT OF OLIVE OIL BEFORE, DURING AND AFTER THE CIVIL WAR: THE CASE OF JAÉN

7.1: INTRODUCTION

The production of olive oil in the 1940s was much closer to the pre-war level than was the case for wheat. This happened in spite of the similarities of the systems of intervention that were in force for the two crops during the period. The province of Jaén in Andalucía has been selected as a case study to examine why the olive sector experience differed. Throughout the 20th century, Jaén was the province with the largest average production of olive oil in Spain. Furthermore, in the post-war years output remained fairly close to the pre-war level. These conditions, together with the fact that both small-scale and large-scale farmers grew olives, make the province a suitable object for the analysis of the relationship between agrarian policy and olive (oil) production in the 1940s.[426]

It was an important feature of the market for olive oil in the 1940s that the state set a price below the equilibrium. This led to excess demand and the subsequent creation of a black market for olive oil, which the state was not able – or willing – to suppress. The purpose of the present chapter is to analyse how the farmers reacted to this situation and what was the economic outcome of their behaviour.

The following evidence creates a picture that is significantly different from the depressed situation that we saw in the case of wheat farmers in Cuenca. The difference is due to several factors, with the first being that in the 1940s the possibilities for olive oil production in Jaén were much better than those for wheat in Cuenca. This was mainly the result of the fact that the stock of olive trees survived the Civil War relatively unhurt in Jaén. The production capacity was therefore not restricted in the same way as in the wheat sector in Cuenca was, which suffered from severe handicaps caused by the decline in work animals in connection with the war.[427] Another factor that favoured the maintenance of pre-war levels of olive oil production was the limited use of artificial fertilisers in the sector. The decline in the availability of this commodity in the 1940s had therefore a very limited influence on output.

[426] See Sections 5.2.2 and 5.3.2 for the social composition of the agrarian population in Jaén.
[427] See Section 3.3 for the availability of work animals at the national level and Section 6.4.2 for the work animal situation in Cuenca.

Consequently, the shift of the supply curve to the left, which was responsible for the post-war decline of wheat production in Cuenca, did not take place in the case of olive oil in Jaén. On the contrary, the sector experienced a period of stability in production throughout the 1940s and in the early the 1950s.

Although there was no shift of the supply curve to the left, the relative stability of production was not a foregone conclusion as the state set the price paid to the farmers below the equilibrium. There were three factors that counter-balanced the negative effect that this could have had on production. The first was that the prices in the black market were higher than those in the official market. The second was that not only did the official prices decrease in real terms, but wages in the agrarian sector did as well. This factor was quite important as wages accounted for 40 to 50 percent of the costs of producing olives. Moreover, wages were a larger part of total costs in olive production than in wheat production. Finally, the fact that the price elasticity of supply of olive oil in the 1940s was very small in the short- and medium-term further restricted the effects of the official price policy on production.

Generally, the positive economic outcome of black market earnings and declining real wages increased with the size of the farm. This occurred because, firstly, the larger farms often had more effective ways of controlling the commercialisation of their produce, and secondly, because the larger the farm, the larger the relative importance of wages in the cost structure. Consequently, it appears that the 1940s were a period where income levels of the olive farmers were at least comparable to the immediate pre-war years. For the large-scale farmers the 1940s might actually have been an economic golden age, in spite of state intervention. This is confirmed by the expansion of the productive area in the 1950s, which was the result of decisions taken by the farmers in the 1940s. The stability of the productive area in the 1940s does not reflect the economic situation of the farmers in the decade, as the size of the productive area was the outcome of the economic conditions before the Civil War.

These results support some of the findings from Chapter 4. Most important is that, with the exception of the first few years after the end of the war, the intervention in the olive sector was unnecessary and harmful for the normal working of the market. Although an abolition of the system of intervention would not have increased the production in the short run, it would have improved the transparency of market conditions. It therefore would have been easier for the farmer to foresee whether expanding production would be profitable. The consumers would also have benefited

from less market distortions since the hassle of the black market could have been avoided. The short-term influence of the system of intervention on the level of output was therefore limited, but its distribution was negatively influenced. It is not possible to say whether the system of intervention was detrimental for the long-term expansion of production as well, since this involves the answering of two difficult questions. First, when black market earnings, paying of bribes, fines, and so on are included, would net earnings have been higher in the absence of state intervention? Second, if there were no intervention, would farmers have anticipated higher returns to the investment in new olive trees? The answer to the second question is only partially dependent on the response to the first as the answer would also have to take into account the farmers' risk willingness in relation to black market trade.

Nevertheless, the olive sector in Spain in the 1940s was an example of state failure, contrary to the case of the wheat sector which was an example of a social market failure. This fact is significant for the interpretation of the consequences of the post-war agrarian policy. The main point is that the understanding of the conditions in the agrarian sector becomes divided in sub-sectors according to crops and social structure. It is of special importance that the conditions in the agrarian sector in the 1940s are not only seen as the outcome of the trans-sectoral price policy. It is also necessary to analyse the specific conditions in each sector, including technical development, the dependency on off-farm inputs and capital goods and so on.

7.2: THE PREDOMINANCE OF OLIVES IN THE CROP STRUCTURE IN JAEN BEFORE THE CIVIL WAR

In the last five years before the Civil War, the cultivation of three crops – olives, wheat, and barley - totally dominated the agrarian sector in the province (Table 7.1). The 330,000 hectares cultivated with olives in Jaén equalled close to 16 percent of the Spanish total, and thereby Jaén was the province with the largest extension of the crop before, during, and after the Civil War.[428]

[428] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35). Note that the expansion has continued practically ever since, given that in 1961, some 378,000 hectares were grown with olives, and that figure had further grown to some 463,000 hectares in 1995. In this last year, the crop covered 65 percent of the cultivated area in the province: Ruiz et al. (1995), p. 10.

Table 7. 1: Average land use and relative value of production in Jaén, 1931-35.

Crops	Average land use (Ha.)	Average land use (%)	Average relative value of production (%) [1]
Olives	330000	56,9	48,2
Wheat	106760	18,4	21,2
Barley	92186	15,9	13,2
Other cereals	10529	1,8	1,3
Leguminous plants	26347	4,5	3,2
Others	14032	2,4	13,0
Total [2]	**579853**	**100,0**	**100,0**
1) Value in current prices changed to constant 1958 pesetas by deflator for "agriculture forestry and fishing" from Prados de la Escosura (1995). Average value calculated on basis of constant 1958 pesetas. See Section 3.2,1 for the use of real prices and the choice of deflator.			
2) The total includes cultivated land only.			
Source: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).			

In general, the expansion or contraction of the cultivated area is expected to be a slow-moving process. This is due to the nature of the olive tree, which requires 15 years before it starts producing and a further 35 years to reach its full potential. It is then not surprising that the amount of land dedicated to olives remained stable between 1931 and 1935.

Within a somewhat longer perspective, the province had experienced a notable expansion in the cultivation of olives since the beginning of the 20th century. This development was not restricted to Jaén as the sector had expanded substantially in other parts of Spain as well after passing through a period of crisis in the late 19th century.[429] The extension of olive farming in Jaén was partly the result of this general trend, but was also due to the comparative advantage of the province in climatic conditions.[430] This advantage meant that the province of Jaén contained 16 percent of all land dedicated to olive farming but produced 24 percent of total oil output between 1931 and 1935.[431]

The expansion in the first third of the 20th century was accompanied by a simultaneous but limited modernisation of the production process. This included the introduction of more effective ploughs and, although only on a very limited basis, artificial fertilisers.[432] At the time it was believed that only nitrogenous fertilisers could have any positive impact on yields,[433] but even as late as 1956 these were still

[429] This general expansion was due to a combination of protectionism, the disappearance of imports of copra from the Philippines after the loss of the colonies in 1898, and the boost of exports in relation to the First World War. The relatively late introduction of the technology of refining in Spain, which did not happen until 1920, further restricted the competition from other sorts of vegetable oils: Tió (1982), p. 49.
[430] See Section 5.3.2, p. 138.
[431] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).
[432] Hernández Armenteros (1998), pp. 212, 214; Zambrana Piñeda (1987), pp. 128-129.
[433] Ruiz et al. (1995), pp. 57-65.

not commonly used in Jaén. In this year the *Sindicato Nacional del Olivo* - the branch of the official "vertical trade unions" that organised the olive sector – reported that fertilisers were mainly employed with olives grown on irrigated land. Furthermore, dung was still the principal fertiliser.[434] The mechanisation of production had to await the introduction of tractors in the 1950s and the invention of "tree-shakers" for the collection of the fruit in the late 1960s and early 1970s.

Beside the improvements in cultivation as such, the growth in output before 1936 also coincided with a betterment in the elaboration of oil. This was especially the case with the diffusion of the hydraulic press, which increased in numbers from 232 in 1915 to 1,060 in 1930.[435] The advantage of the hydraulic press was that it increased pressing capacity, whereby both the quality of oil and the industrial yields improved.[436]

7.3: THE LIMITED INFLUENCE OF THE CIVIL WAR ON OLIVE PRODUCTION

Throughout the Civil War almost the whole of the province of Jaén was located in the Republican rearguard and therefore spared battlefield destruction.[437] The war-time experience does not appear to have been a disaster for the agrarian sector in Jaén. The *Diputación Provincial* wrote a report in 1939 saying:

> The damages caused by Marxist domination exist. With respect to private property, which had to support the abuses, lack of cultivation and attention, incompetence and the hateful and useless management of the red hordes, losses of great consideration were caused. Nevertheless, if we analyse the damages from the point of view of the national economy, these losses are only of a relative importance.[438]

Damages caused directly by the war were found in only 13 towns and villages, with the value of destroyed assets being around 19 million pesetas excluding damages to churches, monasteries and so forth.[439]

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[434] Sindicato Nacional del Olivo (1956), p. 35.
[435] Hernández Armenteros (1998), p. 217.
[436] The industrial yields are the amount of oil obtained per unit of fruit.
[437] Diputación Provincial de Jaén and Colegio Universitaria de Jaén (1982), p. 512. The exceptions from the general Republican control were the areas around Alcalá la Real and Porcuna in the western part of the province.
[438] Diputación Provincial de Jaén: *Memoria de la Diputación Provincial de 1939,* pp. 36-37.
[439] Diputación Provincial de Jaén: Ficha conteniendo los datos relativos a la situación de la corporación en el período de tiempo comprendido entre el 18 de julio de 1.936 y el 31 de diciembre de 1.939, que se remite en cumplimiento de lo ordenado en la circular del Iltmº Señor Director General de

Apart from direct warfare, the Civil War also triggered a collectivisation process in the province that affected over 850,000 hectares,[440] equalling close to 66 percent of the exploited land between 1931 and 1935.[441] This was relatively much more than in Cuenca, where only about 26 percent of the exploited area was affected. In spite of this, Tables 6.4 and 7.2 show that the relative decline in the cultivated area with the main crops in relation to the Civil War was almost 40 percent in Cuenca but only 11 percent in Jaén.[442] This was caused by differences in the crop structures. In both provinces, the area cultivated with olives remained stable, and at the same time, the relative decline in area cultivated with yearly crops was at the same level.[443] Consequently, the difference originated in the relative importance of olives within the crop structure. This match the prevailing national trend that lands devoted to yearly crops were affected more by the Civil War than those planted with perennial crops.[444]

Table 7. 2: Civil War influence on the area cultivated with the main crops in Jaén, 1931-40.

Crops (All figures in hectares)	1931-35 average cultivated area	1936 cultiv. area	1937 cultiv. area	1938 cultiv. area	1939 cultiv. area	1940 cultiv. area
Wheat	106760	105800	87400	N/A	72281	76888
Barley	92186	89400	57600	N/A	38519	55536
Olives [1)]	330000	330000	321396	N/A	336200	336200
Leguminous [2)]	25666	25495	21010	N/A	25250	39301
Total	**528946**	**525200**	**466396**	**N/A**	**447000**	**468624**
1) Both productive and non-productive land.						
2) Include lentils, vetch, chickpeas, broad beans, peas, and green beans.						
Sources: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40);						
Ministerio de Agricultura: *Estadística de Cereales y Leguminosas* (1936, 1937); Ministerio de Agricultura:						
Estadística de la Producción Olivarera (1936-37, 1937-38).						

All in all, the olive sector appears to have escaped the war years relatively unhurt. Not only did the cultivated area remain stable, but output was greater in 1937, 1938, 1941 and 1942 than the average for the years 1932-36. Given the strong need for labour in the olive harvest, it is also important that deaths, exiles, or imprisonment did not lead

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Administración Local de fecha 11 de marzo de 1.940, and Diputación Provincial de Jaén: Memoria de la Diputación Provincial de 1939, p. 38. The locations that suffered damages were Alcalá la Real, Andujar, Arjona, Arjonilla, Castillo de Locubin, Frailes, Higuera de Calatrava, Jaén, Lopera, Marmolejo, Martos, Porcuna and Santiago Calatrava.

[440] Garrido González concluded that the collectivisation affected 852,499 hectares while according to the *Instituto de Reforma Agraria* the figure was 855,655 hectares: Garrido González (1979), pp. 41-56, and Carrión (1973), p. 135.

[441] See Section 6.3, p. 151 for the potential negative effects of the collectivisation and de-collectivisation process. See Cobo Romero (1993) for the political and social situation in Jaén during the Civil War.

[442] The data in Table 7.2 does not include corrections for the black market influence on the official data for the cultivated area. The figures are therefore only indicative for the post-Civil War years, but this is of limited importance for the general picture.

[443] The decline in the land dedicated to cereals was only partially compensated by an increase in the cultivation of leguminous plants especially chickpeas.

[444] See Chapters 3 for the development for the main yearly crops and Chapter 4 for that of olives at the national level.

to a shortage of workers in the agrarian sector. As pointed out earlier, the official data on total population show an increase of some 80,000 persons between 1930 and 1940.[445] However, the figure for 1940 is probably too high, and this is also likely the case for the official eight percent increase in the number of males employed in the agrarian sector between 1930 and 1940.[446] The seasonal character of the need for labour in the olive sector meant that a scarcity of workers would be visible in the size of the harvest. The better-than-average harvests in 1937, 1938, 1941, and 1942 would indicate that sufficient labour was available.[447]

7.4: THE LEVEL OF OLIVE OIL PRODUCTION IN THE POST-WAR PERIOD

It follows from the above description that the post-war years were not a "recovery period" in the case of olives, but rather an example of continuity. In fact, the average production of olives used for oil between 1940 and 1951 was 89.3 percent of the 1932-36 average.[448] This decline was due to the fact that the yields between 1940 and 1951 were 16 percent lower than the 1932-36 average.[449] It is important to notice that this was to a large degree the result of a slightly unusual situation in 1949-51, when there were three relatively bad harvests in a row (Diagram 7.1).

The cultivated area continued to increase in spite of the Civil War.[450] This was possible because the dependency on work animals was much less in the olive sector than in the wheat sector. The only major change after the Civil War occurred between 1951 and 1952 when the official statistics report an unusually large increase.

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[445] See Section 5.2.1, p. 123.

[446] From around 149,000 in 1930 to about 160,000 in 1940: *Censo de la Población* (1930, 1940). See Section 5.2.1, p. 124 for the general problem of the reliability of the 1940 census. The figures for Jaén were probably also inflated by the influx of refugees from other parts of Andalucía.

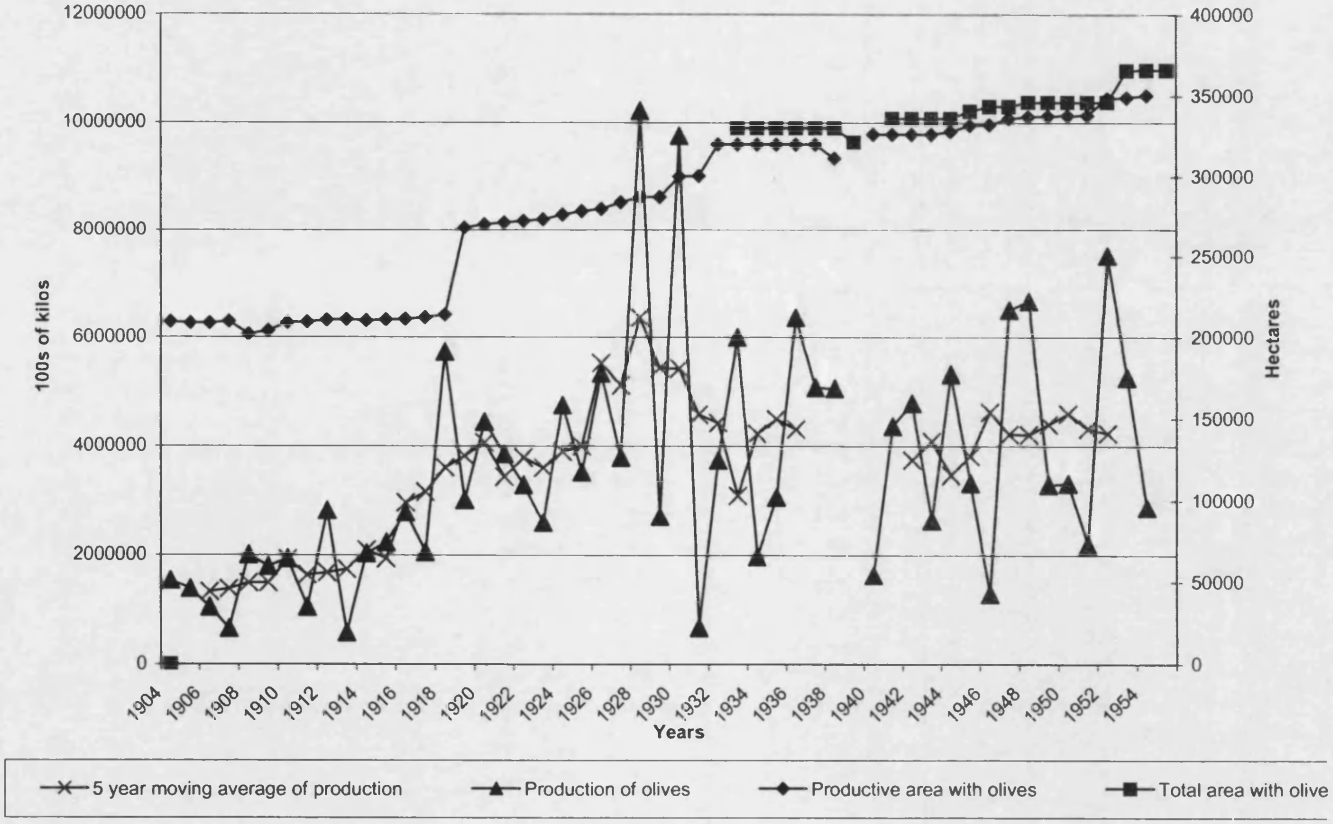
[447] The olive harvest takes place between late December and March, which means that it does not coincide with the harvest of the cereals. Due to the dominant position of olives, a labour shortage would be most acutely felt for this crop.

[448] It is important to remember that the analysis in Chapter 4 showed that in a number of provinces the statistics on production and cultivated area with olives appeared very reliable. These were subsequently used to estimate a correction of the data for a number of provinces where there seemed to be a serious problem of underreporting. Given that Jaén was in the first group, the original statistics on production have been accepted. Obviously, this is not the same as saying that there was no black market for olive oil in Jaén, but rather that the authorities made at least probable estimates of the size of the production.

[449] The agrarian and industrial yields had grown since the beginning of the 20th century because of a general improvement in the cultivation of olives and the elaboration of oil (Section 7.2). Yet, there were technical limits to the growth that could be obtained with the available resources, and when these were reached in the early 1930s, the yields remained stagnated in the remaining decades.

[450] The exception from the continuity in the productive area that we see between 1918 and 1919 appears to be the result of defective statistics before this last year.

Diagram 7.1: The development of the production of olives, the total area covered by olives, and the productive area with olives, 1904-54.



Sources: Grupo de Estudios de Historia Rural (1991), Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-53)

This points to the possibility that there could have been an underestimation of the land under cultivation in the 1940s.[451] However, even if this was the case, the overall picture would not be seriously affected. According to the official figures, the expansion in productive land between 1951 and 1952 was only some 10,000 hectares, equalling an increase of three percent.

The point of departure is therefore radically different from what we saw earlier in the case of cereal production in Cuenca. This is not only the result of dealing with two different crops, but also because the development was different for wheat in Cuenca and Jaén. In the case of wheat cultivation in Cuenca, we saw that the post-war decline in production was the result of a shift of the supply curve to the left and a simultaneous twist of the curve, so it became steeper. This was due to the interruption of the availability of fertilisers and a reduced number of work animals.[452] Contrary to this, the olive sector in Jaén almost kept up the pre-war production levels. At the same time, the wheat sector in Jaén also performed much better than in Cuenca. According to contemporary official statistics - without the necessary alterations for the black market – the average wheat production between 1939 and 1952 was close to 80 percent of the pre-war average.[453] In fact, it is possible that if the statistics are corrected to account for black market influence, the average wheat production in Jaén in the 1940s was very close to that of the pre-war years. This further indicates that the price policy of the 1940s in itself did not necessarily lead to a very large reduction in wheat output.

7.4.1: The maintenance of the stock of work animals

Given the perennial nature of olive trees, changes in the number of work animals would be of a lesser importance for production than it would be for yearly crops. Still, the lack of work animals might have a minor negative effect on the yields if less ploughing between the trees led to insufficient irrigation.

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[451] A possible argument for this interpretation is that the figures given by the Ministry of Agriculture for 1952 are very close to the figures for 1945 in a data set collected by the CGAT. Comisaria General de Abastecimiento y Transporte: Mapas de abstecimiento (Provincia de Jaén, 1945). CGAT's figures were based on local information, which were normally gathered by the municipal secretary, while the official figures used in Diagram 7.1 were gathered by the state bureaucracy. It is therefore not easy to say whether the 1951-52 increase in the area cultivated with olives found in the official data reflects a greater accuracy or an actual increase.

[452] See Chapter 6.

[453] This was the result of that after 1941 the cultivated area was always at least 86 percent of the 1931-35 average, and that between 1939 and 1952 the average yields reached some 90 percent of the pre-war

Although Table 7.3 shows that the statistics on the number of mules between 1933 and 1952 are conflicting,[454] we are left with the impression that the Civil War had a very limited influence on the number of animals.[455]

Table 7. 3: Number of mules in Jaén, 1933-50.

Years	Animals older than 1 year	Animals older than 3 years	All animals
1933	N/A	31800	38100
1940	46362	40544	47933
1942	34990	30761	36507
1948	39132	N/A	N/A
1950	41340	N/A	N/A
Sources: Ministerio de Agricultura: "Tres estúdios económicos"; Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-45, 1950, 1953-54).			

The small decrease in the number of mules makes it plausible to conclude that the effect on post-Civil War yields – at least in this respect - was very small. This, together with the stability of the area cultivated with olives, show that important parts of the capital stock in the olive sub-sector in Jaén suffered significantly less than the cereal-sector in Cuenca. Furthermore, the difference between the number of mules in Jaén and Cuenca coincides with the above-mentioned difference in the cereal-cultivated areas in the two provinces.[456] This supports the conclusion from Chapter 6 that the number of work animals was an external constraint on the recovery of the cultivated area in Cuenca after the Civil War.

7.4.2: The limited influence of fertilisers and weather conditions on post-war yields

In Chapter 6, we discovered that the lack of artificial fertilisers in the post-war period had a negative affect on the yields of wheat in Cuenca. This factor does not seem to have had any significant influence on the yields of olives in Jaén in the 1940s, for the simple reason that artificial fertilisers were not often used for olives in the pre-war

figure. Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-52)

[454] The problem is that the data for 1940 look suspicious, as they report an increase of close to 25 percent compared to 1933 for both "All animals" and "Animals older than 3 years". This hardly seems likely due to the general lack of work animals in Spain. Note that mules were the preferred animals for olive cultivation since they moved easier and faster between the trees: Jiménez Blanco (1986b), p. 301.

[455] For the discussion of the total number of mules in Spain and the possibilities of increasing this number, see Section 3.3.

[456] There is no easy explanation for the different development of the number of work animals in Cuenca and Jaén, since both provinces were located in the Republican rearguard throughout the war. One would suspect that the "drafting" of animals would be similar, but this might not have been the case.

years.[457] When they were used, it was mainly on large-scale farms. On the rest of the farms, the principal fertiliser was manure, or eventually, the planting and ploughing down of leguminous plants between the trees. However, even these more traditional methods were not generally employed on small-scale farms.[458] As no other significant inputs were used in the olive sector in the pre-war period, a lack of inputs would not have caused a significant decline in the post-war yields.

On the other hand, it is possible to establish a relationship between the weather conditions and the olive harvests. This is the case both when precipitation is computed between October and April and when it is computed between October and September (Table 7.4).

