

The London School of Economics and Political Science

*The Political Economy of
Taxation in Spain, 1901-1936*

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Abstract

This thesis studies the political economy of taxation and its relationship with fiscal capacity in Spain between 1901 and 1936 using a provincial-level approach. The thesis constructed a completely novel dataset on twelve taxes across 48 provinces. This research shows the geographical distribution and the evolution of taxes, tax burdens and tax sacrifices between 1904 and 1934 and finds that Madrid and Barcelona were the provinces which collected the most tax revenues and had the highest tax burdens per capita, and that total real tax revenues were increasingly concentrated in the top contributing provinces. It also finds that decreases in tax burdens and tax sacrifices indicated that GDP and GDP per capita were increasing faster than tax revenues. The thesis also delves into agrarian taxation and studies creation of a land cadastre in 1906 to analyse its impact on agrarian tax pressure and discuss its implication for economic development. The findings show that the Spanish land cadastre succeeded in updating the tax bases and increased territorial contribution revenues in the provinces where it was implemented but that it did not impact agrarian tax pressure. The results suggest that the state incurred considerable opportunity cost in foregone territorial contribution revenues. The thesis studies the relationship between taxation and politics during the last two decades of the Restoration and argues that political negotiations around the Treasury were crucial in the politics of Restoration's Spain. The thesis shows that the Spanish state did not tax efficiently across its territory and confirms that Spain had a shallow fiscal capacity in the first decades of the 20th Century.

Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work.

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I declare that my thesis consists of 32,275 words, excluding references.

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1

Introduction

*‘The history of Spain continues to
be explained largely in fiscal terms.’*

Francisco Comín and Bartolomé

Yun-Casalilla¹

Effective states are essential for promoting economic development. The concept of *state capacity* is often used in the academic literature to describe a state’s effectiveness. Centeno and Ferraro define *economic state capacity* as the control over and appropriation of resources through the establishment of an efficient fiscal system.² Indeed, taxation is a useful measurement of a state’s fiscal capacity and a prerequisite for experiencing sustained economic development. States need tax revenues to fund their most basic functions, usually justice as well as internal and external security; they also need tax revenues to show ability to repay before borrowing and to repay creditors after borrowing. In contemporary societies, taxation is crucial to sustain social spending and the welfare state, and to foster industrial development through subsidies or direct investments.

Throughout Western Europe, the rise of liberal and centralised states in the 19th Century came hand in hand with increases in fiscal capacity. In the beginning of the 20th Century, the unprecedented spending levels that arose with the First World War created needs for revenues, leading to higher taxation and the consolidation of fiscal capacities. Like many other Western European countries, Spain’s fiscal capacity increased throughout the 19th Century, yet it had a low fiscal capacity by the turn of the century.³

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1. Francisco Comín and Bartolomé Yun-Casalilla, “Spain: from composite monarchy to nation-state, 1492-1914 An exceptional case?,” in *The Rise of Fiscal States: A Global History 1500-1914*, ed. Bartolomé Yun-Casalilla and Patrick K. O’Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012): 233.
 2. Miguel A. Centeno and Agustín E. Ferraro, “Republics of the Possible. State Building in Latin America and Spain,” in *State and Nation Making in Latin America and Spain*, ed. Miguel A. Centeno and Agustín E. Ferraro (Cambridge: Cambridge University Press, 2013): 10–11.
 3. Centeno and Ferraro, “Republics of the Possible. State Building in Latin America and Spain,” 5.

This thesis studies the political economy of taxation and its relationship with fiscal capacity in Spain between 1901 and 1936. The thesis is interested in the *economic state capacity* of Spain in the early 20th Century and whether the state established an efficient fiscal system which gave it control over its resources. Spain was developing at a good pace in the first three decades of the 20th Century. GDP grew at a yearly rate of 1.2% between 1901 and 1913, then slowed down to 0.3% between 1913 and 1918, before accelerating again to 3.9% between 1918 and 1929.⁴ The country was mostly an agrarian economy at the turn of the century: the agricultural sector accounted for about one third of GDP and two-thirds of the active population workforce in 1910.⁵ The industrial sector was also growing and driving structural change: urban wages were increasing and around 10% of the Spanish population migrated internally.⁶ As people moved from rural to urban areas, nearly a million people or a fifth of the workforce left the agrarian sector between 1910 and 1930, and the share of the active population working in agriculture decreased from 66% in 1910 to 46% in 1930.⁷ Agrarian production increased between 1900 and 1930, and combined with fewer people working in agriculture, agrarian productivity also increased.⁸ Mortality rates decreased from 28 per thousand in 1901 to 16 per thousand in 1934, and infant mortality rates decreased from 186 per thousand in 1901 to 110 per thousand in 1934.⁹

Nonetheless, economic development came with increases in regional income

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4. Leandro Prados de la Escosura, *Spanish Economic Growth, 1850-2015* (London: Palgrave Studies in Economic History, 2017), 17.
 5. James Simpson, "Economic development in Spain, 1850–1936," *Economic History Review* 50, no. 2 (May 1997): 354.
 6. Javier Silvestre, "Internal Migrations in Spain, 1877 – 1930," *European Review of Economic History* 9, no. 2 (August 2005): 233–37.
 7. James Simpson and Juan Carmona, *Why Democracy Failed. The Agrarian Origins of the Spanish Civil War* (Cambridge: Cambridge University Press, 2020), 58.
 8. Simpson and Carmona, *Why Democracy Failed*, 69.
 9. Roser Nicolau, "Población, salud y actividad," in *Estadísticas Históricas de España (Siglos XIX-XX)*, ed. Antonio Carreras and Xavier Tafunell (Bilbao: Fundación BBVA, 2005), 125 and 130-1.

inequality between 1860 and 1920.¹⁰ Spain was a dual economy with industry concentrated in a few provinces while the vast majority of the country remained agrarian.¹¹ Both labour productivity and land yields were below those found in Northern Europe and the diets for many Spaniards “were meagre in nutrients and poor in meat and dairy produce.”¹² Spain was also an inwards-looking country: it never adopted the Gold Standard and it imposed high tariffs on industrial and agricultural goods.¹³ Furthermore, Spain had a low fiscal capacity in the early 20th Century.¹⁴ Comín, Martorell, Fontana and Artola, to cite some of the most prominent scholars, have studied extensively the structure and evolution of the fiscal system throughout the 19th and the early 20th Centuries. Their studies highlight and explain the history and the shortcomings of Spanish fiscality, and are stepping stones for anyone interested in Spanish taxation in the 19th and the early 20th Centuries.¹⁵

Spain’s low fiscal capacity was reflected in low levels of tax revenues and public spending. By the early 20th Century, Spain spent 0.48% of its GDP in social spending, much less than France (2.49%), the UK (6.52%) or Germany (11.50%), and was a latecomer in terms of social security programs such as medical insurance and unemployment insurance. Public social spending only increased with the arrival of democracy in 1931.¹⁶ Spain’s low fiscal capacity persisted under Franco’s dictator-

10. Julio Martínez-Galarraga, Joan Ramón Rosés, and Daniel A. Tirado, “The evolution of regional income inequality in Spain, 1860-2010,” in *The Economic Development of Europe’s Regions: A Quantitative History Since 1900*, ed. Joan Ramón Rosés and Nikolaus Wolf (London: Routledge, 2019), 274.

11. Nicolás Sánchez-Albornoz, *España hace un siglo: una economía dual* (Madrid: Alianza Editorial, 1977); Joan Ramón, Rosés, “Why isn’t the whole of Spain industrialised? New Economic Geography and early industrialisation, 1797–1910,” *The Journal of Economic History* 63, no. 4 (December 2003): 995–1022.

12. Simpson and Carmona, *Why Democracy Failed*, 80.

13. For the non-adoption of the Gold Standard, see: Alba Roldán, “Costes y beneficios de la no entrada de España en el patrón oro (1874–1914): una revisión,” *Investigaciones de Historia Económica – Economic History Research* 13, no. 2 (Junio 2017): 69–80; for tariffs, see Antonio Tena Junguito, “Un nuevo perfil del proteccionismo español durante la Restauración, 1875–1930,” *Revista de Historia Económica - Journal of Iberian and Latin American Economic History* 17, no. 3 (December 1999): 579–621.

14. Centeno and Ferraro, “State Building in Latin America and Spain,” 5.

15. Their research will be referenced throughout the thesis.

16. Sergios Espuelas, “Political regime and public social spending in Spain: a time series analysis

ship and to a lesser degree in democracy. Torregrosa-Hetland showed that the fiscal system was regressive by the end of Franco’s dictatorship, and that although there were important fiscal reforms when Spain transitioned from the dictatorship to the democracy, the system remained regressive by the 1990s.¹⁷

Most existing studies on Spain’s fiscal capacity have been carried out at the national level and take the state as their central unit of analysis. This thesis offers a novel perspective by tackling this debate from a provincial approach and by bringing a completely novel dataset of taxes across provinces. Spain is an economically and politically diverse country, and before its unification into a single political unit, the different kingdoms that conformed it had their own tax systems. Some fiscal privileges persisted after unification: the last set of *Ancien Régime* privileges enjoyed by the Basque provinces were officially abolished in 1878, but in practice they maintained a degree of fiscal autonomy.

Understanding the relationship between provincial development and taxation is crucial: Rosés and Wolf showed that Navarra in Spain and Bolzano in Italy are the two European regions that have improved the most their relative position in GDP per capita rankings between 1900 and 2010.¹⁸ Both regions share a common

(1850-2000),” *Revista de Historia Económica – Journal of Iberian and Latin American Economic History* 35, no. 3 (December 2017): 361 and 381–2; Sergio Espuelas, *La evolución del gasto social público en España, 1850-2005* (Madrid, Banco de España: Estudios de Historia Económica 63: 2013), 65; Sergio Espuelas, “Fallos de mercado y seguro de paro en España antes de 1936”, *Revista de Historia Económica - Journal of Iberian and Latin American Economic History* 31, no. 3 (December 2013): 387–422; Sergio Espuelas, “Los obstáculos al desarrollo de los seguros sociales en España antes de 1936: el caso del seguro de desempleo,” *Revista de Historia Industrial* 22, no. 52 (2013): 77–110; Sergio Espuelas, “The inequality trap. A comparative analysis of social spending between 1880 and 1930,” *Economic History Review* 68, no. 2 (May 2015): 691.

17. Sara Torregrosa-Hetland, “Did Democracy bring Redistribution? Insights from the Spanish tax system (1960-1990)”, *European Review of Economic History* 19, no. 3 (August 2015): 294–315; Sara Torregrosa-Hetland, “Sistema fiscal y redistribución: la transición fiscal española (1960-1990)”, *Perfiles Económicos* 1, no. 1 (Julio 2016): 149–80; Sara Torregrosa-Hetland, *The Spanish Fiscal Transition: tax reform and inequality in the late twentieth century* (Palgrave Studies in Economic History, 2021).
18. Joan Ramón Rosés and Nikolaus Wolf, “Regional economic development in Europe, 1900-2010: a description of the patterns,” in *The Economic Development of Europe’s Regions: A Quantitative History Since 1900*, eds. Joan Ramón Rosés and Nikolaus Wolf (London: Routledge, 2019), 32.

feature: they enjoy fiscal autonomy which differentiates them from the rest of the regions in their respective states – although whether fiscal autonomy is the causal driver behind the improvement remains to be determined.

There are relevant historical provincial analyses on income inequality, wages, or the geography of industrialisation in Spain in the early 20th Century, but there is a gap in the literature on a historical provincial analysis of taxation for the period.¹⁹ This thesis addresses the issues of taxation and fiscal capacity from a provincial perspective in Spain and answers several questions: where were taxes paid in Spain at the beginning of the 20th Century? How did tax indicators evolve in the first decades of the 20th Century? Did changes in agrarian taxation have an impact on agrarian tax pressure? What was the relationship between politics and taxation? To answer these questions, the thesis constructs new yearly tax series for 48 Spanish provinces between 1901 and 1934. The thesis uses a mixed methodology. Firstly, it collected historical data from primary sources and processed it to elaborate the tax series. Secondly, the thesis uses the data qualitatively and builds on the existing economic history literature to develop the arguments. Finally, the thesis uses econometric regressions to provide empirical evidence on the correlations between taxes and other variables, although without claiming causality

The choice of the time period 1901-1934 is particular to Spain's economic history. The global economic history literature divides the years from 1870 to 1939 into two distinct periods: the first globalisation and the Gold Standard period (1870-

19. On regional income inequality see: Joan Ramón Rosés, Julio Martínez-Galarraga, and Daniel A. Tirado, "The upswing of regional income inequality in Spain (1860–1930)," *Explorations in Economic History* 47, no. 2 (April 2010): 244–57; Martínez-Galarraga, Rosés, and Tirado, "Evolution of regional income inequality in Spain," 269–90; Daniel Tirado Fabregat and Marc Badia-Miró, "New Evidence on Regional Inequality in Iberia (1900-2000). A Geographical Approach," *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 47, no. 4 (October 2014): 180–89. On the Geography of industrialisation see: Rosés, "Why isn't the whole of Spain industrialised?," 995–1022. On regional wages see: Joan Ramón Rosés and Blanca Sánchez-Alonso, "Regional wage convergence in Spain 1850–1930," *Explorations in Economic History* 41, no. 4 (October 2004): 404–25.

1914) and the interwar period (1918-1939). Such division does not apply well to Spain, as the country was not part of the Gold Standard and remained neutral during the First World War. The period 1898-1936 is more relevant to the history of the country: the period starts with the loss of the last colonies (Cuba, Puerto Rico and the Philippines) in 1898, and finishes with the beginning of the Spanish Civil War in 1936. In those four decades, Spain experimented two regime changes. It was a parliamentary monarchy until 1923: since 1878, two parties, the Liberals and Conservatives had agreed to alternate in power peacefully, and rigged elections in order to achieve their goal, making Spain an incomplete democracy (see Chapter 5). In 1923, General Primo de Rivera came to power after a *coup d'état*, suspended parliament and governed until 1930 with the King's approval. Finally, Spain transitioned to democracy in 1931 until a military *coup d'état* precipitated the Civil War (1936-1939) which was followed by Franco's dictatorship (1939-1975).

The thesis is composed of four chapters: Chapter 2 describes the construction of the dataset on twelve taxes for 48 provinces in Spain between 1901 and 1934 and explains the primary sources used to obtain the data, as well as its strengths and limitations. Tax series were reconstructed using a multiple imputation model to fill the missing gaps in the primary data. The complete series are reported in tables and figures in the Appendix: Taxes. The land tax was the only tax which was not reconstructed using a multiple imputation model because there was good primary data and the reconstruction of the land tax series were part of the thesis's larger analysis on the land tax and agrarian taxation. The collection of the land tax changed substantially in 1906 when the state approved a land cadastre (see Chapter 4). Hence, the cadastre estimates and the land tax estimates were reconstructed together. The provincial tax series in this chapter are at the core of the analyses in the remaining three chapters.

Chapter 3 revisits Spain's fiscal capacity from a provincial perspective. Us-

ing the new provincial tax series, the chapter builds four tax indicators for the 48 provinces between 1904 and 1934 to identify territorial patterns of taxation: the real total tax revenues, the real tax burdens per capita, the real tax burdens as a percentage of GDP, and the real tax sacrifices. The chapter addresses the following two questions: where were taxes paid and how did tax indicators evolve in the first decades of the 20th Century in Spain? The results show that Madrid and Barcelona were the provinces which collected the most tax revenues and had the highest tax burdens per capita between 1904 and 1934. Furthermore, total real tax revenues were increasingly concentrated in the top contributing provinces: the top five provinces collected 43.89% of total revenues in 1934, up from the 34.54% collected in 1904. The results also show that the tax burdens as percentage of provincial GDPs were low in the whole of Spain and relatively higher in Madrid, which is partially explained by a “capital” effect driving up some tax revenues, and that tax sacrifices decreased to low levels everywhere over time. The decreases in tax burdens and tax sacrifices indicate that GDP and GDP per capita were increasing faster than tax revenues and confirm that Spain had an inelastic tax system and a shallow fiscal capacity in the first decades 20th Century. The state was not capable of taxing efficiently across its territory and was reliant on the tax revenues of a few provinces.

Chapter 4 studies the land tax and agrarian taxation in Spain. Specifically, the chapter studies the creation of the land cadastre in 1906 and how it impacted the land tax across provinces. The chapter investigates whether the cadastre significantly changed agrarian tax pressure in the provinces where it was implemented. Before the land cadastre was created, the state relied on landowners’ declarations to levy the land tax. The system was prone to extensive fraud, and the state decided to remedy this situation by elaborating a land cadastre. Yet the cadastre was not applied uniformly across Spain. It was progressively implemented across provinces, meaning that some provinces were included in the cadastre very early compared to others, leading to the

emergence of a dual system of agrarian taxation across Spain: in the provinces where the cadastre was established early on, landowners would pay taxes based on statistics verified and approved by the Spanish state, whereas in the provinces not yet included in the cadastre, those taxes would continue to be levied based on the landowners' declarations.

The findings show that the Spanish land cadastre succeeded in updating the tax bases and increased territorial contribution revenues in the provinces where it was implemented. However, none of this significantly altered the agrarian tax pressure, which decreased between 1904 and 1934. The cadastre did not substantially change the structure of taxation: agrarian production increased and the territorial contribution did not keep track. The results suggest that the state incurred a considerable opportunity cost in foregone territorial contribution revenues which could have been obtained had the cadastre been more responsive to production, and that it lost an opportunity to improve its fiscal capacity by increasing taxes at a time of economic growth in the agrarian sector. The low agrarian tax pressure undoubtedly favoured the agrarian sector at a time where productivity improvements were driving increases in agrarian production.

Chapter 5 studies the relationship between taxation and politics during the last two decades of the Bourbon Restoration period (1901–1923). Three findings suggest that political negotiations around the Treasury, which was the ministry with power over taxation, played an important role in late Restoration Spain: Galicia was a stronghold of the two parties that shared power during the Restoration (the Conservatives and the Liberals) and the region elected a third of Treasury Ministers between 1901 and 1923; as the arrangement collapsed, the Catalan Regionalist party joined the Restoration governments and held the Treasury twice before 1923. Moreover, budgets were seldom passed when the government did not have a majority in par-

liament. Finally, the chapter also finds that the Basque provinces and Navarre had lower levels of direct taxation due to historical fiscal privileges which were ardently defended by the local MPs. The chapter suggests that Spain's low fiscal capacity in the early 20th Century can partially be explained by the failure to fully centralise taxation in the 19th Century and that political negotiations of the early 20th Century had repercussions on the Treasury. Lastly, Chapter 6 delivers the general conclusions of this thesis. It discusses the thesis's main findings and the potential avenues of future research.

2

Tax series by provinces in Spain, 1901-1936

2.1 Introduction

At the core of this research is the dataset the thesis constructed on taxes across Spanish provinces. Data on twelve different tax revenues was collected for 48 Spanish provinces between the years 1901 to 1934. For the purpose of this thesis, the Canary Islands, Ceuta and Melilla are not included. These twelve taxes together account on average for around 83% of total tax revenues in Spain and offer a close approximation to each province's total revenues at the time.¹ This chapter reports the data sources and the treatment behind the estimates.

Table 2.1 reports the original Spanish names of the twelve taxes, their translation and their description. The thesis will not delve into an in-depth analysis of each tax individually, but there are abundant studies at the sectoral and local level on each tax.² Nonetheless, a brief overview of each tax is required: the *contribución*

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1. Own estimates using Miguel Martorell, "Hacienda y Política en el Primer Tercio del Siglo XX: Las Reformas Tributarias," in *La Evolución de la Hacienda Pública en Italia y España (Siglos XVIII-XXI)*, ed. by Carlos Barciela, Joaquín Melgarejo and Antonio Di Vittorio (Alicante: Publicacions de la Universidad de Alicante, 2015), 256.
 2. For instance, on the *contribución territorial*, see Juan Pro Ruiz, "Ocultación de la riqueza rústica en España (1870-1936): acerca de la fiabilidad de las estadísticas sobre la propiedad y uso de la tierra," *Revista de Historia Económica* 13, no. 1 (March 1995): 89–114; Juan Pro Ruiz, "El poder de la tierra: una lectura social del fraude en la contribución de inmuebles, cultivo y ganadería (1845-1936)," *Hacienda Pública Española* Número Extraordinario 1 (1994): 189–201; Carmelo Pellejero Martínez, "La ocultación de riqueza territorial en la provincia de Málaga a finales del siglo XIX," *Hacienda Pública Española* Número Extraordinario 1 (1994): 203–15; Angel Ignacio Fernández González, "La supresión del diezmo y el establecimiento de la contribución territorial: La fiscalidad agraria directa en la España del s. XIX," *Hacienda Pública Española* Número Extraordinario 1996 (1996): 41–52; Ernest Corominas Abadal, "La Contribución Territorial Rústica y el reparto de la carga tributaria en el siglo XX. La provincia de Lérida (1900-1963)," *Historia Agraria* 44 (Abril 2008): 89–118. Ernest Corominas Abadal, "Inequidad, fraude y conservadurismo. La tributación agraria y el catastro parcelario en la España del siglo XX (1906-1966)." PhD diss., Universitat Autònoma de Barcelona, 2014. On the *contribución industrial*, see Ignacio Corella Aznárez, "La tarifa tercera de la contribución industrial desde la reforma de Mon a la reforma de Villaverde," *Hacienda Pública Española* 45 (1977): 59–82; Javier Moreno Lázaro, "El fraude en el pago de la Contribución Industrial y de Comercio en España: el caso de los harineros, 1845-1907," *Investigaciones de Historia Económica – Economic History Research* 15, no. 3 (Octubre 2019): 165–76. On the *consumos*, see Juan Pan-Montojo, "Lógica legal y lógica social de la contribución de consumos y los derechos de puertas," *Hacienda Pública Española* Número Extraordinario 1 (1994): 217–29; Rafael Ángel Simón Arce, "El cupo de consumos y el consumo de mercancías en Alcalá de Henares: 1868-1936," in *España entre repúblicas, 1868-1939: actas de las VII Jornadas de Castilla-La Mancha sobre investigación en archivos* 1 (2007): 247–68. On *utilidades*, see María Concepción Betrán Pérez, "El fraude

Table 2.1: Taxes in Spain, 1901–1936.

Taxes	Translation	Description
<i>Contribución Territorial</i>	Land Tax	Levied on land values.
<i>Contribución Industrial</i>	Industrial Tax	Levied on industrial production.
<i>Utilidades</i>	Capital Tax	Levied on interests and dividends.
<i>Derechos Reales</i>	Succession Tax	Levied on inheritances.
<i>Minas</i>	Mining Tax	Levied on mining production.
<i>Cédulas Personales</i>	Proto-income Tax	Levied on identification documents.
<i>Aduanas</i>	Customs Tax	Levied on exports and imports.
<i>Timbre</i>	Official Paper Tax	Levied on official paper.
<i>Consumos</i>	Consumption Tax	Levied on consumption goods.
<i>Alcoholes</i>	Alcohol Tax	Levied on alcoholic beverages.
<i>Alumbrado</i>	Gas and Electricity Tax	Levied on gas and electricity.
<i>Transporte</i>	Transport Tax	Levied on transport means.

Notes: Translations are mine. Any mistake is my sole responsibility.

Sources: *Cuentas del Estado Español*.

territorial was a land tax; the *contribución industrial* was a tax levied on industrial production. The *impuesto de utilidades* was a capital tax levied on interests and dividends. The *impuesto de Derechos Reales* was an inheritance tax. The *impuesto de minas* was a mining tax. The *impuesto de cédulas personales* was a proto-income flat tax. The *aduanas* were custom taxes. The *impuesto de timbre* was a tax levied on official paper used for certified documents, such as loan certificates. The *consumos* were indirect consumption tax levied on consumption goods, similar to today's VAT taxes; similarly, the *impuesto de alcoholes* levied taxes on alcoholic beverages. Finally, the *impuesto de alumbrado* levied taxes on gas and electricity used for lighting, and the *impuesto de transporte* levied taxes on transport means, such as train tickets.

The tax series were constructed using data from several sources, and the data was crosschecked across the different primary sources to correct for transcription

fiscal en la industria: España 1913-1929: El Impuesto de Utilidades,” *Hacienda Pública Española* Número Extraordinario 1 (1994): 309–19. On *Minas* see: Antonio Escudero Gutiérrez, “El fraude fiscal en la minería española (1876-1935),” *Hacienda Pública Española* Número Extraordinario 1 (1994): 321–41. On *Alcoholes* see: Nùria Puig Raposo, “Alcoholeros, inspectores y Hacienda Pública: El fraude en la industria alcoholera española, 1900-1936,” *Hacienda Pública Española* Número Extraordinario 1 (1994): 357–66; Juan Pan-Montojo, “La fracasada reforma del impuesto de alcoholes en 1900,” *Hacienda Pública Española* Número Extraordinario 1999 (1999): 177–87.

and measurement errors where possible. For the years 1901 to 1907, the data was extracted from the *Cuentas del Estado Español* (the State Accounts); for the years 1910 to 1934, the data was extracted from the *Anuarios Nacionales de Estadística* (the National Statistical Yearbooks) published yearly by the *Instituto Nacional de Estadística* (National Institute of Statistics); and for the *contribución territorial*, the data for the entire period was extracted from the *Gacetas de Madrid*, the official government publication. All sources can be found in the Bibliography.

The most important shortcoming with the original transcribed data is that there are many missing observations. Unfortunately, archives were lost during the Civil War: the Treasury building was used as governmental headquarters during the Spanish Civil War (1936-39) and archives were trashed to make space for war rooms. Even more dramatically, all the archives of the *Archivo Central de Alcalá de Henares* were lost in a fire in 1939, including archival evidence for the period under study.³ The resulting surviving evidence is scattered, and data is missing at random throughout the sample I reconstructed. In other words, there is no clear pattern regarding which data is missing and which is not. Take three random years as examples: for 1916, I have data on all taxes. For 1917, the transport tax is missing; for 1921, the transport tax is reported, but the mining tax is now missing.

It is impossible to undertake a meaningful analysis without consistent series across years and provinces. Hence, I used the data at my disposal and modern multiple imputation techniques to obtain the missing data and reconstruct the entire series. To the best of my knowledge, this is the first reconstruction of taxes for all Spanish provinces for the period 1901–1934. The final results are reported in the Appendix: Taxes, where I report the full series by taxes and provinces with tables and figures.

3. For an account on the Treasury building being used as governmental headquarters during the Spanish Civil War, see Arturo Barea, *La Forja de un Rebelde* (Barcelona: Debate editorial, 2000), 747; for the fire of the *Archivo Central de Alcalá de Henares* see Antonio Matilla Tascón, “Necesidad de un Archivo Central,” *Boletín de la Dirección General de Archivos y Bibliotecas* 3 (1952): 15.

The figures are particularly useful because they clearly show the original data points in black and the imputed data points in red. For transparency purposes, the original transcribed data (i.e. with gaps) is available in the thesis's replication file and all imputations can be replicated.⁴

The only tax for a multiple imputation model was not used was the *contribución territorial*, the land tax. The *contribución territorial* was levied via a quota that the state assigned to each province. In the 19th Century, the tax was levied on wealth declarations done by landowners themselves known as *amillaramientos*. In 1906, the Spanish state approved the elaboration of a land cadastre: the state was now responsible to estimate land wealth values and to levy the tax on the new estimates. However, the cadastre was not applied uniformly across Spanish provinces, and a dual agrarian taxation system emerged in the early 20th Century, where some provinces paid the *contribución territorial* on the *amillaramientos* and the rest paid the *contribución territorial* on the land cadastre (more details in Chapter 4). The *Gacetas de Madrid* published every year the provincial tax takes levied in the provinces in the *amillaramientos* regime. Hence, I have the complete *contribución territorial* series for the provinces which remained in the *amillaramientos* before 1936. The *Gacetas* did not publish the new provincial quotas for the provinces included in the cadastre, but it did publish the total *contribución territorial* tax takes collected in the provinces included in the cadastre. Using complementary primary sources, I reconstructed estimates on the cadastre's elaboration, and consequently the *contribución territorial* tax takes in the provinces included in the cadastre.

The rest of the chapter continues as follows: Section 2.2 explains the construction of the territorial contribution revenues estimates for the years 1901–1936. This section is divided into two further subsections: subsection 2.2.1 explains the construction of the cadastre estimates, and subsection 2.2.2 explains in four steps the

4. All do-files are available for replication.

construction of the territorial contribution revenues for the provinces included in the cadastre. Finally, Section 2.3 explains how the remaining tax series were estimated using a multiple imputation model, and Section 2.4 concludes.

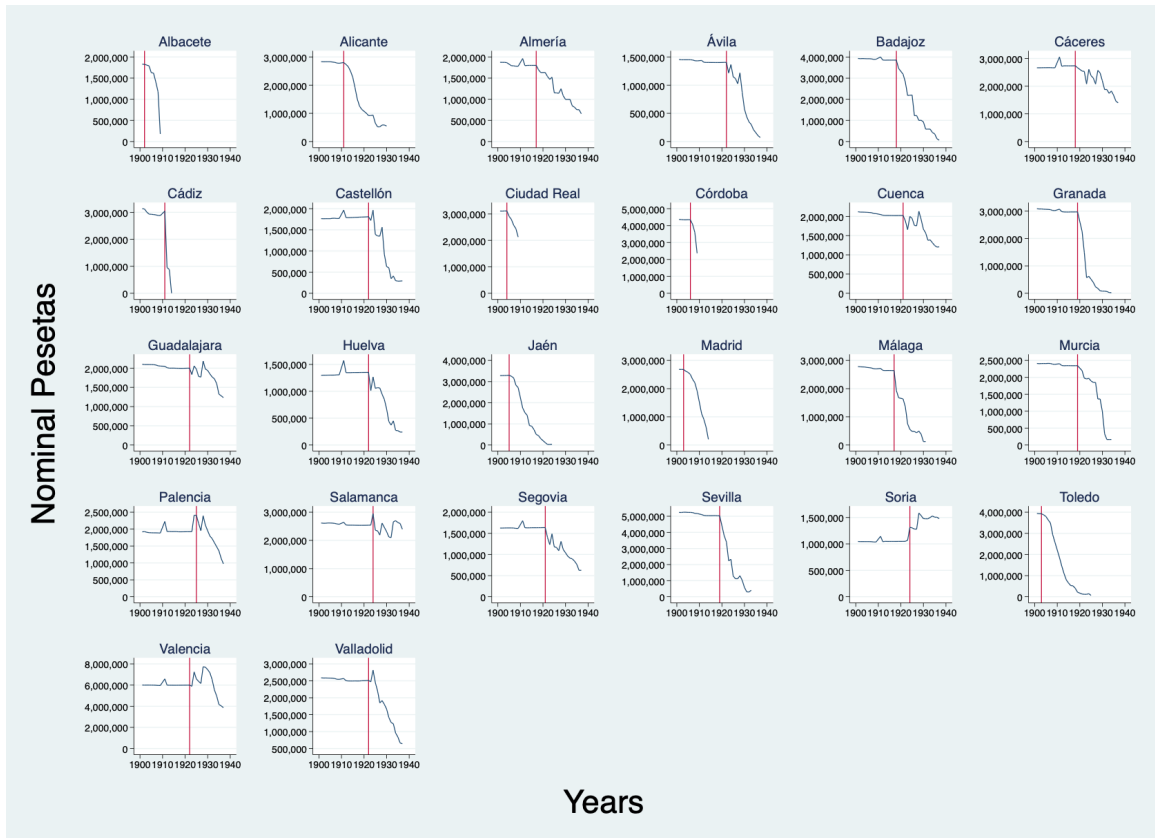
2.2 Estimating the Territorial Contributions Revenues, 1901-1936.

This section explains how the estimates of the total territorial contribution revenues collected in the provinces included in the cadastre between 1901 and 1936 were reconstructed using complementary primary sources. To facilitate a fluent reading and because tables are long, the tables are included in the chapter's Subappendix (see Section 2.A Subappendix).

2.2.1 The cadastre: start and end

From 1913 onwards, the *Gaceta de Madrid* published yearly summaries of the *Avances Catastrales*, which reported the total land registered in the cadastre each year. Unfortunately, the data is not disaggregated by provinces. However, the start and end years of the cadastre in a given province can be inferred using the *Gacetas'* data on tax revenues collected in the *amillaramientos*; I do so by looking at when the trends of the tax revenues in the provinces in the *amillaramientos* regime start to decrease and when provinces drop from the *Gaceta*. Indeed, provinces that remained in the *amillaramientos* before 1936 saw constant quotas over time; a decrease in a province's *amillaramiento's* quota meant that now part of the territorial contribution revenues in the provinces was collected under the cadastre regime. Furthermore, when a province dropped from the sample, it meant that no more revenues were collected from the *amillaramientos*, hence that the cadastre was completed and that all territorial contribution revenues were collected under the cadastre regime. This allows me to infer

Figure 2.1: Structural breaks in the territorial contribution quotas under the *amillaramientos* regime for all provinces where cadastre works started in the sample, 1901–1936.



Notes: The last year of the unchanged *amillaramientos* trend is the year when the cadastre starts. Indeed, the change in the taxes collected in a given province in the *amillaramientos* in year t reflects the cadastral measurements which started in year $t-1$. In short, there is a mismatch between the year the cadastre works start and the first year a province starts to pay the territorial contribution under the cadastre.

with precision the year when cadastral works start and end in each province. Figure 2.1 shows the structural breaks created by the beginning of the cadastral measurements in all provinces between 1901 and 1936. In all cases, the structural break when the amount of taxes paid under the *amillaramientos* starts to decline is visible. The start and end years for each province are reported in Table 2A1.

Furthermore, I obtained from three different primary sources the exact hectares and percentages of the provinces measured in the cadastre in 1912, 1924 and

1930.⁵ The start and end years, together with the three landmark years are used to extrapolate linearly the evolution of land included in the cadastre each year in all the provinces. Take the province of Málaga: in 1912, the cadastre works had not yet started. In 1924, 651,977 hectares were included in the cadastre, accounting for 89% of its total extension. In 1930, it was 687,651 hectares, which accounted for a 100% of its extension. From the *Gaceta de Madrid*, I infer that the cadastre works started in 1917, the last year when the trend from the *amillaramientos* is flat (see Málaga in Figure 2.1). With all this information, I do a linear extrapolation of the percentages to reach from 0% in 1917 to 89% in 1924 and 100% in 1930. The percentages of each year are then multiplied by Málaga's total land extension in the cadastre, in this case 687,651 hectares, to obtain the extension of land in the cadastre for each province every year. The general trends are consistent with the historical evidence that the cadastre construction was very slow until 1919, then accelerated after World War I, before slowing down under Primo de Rivera's dictatorship.⁶ The estimates for all provinces are reported in Table 2A2.

2.2.2 The territorial contribution revenues in the cadastre

The *Gaceta de Madrid* published each year the full amount of the territorial contribution to be collected both in the provinces included in the cadastre and those which remained in the *amillaramientos*. Table 2A3 shows the yearly total revenues collected under both regimes. The *Gacetas* disaggregated the amount collected among the provinces in the *amillaramientos*, but it did not publish disaggregated data for

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5. For 1912 I use Ministerio de Hacienda, *Subsecretaría, Inspección de la Hacienda Pública, Secciones del Catastro Rústica y Urbana* (Madrid: Talleres del Depósito de la Guerra, 1913), 37; for 1924, I use Juan Pro Ruiz, *Estado, geometría y propiedad. Los orígenes del catastro en España (1715-1941)* (Madrid: Ministerio de Economía y Hacienda, 1992), 269; for 1930, I use Pascual Carrión, *Los Latifundios en España. Su importancia. Origen. Consecuencias y solución* (Ediciones Ariel, 1975), Estado nº2.
 6. Edward Malefakis, *Reforma agraria y revolución campesina en la España del siglo XX* (Madrid: Colección Austral, 1972, 2000), 586; Francisco Comín, *Hacienda y Economía en la España Contemporánea* (Madrid: Instituto de Estudios Fiscales, 1988): 930–1.

the provinces included in the cadastre. I reconstructed the territorial contribution revenues for the provinces included in the cadastre using the cadastre estimates from Table 2A2 and the total revenues collected by the cadastre each year from Table 2A3.

To do so, I estimated the provincial tax bases ‘weighted’ by the land extension used for each crop. Variations in the tax base were determined by land extensions and land uses. Determining the variations in tax bases across provinces is crucial due to the flat tax nature of the territorial contribution, because the tax base differences will be exactly mirrored in the territorial contribution. Once the ‘weighted’ provincial tax bases are obtained, the cadastre’s total territorial contribution revenues can be divided by the provincial tax bases to obtain the tax revenues for each province. Take the following invented example: assume that the market value of 1 kilogram of cereal is higher than the market value of 1 kilogram of grapes. Take now Farm A, which has 100 hectares of cereals, and is valued at 200 pesetas, and Farm B, which has 100 hectares of vines and is valued at 100 pesetas; with a 10% flat tax, Farm A pays 20 pesetas in taxes, while Farm B pays 10 pesetas in taxes. The total values of Farms A and B together is equal to 300 pesetas, of which two third (200 pesetas) comes from Farm A and one third (100 pesetas) comes from Farm B. With a flat tax, the proportion is exactly the same with the territorial contribution. The total revenues from both farms is equal to 30 pesetas, out of which two third (20 pesetas) comes from Farm A and one third (10 pesetas) comes from Farm B.

To reconstruct the ‘weighted’ provincial tax bases, I retrieved data on land uses, agrarian production values, and crops.