Table 7. 4: Correlation coefficient between precipitation and yields of olives in Jaén, 1944-66

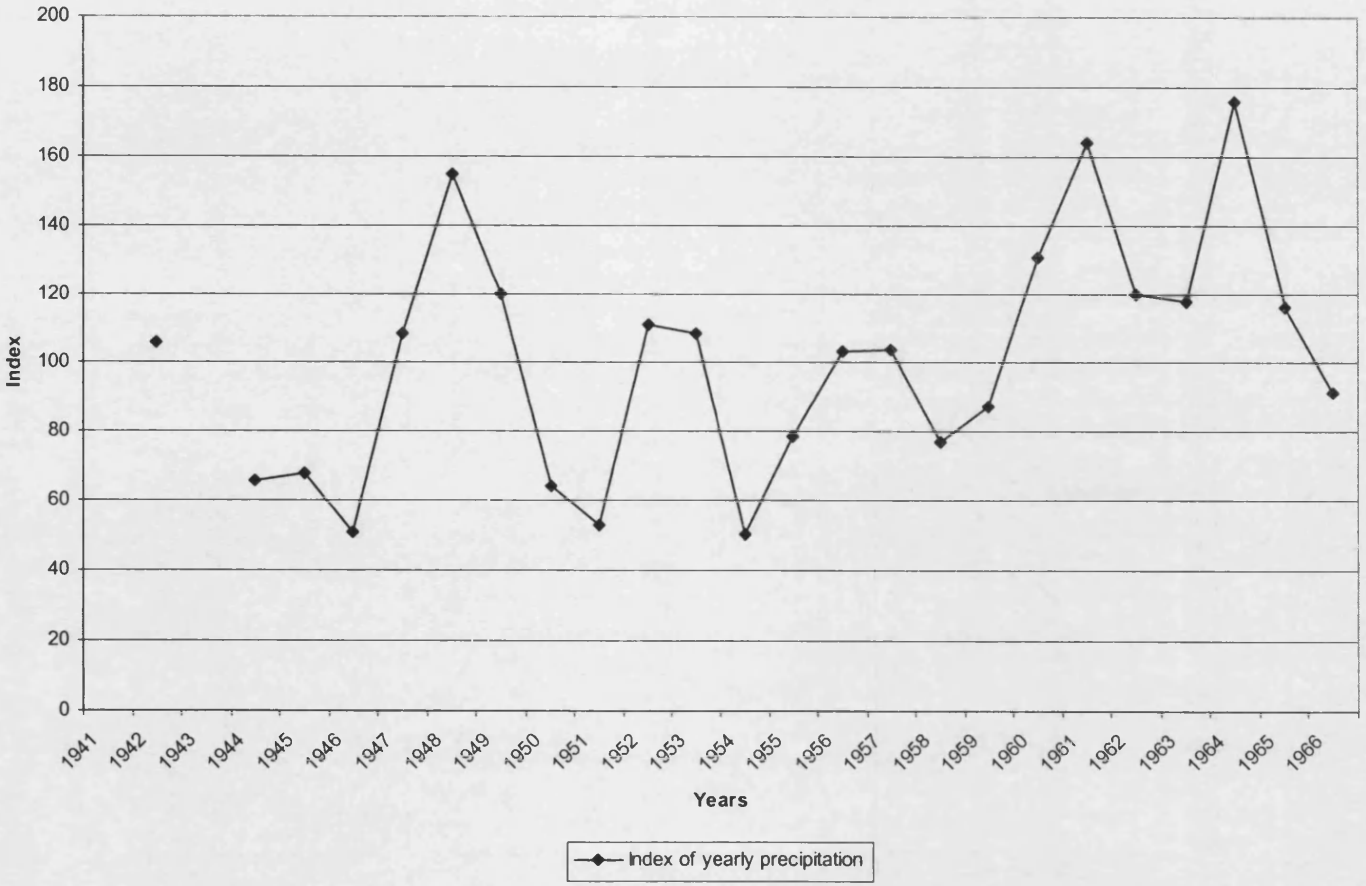
Years	October - April	October - September
1944-55	0,71	0,75
1944-60	0,75	0,79
1944-66	0,69	0,74
Source: de Andrés Cantero (s.a), pp. 7, 13-35; Own elaboration.		

This is of some importance since yearly precipitation in the mid 1940s and around 1950 was less than the 1901-30 average (Diagram 7.2). Consequently, the difference between the yields in the pre- and post-war periods seems to be explainable through the level of precipitation.

When taken as a whole, the results are very different what we saw for wheat-growers in Chapter 6. On one side, weather conditions appear to have been the main cause for a small decline in the yields of olives in Jaén after the Civil War. On the other side, it was lack of work animals and fertilisers that was the reason for the relatively much larger decline in wheat output in Cuenca.

[457] See Section 7.2, p. 189.
[458] García Romero (ed.)(1948), p. 58.

Diagram 7.2: Index of yearly precipitation in Jaén, 1942-65 (1900-30 average precipitation = 100)



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943-66)

7.5: THE INCOME NEUTRALITY FOR THE FARMERS OF THE COMBINED DEVELOPMENT OF PRODUCTION, OFFICIAL PRICES, BLACK MARKET PRICES, AND WAGES

This section deals with the question of whether there was a movement along the supply curve of olive oil due to changing prices. While the official prices paid to farmers suggest that this indeed was the case, three other factors worked towards the opposite effect. The first was the influence of earnings from the black market, where prices were higher than in the official market. The second factor was that, when compared to the pre-war situation, wages rose significantly less fast than the official price of olives and olive oil. Finally, more workers were paid on a piecework basis after the Civil War, and this lowered the costs per unit of harvested fruit. Everything else being equal, the last two elements should cause a shift of the supply curve to the right. The expansion of the productive area in the 1950s supports this interpretation.

7.5.1: The level of the official prices paid to the farmers in the 1940s

As a result of state intervention official oil prices in the 1940s were on average 17 percent below the pre-war level when calculated in real terms.[459] Although the farmers reacted by extracting more oil from the fruit, this was not sufficient to maintain the gross value of production in real terms. Here the official statistics show that in the 1940s the average gross value of production was around 20 percent lower than before the war. The worst situation was reached in the mid 1940s with a 30 percent decline a result of the development of prices rather than a decline in the average production.

We have seen that the CGAT set prices only for olive-based products, and it appears that the official price received by the farmers depended directly on the official market prices for oil.[460] Unfortunately, the data for the price of olives are incomplete, so any conclusions based on them must be treated with some caution. Diagram 7.3 shows three different official prices in real terms. The first is the price for the standard oil type *Andaluz corriente* (Normal Andalusian oil) in Barcelona before the war.[461]

[459] See Section 4.4 for details on the post-war system of intervention in the olive sector. See Section 3.2.1 for the use of real prices and the choice of deflator.
[460] See Section 4.4.
[461] Barcelona was Spain's major trading centre before the Civil War, and the practice was to quote the price of olive oil using the Barcelona figure.

The second is the price received by farmers for olives in the 1940s, and the last is the official price for olive oil in Jaén.

In the years immediately before the Civil War, we find that the price for olive oil in Jaén and the price for the *Andaluz corriente* variety in Barcelona followed each other closely, and this is as expected.[462] Zambrana Piñeda showed that the price for olive oil in Spain was a product of prices in the international markets, and in those the price of olive oil depended on the level of prices of other vegetable oils.[463] This changed after the Civil War when the economy went from a situation where the sector followed the international market conditions to one where the state set prices.

Looking at the development of real olive oil prices in Jaén, it is clear that in most of the 1940s it was at a lower level than before the war.[464] Consequently, for the whole of the 1940-51 period, the average real official price paid to the farmers in Jaén was 17 percent lower than the 1932-36 average. This has to be viewed in light of the fact that between 1931 and 1935, the price of olive oil had already fallen by some 10-12 percent in real terms when compared to the previous decade.[465] With declining real prices of olive oil, producers reacted by extracting about 10 percent more oil from their olives in the 1940s than in the last 15 years before the war.[466] This was detrimental to the quality of the oil, but a logical consequence of a price policy that operated on a one-quality/one-price system.

Diagram 7.4 shows the gross value of both the olives and the olive oil produced in Jaén. As can be seen, this fluctuated much more violently than the unit price, because of the volatility of the yields of the crop. When calculated as a 5-year moving average, the gross value of the olive oil production reached its lowest level in 1944-45. Although this decline is slightly less than what happened in the unit price of olives, it is still a decrease of about 30 percent when compared to the 1932-36 average.

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[462] Apparently, there is an error in the price for olive oil in Jaén in 1930. There are no available local price data before 1930.

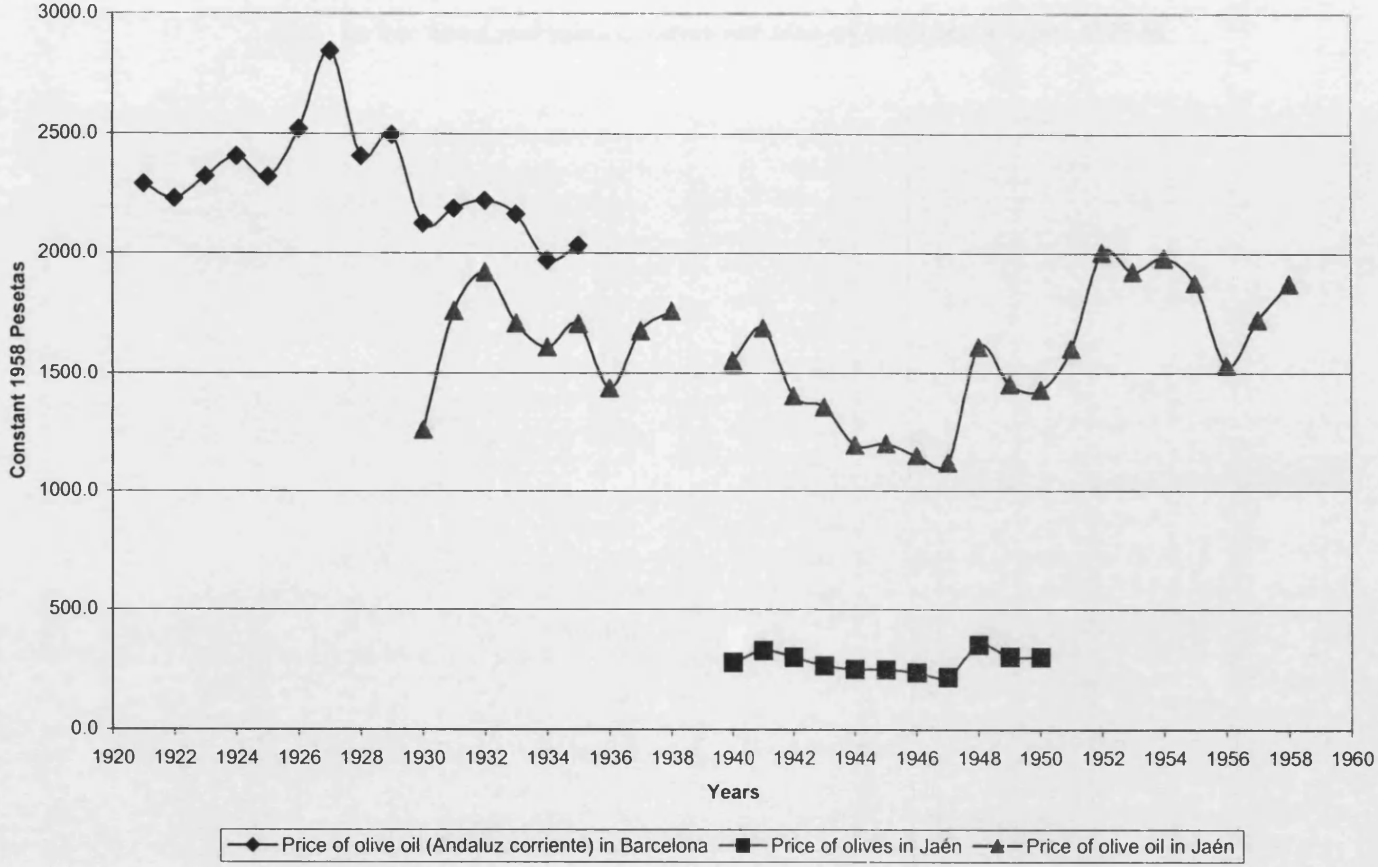
[463] Zambrana Piñeda (1987), pp. 298-307

[464] See Section 3.2.1 for the reason for the use of constant pesetas, as well as for the choice of using the deflator for the "agriculture, forestry and fishing" from Prados de la Escosura (1995), for the calculation of real prices.

[465] That is when calculated from the price of *Andaluz corriente* in Barcelona.

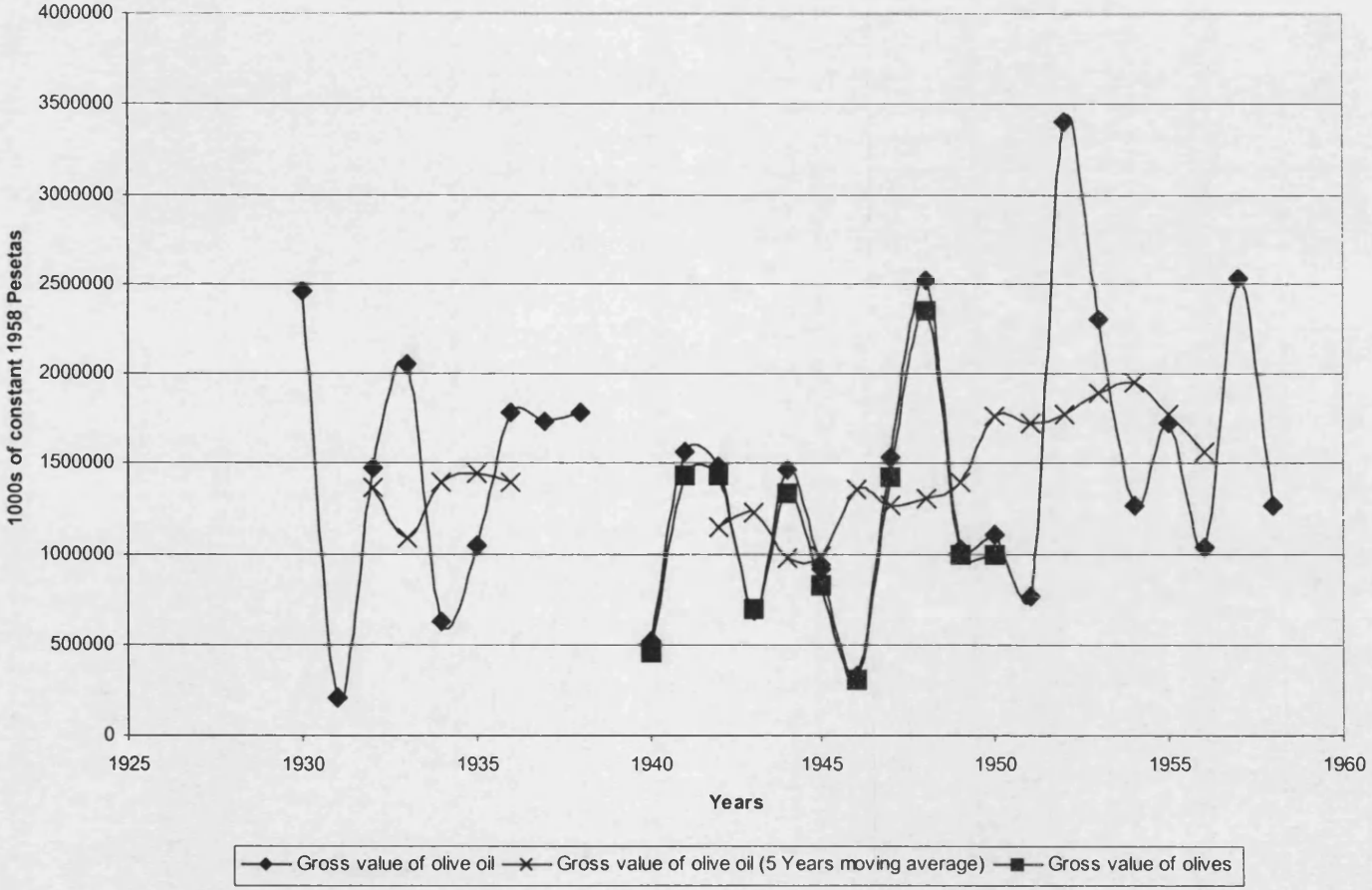
[466] Calculation based on data from: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-50); Ministerio de Agricultura: Informes 5R (1941-42); Zambrana Piñeda (1987), p. 424.

Diagram 7.3: Official prices in real terms of olive oil (Andaluz corriente) in Barcelona, and of olive oil and olives in Jaén, 1922-60.



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-58), Tió, C. (1982).

Diagram 7.4: Gross real value of olives and olive oil produced in Jaén, 1929-58



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1929-35, 1939-40, 1943-58)

The close connection between the gross value of olives and that of olive oil is of great help for those years where there are no price data for the formers. In this situation, it is possible to use the development in the gross value of olive oil as a proxy for the gross value of olives. The conclusion is that state intervention led to a close to 17 percent decline in real terms in official prices received by olive farmers. Furthermore, the average gross value of olive and olive oil production in Jaén was 20 percent lower than in the 1932-36 period.

7.5.2: The effect of black market prices on farm income

The decline in the official price for olive oil was at least partly compensated for by earnings from the black market. Consequently, the gross value of production of olive oil in Jaén in the 1940s remained on a level similar to the pre-war situation. It is more difficult to say whether the same held true for the output of olives. However, the parallel development of the prices for olives and olive oil in the legal markets before and after the war indicates that this was the case.

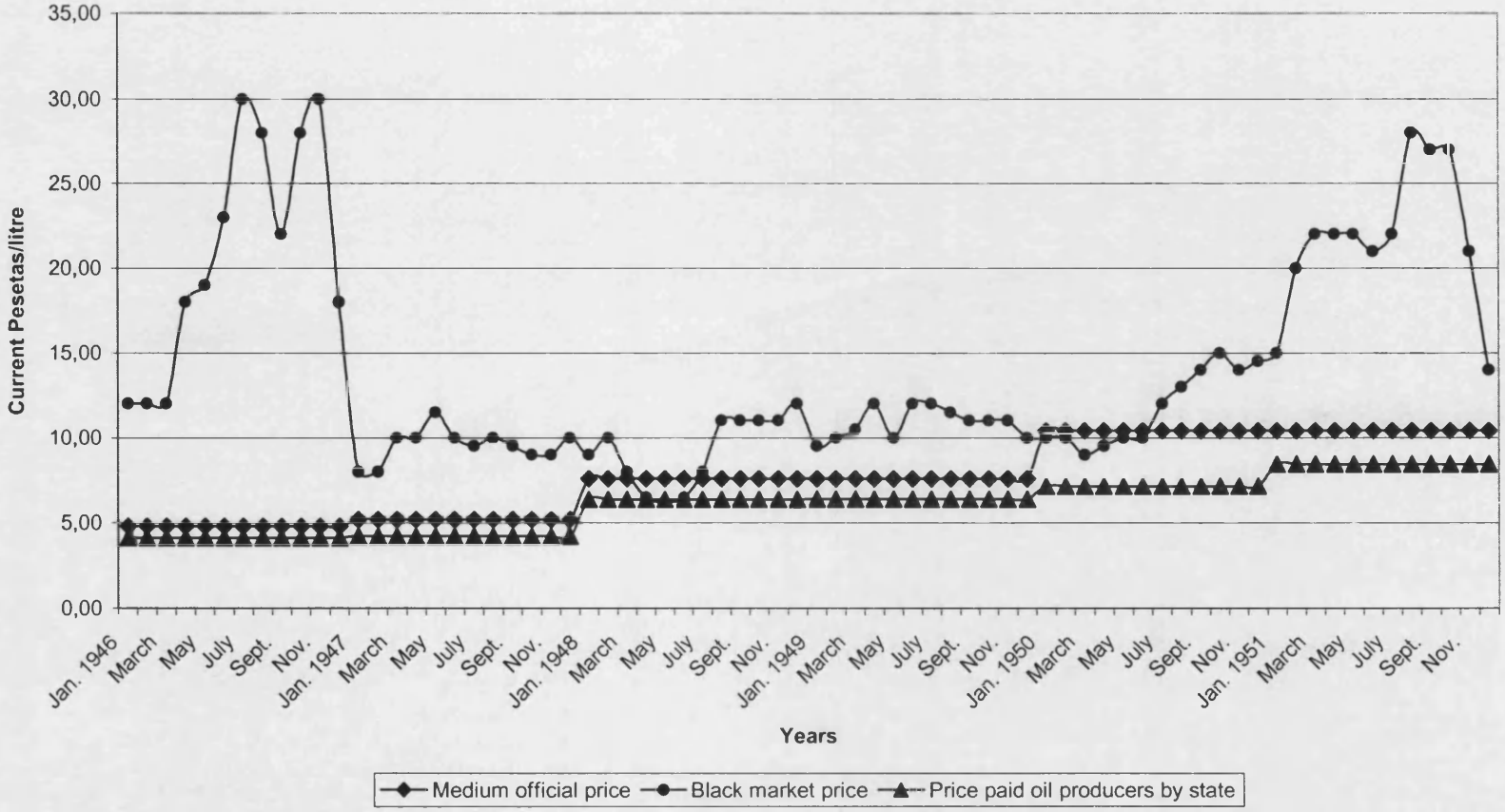
Concerning the level of black market prices for olive oil in Jaén, we do not possess data at the level of producers. Yet, at the level of the consumer monthly data exist for the last 6 years before the abolishment of the rationing system, and these are shown in Diagram 7.5. Although the data do not cover the whole period under consideration, some conclusions can be drawn from it.

It is clear that the black market price was relatively close to the official price in four of the six years. In fact, it was only in 1946 and 1951 that the black market price was more than 200 percent of the official price. The small difference between official and black market prices was a distinctive feature of the province of Jaén (Table 4.3). It is likely that this was the result of Jaén being the province with the largest production. The relatively low level of prices in the black market in Jaén points to the negative effect the high levels of production had on the economic gains that could be made by the farmers in the black market. Other indicators support this interpretation.

For the case of Alicante, Moreno Fonseret has described that the process of selling a part of the production in the black market consisted of two main elements. The first was that the controls over the size of production by the individual farmers could be eased through bribing the local officials.[467]

[467] Moreno Fonseret (1994), p. 171.

Diagram 7.5: Official price received by farmers, official retail price and black market retail price for olive oil in Jaén, 1946-51.



Source: Cámara Oficial de Comercio e Industria de Jaén: *Memoria Comercial y estudio sobre el desarrollo de los negocios en la provincia de Jaén* (1946-51)

The second, and according to Moreno Fonseret, the most important one, was found in the processing of the olives into oil. Here it was possible to press non-registered olives as well as falsify the industrial yields of the registered olives. If a farmer possessed his own press, it was possible for him to control both the cultivation and the pressing of the olives. This was especially important in the 1940s, since it made it much easier to evade the control of the bureaucracy and increase the amount of oil sold in the black market. However, this was not within the capabilities of every farmer. In the late 1940s, there were 1,289 presses in the province, while in 1955 there were 1,286, of which 927 were employed in that harvest.[468]

Evidence from other parts of Spain confirm the importance of possessing a press for the possibility of selling a part of one's produce in the black market. Based on accounts from olive farms in Andalucía, Naredo reached the conclusion that olive oil was a more important commodity in the black market than olives.[469] Similarly, Llopis Agelán used the same reasoning to explain the increase and modernisation of the olive presses in Extremadura in the 1940s.[470]

A parallel argument can also found in a pamphlet published in Jaén in 1947, which quite bluntly stated that:

> You should never forget that the olive grower cannot sell his olives in the black market, but only at the official price. This is set in each village in concordance with the yields of the fruit and the official price of olive oil. Distant and unknown persons determine and receive the black market price for olive oil, and it is those who make a profit without having intervened in the production of the olives. The olive grower cannot profit from selling his fruits, the olives, given that these cannot be hidden nor pressed illegally. The farmers are forced to hand them over to the oil factories the same day they are harvested. When they ask permission to harvest, they even have to declare the harvest they will obtain and the route they will use for transportation to the factory.[471]

The possibility of evading state control in the industrial part of the sector was further increased with the multiplicity of products and sub-products that can be made from

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[468] Presidencia de Gobierno - Secretaría General para la Ordenación Económico-Social: *Programa de necesidades de la provincia de Jaén* (1948), pp. 34-35; Instituto Nacional de Estadística: *Reseña estadística de la Provincia de Jaén* (1956), p. 284.

[469] Naredo (1983), p. 202.

[470] Some of the new presses which were opened in Extremadura by medium- and small-scale farmers in the 1940s were forced to close again in the 1950s when the profitability declined again: Llopis Agelán (1994), pp. 53 and 57.

[471] Gómez Medina (1947), p. 6. Note that the author presents himself as a farmer growing olives, which means that he has an interest in presenting the situation as bad as possible for the agrarian part of the olive oil sector (Own translation).

olives. This could even include declaring that oil suited for human consumption was for industrial use, or vice versa.[472] Finally, the success of the commercialisation of the part of the production that went to the black market depended on the evasion of the transport control, in the same way as it happened in the case of wheat.

These conditions and the restrictions on inter-provincial trade point strongly to the fact that those farmers who owned presses earned the lion's share of the gains to be made in the black market.[473] This meant that the small-scale farmers were at a comparative disadvantage in their attempts to profit from the black market of olive oil. Nevertheless, olive oil sold illegally still had to be obtained from swindle with the quality of the produce, from the elaboration of unregistered olives, or by paying of bribes to the inspectors of the CGAT. The relative bargaining position in this process, and thereby the distribution of the black market gains, between the small-scale farmers and the press owners is difficult to estimate.