Data on land extensions used yearly for each crop in every province was extracted from the *Estadísticas Históricas de la Producción Agraria Española, 1859-1935*;⁷ Crops produced in Spain were classified into five categories: *cereals*, *olives*,

7. Grupo de Estudios de Historia Rural, *Estadísticas Históricas de la Producción Agraria Española, 1859-1935* (Ministerio de Agricultura, Pesca y Alimentación, 1991).

vines, legumes and others. Table 2A4 reports the crop descriptions. Finally, the chapter uses the GEHR estimates on yearly total agrarian production values at the national level, reported in Table 2A5.⁸ To recapitulate, the chapter has: 1) time series on land uses for all crops, provinces and years, 2) yearly total agrarian production values at the national level and 3) the yearly total territorial contribution revenues collected in the land plots registered in the cadastre from the *Gaceta de Madrid*. The following steps were undertaken to estimate the ‘weighted’ provincial tax bases:

Step 1: Estimating territorial contribution revenues by crops.

Assuming that tax revenues reflected agrarian values, and as I showed in the example above, with a flat tax there is a one-to-one relationship between total agrarian value and territorial contribution revenues. Take the year 1910 in table 2A5: for every 100 pesetas of agrarian production, 53 pesetas came from cereals, 7 pesetas came from vines, 3 pesetas from olive production, 6 pesetas from legumes production, and 30 pesetas from the rest of production. Thus, assuming taxation reflected agrarian values, the proportion should be the same for every 100 pesetas of territorial contribution: 53 pesetas should come from cereals, 7 pesetas from vines, 3 pesetas from olive production, 6 pesetas from legumes production, and 30 pesetas from the rest of production.

Hence, I disaggregated the total territorial contribution revenues by each crop’s production values. I used the share of total production for each crop to obtain a yearly total territorial contribution by crop. Note that the territorial contribution revenues collected on a year t are obtained from the value of the tax base on the previous year $t-1$. For instance, in 1911, the total territorial contribution revenues collected in the land plots registered in the cadastre were 14,615,573 pesetas (see

8. Grupo de Estudios de Historia Rural, “Un índice de la producción agraria española, 1891–1935,” *Hacienda Pública Española* 108–109 (1987): 420–21.

Table 2A3): knowing that 53% of total agrarian value came from cereals in 1910, I multiplied 53% by 14,615,573 pesetas and obtained that 7,789,640 pesetas of territorial contribution revenues in 1911 came from cereal production. The results of the yearly total territorial contribution by crops are reported in Table 2A6.

Note that once the cadastral works are completed and a province is fully included in the cadastre, the value of the territorial contribution remains the same for the following years. The cadastre fixed a tax base which was then not regularly updated; in short, when a province is fully included in cadastre, it had an assigned and unchangeable tax base on which the collected territorial contribution was levied. For instance, Albacete, Ciudad Real and Cádiz were all completed in 1910. Thus, the territorial contribution they paid in 1911 remained constant for the following years. To account for this, I subtracted the territorial contribution revenues of the completed provinces from the total territorial contribution (See Column *Adjusted* of Table 2A6) and I used the Adjusted Total for each year.

Step 2: Estimating the hectares included in the cadastre by crops.

Knowing that the territorial contribution on cereals collected 7,789,640 pesetas in 1911, I need to determine the number's exact distribution across provinces. Unfortunately, it is impossible to know the distribution of land included in the cadastre by crops for each province and year. To proxy for it, I assume that the lands included in the cadastre each year mirrored the province's proportion of land uses in that province. Take Cádiz in 1910: 68.51% of its total land extension was used to grow cereals.⁹ That year, 226,865 hectares of the province are included in the cadastre (see table 2A2). Hence, I assume that 68.51% of those 226,865 hectares were cereal plots, meaning that Cádiz had 155,421 hectares of cereals included in the cadastre in 1910. I repeat the exercise with vines, olives, legumes and the other crops. This assumption

9. Own estimates using GEHR, *Estadísticas Históricas de la Producción Agraria Española*, 332–52.

rules out the possibility that measurement works by the cadastre were done crop by crop (e.g. that it measured first all the cereal farms in one province, then all the vine farms, etc).

Step 3: Estimating a province's territorial contribution revenues by crops.

The territorial contribution revenues for Cádiz for the following year 1911 can now be obtained: firstly, I sum the total land used for each crop in all provinces where cadastral works had started in 1910. The total land used for cereals in the seven provinces measured by the cadastre is equal to 3,820,998 hectares, of which 155,421 hectares, or 4.06% are measured in Cádiz. With a flat tax structure, one can assume that 4.06% of the 7,789,640 pesetas of the territorial contribution on cereals that year come from Cádiz. Thus, I multiplied 7,789,640 pesetas by 4.06% and obtained 316,848 pesetas of the territorial contribution on cereals in the cadastre in Cádiz. This methodology is repeated with all crops and provinces included in the cadastre every year and I obtained the territorial contribution revenues for each province. The disaggregated territorial contribution revenues across crops and provinces for all years can be found in table 2A7. The total territorial contribution revenues for provinces in the cadastre are reported in Table 2A8.

Step 4: Estimating territorial contribution for all provinces.

Finally, I summed the total territorial contribution revenues for the provinces included in the cadastre (table 2A8) and the total territorial contribution revenues for the provinces in the *amillaramientos* obtained from the *Gacetas de Madrid*. The final results are reported in **Table A1**.

2.3 Estimating the tax series through multiple imputation, 1901-1934.

Data missing at random in the eleven remaining taxes are problematic for the analysis because inconsistencies in series across years and provinces make it impossible to undertake comparisons and to report the evolution over time. Table 2.2 reports the missing observations. For some taxes, up to 50% of the observations were missing. To solve these issues, I implemented a multiple imputation model to predict the missing values. Significant contributions to the development of multiple imputation models can be found in Rubin’s works.¹⁰ Honaker and King offer a thorough review of the literature and write that a multiple imputation model ‘fill[s] in the holes in the data using a predictive model that incorporates all available information in the observed data (...). The missing values are “filled in” with different imputations. The “best guess” or expected value for any missing value is the mean of the [multiple] imputed values.’¹¹ In previous economic history research, Rossi, Toniolo and Vecchi used a multiple imputation model to fill the gaps in Italian household budgets between 1881 and 1961; Bavel and Frankema studied wealth inequality in the Netherlands between 1950 and 2015 and used *The Survey of Health, Ageing and Retirement in Europe* which also included multiple imputation methods to correct for the missing observations; Phillips and Chen used multiple imputation techniques to study regional growth in China between 1978 and 1999; Yang, Managi and Sato use multiple imputation methods to study the effect of institutional quality on national

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10. For advanced statistical explanations on Multiple Imputation, see Donald B. Rubin, and Nathaniel Schenker, “Multiple Imputation for Interval Estimation for Simple Random Samples with Ignorable Nonresponse,” *Journal of the American Statistical Association*, 81, no. 394 (1986): 366–74; Donald B. Rubin, *Multiple Imputation for Nonresponse in Surveys* (New York: John Wiley – Wiley Series in Probability and Statistics, 1987); Donald B. Rubin, “Missing Data, Imputation, and the Bootstrap: Comment,” *Journal of the American Statistical Association* 89, no. 426 (1994): 475–78; Roderick J. A. Little and Donald B. Rubin, *Statistical Analysis with Missing Data* (New York: John Wiley and Sons, 2002).
 11. James Honaker and Gary King, “What to Do about Missing Values in Time-Series Cross-Section Data,” *American Journal of Political Science* 54, no. 2 (April 2010): 561–81.

Table 2.2: Proportion of missing observations.

Taxes	Missing	Total	Percentage Missing
<i>Contribución Industrial</i>	836	1,632	51.23%
<i>Utilidades</i>	912	1,632	55.88%
<i>Derechos Reales</i>	572	1,632	35.05%
<i>Minas</i>	533	1,632	32.66%
<i>Cédulas Personales</i>	720	1,632	44.12%
<i>Aduanas</i>	121	1,632	7.41%
<i>Timbre</i>	240	1,632	14.71%
<i>Consumos</i>	863	1,632	52.88%
<i>Alcoholes</i>	919	1,632	56.31%
<i>Alumbrado</i>	836	1,632	51.23%
<i>Transporte</i>	473	1,632	28.98%

wealth across a sample of countries.¹²

This chapter uses a truncated multiple imputation regression using the *mi impute truncreg* command in STATA to obtain the estimates:

$$Tax_{it} = GDP_{it} + population_{it} \quad (2.1)$$

where i is a given province and t a given year.¹³ The model was truncated to restrict the imputation of negative values. In addition to all the available tax data, it uses a province's GDP and population data as predictive values to impute the mean of the multiple imputed values for each missing data point. I use Spanish census data for population, and Rosés, Martínez-Galarraga and Tirado's provincial GDP series;¹⁴

12. Nicola Rossi, Gianni Toniolo and Giovanni Vecchi, "Is the Kuznets Curve Still Alive? Evidence from Italian Household Budgets, 1886–1961," *The Journal of Economic History* 61, no. 4 (December 2001): 904–25; Bas van Bavel and Ewout Frankema, "Wealth Inequality in the Netherlands, c. 1950–2015. The Paradox of a Northern European Welfare State," *The Low Countries Journal of Social and Economic History* 14, no. 2 (2017): 29–62; Kerk L. Phillips and Baizhu Chen, "Regional growth in China: An empirical investigation using multiple imputation and province-level panel data," *Research in Economics* 65, no. 3 (September 2011): 243–53; Jue Yang, Shunsuke Managi and Masayuki Sato, "The effect of institutional quality on national wealth: an examination using multiple imputation method," *Environmental Economics and Policy Studies* 17, no. 3 (July 2015) : 431–53.
13. StataCorp, *Stata Multiple-Imputation Reference Manual. Release 17* (Statistical Software. College Station, Texas: StataCorp LLC, 2021), 262.
14. The original provincial GDP series are used in Rosés, Martínez-Galarraga and Tirado, "The

the GDP series last until 1934, hence the model does not impute the data for 1935 and 1936. The choice of a province's population and GDP as predictors of its taxes is backed by the general consensus that differences in population and GDP between political entities are good indicators of differences in taxation.

The original data for all taxes and years from 1901 to 1907 is available in the *Cuentas del Estado Español* which reported very good quality data. Then, there is a general gap for all series from 1908 to 1913, and data is missing at random across series and years from 1914 until 1934. Finally, there is a structural break in the eleven taxes around the years 1918-1919. Before 1918-1919, revenue trends were flat, and they increased after the break. I first ran the multiple imputation model on the complete dataset: the model clearly inflated the imputed data points for the periods 1908-1913 and underestimated the imputed data points for the gaps in the period 1919-1934. Hence, I divided the dataset in two time periods (1901-1918 and 1919-1934) before proceeding to ten multiple imputations for each gap.

The results are reported in tables and figures in Appendix: Taxes. All values are in nominal terms. The figures show the original data points in black, and the imputed data points in red. A visual observation of the trends suggest that the model under- and overestimates some data points in some few cases; I argue that there are acceptable error margins in a multiple imputation framework of many provinces and years with a large part of the sample missing at random. In some cases, I corrected for outliers that deviated significantly from the trends and I assigned the previous year's values (these changes are clearly indicated in the Tables in Appendix: Taxes). The final difference in standard deviations between the original dataset and the imputed series is equal to 6%, suggesting that the multiple imputation estimated values relatively close to the original data points. Furthermore, a visual observation of the time series (see Figures in Appendix: Taxes) suggest that the multiple imputation estim-

upswing of regional income inequality in Spain," 244–57.

ates follow the long-term trend of the original dataset, with tax revenues remaining relatively flat between 1908 and 1913 before increasing between 1914 and 1934. Hence, both the relatively small difference in standard deviations and the visual analysis of the trends suggest that the obtained multiple imputation values offer reasonable estimates of tax values for the missing years. The original data with the gaps, the original results of the multiple imputation models and the manual corrections before the final tax estimates are available in the thesis's replication files.

2.4 Conclusion

This chapter ties the whole thesis together: it exposes the primary sources and how the data was processed to obtain the estimates for the twelve tax series between 1901 and 1934. Firstly, the chapter reconstructed estimates for the cadastre's elaboration across provinces; together with data on crops extension and production, the chapter reconstructed in detail the territorial contribution revenues for all provinces between 1901 and 1936. These estimates could nonetheless be improved if more precise data was obtained on the value of agrarian production by crops and provinces and ideally, on the land included in the cadastre each year. Secondly, using multiple imputation techniques, the chapter reconstructed the tax series for the eleven remaining taxes between 1901 and 1934. This is the first thorough reconstruction of tax series at the provincial level for Spain between 1901 and 1934. Given the data limitations and shortcomings, I argue that this is the closest one can get to obtaining good-quality disaggregated data on the tax revenues by provinces, especially on the territorial contribution given the shortcomings on the data in the cadastre. These inferences are a stepping stone for future provincial analyses of taxation in Spain, but the data remains open to potential changes and improvements.

2.A Subappendix

Table 2A1: Inclusion and completion years of the cadastre for all provinces, 1901–1936.

Provinces	Inclusion Year	Completion Year	Completion Time
Albacete	1902	1911	9 years
Alicante	1912	1931	21 years
Almería	1917		
Ávila	1922		
Badajoz	1918		
Cáceres	1918		
Cádiz	1910	1914	4 years
Castellón	1922		
Ciudad Real	1903	1911	8 years
Córdoba	1906	1911	5 years
Cuenca	1921		
Granada	1919	1935	15 years
Guadalajara	1922		
Huelva	1922		
Jaén	1905	1925	18 years
Madrid	1903	1915	11 years
Málaga	1917	1932	13 years
Murcia	1919	1935	15 years
Palencia	1924		
Salamanca	1924		
Segovia	1921		
Sevilla	1919	1934	14 years
Soria	1924		
Toledo	1903	1926	21 years
Valencia	1922		
Valladolid	1922		
Zamora	1924		
Zaragoza	1934		

Notes: The *Inclusion Year* is the last year of the unchanged *amillaramientos* trend of figure 2.1. There is a mismatch between the year the cadastre works start and the first year a province starts to pay the territorial contribution under the cadastre: if the *amillaramientos* trend changes in a given province in year t , these reflects cadastral measurements which started in the previous year $t-1$. Similarly, when a province disappears from the *amillaramientos* in year t , it means that the cadastre was completed in the previous year $t-1$. The year they disappear is also their first full year of contributions in the cadastre.

Sources: Own elaboration using data from the *Gacetas de Madrid* (1901-1936); Hacienda, *Secciones del Catastro Rústica y Urbana*; Pro Ruiz, *Estado, geometría y propiedad*, 269; Carrión, *Los Latifundios en España*, Estado nº2.

Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Albacete			Alicante		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	165,141	11.11%	100.00%	-	-	-
1903	330,282	22.22%	44.65%	-	-	-
1904	495,423	33.33%	37.70%	-	-	-
1905	660,564	44.44%	33.11%	-	-	-
1906	825,705	55.56%	27.99%	-	-	-
1907	990,846	66.67%	25.37%	-	-	-
1908	1,155,987	77.78%	23.78%	-	-	-
1909	1,321,128	88.89%	22.72%	-	-	-
1910	1,486,269	100.00%	21.24%	-	-	-
1911	1,486,269	100.00%	19.84%	-	-	-
1912	1,486,269	100.00%	18.74%	5,196	1.00%	0.07%
1913	1,486,269	100.00%	18.12%	44,078	7.83%	0.54%
1914	1,486,269	100.00%	17.67%	82,529	14.67%	0.98%
1915	1,486,269	100.00%	17.30%	120,981	21.50%	1.41%
1916	1,486,269	100.00%	17.03%	159,432	28.33%	1.83%
1917	1,486,269	100.00%	16.53%	197,883	35.17%	2.20%
1918	1,486,269	100.00%	15.51%	236,334	42.00%	2.47%
1919	1,486,269	100.00%	13.99%	274,786	48.83%	2.59%
1920	1,486,269	100.00%	12.73%	313,237	55.67%	2.68%
1921	1,486,269	100.00%	11.54%	351,688	62.50%	2.73%
1922	1,486,269	100.00%	10.06%	390,139	69.33%	2.64%
1923	1,486,269	100.00%	8.93%	428,591	76.17%	2.58%
1924	1,486,310	100.00%	7.77%	480,304	82.00%	2.51%
1925	1,486,310	100.00%	7.66%	476,945	84.76%	2.46%
1926	1,486,310	100.00%	7.41%	492,476	87.52%	2.45%
1927	1,486,310	100.00%	7.16%	508,006	90.28%	2.45%
1928	1,486,310	100.00%	6.94%	523,537	93.04%	2.44%
1929	1,486,310	100.00%	6.73%	539,067	95.80%	2.44%
1930	1,436,927	100.00%	6.40%	554,598	98.56%	2.47%
1931	1,436,927	100.00%	6.24%	562,701	100.00%	2.44%
1932	1,436,927	100.00%	6.08%	562,701	100.00%	2.38%
1933	1,436,927	100.00%	5.95%	562,701	100.00%	2.33%
1934	1,436,927	100.00%	5.82%	562,701	100.00%	2.28%
1935	1,436,927	100.00%	5.71%	562,701	100.00%	2.23%
1936	1,436,927	100.00%	5.60%	562,701	100.00%	2.19%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Almería			Ávila		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	56,281	6.38%	0.63%	-	-	-
1918	112,562	12.75%	1.17%	-	-	-
1919	168,842	19.13%	1.59%	-	-	-
1920	225,123	25.50%	1.93%	-	-	-
1921	281,404	31.88%	2.19%	-	-	-
1922	337,685	38.25%	2.28%	142,711	17.67%	0.97%
1923	393,965	44.63%	2.37%	285,422	35.33%	1.72%
1924	450,246	51.00%	2.35%	428,133	53.00%	2.24%
1925	462,194	53.60%	2.38%	444,690	56.92%	2.29%
1926	484,587	56.19%	2.41%	475,327	60.84%	2.37%
1927	506,979	58.79%	2.44%	505,964	64.77%	2.44%
1928	529,372	61.39%	2.47%	536,601	68.69%	2.51%
1929	551,764	63.98%	2.50%	567,239	72.61%	2.57%
1930	574,157	66.58%	2.56%	597,876	76.53%	2.66%
1931	596,550	69.18%	2.59%	628,513	77.81%	2.73%
1932	618,942	71.77%	2.62%	659,151	81.60%	2.79%
1933	641,335	74.37%	2.66%	689,788	85.39%	2.86%
1934	663,727	76.97%	2.69%	720,425	89.18%	2.92%
1935	686,120	79.56%	2.73%	751,062	92.98%	2.98%
1936	708,512	82.16%	2.76%	781,231	96.71%	3.04%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Badajoz			Cáceres		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	-	-	-	-	-	-
1918	203,864	9.29%	2.13%	126,527	6.29%	1.32%
1919	407,728	18.57%	3.84%	253,054	12.57%	2.38%
1920	611,592	27.86%	5.24%	379,581	18.86%	3.25%
1921	815,456	37.14%	6.33%	506,109	25.14%	3.93%
1922	1,019,320	46.43%	6.90%	632,636	31.43%	4.28%
1923	1,223,184	55.71%	7.35%	759,163	37.71%	4.56%
1924	1,427,048	65.00%	7.46%	885,690	44.00%	4.63%
1925	1,449,383	67.99%	7.47%	906,143	46.56%	4.67%
1926	1,513,020	70.97%	7.54%	955,965	49.12%	4.76%
1927	1,576,658	73.96%	7.60%	1,005,787	51.68%	4.85%
1928	1,640,296	76.94%	7.66%	1,055,609	54.24%	4.93%
1929	1,703,933	79.93%	7.71%	1,105,432	56.80%	5.00%
1930	1,767,571	82.91%	7.88%	1,155,254	59.36%	5.15%
1931	1,831,209	83.41%	7.95%	1,205,076	61.92%	5.23%
1932	1,894,846	86.31%	8.02%	1,254,899	64.48%	5.31%
1933	1,958,484	89.21%	8.11%	1,304,721	67.04%	5.40%
1934	2,022,122	92.10%	8.20%	1,354,543	69.60%	5.49%
1935	2,085,759	95.00%	8.28%	1,404,365	72.16%	5.58%
1936	2,131,915	97.11%	8.31%	1,454,188	74.72%	5.67%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Cádiz			Castellón		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	226,865	31.00%	3.24%	-	-	-
1911	453,731	62.00%	6.06%	-	-	-
1912	678,530	93.00%	8.55%	-	-	-
1913	706,210	96.50%	8.61%	-	-	-
1914	731,824	100.00%	8.70%	-	-	-
1915	731,824	100.00%	8.52%	-	-	-
1916	731,824	100.00%	8.38%	-	-	-
1917	731,824	100.00%	8.14%	-	-	-
1918	731,824	100.00%	7.64%	-	-	-
1919	731,824	100.00%	6.89%	-	-	-
1920	731,824	100.00%	6.27%	-	-	-
1921	731,824	100.00%	5.68%	-	-	-
1922	731,824	100.00%	4.95%	150,356	22.33%	1.02%
1923	731,824	100.00%	4.40%	300,711	44.67%	1.81%
1924	731,824	100.00%	3.83%	451,067	67.00%	2.36%
1925	731,824	100.00%	3.77%	456,420	70.78%	2.35%
1926	731,824	100.00%	3.65%	480,784	74.56%	2.40%
1927	731,824	100.00%	3.53%	505,149	78.34%	2.44%
1928	731,824	100.00%	3.42%	529,514	82.11%	2.47%
1929	731,824	100.00%	3.31%	553,879	85.89%	2.51%
1930	687,158	100.00%	3.06%	578,244	89.67%	2.58%
1931	687,158	100.00%	2.98%	591,814	87.91%	2.57%
1932	687,158	100.00%	2.91%	605,384	89.92%	2.56%
1933	687,158	100.00%	2.85%	618,954	91.94%	2.56%
1934	687,158	100.00%	2.78%	632,524	93.95%	2.56%
1935	687,158	100.00%	2.73%	646,094	95.97%	2.57%
1936	687,158	100.00%	2.68%	659,664	97.98%	2.57%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Ciudad Real			Córdoba		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	247,924	12.50%	33.52%	-	-	-
1904	495,847	25.00%	37.73%	-	-	-
1905	743,771	37.50%	37.28%	-	-	-
1906	991,694	50.00%	33.61%	274,532	20.00%	9.31%
1907	1,239,618	62.50%	31.74%	549,064	40.00%	14.06%
1908	1,487,541	75.00%	30.60%	823,596	60.00%	16.94%
1909	1,735,465	87.50%	29.84%	1,098,128	80.00%	18.88%
1910	1,983,388	100.00%	28.34%	1,372,660	100.00%	19.61%
1911	1,983,388	100.00%	26.47%	1,372,660	100.00%	18.32%
1912	1,983,388	100.00%	25.00%	1,372,660	100.00%	17.30%
1913	1,983,388	100.00%	24.18%	1,372,660	100.00%	16.74%
1914	1,983,388	100.00%	23.58%	1,372,660	100.00%	16.32%
1915	1,983,388	100.00%	23.08%	1,372,660	100.00%	15.98%
1916	1,983,388	100.00%	22.72%	1,372,660	100.00%	15.73%
1917	1,983,388	100.00%	22.06%	1,372,660	100.00%	15.27%
1918	1,983,388	100.00%	20.70%	1,372,660	100.00%	14.33%
1919	1,983,388	100.00%	18.67%	1,372,660	100.00%	12.92%
1920	1,983,388	100.00%	16.99%	1,372,660	100.00%	11.76%
1921	1,983,388	100.00%	15.40%	1,372,660	100.00%	10.66%
1922	1,983,388	100.00%	13.42%	1,372,660	100.00%	9.29%
1923	1,983,388	100.00%	11.92%	1,372,660	100.00%	8.25%
1924	1,974,135	100.00%	10.32%	1,372,663	100.00%	7.18%
1925	1,974,135	100.00%	10.18%	1,372,663	100.00%	7.08%
1926	1,974,135	100.00%	9.84%	1,372,663	100.00%	6.84%
1927	1,974,135	100.00%	9.52%	1,372,663	100.00%	6.62%
1928	1,974,135	100.00%	9.22%	1,372,663	100.00%	6.41%
1929	1,974,135	100.00%	8.94%	1,372,663	100.00%	6.21%
1930	1,917,524	100.00%	8.55%	1,350,396	100.00%	6.02%
1931	1,917,524	100.00%	8.32%	1,350,396	100.00%	5.86%
1932	1,917,524	100.00%	8.12%	1,350,396	100.00%	5.72%
1933	1,917,524	100.00%	7.94%	1,350,396	100.00%	5.59%
1934	1,917,524	100.00%	7.77%	1,350,396	100.00%	5.47%
1935	1,917,524	100.00%	7.62%	1,350,396	100.00%	5.36%
1936	1,917,524	100.00%	7.47%	1,350,396	100.00%	5.26%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Cuenca			Granada		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	-	-	-	-	-	-
1918	-	-	-	-	-	-
1919	-	-	-	188,093	15.50%	1.77%
1920	-	-	-	376,187	31.00%	3.22%
1921	87,857	5.00%	0.68%	564,280	46.50%	4.38%
1922	175,714	10.00%	1.19%	752,373	62.00%	5.09%
1923	263,571	15.00%	1.58%	940,466	77.50%	5.65%
1924	351,428	20.00%	1.84%	1,172,960	93.00%	6.13%
1925	386,615	22.57%	1.99%	1,142,717	94.17%	5.89%
1926	430,688	25.15%	2.15%	1,156,875	95.33%	5.76%
1927	474,762	27.72%	2.29%	1,171,032	96.50%	5.64%
1928	518,836	30.29%	2.42%	1,185,190	97.67%	5.53%
1929	562,909	32.87%	2.55%	1,199,347	98.83%	5.43%
1930	606,983	35.44%	2.71%	1,213,505	100.00%	5.41%
1931	651,057	38.01%	2.83%	1,213,505	100.00%	5.27%
1932	695,130	40.59%	2.94%	1,213,505	100.00%	5.14%
1933	739,204	43.16%	3.06%	1,213,505	100.00%	5.02%
1934	783,278	45.73%	3.17%	1,213,505	100.00%	4.92%
1935	827,351	48.31%	3.29%	1,213,505	100.00%	4.82%
1936	871,425	50.88%	3.40%	1,213,505	100.00%	4.73%

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Table 2.A2: Hectares included the cadastre by province, 1901–1936.

Year	Guadalajara			Huelva		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	-	-	-	-	-	-
1918	-	-	-	-	-	-
1919	-	-	-	-	-	-
1920	-	-	-	-	-	-
1921	-	-	-	-	-	-
1922	72,536	5.67%	0.49%	121,139	12.00%	0.82%
1923	145,071	11.33%	0.87%	242,278	24.00%	1.46%
1924	217,607	17.00%	1.14%	363,417	36.00%	1.90%
1925	201,495	20.08%	1.04%	409,926	41.31%	2.11%
1926	232,359	23.15%	1.16%	462,604	46.62%	2.30%
1927	263,223	26.23%	1.27%	515,281	51.93%	2.48%
1928	294,087	29.30%	1.37%	567,959	57.23%	2.65%
1929	324,951	32.38%	1.47%	620,636	62.54%	2.81%
1930	355,815	35.45%	1.59%	673,314	67.85%	3.00%
1931	386,679	38.53%	1.68%	725,992	73.16%	3.15%
1932	417,543	41.60%	1.77%	778,669	78.47%	3.30%
1933	448,407	44.68%	1.86%	831,347	83.78%	3.44%
1934	479,271	47.75%	1.94%	884,024	89.08%	3.58%
1935	510,135	50.83%	2.03%	936,702	94.39%	3.72%
1936	540,999	53.90%	2.11%	982,433	99.00%	3.83%

Continued on Next Page.

Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Jaén			Madrid		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	66,418	8.30%	8.98%
1904	-	-	-	132,835	16.60%	10.11%
1905	106,180	7.88%	5.32%	199,253	24.90%	9.99%
1906	212,361	15.75%	7.20%	265,670	33.20%	9.01%
1907	318,541	23.63%	8.16%	332,088	41.50%	8.50%
1908	424,721	31.50%	8.74%	398,505	49.80%	8.20%
1909	530,902	39.38%	9.13%	464,923	58.10%	7.99%
1910	637,082	47.25%	9.10%	531,340	66.40%	7.59%
1911	743,263	55.13%	9.92%	597,758	74.70%	7.98%
1912	847,689	63.00%	10.69%	612,707	83.00%	7.72%
1913	899,331	66.70%	10.96%	709,520	88.67%	8.65%
1914	949,219	70.40%	11.29%	754,866	94.33%	8.98%
1915	999,107	74.10%	11.63%	800,211	100.00%	9.31%
1916	1,048,995	77.80%	12.02%	800,211	100.00%	9.17%
1917	1,098,882	81.50%	12.22%	800,211	100.00%	8.90%
1918	1,148,770	85.20%	11.99%	800,211	100.00%	8.35%
1919	1,198,658	88.90%	11.28%	800,211	100.00%	7.53%
1920	1,248,546	92.60%	10.70%	800,211	100.00%	6.86%
1921	1,298,434	96.30%	10.08%	800,211	100.00%	6.21%
1922	1,348,322	100.00%	9.12%	800,211	100.00%	5.41%
1923	1,348,322	100.00%	8.10%	800,211	100.00%	4.81%
1924	1,348,322	100.00%	7.05%	800,211	100.00%	4.18%
1925	1,348,322	100.00%	6.95%	800,211	100.00%	4.13%
1926	1,348,322	100.00%	6.72%	800,211	100.00%	3.99%
1927	1,348,322	100.00%	6.50%	800,211	100.00%	3.86%
1928	1,348,322	100.00%	6.30%	800,211	100.00%	3.74%
1929	1,348,322	100.00%	6.10%	800,211	100.00%	3.62%
1930	1,316,454	100.00%	5.87%	743,917	100.00%	3.32%
1931	1,316,454	100.00%	5.71%	743,917	100.00%	3.23%
1932	1,316,454	100.00%	5.57%	743,917	100.00%	3.15%
1933	1,316,454	100.00%	5.45%	743,917	100.00%	3.08%
1934	1,316,454	100.00%	5.34%	743,917	100.00%	3.01%
1935	1,316,454	100.00%	5.23%	743,917	100.00%	2.95%
1936	1,316,454	100.00%	5.13%	743,917	100.00%	2.90%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Málaga			Murcia		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	68,001	9.89%	0.76%	-	-	-
1918	136,002	19.78%	1.42%	-	-	-
1919	204,003	29.67%	1.92%	78,322	6.83%	0.74%
1920	272,004	39.56%	2.33%	156,643	13.67%	1.34%
1921	340,005	49.44%	2.64%	234,965	20.50%	1.82%
1922	408,006	59.33%	2.76%	313,287	27.33%	2.12%
1923	476,007	69.22%	2.86%	391,608	34.17%	2.35%
1924	651,977	89.00%	3.41%	469,930	41.00%	2.46%
1925	624,616	90.83%	3.22%	530,164	48.79%	2.73%
1926	637,223	92.67%	3.17%	614,813	56.58%	3.06%
1927	649,830	94.50%	3.13%	699,461	64.37%	3.37%
1928	662,437	96.33%	3.09%	784,109	72.16%	3.66%
1929	675,044	98.17%	3.06%	868,757	79.95%	3.93%
1930	687,651	100.00%	3.06%	953,405	87.74%	4.25%
1931	687,651	100.00%	2.99%	1,020,015	93.87%	4.43%
1932	687,651	100.00%	2.91%	1,086,625	100.00%	4.60%
1933	687,651	100.00%	2.85%	1,086,625	100.00%	4.50%
1934	687,651	100.00%	2.79%	1,086,625	100.00%	4.40%
1935	687,651	100.00%	2.73%	1,086,625	100.00%	4.32%
1936	687,651	100.00%	2.68%	1,086,625	100.00%	4.24%

Continued on Next Page.

Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Palencia			Salamanca		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	-	-	-	-	-	-
1918	-	-	-	-	-	-
1919	-	-	-	-	-	-
1920	-	-	-	-	-	-
1921	-	-	-	-	-	-
1922	-	-	-	-	-	-
1923	-	-	-	-	-	-
1924	5,145	6.00%	0.03%	333,591	27.00%	1.74%
1925	72,979	9.37%	0.38%	322,948	31.04%	1.66%
1926	99,218	12.74%	0.49%	364,936	35.07%	1.82%
1927	125,457	16.11%	0.60%	406,923	39.11%	1.96%
1928	151,696	19.47%	0.71%	448,911	43.14%	2.10%
1929	177,935	22.84%	0.81%	490,899	47.18%	2.22%
1930	204,174	26.21%	0.91%	532,887	51.21%	2.37%
1931	230,413	29.58%	1.00%	574,875	55.25%	2.50%
1932	256,652	32.95%	1.09%	616,863	59.28%	2.61%
1933	282,891	36.32%	1.17%	658,851	63.32%	2.73%
1934	309,130	39.68%	1.25%	700,838	67.35%	2.84%
1935	335,369	43.05%	1.33%	742,826	71.39%	2.95%
1936	361,608	46.42%	1.41%	784,814	75.42%	3.06%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Segovia			Sevilla		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	1,405	0.00%	0.02%
1913	-	-	-	1,405	0.00%	0.02%
1914	-	-	-	1,405	0.00%	0.02%
1915	-	-	-	1,405	0.00%	0.02%
1916	-	-	-	1,405	0.00%	0.02%
1917	-	-	-	1,405	0.00%	0.02%
1918	-	-	-	1,405	0.00%	0.01%
1919	-	-	-	187,624	13.33%	1.77%
1920	-	-	-	375,247	26.67%	3.22%
1921	71,131	10.00%	0.55%	562,871	40.00%	4.37%
1922	142,262	20.00%	0.96%	750,495	53.33%	5.08%
1923	213,393	30.00%	1.28%	938,118	66.67%	5.64%
1924	284,524	40.00%	1.49%	1,125,742	80.00%	5.89%
1925	290,789	42.35%	1.50%	1,144,661	82.36%	5.90%
1926	306,903	44.69%	1.53%	1,177,415	84.71%	5.87%
1927	323,017	47.04%	1.56%	1,210,170	87.07%	5.83%
1928	339,132	49.39%	1.58%	1,242,925	89.43%	5.80%
1929	355,246	51.73%	1.61%	1,275,680	91.78%	5.77%
1930	371,360	54.08%	1.66%	1,308,435	94.14%	5.83%
1931	387,474	56.43%	1.68%	1,328,797	95.61%	5.77%
1932	403,588	58.77%	1.71%	1,349,159	97.07%	5.71%
1933	419,703	61.12%	1.74%	1,369,520	98.54%	5.67%
1934	435,817	63.47%	1.77%	1,389,882	100.00%	5.63%
1935	451,931	65.81%	1.79%	1,389,882	100.00%	5.52%
1936	468,045	68.16%	1.82%	1,389,882	100.00%	5.42%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Soria			Toledo		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	95,070	6.20%	12.85%
1904	-	-	-	190,140	12.40%	14.47%
1905	-	-	-	285,210	18.60%	14.30%
1906	-	-	-	380,280	24.80%	12.89%
1907	-	-	-	475,350	31.00%	12.17%
1908	-	-	-	570,420	37.20%	11.74%
1909	-	-	-	665,490	43.40%	11.44%
1910	-	-	-	760,559	49.60%	10.87%
1911	-	-	-	855,629	55.80%	11.42%
1912	-	-	-	944,373	62.00%	11.91%
1913	-	-	-	999,257	65.17%	12.18%
1914	-	-	-	1,047,814	68.33%	12.46%
1915	-	-	-	1,096,371	71.50%	12.76%
1916	-	-	-	1,144,928	74.67%	13.12%
1917	-	-	-	1,193,485	77.83%	13.28%
1918	-	-	-	1,242,043	81.00%	12.96%
1919	-	-	-	1,290,600	84.17%	12.15%
1920	-	-	-	1,339,157	87.33%	11.47%
1921	-	-	-	1,387,714	90.50%	10.78%
1922	-	-	-	1,436,272	93.67%	9.72%
1923	-	-	-	1,484,829	96.83%	8.93%
1924	31,319	3.00%	0.16%	1,533,386	100.00%	8.02%
1925	42,784	4.23%	0.22%	1,533,386	100.00%	7.91%
1926	55,249	5.47%	0.28%	1,533,386	100.00%	7.64%
1927	67,713	6.70%	0.33%	1,533,386	100.00%	7.39%
1928	80,178	7.93%	0.37%	1,533,386	100.00%	7.16%
1929	92,642	9.17%	0.42%	1,533,386	100.00%	6.94%
1930	105,107	10.40%	0.47%	1,465,743	99.14%	6.53%
1931	117,572	11.63%	0.51%	1,465,743	100.00%	6.36%
1932	130,036	12.87%	0.55%	1,465,743	100.00%	6.20%
1933	142,501	14.10%	0.59%	1,465,743	100.00%	6.07%
1934	154,965	15.33%	0.63%	1,465,743	100.00%	5.94%
1935	167,430	16.57%	0.66%	1,465,743	100.00%	5.82%
1936	179,895	17.80%	0.70%	1,465,743	100.00%	5.71%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Year	Valencia			Valladolid		
	Hectares	% of Province	% of Spain	Hectares	% of Province	% of Spain
1902	-	-	-	-	-	-
1903	-	-	-	-	-	-
1904	-	-	-	-	-	-
1905	-	-	-	-	-	-
1906	-	-	-	-	-	-
1907	-	-	-	-	-	-
1908	-	-	-	-	-	-
1909	-	-	-	-	-	-
1910	-	-	-	-	-	-
1911	-	-	-	-	-	-
1912	-	-	-	-	-	-
1913	-	-	-	-	-	-
1914	-	-	-	-	-	-
1915	-	-	-	-	-	-
1916	-	-	-	-	-	-
1917	-	-	-	-	-	-
1918	-	-	-	-	-	-
1919	-	-	-	-	-	-
1920	-	-	-	-	-	-
1921	-	-	-	-	-	-
1922	132,987	12.33%	0.90%	80,358	9.67%	0.54%
1923	265,975	24.67%	1.60%	160,717	19.33%	0.97%
1924	398,962	37.00%	2.09%	241,075	29.00%	1.26%
1925	411,571	41.68%	2.12%	257,774	34.44%	1.33%
1926	457,740	46.35%	2.28%	298,491	39.88%	1.49%
1927	503,909	51.03%	2.43%	339,207	45.32%	1.64%
1928	550,078	55.70%	2.57%	379,924	50.76%	1.77%
1929	596,247	60.38%	2.70%	420,641	56.20%	1.90%
1930	642,416	65.05%	2.86%	461,358	61.64%	2.06%
1931	688,585	69.73%	2.99%	502,075	67.08%	2.18%
1932	734,754	74.40%	3.11%	542,792	72.52%	2.30%
1933	780,923	79.08%	3.23%	583,509	77.96%	2.42%
1934	827,092	83.75%	3.35%	624,225	83.40%	2.53%
1935	873,261	88.43%	3.47%	664,942	88.84%	2.64%
1936	919,430	93.10%	3.58%	705,659	94.28%	2.75%

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Table 2A2: Hectares included the cadastre by province, 1901–1936.

Zamora			
Year	Hectares	% of Province	% of Spain
1902	-	-	-
1903	-	-	-
1904	-	-	-
1905	-	-	-
1906	-	-	-
1907	-	-	-
1908	-	-	-
1909	-	-	-
1910	-	-	-
1911	-	-	-
1912	-	-	-
1913	-	-	-
1914	-	-	-
1915	-	-	-
1916	-	-	-
1917	-	-	-
1918	-	-	-
1919	-	-	-
1920	-	-	-
1921	-	-	-
1922	-	-	-
1923	-	-	-
1924	105,783	10.00%	0.55%
1925	115,215	11.18%	0.59%
1926	127,345	12.35%	0.63%
1927	139,475	13.53%	0.67%
1928	151,605	14.71%	0.71%
1929	163,734	15.88%	0.74%
1930	175,864	17.06%	0.78%
1931	187,994	18.24%	0.82%
1932	200,123	19.41%	0.85%
1933	212,253	20.59%	0.88%
1934	224,383	21.77%	0.91%
1935	236,513	22.94%	0.94%
1936	248,642	24.12%	0.97%

Table 2A3: Nominal territorial contribution revenues collected in the *amillaramientos* and the cadastre regimes, 1901–1936.

Year	<i>Amillaramientos</i>	Cadastre	Total
1901	114,559,888	-	114,559,888
1902	114,272,048	-	114,272,048
1903	114,132,235	16,760	114,148,995
1904	113,772,380	154,569	113,926,949
1905	112,950,726	659,031	113,609,757
1906	112,269,432	1,079,516	113,348,948
1907	110,752,718	2,107,299	112,860,017
1908	108,043,372	3,848,905	111,892,277
1909	104,545,890	7,157,027	111,702,917
1910	-	-	-
1911	100,346,195	14,615,573	114,961,768
1912	93,869,672	17,025,741	110,895,413
1913	93,112,482	18,835,817	111,948,299
1914	90,949,850	20,993,334	111,943,184
1915	90,365,504	21,382,794	111,748,298
1916	89,711,169	22,342,295	112,053,464
1917	89,047,521	22,971,309	112,018,830
1918	87,808,525	24,945,423	112,753,948
1919	86,577,670	26,867,796	113,445,466
1920	-	-	-
1921	83,700,777	32,382,127	116,082,904
1922	81,023,832	37,560,265	118,584,097
1923	75,938,121	49,596,337	125,534,458
1924	91,028,562	55,622,083	146,650,645
1925	85,728,216	65,165,022	150,893,238
1926	82,879,044	70,345,841	153,224,885
1927	81,253,154	73,416,458	154,669,612
1928	98,796,648	83,606,081	182,402,729
1929	95,786,098	88,102,107	183,888,205
1930	92,486,353	93,167,033	185,653,386
1931	88,505,344	99,219,965	187,725,309
1932	86,499,564	102,292,297	188,791,861
1933	86,627,039	109,764,328	196,391,367
1934	84,992,742	114,364,514	199,357,256
1935	82,823,663	120,846,504	203,670,167
1936	81,332,721	121,462,110	202,794,831

Sources and Notes: The sources are the *Gacetas de Madrid*. From 1903 to 1909, the *Gacetas* give information on where the territorial revenues in the cadastre were collected: for 1903, the amount corresponds to just one village, Balazote in Albacete. For 1904, it corresponds to Balazote and La Herrera (Albacete); La Cañada (Ciudad Real); Aravaca, El Pardo, Torrelodones and Leganés (Madrid); Azután, Huecas, Puente del Arzopisbo San Román y Villaseca de la Sagra (Toledo). For 1905 and 1906 it corresponds to villages of Albacete, Ciudad Real, Jaén, Madrid and Toledo. Finally, from 1907 to 1908, it corresponds to villages of Albacete, Córdoba, Ciudad Real, Jaén, Madrid and Toledo.

Table 2A4: Categories of Crops in Spain.

Category	Notes and Crops included.
Cereals	Crops include: wheat, barley, oat, rye, corn, einkorn wheat, canary grass, sorghum, rice and millet.
Legumes	Crops include: chickpeas, peas, read peas, common beans, broad beans, lentils, peanuts, carob, white lupin and ervil.
Olives	It includes only raw olives; it does not include refined olive oil.
Vines	It includes only raw grapes; it does not include wine production.
Others	<p>This category includes <i>Fruit Trees, Tubers, Vegetables, Industrial Plants and Grasslands</i>. While there is relatively good data on their extension in <i>Estadísticas Históricas de la Producción Agraria Española, 1859-1935</i>, there is unfortunately no disaggregated data on their production values in <i>Un índice de la producción agraria española, 1891-1935</i>. The best strategy is thus to aggregate all their extensions into this remaining category. <i>Fruit Trees</i> include: peaches, apricots, plums, cherries, apples, pears, figs, almonds, chestnuts, hazelnuts, pomegranates, oranges, lemons, bananas. <i>Tubers</i> include potatoes, turnips, carrots, onions, garlics. <i>Vegetables</i> include tomatoes, spinach, peppers, strawberries, melons, watermelons. <i>Industrial plants</i> are plants that are grown for industrial production, such as hemp, linen, esparto, sugar beet, sugar cane, saffron, pimentón peppers, cotton, tobacco. <i>Grasslands</i> are not a crop: they are lands used for cattle, for instance. While they are not crops, such lands had value, and could reach important extensions, justifying their inclusion in this dataset.</p>

Notes: Own elaboration and translation using the categories from the data of the GEHR, *Estadísticas Históricas de la Producción Agraria Española, 1859-1935* (Ministerio de Agricultura, Pesca y Alimentación, 1991). Any translations errors are mine.

Table 2A5: Share of Agrarian Production Values in Real Prices, 1901–1935.

Years	Cereals	Vines	Olives	Legumes	Others	Total
1901	48%	13%	9%	5%	25%	100%
1902	53%	8%	8%	6%	26%	100%
1903	52%	10%	7%	4%	26%	100%
1904	46%	16%	7%	5%	27%	100%
1905	48%	13%	6%	5%	27%	100%
1906	54%	8%	4%	5%	28%	100%
1907	44%	12%	11%	5%	28%	100%
1908	48%	12%	5%	6%	29%	100%
1909	50%	8%	7%	5%	30%	100%
1910	53%	7%	3%	6%	30%	100%
1911	48%	8%	9%	5%	30%	100%
1912	49%	12%	2%	6%	30%	100%
1913	45%	10%	9%	5%	30%	100%
1914	47%	10%	7%	6%	30%	100%
1915	49%	5%	10%	6%	30%	100%
1916	47%	11%	5%	6%	30%	100%
1917	42%	11%	11%	6%	30%	100%
1918	45%	12%	7%	6%	30%	100%
1919	44%	11%	9%	6%	31%	100%
1920	43%	12%	8%	6%	31%	100%
1921	47%	10%	7%	6%	31%	100%
1922	43%	13%	8%	5%	31%	100%
1923	46%	10%	7%	5%	31%	100%
1924	43%	11%	9%	5%	32%	100%
1925	43%	11%	7%	6%	32%	100%
1926	47%	8%	6%	6%	33%	100%
1927	37%	11%	14%	5%	34%	100%
1928	43%	12%	6%	6%	34%	100%
1929	38%	10%	14%	4%	35%	100%
1930	47%	9%	3%	6%	35%	100%
1931	39%	8%	8%	4%	40%	100%
1932	46%	8%	7%	5%	34%	100%
1933	40%	9%	7%	5%	40%	100%
1934	46%	8%	6%	5%	35%	100%
1935	41%	7%	10%	5%	37%	100%

Source: GEHR, “Un índice de la producción agraria española, 1891-1935,” *Hacienda Pública Española* 108-109 (1987): 420-21.

Note: Adjusted to real values with 1910 prices by the GEHR.

Table 2A6: Yearly total territorial contribution by crops, 1901–1936.

Years	Total	Adjusted	Cereals	Vines	Olives	Legumes	Others
1901	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-
1903	16,760	16,760	-	-	-	-	-
1904	154,569	154,569	80,585	15,639	11,208	6,690	40,448
1905	659,031	659,031	300,278	108,000	42,867	31,838	176,047
1906	1,079,516	1,079,516	522,875	143,253	65,487	53,549	294,351
1907	2,107,299	2,107,299	1,141,753	177,864	94,456	106,608	586,619
1908	3,848,905	3,848,905	1,688,871	470,087	421,680	175,341	1,092,926
1909	7,157,027	7,157,027	3,469,436	843,917	373,160	398,038	2,072,476
1910	-	-	-	-	-	-	-
1911	14,615,573	14,615,573	7,789,640	1,020,843	495,185	914,188	4,395,718
1912	17,025,741	6,863,314	3,308,409	519,723	598,424	369,746	2,067,013
1913	18,835,817	8,673,390	4,272,438	1,025,490	212,442	545,529	2,617,491
1914	20,993,334	10,830,907	4,894,290	1,110,722	965,726	585,454	3,274,715
1915	21,382,794	8,935,576	4,226,712	865,169	599,310	538,478	2,705,907
1916	22,342,295	7,663,197	3,786,438	370,143	738,515	442,755	2,325,347
1917	22,971,309	8,292,211	3,902,018	939,187	447,634	483,107	2,520,265
1918	24,945,423	10,266,325	4,278,311	1,142,503	1,110,092	609,740	3,125,679
1919	26,867,796	12,188,698	5,495,012	1,405,884	852,448	718,679	3,716,674
1920	-	-	-	-	-	-	-
1921	32,382,127	17,703,029	7,783,162	1,878,295	1,658,454	975,788	5,407,330
1922	37,560,265	22,881,167	10,681,424	2,204,948	1,706,900	1,271,713	7,016,182
1923	49,596,337	34,917,239	14,955,890	4,612,281	2,797,613	1,829,790	10,721,664
1924	55,622,083	37,151,154	17,164,016	3,689,067	2,696,398	1,978,297	11,623,376
1925	65,165,022	46,694,093	19,878,371	5,180,424	4,306,980	2,449,658	14,878,660
1926	70,345,841	45,957,624	19,966,850	5,112,675	3,378,881	2,588,594	14,910,624
1927	73,416,458	49,028,241	22,911,074	3,893,113	3,070,771	2,966,677	16,186,606
1928	83,606,081	59,217,864	21,657,094	6,475,000	8,197,176	2,992,162	19,896,432
1929	88,102,107	63,713,890	27,148,281	7,510,929	3,511,789	3,769,798	21,773,093
1930	93,167,033	68,778,816	25,908,012	6,559,829	9,331,744	3,081,132	23,898,098
1931	99,219,965	74,831,748	35,511,586	6,518,235	2,212,888	4,154,810	26,434,228
1932	102,292,297	74,636,788	29,113,154	6,220,877	6,165,946	3,172,235	29,964,576
1933	109,764,328	77,866,781	35,458,191	6,231,820	5,525,630	3,952,188	26,698,952
1934	114,364,514	75,132,152	30,148,571	6,412,553	5,400,764	3,486,569	29,683,695
1935	120,846,504	74,956,801	34,281,536	6,248,418	4,855,844	3,681,239	25,889,764
1936	121,462,110	64,269,157	26,517,121	4,591,464	6,382,702	3,117,661	23,660,210

Notes: The total territorial contribution for the provinces in the cadastre are reported in the column *Total*. The column *Adjusted* subtracts the territorial contribution revenues of the completed provinces from the total territorial revenues. It accounts for the fact that once a province is fully included in the cadastre, the value of the territorial contribution remains the same for the following years.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1904

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	In Measurement	185,784	31.21%	100,989	29.33%	23,633	26,925	21.24%	3,322	5,106	13.15%	1,474	1,612	11.11%	743	51,151	72.30%	29,245	58,417
	In Measurement	247,924	41.65%	137,985	40.07%	32,291	76,399	60.27%	9,426	24,295	62.57%	7,013	2,370	16.33%	1,092	6,874	9.72%	3,930	53,753
Ciudad Real	In Measurement	66,418	11.16%	41,883	12.16%	9,801	15,326	12.09%	1,891	3,196	8.23%	923	4,255	29.31%	1,961	1,758	2.48%	1,005	15,581
	In Measurement	95,070	15.97%	63,496	18.44%	14,859	8,102	6.39%	1,000	6,231	16.05%	1,799	6,279	43.25%	2,893	10,962	15.50%	6,267	26,818
Total		595,195		344,353	100.00%	80,585	126,752	100.00%	15,639	38,828	100.00%	11,208	14,517	100.00%	6,690	70,745	100.00%	40,448	154,569

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1905

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	In Measurement	212,324	25.94%	117,386	24.48%	73,499	30,632	17.83%	19,256	5,707	12.27%	5,260	1,425	4.87%	1,551	57,174	62.49%	110,010	209,576
	In Measurement	283,341	34.61%	154,415	32.20%	96,684	93,516	54.43%	58,788	21,397	46.00%	19,719	5,919	20.23%	6,442	8,095	8.85%	15,576	197,208
Madrid	In Measurement	132,835	16.23%	83,174	17.34%	52,078	30,791	17.92%	19,357	6,422	13.81%	5,918	8,917	30.48%	9,705	3,531	3.86%	6,795	93,852
	In Measurement	190,140	23.23%	124,603	25.98%	78,018	16,861	9.81%	10,599	12,989	27.92%	11,970	12,993	44.42%	14,141	22,694	24.80%	43,666	158,395
Total		818,640		479,578	100.00%	300,278	171,800	100.00%	108,000	46,514	100.00%	42,867	29,253	100.00%	31,838	91,495	100.00%	176,047	659,031

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1906

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	In Measurement	424,648	26.84%	225,499	24.31%	127,111	64,378	20.37%	29,176	11,994	8.66%	5,672	2,616	6.68%	3,577	120,161	74.80%	220,184	385,720
	In Measurement	566,682	35.82%	291,733	31.45%	164,447	194,599	61.56%	88,193	56,944	41.12%	26,928	7,953	20.30%	10,872	15,453	9.62%	28,317	318,757
Jaén	In Measurement	106,180	6.71%	43,977	4.74%	24,789	102	0.03%	46	51,200	36.97%	24,212	6,225	15.89%	8,510	4,677	2.91%	8,570	66,127
	In Measurement	199,253	12.60%	125,315	13.51%	70,639	45,845	14.50%	20,777	9,561	6.90%	4,522	13,273	33.88%	18,145	5,258	3.27%	9,635	123,717
Toledo	In Measurement	285,210	18.03%	241,069	25.99%	135,888	11,166	3.53%	5,061	8,782	6.34%	4,153	9,105	23.24%	12,446	15,087	9.39%	27,646	185,194
	Total	1,581,973		927,592	100.00%	522,875	316,090	100.00%	143,253	138,481	100.00%	65,487	39,172	100.00%	53,549	160,637	100.00%	294,351	1,079,516

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1907

Province	Status	Total Has		Cereals		Vines		Olives		Legumes		Others		Total					
		Has	Proportion	H	%	H	%	H	%	H	%	H	%						
Albacete	In Measurement	636,972	24.31%	341,907	24.66%	281,609	108,343	21.06%	37,461	16,516	4.52%	4,269	4,744	4.77%	5,088	165,462	65.04%	381,541	709,969
	In Measurement	850,023	32.45%	426,164	30.74%	351,006	305,267	59.34%	105,550	85,430	23.38%	22,083	9,979	10.04%	10,703	23,184	9.11%	53,460	542,802
	In Measurement	274,532	10.48%	115,453	8.33%	95,092	4,860	0.94%	1,680	124,680	34.12%	32,228	22,159	22.29%	23,768	7,381	2.90%	17,019	169,787
Córdoba	In Measurement	212,361	8.11%	87,438	6.31%	72,018	1,385	0.27%	479	100,956	27.63%	26,096	13,403	13.48%	14,376	9,178	3.61%	21,164	134,133
	In Measurement	265,670	10.14%	166,861	12.04%	137,433	61,122	11.88%	21,134	12,742	3.49%	3,294	17,939	18.05%	19,241	7,007	2.75%	16,157	197,258
Toledo	In Measurement	380,280	14.52%	248,404	17.92%	204,595	33,430	6.50%	11,559	25,090	6.87%	6,485	31,170	31.36%	33,432	42,186	16.58%	97,278	353,350
	Total	2,619,838	100.00%	1,386,227	100.00%	1,141,753	514,408	100.00%	177,864	365,413	100.00%	94,456	99,394	100.00%	106,608	254,397	100.00%	586,619	2,107,299

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1908

Province	Status	Total Has		Cereals		Vines		Olives		Legumes		Others		Total					
		Has	Proportion	H	%	H	%	H	%	H	%	H	%						
Albacete	In Measurement	849,297	23.22%	467,993	24.58%	415,204	137,632	20.09%	94,462	23,671	4.03%	16,984	6,407	4.43%	7,760	213,594	63.44%	693,302	1,227,712
	In Measurement	1,133,365	30.99%	554,362	29.12%	491,831	415,569	60.67%	285,222	117,917	20.06%	84,605	14,412	9.96%	17,456	31,105	9.24%	100,963	980,076
	In Measurement	549,064	15.01%	233,829	12.28%	207,454	9,618	1.40%	6,601	249,069	42.38%	178,707	41,810	28.88%	50,639	14,737	4.38%	47,834	491,235
Córdoba	In Measurement	318,541	8.71%	136,360	7.16%	120,979	1,722	0.25%	1,182	148,894	25.33%	106,831	17,491	12.08%	21,184	14,074	4.18%	45,683	295,859
	In Measurement	332,088	9.08%	208,134	10.93%	184,657	76,964	11.24%	52,823	15,973	2.72%	11,460	22,230	15.36%	26,924	8,787	2.61%	28,521	304,386
Toledo	In Measurement	475,350	13.00%	302,916	15.91%	268,747	43,414	6.34%	29,797	32,186	5.48%	23,093	42,420	29.30%	51,378	54,414	16.16%	176,623	549,638
	Total	3,657,703	100.00%	1,903,595	100.00%	1,688,871	684,918	100.00%	470,087	587,709	100.00%	421,680	144,771	100.00%	175,341	336,711	100.00%	1,092,926	3,848,905

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1909

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total
			H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	In Measurement	1,061,621	560,370	814,745	23.48%	175,742	171,142	31,497	3.90%	14,566	9,796	4.98%	19,839	284,216	64.70%	1,340,890	2,361,181	
Ciudad Real	In Measurement	1,416,706	681,605	991,013	28.56%	527,255	513,454	148,824	18.44%	68,825	19,749	10.05%	39,994	39,274	8.94%	1,798,573	1,798,573	
Córdoba	In Measurement	823,596	349,574	508,260	14.65%	14,850	14,461	371,414	46.03%	171,763	65,782	33.47%	133,218	21,976	5.00%	103,678	931,380	
Jaén	In Measurement	424,721	182,142	264,824	7.63%	2,644	2,575	197,762	24.51%	91,456	23,694	12.05%	47,983	18,479	4.21%	87,181	494,020	
Madrid	In Measurement	398,505	250,684	364,480	10.51%	91,776	89,374	19,046	2.36%	8,808	26,521	13.49%	53,710	10,477	2.39%	49,431	565,802	
Toledo	In Measurement	570,420	361,854	526,114	15.16%	54,332	52,910	38,365	4.75%	17,742	51,006	25.95%	103,294	64,862	14.77%	306,009	1,006,070	
Total		4,695,569	2,386,229	3,469,436	100.00%	866,600	843,917	806,909	100.00%	373,160	196,548	100.00%	398,038	439,283	100.00%	2,072,476	7,157,927	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1911

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total
			H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	905,548	1,846,087	23.70%	205,926	205,931	42,367	3.36%	16,653	11,667	3.37%	30,766	320,762	58.33%	2,563,996	4,663,432	
Cádiz	In Measurement	226,865	155,421	316,848	4.07%	7,834	7,834	21,077	1.67%	8,285	29,899	8.62%	78,845	12,636	2.30%	101,002	512,814	
Ciudad Real	Completed	1,983,388	1,091,433	2,225,039	28.34%	579,954	579,968	200,485	15.91%	78,806	58,868	16.98%	155,239	52,647	9.57%	420,836	3,459,889	
Córdoba	Completed	1,372,660	583,768	1,190,094	19.61%	25,837	25,838	617,028	48.98%	242,539	109,518	31.59%	288,811	36,508	6.64%	291,825	2,039,106	
Jaén	In Measurement	637,082	268,785	547,955	9.10%	6,646	6,646	302,797	24.04%	119,022	31,279	9.02%	82,486	27,575	5.01%	220,417	976,527	
Madrid	In Measurement	531,340	333,201	679,277	7.59%	122,558	122,560	25,232	2.00%	9,918	36,416	10.50%	96,033	13,933	2.53%	111,372	1,019,161	
Toledo	In Measurement	760,559	482,841	984,340	12.64%	72,064	72,065	50,782	4.03%	19,961	69,018	19.91%	182,008	85,854	15.61%	686,271	1,944,645	
Total		6,998,164	3,820,998	7,789,640	100%	1,020,818	1,020,843	1,259,769	100%	495,185	346,664	100%	914,188	549,914	100%	4,395,718	14,615,573	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1912

Province	Status	Total Has	Proportion		Cereals		Vines		Olives		Legumes		Others		Total
			H	TC	H	TC	H	TC	H	TC	H	TC	H	TC	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
	In Measurement	453,731	17.12%	709,438	16,183	7.92%	41,146	42,158	9.45%	56,565	59,936	14.31%	52,924	27,137	1,251,171
Cádiz	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
	In Measurement	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Córdoba	Completed	743,263	28.04%	801,014	7,444	3.64%	18,928	326,344	73.17%	437,871	31,749	7.58%	28,035	29,609	1,712,579
	In Measurement	597,758	22.55%	860,949	119,961	58.69%	305,014	33,091	7.42%	44,400	55,839	13.34%	49,307	14,703	1,471,568
Madrid	Completed	855,629	32.28%	937,007	60,817	29.75%	154,635	44,410	9.96%	59,587	271,211	64.77%	239,481	71,974	2,427,996
	In Measurement	7,492,697	100.00%	3,308,409	204,405	100.00%	519,723	446,004	100.00%	598,424	418,735	100.00%	369,746	143,423	17,025,741

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1913

Province	Status	Total Has	Proportion		Cereals		Vines		Olives		Legumes		Others		Total
			H	TC	H	TC	H	TC	H	TC	H	TC	H	TC	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
	In Measurement	5,196	0.17%	2,223	1,885	0.77%	7,916	400	0.07%	152	29	0.01%	58	1,939	35,840
Alicante	Completed	678,530	21.96%	1,065,437	28,567	11.70%	119,962	64,965	11.59%	24,631	89,316	32.43%	176,917	44,103	1,966,685
	In Measurement	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Cádiz	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
	In Measurement	847,689	27.43%	867,156	9,047	3.70%	37,991	395,991	70.67%	150,138	39,190	14.23%	77,627	35,922	1,605,116
Córdoba	Completed	612,707	19.83%	903,237	114,609	46.93%	481,285	36,060	6.44%	13,672	62,859	22.82%	124,511	16,348	1,737,598
	In Measurement	1,405	0.05%	1,670	28	0.01%	118	550	0.10%	209	98	0.04%	195	21	2,462
Madrid	Completed	944,373	30.56%	1,432,715	90,065	36.88%	378,217	62,353	11.13%	23,641	83,917	30.47%	166,222	100,790	3,325,689
	In Measurement	3,089,900	100.00%	4,272,438	244,201	100.00%	1,025,490	560,319	100.00%	212,442	275,408	100.00%	545,529	199,122	8,673,390

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1914

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total	
			H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	44,078	14,379	0.73%	35,916	12,249	4.43%	49,161	3,085	0.52%	4,990	387	0.13%	751	13,979	6.21%	203,354	294,172	
Cádiz	Completed	706,210	468,191	23.89%	1,169,440	29,971	10.83%	120,287	67,182	11.25%	108,678	92,250	30.60%	179,123	48,617	21.60%	707,263	2,284,791	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Jaén	In Measurement	899,331	397,064	20.26%	991,779	9,519	3.44%	38,206	413,757	69.31%	669,322	41,412	13.73%	80,410	37,579	16.69%	546,688	2,326,405	
Madrid	In Measurement	709,520	449,000	22.91%	1,121,506	123,767	44.72%	496,741	44,629	7.48%	72,194	72,115	23.92%	140,027	20,010	8.89%	291,094	2,121,562	
Sevilla	In Measurement	1,405	692	0.04%	1,727	29	0.01%	115	559	0.09%	904	104	0.03%	202	22	0.01%	323	3,271	
Toledo	In Measurement	999,257	630,127	32.16%	1,373,921	101,211	36.57%	406,211	67,775	11.35%	109,638	95,247	31.59%	184,942	104,897	46.60%	1,325,994	3,800,706	
Total		3,359,801	1,959,454	100.00%	4,894,290	276,745	100.00%	1,110,722	596,986	100.00%	965,726	301,513	100.00%	585,454	225,104	100.00%	3,274,715	10,830,907	

Notes: H = Hectares; PT = Percentage of hectares of that crop in the province; TC = Territorial Contribution.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1915

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total	
			H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	82,529	7,850	0.50%	21,137	29,232	10.88%	94,087	8,386	1.48%	8,848	1,439	0.64%	3,448	35,623	17.40%	470,854	598,375	
Cádiz	Completed	706,210	468,191	23.89%	1,169,440	29,971	10.83%	120,287	67,182	11.25%	108,678	92,250	30.60%	179,123	48,617	21.60%	707,263	2,284,791	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Jaén	In Measurement	949,219	418,135	26.64%	1,125,958	9,954	3.70%	32,039	437,266	76.98%	461,335	44,100	19.63%	105,709	39,764	19.42%	525,581	2,250,623	
Madrid	Yes	754,866	492,111	31.35%	1,325,161	118,898	44.23%	382,690	48,045	8.46%	50,690	73,292	32.63%	175,684	22,520	11.00%	297,656	2,231,880	
Sevilla	In Measurement	1,405	694	0.04%	1,868	28	0.01%	91	553	0.10%	584	106	0.05%	255	23	0.01%	307	3,106	
Toledo	In Measurement	1,047,814	650,840	41.46%	1,752,588	110,687	41.18%	356,261	73,791	12.99%	77,853	105,706	47.06%	253,381	106,790	52.16%	1,411,509	3,851,593	
Total		2,835,833	1,569,629	100.00%	4,226,712	268,800	100.00%	865,169	568,042	100.00%	599,310	224,643	100.00%	538,478	204,719	100.00%	2,705,907	8,935,576	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by province; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1916

Province	Status	Total Has	Proportion		Cereals			Vines			Olives			Legumes			Others			Total
			H	%	H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	120,981	5.45%	104,607	35,250	21.48%	79,490	10,575	1.94%	14,304	1,240	0.77%	3,395	42,090	21.69%	504,288	-	-	706,084	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Jaén	In Measurement	999,107	45.05%	1,451,273	10,417	6.35%	23,490	458,449	83.97%	620,108	47,038	29.10%	128,820	41,071	21.47%	499,260	-	-	2,722,950	
Madrid	Completed	754,866	-	492,111	118,898	44.23%	382,690	48,045	8.46%	50,690	73,292	32.63%	175,684	22,520	11.00%	297,656	-	-	2,231,880	
Sevilla	In Measurement	1,405	0.06%	2,307	28	0.02%	63	546	0.10%	739	105	0.06%	287	24	0.01%	290	-	-	3,086	
Toledo	In Measurement	1,096,371	49.43%	677,918	58.85%	2,228,251	118,447	72.16%	267,099	76,417	14.00%	103,364	113,289	70.07%	310,253	1,321,510	56.83%	1,321,510	4,230,477	
Total		2,217,863	100.00%	1,151,978	100.00%	3,786,438	164,142	100.00%	370,143	545,987	100.00%	738,515	161,672	100.00%	442,755	194,084	100.00%	2,325,347	7,663,197	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1917

Province	Status	Total Has	Proportion		Cereals			Vines			Olives			Legumes			Others			Total
			H	%	H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	159,432	6.77%	182,661	40,707	23.49%	220,588	12,551	2.17%	9,721	1,889	1.10%	5,324	46,778	22.98%	579,162	-	-	997,456	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Jaén	In Measurement	1,048,995	44.55%	1,473,952	10,924	6.30%	59,196	482,480	83.48%	373,663	47,793	27.88%	134,674	43,762	21.50%	541,828	-	-	2,583,312	
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Sevilla	In Measurement	1,405	0.06%	2,223	28	0.02%	152	547	0.09%	424	104	0.06%	293	26	0.01%	316	-	-	3,409	
Toledo	In Measurement	1,144,928	48.62%	706,207	57.49%	2,243,183	121,658	70.19%	659,251	82,414	14.26%	63,826	121,658	70.96%	342,816	1,398,959	55.51%	1,398,959	4,708,034	
Total		2,354,760	100.00%	1,228,447	100.00%	3,902,018	173,318	100.00%	939,187	577,993	100.00%	447,634	171,445	100.00%	483,107	203,557	100.00%	2,520,265	8,292,211	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1918

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	
Alicante	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
	In Measurement	197,883	7.56%	51,776	26.26%	300,070	17,400	2.72%	30,186	2,087	1.16%	7,049	56,234	21.58%	674,563	21.58%	674,563	1,236,963	
	In Measurement	56,281	2.15%	12,766	0.95%	40,828	539	0.08%	935	686	0.38%	2,316	41,297	15.85%	495,378	15.85%	495,378	545,210	
Almería	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
	In Measurement	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Ciudad Real	Completed	1,098,882	42.01%	11,379	5.77%	65,947	506,715	79.19%	879,051	49,818	27.59%	168,246	45,649	17.52%	547,589	17.52%	547,589	3,212,908	
	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
	In Measurement	68,001	2.60%	33,816	2.53%	108,146	8,332	4.23%	48,287	14,253	2.23%	24,726	4,510	2.50%	15,231	7.090	85,052	281,442	
Málaga	In Measurement	1,405	0.05%	684	0.05%	2,187	28	0.01%	164	552	0.09%	958	113	0.06%	383	27	0.01%	322	4,015
	In Measurement	1,193,485	45.62%	734,819	54.93%	2,349,980	124,627	63.22%	722,282	100,436	15.70%	174,236	123,331	68.31%	416,515	110,272	42.32%	1,322,774	4,985,788
	In Measurement	2,615,938	100.00%	1,337,792	100.00%	4,278,311	197,135	100.00%	1,110,092	639,895	100.00%	1,110,092	180,545	100.00%	609,740	260,570	100.00%	3,125,679	10,266,325

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1919

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	
Alicante	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
	In Measurement	236,334	7.37%	88,227	5.43%	298,366	60,980	24.11%	338,937	21,487	2.69%	22,956	2,412	1.14%	8,200	63,227	19.74%	733,551	1,402,011
	In Measurement	112,562	3.51%	23,965	1.47%	81,046	1,973	0.78%	10,967	1,061	0.13%	1,134	1,277	0.60%	4,339	84,285	26.31%	977,866	1,075,352
Almería	Completed	203,864	6.36%	144,313	8.88%	488,037	9,114	3.60%	50,659	21,574	2.70%	23,049	27,455	12.99%	93,328	1,407	0.44%	16,329	671,401
	In Measurement	126,527	3.94%	100,018	6.16%	338,240	2,994	1.18%	16,640	12,655	1.59%	13,520	5,213	2.47%	17,720	5,647	1.76%	65,519	451,639
	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
	In Measurement	1,148,770	35.82%	456,449	28.09%	1,543,613	10,597	4.19%	58,900	592,777	74.29%	633,293	46,373	21.93%	157,638	42,574	13.29%	493,938	2,887,382
Málaga	In Measurement	136,002	4.24%	66,798	4.11%	225,896	18,543	7.33%	103,062	27,359	3.43%	29,208	9,179	4.34%	31,202	14,144	4.42%	164,093	553,461
	In Measurement	1,405	0.04%	684	0.04%	2,314	28	0.01%	157	550	0.07%	588	114	0.05%	389	28	0.01%	325	3,772
	In Measurement	1,242,043	38.72%	744,430	45.81%	2,517,502	148,712	58.79%	826,561	120,467	15.10%	128,701	119,395	56.47%	405,863	109,039	34.04%	1,265,055	5,143,682
Total	3,207,507	100.00%	1,624,885	100.00%	5,495,012	797,911	100.00%	1,405,884	252,941	100.00%	852,448	211,418	100.00%	718,679	320,351	100.00%	3,716,674	12,188,698	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1921

Province	Status	Total Has	Proportion	Cereals		Vines		Olives		Legumes		Others		Total
				H	%	H	%	H	%	H	%	H	%	
Alicante	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	274,786	6.46%	100,749	4.52%	69,835	21.08%	26,411	2.74%	3,302	1.15%	74,489	16.94%	1,720,390
Almería	In Measurement	168,842	3.97%	35,853	1.61%	2,983	0.90%	1,571	0.16%	1,736	0.61%	126,639	28.81%	1,708,552
Badajoz	In Measurement	407,728	9.59%	288,061	12.93%	16,752	5.06%	47,179	4.89%	53,273	18.57%	181,187	4.63	1,393,611
Cáceres	In Measurement	253,054	5.95%	203,404	9.13%	5,646	1.70%	23,860	2.47%	40,990	3.35%	10,544	2.40%	945,716
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Granada	In Measurement	188,093	4.42%	115,227	5.17%	28,809	8.73%	6,308	0.65%	10,836	5.33%	15,287	5.09%	904,243
Jaén	In Measurement	1,198,658	28.19%	476,112	21.37%	11,011	3.32%	619,202	64.14%	1,063,765	16.76%	48,079	10.06%	3,496,746
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	204,003	4.80%	100,647	4.52%	28,833	8.71%	39,232	4.06%	67,399	4.77%	13,697	4.91%	894,525
Murcia	In Measurement	78,322	1.84%	42,544	1.91%	9,197	2.78%	4,661	0.48%	8,008	0.14%	406	4.89%	474,650
Sevilla	In Measurement	187,624	4.41%	92,036	4.13%	3,746	1.13%	72,888	7.55%	125,219	5.26%	15,082	0.88%	566,810
Toledo	In Measurement	1,290,600	30.35%	773,822	34.72%	154,306	46.59%	124,049	12.85%	213,111	44.07%	126,439	25.46%	5,597,785
Total		4,251,710	100.00%	2,228,454	100.00%	331,209	100.00%	965,361	100.00%	1,658,454	100.00%	286,901	100.00%	17,703,029

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1922

Province	Status	Total Has	Proportion		Cereals		Vines		Olives		Legumes		Others		Total
			H	%	H	%	H	%	H	%	H	%	H	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	351,688	134,650	3.80%	89,059	17.97%	396,203	44,356	35,113	2.60%	4,325	0.93%	88,540	13.61%	1,813,554
Almería	In Measurement	281,404	60,192	1.70%	4,862	0.98%	21,631	3,760	2,976	0.22%	3,321	0.72%	210,052	32.29%	2,481,749
Badajoz	In Measurement	815,456	567,209	16.01%	33,912	6.84%	150,868	122,647	97,091	7.19%	112,494	24.31%	4,750	0.73%	2,344,476
Cáceres	In Measurement	506,109	401,898	11.35%	11,956	2.41%	53,190	63,333	50,136	3.71%	20,402	4.41%	21,716	3.34%	1,618,880
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	87,857	69,726	1.97%	3,369	0.68%	14,990	16,783	13,286	0.98%	1,476	0.32%	0	0.00%	246,109
Granada	In Measurement	564,280	358,771	10.13%	1,081,990	18.27%	402,898	24,100	19,078	1.41%	47,279	10.22%	48,587	7.47%	2,162,985
Jaén	In Measurement	1,298,434	515,972	14.57%	1,536,081	2.39%	52,795	842,278	666,770	49.35%	56,437	12.19%	47,387	7.29%	3,117,375
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	340,005	151,908	4.29%	458,399	8.04%	177,330	125,396	99,266	7.35%	18,571	4.01%	30,309	4.66%	1,130,079
Murcia	In Measurement	234,965	124,973	3.53%	376,897	5.77%	127,208	18,149	14,367	1.06%	1,216	0.26%	65,814	10.12%	1,235,493
Segovia	In Measurement	71,131	52,288	1.48%	157,691	0.86%	18,906	0	0	0.00%	0	0.00%	947	0.15%	224,309
Sevilla	In Measurement	562,871	271,831	7.67%	819,792	2.32%	51,225	277,814	219,925	16.28%	46,933	10.14%	12,668	1.95%	1,414,439
Toledo	In Measurement	1,387,714	832,288	23.50%	2,510,030	33.46%	737,707	168,285	133,219	9.86%	136,688	29.54%	119,696	18.40%	5,082,719
Total		6,501,914	3,541,797	100.00%	10,681,424	100.00%	2,204,948	1,706,900	1,351,228	100.00%	462,791	100.00%	1,271,713	100.00%	22,881,167