Nevertheless, it appears that the outcome for the small-scale farmers of these conditions was that the gross value of the olive production was close to the pre-war level in real terms. As mentioned above, the average unit price of olive oil in real terms between 1940 and 1951 was some 17 percent below that of 1932-36. If the relative amount of olive oil sold in the black market in Jaén was similar to the national average,[474] then black market price had to be approximately 230 percent of the official price to maintain the gross value of the olive oil at the pre-war level.[475]

Returning to the price information in Diagram 7.5, the simple average of the monthly black market prices between 1946 and 1951 was 200 percent of the official price. This is fairly close to the required relative black market price that was necessary to uphold the gross value of olive oil at the level of 1932-36. Furthermore, Table 4.3 showed that in Badajoz the relative black market price in the first half of the 1940s was at least comparable with those of the second half of the decade.[476] Since we also concluded in Chapter 4 that in general the supply of oil improved over the years, it is at least plausible that the relative black market price in Jaén followed the same trend as in Badajoz. Consequently, after including the black market, it seems difficult to

[472] Moreno Fonseret (1994), p. 172. Although the first possibility is counter-intuitive, it could make sense in some years, because of the price structure of different types of oil: Sindicato Nacional de Olivo (1956), pp. 154-155.
[473] This point was also made in Naredo (1981), pp. 108-109.
[474] Remember that in Chapter 4 it was calculated that, on average, 25 percent of output went to the black market. (Table 4.3, p. 115)
[475] This calculation takes into account the combined effect of the decrease in the agrarian yields and the increase in the industrial yields.

argue that the gross value of the total amount of olive oil produced in Jaén between 1940 and 1951 fell significantly below the pre-war level in real prices. However, this conclusion is subject to the insecurity derived from the assumption that the relative size of the black market in Jaén was similar to that in the rest of Spain. Whether this also holds for the gross value of olives is more difficult to say, but the parallel development of olive and olive oil prices in the legal market both before and after the war indicates close market integration.

7.5.3: The reduction in costs in the olive sector due to the development of the wages

The development of prices in the official and the black market was not the only factor that determined the level of earnings for farmers in the 1940s. The relative price of olive oil to wages was also of great importance in the cultivation of a crop where up to 50 percent of the costs were labour-related.[477] On this point, the situation was very favourable for the farmers. The cultivation of one hectare of olives required approximately 20 man-days outside the harvest season and 30 man-days for a normal harvest.[478] Given the seasonal character of the work, the fluctuations in the relative price of olive oil to labour would be felt on even relatively small farms, but obviously, the larger the farm, the more important it would be.

Table 7.5 shows that between 1934 and 1945 the relative price of olive oil to labour costs rose by approximately 30 percent, and by 1950 the increase was even larger.[479] This result is obtained although the prices used for the calculation are the official ones. The inclusion of black market earnings would have further improved the farmer's profit margin.

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[476] Badajoz is the only productive province with a continued series of black market prices for the whole decade.

[477] Sindicato Vertical del Olivo (1945), p. 140; Hernández Armenteros (1998), p. 189.

[478] Instituto Nacional de Investigaciones Agrarias: *Índice humanístico de mecanización de los trabajos agrícolas en la provincia de Jaén*, pp. 10-11.

[479] The sources behind Table 7.5 are from four different accounts of the costs of cultivating olives, with each account representing "typical farms" in each of the four years. Although the type of tasks that were carried out on each farm were the same, there were minor differences in the number of man-days that were employed in each case. To make the accounts comparable, the number of man-days involved in each task on the farm in the source for 1945 has been applied to all four farms. Thereby, the figures reflect the economic development on this "farm" under the changing relation between wages and prices. The reason for using this farm as the base is that the source explicitly says that it is a typical farm in Jaén. Using the man-days involved in each task from one of the other "farms" only leads to minor changes in the development of the relative price of oil to wages with the general trend remaining the same.

Table 7. 5: Accounts for the costs of the cultivation of one hectare of olives in Jaén, 1934-56.

Wages costs in current pesetas.	1934	1945	1950	1956
Ploughing	60,00	140,00	200,00	500,00
First harrowing	90,00	210,00	300,00	750,00
Second harrowing	15,00	35,00	50,00	125,00
First hoeing	31,89	52,75	69,60	125,00
Second hoeing	15,00	31,65	41,76	75,00
Pruning	29,59	36,20	55,68	100,00
Spraying against larvae [1)]	3,83	25,50	N/A	N/A
Sulphuring [1)]	3,83	25,50	N/A	60,00
Harvesting	104,65	153,00	306,00	382,50
Carting of fruit to the press	21,88	61,20	45,90	153,00
Guarding [1)]	3,00	5,09	N/A	N/A
Total wage costs	**378,67**	**775,89**	**1068,94**	**2270,50**
Other costs				
Interest on land	N/A	425,00	127,50	N/A
Insurance, interest on wage outlay etceteras	25,47	52,96	161,20	522,22
Taxes	N/A	48,33	45,90	440,00
Total costs excluding taxes and interest on land	404,14	828,85	1230,14	2792,72
Official price of 100 kilos of olive oil	144,00	390,00	793,00	1156,00
Index of total wage costs (1934 = 100)	100	205	282	600
Index of total costs excluding taxes and interest on land	100	205	304	691
Index of price of olive oil (1934 = 100)	100	271	551	803
1) No data are given for "Spraying against larvae", "Sulphuring" and "Guarding" for 1950, and "Spraying against larvae" in 1956. However, in 1934 and 1945 these tasks only accounted for three to seven percent of total wages, so it is hardly significant for the development of relative wage costs to the price of olive oil.				
Sources: Garrido González (1990), vol. 2, pp. 247-276; ; Patac de Traviesas (1950), pp. 33-37; Sindicato Nacional del Olivo (1956), Vol. 1, p. 11; Sindicato Vertical del Olivo (1945), pp. 69, 71.				

Moreover, this development has to be seen in the perspective of Cobo Romero's find, which proved that the wages in the province in 1934 were already lower than had been the case in the earlier years.[480] Specifically in the case of wages in the olive sector in Jaén in the 1940s, the minimum wage for the collection of the fruit was continuously around 10 pts/100 kilos between the 1941 harvest and the 1948 harvest. It is notable that this was comparable to the absolute level paid in the 1934-35 harvest.[481] The trend in the relation between prices and wages clearly favoured the economic position of the farmer, and the advantage improved with the size of the farm.[482]

In Diagram 7.1 we saw that between 1951 and 1952 there was an increase in both the productive and the non-productive land with olives. This point was earlier discussed but it was not possible to conclude whether this increase took place in this year or just was a reflection of defective statistics in the post war years. Whatever was the case, the figures for the development of the cultivated area with olives between

[480] Cobo Romero (1992), pp. 160-172.
[481] Cobo Romero (1993), pp. 487-489.

1940 and 1951-52 shows a very moderate increase when compared to the situation after 1952.

When comparing data from the CGAT at the local level for 1945 and 1954-55,[483] it can be seen that the stable situation at the provincial level covered some minor differences at the local level.[484] In Table 7.6, these changes are compared with the data on the relative number of landless labourers to small-scale farmers in the different regions. The comparison indicates that there seems to be a positive relationship between the relative number of landless labourers to small-scale farmers and the relative increase of productive land with olives between 1945 and 1954-55.[485]

Table 7. 6: The distribution and development of land occupied by productive and non productive olives in Jaén, 1945-55.

Region	Area with productive olives in 1945 (Ha.)	Area with productive olives in 19554/55 (Ha.)	Change in % between 1945 and 1954/55.	Number of landless labourers to small-scale farmers in 1933/34
1) Sierra Morena	59553	59040	-0.9	3.4
2) Sierra de Cazorla and Sierra de Segura	25264	24516	-3.0	1.3
3) Sierra Magina	44162	41326	-6.4	1.6
4) La Campiña	146570	145776	-0.5	2.3
5) Municipalities with land in both zone 2 and 4	25763	28553	10.8	2.3
6) Id. Both zone 3 and 4	51231	52449	2.4	2.4
TOTAL	**352542**	**351660**	**-0.3**	**2.2**
Sources: Comisaría General de Abastecimiento y Transporte: *Mapas de Abastecimiento*, (1945)				
(Provincia de Jaén); Instituto Nacional de Estadística: *Reseña Estadística de Jaén* (1956); Table 5.12.				

Admittedly the evidence is not to strong in itself, and there is an exception in the case of Sierra Morena. Yet, the result fits with our conclusion that large-scale farmers benefited the most from the development of the relative price of olive oil to labour.

All in all, the evidence strongly suggest that the small-scale farmers cultivating olives in Jaén in the 1940s lived through a period, which economically was at least comparable with the immediate pre-war period. The small-scale farmers cultivated roughly the same amount of land and the yields produced were nearly as they were before the Civil War. At the same time, farmers benefited from a decline in the costs

[482] In a somewhat overlooked article, Naredo reached a similar conclusion and called the last part of the 1940s and the beginning of the 1950s for "A golden age" of olive cultivation; Naredo (1983), pp. 192-193.

[483] For the differences between these data made by the CGAT and the yearly data publicised by the Ministry of Agriculture, see Footnote 451.

[484] The notable increase in Region 5 is almost entirely due to an increase in Villacarillo of 3463 hectares, equalling some 40% of the 1945 productive area in the municipality. This looks suspiciously like an error in the data in one of the years, and if the increase in Villacarillo is taken out of the equation, the total increase for Region 5 falls to 1,1%.

of labour relative to the official price paid by the state for their produce. Furthermore, it is likely that the farmers also received a part of the black market premium from the illegal market of olive oil, which also increased profits. Finally, the post 1950 expansion of the area cultivated with olives that we saw in Diagram 7.1 reflected decisions from the 1940s on increasing output. This supports the interpretation that the economic conditions in the decade were favourable for the olive farmers.

However, despite these relatively favourable circumstances, the situation was not yet so that a widespread mechanisation of the production of olives was possible, a state of affairs that persisted until late in the 1950s.[486] In 1961, the *Consejo Económico Sindical Provincial* concluded that although the prices received by the farmers in the 1950s had kept up with inflation, they did still not constitute a basis for building sufficient reserves to make a mechanisation possible.[487]

7.6: CONCLUSIONS

The evidence in this chapter showed that the influence of state intervention on the level of olive oil production in Jaén was limited. This was due to a combination of several factors. A reduction in output was expected when considering the development of official prices in real terms. On the other hand, earnings from the black market and the development of the relative price of olive oil to wages clearly favoured an expansion of output. These conflicting tendencies appear to have more or less cancelled each other out, or it might have been that the advantages outweighed the disadvantages. But even if this had not been the case, the price elasticity of supply of olive oil was severely limited in the short run.

In this context, it is important to remember that the stagnation in the area cultivated with olives in the 1940s was the result of decisions taken before the Civil War. Similarly, the expansion in the cultivated area in the 1950s was the outcome of choices made by the farmers in the 1940s. This indicates that farmers were willing to expand their holdings planted with olives in the 1940s in spite of the state.

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[485] In most municipalities no data are given for the non-productive area with olives, and the provincial total is far smaller than the total given in the statistics from the Ministry of Agriculture for the same years.

[486] In 1953, there were only 581 tractors in the province: Instituto Nacional de Estadística: *Reseña estadística de la Provincia de Jaén* (1956), p. 223.

[487] Consejo Económico Sindical Pronvincial – Jaén: *Estructura económica de la provincia de Jaén, vol. III: Agricultura*, p. 80.

The situation in the olive sector in Jaén was therefore significantly different from the wheat sector in Cuenca. At the outset, it could be expected that the olive sector would be in a more precarious situation than the latter due to the more rigid crop structure. However, this did not turn out to be the case. The main difference was that there was not the shift of the supply curve to the left in Jaén that was so important for post-war level of wheat output in Cuenca.

All in all, olive farmers in Jaén fared on average far better than the wheat growers in Cuenca. This happened in spite of the fact that in a market with falling official prices, olive growers were in a less favourable position than the wheat farmers were. This second group could choose to increase their self-consumption and be less dependent on the market for their provisions. Yet, this expedient was only possible to a very limited extent for the olive farmers, due to the nature of their crop. This meant that the relative success experienced by the olive growers in Jaén happened in spite of their greater dependency on the market.

Within the olive sector, the data has showed that the economic advantages connected with the black market and declining real wages increased with farm size. It might therefore be that small-scale farmers experienced something less extravagant than the "golden age", which Naredo found for the large-scale olive farmers. Still, neither was it an economic depression similar to what the average small-scale wheat farmer experienced in Cuenca.

The comparison between the situation for olive and wheat growers reveals an important fact about the effects of the system of intervention on output and farm income. It demonstrates that their circumstances were not solely the result of intervention itself. The development in the stock of capital was also very important and cannot be ignored. It is therefore not possible to transfer in toto the conclusions about the wheat sector to the olive sector, or vice versa for that matter. Nor can we talk about the agrarian sector as a single unit. This is a new interpretation compared to the existing literature, which tends to look at the agrarian sector that was subject to state intervention as a whole.

CHAPTER 8: SHIFT IN DEMAND AND RISING PRICES IN THE WINE SECTOR AFTER THE CIVIL WAR: THE CASE OF TOLEDO

8.1: INTRODUCTION

This third and last provincial study deals with the economic consequences of the agrarian policy for small-scale winegrowers in the province of Toledo. This particular province has been selected for two reasons: most of its winegrowers only possessed small plots of land, and its production was mainly low quality wine destined for daily consumption and/or distillation to industrial alcohol in surplus years. The quality of *toledano* wine is representative of the traditional part of this agrarian sub-sector, while the average size of its farms makes it comparable with the other provincial studies.

Until now, the case of wine has received almost no attention in the historical debate on the agrarian policy of early Francoism. This is probably because the situation for the winegrowers was somewhat distinct from that of the olive and wheat farmers. The main difference was that the production of grapes, as well as the elaboration, commercialisation and consumption of wine, was not subject to the same intervention as the wheat and olive sectors in most of the post-war years. This meant that the wine sector did not face production quotas, rationing systems, and that, subsequently, there was no black market for its produce.

The purpose of this chapter is therefore twofold. First, it will widen the analysis to an important part of small-scale farming in the agrarian sector. This will fill a gap in the knowledge about agriculture in the 1940s, since the wine sector has hardly received any attention within the context of the economic policy of the Franco regime. Second, the different political environment of this sub-sector will be examined contrasting it to the cases of wheat and olives. It will thereby be possible to analyse to which degree the differences in the developments in the three sectors were caused by different policy approaches or by other factors.

The main conclusions to be drawn are that the development of the wine sector in Toledo in the 1940s has to be seen in the long-run perspective of changes that had been occurring since the beginning of the 20th century. In the post-war years, the production of wine was larger than in the 1930s, in spite of the Civil War leading to an important decline in the area cultivated with grapes. Furthermore, the prices received by the farmers were, in real terms, also significantly higher than before 1936. For the

individual winegrower, the 1940s were therefore a much more prosperous period than the 1930s as long as his vines had not been destroyed during the war.

Although this coincided with a significantly smaller area cultivated with yearly crops throughout the province, the relation between this and the situation in the wine sector does not seem to be one of direct cause and effect. This holds because conditions in the wine sector in Toledo in the 1940s favoured expansion, almost regardless of the conditions for the cultivation of cereals. This is important as it, together with the results found in earlier chapters of this thesis, indicates that developments in significant agrarian sub-sectors were relatively independent. Conclusions drawn from one agrarian sub-sector on the economic consequences of the Franco regime's policies can therefore not be generalised for the whole of the sector.

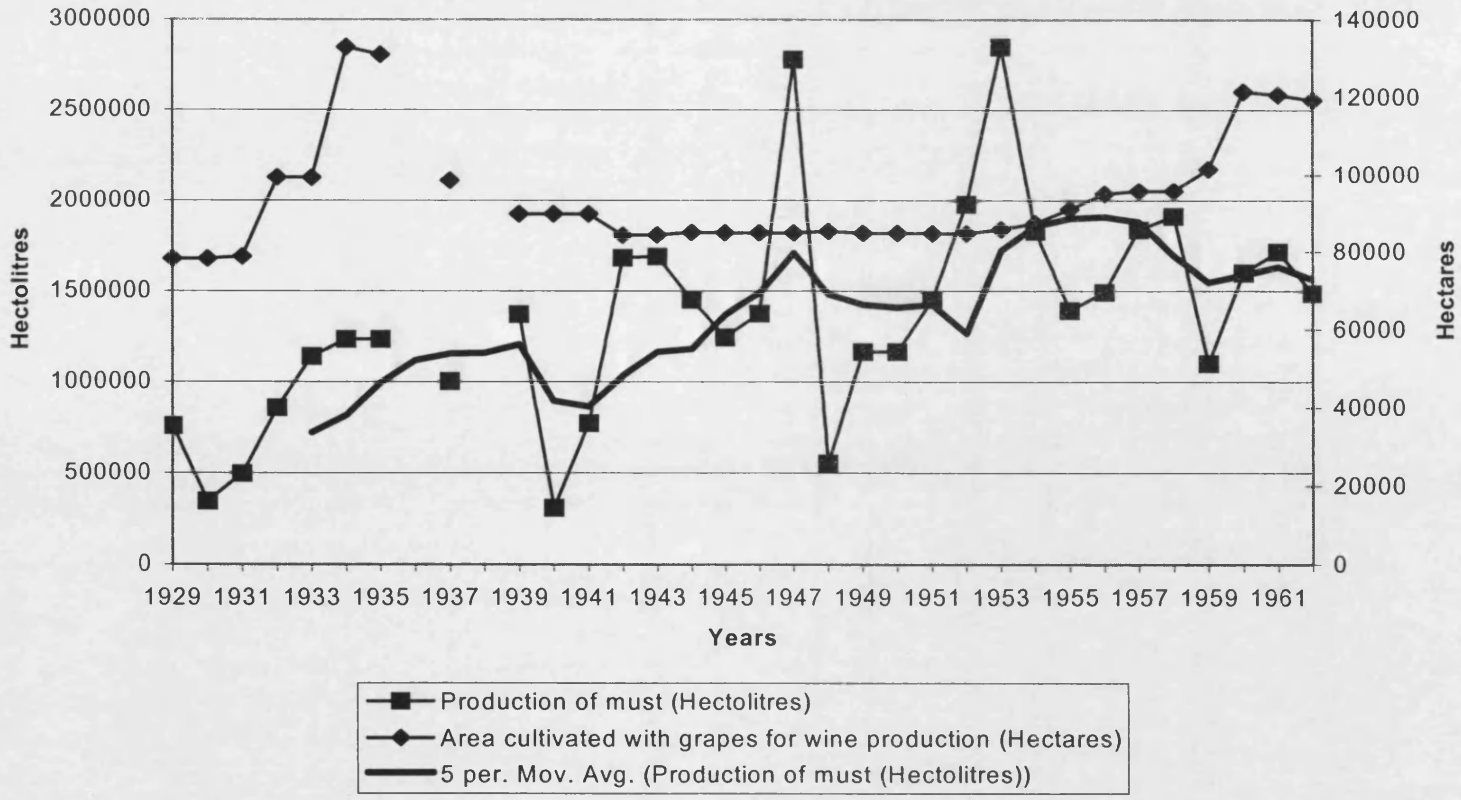
8.2: EXPANSION OF PRODUCTION AND SHIFTS IN OUTPUT COMPOSITION IN THE WINE SECTOR IN TOLEDO, 1900-60.

The analysis of the wine sector in Toledo in the post-war years is characterised by an apparent paradox. When the Civil War ended, the wine sector in Toledo was left in shambles. The cultivated area in 1941 had declined by almost 37 percent compared to the 1935 level, and the 1940s did not clearly favour the replanting of vines that had been destroyed. The consumption of wine declined in the early 1940s because of the economic crisis, and exports of wine decreased after the outbreak of World War II. Finally, the precarious supply of edible crops might have led some farmers to consider substituting the cultivation of grapes for that of basic staples such as wheat.

In spite of these problems, the statistics show that the trend for production was clearly increasing after the war (Diagram 8.1). Furthermore, in real terms farmers received higher prices for their must in the 1940s than before the war and the late 1950s (Diagram 8.2).[488] To analyse this development, it is necessary to start with a short outline of the pre-war conditions in the wine sector in Toledo.

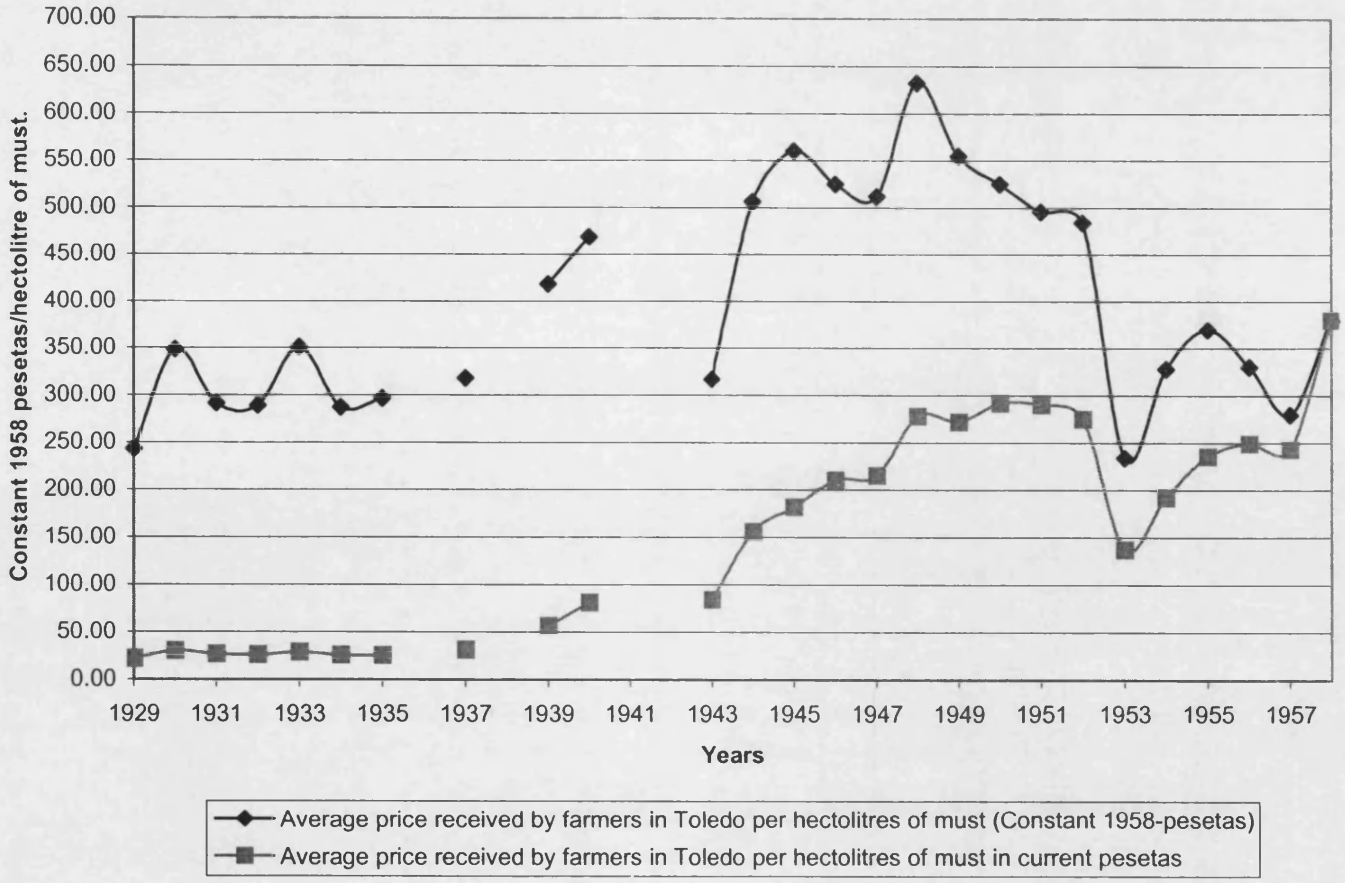
[488] Must is the unfermented juice extracted from grapes.

Diagram 8.1: Production of must and area cultivated with grapes for wine production in Toledo, 1929-62.



Source: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1929-35, 1939-40, 1943-62), Instituto Nacional de Estadística: Anuario Estadístico de España (1943), Ministerio de Agricultura: Estadística de la producción Vitivinícola (1937), Ministerio de Agricultura: Informes IOR, Toledo, 1941

Diagram 8.2: Average real price received by farmers in Toledo per hectolitres of must.



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1929-35, 1939-40, 1943-58), Ministerio de Agricultura: Informes IRA, Toledo, 1941, Ministerio de Agricultura: Estadístico de las producciones vitivinícolas (1937)

8.2.1: Wine production in Toledo before the Civil War: Expansion, Crisis, and Political Intervention

Vines in Toledo for the years 1934-35 occupied 18.5 percent of the total cultivated area, amounting to almost 9 percent of the national total. However, since the yields were lower than the national average, provincial production of must only accounted for some 6.4 percent of national production.[489] As can be seen in Table 8.1, this took place within the context of an agrarian sector that was dominated by grapes and other traditional dry land crops like cereals and olives.

The wine sector in Toledo had increased since the beginning of the 20th century, in spite of the pre-war period was often characterised by overproduction and calls for government protection of the producers at the national level. These claims led to the introduction of some protective measures in the last ten years before the war, and they remained as the guidelines for the regulation of the sector until the early 1950s. In two ways the situation in the wine sector in the 1940s was different from that of the wheat and olive sectors. First, there was continuity in policy before and after the war. Second, the price policy for wine aimed at obtaining high producer prices rather than low consumer prices.

Table 8. 1: Average land use in Toledo, 1931-35, and relative value of output, 1934-35.[490]

Crops	Average land use (Ha.)	Average land use (%)	Relative value of production in 1934-35 (%)
Cereals	406350	53	59
Grapes [1)]	142357	18	12
Olives	98369	13	8
Leguminous plants	76136	10	10
Others	49480	6	12
Total [2)]	**772692**	**100**	**100**
1) Data for 1935 only. See explanation later in the text.			
2) Includes cultivated land only.			
Source: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).			