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1923

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total	
			H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	390,139	147,571	3.31%	495,759	101,242	15.09%	696,217	39,836	2.44%	68,209	4,599	0.75%	13,682	96,891	10.07%	1,079,190	2,353,059	
Almería	In Measurement	337,685	57,121	1.28%	191,895	6,115	0.91%	42,050	3,849	0.24%	6,591	3,370	0.55%	10,026	267,230	27.76%	2,976,445	3,227,007	
Ávila	In Measurement	142,711	86,536	1.94%	290,713	11,730	1.75%	80,668	4,867	0.30%	8,334	30,289	4.93%	90,120	9,289	0.96%	103,459	573,594	
Badajoz	In Measurement	1,019,320	691,997	15.94%	2,324,737	39,211	5.85%	269,643	144,452	8.84%	247,338	137,965	22.43%	410,494	5,694	0.59%	63,423	3,315,634	
Cáceres	In Measurement	632,636	512,019	11.50%	1,720,105	13,887	2.07%	95,501	58,122	3.56%	99,518	23,693	3.85%	70,495	24,915	2.59%	277,508	2,263,127	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	175,714	128,506	2.89%	431,710	6,702	1.00%	46,089	24,659	1.51%	42,223	2,740	0.45%	8,153	13,107	1.36%	145,984	674,158	
Granada	In Measurement	752,373	487,430	10.95%	1,637,502	122,822	18.31%	844,619	26,306	1.61%	45,042	64,273	10.45%	191,234	51,541	5.35%	574,075	3,292,473	
Huelva	In Measurement	121,139	64,812	1.46%	217,733	9,504	1.42%	65,355	24,209	1.48%	41,452	9,516	1.55%	28,312	13,098	1.36%	145,890	498,743	
Jaén	Completed	1,348,322	534,367	12.00%	1,795,184	12,280	1.83%	84,449	691,546	42.33%	1,184,094	61,073	9.93%	181,713	49,056	5.10%	546,390	3,791,831	
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	408,006	177,330	3.98%	595,733	48,984	7.30%	336,848	121,325	7.43%	207,738	22,719	3.69%	67,597	37,648	3.91%	419,334	1,627,250	
Murcia	In Measurement	313,287	93,921	2.11%	315,522	57,101	8.51%	392,671	28,760	1.76%	49,243	2,574	0.42%	7,658	130,932	13.60%	1,458,336	2,223,430	
Segovia	In Measurement	142,262	103,996	2.34%	349,372	8,609	1.28%	59,205	0	0.00%	0	27,674	4.50%	82,338	1,983	0.21%	22,082	512,997	
Sevilla	In Measurement	750,495	362,880	8.15%	1,219,080	15,414	2.30%	105,999	292,529	17.90%	500,880	62,160	10.11%	184,946	17,512	1.82%	195,054	2,205,960	
Toledo	In Measurement	1,436,272	859,767	19.31%	2,888,351	172,503	25.72%	1,186,259	137,936	8.44%	236,180	142,540	23.18%	424,105	123,526	12.83%	1,375,851	6,110,746	
Valencia	In Measurement	132,987	32,193	0.72%	108,152	27,146	4.05%	186,674	12,897	0.79%	22,083	7,319	1.19%	21,776	53,432	5.55%	595,139	933,823	
Valladolid	In Measurement	80,358	63,712	1.43%	214,037	7,367	1.10%	50,664	0	0.00%	0	7,938	1.29%	23,617	1,342	0.14%	14,942	303,260	
Total		8,406,597	4,451,874	100.00%	14,955,890	670,706	100.00%	4,612,281	1,633,888	100.00%	2,797,613	614,985	100.00%	1,829,790	962,608	100.00%	10,721,664	34,917,239	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1924

Province	Status	Total Haas	Proportion	Cereals			Vines			Olives			Legumes			Others			Total	
				H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	428,591	4.81%	563,718	110,955	14.33%	528,811	42,202	3.67%	98,945	4,795	0.64%	12,733	102,885	9.05%	1,052,461	-	-	-	2,256,668
Almería	In Measurement	393,965	4.42%	244,559	7,075	0.91%	33,720	4,628	0.40%	10,850	3,782	0.51%	10,043	305,704	26.90%	3,127,183	-	-	-	3,426,355
Ávila	In Measurement	285,422	3.20%	581,323	22,822	2.95%	108,772	9,860	0.86%	23,117	60,421	8.11%	100,453	19,327	1.70%	197,702	-	-	-	1,071,366
Badajoz	In Measurement	1,223,184	13.72%	2,776,057	48,092	6.21%	229,206	170,029	14.78%	398,640	172,497	23.16%	458,082	6,456	0.57%	66,038	-	-	-	3,928,023
Cáceres	In Measurement	759,163	8.52%	2,072,745	16,167	2.09%	77,050	67,483	5.87%	158,218	27,720	3.72%	73,613	30,977	2.73%	316,879	-	-	-	2,698,504
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	300,711	3.37%	399,938	19,741	2.55%	94,088	38,974	3.39%	91,375	7,667	1.03%	20,361	115,314	10.15%	1,179,600	-	-	-	1,785,362
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	263,571	2.96%	694,758	10,776	1.39%	51,357	39,522	3.44%	92,662	6,524	0.88%	17,326	0	0.00%	0	-	-	-	856,102
Granada	In Measurement	940,466	10.55%	1,937,663	143,763	18.57%	685,176	30,912	2.69%	72,474	74,435	9.99%	197,669	114,730	10.10%	1,173,625	-	-	-	4,066,638
Guadalajara	In Measurement	145,071	1.63%	397,692	7,253	0.94%	34,567	9,850	0.86%	23,095	8,641	1.16%	22,946	981	0.09%	10,033	-	-	-	488,332
Huelva	In Measurement	242,278	2.72%	431,434	18,899	2.44%	90,073	47,784	4.15%	112,032	19,138	2.57%	50,822	28,069	2.47%	287,133	-	-	-	971,494
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	476,007	5.34%	658,744	45,806	5.92%	218,313	132,194	11.49%	309,935	57,819	7.76%	153,543	44,156	3.89%	451,694	-	-	-	1,792,229
Murcia	In Measurement	391,608	4.39%	753,414	43,272	5.59%	206,233	22,750	1.98%	53,338	2,098	0.28%	5,572	99,285	8.74%	1,015,629	-	-	-	2,034,186
Segovia	In Measurement	213,393	2.39%	522,286	12,800	1.65%	61,003	0	0.00%	0	41,244	5.54%	109,529	3,925	0.35%	40,149	-	-	-	732,967
Sevilla	In Measurement	938,118	10.53%	1,496,606	19,024	2.46%	90,667	364,803	31.72%	855,294	81,397	10.93%	216,158	27,529	2.42%	281,604	-	-	-	2,940,329
Toledo	In Measurement	1,484,829	16.66%	2,982,442	178,073	23.01%	848,695	142,395	12.38%	333,850	146,951	19.73%	390,242	129,883	11.43%	1,328,635	-	-	-	5,883,865
Valencia	In Measurement	265,975	2.98%	223,259	54,625	7.06%	260,345	26,690	2.32%	62,575	13,917	1.87%	36,959	104,304	9.18%	1,066,977	-	-	-	1,650,114
Valladolid	In Measurement	160,717	1.80%	427,349	14,895	1.92%	70,991	0	0.00%	0	15,908	2.14%	42,246	2,741	0.24%	28,035	-	-	-	568,621
Total		8,913,070	100.00%	17,164,016	774,037	100.00%	3,689,067	1,150,075	100.00%	2,696,398	744,955	100.00%	1,978,297	1,136,265	100.00%	11,623,376	-	-	-	37,151,154

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1925

Province	Status	Total Has	Proportion			Cereals			Vines			Olives			Legumes			Others			Total		
			H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alicante	In Measurement	480,304	4.21%	588,504	122,208	12.33%	638,906	45,968	3.21%	138,284	5,417	0.56%	-	-	-	-	-	-	-	1,119,271	7.52%	-	4,663,432
Almería	In Measurement	450,246	3.95%	322,424	7,871	0.79%	41,152	5,164	0.36%	15,534	4,437	0.46%	-	-	-	-	-	-	-	327,482	21.51%	-	2,498,608
Ávila	In Measurement	428,133	3.75%	786,492	33,009	3.33%	172,573	19,364	1.35%	58,251	89,502	9.20%	-	-	-	-	-	-	-	29,418	1.93%	-	3,590,767
Badajoz	In Measurement	1,427,048	12.51%	3,003,219	60,393	6.09%	315,740	188,493	13.17%	567,039	190,449	19.58%	-	-	-	-	-	-	-	6,969	0.46%	-	1,530,214
Cáceres	In Measurement	885,690	7.76%	2,196,839	18,875	1.90%	98,681	78,475	5.48%	236,074	32,541	3.35%	-	-	-	-	-	-	-	38,391	2.52%	-	4,433,712
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,988,733
Castellón	In Measurement	451,067	3.95%	412,321	35,090	3.54%	183,454	66,133	4.62%	198,945	15,838	1.63%	-	-	-	-	-	-	-	199,357	13.09%	-	2,854,791
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,782,923
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Cuenca	In Measurement	351,428	3.08%	838,582	18,085	1.83%	94,549	50,890	3.55%	153,092	8,602	0.88%	-	-	-	-	-	-	-	0	0.00%	-	2,039,106
Granada	In Measurement	1,172,960	10.28%	2,074,801	175,131	17.67%	915,591	37,413	2.61%	112,548	83,780	8.61%	-	-	-	-	-	-	-	199,081	13.08%	-	1,107,885
Guadalajara	In Measurement	217,607	1.91%	497,998	15,253	1.54%	79,744	24,878	1.74%	74,839	12,031	1.24%	-	-	-	-	-	-	-	2,816	0.18%	-	5,259,543
Huelva	In Measurement	363,417	3.19%	585,129	28,420	2.87%	148,580	71,081	4.96%	213,831	27,753	2.85%	-	-	-	-	-	-	-	45,081	2.96%	-	710,405
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,458,007
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Málaga	In Measurement	651,977	5.71%	841,640	66,098	6.67%	345,563	185,722	12.97%	558,702	59,146	6.08%	-	-	-	-	-	-	-	66,162	4.35%	-	2,231,880
Murcia	In Measurement	469,930	4.12%	721,955	59,111	5.97%	309,034	31,067	2.17%	93,458	3,446	0.35%	-	-	-	-	-	-	-	1,40,541	9.23%	-	2,541,453
Palencia	In Measurement	5,145	0.05%	14,070	177	0.02%	926	0	0.00%	0	211	0.02%	-	-	-	-	-	-	163	0.01%	-	17,116	
Salamanca	In Measurement	333,591	2.92%	753,262	8,741	0.88%	45,696	4,432	0.31%	13,334	69,235	7.12%	-	-	-	-	-	-	-	5,195	0.34%	-	1,037,414
Segovia	In Measurement	284,524	2.49%	629,094	17,174	1.73%	89,788	0	0.00%	0	55,354	5.69%	-	-	-	-	-	-	-	64,079	0.43%	-	922,357
Sevilla	In Measurement	1,125,742	9.87%	1,618,370	22,540	2.27%	117,842	432,787	30.23%	1,301,941	102,627	10.55%	-	-	-	-	-	-	-	39,286	2.58%	-	6,680,544
Soria	In Measurement	31,319	0.27%	79,806	538	0.05%	2,811	0	0.00%	0	1,826	0.19%	-	-	-	-	-	-	-	2,894	0.19%	-	115,498
Toledo	Completed	1,533,386	13.44%	2,801,534	183,481	18.52%	959,248	147,751	10.32%	444,477	151,004	15.52%	-	-	-	-	-	-	-	1,36,269	8.95%	-	5,917,289
Valencia	In Measurement	398,962	3.50%	308,845	82,521	8.33%	431,424	42,032	2.94%	126,443	20,361	2.09%	-	-	-	-	-	-	-	153,190	10.06%	-	2,415,115
Valladolid	In Measurement	241,075	2.11%	577,613	23,059	2.33%	120,554	0	0.00%	0	25,071	2.58%	-	-	-	-	-	-	-	4,318	0.28%	-	803,498
Zamora	In Measurement	105,783	0.93%	225,873	13,116	1.32%	68,570	63	0.00%	188	14,116	1.45%	-	-	-	-	-	-	-	4,727	0.31%	-	376,374
Total		11,409,334	100.00%	19,878,371	990,892	100.00%	5,180,424	1,431,712	100.00%	4,306,980	972,748	100.00%	2,449,658	1,522,423	100.00%	14,878,660	46,694,093						

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by province; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1926

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total	
			H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	476,945	163,036	2.85%	569,168	130,168	16.12%	824,396	54,846	4.17%	140,741	6,474	0.79%	20,560	122,421	8.21%	1,223,898	2,778,763	
Almería	In Measurement	462,194	110,532	1.93%	385,871	8,356	1.04%	52,921	5,466	0.42%	14,027	4,595	0.56%	14,593	333,245	22.34%	3,331,602	3,799,015	
Ávila	In Measurement	444,690	266,697	4.06%	931,052	33,509	4.15%	212,225	20,065	1.52%	51,488	93,151	11.43%	295,810	31,268	2.10%	312,599	1,808,174	
Badajoz	In Measurement	1,449,383	988,448	17.28%	3,450,721	58,348	7.23%	369,534	209,959	15.95%	538,780	185,838	22.80%	590,146	6,790	0.46%	67,884	5,017,065	
Cáceres	In Measurement	906,143	747,990	13.08%	2,611,269	17,658	2.19%	111,834	72,583	5.51%	186,256	30,207	3.71%	95,926	37,705	2.53%	376,954	3,382,238	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	456,420	132,765	2.32%	463,488	36,473	4.52%	230,996	69,674	5.29%	178,793	14,834	1.82%	47,107	202,673	13.59%	2,026,219	2,946,603	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	386,615	308,471	5.39%	1,076,888	15,426	1.91%	97,695	48,914	3.71%	125,519	13,804	1.69%	43,837	0	0.00%	0	1,343,939	
Granada	In Measurement	1,142,717	624,829	10.92%	2,181,307	161,774	20.04%	1,024,567	35,370	2.69%	90,765	78,639	9.65%	249,725	242,106	16.23%	2,420,441	5,966,805	
Guadalajara	In Measurement	201,495	159,169	2.78%	555,667	9,053	1.12%	57,334	21,192	1.61%	54,380	8,633	1.06%	27,415	3,448	0.23%	34,472	729,269	
Huelva	In Measurement	409,926	212,889	3.72%	743,207	31,735	3.93%	200,991	79,688	6.05%	204,488	31,675	3.89%	100,586	53,939	3.62%	539,251	1,788,524	
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	624,616	265,479	4.64%	926,798	66,108	8.19%	418,684	180,670	13.72%	463,622	43,903	5.39%	139,419	68,456	4.59%	684,389	2,632,912	
Murcia	In Measurement	530,164	247,970	4.34%	865,674	68,940	8.54%	436,618	36,852	2.80%	94,566	3,682	0.45%	11,692	172,722	11.58%	1,726,777	3,135,327	
Palencia	In Measurement	72,979	64,842	1.13%	226,366	2,492	0.31%	15,781	0	0.00%	0	2,921	0.36%	9,277	2,724	0.18%	27,231	278,655	
Salamanca	In Measurement	322,948	236,078	4.13%	824,161	8,395	1.04%	53,170	4,256	0.32%	10,923	67,181	8.24%	213,339	7,037	0.47%	70,349	1,171,942	
Segovia	In Measurement	290,789	209,272	3.66%	730,578	17,393	2.15%	110,154	0	0.00%	0	56,142	6.89%	178,283	7,983	0.54%	79,805	1,098,820	
Sevilla	In Measurement	1,144,661	528,262	9.24%	1,844,187	22,173	2.75%	140,430	436,324	33.14%	1,119,660	111,581	13.69%	354,335	46,321	3.11%	463,096	3,921,708	
Soria	In Measurement	42,784	36,059	0.63%	125,885	539	0.07%	3,414	0	0.00%	0	2,462	0.30%	7,818	3,724	0.25%	37,228	174,344	
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	411,571	133,791	2.34%	467,070	80,140	9.93%	507,553	40,801	3.10%	104,699	18,295	2.24%	58,008	138,545	9.29%	1,385,093	2,522,513	
Valladolid	In Measurement	257,774	202,811	3.55%	708,024	24,384	3.02%	154,431	0	0.00%	0	25,826	3.17%	82,012	4,753	0.32%	47,516	991,983	
Zamora	In Measurement	115,215	80,053	1.40%	279,470	14,202	1.76%	89,946	67	0.01%	173	15,309	1.88%	48,616	5,584	0.37%	55,821	474,025	
Total		10,150,027	5,719,443	100.00%	19,966,850	807,264	100.00%	5,112,675	1,316,726	100.00%	3,378,881	815,152	100.00%	2,588,594	1,491,442	100.00%	14,910,624	45,957,624	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by province; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1927

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total	
				H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	492,476	4.55%	160,826	2.67%	611,328	165,476	18.11%	705,195	50,315	3.64%	111,885	5,703	0.66%	19,554	110,156	6.73%	1,089,257	1,089,257	2,537,220
Almeria	In Measurement	484,587	4.48%	114,091	1.89%	433,683	9,212	1.01%	39,258	5,991	0.43%	13,323	4,778	0.55%	16,381	350,514	21.41%	3,465,988	3,465,988	3,968,633
Ávila	In Measurement	475,327	4.39%	280,202	4.05%	1,065,101	35,661	3.90%	151,973	21,605	1.56%	48,044	103,345	11.94%	354,335	34,513	2.11%	341,279	341,279	1,960,732
Badajoz	In Measurement	1,513,020	13.98%	1,029,750	17.08%	3,914,274	62,161	6.80%	264,908	223,818	16.21%	497,701	189,959	21.95%	651,305	7,332	0.45%	72,499	72,499	5,400,687
Cáceres	In Measurement	955,965	8.83%	770,070	12.78%	2,927,180	17,914	1.96%	76,341	97,345	7.05%	216,466	30,465	3.52%	104,455	40,171	2.45%	397,218	397,218	3,721,660
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	480,784	4.44%	137,071	2.27%	521,033	39,509	4.32%	168,373	73,323	5.31%	163,047	11,127	1.29%	38,151	219,755	13.42%	2,172,997	2,172,997	3,063,600
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	430,688	3.98%	337,119	5.59%	1,281,453	21,151	2.32%	90,137	56,125	4.06%	124,803	16,294	1.88%	55,867	0	0.00%	0	0	1,552,260
Granada	In Measurement	1,156,875	10.69%	601,071	9.97%	2,284,785	157,486	17.24%	671,148	33,640	2.44%	74,805	76,425	8.83%	262,036	288,252	17.61%	2,850,315	2,850,315	6,143,089
Guadalajara	In Measurement	232,359	2.15%	186,912	3.10%	710,486	7,630	0.84%	32,517	24,127	1.75%	53,651	8,525	0.99%	29,229	5,165	0.32%	51,076	51,076	876,958
Huelva	In Measurement	462,604	4.27%	222,478	3.69%	845,680	63,278	6.93%	269,667	83,362	6.04%	185,372	33,273	3.85%	114,083	60,212	3.68%	595,394	595,394	2,010,196
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	637,223	5.89%	264,279	4.38%	1,004,374	67,344	7.37%	286,995	179,979	13.03%	400,217	53,370	6.17%	182,987	72,251	4.41%	714,442	714,442	2,589,215
Murcia	In Measurement	614,813	5.68%	289,907	4.81%	1,101,991	77,709	8.51%	331,167	41,539	3.01%	92,371	4,330	0.50%	14,847	201,327	12.30%	1,990,776	1,990,776	3,531,152
Palencia	In Measurement	99,218	0.92%	87,597	1.45%	332,971	3,382	0.37%	14,415	0	0.00%	0	3,970	0.46%	13,611	4,269	0.26%	42,213	42,213	403,209
Salamanca	In Measurement	364,936	3.37%	264,642	4.39%	1,005,952	9,447	1.03%	40,261	4,775	0.35%	10,619	75,880	8.77%	260,167	10,191	0.62%	100,774	100,774	1,417,773
Segovia	In Measurement	306,903	2.84%	220,011	3.65%	836,303	18,324	2.01%	78,092	0	0.00%	0	58,798	6.80%	201,598	9,770	0.60%	96,607	96,607	1,212,600
Sevilla	In Measurement	1,177,415	10.88%	546,672	9.07%	2,078,004	22,545	2.47%	96,078	438,181	31.73%	974,377	115,874	13.39%	307,293	54,143	3.31%	535,385	535,385	4,081,136
Soria	In Measurement	55,249	0.51%	47,548	0.79%	180,738	633	0.07%	2,698	0	0.00%	0	2,948	0.34%	10,108	4,120	0.25%	40,735	40,735	234,280
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	457,740	4.23%	145,880	2.42%	554,517	90,527	9.91%	385,794	46,734	3.38%	103,922	22,135	2.56%	75,892	152,464	9.31%	1,507,606	1,507,606	2,627,731
Valladolid	In Measurement	298,491	2.76%	233,098	3.87%	886,050	28,513	3.12%	121,513	0	0.00%	0	31,214	3.61%	107,022	5,665	0.35%	56,019	56,019	1,170,604
Zamora	In Measurement	127,345	1.18%	88,123	1.46%	334,971	15,624	1.71%	66,584	76	0.01%	168	16,845	1.95%	57,757	6,677	0.41%	66,026	66,026	525,506
Total		10,824,016	100.00%	6,027,347	100.00%	22,911,074	913,528	100.00%	3,893,113	1,380,937	100.00%	3,070,771	865,257	100.00%	2,966,677	1,636,947	100.00%	16,186,606	16,186,606	49,028,241

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1928

Province	Status	Total Has	Proportion		Cereals			Vines			Olives			Legumes			Others			Total
			H	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	169,184	1,161,276	-	-	52,157	302,481	-	-	19,536	-	-	112,315	-	-	4,663,432	
Alicante	In Measurement	508,006	4.42%	2.59%	11,060	561,822	17.93%	1.16%	6,444	302,481	3.69%	0.65%	5,889	19,536	0.43%	360,326	1,280,334	3,325,449		
Almería	In Measurement	506,979	4.41%	1.91%	36,572	414,250	1.17%	0.55%	22,410	37,373	0.46%	0.55%	4,937	16,376	20.64%	360,749	4,107,528	4,651,445		
Ávila	In Measurement	505,964	4.40%	4.64%	1,066,885	1,005,694	3.88%	251,027	234,721	129,967	1.59%	12.06%	108,752	360,749	2.10%	36,675	418,076	2,165,514		
Badajoz	In Measurement	1,576,658	13.71%	16.43%	17,769	3,558,083	64.84%	445,071	98,744	1,361,258	16.61%	22.45%	202,471	671,633	0.44%	7,740	88,230	6,124,274		
Cáceres	In Measurement	1,005,787	8.75%	12.54%	41,398	2,715,494	1.88%	121,967	79,969	572,661	6.99%	3.55%	32,055	106,331	2.46%	42,984	489,992	4,006,445		
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791		
Castellón	In Measurement	505,149	4.39%	2.18%	141,639	472,369	4.39%	284,153	79,969	463,776	5.66%	1.39%	12,532	41,572	13.16%	229,612	2,617,453	3,879,323		
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889		
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106		
Cuenca	In Measurement	474,762	4.13%	5.75%	373,455	1,245,480	2.73%	176,771	60,131	348,730	4.25%	1.71%	15,422	51,159	0.00%	0	0	1,822,140		
Granada	In Measurement	1,171,032	10.18%	8.95%	581,118	1,938,040	16.16%	1,046,347	32,060	185,932	2.27%	8.32%	75,085	249,069	18.93%	330,330	3,765,586	7,184,973		
Guadalajara	In Measurement	263,223	2.29%	3.19%	207,065	690,567	0.83%	53,957	27,490	159,425	1.94%	1.49%	13,452	44,622	0.42%	7,355	83,845	1,032,417		
Huelva	In Measurement	515,281	4.48%	4.96%	322,382	1,075,150	5.31%	343,582	66,737	387,042	4.72%	2.81%	25,334	84,039	2.91%	50,772	578,774	2,468,586		
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831		
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880		
Málaga	In Measurement	649,830	5.65%	4.12%	267,492	892,092	7.23%	467,877	182,736	1,059,775	12.93%	5.99%	54,026	179,215	4.44%	77,411	882,449	3,481,407		
Murcia	In Measurement	699,461	6.08%	5.32%	345,730	1,153,018	8.79%	568,837	44,300	256,914	3.13%	0.53%	4,779	15,854	12.71%	221,779	2,528,160	4,522,784		
Palencia	In Measurement	125,457	1.09%	1.69%	109,694	365,831	0.48%	30,927	0	0.00%	0.00%	0.00%	5,073	16,829	0.35%	6,184	70,494	484,082		
Salamanca	In Measurement	406,923	3.54%	4.51%	293,085	977,445	1.00%	64,916	5,311	30,799	0.38%	9.44%	85,185	282,573	0.80%	13,885	158,287	1,514,020		
Segovia	In Measurement	323,017	2.81%	3.55%	230,600	769,055	1.93%	131,367	0	0.00%	0.00%	61,609	204,370	6.83%	11,669	133,026	1,237,818			
Sevilla	In Measurement	1,210,170	10.53%	8.81%	572,365	1,908,850	1.37%	88,672	447,698	2,596,412	31.67%	12.79%	115,398	382,795	3.54%	61,791	704,382	5,681,111		
Soria	In Measurement	67,713	0.59%	0.89%	57,733	192,540	0.08%	5,293	0	0.00%	0.00%	3,913	12,980	0.30%	5,296	60,375	271,188			
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289		
Valencia	In Measurement	503,909	4.38%	2.36%	153,142	510,730	12.70%	822,127	52,462	304,251	3.71%	2.62%	23,591	78,256	8.88%	154,940	1,766,239	3,481,604		
Valladolid	In Measurement	339,207	2.95%	4.11%	267,009	890,480	3.34%	216,285	0	0.00%	0.00%	34,175	113,364	0.37%	6,514	74,253	1,294,382			
Zamora	In Measurement	139,475	1.21%	1.48%	95,982	320,102	1.83%	118,630	66	380	0.00%	2.03%	18,341	60,841	0.45%	7,803	88,949	588,903		
Total		11,498,006	100.00%	100.00%	6,493,841	21,657,094	943,329	6,475,000	1,413,435	8,197,176	100.00%	100.00%	902,020	2,992,162	100.00%	1,745,382	100.00%	19,896,432	59,217,864	

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Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1929

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	523,537	4.30%	182,268	1,288,081	17.15%	64,310	138,429	4,936	18,554	0.49%	108,860	1,266,130	5.82%	1,266,130	1,266,130	5.82%	1,266,130	3,382,053
Almería	In Measurement	529,372	4.35%	145,094	600,269	2.21%	9,775	21,042	12,692	47,714	1.27%	350,425	4,075,717	18.72%	4,075,717	4,075,717	18.72%	4,075,717	4,818,836
Ávila	In Measurement	536,601	4.41%	323,168	1,328,734	4.89%	23,514	50,615	111,278	418,323	11.10%	39,401	498,269	2.10%	498,269	498,269	2.10%	498,269	2,533,248
Badajoz	In Measurement	1,640,296	13.48%	1,107,159	4,552,183	16.77%	244,197	525,638	202,756	762,212	20.22%	7,991	92,947	0.43%	92,947	92,947	0.43%	92,947	6,485,566
Cáceres	In Measurement	1,055,609	8.67%	836,120	3,437,784	12.66%	110,505	237,864	38,167	143,480	3.81%	46,122	536,431	2.46%	536,431	536,431	2.46%	536,431	4,530,080
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	529,514	4.35%	125,327	515,294	1.90%	140,910	303,311	12,879	48,415	1.28%	211,026	2,454,400	11.27%	2,454,400	2,454,400	11.27%	2,454,400	3,599,060
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	518,836	4.26%	406,474	1,671,255	6.16%	63,142	135,914	18,728	70,404	1.87%	0	0	0.00%	0	0	0.00%	0	2,093,056
Granada	In Measurement	1,185,190	9.74%	582,742	2,395,995	8.83%	26,615	57,288	123,042	462,549	12.27%	323,506	3,762,629	17.28%	3,762,629	3,762,629	17.28%	3,762,629	7,592,115
Guadalajara	In Measurement	294,087	2.42%	230,333	947,035	3.49%	5,411	73,526	13,233	49,747	1.32%	10,951	127,373	0.59%	127,373	127,373	0.59%	127,373	1,235,922
Huelva	In Measurement	567,959	4.67%	261,027	1,073,235	3.95%	116,152	250,020	54,446	204,678	5.43%	65,028	756,321	3.47%	756,321	756,321	3.47%	756,321	2,788,171
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	In Measurement	662,437	5.44%	249,434	1,025,570	3.78%	73,142	423,050	55,462	208,498	5.53%	87,862	1,021,898	4.69%	1,021,898	1,021,898	4.69%	1,021,898	3,195,906
Murcia	In Measurement	784,109	6.44%	338,153	1,390,348	5.12%	101,556	126,930	4,982	18,730	0.50%	280,449	3,261,835	14.98%	3,261,835	3,261,835	14.98%	3,261,835	5,515,539
Palencia	In Measurement	151,696	1.25%	125,895	517,627	1.91%	5,261	37,177	0	0	0.00%	12,569	47,250	0.43%	47,250	47,250	0.43%	47,250	694,771
Salamanca	In Measurement	448,911	3.69%	308,368	1,267,885	4.67%	11,505	24,764	90,522	340,296	9.03%	20,532	238,802	1.10%	238,802	238,802	1.10%	238,802	1,998,841
Segovia	In Measurement	339,132	2.79%	248,343	1,021,084	3.76%	18,805	132,892	0	0	0.00%	60,202	226,315	0.63%	226,315	226,315	0.63%	226,315	1,517,326
Sevilla	In Measurement	1,242,925	10.21%	591,998	2,434,055	8.97%	13,257	93,685	466,194	28,577%	1,003,489	378,167	70,880	824,393	4,733,789	824,393	3.79%	824,393	4,733,789
Soria	In Measurement	80,178	0.66%	67,808	278,799	1.03%	1,027	7,259	0	0	0.00%	4,512	16,961	0.36%	16,961	16,961	0.36%	16,961	382,465
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	550,078	4.52%	93,481	384,354	1.42%	64,928	139,758	19,025	71,521	1.90%	205,683	2,392,255	10.99%	2,392,255	2,392,255	10.99%	2,392,255	4,167,798
Valladolid	In Measurement	379,924	3.12%	294,011	1,208,853	4.45%	35,376	250,002	0	0	0.00%	42,867	161,148	0.41%	161,148	161,148	0.41%	161,148	89,209
Zamora	In Measurement	151,605	1.25%	103,868	427,062	1.57%	18,707	132,201	152	152	0.04%	19,907	74,835	0.48%	74,835	74,835	0.48%	74,835	739,535
Total		12,171,995	100.00%	6,602,867	27,148,281	100.00%	1,062,821	7,510,929	1,631,481	3,511,789	100.00%	1,002,802	3,769,798	100.00%	3,769,798	3,769,798	100.00%	3,769,798	63,713,890

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1930

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	539,067	4.20%	721,324	107,400	10.40%	682,400	90,608	5.24%	488,879	33,292	3.17%	97,645	113,136	5.54%	-	-	-	1,323,489
Almería	In Measurement	551,764	4.30%	637,186	10,864	1.05%	69,030	10,039	0.58%	54,166	9,239	0.88%	27,098	344,296	16.85%	-	-	-	4,835,137
Ávila	In Measurement	567,239	4.42%	1,228,556	47,057	4.56%	298,989	24,616	1.42%	132,815	121,646	11.58%	356,785	42,425	2.08%	-	-	-	2,513,441
Badajoz	In Measurement	1,703,933	13.26%	4,283,877	82,554	8.00%	524,531	258,205	14.93%	1,393,157	198,729	18.92%	582,868	8,547	0.42%	-	-	-	6,884,417
Cáceres	In Measurement	1,105,432	8.61%	3,089,168	30,150	2.92%	191,565	135,686	7.85%	732,101	46,944	4.47%	137,687	59,116	2.89%	-	-	-	4,842,069
Cádiz	Completed	706,210	-	497,116	42,047	4.07%	267,162	136,133	7.87%	734,512	13,207	1.26%	38,736	228,357	11.18%	-	-	-	2,284,791
Castellón	In Measurement	553,879	4.31%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,208,899
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	562,909	4.38%	1,584,711	31,871	3.09%	202,500	57,434	3.32%	309,888	19,609	1.87%	57,512	26,401	1.29%	-	-	-	2,463,451
Granada	In Measurement	1,199,347	9.34%	2,111,246	124,712	12.08%	792,400	25,344	1.47%	136,742	125,971	11.99%	369,471	353,652	17.31%	-	-	-	7,546,964
Guadalajara	In Measurement	324,951	2.53%	919,856	6,251	0.61%	39,719	41,865	2.42%	225,883	14,547	1.38%	42,667	14,087	0.69%	-	-	-	1,392,921
Huelva	In Measurement	620,636	4.83%	1,110,615	74,024	7.17%	470,337	120,580	6.97%	650,598	54,964	5.23%	161,207	71,396	3.49%	-	-	-	3,227,962
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	942,884	76,718	7.43%	487,452	205,273	11.87%	1,107,561	42,064	4.00%	123,373	96,575	4.73%	-	-	-	2,231,880
Málaga	In Measurement	675,044	5.25%	1,296,106	115,926	11.23%	736,574	67,312	3.89%	363,186	5,768	0.55%	16,918	330,028	16.16%	-	-	-	3,791,024
Murcia	In Measurement	868,757	6.76%	1,556,438	5,980	0.58%	37,999	0	0.00%	0	11,921	1.13%	34,964	9,892	0.48%	-	-	-	6,273,524
Palencia	In Measurement	177,935	1.39%	556,438	150,141	2.15%	329,584	329,584	5.90%	71,736	101,562	9.67%	297,880	27,414	1.34%	-	-	-	745,124
Salamanca	In Measurement	490,899	3.82%	1,221,469	19,044	1.84%	121,002	13,295	0.77%	71,736	57,078	5.43%	167,409	11,135	0.55%	-	-	-	2,032,782
Segovia	In Measurement	355,246	2.77%	1,004,517	15,988	1.55%	101,587	0	0.00%	0	0	0.00%	0	0	0.00%	-	-	-	1,302,260
Sevilla	In Measurement	1,275,680	9.93%	2,231,768	13,419	1.30%	85,260	477,912	27.63%	2,578,598	102,200	9.73%	299,750	79,962	3.91%	-	-	-	6,130,792
Soria	In Measurement	92,642	0.72%	295,408	1,042	0.10%	6,621	0	0.00%	0	5,347	0.51%	15,683	6,545	0.32%	-	-	-	394,272
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	596,247	4.64%	539,280	167,021	16.18%	1,061,218	65,148	3.77%	351,509	17,980	1.71%	52,735	200,587	9.82%	-	-	-	2,346,513
Valladolid	In Measurement	420,641	3.27%	1,203,231	40,173	3.89%	255,252	0	0.00%	0	46,936	4.47%	137,662	8,870	0.43%	-	-	-	1,699,905
Zamora	In Measurement	163,734	1.27%	413,256	20,181	1.95%	128,229	76	0.00%	413	21,508	2.05%	63,081	10,462	0.51%	-	-	-	727,364
Total		12,845,985	100.00%	25,908,012	1,032,424	100.00%	6,559,829	1,729,525	100.00%	9,331,744	1,050,511	100.00%	3,081,132	2,042,883	100.00%	-	-	-	68,778,816