Within the province of Toledo, the vineyards were mainly located in the section of the province that forms part of the La Mancha region. The post-1900 expansion was shared with the other provinces that were partly or totally located in La Mancha, which became the largest wine-producing region in Spain before the Civil War.[491] In 1934-35, the total area cultivated with grapes in Albacete, Cuenca, Ciudad Real and

[489] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35).
[490] The figures for the cultivated area and value of production in the wine sector in Toledo only refer to 1934-35. This is due to inconsistency in earlier data, as will be explained in Footnote 501.
[491] The other provinces in La Mancha are Albacete, Ciudad Real, and Cuenca.

Toledo exceeded 25 percent of the national total and the production of must was roughly 25 percent of the Spanish total.[492]

The expansion of vines in La Mancha started in the late 19th century with impetus provided by the crisis in French wine production after the phylloxera attack in the 1880s. This incident led to a golden age for the Spanish wine sector until French production recovered and the very same phylloxera spread to Spain. After this change in circumstances in the early 1890s, the Spanish wine-sector in general suffered from a combination of lower prices and smaller production.[493] Yet, vines continued to expand in La Mancha up to the Civil War. This was possible because the diffusion of the disease was much slower here than, for example, in Cataluña.[494] The difference gave the La Mancha region a comparative advantage over the Catalan wine sector, which had to endure the high costs connected with the replanting of new phylloxera resistant American rootstocks.[495]

World War I led to an increase in prices, but this was a short-lived phenomenon that only lasted until the French wine production got back to normal. Problems increased with the post-1929 international crisis, which led to declining exports, as well as a decrease in sales for human consumption within Spain.[496] The expansion of wine production in La Mancha before 1936 therefore happened against the background of troublesome economic conditions in the sector elsewhere in Spain.

In the mid-1940s the *Sindicato Nacional de la Vid, Cervezas y Bebidas* (the National Trade Union for Wine, Beer and Beverages - SNVCB), pointed out the main reasons for the pre-war crisis. These were a mixture of structural problems, inadequate government intervention, and international conditions. The main structural problems were that the sector was poorly organised at the producer level, with most winegrowers being small-scale farmers and few participating in co-operatives. This was especially the case in the interior of the country, where the contacts with international markets were limited. The quality of the final produce was jeopardised

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[492] Immediately before the war, more than 400,000 hectares were covered with vines in the four provinces. The second largest wine producing region was Cataluña with close to 18 percent of the cultivated area and 22 percent of the national production immediately before the war; Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1934-35).

[493] Jiménez Blanco (1986a), pp. 61-64.

[494] Fernández Martínez (1963), p. 30 and Rodríguez Tato (1988), p. 358. The slower diffusion was due to different climatic conditions in the two regions, with the determinant factor being the higher maximum temperature in La Mancha. For the development of the wine sector in Cataluña between 1892 and 1935 see: Pujol Andreu (1986).

[495] Simpson (1992), pp. 118-128.

[496] Between 1922 and 1931, the average export of wine was some 3,729,000 hectolitres, but this fell to some 1,554,000 hectolitres in 1934 and 1,354,700 hectolitres in 1935; Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 424.

by the practice of watering down the wine, which nominally increased production but also led to declining prices. Furthermore, the transport system was deficient, which hindered market integration. Finally, the SNVCB stipulated that it was middlemen, rather than the producers, which received the main part of the profits in the trade of high quality wine. The principal complaint against the action taken by the government was that the regulation of the markets for alcohol was inadequate to maintain high prices in the wine sector. On top of that, governmental, provincial and local taxes were described as unequal but generally too high. Finally, the declining exports in the 1930s due to the world crisis further aggravated the internal problems.[497]

While the last point obviously was difficult to overcome, the different political regimes in Spain tried from the mid-1920s to solve some of the other problems that were later identified by the *SNVCB*. After the end of the relatively prosperous years during World War I, demands emerged for government action to recuperate the profitability for the winegrowers. The main goals for the farmers were that distilled wine should be the only legal base for the production of industrial alcohol, that local taxes were reduced, and that the control of the quality of wine should be improved.[498]

This campaign was successful as it led in the last ten years before the Civil War to the introduction of various measures along the lines proposed. From September 1924, the price and size of wine production determined whether other raw materials than grapes could be used for the elaboration of certain types of alcohol.[499] From 1926, preferential status was given to distilled wine for the making of industrial alcohol and alcohol for human consumption. Furthermore, the compulsory mixing of fuel with industrial alcohol was introduced gradually in the late 1920s and the early 1930s.[500] Also in 1926 it was legally defined what could be sold as "wine", and it became prohibited to mix wine with industrial alcohol or other liquids that were not derived from grapes. The regulation was transformed into *El estatuto de vino* (the wine statue) in 1932, and finally made into law the following year.[501] This legislation

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[497] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), p. 21. Almost 20 years later, similar arguments for the crisis were forwarded by the *Consejo Económico Provincial* (the Provincial Economic Council) in Toledo: Consejo Económico Provincial (Toledo) (1961), p. 164.

[498] Carrión, Santacana, Tarín (1974), pp. 295-332. The text is a reprint of an article from 1925, containing the political demands of the winegrowers.

[499] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), p. 804.

[500] Carrión (1974), pp. 350-351.

[501] In Footnote 490 it was pointed to that the figures for the area cultivated with grapes in Toledo in Table 8.1 only covered 1934-35, rather than for example the 1931-35 average. This is due to the difficulty in accepting official statistics, which show a remarkable 65 percent increase in the cultivated area – including young non-productive vines - from 85,856 hectares in 1931 to 142,357 hectares in 1935. In the same years according to the official statistics, the cultivated area with productive vines went from 78,850 hectares to 130,987. Although the protective measures introduced after 1926

continued to govern the market for wine and alcohol until the end of the 1940s, and was the base for subsequent laws that remained in force until the early 1950s.[502]

The situation in Toledo reflected the problems of the sector at the national level, and some of the protective measures that were introduced were important for the winegrowers in the province. The *SNVCB* described the lack of internal organisation in the sector as a general structural weakness, and this also applied to Toledo. Co-operatives were virtually non-existent in the province until the late 1940s, and the local capacity for the elaboration of grapes into wine was very limited. This meant that only a minor part of the value added in the production of wine ended up in the hands of the farmers. The structural problems were not eased by the fact that it was small-scale farmers that produced most of the grapes before and after the Civil War.[503] The difficulty in mechanising the cultivation of grapes imposed a limit on the possibilities of improving the farming techniques. At the same time, the investments that were required for improving the elaboration process also meant that the individual farmer only had a limited scope for changing the technical conditions in the industrial part of production. Consequently, major shifts in the production of wine had to await the introduction of co-operatives, which did not happen on a larger scale until the early 1950s.

The production in Toledo in the 1930s and 1940s was therefore characterised by a large number of small-scale farmers who produced low quality wine (Table 8.2). Hence, the regulation of the production of industrial alcohol in favour of the use of distilled wine was important for the majority of the winegrowers in Toledo, as it raised the prices for low quality wine. Table 8.2 also shows that the predominant position of low quality wine in Toledo was quite typical for the Spanish wine sector as a whole, with different sorts of bulk wine being the main produce.

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benefited the farmers, the 1930s also were characterised by declining exports and a retraction in national consumption. It therefore appears likely that expansion in the cultivated area did not happen at such a rapid speed between 1931 and 1935 but rather was a longer process, which, however, was not registered before the early 1930s. At that time there was an increase in the incentive for the farmers to report correct production figures, since this was necessary to obtain benefits from the state intervention. A similar problem affects the official statistics of the neighbouring province of Ciudad Real, where some 140,000 hectares of vineswere reported in the last five years before the Civil War as well as in 1939. However, in 1940 this jumps to slightly over 200,000 hectares, where it remains until another leap upwards of 40,000 hectares is reported in 1946: Ministerio de Agricultura: *Anuario estadístico de las producciones Agrarias* (1931-35, 1939-40, 1943-46).

[502] See Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 807-820 for the law of 1933. The legislation also included technicalities such as the compulsory declaration of production, the definition of the concept of *Denominación de Origen* and the compulsory labelling of the bottles.

[503] See Section 5.2.3.

Table 8. 2: Destination of must produced in Toledo and Spain, 1934-35.

Type of wine	Toledo (Hectolitres)	Toledo (% of total)	Spain (Hectolitres)	Spain (% of total)
Ordinary red wine	1429476	58,8	16403330	42,3
Ordinary white wine	766022	31,5	12302557	31,7
Ordinary rosé wine	32445	1,3	7561217	19,5
Fine red wine	93658	3,9	346368	0,9
Fine white wine	81700	3,4	317521	0,8
Fine rosé wine	20175	0,8	165295	0,4
Others	12342	0,5	1659750	4,3
Total	**2432094**	**100**	**38756038**	**100**
Source: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1934-35).				

8.2.2: The Conditions in the Wine Sector during the Civil War: Phylloxera, Warfare, and Collectivisation

The Civil War had a profound negative influence on the wine sector in Toledo and the cultivated area in 1941 was almost 37 percent smaller than in 1935. Such developments were found in other parts of the agrarian sector as well, so even in 1941 the total cultivated area was still some 25 percent below the pre-war level (Table 8.3). According to the official statistics, most of the decline in the area cultivated with grapes happened between 1940 and 1941. However, according to a letter from March 26, 1941 written by the *Jefatura Agrícola* in Toledo to the Ministry of Agriculture, the decline preceded these years:

> Answering your letter of the seventh of the current month, I can say that the data on the area cultivated with vines, which are shown in the 10R-form,[504] is the result of the latest received data. Last year we could not get updated information, which is why we instead reported data from earlier years.[505]

Although a 37 percent decrease in the area cultivated with vines is remarkable, it was not an isolated phenomenon. In the neighbouring province of Cuenca the decline was some 35 percent, and here the reduction was attributed to a further spread of phylloxera during the war.[506]

Similarly, the decline in the area cultivated with grapes appears to be the outcome of various factors related to the Civil War. First phylloxera also appears to have been a factor in Toledo, but it is difficult to determine the exact importance of

[504] I.e. the form used by the provincial office of the Ministry of Agriculture to report the statistics on wine to Madrid.
[505] Ministerio de Agricultura: *Informes 10R*, Toledo, 1941. The 1941 figure might be too high, since in 1942 the cultivated area was given as 84,325 hectares. (Own translation)
[506] See Section 6.3.

the disease. Yet, it was reported in some of the CGAT "Supply maps" in the late 1940s,[507] and replanting with American rootstocks took place in the mid-1940s.[508]

Table 8. 3: Civil War influence on the area cultivated area with the main crops in Toledo, 1931-40.

Crops	1931-35 average	1936	1937[1)]	1938	1939	1940	1941
	cultivated area	cultiv. area	cultiv. area	cultiv. area	cultiv. area	cultiv. area	cultiv. area
	(Hectares)	(Hectares)	(Hectares)	(Hectares)	(Hectares)	(Hectares)	(Hectares)
Wheat	226144	N/A	145070	N/A	140425	140000	175000
Barley	106658	N/A	51470	N/A	58880	80010	85000
Rye	13658	N/A	6250	N/A	8750	12750	15200
Oats	57397	N/A	27230	N/A	21400	29975	27700
Olives[2)]	98369	N/A	60896	N/A	87269	87267	85000[4)]
Grapes[2)]	142357	N/A	98581	N/A	112589	112489	89833
Leguminous[3)]	69736	N/A	31010	N/A	37976	56232	57890
Total	**714319**	**N/A**	**420507**	**N/A**	**467289**	**518723**	**535623**
1) The statistics cover the area controlled by the Republican Government.							
2) The 1935 cultivated area. Grapes for winemaking, and olive for oil production.							
3) Include carob beans, vetch, chickpeas, beans, peas, and green beans.							
4) Estimated figure based on the data for 1940 and 1943. There is no data for area cultivated with olives for olive oil production for 1941 and 1942.							
Sources: Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943); Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40); Ministerio de Agricultura: *Estadística de Cereales y Leguminosas* (1937); Ministerio de Agricultura: *Estadística de la Producción Olivera* (1937); Ministerio de Agricultura: *Estadística de la Producción Vitivinícola* (1937). Ministerio de Agricultura: *Informes 10R*, Toledo, 1941.							

Second, destruction of the vines caused by combat is also a likely cause for the decline in the cultivated area. During most of the Civil War, Toledo was divided between an area controlled by the Government and another by the insurrectionists. However, after the initial months of combat, the frontline did not change much, and the Government maintained control over roughly two-thirds of the province.[509] On the other side, after the early conquest of Toledo and Talavera de la Reina, the rebels occupied the remaining third of the territory.[510]

The effects of the war are described in a report from the administration of the insurrectionists. The report is probably written in 1938, and it declares that war-related damages, which included more than just churches and monasteries, in 17 villages. In addition, the report stated that means of production were destroyed before the arrival of the Francoist army. The main obstacle for the recovery of agrarian production was the lack of work animals, and although no figures were given for these, the number of

[507] Comisaría General de Abastecimiento y Transporte: Mapas de abstecimiento (Provincia de Toledo, 1949), Muncipalities of Almonacid de Toledo and Yepes.

[508] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 22-23. Given the higher costs that this involved compared to using European vines, it is likely that replanting with American rootstocks was the result of a further spread of the disease. Nevertheless, European vines were still used for new plantations as late as the early 1960s, which indicates that the spread of the disease was under control at that moment. Fernández Martínez (1963), p. 32.

[509] These were located in a belt along the borders of Cuenca to the east, Ciudad Real to the south and the southern part of Cáceres to the west.

[510] This was found in the north-west corner of the province, next to the northern part of Cáceres, and the southern parts of Ávila and Madrid.

other animals had declined by two thirds when compared to 1936.[511] It is likely that a part of the reduction in the area cultivated with grapes was the result of the prolonged division of the province by the frontline. On the other hand, the decline in the number of work animals was not likely to be detrimental to the maintenance of the existing vines, due to the perennial nature of the crop. Yet, lack of work animals could be a hindrance for the plantation of new vines, since this requires a thorough preparation of the soil. Moreover, the yields obtained from existing vines could be perjured if lack of work animals led to less or no ploughing so that less water would reach the roots.

Another factor to consider is the collectivisation process that took place in the part of the province controlled by the Government during the war.[512] Up to August 1938, the *Instituto de Reforma Agraria* recognised 100 collectives with a total of 289,362 hectares.[513] This equals some 37 percent of the total cultivated area, but only some 20 percent of the total exploited area. This was relatively less than in Cuenca and, especially, Jaén. Yet, it has to be taken into consideration that the province of Toledo was divided in two parts during most of the war, and that no collectivisation took place in the part controlled by the insurrectionist. It is possible that uncertainty about property rights connected with collectivisation and post-war de-collectivisation could result in sub-optimal care taking of vines, and thereby spreading phylloxera further.

One element that apparently did not affect the situation of the wine sector after 1939 was the availability of labour. The official figures on male employment in agriculture[514] indicate a slight increase from some 115,000 persons in 1930 to some 118,000 persons in 1940, but at the same time, there was a minor fall in the total provincial population.[515] However, as the 1940 census data were generally inflated,[516] it is likely that the decrease in the population was larger than reported, and that the agrarian sector employed less than 118,000 persons in 1940. Yet, since yields were higher in the 1940s than before the war lack of labour was probably not a problem in the wine sector in the 1940s.

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[511] Diputación Provincial de Toledo: *Unnamed and undated report*, pp. 7-13.
[512] See Section 6.3 for the argument that collectivisation and de-collectivisation could be detrimental for agrarian production.
[513] Carrión (1973), pp. 135-136. A similar number of collectives, but without data on the size of the affected area, is found in Rodrigo González (1985), pp. 94-97.
[514] See Footnote 270 for the necessity to restrict the discussion of employment to the male population.
[515] See Table 5.1.
[516] See Section 5.1.1.

8.2.3: The post-war demand induced changes in production

The post-war years for the wine sector in Toledo were characterised by higher real prices than before the war, in spite of the fact that the demand for wine for human consumption declined. Yet, this was more than counteracted by an increase in the demand for alcohol for industrial use and human consumption. The winegrowers reacted to the demand shift by increasing output of high alcohol white wine, which was suited for distillation. Still, the reaction of the farmers does not appear to have been detrimental to cereal output since land was plentiful. The market conditions changed again in the beginning of the 1950s when prices declined sharply. However, at this point the government stepped in and introduced a system of intervention that kept producer prices up, making it possible for the farmers to continue the expansion of their production. This relatively positive development for the winegrowers was not a foregone conclusion. One of the main findings from the previous section was that between 1935 and 1939 the area cultivated area with grapes declined by almost 40 percent. Furthermore, in spite of the fact that wine production had expanded before the war in the La Mancha region, including Toledo, the 1940s does not at first sight appear to be a period that favoured the replanting of vines.

There are several reasons for this. First, the economic crisis in Spain led to a 25 percent decline in consumption of wine in the first half of the 1940s.[517] This was because the working class, especially in the countryside, consumed a large part of the ordinary wine in Spain, and that consumption was positively correlated to the employment rate.[518] The second problem affecting the wine sector was a further drop in exports after the outbreak of World War II. We noted earlier that when compared to the 1922-31 period, exports were already down by approximately 60 percent immediately before the war. Nevertheless, the situation became even worse with the average exports between 1940 and 1945 standing at only 13 percent of the 1921-31 average.[519] The third factor to take into consideration was the precarious supply of edible crops, which might have led some farmers to consider substituting the cultivation of grapes for that of basic staples.[520] Yet, the possibility of growing crops such as wheat was complicated by the fact that these were integrated in the system of

[517] While the consumption per capita decline by roughly 30 percent, total consumption was roughly 25 percent below the pre-war level.
[518] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 21, 421 and 427. No data exists after 1945.
[519] Between 1940 and 1945 average exports were 507,400 hectolitres, while the 1921-31 average was some 3,729,000 hectolitres: Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 424.

intervention. As described in Chapters 3, 4, 6 and 7, this would on one side have the inconvenience of state fixed-prices, production quotas and so on, but on the other also opened up the possibility of black market earnings. Whether this would have been attractive for the individual farmer would depend on a combination of circumstances such as farm size and access to the black market. In all cases, the state tried to avoid a shift in the opposite direction, i.e. from the cultivation of intervened crops to grapes, and legal restrictions on the expansion of vines were in force throughout the 1940s.

Still, a higher level of demand for low quality wine, which was subsequently distilled into alcohol, counteracted these negative factors. This was due to a lack of imports of alcohol and fuels, and it partly compensated for the decline in exports and domestic consumption of wine.[521] This situation led to the somewhat unexpected development in the prices received by farmers for must between 1931 and 1958. Given the general level of inflation, it is hardly surprising that in current pesetas the price level in the 1940s was higher than in the 1930s. Yet, Diagram 8.2 showed that prices received by the farmers in real terms were also significantly higher in the 1940s than in both the 1930s and the 1950s.[522] The elaboration of must therefore changed towards a final produce of inferior quality, i.e. wine suitable for distillation, which somewhat paradoxically coincided with an increase in producer prices. Table 8.2 demonstrated the destination of must before the Civil War, and here we saw that six to eight percent of must was used for high quality wine. This figure declined slightly in the 1940s, and during some years, no high quality wine was produced at all in Toledo. Another shift in production that took place was the use of between two and six percent of the production for sulphured musts from 1944 onwards.[523] However, given the relatively small production, the importance of these changes was limited. The most significant movement that took place was a major shift from the production of "ordinary red wine" to "ordinary white wine".[524] Behind this was a widespread expansion of the white *Airén* grape, which today is the most widespread type in La Mancha.[525] Still, as indicated earlier, the shift in grape type was not a shift towards a

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[520] Piqueras Habas (1993), p. 86.
[521] Carrión (1974), p. 351.
[522] See Section 3.2.1 for the reason for the use of constant pesetas, as well as for the choice of using the deflator for the "agriculture, forestry and fishing" from Prados de la Escosura (1995), for the calculation of real prices.
[523] Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1933-35, 1939-40, 1943-62).
[524] Before the Civil War some 60-70 percent of the must was used for "ordinary red wine", with roughly 30 percent going to "ordinary white wine". After 1939, this gradually changed to the opposite distribution.
[525] Duijker (1992), p. 152.

higher quality of wine, but towards a higher amount of alcohol originating from the *Airén* grape. The reason for this shift was that prices were positively correlated with the amount of alcohol in the produce when the wine was used for distillation.

It is therefore hardly a surprise that the quality of the white wine of La Mancha in the 1950s, which was normally sold in Madrid, has been described as:

> The white wine produced at the time had not much to recommend it. The grapes were usually picked too late in the season and then fermented at a temperature which was to high to be able to preserve the wine's fruit and freshness. Moreover, the alcohol content was usually around 13 to 14 percent, which made the wine very soporific.[526]

The practice of a late harvest was one way to increase the percentage of alcohol, but, as the above author states, this happened at the cost of quality.[527] Unfortunately, there are no provincial data describing the amount of must that was distilled. At the national level some 600,000 hectolitres of wine were on average distilled between 1926 and the beginning of the 1930s. This increased sharply in the last three years before the war, reaching 1.8 million hectolitres in 1935.[528] After a minor decline to 1.5 million hectolitres in 1940 and 1941, the upward trend continued and reached approximately 2.5 million hectolitres in 1944.[529]

In the 1940s, there were two reasons for the increased use of wine for distillation. The first was an increase in the exports of brandies and liquors.[530] Although most of the grapes were produced in La Mancha, the elaboration of the must into brandy mainly took place in Jeréz de la Frontera in Andalucía.[531] The business link between the *Airén*-producing farmers in La Mancha and the brandy production in Jeréz increased especially after the opening of a railway connection in 1945.[532]

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[526] Duijker (1992), p. 153.
[527] Even in the early 1980s, many bodegas were still working in the tradition of favouring alcohol percentage over quality, which at that time had become an obstacle for the modernisation of the sector. See Junta de Comunidades de Castilla-La Mancha (1982), pp. 223-225.
[528] This was the result of that the state fuel monopoly CAMPSA by the law of June 5th 1935 that regulated the market for alcohol, was ordered to buy alcohol made from molasses for blending with fuel. This lead to an increase in the demand for alcohol made from vine in other parts of the economy. See Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), p. 820-822, for the text.
[529] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 421-422.
[530] The average exports of brandy were 7,558 hectolitres in 1931-35, 38,367 hectolitres in 1941-45 and 55,373 hectolitres in 1946-50. *Comercio exterior de España. Números índices (1901-1956)*, p. 78.
[531] This is still the case in the beginning of the 21st century. Local grapes in Jeréz are too expensive to use for brandy, since they are the only ones that legally can be used for the production of sherry. The advantage of making brandy in Jeréz originates in that it is old sherry casks that are used for its production.
[532] Robinson (ed.) (1994), pp. 148-150.

Parallel to the increase in brandy production, a new regulation of the market for alcohol appeared after the war. In 1941 and again in 1947, further restrictions were placed on the production and use of alcohol that was made from products other than wine. From 1947, the control of the market was carried out by the *Comisión Interministerial del Alcohol* (the Interministerial Commission for Alcohol) which had the authority to set the prices for a number of non-wine alcohol products.[533] In this way the producers used the distillation of wine as a safety valve in years of overproduction in relation to the domestic demand and export possibilities.[534]

However, the favourable development of prices did not persist beyond 1952-53 when an important decline set in after two years with better than average harvests. This led the government to extend its intervention in the sector to secure minimum prices for the farmers. New regulations were launched, first as temporary solutions in 1952, but already from 1953 as a lasting measure. The main point was the creation of the state agency, the *Comisión de Compra de Excedentes de Vino* (CCEV, the Commission for the Buying of Surplus Wine) which was to regulate the market prices for wine. The CCEV offered loans to co-operatives against security in wine, as well as purchasing grapes and wine from farmers, co-operatives and wine-producers when the price fell below a predetermined level. The state agency would then sell the produce as either wine or alcohol when prices were higher.[535] Another function of the CCEV was to encourage the establishment of co-operatives and facilitate credits so that these could store production until prices raised. In the case of Toledo, the organisation of producers in co-operatives increased from 11 in 1943 to 143 in 1963, with 26,767 members in the latter year.[536]

At the national level, the activities of the CCEV quickly reached huge proportions. In 1953, which saw the largest harvest of the decade, the CCEV bought more than 12 percent of the wine produced. The following year, when the harvest was also better than average, CCEV was authorised to buy up to 400 million kilos of grapes from La Mancha and other specific areas where such action was estimated to be necessary.[537] After the introduction of minimum prices in 1952-53, the official

[533] Carrión (1974), pp. 352-354.
[534] The importance of alcohol for the price of wine was already well accepted in the 1920s. In this period, the winegrowers argued that an important protection for wine could be gained through the prohibition of making alcohol from other products than grapes, unless the harvest was below normal. Carrión, Santacana, Tarín (1974), pp. 316-317. As described in Section 8.2.1, this was partially conceded by the Government from the mid-1920s.
[535] Carrión (1974), pp. 337-345 and 364-365.
[536] Movimiento Nacional: *Toledo. España en paz*, p. 97.
[537] Carrión (1974), pp. 335-340.

statistics show a prolonged increase in the productive area in the La Mancha region that lasted until the early 1980s.[538] This knowledge about the wine market is necessary for the interpretation of the post-war statistics on production, cultivated area, and yields in Toledo.