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1931

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	In Measurement	554,598	4.10%	137,499	661,880	136,004	12.40%	90,856	5.29%	117,059	16,048	1.48%	174,191	7.75%	2,049,374	7.75%	2,049,374	3,698,058	
Almería	In Measurement	574,157	4.25%	187,484	902,489	11,648	1.06%	10,673	0.62%	13,750	15,357	1.42%	348,995	15.53%	4,105,972	15.53%	4,105,972	5,150,428	
Ávila	In Measurement	597,876	4.42%	352,652	1,697,558	44,679	4.07%	26,737	1.56%	34,448	26,737	1.56%	47,123	2.10%	554,406	2.10%	554,406	3,038,638	
Badajoz	In Measurement	1,707,571	13.07%	1,187,433	5,715,936	89,291	8.14%	530,537	274,272	15.97%	353,370	207,479	19.19%	9,096	0.40%	107,016	0.40%	7,504,050	
Cáceres	In Measurement	1,155,254	8.54%	865,128	4,164,458	31,721	2.89%	142,378	8.29%	183,438	51,172	4.73%	64,856	2.89%	763,040	2.89%	763,040	5,496,026	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	578,244	4.28%	141,170	679,547	43,530	3.97%	139,779	8.14%	180,090	18,219	1.68%	235,547	10.48%	2,771,235	10.48%	2,771,235	3,959,514	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	606,983	4.49%	451,755	2,174,609	41,134	3.75%	65,218	3.80%	84,026	22,646	2.09%	87,011	1.17%	308,613	1.17%	308,613	2,898,660	
Granada	In Measurement	1,213,505	8.98%	558,841	2,690,089	123,050	11.22%	24,649	1.44%	31,758	120,834	11.17%	464,279	17.19%	4,542,864	17.19%	4,542,864	8,460,111	
Guadalajara	In Measurement	355,815	2.63%	270,520	1,302,197	7,492	0.68%	44,469	2.59%	57,294	16,293	1.51%	62,601	0.76%	200,494	0.76%	200,494	1,667,102	
Huelva	In Measurement	673,314	4.98%	325,952	1,569,033	77,983	7.11%	127,029	7.40%	163,663	60,581	5.60%	232,770	3.64%	962,015	3.64%	962,015	3,390,829	
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	Completed	687,651	5.09%	307,556	1,480,481	63,778	5.81%	166,747	9.71%	214,836	71,525	6.61%	274,818	3.47%	918,213	3.47%	918,213	3,267,291	
Murcia	In Measurement	953,405	7.05%	348,781	1,678,925	131,898	12.02%	783,689	4.46%	98,673	8,107	0.75%	31,149	0.37%	4,565,259	17.27%	4,565,259	7,157,695	
Palencia	In Measurement	204,174	1.51%	167,684	807,177	5,946	0.54%	35,331	0.00%	0	18,734	1.73%	71,983	0.53%	138,942	0.53%	138,942	1,053,433	
Salamanca	In Measurement	532,887	3.94%	353,067	1,699,553	19,507	1.78%	115,902	0.85%	18,863	112,138	10.37%	430,866	1.49%	394,541	1.49%	394,541	2,659,725	
Segovia	In Measurement	371,360	2.75%	286,119	1,377,287	14,136	1.29%	83,989	0.00%	0	60,483	5.59%	232,363	0.47%	124,976	0.47%	124,976	1,818,645	
Sevilla	In Measurement	1,308,435	9.68%	708,151	3,408,820	14,178	1.29%	84,243	25.86%	572,223	56,391	5.21%	216,669	3.81%	1,006,838	3.81%	1,006,838	5,288,793	
Soria	In Measurement	105,107	0.78%	89,684	431,712	1,317	0.12%	7,828	0.00%	0	5,934	0.55%	22,799	0.36%	96,139	0.36%	96,139	558,478	
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	642,416	4.75%	163,254	785,854	173,361	15.80%	1,030,047	4.04%	89,292	18,352	1.70%	70,513	9.71%	2,566,495	9.71%	2,566,495	4,542,201	
Valladolid	In Measurement	461,358	3.41%	355,289	1,710,252	44,824	4.09%	266,330	0.00%	0	51,231	4.74%	196,845	0.45%	117,807	0.45%	117,807	2,291,234	
Zamora	In Measurement	175,864	1.30%	119,187	573,728	21,566	1.97%	128,137	0.00%	105	23,131	2.14%	88,875	0.53%	139,990	0.53%	139,990	930,836	
Total		13,519,974	100.00%	7,377,206	100.00%	35,511,586	1,097,043	100.00%	2,212,888	1,717,556	100.00%	6,518,235	1,081,340	100.00%	4,154,810	100.00%	26,434,228	100.00%	74,831,748

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1932

Province	Status	Total Has	Proportion	Cereals			Vines			Olives			Legumes			Others			Total
				H	%	TC	H	%	TC	H	%	TC	H	%	TC	H	%	TC	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	Completed	562,701	4.19%	466,846	133,875	12.66%	787,279	97,491	6.14%	378,384	34,468	3.14%	99,634	177,047	7.99%	2,395,293	-	4,127,437	
Almería	In Measurement	596,550	4.44%	696,004	12,811	1.21%	75,337	12,950	0.82%	50,261	11,603	1.06%	33,540	380,550	17.18%	5,148,506	-	6,003,649	
Ávila	In Measurement	628,513	4.68%	1,475,558	43,196	4.08%	254,022	15,465	0.97%	60,021	140,016	12.76%	404,736	51,122	2.31%	691,633	-	2,885,970	
Badajoz	In Measurement	1,831,209	13.63%	4,775,271	95,197	9.00%	559,828	281,913	17.75%	1,094,167	220,511	20.09%	637,418	7,971	0.36%	107,842	-	7,174,527	
Cáceres	In Measurement	1,205,076	8.97%	3,574,436	32,342	3.06%	190,196	137,708	8.67%	534,476	49,754	4.53%	143,821	67,860	3.06%	918,090	-	5,361,020	
Cádiz	Completed	706,210	-	547,102	40,633	3.84%	238,951	144,703	9.11%	561,625	15,065	1.37%	43,548	250,994	11.33%	3,395,734	-	2,284,791	
Castellón	In Measurement	591,814	4.41%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,786,959
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	651,057	4.85%	1,902,446	39,269	3.71%	230,931	77,237	4.86%	299,775	20,198	1.84%	58,387	26,072	1.18%	352,726	-	2,844,265	
Granada	In Measurement	1,213,505	9.04%	2,174,795	125,076	11.82%	735,539	24,246	1.53%	94,104	112,431	10.25%	324,999	393,570	17.77%	5,324,661	-	8,654,097	
Guadalajara	In Measurement	386,679	2.88%	1,132,532	8,166	0.77%	48,020	48,438	3.05%	187,999	17,342	1.58%	50,128	22,059	1.00%	298,438	-	1,717,118	
Huelva	In Measurement	725,992	5.41%	1,408,172	83,936	7.93%	493,601	136,246	8.58%	528,800	58,684	5.35%	169,634	85,707	3.87%	1,159,535	-	3,759,742	
Juén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	Completed	687,651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,267,291
Murcia	In Measurement	1,020,015	7.59%	1,792,103	120,137	11.36%	706,490	71,994	4.53%	279,425	8,088	0.74%	23,378	359,837	16.25%	4,868,279	-	7,669,676	
Palencia	In Measurement	230,413	1.72%	740,083	9,004	0.85%	52,949	0	0.00%	0	22,895	2.09%	66,181	8,565	0.39%	115,879	-	975,092	
Salamanca	In Measurement	574,875	4.28%	1,469,079	21,123	2.00%	124,221	16,489	1.04%	63,998	119,329	10.87%	344,937	40,881	1.85%	553,084	-	2,555,319	
Segovia	In Measurement	387,474	2.88%	1,178,052	14,597	1.38%	85,844	0	0.00%	0	59,830	5.45%	172,948	10,689	0.48%	144,607	-	1,581,451	
Sevilla	In Measurement	1,328,797	9.89%	2,729,665	14,180	1.34%	83,391	452,017	28.45%	1,754,380	95,408	8.69%	275,790	66,598	3.01%	901,018	-	5,744,244	
Soria	In Measurement	117,572	0.88%	396,775	1,652	0.16%	9,717	0	0.00%	0	5,812	0.53%	16,801	8,271	0.37%	111,900	-	555,194	
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	688,585	5.13%	631,466	190,315	17.99%	1,119,188	71,666	4.51%	278,152	34,803	3.17%	100,603	229,729	10.37%	3,108,037	-	5,237,446	
Valladolid	In Measurement	502,075	3.74%	1,503,762	47,778	4.52%	280,972	0	0.00%	0	50,894	4.64%	147,117	17,448	0.79%	236,057	-	2,167,907	
Zamora	In Measurement	187,994	1.40%	519,005	24,555	2.32%	144,400	98	0.01%	378	20,284	1.85%	58,635	9,850	0.44%	133,256	-	855,675	
Total		13,430,894	100.00%	29,113,154	1,057,843	100.00%	6,220,877	1,588,659	100.00%	6,165,946	1,097,415	100.00%	3,172,235	2,214,821	100.00%	29,964,576	-	74,636,788	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1933

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total
			H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	Completed	562,701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,127,437
Almería	In Measurement	618,942	200,592	2,60%	923,008	12,628	1,33%	13,090	0,83%	46,007	11,346	1,00%	39,743	381,286	18,27%	4,884,948	5,976,692	
Ávila	In Measurement	659,151	380,967	4,94%	1,753,163	46,714	4,91%	16,741	1,06%	58,839	143,249	12,68%	501,762	71,479	3,42%	915,769	3,536,186	
Badajoz	In Measurement	1,894,846	1,240,278	16,07%	5,707,603	103,225	10,86%	311,406	19,78%	1,094,519	231,533	20,49%	810,996	8,403	0,40%	107,661	8,398,390	
Cáceres	In Measurement	1,254,899	942,819	12,22%	4,338,731	36,166	3,80%	145,700	9,25%	512,101	57,317	5,07%	200,767	72,897	3,49%	933,937	6,222,942	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	605,384	136,855	1,77%	629,790	42,773	4,50%	147,303	9,36%	517,734	15,247	1,35%	53,405	263,207	12,61%	3,372,139	4,853,848	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	695,130	525,936	6,82%	2,420,288	38,285	4,03%	78,752	5,00%	276,796	20,984	1,86%	73,502	311,173	1,49%	399,382	3,421,286	
Granada	In Measurement	1,213,505	560,092	7,26%	2,577,470	127,302	13,39%	21,757	1,38%	76,471	114,471	10,13%	400,961	389,883	18,68%	4,995,093	8,885,654	
Guadalajara	In Measurement	417,543	317,850	4,12%	1,462,704	6,751	0,71%	51,298	3,26%	180,299	18,003	1,59%	63,059	23,641	1,13%	302,889	2,053,270	
Huelva	In Measurement	778,669	375,982	4,87%	1,730,221	88,483	9,31%	143,723	9,13%	505,152	68,170	6,03%	238,781	102,311	4,90%	1,310,790	4,365,780	
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	Completed	687,651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,267,291
Murcia	Completed	1,086,625	589,886	7,64%	2,714,581	109,297	11,50%	67,903	4,31%	238,662	10,606	0,94%	37,148	308,933	14,80%	3,957,981	7,665,844	
Palencia	In Measurement	256,652	212,124	2,75%	976,166	9,961	1,05%	0	0,00%	65,387	25,057	2,22%	87,767	9,511	0,46%	121,851	1,251,171	
Salamanca	In Measurement	616,863	406,180	5,26%	1,869,187	23,647	2,49%	16,237	1,03%	57,071	125,484	11,10%	439,534	45,315	2,17%	580,571	3,101,588	
Segovia	In Measurement	403,588	308,622	4,00%	1,420,241	15,249	1,60%	0	0,00%	100,098	64,644	5,72%	226,431	15,073	0,72%	193,112	1,939,883	
Sevilla	In Measurement	1,349,159	664,464	8,61%	3,057,778	15,208	1,60%	486,178	30,88%	1,708,801	106,633	9,44%	373,504	76,676	3,67%	982,351	6,222,267	
Soria	In Measurement	130,036	111,313	1,44%	512,248	1,880	0,20%	0	0,00%	12,343	6,798	0,60%	23,811	10,045	0,48%	128,695	677,098	
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	734,754	177,613	2,30%	817,354	197,285	20,75%	74,244	4,72%	260,951	38,423	3,40%	134,586	247,188	11,84%	3,166,913	5,674,862	
Valladolid	In Measurement	542,792	423,736	5,49%	1,949,978	50,697	5,33%	0	0,00%	332,793	49,250	4,36%	172,508	19,110	0,92%	244,827	2,700,106	
Zamora	In Measurement	200,123	141,198	1,83%	649,774	25,183	2,65%	103	0,01%	360	22,765	2,01%	79,738	10,875	0,52%	139,334	1,034,518	
Total		13,458,662	7,716,505	100,00%	35,510,377	950,734	100,00%	1,574,434	100,00%	5,533,762	1,129,981	100,00%	3,958,005	2,087,008	100,00%	26,738,246	77,981,382	

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1934

Province	Status	Total Has	Cereals			Vines			Olives			Legumes			Others			Total
			H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	Completed	562,701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,127,437
Almería	In Measurement	641,335	212,910	841,756	2.80%	13,265	1,001,134	0.88%	13,401	47,332	0.88%	11,152	34,581	0.99%	390,607	6,425,318	21.71%	7,449,121
Ávila	In Measurement	689,788	403,693	1,596,031	5.31%	49,464	373,392	1.17%	17,832	62,982	1.17%	156,222	484,423	13.93%	62,577	1,029,361	3.48%	3,546,189
Badajoz	In Measurement	1,958,484	1,296,413	5,125,472	17.05%	107,174	809,033	12.65%	312,505	1,103,755	20.50%	233,992	725,576	20.87%	8,400	138,172	0.47%	7,902,008
Cáceres	In Measurement	1,304,721	985,978	3,898,141	12.97%	36,762	277,505	9.68%	147,520	521,034	9.68%	60,082	186,306	5.36%	74,380	1,223,516	4.13%	6,106,502
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	In Measurement	618,954	148,007	585,156	1.95%	44,307	334,464	9.74%	148,495	524,478	9.74%	13,625	42,250	1.22%	264,520	4,351,217	14.70%	5,837,396
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	In Measurement	739,204	557,754	2,205,126	7.34%	40,703	307,258	5.49%	83,661	295,487	5.49%	22,292	69,125	1.99%	34,793	572,338	1.93%	3,449,333
Granada	In Measurement	1,213,505	568,012	2,245,679	7.47%	126,715	956,541	14.96%	22,192	78,381	1.46%	100,211	310,740	8.94%	396,375	6,520,210	22.03%	10,111,351
Guadalajara	In Measurement	448,407	343,452	1,357,867	4.52%	6,309	47,624	3.64%	55,452	195,853	3.64%	19,561	60,656	1.74%	23,633	388,758	1.31%	2,050,757
Huelva	In Measurement	831,347	530,917	2,093,023	6.98%	61,950	467,643	7.18%	109,476	386,664	7.18%	50,260	155,849	4.48%	78,744	1,295,311	4.38%	4,404,490
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	Completed	687,651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,267,291
Murcia	Completed	1,086,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,665,844
Palencia	In Measurement	282,891	241,008	952,843	3.17%	10,918	82,414	0.00%	0	0	0.00%	17,335	53,754	1.55%	13,631	224,218	0.76%	1,313,230
Salamanca	In Measurement	658,851	434,776	1,718,923	5.72%	25,808	194,820	3.05%	18,142	64,076	1.19%	132,070	409,530	11.78%	48,054	790,472	2.67%	3,177,821
Segovia	In Measurement	419,703	326,951	1,292,625	4.30%	15,445	116,590	1.82%	0	0	0.00%	62,572	194,025	5.58%	14,736	242,395	0.82%	1,845,635
Sevilla	Completed	1,369,520	638,242	2,523,339	8.39%	16,163	122,007	33.90%	516,942	1,825,820	33.90%	117,975	365,823	10.52%	801,199	1,319,246	4.46%	6,156,234
Soria	In Measurement	142,501	121,558	480,590	1.60%	2,002	15,112	0.24%	0	0	0.00%	7,529	23,347	0.67%	11,411	187,713	0.63%	706,762
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	In Measurement	780,923	186,652	737,944	2.45%	208,988	1,577,597	24.67%	78,966	278,903	5.18%	40,829	126,604	3.64%	265,489	4,367,186	14.75%	7,088,234
Valladolid	In Measurement	583,509	458,122	1,811,224	6.03%	53,618	404,752	6.33%	0	0	0.00%	51,057	158,321	4.55%	20,711	340,681	1.15%	2,714,978
Zamora	In Measurement	212,253	149,228	589,984	1.96%	27,448	207,195	3.24%	125	443	0.01%	24,386	75,616	2.18%	11,067	182,045	0.62%	1,055,283
Total		12,895,895	7,603,672	30,061,724	100.00%	847,038	6,394,081	100.00%	1,524,707	5,385,207	100.00%	1,121,152	3,476,526	100.00%	1,799,327	29,598,187	100.00%	74,915,724

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1935

Province	Status	Total Has	Proportion			Cereals			Vines			Olives			Legumes			Others			Total			
			H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC	%	H	TC		
Albacete	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432	-
Alicante	Completed	562,701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,127,437
Almería	In Measurement	663,727	219,176	1,048,904	3.05%	13,971	97,247	1.39%	14,461	67,921	1.39%	12,199	42,495	1.15%	403,919	5,706,186	21.96%	50,196	709,128	2.73%	8,025	113,373	0.44%	6,962,754
Ávila	In Measurement	720,425	426,577	2,041,455	5.93%	60,655	422,200	6.73%	18,319	86,039	1.77%	311,933	744,591	11.87%	228,379	795,528	21.53%	73,369	1,036,482	3.99%	2,284,791	-	3,832,455	
Badajoz	In Measurement	2,022,122	1,366,813	6,541,108	19.01%	106,971	744,591	11.87%	145,925	685,384	14.06%	152,901	47,271	1.28%	13,570	3,858,202	14.85%	273,108	3,459,889	-	5,646,269	-	5,646,269	
Cáceres	In Measurement	1,354,543	1,038,768	4,971,107	14.45%	36,826	256,330	4.09%	45,644	317,711	5.07%	69,689	327,316	6.72%	25,116	87,489	2.37%	54,431	768,944	2.96%	2,039,106	-	4,313,998	
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Castellón	In Measurement	632,524	147,301	704,934	2.05%	45,644	317,711	5.07%	152,901	718,151	14.73%	69,689	327,316	6.72%	25,116	87,489	2.37%	54,431	768,944	2.96%	2,039,106	-	4,313,998	
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cuenca	In Measurement	783,278	589,933	2,823,223	8.20%	44,109	307,026	4.90%	44,109	307,026	4.90%	69,689	327,316	6.72%	25,116	87,489	2.37%	54,431	768,944	2.96%	2,039,106	-	4,313,998	
Granada	Completed	1,213,505	562,937	2,694,026	7.83%	126,146	878,057	14.00%	21,154	99,357	2.04%	57,793	271,443	5.57%	108,264	377,124	10.21%	395,004	5,580,244	21.47%	5,580,244	-	9,628,808	
Guadalajara	In Measurement	479,271	370,475	1,772,967	5.15%	5,811	40,448	0.64%	57,793	271,443	5.57%	141,183	663,113	13.60%	64,306	224,000	6.06%	146,855	2,074,624	7.98%	5,694,156	-	5,694,156	
Huelva	In Measurement	884,024	445,257	2,130,849	6.19%	86,424	601,569	9.59%	141,183	663,113	13.60%	141,183	663,113	13.60%	64,306	224,000	6.06%	146,855	2,074,624	7.98%	5,694,156	-	5,694,156	
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Málaga	Completed	687,651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Murcia	Completed	1,086,625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Palencia	In Measurement	309,130	262,452	1,256,006	3.65%	12,961	90,214	1.44%	12,961	90,214	1.44%	18,569	87,215	1.79%	19,325	67,315	1.82%	14,393	203,336	0.78%	7,665,844	-	1,616,871	
Salamanca	In Measurement	700,838	459,118	2,197,187	6.38%	27,022	188,094	3.00%	18,569	87,215	1.79%	63,140	219,939	5.95%	145,118	505,500	13.68%	51,010	720,626	2.77%	3,698,622	-	3,698,622	
Segovia	In Measurement	435,817	339,941	1,626,844	4.73%	16,836	117,191	1.87%	0	0	0.00%	0	0	0.00%	63,140	219,939	5.95%	15,900	224,622	0.86%	6,156,234	-	6,156,234	
Sevilla	Completed	1,369,520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soria	In Measurement	154,965	132,060	631,994	1.84%	2,212	15,400	0.25%	2,212	15,400	0.25%	0	0	0.00%	7,861	27,382	0.74%	12,833	181,286	0.70%	5,917,289	-	5,917,289	
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valencia	In Measurement	827,092	189,652	907,609	2.64%	227,957	1,586,728	25.30%	85,781	402,897	8.27%	45,256	157,644	4.27%	56,076	195,335	5.29%	23,855	337,006	1.30%	1,228,792	-	6,988,512	
Valladolid	In Measurement	624,225	486,839	2,329,847	6.77%	57,455	399,924	6.38%	0	0	0.00%	27,513	95,837	2.59%	27,513	95,837	2.59%	13,421	189,597	0.73%	75,241,481	-	75,241,481	
Zamora	In Measurement	224,383	153,288	733,584	2.13%	30,086	209,420	3.34%	75	354	0.01%	75	354	0.01%	1,060,818	3,695,220	100.00%	1,839,598	100.00%	25,988,091	-	25,988,091		
Total		12,029,871	7,190,586	34,411,734	100.00%	901,086	6,272,149	100.00%	1,037,782	4,874,287	100.00%	3,695,220	1,839,598	100.00%	1,060,818	3,695,220	100.00%	1,839,598	100.00%	25,988,091	-	75,241,481	-	75,241,481

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A7: Disaggregated territorial contribution revenues across crops and provinces, 1936

Province	Status	Total Has	Proportion		Cereals		Vines		Olives		Legumes		Others		Total
			H	%	H	%	H	%	H	%	H	%	H	%	
Alicante	Completed	1,486,269	-	-	-	-	-	-	-	-	-	-	-	-	4,663,432
Alicante	Completed	562,701	-	-	-	-	-	-	-	-	-	-	-	-	4,127,437
Almería	Yes	686,120	6.06%	3.10%	845,800	15,964	1.99%	94,172	1.46%	15,680	12,395	1.31%	42,071	28.49%	8,023,962
Ávila	Yes	751,062	6.63%	7.84%	2,143,437	45,299	5.65%	267,224	1.13%	12,127	106,703	11.27%	362,179	2.50%	3,456,701
Badajoz	Yes	2,085,759	18.43%	19.81%	5,412,261	114,727	14.30%	676,784	30.39%	325,764	1,998,955	26.31%	845,318	0.56%	9,070,599
Balears	Yes	1,404,365	12.41%	15.24%	4,164,186	39,409	4.91%	232,479	14.56%	156,036	64,665	6.83%	219,493	5.12%	6,822,701
Cádiz	Completed	706,210	-	-	-	-	-	-	-	-	-	-	-	-	2,284,791
Castellón	Yes	646,094	5.71%	2.22%	607,430	46,170	5.76%	272,362	14.42%	154,565	14,041	1.48%	47,658	18.46%	6,377,207
Ciudad Real	Completed	1,983,388	-	-	-	-	-	-	-	-	-	-	-	-	3,459,889
Córdoba	Completed	1,372,660	-	-	-	-	-	-	-	-	-	-	-	-	2,039,106
Cuenca	Yes	827,351	7.31%	9.12%	2,491,506	45,719	5.70%	269,700	7.13%	76,455	25,858	2.73%	87,770	2.71%	3,978,740
Granada	Completed	1,213,505	10.09%	7.83%	2,694,026	126,146	14.00%	878,057	2.04%	21,154	108,264	10.21%	377,124	21.47%	9,628,808
Guadalajara	Yes	510,135	4.51%	5.67%	1,550,466	6,120	0.76%	36,101	5.64%	60,423	20,719	2.19%	70,326	1.70%	2,440,943
Huelva	Yes	936,702	8.27%	6.29%	1,718,012	96,109	11.98%	566,951	14.97%	160,420	70,276	7.42%	238,536	11.35%	6,274,418
Jaén	Completed	1,348,322	-	-	-	-	-	-	-	-	-	-	-	-	3,791,831
Madrid	Completed	754,866	-	-	-	-	-	-	-	-	-	-	-	-	2,231,880
Málaga	Completed	687,651	-	-	-	-	-	-	-	-	-	-	-	-	3,267,291
Murcia	Completed	1,086,625	-	-	-	-	-	-	-	-	-	-	-	-	7,665,844
Palencia	Yes	335,369	2.96%	4.06%	1,109,105	14,520	1.81%	85,656	0.00%	0	22,928	2.42%	77,823	0.91%	220,890
Salamanca	Yes	742,826	6.56%	6.86%	1,874,434	28,833	3.59%	170,988	1.87%	20,014	153,230	16.19%	520,105	4.03%	981,808
Segovia	Yes	451,931	3.99%	5.06%	1,383,540	17,637	2.20%	104,042	0.00%	0	63,523	6.71%	215,614	1.07%	261,381
Sevilla	Completed	1,369,520	-	-	-	-	-	-	-	-	-	-	-	-	6,156,234
Soria	Yes	167,430	1.48%	2.06%	562,703	2,060	0.26%	12,151	0.00%	0	7,531	0.80%	25,563	0.91%	821,752
Toledo	Completed	1,533,386	-	-	-	-	-	-	-	-	-	-	-	-	5,917,289
Valencia	Yes	873,261	7.71%	2.89%	790,213	239,361	29.84%	1,412,005	8.43%	90,313	48,623	5.14%	165,041	19.59%	7,696,799
Valladolid	Yes	664,942	5.87%	7.48%	2,045,280	58,079	7.24%	342,613	0.00%	0	58,336	6.16%	198,010	1.61%	2,979,120
Zamora	Yes	236,513	2.09%	2.29%	627,071	32,056	4.00%	189,098	0.01%	81	28,633	3.03%	97,188	1.00%	1,158,039
Total		11,319,863	100.00%	100.00%	27,325,444	802,064	100.00%	4,731,426	100.00%	1,071,877	946,501	100.00%	3,212,696	100.00%	66,228,278

Notes: Status = Cadastre Status; H = Hectares of crop in the cadastre; % = Percentage of the hectares in the cadastre by crop; TC = Territorial Contribution revenues by crop; Total = Total Territorial Contribution revenues by province.

Table 2A8: Territorial contribution revenues of the provinces in the cadastre, 1901–1936.

Year	Albacete	Alicante	Almería	Ávila	Badajoz	Cáceres	Cádiz
1901	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-
1903	16,760	-	-	-	-	-	-
1904	58,417	-	-	-	-	-	-
1905	209,576	-	-	-	-	-	-
1906	385,720	-	-	-	-	-	-
1907	709,969	-	-	-	-	-	-
1908	1,227,712	-	-	-	-	-	-
1909	2,361,181	-	-	-	-	-	-
1910	-	-	-	-	-	-	-
1911	4,663,432	-	-	-	-	-	512,814
1912	4,663,432	-	-	-	-	-	1,251,171
1913	4,663,432	35,840	-	-	-	-	1,966,685
1914	4,663,432	294,172	-	-	-	-	2,284,791
1915	4,663,432	598,375	-	-	-	-	2,284,791
1916	4,663,432	706,084	-	-	-	-	2,284,791
1917	4,663,432	997,456	-	-	-	-	2,284,791
1918	4,663,432	1,236,963	545,210	-	-	-	2,284,791
1919	4,663,432	1,402,011	1,075,352	-	671,401	451,639	2,284,791
1920	-	-	-	-	-	-	-
1921	4,663,432	1,720,390	1,708,552	-	1,393,611	945,716	2,284,791
1922	4,663,432	1,813,554	2,481,749	-	2,344,476	1,618,880	2,284,791
1923	4,663,432	2,353,059	3,227,007	573,294	3,315,634	2,263,127	2,284,791
1924	4,663,432	2,256,668	3,426,355	1,071,366	3,928,023	2,698,504	2,284,791
1925	4,663,432	2,498,608	3,590,767	1,530,214	4,433,712	2,988,733	2,284,791
1926	4,663,432	2,778,763	3,799,015	1,803,174	5,017,065	3,382,238	2,284,791
1927	4,663,432	2,537,220	3,968,633	1,960,732	5,400,687	3,721,660	2,284,791
1928	4,663,432	3,325,449	4,651,445	2,165,514	6,124,274	4,006,445	2,284,791
1929	4,663,432	3,382,053	4,818,836	2,533,248	6,485,566	4,530,080	2,284,791
1930	4,663,432	3,313,738	4,835,137	2,513,441	6,884,417	4,842,069	2,284,791
1931	4,663,432	3,698,058	5,150,428	3,038,638	7,504,050	5,496,026	2,284,791
1932	4,663,432	4,127,437	6,003,649	2,885,970	7,174,527	5,361,020	2,284,791
1933	4,663,432	4,127,437	5,976,692	3,536,186	8,398,390	6,222,942	2,284,791
1934	4,663,432	4,127,437	7,449,121	3,546,189	7,902,008	6,106,502	2,284,791
1935	4,663,432	4,127,437	6,962,754	3,832,455	9,659,697	7,157,196	2,284,791
1936	4,663,432	4,127,437	8,023,962	3,456,701	9,070,599	6,822,701	2,284,791

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Table 2A8: Territorial contribution revenues of the provinces in the cadastre, 1901–1936.

Year	Castellón	Ciudad Real	Córdoba	Cuenca	Granada	Guadalajara	Huelva
1901	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-
1904	-	53,753	-	-	-	-	-
1905	-	197,208	-	-	-	-	-
1906	-	318,757	-	-	-	-	-
1907	-	542,802	169,787	-	-	-	-
1908	-	980,076	491,235	-	-	-	-
1909	-	1,798,573	931,380	-	-	-	-
1910	-	-	-	-	-	-	-
1911	-	3,459,889	2,039,106	-	-	-	-
1912	-	3,459,889	2,039,106	-	-	-	-
1913	-	3,459,889	2,039,106	-	-	-	-
1914	-	3,459,889	2,039,106	-	-	-	-
1915	-	3,459,889	2,039,106	-	-	-	-
1916	-	3,459,889	2,039,106	-	-	-	-
1917	-	3,459,889	2,039,106	-	-	-	-
1918	-	3,459,889	2,039,106	-	-	-	-
1919	-	3,459,889	2,039,106	-	-	-	-
1920	-	-	-	-	-	-	-
1921	-	3,459,889	2,039,106	-	904,243	-	-
1922	-	3,459,889	2,039,106	246,109	2,162,985	-	-
1923	1,010,448	3,459,889	2,039,106	674,158	3,292,473	-	498,743
1924	1,785,362	3,459,889	2,039,106	856,102	4,066,638	488,332	971,494
1925	2,782,923	3,459,889	2,039,106	1,107,885	5,259,543	710,405	1,458,007
1926	2,946,603	3,459,889	2,039,106	1,343,939	5,966,805	729,269	1,788,524
1927	3,063,600	3,459,889	2,039,106	1,552,260	6,143,089	876,958	2,010,196
1928	3,879,323	3,459,889	2,039,106	1,822,140	7,184,973	1,032,417	2,468,586
1929	3,599,660	3,459,889	2,039,106	2,093,056	7,592,115	1,235,922	2,788,171
1930	4,208,899	3,459,889	2,039,106	2,463,451	7,546,964	1,392,921	3,227,962
1931	3,959,514	3,459,889	2,039,106	2,898,660	8,460,111	1,667,102	3,390,829
1932	4,786,959	3,459,889	2,039,106	2,844,265	8,654,097	1,717,118	3,759,742
1933	4,853,848	3,459,889	2,039,106	3,421,286	8,885,654	2,053,270	4,365,780
1934	5,837,596	3,459,889	2,039,106	3,449,333	10,111,551	2,050,757	4,404,490
1935	5,646,269	3,459,889	2,039,106	4,313,998	9,628,808	2,506,582	5,694,156
1936	6,377,207	3,459,889	2,039,106	3,978,740	9,628,808	2,440,943	6,274,418

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Table 2A8: Territorial contribution revenues of the provinces in the cadastre, 1901–1936.

Year	Jaén	Madrid	Málaga	Murcia	Palencia	Salamanca	Segovia
1901	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-
1904	-	15,581	-	-	-	-	-
1905	-	93,852	-	-	-	-	-
1906	66,127	123,717	-	-	-	-	-
1907	134,133	197,258	-	-	-	-	-
1908	295,859	304,386	-	-	-	-	-
1909	494,020	565,802	-	-	-	-	-
1910	-	-	-	-	-	-	-
1911	976,527	1,019,161	-	-	-	-	-
1912	1,712,579	1,471,568	-	-	-	-	-
1913	1,605,116	1,737,598	-	-	-	-	-
1914	2,326,405	2,121,562	-	-	-	-	-
1915	2,250,623	2,231,880	-	-	-	-	-
1916	2,722,950	2,231,880	-	-	-	-	-
1917	2,583,312	2,231,880	-	-	-	-	-
1918	3,212,908	2,231,880	281,442	-	-	-	-
1919	2,887,382	2,231,880	553,461	-	-	-	-
1920	-	-	-	-	-	-	-
1921	3,496,746	2,231,880	894,525	474,650	-	-	-
1922	3,117,375	2,231,880	1,139,079	1,235,493	-	-	224,309
1923	3,791,831	2,231,880	1,627,250	2,223,430	-	-	512,997
1924	3,791,831	2,231,880	1,792,229	2,034,186	-	-	732,967
1925	3,791,831	2,231,880	2,541,453	2,506,638	17,116	1,037,414	922,357
1926	3,791,831	2,231,880	2,632,912	3,135,327	278,655	1,171,942	1,098,820
1927	3,791,831	2,231,880	2,589,215	3,531,152	403,209	1,417,773	1,212,600
1928	3,791,831	2,231,880	3,481,407	4,522,784	484,082	1,514,020	1,237,818
1929	3,791,831	2,231,880	3,195,906	5,515,539	694,771	1,998,841	1,517,326
1930	3,791,831	2,231,880	3,791,024	6,273,524	745,124	2,032,782	1,403,773
1931	3,791,831	2,231,880	3,267,291	7,157,695	1,053,433	2,659,725	1,818,645
1932	3,791,831	2,231,880	3,267,291	7,669,676	975,092	2,555,319	1,581,451
1933	3,791,831	2,231,880	3,267,291	7,665,844	1,251,171	3,101,588	1,939,883
1934	3,791,831	2,231,880	3,267,291	7,665,844	1,313,230	3,177,821	1,845,635
1935	3,791,831	2,231,880	3,267,291	7,665,844	1,616,871	3,698,622	2,188,595
1936	3,791,831	2,231,880	3,267,291	7,665,844	1,493,474	3,669,243	1,964,578

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Table 2A8: Territorial contribution revenues of the provinces in the cadastre, 1901–1936.

Year	Sevilla	Soria	Toledo	Valencia	Valladolid	Zamora	Total
1901	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-
1904	-	-	26,818	-	-	-	154,569
1905	-	-	158,395	-	-	-	659,031
1906	-	-	185,194	-	-	-	1,079,516
1907	-	-	353,350	-	-	-	2,107,299
1908	-	-	549,638	-	-	-	3,848,905
1909	-	-	1,006,070	-	-	-	7,157,027
1910	-	-	-	-	-	-	-
1911	-	-	1,944,645	-	-	-	14,615,573
1912	-	-	2,427,996	-	-	-	17,025,741
1913	2,462	-	3,325,689	-	-	-	18,835,817
1914	3,271	-	3,800,706	-	-	-	20,993,334
1915	3,106	-	3,851,593	-	-	-	21,382,794
1916	3,686	-	4,230,477	-	-	-	22,342,295
1917	3,409	-	4,708,034	-	-	-	22,971,309
1918	4,015	-	4,985,788	-	-	-	24,945,423
1919	3,772	-	5,143,682	-	-	-	26,867,796
1920	-	-	-	-	-	-	-
1921	566,810	-	5,597,785	-	-	-	32,382,127
1922	1,414,439	-	5,082,719	-	-	-	37,560,265
1923	2,205,960	-	6,110,746	933,823	303,260	-	49,596,337
1924	2,940,329	-	5,883,865	1,650,114	568,621	-	55,622,083
1925	3,680,544	115,498	5,917,289	2,415,115	803,498	376,374	65,165,022
1926	3,921,708	174,344	5,917,289	2,522,513	991,983	474,025	70,345,841
1927	4,081,136	234,280	5,917,289	2,627,731	1,170,604	525,506	73,416,458
1928	5,681,111	271,188	5,917,289	3,481,604	1,294,382	588,903	83,606,081
1929	4,733,789	382,465	5,917,289	4,167,798	1,709,212	739,535	88,102,107
1930	6,130,792	394,272	5,917,289	4,351,255	1,699,905	727,364	93,167,033
1931	5,288,793	558,478	5,917,289	4,542,201	2,291,234	930,836	99,219,965
1932	5,744,244	535,194	5,917,289	5,237,446	2,167,907	855,675	102,292,297
1933	6,222,267	677,098	5,917,289	5,674,862	2,700,106	1,034,518	109,764,328
1934	6,156,234	706,762	5,917,289	7,088,234	2,714,978	1,055,283	114,364,514
1935	6,156,234	856,061	5,917,289	6,988,512	3,262,112	1,228,792	120,846,504
1936	6,156,234	821,752	5,917,289	7,696,799	2,979,120	1,158,039	121,462,110

3

Fiscal capacity in Spain: new evidence
from taxation disparities across provinces,
1904-1934

3.1 Introduction

The relationship between taxation and fiscal capacity is fundamental in determining the prospects of a state's economic development. The topic is often approached from two interconnected perspectives. One looks at the relationship between the state, its citizens, and taxation: Douglass North and New Institutional Economics framed the debate as a struggle between a predatory state seeking to extract resources from its citizens and those same citizens seeking protection of their property rights.¹ Solving this coordination problem was key in determining the extent of state taxation. The second perspective focuses on the process of state building and the rise of fiscal states, defined as the 'nations and democratic states [that] emerged over the 19th Century.'² As Patrick O'Brien writes, 'fiscal systems provided states with the revenues they needed to fund external security, internal stability, and (...) the necessary security for the loans and credits governments required to fund their flows of expenditures.'³ Hence, a state's capacity to tax its citizens, by consensus or by force, is a key driver behind its development.

There is an abundant literature on how fiscal states arose as part of the larger process of state building in Western Europe. The literature studies the evolution from the feudal relationships between rulers and their subjects in the middle ages to the relationships between states and its citizens in modern times; similarly, the literature also studies the evolution of the relationship between a state and the different territories that constitute it.⁴ Scholars studying state building have emphasized that

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1. Douglass North, *Structure and Change in Economic History* (New York: Norton & Company, 1981), 20–32.
 2. Bartolomé Yun-Casalilla, "Introduction: the rise of the fiscal state in Eurasia," in *The Rise of Fiscal States: A Global History 1500-1914*, ed. Bartolomé Yun-Casalilla and Patrick K. O'Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 1.
 3. Patrick O'Brien, "Fiscal and Financial Preconditions for the Formation of Developmental States in the West and the East from the Conquest of Ceuta (1415) to the Opium War (1839)," *Journal of World History* 23, no. 2 (September 2012): 546.
 4. See José Luís Cardoso and Pedro Lains, ed., *Paying for the Liberal State: The Rise of Public Finance in Nineteenth-Century Europe* (Cambridge: Cambridge University Press, 2010); Barto-

a ‘properly funded and centralised state [is] necessary for economic growth.’⁵ Indeed, the formation of fiscal states, was accompanied by a process of centralisation,⁶ which solved coordination problems and achieved ‘economies of scale and scope,’ neither of which could be achieved efficiently in the pre-modern fragmented political landscape.⁷ The timing of the construction of the fiscal state differed across Western European countries, but by the 19th Century the final stages were reached, and the central governments of the new democratic states ‘monopolised taxation [with] individuals [becoming] the basis for tax collection.’⁸ In short, the processes of centralisation and state building were completed or nearly completed by the late 19th and early 20th Centuries onwards.

Spain fits the overall narrative, although historians have rightly pointed out that the country’s path to state building was slow and haphazard.⁹ Spain as a historical unit existed since the 15th Century, but the king of Spain ruled over several territories which all maintained large degrees of fiscal autonomy. The fragmentation of the fiscal structure lasted until the 19th Century, when a succession of liberal governments implemented reforms that strengthened the power of the central state, bringing progressive political, fiscal and administrative centralisation. The economic history literature on Spain praises the success of the liberal reforms of the second half of the 19th Century in modernising the Spanish economy. The economy enjoyed

lomé Yun-Casalilla and Patrick K. O’Brien with Francisco Comín Comín, ed., *The Rise of Fiscal States: A Global History 1500-1914* (Cambridge: Cambridge University Press, 2012); Lucian W. Pye, ed., *The Formation of National States in Western Europe*. (Princeton: Princeton University Press, 1975).

5. Patrick O’Brien, “The nature and historical evolution of an exceptional fiscal state and its possible significance from the precocious commercialization and industrialization of the British economy, from Cromwell to Nelson,” *The Economic History Review* 64, no. 2 (May 2011): 439.
6. Yun-Casalilla, “Introduction: the rise of the fiscal state in Eurasia,” 14
7. Stephan R. Epstein, *Freedom and Growth: The Rise of States and Markets in Europe, 1300–1750* (London: Routledge Explorations in Economic History, 2000), 169; O’Brien, “The nature and historical evolution of an exceptional fiscal state,” 439.
8. Yun-Casalilla, “Introduction: the rise of the fiscal state in Eurasia,” 12.
9. Regina Grafe, *Distant Tyranny. Markets, Power and Backwardness in Spain, 1650–1800* (Princeton: Princeton University Press, 2012), xi.

a relative success in the first decades of the 20th Century (see Chapter 1); yet the literature has also pointed out Spain's low fiscal capacity.

This chapter offers new evidence on Spain's fiscal capacity at the beginning of the 20th Century from a provincial perspective. Using the data series obtained in Chapter 2, I identify territorial taxation patterns across provinces. The chapter addresses two main questions: where were taxes paid and how did tax indicators evolve in the first decades of the 20th Century in Spain? The hypothesis is that a modern centralised state with an efficient fiscal capacity by the early 20th Century can tax effectively across its territory and can capture the benefits of economic growth through taxation. Richer regions are expected to contribute more than poorer regions and tax revenues are expected to increase accordingly with GDP increases.

The results show that Madrid and Barcelona were the provinces which collected the most tax revenues and had the highest tax burdens per capita between 1904 and 1934, and that total real tax revenues were increasingly concentrated in the top contributing provinces. The top five provinces collected 43.89% of total revenues in 1934, up from the 34.54% collected in 1904. Provincial Tax burdens as percentage of GDPs were low in the whole of Spain, with the exception of Madrid, where a "capital" effect led to higher revenue collection; furthermore, tax sacrifices decreased significantly in all provinces between 1904 and 1934. The decreases in tax burdens and tax sacrifices indicate that GDP and GDP per capita were increasing faster than tax revenues and confirm that Spain had an inelastic tax system and a shallow fiscal capacity in the first decades 20th Century. The results suggest that the state was not capable of taxing efficiently across its territory: it was reliant on the tax revenues of a few provinces with high share of urban population, and on revenues of taxes which were relatively easy to collect. Meanwhile, the vast majority of the country had low tax burdens. Furthermore, it is striking that whereas fiscal capacity

consolidated in Western Europe during the First World War, Spain's fiscal capacity remained stagnant or weakened during and after the War.

The rest of the chapter is organised as follows: Section 3.2 tackles the different debates in the literature on fiscal capacity, state building and the emergence of fiscal states. Section 3.3 explains the fiscal system in Spain after 1845. Section 3.4 describes the tax indicators. Section 3.5 presents the results. Section 3.6 concludes the chapter.

3.2 Fiscal Capacity, State Building, and the Emergence of Fiscal States

State building processes started in pre-modern times. An implicit idea behind the literature is that the state has an important role to play in fostering economic growth; for instance, by efficiently allocating resources through taxation, and by providing public goods. To successfully achieve both, the state needs to be properly funded; yet in pre-modern polities, states had fragmented tax bases, which often competed against each other to obtain revenues. In fact, Epstein argued that the main contribution by European states to pre-modern economic growth was the progressive 'centralisation of government [and] the reduction of decentralised rent-seeking.'¹⁰

As central governments gained power and control over revenues, it became easier to solve the coordination problems which arose from decentralised rent-seeking: better funded states, with enlarged areas of influence, were also able to achieve economies of scale in the provision of public goods. Nowhere can this be seen more clearly than in the provision of external security: Charles Tilly famously theorised that large-scale warfare and the necessity to support standing armies, which required a constant

10. Epstein, *Freedom and Growth*, 169.

stream of revenues, were crucial drivers behind the formation and consolidation of Western European fiscal states.¹¹

Centralisation in the early modern period was a necessary first step to solve the coordination problems, but it did not increase tax revenues *per se*. States needed to increase their fiscal capacity, and they had two options to do so: one was to obtain revenues through coercion. The other was to negotiate taxes with their subjects. An important body of economic history research has thus centred on the political economy of the relationship between states and its citizens, debating which states were more successful in raising revenues; for instance, whether ‘absolutist’ states were more successful at extracting taxes than ‘parliamentary’ states or vice versa. Absolutist states are assumed to be more coercive, whereas parliamentary states are assumed to be more prone to negotiation with their subjects. Dincecco undertook a cross-country analysis for European states between 1650 and 1913 and found that ‘centralised and limited regimes were associated with significantly higher revenues than fragmented and absolutist ones.’¹² In a similar line, Hoffman and Norberg argued that taxation was relatively light in absolutist France and Spain compared to the Netherlands and England.¹³ Furthermore, DeLong and Shleifer contended that tax policies were less conducive to economic growth in absolutist governments prior to the Industrial Revolution.¹⁴

Hence, the literature has often highlighted the relative success of parliamentary fiscal states in reaching earlier on a higher fiscal capacity and higher tax revenues

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11. Charles Tilly, *Coercion, Capital and European States, AD 990-1992* (Oxford: Blackwell, 1992); Charles Tilly, “Reflections on the History of European State-Making,” in *The Formation of National States in Western Europe*, ed. Lucian W. Pye (Princeton: Princeton University Press, 1975), 3–83.
 12. Mark Dincecco, “Fiscal Centralization, Limited Government, and Public Revenues in Europe, 1650–1913,” *The Journal of Economic History* 69, no. 1 (March 2009): 48–103.
 13. Philip T. Hoffman and Kathryn Norberg, “Conclusion,” in *Fiscal Crises, Liberty, and Representative Government, 1450-1789*, ed. Philip T. Hoffman and Kathryn Norberg (Stanford: Stanford University Press, 1994), 299.
 14. J. Bradford DeLong and Andrei Shleifer, “Princes and Merchants: European City Growth Before the Industrial Revolution,” *The Journal of Law & Economics* 36, no. 2 (October 1993): 700.

than their absolutist counterparts. England is often considered the paradigm of an early centralised and parliamentary fiscal state. North and Weingast famously argued that the Glorious Revolution of 1688 imposed checks and balances on the king's powers and represented a significant landmark in setting institutions which protected the property rights of the subjects; a more consensual taxation and the participation of the subjects in setting the taxes were conducive to higher revenues.¹⁵ O'Brien also highlighted the Glorious Revolution as an important landmark in the emergence of a 'proto-professional and relatively effective system for the assessment and collection of ever-increasing amounts of [tax] revenues', and he documented a steady increase in tax revenues in Britain for the period 1660-1815.¹⁶

The Dutch Republic is also considered an early example of a successful parliamentary fiscal state, although the political economy of the Dutch Republic was significantly more decentralised than England's. Dutch cities retained a high autonomy in tax collection.¹⁷ Nonetheless, tax revenues per capita were higher than England and France's for most of the 17th and the 18th Centuries.¹⁸ Zanden and Prak explained how the notion of 'citizenship' played a crucial role in the consolidation of the Dutch Republic's early fiscal capacity.¹⁹ 'Citizenship' worked as a consensual 'contract' that bounded the Dutch citizens to obligations, like paying taxes, whereas it also bounded the state to respect the rights of these citizens and offer protection

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15. Douglass C. North and Barry R. Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *The Journal of Economic History* 49, no. 4 (December 1989): 803–32.
 16. O'Brien, "The nature and historical evolution of an exceptional fiscal state," 437; Patrick O'Brien, "The political economy of British taxation, 1660-1815," *Economic History Review* 41, no. 1 (February 1988): 1–32.
 17. Wantje Fritschy, Marjolein 'T Hart and Edwin Horlings, "Long-term trends in the fiscal history of the Netherlands, 1515-1913," in *The Rise of Fiscal States: A Global History 1500 – 1914*, eds. Bartolomé Yun-Casalilla and Patrick O'Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 39–66.
 18. Jan Luiten van Zanden and Maarten Prak, "Towards an economic interpretation of citizenship: The Dutch Republic between medieval communes and modern nation-states," *European Review of Economic History* 10, no. 2 (August 2006): 130.
 19. Luiten van Zanden and Prak, "Towards an economic interpretation of citizenship," 111–45.

and public goods in return.²⁰

The literature offers several explanations to explain why early modern parliamentary regimes such as England and the Dutch Republic were relatively more successful than their absolutist counterparts in increasing their fiscal capacity. One potential explanation is that the Dutch Republic and England were dynamic economies with a buoyant trade sector, which was easy to tax and very lucrative.²¹ Another potential explanation is that parliamentary states solved more efficiently the coordination problems between states and citizens laid out by North and New Institutionalists. In parliamentary regimes, both the state and its citizens had duties and obligations: for instance, citizens paid taxes and participated in the political process, while the state provided public goods and did not infringe on the property rights of their subjects.²² Hence, in this environment, consensual taxation leads to higher revenues than through coercive taxation.

In contrast with England and the Dutch Republic, France, where tax revenues per capita in the early modern period were lower, is often categorised as the prime example of an absolutist fiscal state. To explain why France collected less revenues per capita, Bonney mentions a ‘paradox of power’: according to him, the French absolutist kings granted many privileges which, over time, limited their own ability to exercise power. As those privileges became deeply entrenched, they ended up creating tensions between the government and the society, until the structure imploded at the Revolution in 1789.²³

Regardless of the differences – whether a state was parliamentary or absolutist, or more or less centralised – most fiscal states consolidated in the 19th Century.

20. Luiten van Zanden and Prak, “Towards an economic interpretation of citizenship,” 121–24.

21. Hoffman and Norberg, “Conclusion,” 300–03.

22. Luiten van Zanden and Prak, “Towards an economic interpretation of citizenship,” 113–17.

23. Richard Bonney, “The rise of the fiscal state in France, 1500–1914,” in *The Rise of Fiscal States: A Global History 1500–1914*, ed. Bartolomé Yun-Casalilla and Patrick O’Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 93–110.

The central governments of the new democratic states ‘monopolised taxation [with] individuals [becoming] the basis for tax collection.’²⁴ Indeed, the Napoleonic Wars increased revenues both in France and in England. England already enjoyed a relatively higher fiscal capacity, yet the war effort boosted tax revenues even further.²⁵ An income tax was implemented in 1798 for the first time. The French fiscal structure changed too during the Napoleonic Wars. After the turbulent political period which followed the Revolution, the privileges granted under the *Ancien Régime* were definitely abolished and the payment of direct taxation was directly linked to the notion of citizenship.²⁶ In the Dutch Republic, there was a progressive centralisation and modernisation of the state after 1795.²⁷ The different Dutch provinces created a unified state and merged their respective debts into one single national debt.²⁸ The Dutch Republic was one of the first cases of fiscal centralisation which ended up in national unification: the formation of centralised fiscal states also led to the unification of Italy and Germany later in the 19th Century.²⁹

The formation of fiscal states in Western Europe and in Asia has been studied in depth; the book *The Rise of Fiscal States: A Global History 1500 – 1914*, edited by Yun-Casalilla, O’Brien and Comín, offers a series of detailed accounts on the emergence of fiscal states in Eurasia since 1500.³⁰ The processes were slightly

24. Yun-Casalilla, “Introduction: the rise of the fiscal state in Eurasia,” 12.

25. O’Brien, “The nature and historical evolution of an exceptional fiscal state,” 437.

26. Bonney, “The rise of the fiscal state in France, 1500–1914,” 104.

27. Fritschy, ’T Hart and Horlings, “Long-term trends in the fiscal history of the Netherlands, 1515–1913,” 64.

28. Fritschy, ’T Hart and Horlings, “Long-term trends in the fiscal history of the Netherlands, 1515–1913,” 49.

29. For a summary of the rise of the German and Italian fiscal states prior to their unification, see for Germany: Michael North, “Finances and power in the German state system,” in *The Rise of Fiscal States: A Global History 1500–1914*, ed. Bartolomé Yun-Casalilla and Patrick O’Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 145–63. For Italy, see: Luciano Pezzolo, “Republics and principalities in Italy,” in *The Rise of Fiscal States: A Global History 1500–1914*, ed. Bartolomé Yun-Casalilla and Patrick O’Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 267–84; Fausto Piola Caselli, “The formation of fiscal states in Italy: the Papal States,” in *The Rise of Fiscal States: A Global History 1500–1914*, ed. Bartolomé Yun-Casalilla and Patrick O’Brien with Francisco Comín Comín (Cambridge: Cambridge University Press, 2012), 285–304.

30. Yun-Casalilla and O’Brien with Comín, *The Rise of Fiscal States: A Global History 1500 –*

different in the New World economies, where all countries started as colonies, but the construction of fiscal states also took place throughout the 19th Century. The United States were built since its inception on an equilibrium between the fiscal powers of the federal government and the states, where states maintained prerogatives to tax and spend but the public debt was federalised. Sylla argues that the design of the fiscal state in the US was crucial in fostering US economic growth throughout the 19th Century.³¹ In Latin America, the formation of fiscal states was marked by the fragmentation that occurred at independence. The Spanish empire was the largest fiscal union in the world: when the empire fragmented into different independent states, war and competition for resources weakened the fiscal states instead of strengthening them.³² Indeed, Centeno showed that Tilly's theory did not hold for Latin America's independent countries, as post-independence warfare did not lead to higher fiscal capacity in newly independent Latin American states.³³

To summarise, a centralised and properly funded state plays an important role in fostering economic growth: it does so by solving the coordination problems that arise from fragmentation, and by achieving economies of scale in the provision of public goods. In Western Europe, states progressively increased their fiscal capacity over time, albeit following different paths. England was a parliamentary and relatively centralised state already in the early modern period; the Dutch Republic was a parliamentary state too, but it had a significantly lower level of centralisation. Both however had higher tax revenues per capita than France, which was a centralised and

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31. Richard Sylla, "Experimental Federalism: the Economics of American Government, 1789 – 1914," in *The Cambridge Economic History of the United States*, ed. Stanley L. Engerman and Robert E. Gallman (Cambridge: Cambridge University Press, 2000), 483–582.
32. Regina Grafe and Maria Alejandra Irigoin, "The Spanish Empire and its legacy: fiscal redistribution and political conflict in colonial and post-colonial Spanish America," *Journal of Global History* 1, no. 2 (July 2006): 241–67; Regina Grafe and Maria Alejandra Irigoin, "A stakeholder empire: the political economy of Spanish imperial rule in America," *The Economic History Review* 65, no. 2 (May 2012): 609–51.
33. Miguel Angel Centeno, "Blood and Debt: War and Taxation in Nineteenth-Century Latin America," *American Journal of Sociology* 102, no. 6 (May 1997): 1565–1605.

absolutist state. Regardless of their trajectories in the early modern period, states consolidated their fiscal capacity in the 19th Century, when the central governments of the democratic states monopolised taxation.

3.3 Fiscal Capacity and State Building in Spain: the Fiscal System since 1845

Spain fits the overall Western European narrative on the rise and consolidation of the fiscal state. There is an important body of historical literature on the issue: scholars have studied at length the fiscal system of the Spanish *Ancien Régime* and the transition to the liberal fiscal system of the 19th Century and early 20th Century.³⁴ In the early modern period, Spain was a ‘composite monarchy.’³⁵ The king of Spain ruled over several large territories which all maintained their fiscal autonomy; Castile was the largest and most important of all. Like France, Castile has been categorised as an ‘absolutist’ state and had lower tax revenues than England and the Dutch Republic.³⁶ There were some unsuccessful reforms in the 18th Century which attempted to overcome the fragmentation problems of the composite monarchy, yet the Spanish fiscal state entered the 19th Century still very fragmented and with relatively low revenues

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34. See Miguel Artola, *La Hacienda del Antiguo Régimen* (Alianza, 1982); Miguel Artola, *La Hacienda del Siglo XIX: progresistas y moderados* (Alianza, 1986); Josep Fontana, *La Quiebra de la Monarquía Absoluta 1814–1820* (Barcelona: Ariel, 1978); Francisco Comín, *Las Cuentas de la Hacienda Preliberal en España (1800–1855)* (Madrid: Banco de España. Servicio de Estudios: Estudios de Historia Económica no. 19, 1990); Francisco Comín, “‘Una burguesía revolucionaria’ poco revolucionaria en cuestiones de Hacienda (1808–1874).” *AREAS: Revista Internacional de Ciencias Sociales* 37 (2018): 79–91; Francisco Comín, “Public Finance and the Rise of the Liberal State in Spain, 1808–1914,” in *Paying for the Liberal State: The Rise of Public Finance in 19th Century Europe*, ed. José Luis Cardoso and Pedro Lains (Cambridge Cambridge University Press, 2010), 214–50; Francisco Comín and Rafael Vallejo Pousada, “La reforma fiscal de Mon-Santillán desde una perspectiva histórica,” *Hacienda Pública Española*, Extra 1996 (1996): 7–20; Francisco Comín, “Raimundo Fernández Villaverde: Un ministro de Hacienda ejemplar,” *Anales de la Real Academia de Ciencias Morales y Políticas* no. 79 (2002): 637–75; Martorell, “Hacienda y Política en el Primer Tercio del Siglo XX,” 241–62).
35. John Elliott, “A Europe of Composite Monarchies,” *Past & Present* 137, no. 1 (November 1992): 52–3.
36. Hoffman and Norberg, “Conclusion,” 299.

per capita. To add insult to injury, where other states managed to increase their tax revenues, the Spanish state was virtually bankrupt at the end of the Napoleonic Wars.³⁷

A series of liberal reform in the mid-19th Century mark the transition from the *Ancien Régime* to the modern Spanish liberal state. The implemented liberal reforms achieved administrative, fiscal and political centralisation and fostered market and fiscal integration. The liberalisation measures created a national goods and financial market: the railway network expanded, and an incipient industrialisation developed in Barcelona and the Basque provinces.³⁸ However, most of Spain remained predominantly agrarian, and the concentration of industries in a few provinces led to the rise of regional inequalities. Rosés, Martínez-Galarraga and Tirado show that regional per capita incomes diverged between 1860 and 1920, when they reached an all-time high before decreasing.³⁹ Tirado and Badiá-Miró confirmed that the divergences in GDP capita were driven by the economic integration process.⁴⁰ An inverted U-shaped curve in regional inequalities over time is consistent with economic models predicting that in an industrialisation process, early industrialising regions would grow faster than the rest of regions, thus diverging with respect to the other regions, and that over time, once the rest of the regions catch-up, incomes would converge with respect to the leaders.⁴¹ Indeed, Rosés and Sánchez-Alonso show that

37. Fontana, *La Quiebra de la Monarquía Absoluta 1814–1820*.

38. For an exhaustive list of these measures, see Pedro Tedde de Lorca, “Cambio institucional y cambio económico en la España del siglo XIX,” *Revista de historia económica* 12, no. 3 (December 1994): 529–36. For the measures listed in the paragraph, see: Alfonso Herranz-Loncán, “Railroad impact on backwards economies: Spain, 1850-1913,” *The Journal of Economic History* 66, no. 4 (December 2006): 853–81; Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 245; Rosés, “Why isn’t the whole of Spain industrialised?,” 1016–17.

39. Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 244–57; Martínez-Galarraga, Rosés and Tirado, “The evolution of regional income inequality in Spain,” 269–90.

40. Tirado and Badiá-Miró, “New Evidence on Regional Inequality in Iberia (1900-2000),” 180–89.

41. Jeffrey G. Williamson, “Regional Inequality and the Process of National Development: A Description of the Patterns,” *Economic Development and Cultural Change* 13, no. 4 (July 1965): 1–84; Paul Krugman and Anthony J. Venables, “Globalization and the Inequality of Nations,”

substantial wage convergence took place across regions between 1850 and 1930.⁴² However, Comín and Yun-Casalilla claim that the fiscal system that emerged in the 19th Century was a ‘a radical and absolute failure with economic backwardness as the outcome.’⁴³ Implicitly, they suggest that the relative development of the Spanish economy of the 19th century was achieved despite the state’s low fiscal capacity; had fiscal capacity been higher, the state could have fostered economic growth more efficiently.

The year 1845 marked the birth of the so-called ‘liberal tax system’ in Spain. It came after a half century of political and economic turmoil, marked by wars and constant changes in governments.⁴⁴ The new tax system represented a significant landmark: all subsequent tax reforms and counter-reforms of the 19th and 20th Centuries were mostly amendments to the framework established in 1845, until a new framework emerged after Franco’s dictatorship in 1977.⁴⁵ The new ‘liberal tax system’ led to a significant increase in revenues and slowed the expansion of the ballooning budgetary debt – although it did not manage to reduce it substantially.⁴⁶ In 1850, the finance minister Juan Bravo Murillo established a modern public accounting system, bringing effective centralisation in the control of fiscal information by the central state: for the first time, the government knew how much it collected and how much it spent, bringing light to the true size of its deficits and debts.⁴⁷

Nonetheless, the new tax system suffered from severe limitations. It was not particularly progressive, and several historians argue that Spanish liberal politicians had pushed for more progressive reforms in the past, such as a short-lived one in 1821;

The Quarterly Journal of Economics 110, no. 4 (November 1995): 857–80.

42. Rosés and Sánchez-Alonso, “Regional wage convergence in Spain 1850-1930,” 404–25.

43. Comín and Yun-Casalilla, “Spain: from composite monarchy to nation-state,” 233.

44. Comín, “Public Finance and the Rise of the Liberal State in Spain, 1808-1914,” 220.

45. Comín and Vallejo Pousada, “La reforma fiscal de Mon-Santillán desde una perspectiva histórica,” 7.

46. Comín and Yun-Casalilla, “Spain: from composite monarchy to nation-state,” 257–58.

47. Comín, *Las Cuentas de la Hacienda Preliberal en España (1800-1855)*, 9.

in comparison, the tax system that was implemented in 1845 was less ambitious and less progressive, but more pragmatic. Comín and Vallejo Pousada highlight that there was a lack of adjustment between taxation and the economy: direct taxes were sticky and failed to follow the upward evolution of income, whereas indirect taxes were insufficient to make up the difference.⁴⁸ Furthermore, suffrage was not universal and the parliament consistently protected the landed elites' interests, who contributed relatively little in taxes and evaded taxation by hiding their assets.⁴⁹ The tax system suffered some short-lived counter-reforms in the decades following its implementation, but none changed fundamentally the tax structure implemented in 1845.

The beginning of the 'Bourbon Restoration' period in 1874 was the first time in nearly a century in which Spain would experience a sustained period of economic and political stability, with opposing political parties alternating in power peacefully and no major revolutionary upheavals (see Chapter 5).⁵⁰ The most important fiscal reform that came with the Restoration was the abolition of the Basque *fueros* in 1876.⁵¹ The word *fueros*, translated as 'liberties' or 'privileges', were a series of 'corporate privileges' enjoyed by kingdoms, regions or cities under the *Ancien Régime*. The origins of the *fueros* can be traced back to the conquest of land in the peninsula at the expense of the Moorish kingdoms. As there was a need 'to resettle [and defend] the successive layers of reconquered territory (...) a new population had to be attracted by allowing them personal liberty (...) and charters of privileges and self-government had to be granted to the new towns.'⁵² For instance, the *fueros*

48. Comín and Vallejo Pousada, "La reforma fiscal de Mon-Santillán desde una perspectiva histórica," 8.

49. Francisco Comín, "La corrupción permanente: el fraude fiscal en España," *HISPANIA NOVA Revista de Historia Contemporánea* 16 (2018): 498-510.

50. Miguel Martorell Linares, "La política económica en el reinado de Alfonso XII: una década tranquila," *Ayer* 52 (2003): 151-73.

51. Martorell, "La política económica en el reinado de Alfonso XII," 161.

52. See I.A.A. Thompson, "Castile: Polity, Fiscality and Fiscal Crisis," in *Fiscal Crises, Liberty and Representative Government, 1450-1789*, eds. Philip T. Hoffman and Kathryn Norberg (Stanford: Stanford University Press, 1994), 142. For the definition of *fueros* as 'corporate privileges,' see: Grafe, *Distant Tyranny*, 125.

allowed local parliaments to resist higher pecuniary demands from the king of Spain. Similarly, the king was expected to uphold the *fueros* of all its territories when he accessed the throne. Understandably, any reform which attempted to remove them would always be strongly opposed by the local institutions losing these privileges. This partly explains why as late as 1876 the *fueros* still existed in the three Basque provinces.

Under their *fueros*, not only did the provinces retained local institutions with significant amounts of powers, they were also exempted from paying taxes to the central Treasury.⁵³ Although the Basque *fueros* were legally abolished in 1876 by Cánovas del Castillo, the President of the Council of Ministers, the structure that emerged replicated closely the exceptional situation they had enjoyed until then: Cánovas del Castillo preserved the Basque administrative autonomy in exchange for direct fiscal and military contributions to the central Treasury.⁵⁴ While the President of the Council of Ministers wanted the contributions to be proportional to wealth, the Basque political representatives wanted to pay a fixed and unchangeable amount over time, called a *cupo*.⁵⁵ Such arrangement had a precedent in the province of Navarre, where a fixed *cupo* had been negotiated and agreed when its *fueros* were abolished in 1841. In the end, the same agreement was reached with the Basque provinces.⁵⁶ Hence, the three Basque provinces and Navarre were only partially integrated in the national fiscal system, although the abolition of their *fueros* represented the last step of the process of fiscal centralisation undertaken with the 1845 reform. There were no major changes to the fiscal system for the rest of the 19th Century.

In 1898, Spain lost its last colonies and was saddled with gargantuan war

53. Luis Castells, “La abolición de los Fueros Vascos,” *Ayer* 52 (2003): 121

54. Castells, “La abolición de los Fueros Vascos,” 117–38.

55. Castells, “La abolición de los Fueros Vascos,” 146.

56. The fixed *cupo* agreed with Navarre was nonetheless renegotiated in 1877, and the agreement with the Basque provinces also included a future renegotiation.

debts.⁵⁷ The Treasury Minister Raimundo Fernández Villaverde implemented a fiscal reform in 1900; he successfully restructured the public debt, and he modified the tax structure to ensure a steady flow of tax revenues in the following years. He reduced public spending and introduced new taxes, such as the *utilidades*.⁵⁸ Tax revenues did not increase significantly over the next years, yet Spain experienced an unprecedented (and unrepeated) decade of budget surpluses.⁵⁹ However, the fiscal system after 1900 still suffered from important shortcomings, and some remained the same than after 1845. Although significantly more centralised than it was in the past, the situation of Navarre and the Basque provinces remained unchanged, with the two regions contributing less to the central state than other provinces. Moreover, administrative centralisation did not bring an effective centralisation in terms of tax revenue collection. The central government delegated to lower level administrations the responsibility of collecting specific taxes, assigning quotas to be collected in the provinces; the provincial and local administrations were then responsible for collecting the tax revenues.⁶⁰ Many of the local administrations were in the hands of local elites and prone to corruption, abuse of power and cronyism.⁶¹ Furthermore, the assignment of quotas was arbitrary and out of touch with the real levels of economic growth; when upwards adjustments eventually occurred, they lagged with respect to the real levels of economic growth.

The existing analyses have approached the issue of fiscal capacity from a national perspective. Comín estimated that tax revenues accounted for 6.2% of GDP in 1854, roughly ten years after the first reform. Martorell placed that number at 4.2% of GDP in 1874 and at 6% in 1885.⁶² The estimates for the first decades of

57. Comín, “Raimundo Fernández Villaverde,” 646–48.

58. Comín, “Raimundo Fernández Villaverde,” 651–55.

59. Comín, “Raimundo Fernández Villaverde,” 669.

60. Comín, “Una burguesía revolucionaria poco revolucionaria,” 87–8.

61. Comín, “La corrupción permanente: el fraude fiscal en España,” 503.

62. Comín, *Las Cuentas de la Hacienda Preliberal en España (1800-1855)*, 66–7; Martorell, “La política económica en el reinado de Alfonso XII,” 165.

the 20th Century oscillate between 8.5% and 10% of GDP.⁶³ Importantly, the Spanish figures for the 19th and early 20th Centuries were not too dissimilar to other Western European countries. However, the literature has highlighted the important impact of the First World War: to pay for the war effort, European countries implemented extraordinary taxes, substantially increasing their fiscal capacities, which consolidated during and after the First World War. Spain remained neutral during the War and did not see a consolidation of its fiscal capacity. The country's low fiscal capacity was not only reflected in the lower tax burdens, but also in its low levels of social spending.⁶⁴ The rest of the chapter revisits the question of Spain's fiscal capacity in the early 20th Century by looking at tax indicators at the provincial level.

3.4 Methodology and Tax Indicators

To look at the fiscal capacity of Spain at the provincial level for the first decades of the 20th Century, the chapter uses the data series set out in Chapter 2 and which are available in the Appendix: Taxes. Recall that there are twelve taxes for 48 provinces and that together they account on average for around 83% of total tax revenues in Spain. To allow comparisons over time, all values in the remainder of this chapter are in real terms. Some years are lost in the deflation process: there are observations for the 48 provinces between 1904 and 1934. The nominal tax revenues are deflated using Rosés and Sánchez-Alonso's Consumer Price Indexes (CPI) for each province.⁶⁵ Rural CPIs are weighted by each province's share of the rural population and urban CPIs are weighted by each province's share of the urban population to

63. Francisco Comín, "El desarrollo del estado del bienestar en España," *Historia y política: Ideas, procesos y movimientos sociales* no. 2 (1999): 22; Francisco Comín, "La fiscalidad del estado del bienestar frente a la fiscalidad del Franquismo (1940–2016)," in *Sesión "La Evolución de los Sistemas Fiscales desde la España medieval a la contemporánea: objetivos, instrumentos y resultados"* (Universidad de Málaga, 2017), 3.

64. See Footnote 13 in Chapter 1.

65. The original CPIs are used in Rosés and Sánchez-Alonso, "Regional wage convergence in Spain 1850-1930," 404–25.

obtain total provincial CPIs. For population data, the chapter Spain’s population censuses of 1900, 1910, 1920 and 1930, which were published by the *Instituto Nacional de Estadística*. I assumed a linear increase of population on a year-to-year basis and I linearly interpolated to infer the population values for each year, Finally, data on provincial GDPs and GDPs per capita are obtained from Rosés, Martínez-Galarraga and Tirado’s estimates.⁶⁶

The chapter builds four tax indicators: firstly, it obtains the *Total Real Tax Revenues* per province by summing eleven of the twelve taxes: customs revenues were not included because not all provinces collected customs revenues. Secondly, it estimates the *Tax Burden per capita*; the indicator adjusts for differences in population size across provinces. I use the share of the population between 20 and 60 years of age as a proxy of the population in working age, instead of a province’s total population, because the latter assigns the same weight to all residents regardless of their age, condition, or position in the economy.⁶⁷ The assumption behind using the share of the population between 20 and 60 years of age is that this share of the population is likely to contribute the most in paying both direct and indirect taxes. Hence, the choice of this share of the population controls for differences in age structure across provinces.⁶⁸ Hence, the *Tax Burden per capita* indicator is obtained by dividing a province’ yearly *Total Real Tax Revenues* by the province’s population between 20 and 60 years of age:

$$TaxBurdenperCapita_{ij} = RealTotalTaxRevenues_{ij} / Population_{20 - 60_{ij}} \quad (3.1)$$

66. The original provincial GDP series are used in Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 244–57.

67. Henry J. Frank and Henry S. Frank, “Measuring State Tax Burdens,” *National Tax Journal* 12, no. 2 (June 1959): 180.

68. The cut-off years are 20 and 60 years due to data availability in the Spanish Censuses, which reported aggregated numbers by decades (e.g. it reported the total number of citizens per province aged from 20 to 29, then the total number of citizens aged 30 to 39, etc.)

where i is a given province and j a given year.

The second indicator is the *Tax Burden as a percentage of income* (from now on, called only *Tax Burden*). The *Tax Burden* is one of the most popular indicators of differences in taxation across territories and it shows ‘the share of a [province’s] output that is collected by the government through taxes.’⁶⁹ Similar to the first indicator, it adjusts for differences in income across provinces and it is calculated by dividing a province’s *Total Real Tax Revenues* by its real GDP:

$$TaxBurden_{ij} = (RealTotalTaxRevenues_{ij}/GDP_{ij}) * 100 \quad (3.2)$$

where i is a given province and j a given year; it is multiplied by a 100 to read it as a percentage of GDP.

The third and last indicator is an index called the *Tax Sacrifice*; first developed by Frank and later amended by Bird, it is a combination of the two previous indicators.⁷⁰ It offers a way to overcome the two main shortcomings of the two indicators: the *Tax burden per capita* only indicates ‘the amount of the contribution by the average member of society without reference to its ability to pay’, whereas the *Tax Burden as a percentage of income* does not account for how that income has been created. Hence, a composite indicator using the two measures of tax burden gives ‘a measure of the degree of sacrifice involved in the payment of taxes.’⁷¹ To understand the rationale behind this indicator, take province A and province B which have an identical tax burden as a percentage of income of 10%. However, province A’s income per capita is twice larger than province B’s income per capita. The underlying assumption behind the *Tax Sacrifice* index is that given that province A is richer than

69. Frank and Frank, “Measuring State Tax Burdens,” 180.

70. See Frank and Frank, “Measuring State Tax Burdens,” 179–85; Richard Bird, “A Note on “Tax Sacrifice” Comparisons,” *National Tax Journal* 17, no. 3 (September 1964): 303–08.

71. Frank and Frank, “Measuring State Tax Burdens,” 182.

province B, the average citizen in province A will have to make less of a sacrifice to pay that tax amount. The *Tax Sacrifice* is thus obtained by dividing the *Tax Burden* from equation (3.2) by a province's real GDP per capita:

$$TaxSacrifice_{ij} = (TaxBurden_{ij}/GDPpc_{ij}) * 1000 \quad (3.3)$$

where i is a given province and j a given year; it is multiplied by a 1000 to create a ranking. Obviously, the tax sacrifice is not the same for all the residents on a same province. One can safely assume that the tax sacrifice was lower for the richest individuals in each province. However, without available individual data, the issue must be approached with provincial averages.

3.5 Results

Figure 3.1 shows the geographical distribution of the total real tax revenues for the years 1904, 1910, 1916, 1922, 1928 and 1934.⁷² The figure shows the emergence over time of two important poles of collection in the provinces of Madrid and Barcelona.⁷³ In 1904, no province in Spain collected more than 50 million pesetas; by 1928, Barcelona and Madrid are the only two provinces which collect more than 100 million pesetas, while the remaining 46 provinces never cross the 50 million pesetas threshold.