Diagram 8.1 demonstrated that post-war output increased steadily after the Civil War. This happened despite that the cultivated area remained almost constant until 1960. Subsequently, the official data in Diagram 8.3 show that the yields were 70 percent higher in the 1940s and early 1950s than in the 1930s,[539] before they started to decline again in the late 1950s.[540] The level of the yields in the early 1950s according to the official statistics is comparable to the level of 20-22 hectolitres per hectare found in the 1990s. This was mainly due to the bumper harvest of 1953, and can not be considered a normal situation. With legal restrictions on the expansion of vines in a situation with high prices paid to the farmers, it appears plausible that an increase of the cultivated area was camouflaged as an increase in the yields. It might be an exaggeration to explain all of the increase in the yields in the 1940s to a possible underestimation of the cultivated area, but few alternative explanations are likely.[541]

The availability of fertilisers was significantly smaller in the 1940s than before the war, mechanisation did not begin on any major scale before the 1960s, and the number of co-operatives was still very limited in the 1940s. It is therefore conceivable that the process in reality was smoother than what the official data show. Moreover, the figures state a doubtful increase of the cultivated area of some 25,000 hectares of vines between 1958 and 1960.

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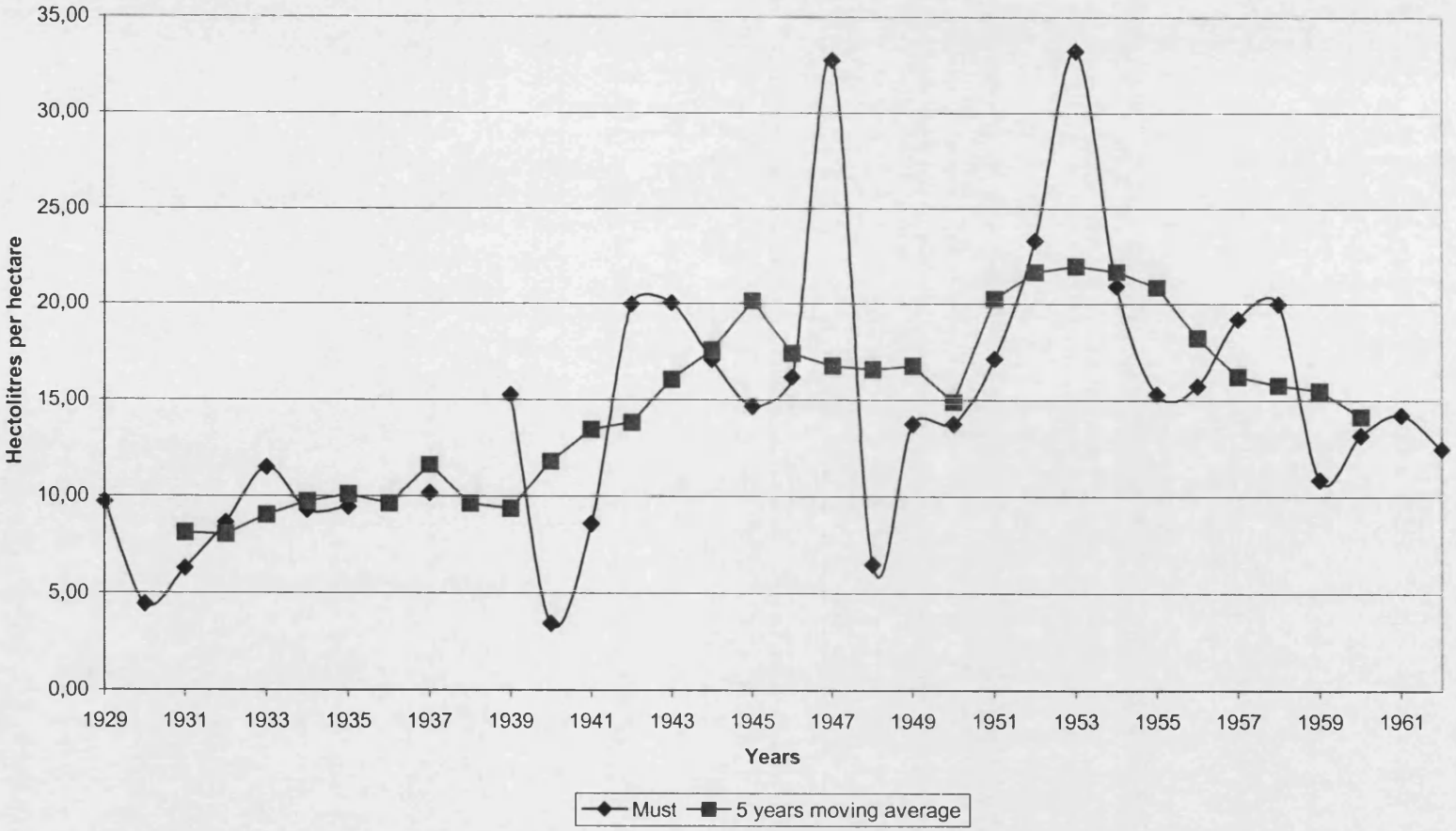
[538] Piqueras Habas (1993), pp. 89-91.

[539] The picture is the same when calculated on the bases of grapes and when the calculation is based on must.

[540] Note that the data behind Diagram 8.3 suffer from a problem of incoherence before 1934, as discussed in Footnote 501. This, however, does not seem to affect the data on the yields, which are coherent in the pre-war period. This might indicate that the Ministry of Agriculture got the yields roughly right, but seriously underestimated the cultivated area and, thereby, the total production. If it was the other way around, i.e. that the estimate of the total production was correct, so it was the data on the cultivated area that were to low. The consequence would be then much lower yields in the pre-war period. In the light of the post-war data, this seems unlikely.

[541] In the last years before the Civil War, the national trend was one of declining yields after the sector entered a crisis as a result of raising wages and declining exports. In this situation farmers seem to have reacted by reducing labour input, which led to declining yields: Simpson (1985), p. 240-242; Pujol Andreu (1986), p. 329.

Diagram 8.3: Yields of must in Toledo, 1930-62.



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (19 -35, 1939-40, 1943-62), Ministerio de Agricultura: Estadicas de las producciones Vitivinicolas (1937), Ministerio de Agricultura: Informes IOR, Toledo, 1941.

A more gradual development also fits with the reporting from the mid-1940s of that re-plantation was happening at a quite fast rate in Toledo due to the high prises at that time.[542] In sum, it appears that from the end of the Civil War until the early 1950s the strategy of the winegrowers was to increase the industrial yields at the expense of quality.[543] At the same time, the extension of the cultivated area was probably disguised as higher yields. Although the expansion of the crop appears to have been a viable solution in the 1940s and 1950s, Table 8.4 indicates that this was probably not detrimental to the cultivation of cereals.

The situation in Toledo resembles what we saw in Cuenca in Chapter 6, i.e. that the recovery of the pre-war total cultivated area was still not accomplished 25 years after the end of the Civil War. This was the result of that a large amount of land that had been cultivated before the war was left fallow, and that expansion of almost all crops that took place after 1943 was very slow. We observed earlier that the administration of the rebels claimed that an important decline in the number of work animals occurred because of the Civil War. In Chapter 6, we argued that one of the main reasons for the slow recovery of the pre-war level of production in the 1940s was exactly due to this factor. It is therefore plausible that this element was also at work in Toledo, but the statistics in Table 8.5 on the number of mules are inconclusive, as a result of inconsistencies in the pre-war data.

The data for 1933 looks problematic in comparison with the 1929 figures and the post-war development. It does not appear logic that the increase in the number of animals between 1940 and 1950 should not be reflected in the area under cultivation. However, this remained relatively stable in the period at a level some 15 percent below the 1931-35 average.[544] When this is taken into account, it becomes clear that vines and cereals did not compete for the same land in the 1940s and early 1950s in Toledo. Consequently, it is erroneous to ascribe the post-war decline in the cultivated area with cereals to this factor. On the contrary, the expansion of cereals and vines occurs simultaneously. Note that these conclusions are similar to those in Cuenca, where the development was analysed from the "point of view" of the cereal growers.[545]

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[542] Sindicato Nacional de la Vid, Cervezas y Bebidas (1947), pp. 22-23. It was here estimated that the pre-1936 cultivated area was re-established by 1946. This, though, seems exaggerated in the light of that the amount of land under cultivation did not reach its pre-war figure until as late as 1960.

[543] Apart from lowering the quality, watering down the produce or mixing with other substances were other ways of increasing the yields.

[544] See Table 8.4 above.

[545] See Chapter 6.

Table 8.4: Index of composition of land use in Toledo, 1931-62 (1931-35 total cultivated area = 100)

	1	2	3	4	5	6	7	8
Years	Cereals	Grapes[1)]	Olives[1)]	Leguminous	Others[2)]	Cultivated total	Meadows, pastures scrubland and wood	Fallow land
1931-35	52,6	18,4 [3)]	12,7	9,9	6,4	100,0	50,9	39,9
1939	29,7	12,4 [4)]	11,3	5,3	5,2	63,2	55,2	35,3
1943-47	42,2	12,0	11,6	12,2	5,2	83,2	38,9	44,7
1948-52	43,1	12,3	11,5	12,2	5,4	84,4	35,9	38,4
1953-57	44,3	12,8	11,6	11,8	6,0	86,3	32,8	N/A
1958-62	43,4	13,2	11,8	12,3	3,9	84,7 [5)]	38,3	N/A

1) Includes non-productive land.

2) Includes esparto grass until 1958 only, which accounts for the decline in the last period.

3) Data for 1935 only due to incoherence in pre-war data, as explained in Section 8.2.1.

4) Data as given in 1941 due to inaccurate original data for 1939, as explained in Section 8.2.2.

5) See note 2.

Sources: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1931-35, 1939, 1943-62); Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1954-55).

Table 8.5: Number of mules in Toledo, 1933-50.

Years	Animals older than 1 year	Animals older than 3 years	All animals
1929	N/A	56516	60503
1933	N/A	45030	48967
1940	45939	41764	47355
1942	46442	43310	48017
1948	54143	N/A	N/A
1950	55509	N/A	N/A

Sources: Ministerio de Agricultura: "Tres estúdios económicos"; Ministerio de Trabajo y Previsión: *Anuario Estadístico de España* (1929); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-45, 1950, 1953-54).

8.3: POST-WAR WINE PRODUCTION IN TOLEDO IN FACE OF CHANGES IN THE RISK ENVIRONMENT

Three factors are crucial when considering the economic consequences of the post-war agrarian policy for the wine sector in Toledo. First, there was no black market for grapes or wine, which makes it easier to accept the post-war official statistics on the value of production. Second, small-scale farmers dominated the sector, which limited the scope for adjusting the patterns of production at least until the early 1950s when co-operatives became more widespread.[546] Finally, some of the relevant statistics are problematic. The pre-1934 figures underestimate the cultivated area, output and the aggregate value of production in the wine sector by an unknown factor. Moreover, the post-1940 figures on cultivated area and yields are likely to be incorrect.[547] Thus, it is necessary to be careful with the official data on the development of the value of the production.

Nevertheless, it appears clear that winegrowers in Toledo in the 1940s experienced a situation which, although far from simple, was still economically more favourable than in the 1930s. The negative aspects were the decline in exports and in domestic demand for wine for human consumption. However, domestic production was smaller than in the 1930s. This and the increase in the use of alcohol based on grapes more than compensated for these factors and led to higher prices. Farmers benefited further from the development of wages in the agrarian sector.[548]

Diagram 8.4 shows the official figures for the value of production of the wine sector converted into constant 1958 pesetas, and according to these, the average value of production reached its climax in the late 1940s.[549]

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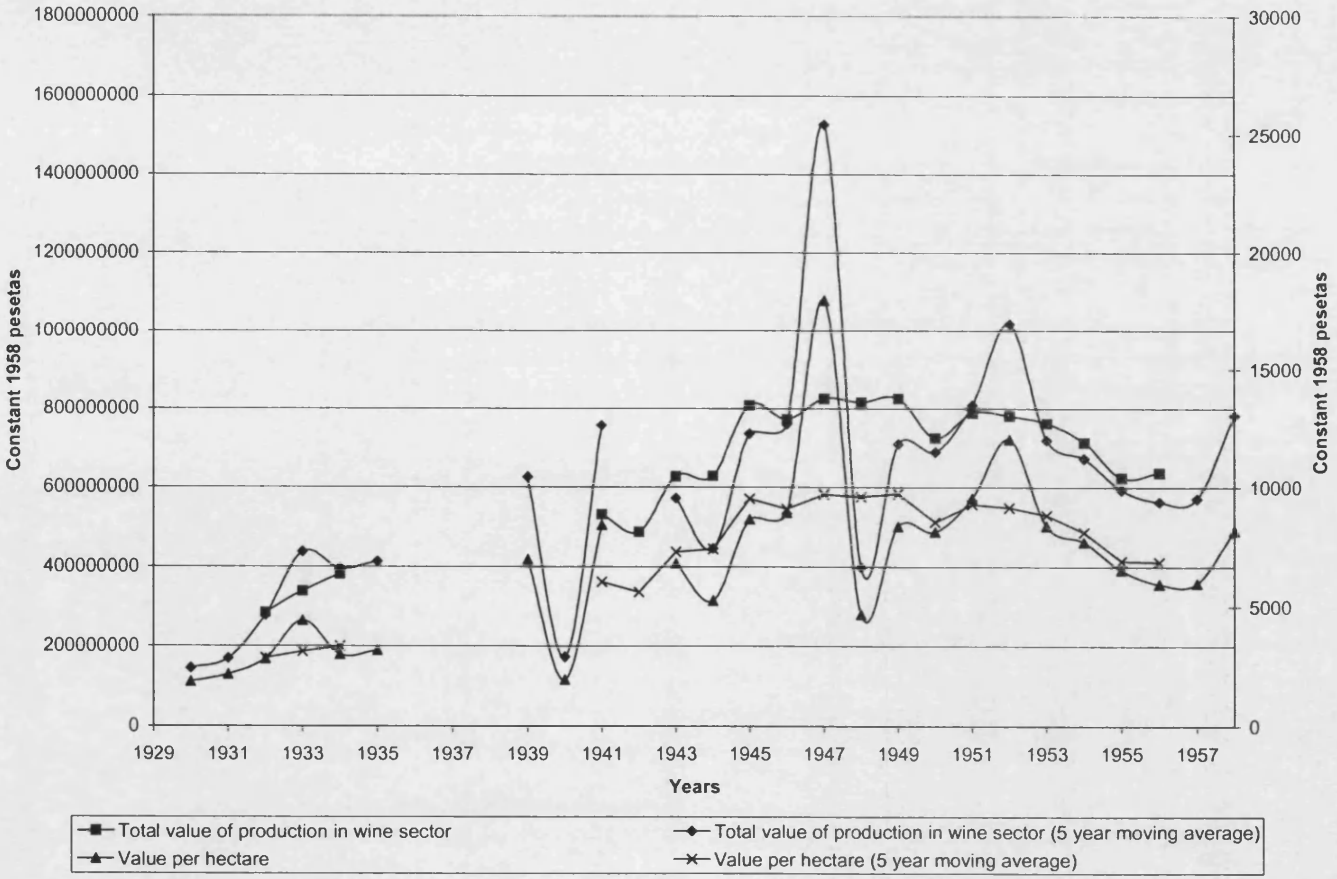
[546] See Sections 5.1.2 and 5.2.3.
[547] See Sections 8.1.2 and 8.2.3.
[548] See Chapter 7, where this factor was discussed at some length in relation to the olive sector.
[549] Real prices were obtained using the deflator for "agriculture, forestry and fishing" from Prados de la Escosura (1995). See Section 3.2.1 for the use of real prices instead of nominal prices, as well for the choice of deflator. The total value of production includes the value of must, grapes sold for direct consumption and wood from the vines. Approximately 90 percent of the value of the production of products and sub-products came from the value of the must: Ministerio de Agricultura: *Anuario estadistico de las producciones agricolas* (1931-35, 1939-40, 1943-60).

Diagram 8.4: Real value of total production - including subproducts - and value per cultivated hectare in the wine sector in Toledo, 1930-58.



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1930-35, 1939-40, 1943-58)

Still, according to the official statistics, this pattern also counts for the value of production per cultivated unit of land, where the 1941-58 average in real terms was 274 percent of the 1930-36 average.[550] Yet, it was earlier pointed out that the 70 percent increase in the 1940s' yields reported in the official statistics looked suspicious. It is thus conceivable that the official figures on the value of production per unit of land are too high for the 1940s, but hardly sufficient to cancel out the effect of the increase in prices.

Simultaneously, wages in real terms were lower than in the 1930s, making the amount of cultivated land the main variable that determined the economic outcome for the individual farmer. The significant decline in the amount of land under cultivation in connection to the Civil War was the result of two largely exogenous incidents: war related destruction and the limits to the spread of phylloxera. Thereby, the timing of the recovery process becomes crucial for the evaluation of the situation faced by the winegrowers after 1940. This is especially so in the light of the several factors that changed in the early 1950s and that were important for the profitability of the cultivation of grapes. The most significant changes were probably the introduction of guaranteed minimum prices in years with a large production, and the incentives to establish co-operatives with financial help from the CCEV.

Still, it is a problem that the official statistics on production indicates a development in the sector, which is different from what that suggested by the statistics on the cultivated area. The timing of the post-war expansion of production can therefore be interpreted in two different ways. On one side, the production statistics indicate a continued growth of production from the mid-1940s to at least the late 1950s. On the other side, the statistics on the cultivated area indicates that the main post–war increase took place in the second half of the 1950s.[551]

In the first case, the policy changes in 1952-53 stabilised an ongoing expansion at a time when prices began to decline. The expansion in the 1940s was the result of that the farmers reacting to the post-war conditions with a combination of an increase of production and a shift in the structure of output. This took place by substituting red wine-producing grapes for the *Arién* variety, which, producing high alcohol white wines, was a suitable response to the growth in demand in the 1940s for alcohol based

[550] The peak was in 1947, where the value of production per hectare was 627 percent of the 1930-35 average. The lowest point was found in 1940 when the value of production per hectare was only 67 percent of the pre-war average.
[551] In both cases, see Diagram 8.1.

on grapes. In the longer perspective, the 1940s were an integrated part of the secular expansion of the cultivation of grapes that started in the early 20th century.

In the second scenario, the 1952-53 policy shift was a necessary condition for the increase of the crop. Within this interpretation, the intervention in the wine sector before 1952-53 was insufficient to trigger a widespread growth in the sector. This happened although the farmers obviously faced a situation that, due to the absence of a black market, was less complicated than in the cereal and olive sectors. Seen in perspective the 1940s constituted a break in the secular expansion of vines in Toledo that started in the early 20th century and continued into the early 1980s.

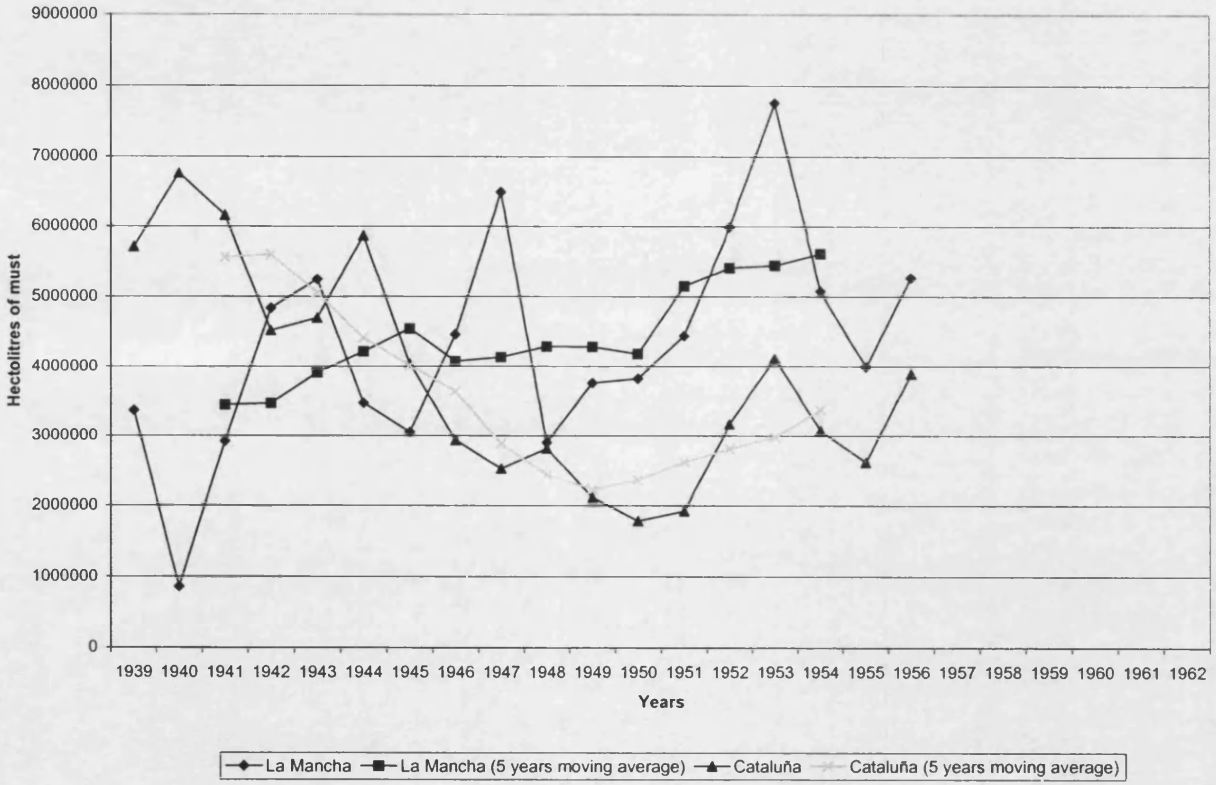
The difference between the two interpretations can be boiled down to the question of whether the sector was able to exploit the market conditions in the 1940s and continue the growth in production. A comparison between the development of production in La Mancha and in Cataluña, which was the second largest wine producing region in Spain, indicates an answer to this question. Diagram 8.5 strongly suggests that while production could be augmented in La Mancha in the 1940s, this was only the case in Cataluña after the introduction of further legislation in 1952-53. The same impression is obtained when comparing the development of the value of output in the wine sector in the two regions (Diagram 8.6).

In the 1940s the problem of the Catalan wine sector to adjust to the new market conditions, were likely to be the result of the relative successful changes that had taken place before the Civil War. The plantation of American vines after the phylloxera attack had required large investments, and the consequence was that grape production was concentrated in the areas most suited for the crop. In the first 30 years of the 20th Century, this had been accompanied by technical improvements in the cultivation of grapes and the elaboration of wine, as well as an increase in the number of co-operatives.[552] A return in the 1940s to the production of low quality wines for distillation was therefore not feasible since it would equal render useless the large investments in vines and infrastructure that had taken place over the last 30-40 years.

The gradual increase of production Toledo from the early 1940s appears to have been a two step process, with the division line running around 1952-53. The relatively high prices in real terms in the 1940s obscure the fact that this happened against the background of a crisis in the human consumption of wine.

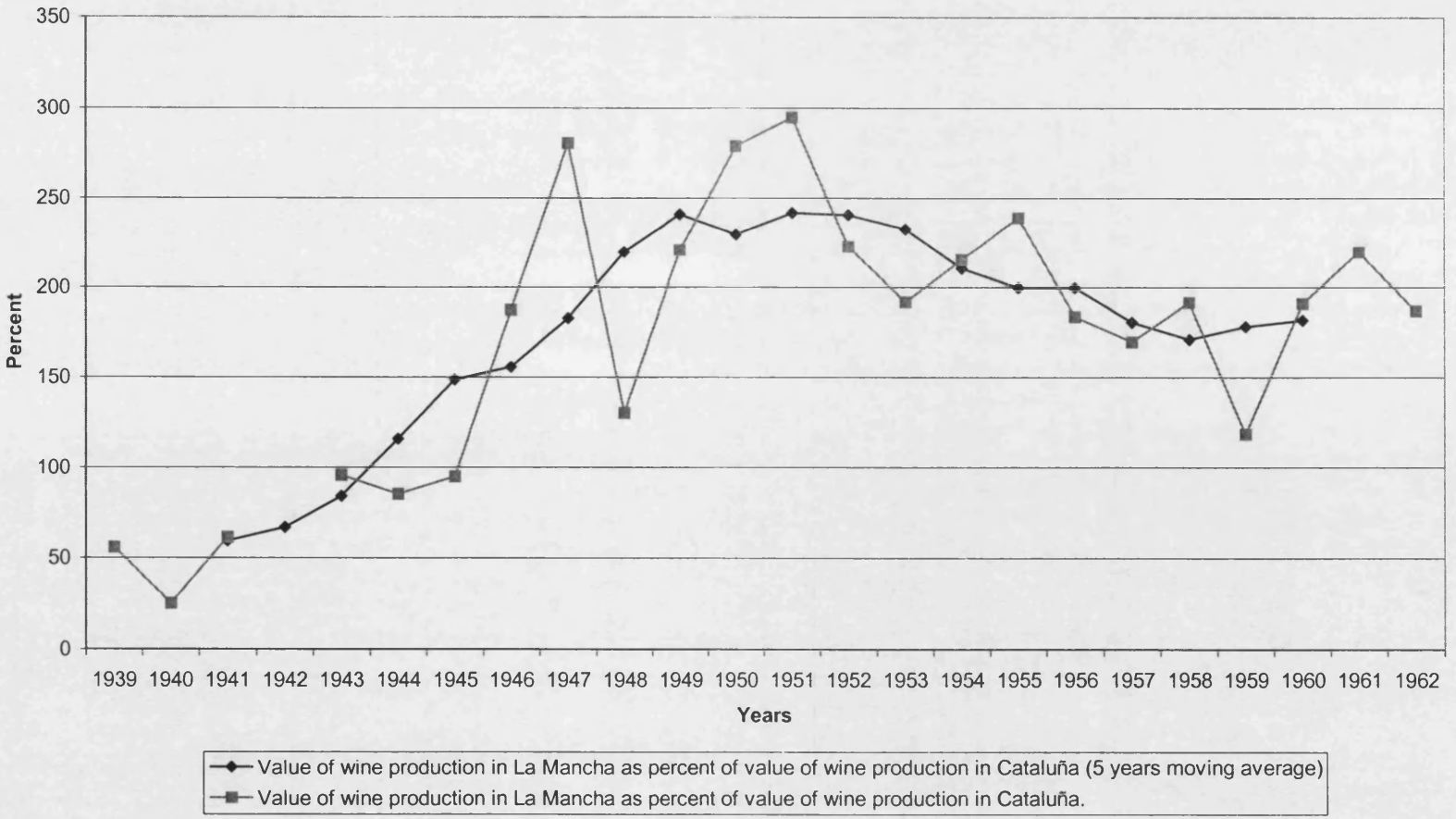
[552] Pujol Andreu (1986), pp. 331-337.

Diagram 8.5: Production of must in La Mancha and Cataluña, 1939-62.



Source: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-63)

Diagram 8.6: Relative value of wine production in La Mancha and Cataluña, 1939-62.



S ource: Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943), Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-63)

The high prices that the farmers could get for their must were the result of an extraordinary demand for alcohol, and the farmers reacted to this incentive by spreading the *Airén grape*, which produced high alcohol white wines. However, this strategy was bound to run into trouble with the growth of the Spanish economy from the beginning of the 1950s.

Although the demand for wine would increase given its position as a superior good, in the longer run the request would be for higher quality wines. This would happen at the expense of the low quality wines produced in Toledo and La Mancha. The continued growth in production after 1952-53 is therefore likely to have been the outcome of the system of guaranteed minimum prices, which justified the investment involved in planting new vines. Nevertheless, production was still mainly oriented towards low quality wine.[553] For the individual farmer, a change in production towards higher quality output would require investments in new vines and a more careful cultivation of the grapes. However, to obtain higher prices it would also be necessary to improve the elaboration of the must into wine. This was probably beyond the economic possibilities of the average farmer, and had to await the establishment of co-operatives. A large-scale improvement of the quality of output in La Mancha was therefore bound to be a complex and long-term process.

It is difficult to reject that for the winegrowers in Toledo the post-war years were economically more favourable than the immediate pre-wear period. At the same time, the 1940s were also a continuation of the secular trend, which stretched back to the early 20th century. For the small-scale farmers in Toledo, the most obvious alternative to grape cultivation would be cereals, but with low official prices, this was hardly an attractive option in the 1940s. Neither would the fact that the soil in La Mancha is relatively poor for dry-land cereal cultivation be an incentive.

In a place like Toledo, the post-1950 development in wages would further encourage this course. Non-mechanised grape cultivation was significantly more labour intensive than non-mechanised cereal cultivation.[554] Moreover, it was much easier to mechanise the cultivation of cereals than that of grapes. For large-scale farmers, the potential economies of scale in cereal cultivation would favour a shift towards these types of crops,[555] while the small-scale farmers would have a

[553] As late as in 1975, the *Diputación Provincial de Toledo* complained in a report of the lack of further elaboration of the produce beyond bulk vine: Diputación Provincial de Toledo (1975), *Fase II, Vol. 1*, p. 78.
[554] One unit of land required approximately twice as much labour input if cultivated with vine instead of cereals: Rodríguez Tato (1988), p. 361.
[555] See Section 6.4.2 for this discussion.

comparative advantage if they cultivated grapes. They were in a much more difficult position to mechanise due to the lower limit of farm size that would make such an investment profitable.[556] At the same time, a relatively large part of the work in the cultivation of grapes would be made by non-wage labour in the form of the farmer and his family.[557] The data in Table 5.15 from the Agrarian Census of 1962 confirms the comparative advantages of the small- and large-scale farmers.

Although the legal situation and economic conditions favoured the expansion of grapes rather than cereals, it is not possible to blame this factor for the poor performance in the cultivation of cereals in Toledo in the 1940s. Compared to the pre-war situation, the total amount of land under cultivation in Toledo was so much smaller that neither the scarcity of land nor labour was a problem. It has not been the purpose of this chapter to explore the reasons for the decline in the amount of land with cereals. Yet, the conclusions from Chapter 6 on the neighbouring province of Cuenca showed that this was mainly the result of the lack of work animals and fertilisers after the end of the Civil War. The above description and the figures in Table 8.4 suggest that a similar process took place in Toledo.

8.4 CONCLUSIONS

The main conclusion from this analysis of the wine sector in Toledo after the Civil War is that the farmers experienced an economic situation that was more favourable than in the 1930s. This was the result of a growth in the demand for wine suitable for distillation, and the farmers reacted to this by increasing output of low quality, high alcohol white wine. Consequently, total output increased gradually after 1939. This does not appear to have been detrimental to the production of cereals, since less land in total was cultivated in the 1940s than before the war. After 1952-53, this expansion continued within the context of state intervention that further protected the sector through the introduction of floor prices.

The analysis of the wine sector in Toledo, together with the conclusions from Chapters 6 and 7, suggest that the development of the different agrarian sub-sectors followed relatively independent paths. The main cereals, olives and grapes often could be cultivated on the same type of land. Nevertheless, substitutions appear to have been

[556] Ibid. and Chapter 5 on typical farm size for winegrowers in Toledo.
[557] In the neighbouring province of Ciudad Real, relatively more vine was found on large-scale farms than in Toledo. However, here the wine was generally of a higher quality, thereby obtaining higher prices, making it economically more viable for large-scale farmers to cope with the rising level of wages.

secular rather than short time in nature. This corresponds to the conclusion from Chapter 3, where it was stated that crop substitution mainly took place between annual crops. In the short run this is not surprising considering the investments and de-investments involved when taking vines and olives in and out of production. However, the results from Chapters 7 and 8 indicate that this was also the case in the long run.

The analysis has shown that similar kinds of intervention led to quite different result in terms of production, as was demonstrated in the cases of wheat and olives. On the other hand, different types of intervention led to similar results in production for olives and vines. The implications of this for our understanding of the period under investigation will be explored in the following conclusion of this thesis.

CHAPTER 9: CONCLUSIONS AND PERSPECTIVES

The present thesis provides a new understanding of the economic consequences of Francoist agrarian policy in the 1940s and early 1950s. The principal argument is that it was external constraints, and not the official prices paid to farmers, that primarily determined the post-war level of output of yearly crops. The analysis also demonstrates that similar forms of state intervention in the olive and wheat sectors produced quite different results at the level of output. Thereby it has been shown that the economic consequences of the agrarian policy were heterogeneous and depended on the particular circumstances in each sub-sector. This result is further supported by a comparison between the olive and wine sectors, which experienced relatively similar developments in output in spite of being subject to different regimes of state intervention. Finally, the comparison between the situation in Spain and in other countries improves the understanding of the policy choices taken be the Franco go vernment. The main point is that the agrarian policy in Spain in the 1940s had similarities with those carried out in other countries. Hence, the Spanish system of intervention was not unique but included advantages and disadvantages akin to those found elsewhere.

A significant part of the thesis focuses on the economic conditions for small-scale farmers. The evidence presented in Chapters 3, 6, and 7 shows that although the large-scale farmers undoubtedly benefited more from the black market than their small-scale counterparts, black market earnings were important for the latter as well. Nevertheless, the analysis revealed that the economic situation for small-scale farmers was complex and contained a variety of outcomes. On the one side, when black market earnings are included, the average value of production per unit of cultivated land did not appear to have declined in real terms compared to the 1930s.[558] On the other side, it was not possible to maintain the pre-war cultivated area with yearly crops. The economic outcome for the farmers was therefore a consequence of a number of factors such as the size of the exploitation, the cultivated crops and the farmers' access to work animals and chemical fertilisers.

[558] The illegal nature of the black market made it necessary to rely on estimates of the black market prices received by farmers. Black market earnings were therefore calculated in such a way that they were likely to under-estimate farmers' economic gains. This procedure secured that the bias of the results runs contrary to the main argument in the thesis.

From the early 1970s, the main trend in the historical literature has been to stress the economic policy as the main reason for the post-war decline in agrarian output.[559] In the early 1980s, this line of interpretation was further strengthened by the works of Barciela.[560] Hence, in the last 15-20 years these have been the main reference points for the analysis of the relation between Francoist economic policy and agriculture.[561] Nevertheless, Simpson relatively recently suggested that lack of work animals and artificial fertilisers could have been important for the post-war decline in output.[562] The conclusions from the present thesis are at odds with the interpretation represented by Barciela, but in line with the argument suggested by Simpson.

Barciela and García González maintained that the depressed official prices led small-scale farmers to withdraw from the market.[563] Nevertheless, given that we found that the real value of production per unit of land kept up with the pre-war level, leaving the market does not appear to be a likely response. With most work being done by the family, non-cultivation of land would only result in a limited reduction in variable costs, while fixed costs would remain unchanged. Moreover, to the extent wage labour was used, official prices increased relative to wages and a withdrawing from the market would therefore reduce profits. The analysis of the economic conditions for small-scale farmers forms a contrast to several existing studies, which have centred on large-scale farms.[564] In these works it has generally been argued that notwithstanding that the 1940s were a period of depressed official prices in real terms, farmers were compensated through black market earnings and declining real wages. So, while the importance of black market earnings for the large-scale farmers has been recognised in the historical literature, is has hitherto been unclear as to what the situation was for the smaller farms. The present thesis demonstrates that if small-scale farmers sold less in the market, it was mainly due to a smaller marketable surplus and not because of declining prices as stipulated by Barciela and García González.

A possible counter-argument to the interpretation forwarded in this thesis might be that black market earnings were too insecure or volatile to be useful as guidelines

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[559] The viewpoint can be found in Clavera et al. (1973), which was a seminal work on the Spanish post-war economic history.
[560] Barciela (1981a), Barciela (1981b), Barciela (1983a), Barciela (1986b), and Barciela and García González (1983).
[561] The works of Barciela are often referred to in more general articles and books on Spain's economic history, including Harrison (1985), Harrison (1990), Lieberman (1995), Prados de la Escosura and Sanz (1996), and Richards (1999).
[562] Simpson (1995).
[563] Barciela and García González (1983), pp. 84-86.
[564] For example Naredo (1981), Naredo (1983), and Naredo, Ruíz-Maya and Sumpsi (1977). In the last article, the focus is on the relation between sharecroppers and large-scale landowners.

for future earnings. Farmers could therefore be supposed to plan the following harvest based on official prices. Yet, the longevity and the relatively large size of the black market along with the price elasticity of supply for wheat work against such an argument. Furthermore, in Chapter 3 it was intended to establish a relation between official prices and planned output, but this was not possible. This can indicate either that there was no such relation, or that the quality of the statistics is deficient. Yet, Astorquiza and Albiso computed the price elasticity of supply for wheat for the 1959-85 period and determined that it was positive but low.[565] The economics literature indicates that the price elasticity of supply in the agrarian sector in general is positively correlated with technical development.[566] Thus, it is difficult to argue that the price elasticity of supply should have been significantly higher in Spain in the 1940s than in the 1959-85 period. This is important in relation to the argument that black market earnings did not affect farmers' decision on how much wheat to sow. The case is, that the price elasticity of supply calculated by Astorquiza and Albiso is far too low to support the conclusion that official prices alone explain the post-war decline in wheat output.

As indicated earlier, it turns out that lack of work animals and artificial fertilisers were the main reasons for the post-war decline in output. The Civil War resulted in a 10 percent decline in the number of mules. In normal circumstances, it would not have been a major problem to replace the missing animals by imports. Yet, World War II interrupted this trade, and at the same led to an increase in the demand for animals for military purposes in other countries. Consequently, the decrease in the number of work animals during the Civil War had a disproportionate effect on the agrarian sector due to the outbreak of World War II. However, at least in the medium term, the regime could have done more to alleviate this problem. The introduction of a price ceiling on mules, as well as the absence of a large-scale breeding scheme, delayed the recovery of the pre-war stock of animals. Nevertheless, a change in policy would hardly have been sufficient to solve the problem of supply of mules in the 1940s, due to the lack of adequate breeding animals in Spain.

World War II also significantly reduced the international trade for nitrogenous fertilisers, due to the use of nitrogen in the production of explosives. After 1945 this was followed by a situation where the United Nations regulated the international commerce with nitrogenous fertilisers until 1949, allocating less fertiliser to Spain

[565] Astorquiza and Albiso (1985).

than desired by the government. At the same time, Spanish industry was incapable to compensate for the shortfall in imports. Before the war, Spanish production of nitrogenous fertilisers was very limited. This was a result of a lack of competitiveness and an international market that was characterised by over capacity and low prices. The dictatorship tried to solve the problem of supply with the help of the INI. Yet, the programme suffered from technical problems, and the jealousy of the institution vis-à-vis the private sector was also an obstacle for increasing output. Anyhow, to obtain self-sufficiency in this field was hardly a short-term project. Furthermore, it can be questioned whether it would be economically sound to reach this goal as the experience from the 1914-39 period was that a shortage in war years could quickly be replaced by over capacity in peace time.

The importance of fertilisers and work animals for the agricultural supply situation in Spain in the 1940s is underlined by the way the wheat supply crisis was solved around 1950. At this time, output increased but mainly through a greater use of fertilisers rather than an expansion of the amount of cultivated land. This development suggests that there was not a large amount of idle capital in the 1940s in the form of work animals and/or machinery, which could have been put into use if the economic incentives had been there. The lack of fertilisers during World War II as well as the post-1945 regulation of international trade has hitherto not been stressed in the historical literature. Such an omission is important in the light of contemporary estimates which show that the fertilisation of normal Castilian dry land would lead to a 40 percent increase in the yields of cereals.

The constraints on output of yearly crops have the consequence that the desirability of the system of intervention has to be re-evaluated. It is argued in the present thesis that to solve the supply problem the answer was neither to increase official prices nor to liberalise the market completely. With external restrictions on output, higher official prices would have increased returns to land and capital without substantially increasing production. This process would principally had benefited the large-scale farmers. Although the richest consumers would pay the largest part of the price increase in absolute terms, the poorest consumers would face the risk of an even more precarious living standard. Liberalising the market would also have left the poorest consumers worse off in the short run by denying them the security of receiving a minimum amount of their foodstuffs through the rationing system.

[566] See Askari and Cummings (1976), Chhibber (1989), Griliches (1960), Peterson (1979), and Schiff and Montenegro (1997).

Moreover, the low price elasticity of supply in the agrarian sector in Spain in the 1940s make it doubtful whether output would have increased substantially in the medium term. The result of increasing consumer prices and maintaining the rationing system, or liberalising prices and consumption, would be a socially regressive redistribution of income.

On the other side, the introduction of a parallel market in 1950, which worked as a self-regulated dual-price policy, helped to solve the problem of the supply of basic foodstuffs. However, this measure was applied late in the period, and could have been introduced earlier if it had been politically acceptable to the Franco regime. Another way out of the deadlock could have been the introduction of an across-the-board consumer subsidy. While both of these solutions had their own faults, they would have increased the legally-consumed part of the production without a negative effect on the size of output. The late introduction of such measures places a heavy legacy on the Francoist regime. This less than perfect handling of the situation was not only found in Spain. Yet, the degree of success turned out to be positively correlated with structural traits in the agrarian sector as well as the rest of the economy. A comparison with the policies employed in other countries during World War II shows that rationing and price controls were often introduced on an ad hoc basis. Governments and administrators were often unable to foresee all the consequences of state intervention, and the type of sub-optimal policy carried out by the Franco regime can also be found in other countries in later periods of history. Yet, when compared to more industrialised countries like Germany, the United Kingdom, and the United States, Spain was in a disadvantageous situation to change production patterns and improve the productivity of its land.

In the inquiry into the olive sector, it was estimated that the official statistics of output of olive oil probably should be increased by up to 12 percent for the 1940-52 period due to underreporting caused by the black market. With the exception of wheat, barley, rye and oats - where the Ministry of Agriculture revised the statistics – olive is the first crop where such a correction has been made. Based on the new estimate of olive oil output, it was argued that rationing was unnecessary to secure a sufficient supply of olive oil to the population in most of the post-war years. This result clarifies an ambiguity that appears in Tió's interpretation of the supply situation in the 1940s.[567] The question he did not answer was whether there was scarcity of olive oil for human consumption in Spain in the 1940s or not. The conclusion from Chapter 4

clearly suggests that there probably was a situation of insufficient supply in the early post-war years, but that this was not the case later in the decade. Nevertheless, there was a lack of oils and fats for industrial use, but this was mainly the effect of the international situation in the post-war years rather than a consequence of state intervention in Spain.

The largely unnecessary state intervention in the markets for olive oil for human consumption created market distortions, including a black market, which, though, was significantly smaller than the black market for wheat. At the same time, it was argued that the existence of a black market did not increase olive oil output, while it did for wheat. Chapter 4 demonstrated that the relative size of the black market for olive oil equalled up to 2 . percent of the legal market between 1940 and 1950, or 1 percent of average output. These figures are not that different from the calculation made by Gutiérrez del Castillo in an article that until now has been the point of reference for this topic.[568] Still, the new computation covers a longer period, includes a revision of the figures for total output and corrects various minor errors made by Gutiérrez del Castillo.

The different developments in the relative size of the black market and output of olive oil and wheat happened in spite of the fact that the decline in official prices was almost similar in the two cases. The differences were rooted in the sectors' dependence on fertilisers and work animals. As the olive farmers relied to a lesser degree on these two inputs they were not hit by a simultaneous fall in prices and output, as was the case with the average wheat grower. The economic situation for the olive farmers also improved because rural wages did not keep up with agrarian prices. In a much overlooked article, Naredo used the development of the price-wage relation to argue that large-scale olive farmers experienced a "golden age" in the late 1940s.[569] In Chapter 7, it was concluded that although this might be too optimistic a description to be applied to small-scale olive farmers, the picture was far from catastrophic. Nevertheless, while state intervention had only a limited immediate effect on olive oil output, it cannot be denied that it might have delayed the expansion of the cultivated area. The time-gap between plantation and the first harvest meant that this would only be felt on the supply side in the medium term.

The examination of the wheat and olive sectors reveals that it is difficult to talk about the consequences of state intervention for the agrarian sector as a whole, or to

[567] Tió (1982).
[568] Gutíerrez del Castillo (1983).

transfer results from one sub-sector to another. This point was emphasised by the analysis of the wine sector in Toledo in Chapter 8. There are no obvious points of comparisons in the historiography with the following conclusions, as the wine sector has not been examined before in the light of the agrarian policy of the period.

In contrast to wheat and olives, the markets for grapes and wine were characterised by a protective intervention in the 1940s. This does not mean that the situation was uncomplicated, since market conditions were somewhat different from the pre-war years. On the one hand, demand for wine for human consumption was depressed, but on the other, there was increased demand for wine-based alcohol. These two factors, together with protective measures, led to an increase in the unit price of must, and, in the case of winegrowers in Toledo, a partial shift in production from red wine to white wine.

The analysis has demonstrated that the official statistics for Toledo in the 1940s underestimate the cultivated area with grapes. Still, the error appears to be small, and after the Civil War retraction, the pre-war extension of the crop was not reached again until the early 1960s. Taking into account that prices in real terms declined in the 1950s, it is a peculiar phenomenon that the re-plantation of rootstocks accelerated in this decade rather than in the 1940s. Yet, the developments in Toledo followed a national trend. This emphasises the importance of the change in policy in 1952-53, which extended the existing system of price guarantees. At the same time, the improvement of the general economic conditions in Spain increased demand for wine. Thus, the farmers probably perceived the 1950s as economically more favourable than the 1940s. Nevertheless, the situation in Toledo cannot be seen as solely the consequence of a shift in the agrarian policy, but was also related to the secular development of land use in La Mancha. Since the beginning of the 20th century, the unsuitability of the soil for dry-land cereal cultivation in the region had worked as an incentive to increase the cultivation of grapes.

To summarise, the analysis in Chapters 3, 4, 6, 7 and 8 suggests that the developments in different agrarian sub-sectors to some degree followed independent paths. Similar patterns of intervention in the cases of wheat and olives led to quite unlike results in levels of output. At the same time, quite different sorts of intervention led to similar outcomes in the cases of olives and grapes. This happened despite the fact that cereals, olives and grapes could often be cultivated on the same land, but substitutions between yearly and perennial crops appear to have been restricted. This

[569] Naredo (1983).

is not surprising in the short run, when one considers the investments and de-investments involved when taking vines and olive trees in and out of production. However, the conclusions from Chapters 7 and 8 indicate that substitution was also limited in the longer run. The discussion of the economic consequences of the agrarian policy for the farmers in the 1940s and early 1950s has therefore to discriminate between agrarian sub-sectors. Hitherto, this is seldom found in the historical literature, where focus often has been on a single crop.[570]

Within the broader context of the economic policy of the early Franco regime, it is normally stressed that autarky and state intervention was a deliberate choice influenced by the German and Italian pre-war experiences.[571] According to Francoist ideology, widespread state intervention was seen as necessary to prepare the country for war and making it militarily and economically independent. As pointed out in Chapter 1, this strategy materialised in Spain through the creation of the state-holding INI, whose activities in the 1940s were focused on military-related industries. The dominant status of industry relegated the agrarian sector to a secondary place, where its main purpose was to provide cheap foodstuffs for the industrial labour force. This thesis does not change the perception of the subordinated nature of the agrarian sector with regards to industry. Nevertheless, it introduces a shift in the understanding of the conditions governing the agrarian sector: Since there were external constraints on agrarian output in the 1940s, intervention by the government was a reasonable measure to secure distribution of basic foodstuffs. Although this was not the reason behind the intervention, it was a likely policy in the circumstances of World War II.

The intervention that took place was not always the best possible, and this especially concerns the distribution of the produce to the population. A number of confluent factors, of which the following are the most likely, can help explain the deficient working of the rationing system. First, the relevant persons in the administrations thought that the planning of the economy in all cases was the correct way of pursuing the political goals of the regime. Second, insufficient statistical information, especially the lack of knowledge of the size of the black market, had the consequence that the administrators and politicians believed that the supply situation was worse than in reality. Third, the lack of knowledge about how to handle an

[570] Most of the work by Barciela had been on the wheat sector, while Tió and Gutíerrez del Castillo analysed the olive oil sector. Contrary to this, Clavera et al. mainly referred to the agrarian sector as a whole without distinguishing between sub-sectors.

[571] See for example Barciela (1986b), Catalán (1992), Catalán (1995), Clavera et al (1973), Gámir (ed.) (1980), M.-J. González (1980), Preston (1995), Tusell (1993), Velasco Murviedro (1981) and Viñas (1984).

intervention system made it deficient. Fourth, personal economic interests of administrators and politicians were involved in the black market, either through direct participation or through the acceptance of bribes. It has been pointed out that all four elements were probably at play simultaneously throughout the 1940s and early 1950s.

Finally, the opposition of the Ministry of Agriculture to the plans of the CGAT about the "harmonisation" of prices in 1946 showed important disagreements in the government about the course of its economic policy. This finding is parallel to the conclusions of a recent book by San Román on the INI. She maintained that although the interventionist line in the government was strong in the 1940s, it was also resisted by members of the cabinet and industrial circles.[572] The closed nature of the regime, including the strict censorship of the press, tends to emphasise shifts in government as breaking points for changes in policy. Within this line of reasoning, Barciela has stressed the shift in government in 1951 for the liberalisation of the agrarian sector in the following years.[573] Yet, such an interpretation can be misleading, as demonstrated in this thesis. The steps taken by Rein Segura in the late 1940s clearly anticipated the actions of Cavestany, who took office as Minister of Agriculture in 1951.

[572] San Román (1999).
[573] Barciela (1986).

APPENDIX 1: THE LIMITS TO THE RELIABILITY OF THE OFFICIAL STATISTICS

1.1: INTRODUCTION

It is well known that the statistics covering the agrarian sector during the Franco years are less trustworthy than could be desired, especially taking into consideration that we are dealing with a relative recent historical period.[574] Concerning the topics that are dealt with in the present thesis, two main problems arise with the use of official statistics on the agrarian sector in the 1940s. The first problem is the result of that the Franco regime was a dictatorship, and it is necessary to consider whether the agrarian statistics were deliberately manipulated for political purposes. The second problem relates to the existence of a large black market for foodstuffs in the 1940s, which had the consequence that the original statistics underestimated output as well as the cultivated area. It is the purpose of this appendix to discuss the nature of these problems, as well as to show which solutions have been chosen to make it possible to work with the available data in spite of the existing problems.

1.2: THE QUESTION OF THE POSSIBLE DELIBERATE MANIPULATION BY THE MINISTRY OF AGRICULTURE OF THE AGRAIAN STATISTICS COVERING THE 1940S

The question of whether the agrarian statistics of the 1940s were deliberately manipulated, has its origin in a note sentence from the 1950 edition of the statistics published by the Ministry of Agriculture. In the *Anuario Estadístico de las Producciones Agrícolas* it was stated that until that year the statistics had been elaborated in the following way:

> The estimations of the harvest of all the crops, and therefore also those for the autumn cereals, used to be based exclusively on data from the Provincial Agronomic Offices which were later corrected by the DG of Agriculture. The data coming from the Provincial Offices had been sent to them by the local organisations, and had passed an initial correction by the Provincial Offices (...).[575]

[574] Barciela (1986a), pp. 161-164.