Table 3.1 shows the five top and five bottom provinces ranked by their total tax revenues in the selected years. The table reports the total real tax revenues by provinces, its proportion with respect to the national total real tax revenues and its change over six years. The table confirms Madrid and Barcelona's predominance as the provinces with the highest tax revenues, well above the other provinces for the

72. I have only selected six years to show the evolution over time and facilitate the reading of the information. The complete map is available in the Appendix of this chapter (see Table 3A1).

73. Two political maps naming the provinces and regions of Spain are available in the Appendix.

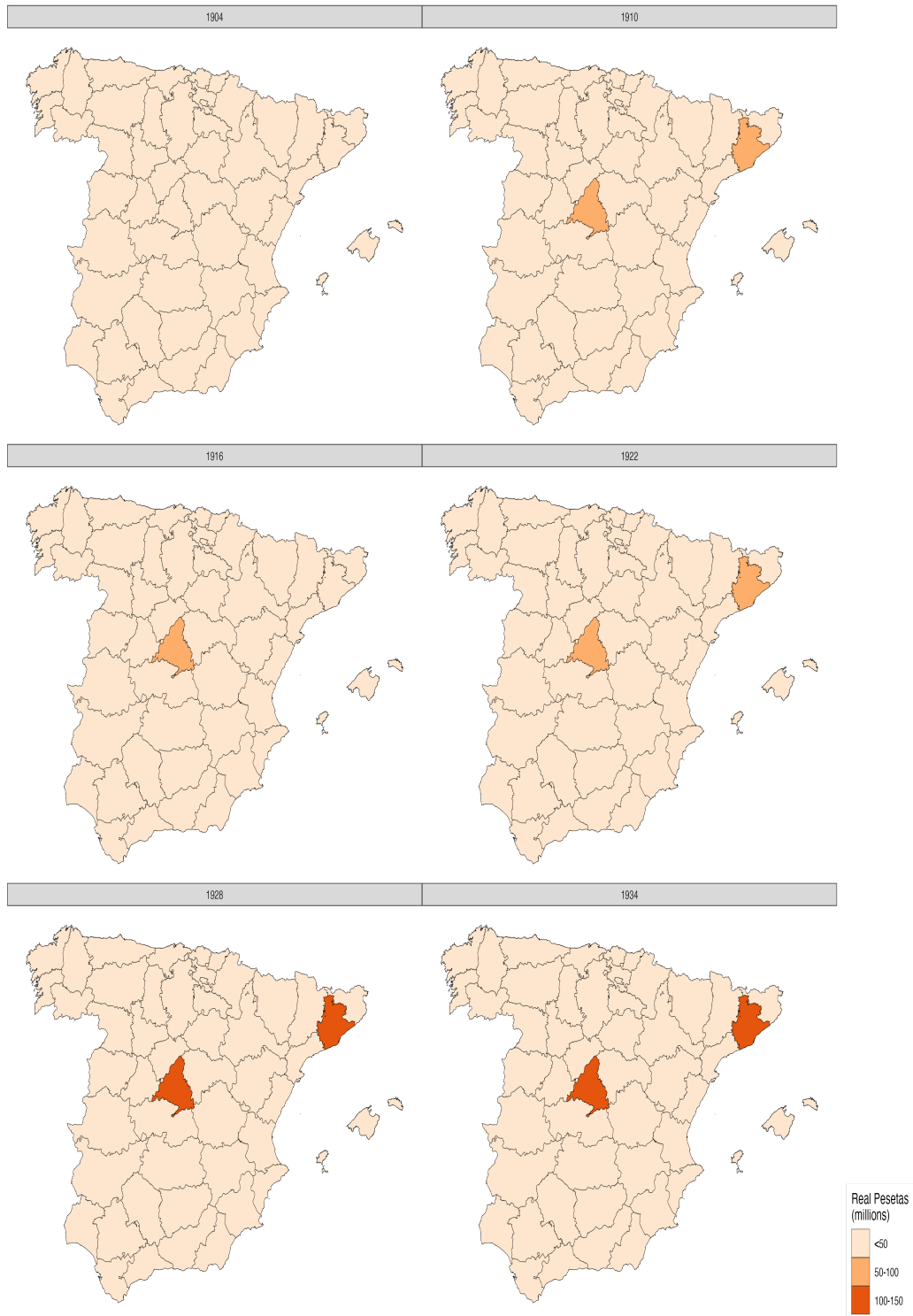
whole period. There is a predominance of coastal provinces among the provinces which collect the most total real revenues.⁷⁴ In 1904, seventeen out of the twenty coastline provinces are in the top half of the contributors, and nine are in the top ten. By 1934, the numbers for the top 10 are unchanged and the number of coastline provinces in the top half has increased to eighteen out of the twenty four top provinces. On the other hand, the bottom ten provinces for 1904 and 1934 are all landlocked provinces. Finally, total tax revenues increased in all provinces, yet they became increasingly concentrated in the provinces which collected the most: while the top five provinces of the ranking collected 43.89% of total revenues in 1934, an increase from the 34.54% collected in 1904, the bottom five provinces decreased from 2.90% of the national tax revenues in 1904 to 1.96% in 1934.

To visualise the rise in inequality in tax revenues collection across provinces, I constructed boxplots of the total tax revenues for the selected years in figures 3.2 and 3.3. The median is represented by the black line inside the box and the mean by the blue dot; the box shows the degree of dispersion (spread) and represents 50% of the data, and the whiskers indicate the ranges from the bottom 25% and the top 25% of the data values - excluding outliers, which are represented by red triangles. The top two outliers are always Barcelona and Madrid. Figure 3.3 shows that the boxplots widen over time, indicating a bigger spread in tax revenues across provinces: in other words, the provinces at the top collect more of the total revenues while the provinces at the bottom collect less revenues over time. However, the outliers in these figures compress the boxplots and hide the general trend. Hence, figure 3.3 excludes the outliers to offer a better view of how the distribution of the remaining provinces evolves over time. The boxplots depict a decrease in the mean and the median in 1916 and 1922 with respect to 1904 and 1910, followed by a substantial increase in 1928 and 1934. Importantly too, by 1928 and 1934, both the upper whisker and the upper part

74. Spain has 27 landlocked provinces, 20 coastline provinces and 3 provinces located on islands.

of the boxes have widened with respect to the previous selected years. This indicates a higher dispersion above the median, meaning that the contributions of the richest half of the provinces were more spread in 1928 and 1934 than they were before. Note also that the lower sections of the boxes and the downward whiskers have widened, indicating more dispersion below the median too. The wider boxes and whiskers in 1928 and 1934 with respect to the previous years clearly show that provincial total revenues were diverging, and that real tax revenues were less homogeneous across provinces by the 1930s than by the 1900s.

Figure 3.1: Total real tax revenues by provinces, 1904–1934.



Notes: The complete tables can be found in Section 3.A.

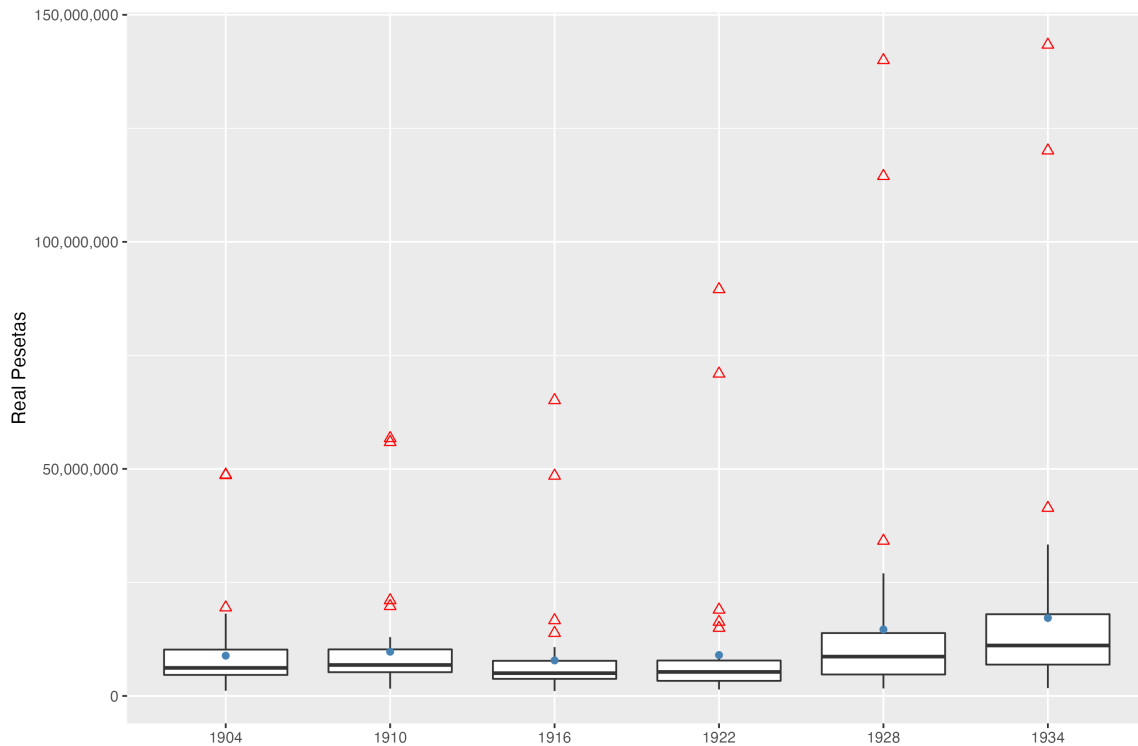
Sources: See Chapter 2 and Section 3.4.

Table 3.1: Top and bottom five provinces ranked by total tax revenues, 1904–1934.

Rank	Provinces	1904			1910			1916			1922			1928			1934		
		Tax Revenues	% of total contributions	Increase in period	Rank	Provinces	Tax Revenues	% of total contributions	Increase in period	Rank	Provinces	Tax Revenues	% of total contributions	Increase in period	Rank	Provinces	Tax Revenues	% of total contributions	Increase in period
1	Barcelona	48,721,792	11.44%	-	1	Madrid	89,550,304	20.73%	-	1	Madrid	143,394,676	17.34%	14.74%	1	Barcelona	65,113,129	17.36%	14.74%
2	Madrid	48,607,124	11.42%	-	2	Barcelona	56,746,361	12.14%	16.74%	2	Barcelona	70,955,854	16.43%	14.71%	2	Madrid	48,470,575	12.92%	-13.28%
3	Valencia	19,469,029	4.57%	-	3	Valencia	21,043,189	4.50%	8.09%	3	Valencia	18,962,980	4.39%	8.09%	3	Valencia	16,649,828	4.44%	-20.88%
4	Sevilla	18,121,856	4.26%	-	4	Sevilla	19,766,374	4.23%	9.07%	4	Sevilla	16,308,966	3.78%	9.07%	4	Sevilla	13,851,641	3.69%	-29.92%
5	Cádiz	12,076,142	2.84%	-	5	Málaga	12,959,465	2.77%	7.37%	5	Oviedo	14,967,222	3.46%	7.37%	5	Oviedo	10,761,378	2.87%	-8.95%
44	Teruel	3,595,564	0.84%	-	44	Segovia	3,885,507	0.83%	5.89%	44	Teruel	2,311,069	0.53%	5.89%	44	Guipúzcoa	2,554,330	0.68%	-34.26%
45	Soria	3,107,733	0.73%	-	45	Soria	3,505,942	0.75%	12.81%	45	Segovia	2,155,420	0.50%	12.81%	45	Segovia	2,364,290	0.63%	-20.88%
46	Navarra	2,823,686	0.66%	-	46	Navarra	2,988,265	0.64%	5.83%	46	Navarra	1,989,627	0.46%	5.83%	46	Navarra	2,192,344	0.58%	-37.47%
47	Guipúzcoa	1,666,061	0.39%	-	47	Guipúzcoa	2,014,111	0.43%	20.89%	47	Soria	1,635,782	0.38%	20.89%	47	Soria	1,299,438	0.35%	-35.48%
48	Álava	1,142,447	0.27%	-	48	Álava	1,608,415	0.34%	40.79%	48	Álava	1,416,533	0.33%	40.79%	48	Álava	1,076,122	0.29%	-33.09%
1	Madrid	139,998,486	19.92%	56.34%	1	Madrid	139,998,486	19.92%	16.74%	1	Madrid	139,998,486	19.92%	16.74%	1	Madrid	139,998,486	19.92%	16.74%
2	Barcelona	114,474,468	16.29%	61.33%	2	Barcelona	114,474,468	16.29%	14.71%	2	Barcelona	114,474,468	16.29%	14.71%	2	Barcelona	114,474,468	16.29%	14.71%
3	Valencia	34,153,911	4.86%	80.11%	3	Valencia	34,153,911	4.86%	8.09%	3	Valencia	34,153,911	4.86%	8.09%	3	Valencia	34,153,911	4.86%	8.09%
4	Sevilla	27,000,129	3.84%	65.55%	4	Sevilla	27,000,129	3.84%	9.07%	4	Sevilla	27,000,129	3.84%	9.07%	4	Sevilla	27,000,129	3.84%	9.07%
5	Oviedo	19,340,226	2.75%	29.22%	5	Oviedo	19,340,226	2.75%	7.37%	5	Oviedo	19,340,226	2.75%	7.37%	5	Oviedo	19,340,226	2.75%	7.37%
44	Teruel	3,683,302	0.52%	57.64%	44	Teruel	3,683,302	0.52%	5.89%	44	Teruel	3,683,302	0.52%	5.89%	44	Teruel	3,683,302	0.52%	5.89%
45	Segovia	3,411,310	0.49%	71.45%	45	Segovia	3,411,310	0.49%	12.81%	45	Segovia	3,411,310	0.49%	12.81%	45	Segovia	3,411,310	0.49%	12.81%
46	Navarra	2,876,699	0.41%	-23.78%	46	Navarra	2,876,699	0.41%	5.83%	46	Navarra	2,876,699	0.41%	5.83%	46	Navarra	2,876,699	0.41%	5.83%
47	Soria	2,485,196	0.35%	51.93%	47	Soria	2,485,196	0.35%	20.89%	47	Soria	2,485,196	0.35%	20.89%	47	Soria	2,485,196	0.35%	20.89%
48	Álava	1,649,795	0.23%	16.47%	48	Álava	1,649,795	0.23%	40.79%	48	Álava	1,649,795	0.23%	40.79%	48	Álava	1,649,795	0.23%	40.79%
1	Madrid	120,096,829	14.53%	25.26%	1	Madrid	120,096,829	14.53%	14.74%	1	Madrid	120,096,829	14.53%	14.74%	1	Madrid	120,096,829	14.53%	14.74%
2	Barcelona	41,393,096	5.01%	-14.22%	2	Barcelona	41,393,096	5.01%	-13.28%	2	Barcelona	41,393,096	5.01%	-13.28%	2	Barcelona	41,393,096	5.01%	-13.28%
3	Valencia	33,343,313	4.03%	21.20%	3	Valencia	33,343,313	4.03%	-20.88%	3	Valencia	33,343,313	4.03%	-20.88%	3	Valencia	33,343,313	4.03%	-20.88%
4	Oviedo	23,448,970	2.84%	23.49%	4	Oviedo	23,448,970	2.84%	-29.92%	4	Oviedo	23,448,970	2.84%	-29.92%	4	Oviedo	23,448,970	2.84%	-29.92%
5	Guipúzcoa	4,461,243	0.54%	21.24%	5	Guipúzcoa	4,461,243	0.54%	-8.95%	5	Guipúzcoa	4,461,243	0.54%	-8.95%	5	Guipúzcoa	4,461,243	0.54%	-8.95%
44	Segovia	4,026,910	0.49%	16.45%	44	Segovia	4,026,910	0.49%	0.68%	44	Segovia	4,026,910	0.49%	0.68%	44	Segovia	4,026,910	0.49%	0.68%
45	Navarra	2,822,793	0.34%	18.05%	45	Navarra	2,822,793	0.34%	-20.88%	45	Navarra	2,822,793	0.34%	-20.88%	45	Navarra	2,822,793	0.34%	-20.88%
46	Soria	2,673,522	0.32%	-1.87%	46	Soria	2,673,522	0.32%	-37.47%	46	Soria	2,673,522	0.32%	-37.47%	46	Soria	2,673,522	0.32%	-37.47%
47	Guipúzcoa	1,729,087	0.21%	7.58%	47	Guipúzcoa	1,729,087	0.21%	-35.48%	47	Guipúzcoa	1,729,087	0.21%	-35.48%	47	Guipúzcoa	1,729,087	0.21%	-35.48%
48	Álava	1,729,087	0.21%	4.81%	48	Álava	1,729,087	0.21%	-33.09%	48	Álava	1,729,087	0.21%	-33.09%	48	Álava	1,729,087	0.21%	-33.09%

Sources: See Chapter 2 and Section 3.4.

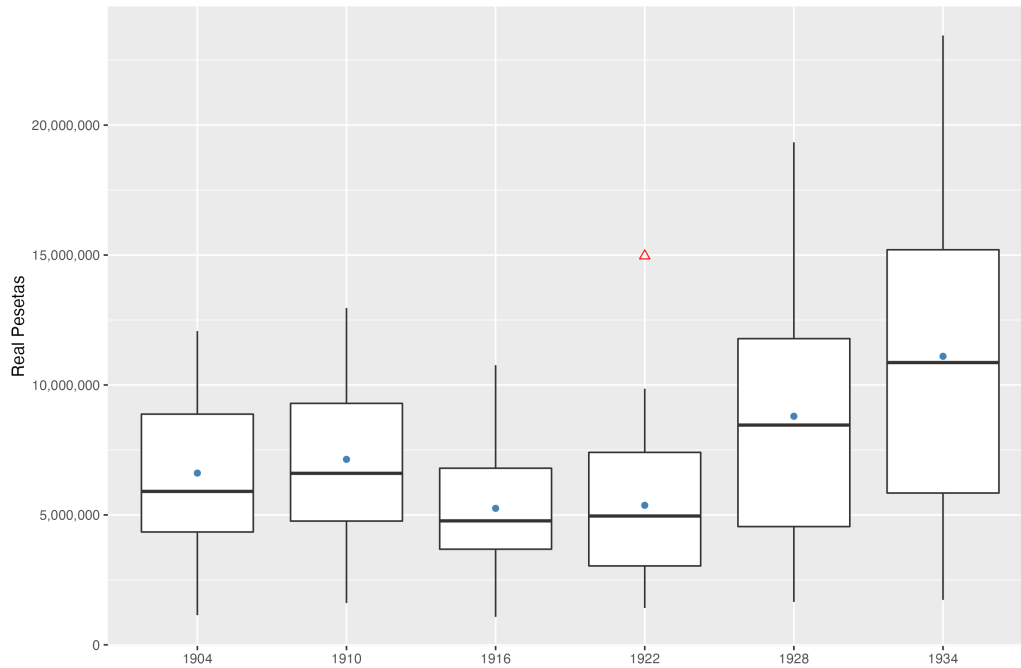
Figure 3.2: Distribution among provinces of the total tax revenues, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

How does the picture change when population is taken into account? Figure 3.4 shows the geographical distribution of the tax burden per capita for the same six selected years. The results show more variation across provinces than in figure 3.1. There is heterogeneity in the tax burdens per capita of 1904 and 1910 and there are no evident geographical patterns. In 1910, the majority of provinces have tax burdens per capita below 50 pesetas, fourteen have tax burden per capita of between 50 and 100 pesetas, and only Madrid has a tax burden per capita of between 100 and 150 pesetas. In 1916, in the middle of the First World War, only Madrid and Barcelona have tax burdens per capita above 50 pesetas; by 1922, Madrid's tax burden per capita has increased above 150 pesetas, and only Barcelona and Oviedo are above 50 pesetas. In 1928, more provinces collect between 50 and 100 pesetas per capita, and again there is no geographical pattern; finally, by 1934, more than half of the provinces collect

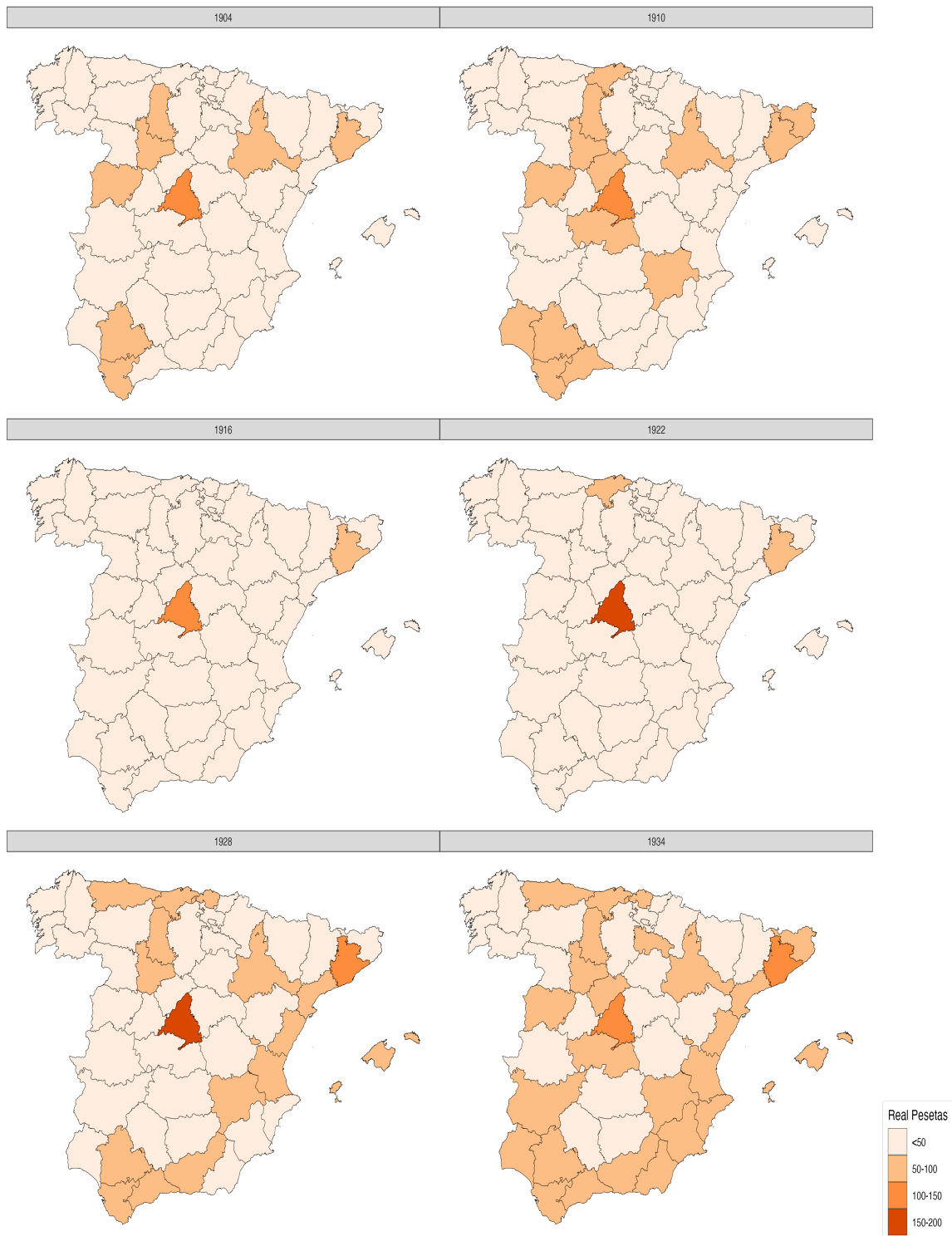
Figure 3.3: Distribution among provinces of the total tax revenues without the top outliers, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

more than 50 pesetas per capita. The figure shows heterogeneous provincial tax burdens per capita in Spain in the 1900s, before a generalised decrease during the 1910s and a heterogeneous increase in the late 1920s and 1930s; while no clear geographical pattern emerges from the figure, one can observe that by 1934 many coastal provinces had higher tax burdens per capita than in 1904, whereas many landlocked provinces remained with low tax burdens per capita. Spains' population distribution is historically skewed towards coastal areas. Provinces in coastal areas are more populated and have larger urban areas than the central and landlocked provinces, which are scarcely populated and have smaller cities. In fact, even controlling for population, the share of the urban population is importantly correlated with the tax burdens per capita: the coefficient of correlation is equal to 0.7385 and suggests that the state collected higher revenues in provinces with larger urban areas.

Figure 3.4: Tax burdens per capita, 1904–1934.



Notes: The complete tables can be found in Section 3.A.

Sources: See Chapter 2 and Section 3.4.

Figures 3.1 to 3.4 already offer some important observations: Madrid and Barcelona stand out as the provinces with the highest tax revenues and the highest tax burdens per capita between 1904 and 1934. By 1934 the state relied on its top five contributing provinces to collect 43.89% of its total tax revenues, up from 34.53% in 1904, while the bottom five provinces collected a lower proportion of the total revenues in 1934 than they did in 1904. In short, tax revenues were increasingly concentrated in the top contributing provinces. Furthermore, tax burdens per capita were relatively higher in areas with higher shares of urban population. Together, these initial figures suggest a shallow fiscal capacity: the state collected more revenues in urban areas and relied increasingly on the revenues of a reduced number of provinces.

Figure 3.5 depicts the distribution of tax burdens as a percentage of GDP for all years between 1904 and 1934. Madrid is the only province with a tax burden above 5% of its GDP for the whole period, with some years 10 and 15% of GDP; Barcelona's tax burden only climbs above 5% in 1933 and 1934. Whereas Barcelona was a clear leader in the previous two indicators together with Madrid, the results suggest it contributed much less in taxes with respect to its economic output. Before the First World War, with the exception of Madrid which was consistently between 10 and 15% of GDP, the majority of provinces had tax burdens below 5% of their GDPs and only a few provinces were above 5%, but never more than six in a given year. Then from 1915 to 1932, all provinces except Madrid had a tax burden below 5% of their GDP. Cáceres, Badajoz and Valladolid in 1933 (and Valladolid in 1934 again) had tax burdens of between 5 and 10% of GDP, but the cause was a decrease in their respective provincial GDPs those years, rather than significant changes in taxation.

Hence, the main image emerging from figure 3.5 is Madrid standing out with a higher tax burden as a share of GDP in an sea of tax burdens below 5% of GDP.

However, this image is deceptive, as two factors drove Madrid predominance: firstly, the importance of two taxes, the *utilidades* and the *timbre* taxes. The *utilidades* was the capital tax and was levied on interests and dividends, and the *timbre* was a tax levied on official paper used for certified documents. Joint-stock companies which operated in the whole of Spain and abroad were located in Madrid, and as consequence, the *utilidades* tax on their capital was levied and reported in Madrid. The average nominal *utilidades* revenues for Madrid between 1904 and 1934 was 35,100,000 pesetas; nonetheless, Barcelona also collected substantial *utilidades* tax revenues, with an average of 31,400,000 pesetas for the time period. Barcelona was the most important industrial centre and also had an important presence of joint-stock companies. On the other hand, the rest of Spanish provinces collected on average 2,120,913 pesetas of *utilidades* tax revenues.

Madrid also collected important *timbre* tax revenues because it was the capital: the *timbre*, the tax on official paper and certified documents, was levied on government papers or on papers used on private deals by companies with banks, notaries, or the government, for instance. The average nominal *timbre* revenues for Madrid between 1904 and 1934 was 34,200,000 pesetas while the rest of Spain collected an average of 1,984,247 pesetas. However, Barcelona did not lag far behind with 29,500,000 pesetas collected in *timbre* revenues. Again, the presence of joint-stock and financial companies in the province explains the result. Hence, Barcelona followed closely Madrid in terms of *timbre* and *utilidades* tax revenues, and both taxes drive massively the two provinces' positions at the top of table 3.1 as the two leading provinces in tax revenues.

The second factor explaining Madrid's higher tax burden in Figure 3.5 is that its GDP is lower than Barcelona's. Hence, for roughly similar levels of taxation, Madrid's tax burden is always bound to be higher. This does not imply that Madrid

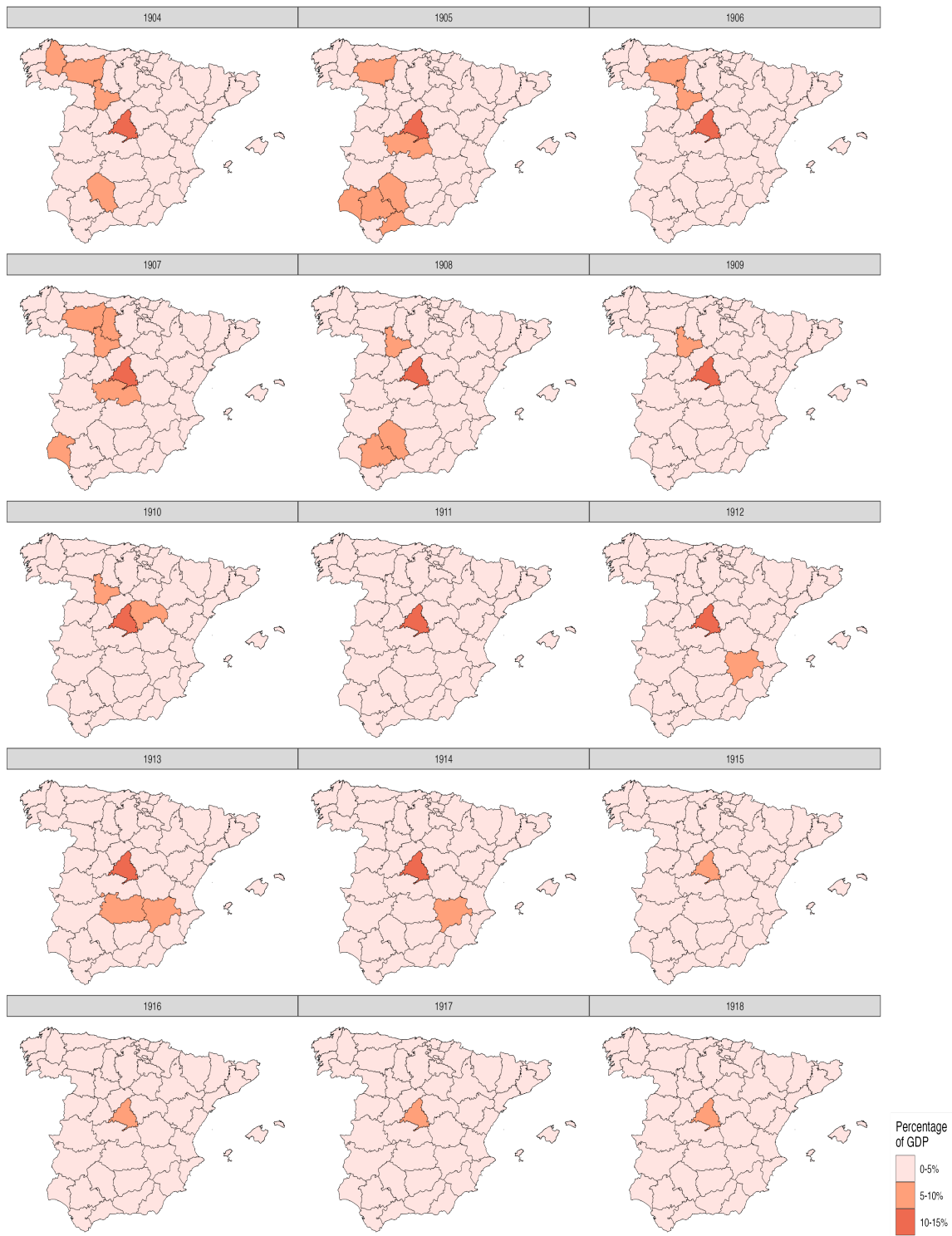
was overtaxed with respect to its GDP, as the tax revenues were driven by taxes such as the *utilidades* and the *timbre* which were bound to be higher in Madrid because it was the administrative capital, and it explains why Madrid had a higher tax burden as a share of GDP between 1915 and 1934. These findings highlight even more that the state had a shallow fiscal capacity: the low tax burdens indicate that collected little tax revenues throughout Spain and that it relied heavily on the *utilidades* and *timbre* tax revenues in Madrid and Barcelona. Collection was high in these two taxes in these two provinces because they were taxes easy to implement and to track, and thus prone to bring more revenues to the state.

The last figure, figure 3.6 shows the provincial tax sacrifices between 1904 and 1934. It is worth highlighting the original findings from Rosés, Martínez-Galarraga and Tirado on the fluctuations in provincial GDPs per capita over time. Firstly, Madrid and Catalonia are consistently in the top three regions in terms of GDP per capita between 1860 and 1930. Secondly, Andalucía had the highest GDP per capita by 1860, but it fell to the 9th position out of seventeen in 1900, and then fluctuated between the 6th and the 12th positions in the next three decades. Thirdly, Galicia and Extremadura were always in the bottom four positions. Finally, by 1930, a rich core was located in Madrid, the Basque Country and Catalonia and the poorest regions were situated at the Portuguese frontier.⁷⁵

Figure 3.6 suggests that in the 1900s, the tax sacrifices were higher in the poorest provinces situated at the Portuguese frontier, especially in the provinces of Extremadura and Galicia, in some of the central landlocked provinces, and in Murcia for some years. While tax sacrifices are heterogeneously distributed across Spain between 1904 and 1914, they start to decrease everywhere coinciding with the First World War years, remaining relatively higher just in the Portuguese frontier and in

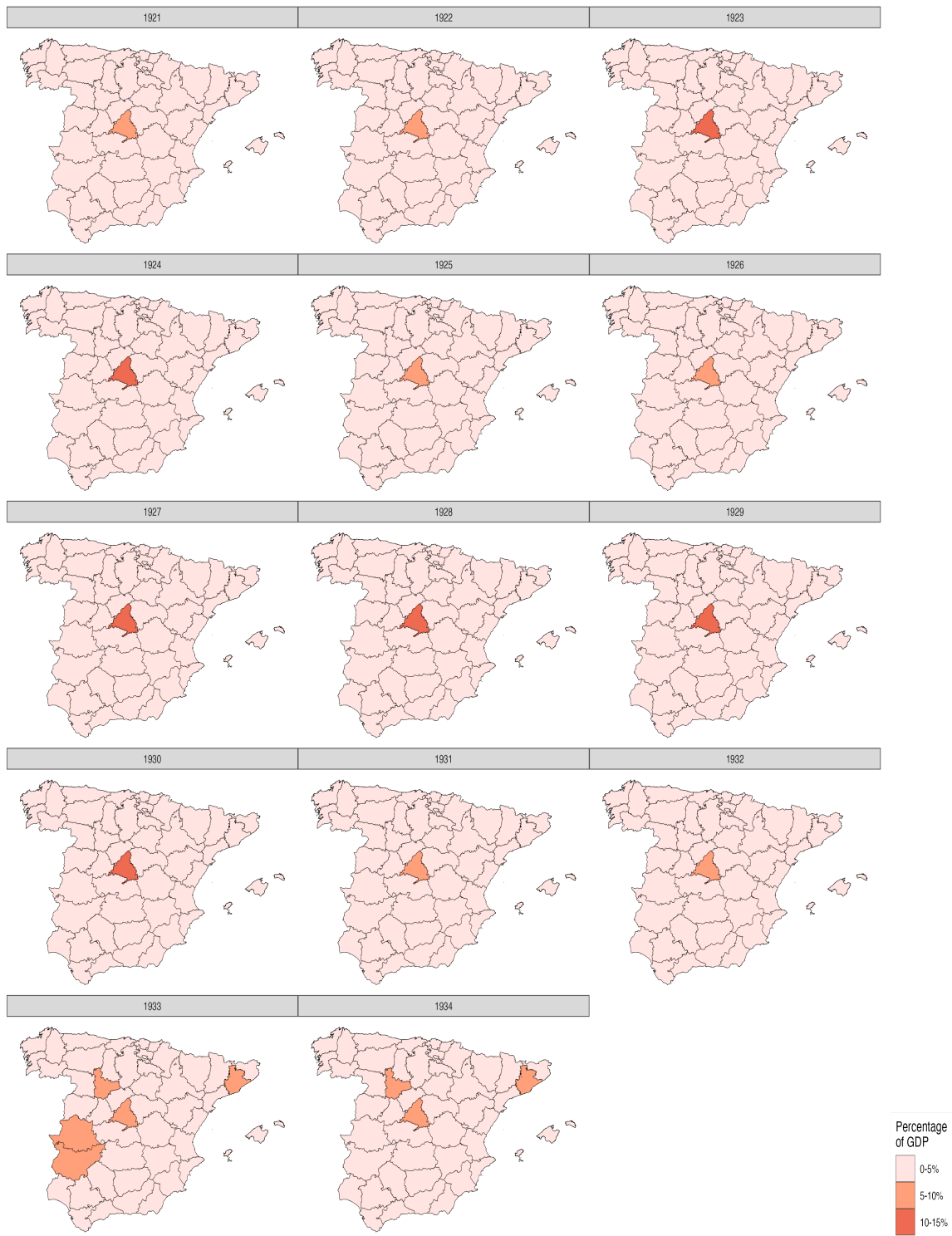
75. Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 249.

Figure 3.5: Tax burdens as a percentage of provincial GDPs, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

Figure 3.5: Tax burdens as a percentage of provincial GDPs, 1904–1934.