[575] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1950), pp. 1-2. (Underlining by the author, own translation)

It is the use of the words "corrected" in a context where statistics where employed for political aims, which raises the first question about the reliability of the data.[576] However, an inspection of some of the original data sent from the Provincial Offices indicates that the Ministry Agriculture did not systematically falsify the figures it received. The corrections are easily recognisable in the originals, but there are very few and in the majority of the cases concerns errors of calculation of the value of the production.[577] This means that the published statistics reflects the information facilitated by the local bureaucracy to the Ministry of Agriculture, which is an argument against that the statistics were systematically falsified by the Ministry in Madrid.

1.3: THE OFFICIAL AGRARIAN STATISTICS AND THE BLACK MARKET FOR FOODSTUFFS

Although the Ministry of Agriculture does not appear to have made a systematic falsification of the agrarian statistics in the 1940s and early 1950s, this does not mean that they necessarily are correct. This is due to that the existence of a large black market for foodstuffs had the consequence that not all output was officially registered. However, this insight is not new, since the Ministry of Agriculture as early as in 1950 started to revise output statistics for wheat, barley, rye, and oats for the 1939-48 period. According to the Ministry, it was noted in 1950 that there was an important difference between the pre-harvest data on expected output facilitated by the local authorities, and the amount of grain that was later purchased by the SNT.[578] Using this difference as a benchmark, the statistics for national output of the four cereals between 1939 and 1948 were then changed.[579] However, the procedure appears to have been

[576] Political use of statistics is found in Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939), where it is "shown" that the rebels were better organisers of the agrarian production than the Republic during the Civil War. Another example is that pre-1936 agrarian statistics were "corrected" in 1955 to "demonstrate" that the pre-war "Republican" agrarian production was smaller than the post-war "Francoist" production. This corrected pre-war data are generally rejected in the historiography and has therefore not been used in this thesis. Barciela (1986a), pp. 161-164. See Ministerio de Agricultura: *Resumen Estadístico de las Principales Producciones Agrícolas 1954-55*, pp. IX-X, and 24-25 for the "corrected" pre-war figures.

[577] Se for example Ministerio de Agricultura: Informes 5R (olives); Id.: Informes 7R (cereals and leguminous); Id.: Informes 10R (wine).

[578] The difference between the pre-harvest expectation and the post-harvest data was probably the outcome of a gradual liberalisation of the control system and the introduction of a parallel market, which occurred in 1950. See Section 3.7 for a detailed description.

[579] Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950), pp.3-4 and 13. It is not explained how the information about the 1950 harvest was extrapolated to the earlier years, and

somewhat ad hoc since in six of the 10 years between 1939 and 1948,[580] the upward corrections in output were in relative terms the same. Here the smallest relative increase was in the case of rye with approximately 20 percent, while the largest was a 45 percent in the case of barley.[581] In the remaining four years, the corrections were somewhat smaller.[582]

The following year, the Ministry continued the work and produced revised provincial data for the four cereals covering the yearly average cultivated area and average yearly output between 1939 and 1948.[583] It is notable that the percentage increase in the data for the average cultivated area between 1939 and 1948 is generally less than five percent and practically of the same size for all provinces.[584] However, the corrections of the average cereal output are more heterogeneous, as can be seen in Table A.1.

Table A. 1: Official corrections of average cereal output, 1939-48.

	Wheat	Barley	Rye	Oats
Original figures for average total				
yearly output, 1939-48 (metric tons)	2577788	1431613	382114	466709
Official revised figures for average total				
yearly output, 1939-48 (metric tons)	3205970	1856410	438070	563653
Increase in average yearly output,				
1939-48 (Percent)	24	30	15	21
Smallest increase at provincial level				
in average yearly output, 1939-48 (percent)	20	24	10	14
Largest increase at provincial level				
in average yearly output, 1939-48 (percent)	26	34	17	26
Sources: Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40,				
1943-48 and 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).				

When analysed closer it appears that there is a geographic pattern in the statistical corrections of total cereal output, i.e. the aggregate output of wheat, barley, rye, and oats. In Table A.2 , it can be seen that most of the smallest relative corrections

it has not been possible to localise the manuscript behind the revised published data to solve this question.

[580] That is in 1942-45, 1947-48.

[581] The figure for wheat is a 35 percent increase and for oats a 33 percent increase.

[582] In 1939-41 output of barley and oats were not corrected. While the increase for rye was four percent in these three years, the adjustment of wheat output was 11 percent in 1939 and 1940, and nine percent in 1941. Concerning 1946, the figures were wheat: 14 percent; barley: 36 percent; rye: 12 percent; oats: 24 percent. Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas*; Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939, 1940, 1943-49); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).

[583] Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1951).

[584] The increase in the area cultivated with wheat was between 3.21 percent and 3.74 percent, with the exception of Valladolid where the data remained unchanged. In the case of barley the increase in the cultivated area was between 3.10 percent and 3.95 percent, with the exception of Orense where the increase was 5.11 percent. The increase in the area cultivated with oats was between 3.69 percent and 5.58 percent. The data for the area cultivated with rye were not changed. Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1939-40, 1943-48, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).

correspond to the North-eastern part of the peninsula.[585] At the same time, some of the largest corrections correspond to the South,[586] as well as some provinces - such as Alicante, Barcelona, and Madrid - where local output was to small to meet demand. This could reflect that the corrections were made with a view to that black market trade was most widespread where wheat was important in the crop structure, when local supply was insufficient, as well as in provinces where land was concentrated in few hands.

Table A. 2: Relative corrections at provincial level of aggregate output of wheat, barley, rye, and oats, 1939-48.

Increase in %	Provinces	Increase in %	Provinces
15,0	Pontevedra	**24,8**	**SPAIN**
15,3	Orense	24,9	Burgos
16,6	Lugo	25,2	Málaga
19,8	La Coruña	25,2	Teruel
21,3	León	25,2	Cuenca
21,3	Oviedo	25,6	Córdoba
22,2	Valladolid	25,6	Ávila
22,4	Santander	25,7	Tarragona
23,0	Zamora	25,7	Granada
23,0	Las Palmas	25,7	Cádiz
23,1	Logroño	25,7	Valencia
23,2	Navarra	25,9	Lleida
23,6	Guadalajara	26,1	Castellón
23,7	Soria	26,1	Sevilla
23,7	Álava	26,4	Jaén
23,8	Palencia	26,4	Albacete
23,8	St. Crus de T.	26,5	Segovia
23,9	Vizcaya	26,6	Toledo
24,0	Huesca	26,7	Badajoz
24,1	Cáceres	27,4	Murcia
24,1	Guipúzcoa	27,5	Madrid
24,1	Salamanca	28,1	Barcelona
24,2	Huelva	28,3	Almería
24,4	Zaragoza	28,3	Ciudad Real
24,5	Baleares	28,5	Alicante
24,7	Gerona		
24,8	**SPAIN**		
Own elaboration based on Ministerio de Agricultura: *Anuario Estadístico de la Producciones Agrícolas* (1939-40, 1943-48, 1951); Instituto Nacional de Estadística: *Anuario Etadístico de España* (1943).			

Since no other data were corrected, the reliability of the available data for agrarian output and cultivated area can be questioned on several grounds. The first problem is that even the corrected data often were constructed applying a similar relative increase to the original data in different years and in different provinces. This would either suggest that the relative size of underreporting was stable from year to year, or that the Ministry of Agriculture only had a general idea of the amount of underreporting that took place. The second problem is that although there was a black market for almost

[585] I.e. Galicia, Asturias, Santander, and part of Castilla la Vieja.
[586] I.e. parts of Castilla-La Mancha and Andalucía, as well as Murcia.

every agrarian produce, the statistics were only revised for the four main cereals, but not for example for leguminous plants or olive oil. A special problems relates to the value of output, where the underreporting of output introduces an error, but where this is magnified by the fact that black market prices received by the farmers were higher than official prices. Consequently, the raw data are still problematic, and it has been necessary to take this into account at various points in this thesis.

The approach to the issue has been pragmatic focusing on the problems, which had the largest importance for a given topic under discussion. Generally speaking, data supplied in the main text shall therefore not be considered as perfect. They shall rather be seen as the best available, where every caution has been taken to correct possible errors and/or discuss the likely magnitude and bias of those errors.

APPENDIX 2: HUMAN CONSUMPTION OF NON-OLIVE OIL BETWEEN 1940 AND 1944

Gutiérrez del Castillo maintained that between 1940 and 1944, 97,954 metric tons of non-olive oil was distributed through the rationing system for human consumption. However, this is not correct, and the real figure was only 307 metric tons for the five years. The error has its origin in a misinterpretation of the distribution and consumption of edible oils.

The part of the production of olive oil that was controlled by the state through the rationing system had several outlets: The civil population, the military personnel and their families, the civilian industry, the military industry, the Spanish possessions in Morocco, exports, and stocks. In Table 4.6 these outlets, with the exception of exports and stocks, have been pooled in Column 5 "Amounts of oil sold in legal markets". The official information on the amount of oil sold through the rationing system for human consumption only refers to "oil".[587] Erroneously, Gutiérrez del Castillo therefore supposed that this heading referred to olive oil as well as other sorts of edible oils. She therefore deducted the consumption of other oil types from the total legal consumption of oil, to reach the figure of the total legal consumption of olive oil, but this is incorrect.[588]

Olive oil is produced in several different qualities that can easily be separated and sold to different markets. The quality of the oil depends on factors such as the quality of the fruit, the time gap from harvest to grinding, the pressing method, and whether the oil comes from the first or later pressings. Approximately five percent of the oil would normally have an acidity of more than 15°, which made it unsuitable for human consumption even after being refined.[589] Gutiérrez del Castillo only had data for 1943 and 1944 for the relative amount of oil that went to the civil and military industry, and this was 5.54 percent and 5.07 percent of the official production of olive oil.[590] This means that the data she is using for the consumption of oil in the civil and military industry, only refers to the consumption of olive oil in the industry and not all types of oils used in the industry.[591] The consequence is that the author implicitly

[587] See Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943-52).
[588] See Table 4.6.
[589] Anonymous (1944), s.p. Immediately before the Civil War, olive oil was used in the pharmaceutical industry as well as in the making of margarine, pomades, cosmetics and soap; Soroa Piñeda (1936), p. 23.
[590] The data for the other years are estimates made by Gutíerrez del Castillo.
[591] See Gutíerrez del Castillo (1983), Table 1, p.158, for her use of the data.

supposes that vegetable oils with other origins than olives were normally a part of the oil that was distributed for human consumption through the rationing system. Although this was the case in years with an acute scarcity of olive oil, such as 1943 and 1946, it was generally not allowed.[592]

In 1943 there was scarcity of olive oil, and non-olive oil was then used for human consumption in the form of refined *orujo* oil with an acidity of less than 15°.[593] However, this only took place in four provinces[594] and only to military personnel and their families. In total it amounted to some 307.5 metric tons, which is totally insignificant compared to the data given by Gutiérrez del Castillo in column 6 in Table 4.6.[595] It was not until 1946, where the harvest was the worst of the decade, that the use of non-olive oil for human consumption was permitted again. The types of non-olive oil that was used for human consumption included *orujo* oil with an acidity of less than 15°, and oil obtained from almonds, hazelnuts, peanuts, and cotton.[596] Consequently, only 307 metric tons of *orujo* oil shall be deducted from the total consumption of oil in Table 4.6 and only so in 1943.

Since no data are available for the amount of non-olive oil that was sold through the rationing system in 1946, it has been supposed in Table 4.7 that it was equal to the amount in 1943. Seen in the light of the total amount of olive oil sold through the rationing system between 1940 and 1950, it is of limited importance whether this guestimate is totally correct.

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[592] Tió (1982), pp. 96-98. Non olive oils were almost exclusively used for industrial purposes, in spite of the rationing of the olive oil for human consumption, due to a mayor deficit of industrial oils and fats in the post-war years. The deficit was caused by a sharp decrease in the imports of these products after 1939; Zambrana Piñeda (2000), pp. 4-6. The imports that took place to alleviate this deficit were mainly in the form of animal fats, copra, palm oil, castor beans and linseeds; Tió (1982), p. 429. Although the fats and oils that were obtained from these products could be used for human consumption - with the exception of castor oil - they were almost exclusively designated for the industry.

[593] After the repeated application of mechanical pressure, the rests of the olive fruits still contain oil, but can only be extracted through chemical dissolution. Oil obtained in this way is the *orujo* oil - "*aceite de orujo*" – and a part of this can be used for human consumption after being refined. Although *orujo* oil comes from olive fruits, it is illegal to call it "olive oil", since this requires that it is obtained through mechanical pressure of the fruit.

[594] Almería, Orense, Pontevedra, and Vizcaya.

[595] Comisaría General de Abastecimientos y Transportes: Memoria del aciete, pp. 43, 45.

[596] Comisaría General de Abastecimientos y Transportes: "Circular 568", Boletín Oficial del Estado, May 6, 1946. This order modified "Circular 548" that originally regulated the intervention of olive oil in 1945/46, and which did not permit the use of non olive oil for human consumption.

APPENDIX 3: DETAILS ON BLACK MARKET RELATED CORRECTIONS OF DATA ON WHEAT, BARLEY, RYE, AND OATS IN CUENCA BETWEEN 1939 AND 1949

3.1: INTRODUCTION

For the analysis of the cereal sector in Cuenca in the 1940s, it has been necessary with a careful modification of the data on output, cultivated area, and yields for wheat, barley, rye, and oats. As explained in Appendix 1, the Ministry of Agriculture corrected in the early 1950s the statistics on wheat, barley rye, and oats for the 1939-48 period. However, revised yearly figures only appeared for the national aggregate, while at the provincial level new figures only appeared as an average for the 1939-48 period. Nevertheless, it is possible to make a rough revision of the yearly statistics for the four main cereals at the provincial level in Cuenca. Even though the correction suffer from some insecurity, the revised figures are still preferable to the original statistics, since these seriously underestimated output and the amount of land under cultivation.

3.2: REVISION OF YEARLY OUTPUT FIGURES IN CUENCA BASED ON THE OFFICIAL REVISION AT THE NATIONAL LEVEL

As mentioned above, officially revised yearly output figures exists at the national level, but at the provincial level they only exist for the 1939-48 as a whole. However, Table A.3 shows that the Ministry of Agriculture estimated that the supposed underreporting of output in Cuenca between 1939 and 1948, was similar to the perceived underreporting at the national level.

Table A. 3: Official relative revisions in cereal output in Cuenca and Spain, 1939-48 average.

Crops	Original average 1939-48	Revised average 1939-48	Relative increase in average	Relative increase in average
	output figures (Cuenca)	output figures (Cuenca)	output figures (Cuenca)	output figures (Spain)
	(100s of kilos)	(100s of kilos)	(Percent)	(Percent)
Wheat	785764	975185	24,11	24,37
Barley	393743	518975	31,81	29,67
Rye	83900	96699	15,26	14,64
Oats	160984	192769	19,74	20,77
Own elaboration based on Ministerio de Agricultura: *Anuario Estadístico de la Producciones Agrícolas* (1939-40, 1943-48, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).				

Given the parallel situation in Cuenca and Spain, the yearly data on cereal output in Cuenca has been increased in Table A.4 by the same relative amount as the official revision of the data for the national total.

As pointed out in Appendix 1, the Ministry increased total national output by the same relative amount in six of the 10 years between 1939 and 1948. The revised data in Table A.4 shall therefore only be considered as an estimate of the likely size of cereal output in Cuenca in the 1940s, and not as an exact measure of output in each and every year.

Table A. 4: Own revision of official yearly data on cereal output in Cuenca, 1939-48.

(All figures in 100s of kilos).				
Years	Original output	Revised output	Original output	Revised output
	data for wheat	data for wheat [1]	data for barley	data for barley [2]
1939	664210	735945	430550	430550
1940	700004	775604	292150	292150
1941	796502	872010	338131	338131
1942	869793	1171176	498860	723347
1943	642575	865291	552813	801579
1944	829083	1116360	442118	641071
1945	470855	634006	201150	291668
1946	1530276	1747269	495788	676751
1947	766705	1032368	320745	465080
1948	587641	791259	365123	529428
Years	Original output	Revised output	Original output	Revised output
	data for rye	data for rye [3]	data for oats	data for oats [4]
1939	65275	67938	149800	149800
1940	58958	61363	211950	211950
1941	84328	87769	226952	226952
1942	101777	122957	208092	276055
1943	70785	85515	164047	217625
1944	82389	99534	147010	195023
1945	47816	57767	91553	121454
1946	131838	147606	184107	228569
1947	90805	109702	126344	167608
1948	105026	126882	101098	134117
1) Original data were increased by 10,80 percent in 1939-40, by 9,48 percent in 1941,				
by 34,65 percent in 1942-45 and 1947-48, and by 14,18 percent in 1946.				
2) Original data were increased by 45,00 percent in 1942-45 and 1947-48, and by				
36,50 percent in 1946.				
3) Original data were increased by 4,08 percent in 1939-41, by 20,81 percent in				
1942-45 and 1947-48, and by 11,94 percent in 1946.				
4) Original data were increased by 32,66 percent in 1942-45 and 1947-48, and by				
24,15 percent in 1946.				
Own elaboration based on Ministerio de Agricultura: *Anuario Estadístico de la*				
Producciones Agrícolas (1939-40, 1943-48 and 1951); Instituto Nacional de				
Estadística: *Anuario Estadístico de España* (1943).				

However, the analysis in Chapter 6 shows that even when the revised data are used, cereal output in Cuenca in the 1940s was significantly lower than before the Civil War. Although the revised data suffers from some insecurity, the post-war decline in cereal output in Cuenca cannot be disputed, given the magnitude of the difference between pre- and post-war output levels.

3.3: REVISION OF YEARLY DATA FOR THE AREA CULTIVATED WITH CEREALS IN CUENCA BASED ON THE OFFICIAL REVISION AT THE NATIONAL LEVEL

In the case of the officially revised figures for the area cultivated with cereals, the problem is the same as it was for the output data, i. e. that there are only yearly estimates at the national level. However, the official corrections made for the 1939-48 average cultivated area in Cuenca are once again similar to the corrections for the same period at the national level, as can be seen in Table A.5.

Table A. 5: Official relative revision of cultivated area with cereals in Cuenca and Spain, 1939-48 average.

Crops	Original average 1939-48 output figures	Revised average 1939-48 average figures	Relative increase in average output figures	Relative increase in average output figures
	(Cuenca)	(Cuenca)	(Cuenca)	(Spain)
	(Hectares)	(Hectares)	(Percent)	(Percent)
Wheat	164727	170305	3,39	3,27
Barley	40806	42273	3,59	3,66
Rye	21300	21300	0,00	0,00
Oats	42299	44285	4,69	4,88
Own elaboration based on Ministerio de Agricultura: *Anuario Estadístico de la Producciones Agrícolas* (1939-40, 1943-48, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).				

Given the proximity of the corrections for Cuenca and for Spain, and in the absence of any alternative estimation, the year to year corrections for Spain have also been applied to Cuenca.[597] The revisions that are shown in Table A.6 increase the total cultivated area in Cuenca by approximately 12,000 hectares, which is roughly 3% of the provincial total. As was pointed out in relation to the revised output data in Table A.4, the revised data on cultivated area in Table A.6 shall only be considered an estimate but not an exact measure for each year.

The increase in the area cultivated with cereals obviously has to be deducted from some other heading in Table 6. , which deals with total land use in the province. Since the underreporting of land under cultivation was due to the existence of a widespread black market, it would not be logic if land use for cereals was reported as being used for other crops.

[597] In contrast to the revision of output data in Table A.4, the figures were only corrected for the 1941-48 period for barley and oats, as well as for 1942-48 in the case of wheat. This procedure follows the method used by the Ministry of Agriculture when the official revisions of the yearly data were carried out at the national level.

Table A. 6: Own revision of official yearly data on cereal output in Cuenca, 1939-48.

(All figures in hectares).				
Years	Original data for area cultivated with wheat	Revised data for area cultivated with wheat [1]	Original data for area Cultivated with barley	Revised data for area cultivated with barley [2]
1939	165730	165730	47775	47775
1940	162305	162305	36425	36425
1941	176853	176853	48033	50219
1942	157991	165701	49710	51972
1943	147321	154510	42048	43961
1944	150442	157784	39844	41657
1945	179299	188049	36300	37952
1946	170000	178296	36625	38291
1947	170044	178342	35575	37194
1948	167283	175446	35729	37355

Years	Original data for area cultivated with oats	Revised data for area cultivated with oats [3]
1939	42800	42800
1940	47100	47100
1941	56738	60171
1942	52023	55170
1943	48249	51168
1944	41215	43709
1945	36621	38837
1946	35068	37190
1947	31586	33497
1948	31593	33504

1) Original data were increased by 4.88 percent between 1942 and 1948.
2) Original data were increased by 4.55 percent between 1941 and 1948.
3) Original data were increased by 6.05 percent between 1941 and 1948.
Own elaboration based on Ministerio de Agricultura: *Anuario Estadístico de la Producciones Agrícolas* (1939-40, 1943-48, 1951); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943).

It can therefore be supposed that a part of land used for cereals was reported as being "Fallow land" or being used for "Meadows, pastures and scrubland". Since the amount of land described at "Meadows pastures and scrubland" is significantly higher after the war than before 1936, the deducting has been made from this heading. However, choosing one or the other does not change the overall picture of the Table given the total amount of land under both of these alternative headings.

3.4: THE ESTIMATION OF THE RELATIVE BLACK MARKET PRICE FOR WHEAT IN CUENCA BETWEEN 1939 AND 1952

To estimate the average wheat price received by the farmers in Cuenca, it is necessary to know the relative size of the black market as well as the relative black market price. Unfortunately, this information is not available at the provincial level. However, we have just seen that the corrections of the cultivated area and production of wheat in Cuenca are close to those for the whole of Spain. Since the raison d'être for the corrections was the existence of the black market, it has been assumed that the same

relative share of production went to the black market in Cuenca as in the whole of Spain.[598]

Concerning the relative black market price for wheat, it has not been possible to find much information from Cuenca. In a report written in February 1948 by an SNT-inspector, it was stated that the Principal of the SNT-warehouse in the village Quintana del Rey had sold 9,000 kilos of wheat, with a gain of some 30,000 pesetas.[599] This equals 3.33 pesetas/kilo and given the official price was 2.52 pesetas/kilo, the gain represents 132% of the official price. This is relatively close to the estimate by Barciela and García González that the average price paid for wheat in the 1940s was 250% of the official price.[600] Furthermore, according to the Chambers of Commerce in Bilbao and Zamora, the black market price for bread seems to be a bit low in 1947/48 compared to the normal level in the 1940s.[601]

The relative black market price varied from province to province and was influenced by whether a province was a net importer of wheat, what the distance was to large urban centres, the quality of the infrastructure, and the type of land ownership.[602] All these factors were unfavourable to the farmers in Cuenca. This is so because the province had a considerable net export of wheat, a very small part of the population lived in urban centres, the distance to Madrid and Valencia were at least 70 kilometres from the border of the province, and the neighbouring provinces Albacete, Ciudad Real, Guadalajara, Teruel and Toledo were also net exporters of wheat. Furthermore, the road system was deficient, and the majority of the farmers were family farmers, making their bargaining position weak when selling in the black market.

It does therefore not seem likely that the farmers in general were able to obtain relative black market prices that were substantially higher than the national average. Consequently, it has been assumed that the relative black market price for wheat in

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[598] These data are found in: Servicio Nacional de Trigo: *Cosechas, comercio y consumo de trigo desde la fundación del servicio nacional hasta la cosecha de 1962.*

[599] Servicio Nacional de Trigo: *Informe quincenal de la primera quincena de febrero de 1948*, from an *Inspector Provincial* of the SNT in Teruel temporarily working for the SNT in Cuenca.

[600] See Section 3.2.

[601] In Bilbao the black market price for bread in December 1948 was 4.57 times the official price. The average relative black market price between 1941-49 was 7.14 times the official price; Cámera Oficial de Comercio, Industria y Navegación de Bilbao: *Memoria Comercial* (1943-44, 1946, 1948-51); González Portilla and Garmendia (1988), p. 33.
In Zamora, the relative black market price was 2.32 times the official price in 1947 and 2.12 times the official price in 1948. The average relative black market price in the 1946-50 period was 2.43 times the official price; Cámara Oficial de Comercio e Industria de Zamora: *Zamora 1946-1950. Memoria comprensiva de los aspectos más interesantes de la provincia referido a dicho período*, p. 262.

[602] Barciela and García González (1983), pp. 78-79.

Cuenca on average was 250% of the official price. This is similar to the estimate by Barciela and García González of the national average relative black market price. With this information, the revised value of wheat output in Cuenca between 1939 and 1953 has been calculated in Table A.7. The new estimate in Column 8 of the value of wheat output is significantly higher in most of the 1940s than the original figures. The importance of this result for the analysis of the incentive structure for wheat farmers in Cuenca is discussed in detail in Section 6.6 in the main text.

Table A.7: Original and revised figures for value of wheat output in Cuenca between 1939 and 1953.

	1	2	3	4	5	6	7	8
Years	Original wheat output data (100s of kilos)	Official wheat price (Pts per 100s of kilos)	Original value of wheat output (Pesetas)	Revised wheat output (100s of kilos)	Share of output sold in the black market (Percent)	Black market wheat price (Pesetas)	Revised value of wheat output (Pesetas)	Revised value of wheat output as percent of original value of wheat output
1939	664210	70,50	46826805	735945	27,93	176,25	73620944	157
1940	700004	85,50	59850342	775604	30,88	213,75	97030907	162
1941	796502	86,00	68499172	872010	27,96	215,00	106444913	155
1942	869793	98,00	85239714	1171176	38,26	245,00	180644805	212
1943	642575	147,84	94998288	865291	34,12	369,60	193396553	204
1944	829083	182,07	150951142	1116360	34,27	455,18	307739311	204
1945	470855	161,97	76264384	634006	28,95	404,93	147283123	193
1946	1530276	194,10	297026572	1747269	31,02	485,25	496949080	167
1947	766705	139,57	107009017	1032368	35,58	348,93	220987215	207
1948	587641	178,79	105064334	791259	37,04	446,98	220069373	209
1949	970084	250,00	242521000	970084	32,75	625,00	361659441	149
1950	1102313	250,00	275578250	1102313	20,58	625,00	360649256	131
1951	1388270	293,00	406763110	1388270	18,10	732,50	517199294	127
1952	1261073	376,00	474163448	1261073	23,89	940,00	644079920	136
1953	762463	396,00	301935348	762463	8,65	990,00	341111459	113

Sources: Columns 1, 2 and 3: Ministerio de Agricultura: *Anuario Estadístico de las producciones agrícolas* (1939-40, 1943-53); Instituto Nacional de Estadística: *Anuario Estadístico de España* (1943). Column 4: Own estimation according to Appendix 3. Column 5: Own estimation applying share of national wheat output sold in the black market to the situation in Cuenca. Data for share of national wheat output sold in black market are from: Sevicion Nacional de Trigo (1963): Table C.-10-1. Column 6: Own estimation as explained in text and based estimate of relative black market wheat price from Barciela and García González (1983).

LIST OF REFERENCES

UNPUBLISHED SOURCES

Comisaría General de Abastecimientos y Transportes: *Cuentas y jutificaciones de las Delegaciones Provinciales* - June 1939 to December 1941 - Archivo General de la Administración, Sección Agricultura, Subsección CGAT, Boxes 7-35 and 42-45.

Comisaría General de Abastecimientos y Transportes: *Mapas de abastecimiento* (Provincia de Jaén, 1945, 1952) – Archivo Histórico Provincial de Jaén.

Comisaría General de Abastecimientos y Transportes: *Mapas de abastecimiento* (Provincia de Toledo, 1946, 1949) – Archivo Histórico Provincial de Toledo.

Comisaría General de Abastecimientos y Transportes: *Memoria del aceite* – The Library of the Instituto Nacional de Estadística.

Consejo Económico Sindical de Cuenca: *Constitución de Juntas de Cupo Forzoso* - composed of letters recieved from various local organizations in the province - summer-autumn, 1943., A.H.P. Cuenca, AISS 672.

Consejo Económico Sindical de Cuenca: *Informe*, dated 8th March 1946, A.H.P. Cuenca, AISS 635.

Consejo Económico Sindical de Cuenca: *Informe*, dated 1st May 1946, A.H.P. Cuenca, AISS 905.

Consejo Económico Sindical de Cuenca: *Informe*, dated 22nd May 1946, A.H.P. Cuenca, AISS 905.

Consejo Económico Sindical de Cuenca: *Situación actual de la agricultura*, dated 23rd September 1947, A.H.P. Cuenca, AISS 305.

Delegación Sindical Provincial de Cuenca: Untitled report dated 23rd September 1939, A.H.P. Cuenca, AISS 401/1.

Diputación Provincial de Cuenca: *Ficha conteniendo los datos relativos a la situación de la corporación en el período de tiempo comprendido entre el 18 de julio de 1.936 y el 31 de diciembre de 1.939, que se remite en cumplimiento de lo ordenado en la circular del Iltmº Señor Director General de Administración Local de fecha 11 de marzo de 1.940*, Archivo General de la Administración, Sección Gobernación, Subsección 1.03, Box 3,117.

Diputación Provincial de Jaén: *Memoria de la Diputación Provincial de 1939*, Archivo General de la Administración, Sección Gobernación, Subsección 1.03, Box 3120.

Diputación Provincial de Toledo: Unnamed and undated report (Probably from 1938), Archivo General de la Administración, Sección Gobernación, Subsección 1.03, Box 3123.

Fiscalía Provincial de Tasas de Teruel: *Fichas de los sancionados por la Fiscalía Provincial de Tasas y multas que se les han impuesto* (1950-55), Archivo Historico de Teruel, Boxes 57-68.

Gobernador Civil de Cuenca: *Informe*, dated 20th of April 1940, Archivo General de la Administración, Sección Gobernación, Subsección 1.03, Box 3117.

Jefe Provincial de Sindicatos, Cuenca: Letter to the Delegado Nacional de Sindicatos, Madrid, dated 9th of January 1941, A.H.P. de Cuenca, AISS 401 Exp. 1.

Junta Superior de Precios: *Acta de la reunión celebrada el dia ...*, (1945-54), Archivo General de la Administración, Sección Presidencia de Gobierno, Boxes 3622-3627.

Ministerio de Agricultura: *Informes 5R*, Archivo General de la Administración, Sección Agricultura, Caja 234.

Ministerio de Agricultura: *Informes 7R*, Archivo General de la Administración, Sección Agricultura, Cajas 227, 228, 236.

Ministerio de Agricultura: *Informes 10R*, Archivo General de la Administración, Sección Agricultura, Cajas 227, 252.

Organización Sindical (Cuenca): *Anexo 1e - Datos Estadísticas*, Archivo Histórico Provincial Cuenca, AISS 264, Exp. 1

Servicio Nacional de Trigo: *Informes*, from the national inspectors from the Central Zone, 1946-48, Archivo General de la Administración, Sección Agricultura, Caja 13.572

Servicio Nacional de Trigo: *Informes quincenales*, from the provincial and local inspectors of *the Servicio Nacional de Trigo* in Cuenca, 1948, 1950 and 1951, Archivo General de la Administración, Sección Agricultura, Cajas 13.557, 13.563 and 13.568.

Servicio Nacional de Trigo: *Resumen de agricultores deudores de cupos forzosos de centeno para la campaña 1950/51*, Archivo General de la Administración, Sección Agricultura, Boxes 14,089.

Servicio Nacional de Trigo: *Resumen de agricultores deudores de cupos forzosos de trigo para la campaña 1950/51*, Archivo General de la Administración, Sección Agricultura, Boxes 14,090 – 14,097

OFFICIAL PUBLICATIONS, PERIODICALS, PROCEEDINGS, REPORTS ETCETERA

Alimentación Nacional (1941-53). Periodical published by the Comisaría General de Abastecimiento y Transporte.

Boletín Oficial de Cuenca. Official Bulletin published by the Provincial Government in Cuenca.

Cámara Oficial de Comercio e Industria de Gerona: *Memoria Comercial* (1946), Gerona.

Cámara Oficial de Comercio e Industria de Jaén: *Memoria Comercial y estudio sobre el desarrollo de los negocios en la provincia de Jaén* (1946-51), Jaén.

Cámara Oficial de Comercio e Industria de Zamora: *Zamora 1936-1941. Memoria comprensiva de los aspectos más interesantes de la provincia referido a dicho periodo*, Zamora, 1942.

Cámara Oficial de Comercio e Industria de Zamora: *Zamora 1946-1950. Memoria comprensiva de los aspectos más interesantes de la provincia referido a dicho periodo*, Zamora, 1951.

Cámera Oficial de Comercio, Industria y Navegación de Bilbao: *Memoria Comercial* (1943-51), Bilbao.

Cámera Oficial de Comercio, Industria y Navegación de La Coruña: *La economia coruñesa en los últimos años. Memoria Comercial de la Cámara Oficial de Comercio, Industria y Navegación de La Coruña* (1947-1949), La Coruña.

Cámera Oficial de Comercio, Industria y Navegación de Lleida: *Memoria reglamentaria de trabajos y comercial de los años 1946 y 1947*, Lleida.

Cámara Oficial de Comercio y Navegación de Barcelona: *Memoria comercial* (1942, 1946, 1948, 1950), Barcelona.

Consejo de la Economia Nacional: *Estadística del comercio Exterior de España, enero-septiembre de 1927*, Madrid, 1928.

Consejo Económico Sindical de la provincia de Cuenca: *Perspectivas de desarrollo económico de la provincia de Cuenca (en los proximos cinco años)*, Organización Sindical, Consejo Económico Nacional, Gabinete Técnico, Madrid, marzo 1962.

Consejo Económico Sindical Pronvincial – Jaén: *Structura económica de la provincia de Jaén, vol. III: Agricultura*, Jaén, 1961.

Consejo Económico Sindical Pronvincial (Toledo) (1961): *Conclusiones y ponencias del Consejo Económico Sindical Comarcal de La Mancha*, Toledo.

Consejo Económico Sindical Pronvincial (Toledo) (1965): *Conclusiones y resumen de ponencias del II Pleno del Consejo Económico Sindical Provincial de Toledo*, Toledo.

Consejo Económico Social Sindical del Guadalquivir (s.a.): *1. pleno. Ponencias de: Olivo, Regadíos, Ganadería*, ?.

Diputación Provincial de Toledo (1975): *Plan de desarrollo socioeconómico de la Provincia de Toledo*, Toledo.

Ganadería (1943-53). Periodical published by the Sindicato Vertical de Ganadería.

García Romero, A. (ed.) (1944?): *Anuario de la industria y comercio del aceite 1944*, Editorial Excelsior, ?.

García Romero, A. (ed.) (1948?): *Anuario de la industria y comercio del aceite 1947-1948*, Editorial Excelsior, ?.

Instituto Nacional de Estadística: *Anuario Estadístico de España*, (1943-66), Madrid.

Instituto Nacional de Estadística: *Comercio exterior de España. Números índices (1901-1956)*, Madrid, 1958.

Instituto Nacional de Estadística: *Cuenca. Reseña estadística*, Madrid, 1958.

Instituto Nacional de Estadística: *Cuenca. Reseña estadística*, Madrid, 1971.

Instituto Nacional de Estadística: *Jaén. Reseña estadística*, Madrid, 1956.

Instituto Nacional de Estadística: *Jaén. Reseña estadística*, Madrid, 1971.

Instituto Nacional de Investigaciones Agrarias (1986): *Índice humanístico de mecanización de los trabajos agrícolas en la provincia de Jaén, (Comunicaciones I.N.I.A, serie Economia n. 20)*, Ministerio de Agricultura, Pesca y Alimentación, Madrid.

International Emergency Food Council (1947): *Report of the Secretary-General to the Fifth Meeting of the Council*, FAO, Washington.

International Institute of Agriculture (1939): *Oils and Fats: Production and International Trade*, Rome.

Junta de Comunidades de Castilla-La Mancha (1982): *El sector agrario en Castilla-La Mancha*, Toledo.

Ministerio de Agricultura: *Anuario Estadístico de las Producciones Agrícolas* (1931-35, 1939-40, 1943-63), Madrid.

Ministerio de Agricultura: *Censo Agrario 1962*, Madrid, 1963.

Ministerio de Agricultura: *Estadística de la producción de cereales y leguminosas - 1936*, s.a., Valencia.

Ministerio de Agricultura: *Estadística de la producción de cereales y leguminosas - 1937*, s.a., Barcelona.

Ministerio de Agricultura: *Estadística de la producción olivarera - 1936-37*, s.a., Valencia.

Ministerio de Agricultura: *Estadística de la producción olivarera - 1937-38*, s.a., Barcelona.

Ministerio de Agricultura: *Estadística de la producción vitivinícola - 1936*, s.a., Valencia.

Ministerio de Agricultura: *Estadística de la producción vitivinícola - 1937*, s.a., Barcelona.

Ministerio de Agricultura: *Inventario agronómico del olivar, Vol. II: Provincia de Jaén*, Madrid, 1975.

Ministerio de Agricultura: *Mapa de cultivos y aprovechamientos de la Provincia de Toledo*, Madrid, 1983.

Ministerio de Agricultura: *Resumen estadístico de las producciones agrícolas* (1950, 1950-1951, 1954-1955), Madrid.

Ministerio de Fomento: *Materias fertilizantes empleadas en la Agricultura*, Madrid, 1921.

Ministerio de Hacienda: *Estadística del Comercio Exterior de España* (1931, 1934, 1941-1956), Madrid.

Ministerio de Trabajo: *Cuenca. Reseña Estadística 1943*, Madrid, 1943.

Moreno Nieto, L. (1960): *La Provincia de Toledo*, Diputación Provincial de Toledo, Toledo.

Movimiento Nacional: *Toledo. España en paz*, Movimiento Nacional, Toledo, 1964.

Patac de Traviesas, L. (1950): *El costo de los productos del oliva y sus industrias derivadas*, Sindicato Vertical del Olivo, Madrid.

Presidencia del Gobierno - Secretaría General para la Ordenación Económico-Social: *Programa de necesidades de la Provincia de Cuenca*, Madrid, 1948.

Presidencia de Gobierno - Secretaría General para la Ordenación Económico-Social: *Programa de necesidades de la provincia de Jaén*, Madrid 1948.

Presidencia de Gobierno - Secretaria General para la Ordenación Económico-Social: *Proyecto de Plan de Ordenación Económico-Social de la Provincia de Jaén*, Madrid, 1951.

Servicio de Recuperación Agrícola (1941): *Memoria sobre la gestión realizada por este Servicio desde su creación en mayo 1938 hasta su extinción en diciembre 1940*, Ministerio de Agricultura, Madrid.

Servicio Nacional de Trigo (1958): *Veinte años de actuación*, Madrid.

Servicio Nacional de Trigo (1960): *Estudio del consumo nacional de trigos y harinas y sus corriente comerciales. Datos de las campañas trigueras 1954-55 a 1958-59*, Madrid.

Servicio Nacional de Trigo (1963): *Cosechas, comercio y consumo de trigo desde la fundación del servicio nacional hasta la cosecha de 1962*, Madrid.

Sindicato Nacional del Olivo (1956): *Estudio Económico-social de las grasas begetales - Vol. 1 Ponencias*, Madrid.

Sindicato Nacional de la Vid, Cervezas y Bebidas (1947): *Anuario de la vid y de la producción y comercio del vino, industrias derivadas, cervezas y sidras 1946-1947*, Madrid.

Sindicato Vertical del Olivo (1945): *Estudios sobre la economía del aceite*, Madrid.

Sindicato Vertical del Olivo (1950): *Estadísticas oleícolas*, Madrid.

ARTICLES AND BOOKS

Anonymous (1944): "El problema de las grasas en España", (s.p.), in: *Boletín del Sindicato Vertical del Olivo*, vol. 40, 1944.

Andrés-Gallego, J.; de Llera, L.; Velarde, J.; González, N. (1989): *Historia de España*, Volume 13,1: *España actual. La Guerra Civil (1936-1939)*, Editorial Gredos, Madrid.

Aparicio, M. (1980): *El sindicalismo vertical y la formación del estado franquista*, Ennibar, Barcelona.

Askari, H. and Cummings, J.T. (1976): *Agricultural Supply Response. A Survey of the Econometric Evidence*, Praeger, New York.

Barciela, C. (1981a): *La agricultura cerealista en la España contemporanea. El mercado triguera y el Servicio Nacional de Trigo*, Phd.-thesis, Universidad Complutense de Madrid, Madrid.

Barciela, C. (1981b): "El "estraperlo" de trigo en la postguerra", pp. 17-37, in: *Moneda y Crédito*, vol. 159.

Barciela, C. (1983a): "Intervencionsimo y crecimiento agrario en España, 1936-1971", pp. 285-316, in: Martín Aceña, P. y Prados de la Escosura, L.: *La nueva historia economica de España*, Madrid.

Barciela, C. (1983b): "Producción y política cerealista durante la guerra civil española (1936-1939)", pp. 649-675, in: Anes, G., Tedde, P. and Rojo, A. (ed.): *Historia económica y pensamiento social*, Alianza Editorial, Madrid.

Barciela, C. (1986a): "Guia de Fuentes", pp. 161-165 in: Carreras, A. (ed.) (1986): *Estadísticas históricas de España. Siglos XIX-XX*, Fundación Banco Exterior, Madrid.

Barciela, C. (1986b): "Introducción", pp. 383-454 in: Garrabou, R., Barciela, C. and Jiménez Blanco, J.I. (ed): *Historia agraria de la España contemporánea"*, Vol. 3: *"El fin de la agricultura tradicional (1900-1960)*, Editorial Crítica, Barcelona.

Barciela, C. and García González, A. (1983): "Un analisis crítico de las series estadísticas de los precios del trigo entre 1937 y 1980", pp. 69-151, in: *Agricultura y Sociedad*, vol. 29.

Barona, G. (1948): "Economia dirigida. El boton de muestra de la lana", pp. 372-373, in: *Ganaderia*, vol. 61.

Boyes, W. and Melvin, M. (1996): *Economics*, Houghton Mifflin Company, Boston.

Brown, G.T. (1978): "Agricultural Pricing Policies in Developing Countries", pp. 84-113 in: Schultz, T.W. (ed.): *Distortions of Agricultural incentives*, Indiana University Press, Bloomington.

Carreras, A. (ed.) (1986): *Estadísticas históricas de España. Siglos XIX-XX*, Fundación Banco Exterior, Madrid.

Carreras, A. (1987): "La industria: atraso y modernización", in: Nadal, J., Carreras, A. and Sudrià, C. (ed.): *La economia española en el siglo XX*, Ariel, Barcelona.

Carrión, P. (1972): *Los latifundios en España*, Editorial Ariel, Barcelona.

Carrión, P. (1973): *La reforma agraria de la segunda república y la situación actual de la agricultura española*, Ariel, Barcelona.

Carrión, P. (1974): "El equilibrio económico en viticultura. Algunas del mas medidas adoptados en España para mantenerlo, pp. 335-378 in: P. Carrión: *Estudios sobre la agricultura española (1919-1971)*, edited by García Delgado, J.L., Ediciones de la Revista de Trabajo, Madrid.

Carrión, P.; Santacana, F. and Tarín, F. (1974): "La crisis vitícola de los primeros años veinte y sus soluciones", pp. 295-332 in: P. Carrión: *Estudios sobre la agricultura española (1919-1971)*, edited by García Delgado, J.L., Ediciones de la Revista de Trabajo, Madrid.

Catalán, J. (1992): "Reconstrución, política económica y desarrollo industrial: tres economías del sur de Europa, 1944-1953", pp. 359-395, in: Prados de la Escosura, L. and Zamagni, V. (ed.): *El desarrollo económico en la Europa del Sur: España e Italia en perspectiva histórica*, Madrid.

Catalán, J. (1995): *La economia española y la segunda guerra mundial*, Ariel, Barcelona.

Chhibber, A. (1989): "The Aggregate Supply Response. A Survey", pp. 55-68, in: Commander, S. (ed.): *Structural Adjustment & Agriculture*, Overseas Development Institute, London.

Christiansen, T. (1999): "Conflictos políticos y administrativos en el sector agraio durante el primer franquismo: el caso de Cuenca", pp. 225-245, in *Historia Agraria*, vol. 18.

Clavera, J.; Esteban, J.M.; Antònia Monés, M.; Montserrat, A.; Ros Hombravella, J. (1973): *Capitalismo español: De la autarquía a la estabilización (1939-1959)*, Vol. 1 (1939-1950), Cuadernos para el diálogo. Madrid.

Clinard, M.B. (1952): *The Black Market. A Study of White Collar Crime*, Rinehardt and Company, New York.

Cobo Romero, F. (1992): *Labradores, campesinos y jornaleros. Protesta social y diferenciación interna del campesinado jiennense en los orígenes de la Guerra Civil (1931-1936)*, Ayundamiento de Córdoba, Córdoba.

Cobo Romero, F. (1993): *La Guerra Civil y la represión franquista en la provincia de Jaén (1936-1950)*, Diputación Provincial de Jaén, Jaén.

Colman, D. (1983): "A Review of the Arts of Supply Response Analysis", pp. 201-230, in : *Review of Marketing and Agricultural Economics*, Vol. 51, No. 3.

Comín, F. (1994): "El papel del presupuesto en el crecimiento económico español: Una visión a largo plazo", pp. 283-314, in: *Revista de Historia Económica*, vol. XII, nº. 2.

Crespo Serrano, J. (1943): "Los equidos en la reconstrucción de nuestra economía agrícola", p. 43, in: *Ganadería*, Vol. 1.

de Torres, M. (1944): *El problema triguero y otras cuestiones fundamentales de la agricultura española*, CSIC, Madrid.

de Torres, M. (1956): *Juicio de la actual política económica española*, Aguilar, Madrid.

Dell, M. (1994): *Maximum Price Regulations and Resulting Parrallel and Black Markets*, Thesis Publishers, Amsterdam.

Diputación Provincial de Jaén and Colegio Universitaria de Jaén (1982): *Historia de Jaén*, Diputación Provincial de Jaén, Jaén.

Duijker, H. (1992): *Wine atlas of Spain*, Simon and Schuster, New York.

Estébanez Álvarez, J. (1974): *Cuenca. Estudio geográfico*, CSIC, Madrid.

Farquharson, J.E. (1985a): "The Management of Agriculture and Food Supplies in Germany, 1944-1947", pp. 50-68, in: Martin, B. and Milward, A.S. (eds.): *Agriculture and Food Supply in the Second World War*, Scripta Mercature Verlag, Ostfildern.

Farquharson, J.E. (1985b): *The Western Allies and the Politics of Food. Agrarian Management in Postwar Germany*, Berg Publishers, Leamington Spa.

Fernández García, F. (1988): "El clima de Castilla-La Mancha y sus implicaciones agrícolas", pp. 62-81, in: Diputación Provincial de Ciudad Real (ed.): *El espacio rural de Castilla-La Mancha*, vol. 2, Ciudad Real.

Fernández Martínez, S. (1963): *La vid y el vino en La Mancha*, Ministerio de Agricultura, Madrid.

Fusi, J.P. (1986): "El País Vasco durante la guerra", pp. 289-320, in: Malefakis, E. (ed.): *La guerra de España*, Ediciones El País, Madrid.

Galbraith, J.K. (1980): *A Theory of Price Control*, Harvard University Press, Massachusetts.

Gallego Martínez, D. (1986): "Transformaciones técnicas de la agricultura española en el primer tercio del siglo XX", pp. 171-229, in: Garrabou, R.; Barciela, C. and Jiménez Blanco, J.I. (edS.): *Historia Agraria de la España contemporánea*, Vol. 3, Editorial Crítica, Barcelona.

Gámir, L. (ed.)(1980): *Política Económica de España*, Alianza Editorial, Madrid.

Gardner, B.L. (1992): "Changing Economic Perspectives on the Farm Problem", pp. 62-101, in: *Journal of Economic Literature*, Vol. XXX.

Garrido González, L. (1979): *Colectividades agrarias en Andalucía: Jaén (1931-1939)*, Siglo XXI, Madrid.

Garrido González, L. (1990): *Riqueza y tragedia social. Historia de la clase obrera en la provincia de Jaén (1820-1939)*, Diputación Provincial de Jaén, Jaén.

Gómez Medina, E. (1947): *En pro de la revalorazación de la aceituna y del aceite*, Imprenta Provincial, Jaén.

Gómez Mendoza, A. (1994): *El Gibraltar económico. Franco y Rio Tinto (1936-1954)*, Madrid.

Gómez Mendoza, A. (1997): *El plan del nitrógeno*, Documento de Trabajo 9709, Facultad de Ciencias Económicas y Empresariales, Universidad Complutense de Madrid.

Gómez Mendoza, A. and San Román, E. (1997): "Competition between Private and Public Enterprise in Spain, 1939-1959: An alternative view", pp. 696-708, in *Business and Economic History*, Vol. 26, n. 2.

González, M.-J. (1980): *La economia política del franquismo (1940-1970)*, Editorial Tecnos, Madrid.

González Cárdenas, E. (1988): "El relieve, los suelos y los comarcas agrarios en su relación con el medio natural de Castilla-La Mancha", pp.45-60, in: Diputación Provincial de Ciudad Real (ed.): *El espacio rural de Castilla-La Mancha*, vol. 1, Ciudad Real.

González Portilla, M. and Garmendía, J.M. (1988): *La posguerra en el País Vasco. Política, Acumulación, Miseria*, Kriselu, Donostia.

Griliches, Z. (1960): "Estimates of the Aggregate U.S. Farm Supply Function", pp. 282-293, in: *Journal of Farm Economics*, Vol. 42.

Grupo de Estudios de Historia Rural (1991): *Estadísticas históricas de la producción agraria española, 1859-1935*, Ministerio de Agricultura, pesca y alimentación, Madrid.

Guillén-García, G.J. de (1917): *El olivo, la aceituna y el aceite*, Libreria Francisco Puig, Barcelona.

Gutiérrez del Castillo, C. (1983): "Una estimación del mercado negro del aceite de oliva en la postguerra española", pp. 153-173, in: *Agricultura y Sociedad*, vol. 29.

Gutiérrez Hurtado, F.J. (1987): *Agricultura y capitalismo. Valladolid 1939-1982*, Universidad de Valladolid, Caja de Ahorros y Monte de Piedad de Salamanca.

Harrison, J. (1985): *Spanish Economy in the Twentieth Century*, Croom Helm, London.