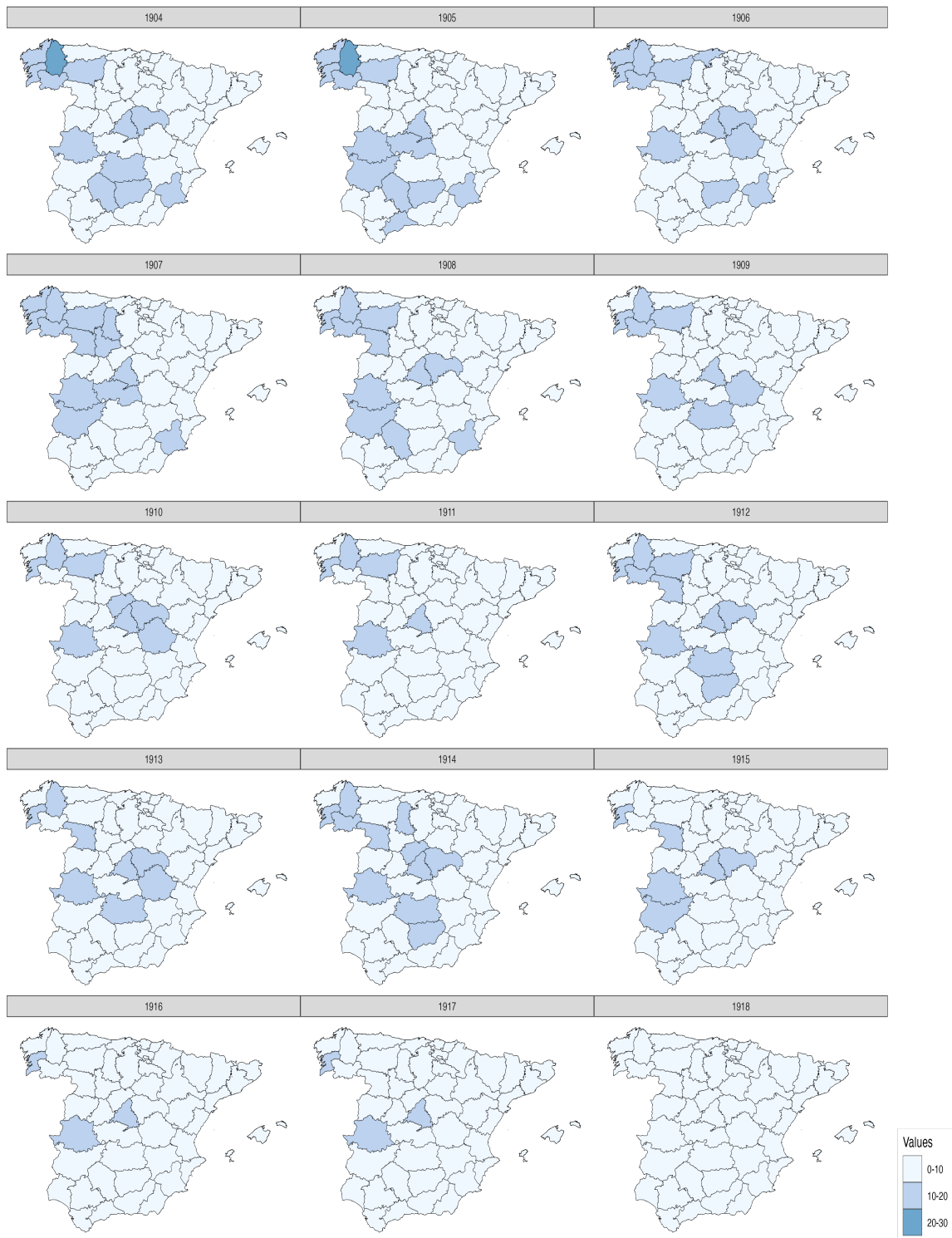


Sources: See Chapter 2 and Section 3.4.

Madrid. From 1918 onwards, all provinces had low tax sacrifices. Hence, the figure shows that the poorest provinces had higher tax sacrifices than the richest provinces in the first decade of the 20th Century, yet that all tax sacrifices decreased over time. By the 1920s, all tax sacrifices were low and any differentials across provinces were erased. Unsurprisingly, provinces with lower GDP per capita in the 1900s had higher tax sacrifices: the Spearman rank correlation coefficient between tax sacrifices and GDP per capita is equal -0.7388918 and confirms the negative correlation between a province's GDP per capita rank position and its tax sacrifice rank position. The coefficient also indicates that tax sacrifices should decrease with increases in GDP per capita increases, which is what is observed in figure 3.6. The generalised decreases in the provincial tax burdens and tax sacrifices during and after the First World War indicate that both GDP and GDP per capita were growing faster than fiscal revenues. In short, the fiscal system was unable to capture the economic growth happening across its territory.

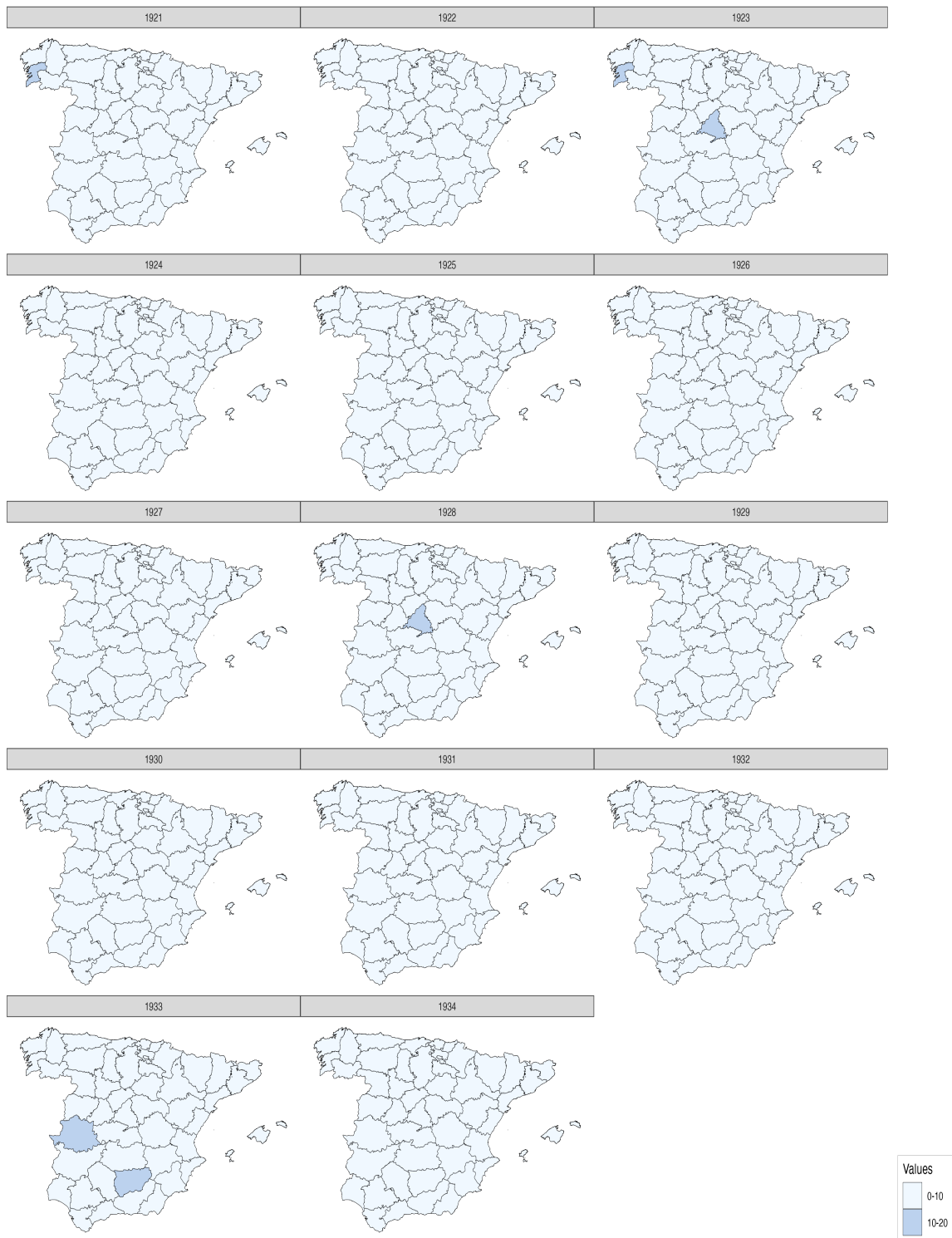
Before concluding, Table 3.2 offers two measures of regional inequality for the four tax indicators: the Gini and the Williamson Indexes. Both measures are used in the regional economics literature to depict income inequality, yet they are also useful to report inequalities in the Chapter's tax indicators. In both cases, a value equal to 1 means perfect concentration (i.e. one provinces collect all tax revenues, or all provinces have tax burdens equal to 0 but one, etc) and a value equals to 0 means perfect equality (i.e. all provinces collect the exact same amount of tax revenues, all provinces have the same tax burdens, etc). The Gini and the Williamson Indexes increased over time for the Total Real Tax Revenues, confirming the concentration of tax revenues in the top provinces (figures 3.1, 3.2, 3.3 and table 3.1). Unsurprisingly, there was no σ -convergence in tax revenues across provinces – in other words, the tax revenues of the provinces that contributed less were not converging with the tax revenues of the provinces that contributed the most. For the tax burden per capita,

Figure 3.6: Provincial tax sacrifices, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

Figure 3.6: Provincial tax sacrifices, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

both indexes had a relatively stable evolution: although they increased slightly in the early 1920s, they decreased again in the late 1920s and by 1934 they were just marginally higher than in 1904. Similarly, the indexes for the tax burden as a share of GDP also had a stable evolution and were roughly similar across the time period, suggesting there was neither a process of concentration of higher tax burdens in some provinces, nor an “equalisation” of tax burdens across provinces. On the other hand, there is a clear decrease in both indexes for the tax sacrifices, meaning that tax sacrifices converged and equalised across provinces; Figure 3.6 suggests that this “equalisation” of tax sacrifices was due to the generalised tax sacrifices decreases for provinces over time.

Table 3.2: Gini and Williamson Indexes, 1904–1934.

Year	Total Real Tax Revenues		Tax Burden per Capita		Tax Burden (GDP)		Tax Sacrifice	
	Williamson	Gini	Williamson	Gini	Williamson	Gini	Williamson	Gini
1904	0.1532	0.4051	0.0716	0.2022	0.0550	0.1708	0.0747	0.2762
1905	0.1522	0.3989	0.0693	0.1930	0.0535	0.1661	0.0696	0.2599
1906	0.1581	0.4068	0.0736	0.1966	0.0578	0.1627	0.0733	0.2711
1907	0.1560	0.4037	0.0715	0.1912	0.0574	0.1663	0.0727	0.2630
1908	0.1593	0.4034	0.0734	0.1918	0.0571	0.1595	0.0696	0.2560
1909	0.1592	0.4041	0.0734	0.1926	0.0592	0.1512	0.0696	0.2453
1910	0.1607	0.4043	0.0744	0.1956	0.0606	0.1584	0.0687	0.2431
1911	0.1646	0.4103	0.0770	0.2008	0.0608	0.1554	0.0699	0.2440
1912	0.1789	0.4278	0.0870	0.2053	0.0640	0.1706	0.0725	0.2669
1913	0.1836	0.4371	0.0902	0.2085	0.0681	0.1828	0.0743	0.2758
1914	0.1892	0.4441	0.0937	0.2101	0.0663	0.1779	0.0699	0.2635
1915	0.1881	0.4438	0.0914	0.2063	0.0651	0.1674	0.0714	0.2612
1916	0.1951	0.4578	0.0999	0.2113	0.0766	0.1847	0.0794	0.2802
1917	0.2053	0.4841	0.1079	0.2370	0.0773	0.1852	0.0804	0.2863
1918	0.2129	0.5025	0.1147	0.2388	0.0821	0.1974	0.0819	0.2879
1919	0.2197	0.5255	0.1208	0.2684	0.0863	0.1973	0.0803	0.2726
1920	0.2225	0.5357	0.1227	0.2672	0.0823	0.1935	0.0818	0.2766
1921	0.2207	0.5232	0.1208	0.2459	0.0797	0.1672	0.0700	0.2367
1922	0.2251	0.5346	0.1237	0.2511	0.0804	0.1793	0.0710	0.2501
1923	0.2306	0.5529	0.1288	0.2676	0.0838	0.1676	0.0684	0.2297
1924	0.2279	0.5471	0.1241	0.2546	0.0779	0.1628	0.0666	0.2387
1925	0.2236	0.5436	0.1185	0.2499	0.0765	0.1646	0.0583	0.2073
1926	0.2222	0.5350	0.1141	0.2382	0.0721	0.1583	0.0604	0.2156
1927	0.2212	0.5474	0.1126	0.2501	0.0790	0.1727	0.0633	0.2192
1928	0.2177	0.5405	0.1089	0.2474	0.0757	0.1606	0.0648	0.2338
1929	0.2140	0.5361	0.1024	0.2410	0.0750	0.1626	0.0619	0.2085
1930	0.2109	0.5357	0.1005	0.2462	0.0690	0.1630	0.0648	0.2322
1931	0.2091	0.5297	0.0954	0.2315	0.0653	0.1597	0.0627	0.2292
1932	0.1994	0.5104	0.0830	0.2204	0.0579	0.1561	0.0545	0.2037
1933	0.2007	0.5151	0.0821	0.2266	0.0553	0.1658	0.0611	0.2355
1934	0.1996	0.5166	0.0799	0.2255	0.0544	0.1583	0.0549	0.2096

Notes: The Gini and Williamson Indexes were obtained using the data from Chapter 2 and Section 3.4.

3.6 Conclusions

This chapter addressed Spain's fiscal capacity in the first decades of the 20th Century from a provincial perspective. To do so, the chapter built four tax indicators for 48 provinces between 1904 and 1934 and studied the differences across provinces over time. The findings show that Madrid and Barcelona were the provinces which collected the most tax revenues and had the highest tax burdens per capita between 1904 and 1934. Furthermore, total real tax revenues were increasingly concentrated in the top contributing provinces between 1904 and 1934: the top five provinces collected 43.89% of total revenues in 1934, up from the 34.54% collected in 1904, whereas the bottom five provinces decreased from 2.90% of the national tax revenues in 1904 to 1.96% in 1934. The increases in the Gini and Williamson indexes confirm the concentration pattern.

The results also show that the tax burdens as percentage of provincial GDPs were low in nearly all Spanish provinces, but relatively higher in Madrid due to a "capital" effect driving up the *utilidades* and *timbre* tax revenues. Joint-stock companies were located in Madrid and paid the *utilidades* tax in the capital; similarly, the *timbre* tax which was levied on official and certified documents was higher in Madrid, where more private and government transactions took place. Barcelona also had high *utilidades* and *timbre* tax revenues, but with higher GDP levels than Madrid, its tax burden as a percentage of GDP was lower than Madrid's. Finally, the findings show that tax sacrifices "equalised" as they decreased to low levels across the country between 1904 and 1934. The negative Spearman rank correlation coefficient confirmed that tax sacrifices decreased as GDP per capita increased.

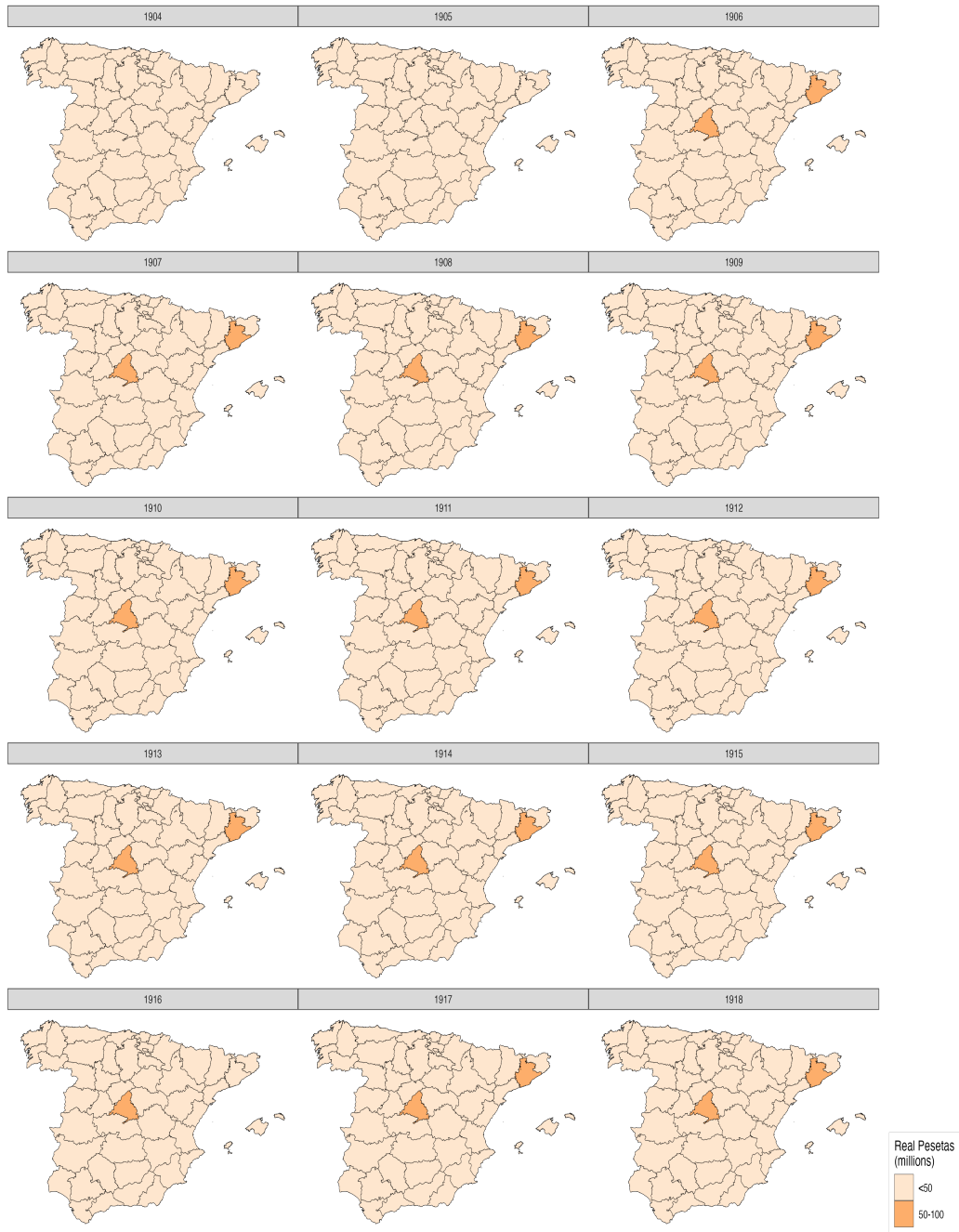
The chapter's results confirm that the Spanish state had a shallow fiscal capacity in the first decades of the 20th Century. The decreases in tax burdens and tax sacrifices indicate that GDP and GDP per capita were increasing faster than

tax revenues and that the state was incapable of capturing economic growth through taxation. Tax revenues were increasingly concentrated in fewer provinces, suggesting that the state was not capable of taxing efficiently across its territory and was reliant on the tax revenues obtained in its top contributing provinces. Furthermore, the predominance of the *utilidades* and the *timbre* tax in Madrid and Barcelona suggest that the state relied on levying taxes that were easy to implement and to track in the most important urban centres. Furthermore, while there is some small heterogeneity for the tax burdens and the tax sacrifices in the 1900s, there is a clear decrease in both indicators during and after the First World War. The literature has highlighted that Western European states that fought the War saw a consolidation of their fiscal capacity during the Great War, as the increase in spending required increases in tax revenues. Spain, which remained neutral during the War, did not see a fiscal consolidation and remained stuck in its shallow fiscal capacity in the 1920s.

By offering a novel provincial approach to the issue of fiscal capacity, this chapter has unveiled new evidence on Spain's low fiscal capacity in the first decades of the 20th Century. The chapter leaves some questions unaddressed which are open for future research: for instance, what was the proportion of tax revenues collected in each province that remained in the hands of the local institutions? Could the state low fiscal capacity be partially explained by local institutions retaining some control over taxes and spending? The most striking question, however, is why were taxes increasingly concentrated in urban centres in a predominantly agrarian economy like Spain? Indeed, the vast majority of provinces with relatively lower tax revenues and lower tax burdens were mostly rural and agrarian provinces. The next chapter specifically looks at agrarian taxation and sheds some further light on Spain's shallow fiscal capacity.

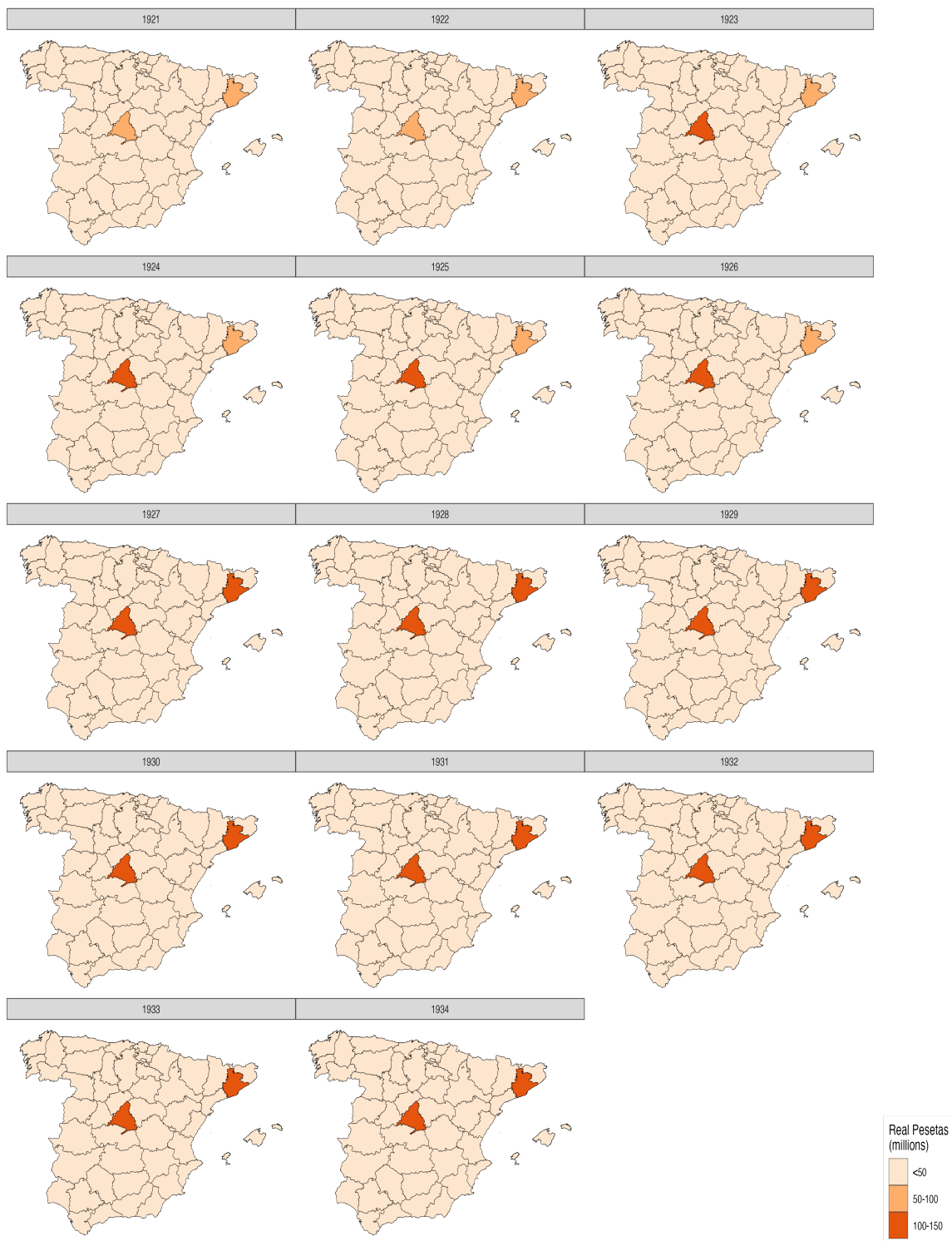
3.A Subappendix

Figure 3A1: Total real tax revenues by provinces, 1904–1934.



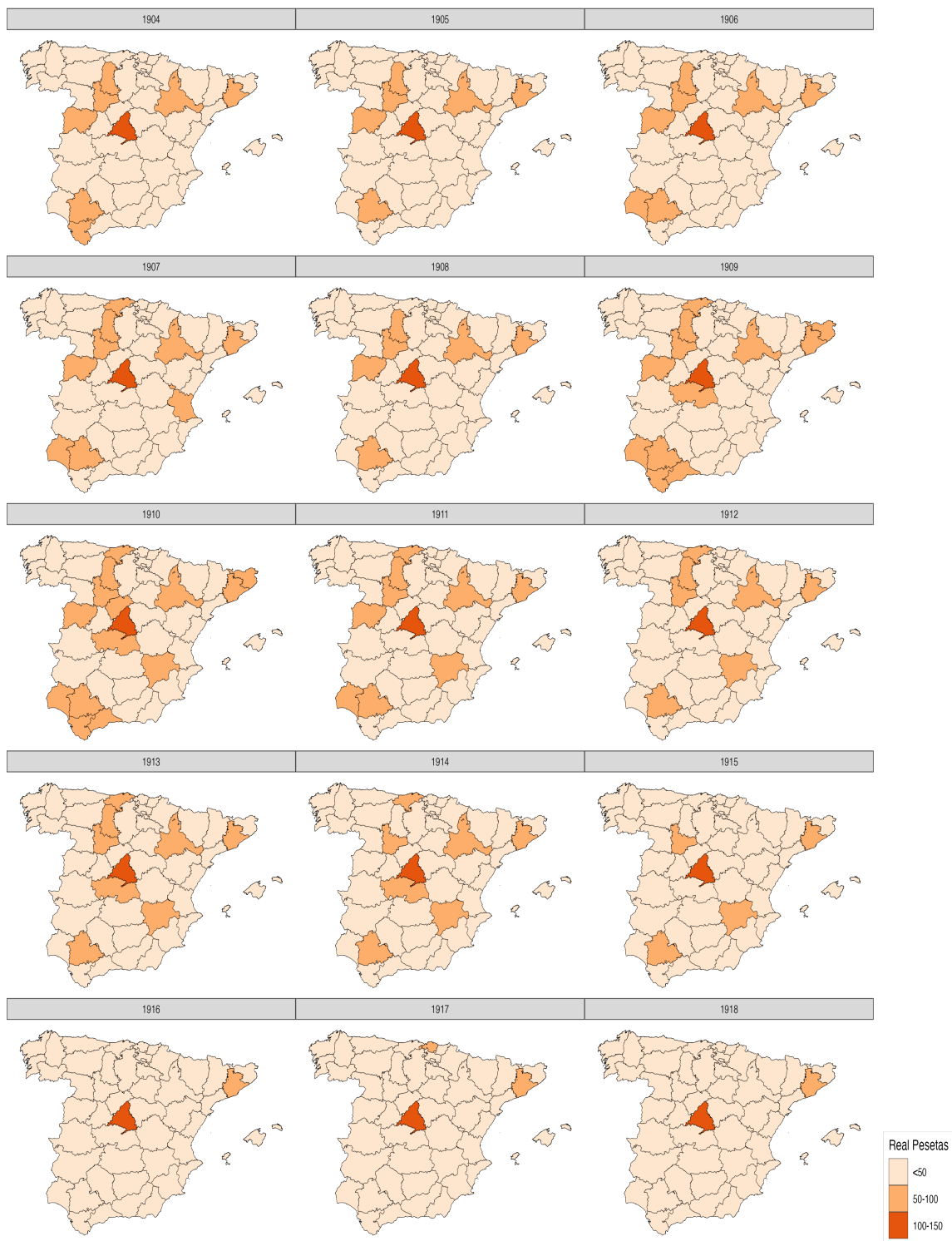
Sources: See Chapter 2 and Section 3.4.

Figure 3A1: Total real tax revenues by provinces, 1904–1934.



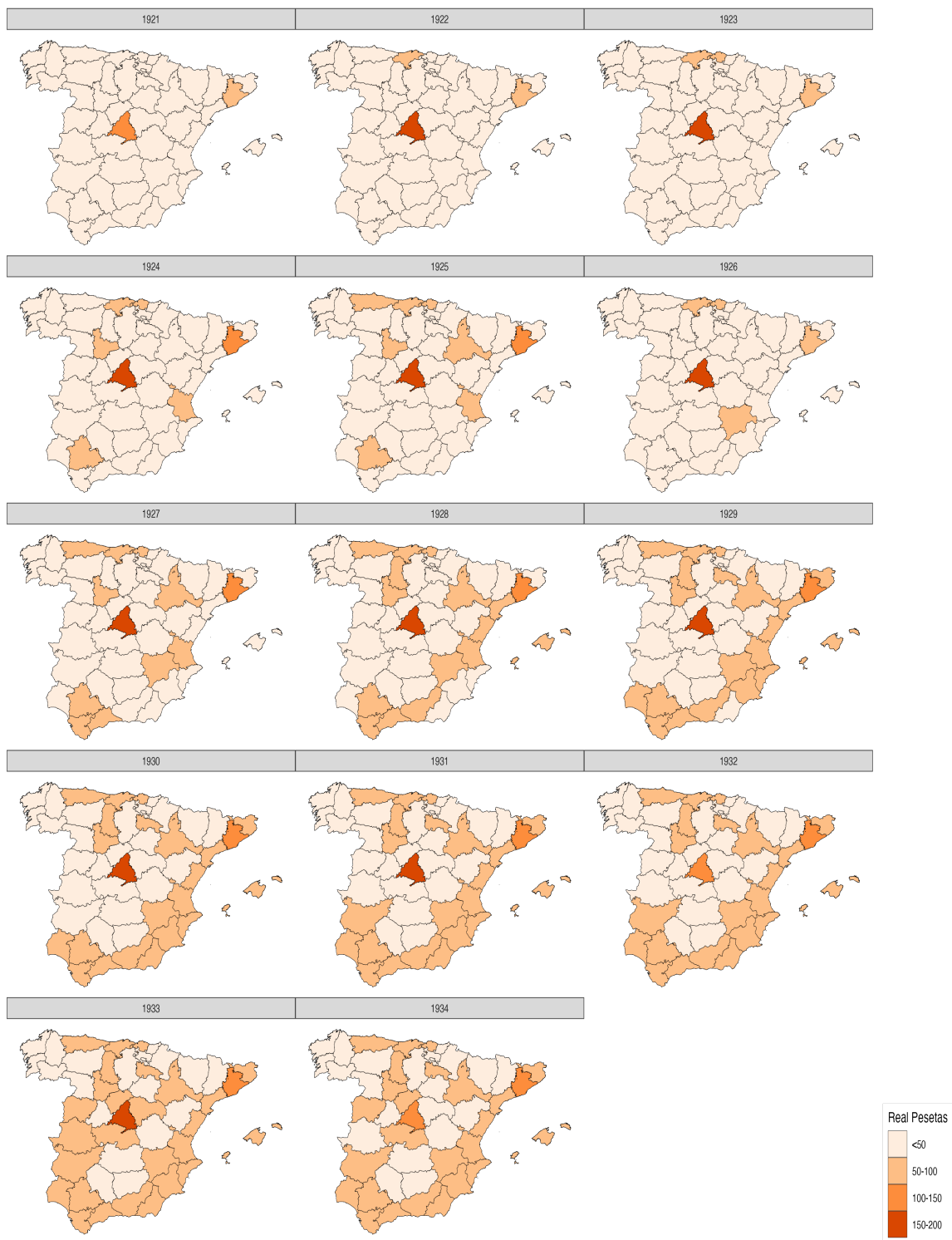
Sources: See Chapter 2 and Section 3.4.

Figure 3A2: Tax burdens per capita, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

Figure 3A2: Tax burdens per capita, 1904–1934.



Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1904.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Barcelona	48,721,792	11.44%	25	Ciudad Real	6,172,591	1.45%
2	Madrid	48,607,124	11.42%	26	Baleares	5,957,786	1.40%
3	Valencia	19,469,029	4.57%	27	Cáceres	5,851,139	1.37%
4	Sevilla	18,121,856	4.26%	28	Lérida	5,798,051	1.36%
5	Cádiz	12,076,142	2.84%	29	Zamora	5,783,026	1.36%
6	Málaga	12,069,440	2.83%	30	Castellón	5,718,737	1.34%
7	Zaragoza	12,021,544	2.82%	31	Lugo	5,646,509	1.33%
8	Córdoba	11,588,378	2.72%	32	Ourense	5,481,121	1.29%
9	Coruña (La)	11,538,572	2.71%	33	Tarragona	5,457,247	1.28%
10	Oviedo	11,383,227	2.67%	34	Palencia	5,201,514	1.22%
11	Badajoz	10,401,112	2.44%	35	Almería	4,783,364	1.12%
12	Valladolid	10,320,538	2.42%	36	Huesca	4,680,198	1.10%
13	Murcia	10,171,505	2.39%	37	Albacete	4,467,120	1.05%
14	Alicante	9,550,656	2.24%	38	Ávila	3,970,438	0.93%
15	Granada	9,035,254	2.12%	39	Guadalajara	3,965,521	0.93%
16	Toledo	8,825,302	2.07%	40	Vizcaya	3,872,605	0.91%
17	Jaén	8,257,562	1.94%	41	Logroño	3,761,242	0.88%
18	Salamanca	7,800,455	1.83%	42	Cuenca	3,685,833	0.87%
19	Girona	7,402,143	1.74%	43	Segovia	3,669,536	0.86%
20	León	6,685,261	1.57%	44	Teruel	3,595,564	0.84%
21	Burgos	6,522,015	1.53%	45	Soria	3,107,733	0.73%
22	Huelva	6,476,832	1.52%	46	Navarra	2,823,686	0.66%
23	Pontevedra	6,274,720	1.47%	47	Guipúzcoa	1,666,061	0.39%
24	Santander	6,178,546	1.45%	48	Álava	1,142,447	0.27%

Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1910.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Madrid	56,746,361	12.14%	25	Pontevedra	6,735,213	1.44%
2	Barcelona	55,890,905	11.96%	26	Albacete	6,706,938	1.43%
3	Valencia	21,043,189	4.50%	27	Cáceres	6,493,813	1.39%
4	Sevilla	19,766,374	4.23%	28	Baleares	6,290,573	1.35%
5	Málaga	12,959,465	2.77%	29	Castellón	6,254,409	1.34%
6	Zaragoza	12,421,709	2.66%	30	Lérida	6,093,995	1.30%
7	Cádiz	12,117,920	2.59%	31	Zamora	6,005,870	1.28%
8	Coruña (La)	11,920,739	2.55%	32	Lugo	5,904,390	1.26%
9	Oviedo	11,819,509	2.53%	33	Tarragona	5,697,742	1.22%
10	Badajoz	11,552,257	2.47%	34	Ourense	5,605,397	1.20%
11	Córdoba	11,451,211	2.45%	35	Palencia	5,526,664	1.18%
12	Granada	10,366,503	2.22%	36	Vizcaya	5,358,605	1.15%
13	Murcia	10,212,841	2.18%	37	Huesca	4,840,892	1.04%
14	Toledo	10,012,321	2.14%	38	Almería	4,530,130	0.97%
15	Valladolid	9,360,141	2.00%	39	Guadalajara	4,516,146	0.97%
16	Alicante	9,268,694	1.98%	40	Teruel	4,431,129	0.95%
17	Jaén	9,268,156	1.98%	41	Cuenca	4,343,872	0.93%
18	Girona	8,393,564	1.80%	42	Ávila	4,319,716	0.92%
19	Salamanca	8,313,426	1.78%	43	Logroño	3,902,175	0.83%
20	Huelva	8,280,197	1.77%	44	Segovia	3,885,507	0.83%
21	Ciudad Real	7,356,493	1.57%	45	Soria	3,505,942	0.75%
22	Burgos	7,330,367	1.57%	46	Navarra	2,988,265	0.64%
23	León	7,187,341	1.54%	47	Guipúzcoa	2,014,111	0.43%
24	Santander	6,894,953	1.47%	48	Álava	1,608,415	0.34%

Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1916.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Madrid	65,113,129	17.36%	25	Cáceres	4,988,530	1.33%
2	Barcelona	48,470,575	12.92%	26	Huelva	4,803,107	1.28%
3	Valencia	16,649,828	4.44%	27	Lugo	4,739,110	1.26%
4	Sevilla	13,851,641	3.69%	28	Salamanca	4,706,634	1.25%
5	Oviedo	10,761,378	2.87%	29	Burgos	4,541,310	1.21%
6	Zaragoza	9,775,901	2.61%	30	Tarragona	4,478,066	1.19%
7	Granada	8,919,996	2.38%	31	Lérida	4,354,904	1.16%
8	Coruña (La)	8,864,444	2.36%	32	Almería	4,332,607	1.15%
9	Cádiz	8,189,737	2.18%	33	Castellón	4,253,705	1.13%
10	Córdoba	8,189,007	2.18%	34	León	4,187,748	1.12%
11	Badajoz	7,809,417	2.08%	35	Zamora	4,167,676	1.11%
12	Toledo	7,769,604	2.07%	36	Ourense	3,765,173	1.00%
13	Málaga	7,722,130	2.06%	37	Palencia	3,755,601	1.00%
14	Jaén	7,390,678	1.97%	38	Huesca	3,454,999	0.92%
15	Vizcaya	7,318,616	1.95%	39	Teruel	3,369,113	0.90%
16	Ciudad Real	6,623,113	1.77%	40	Guadalajara	3,227,531	0.86%
17	Murcia	6,401,501	1.71%	41	Cuenca	3,201,336	0.85%
18	Alicante	6,215,321	1.66%	42	Ávila	2,917,493	0.78%
19	Santander	5,995,347	1.60%	43	Logroño	2,681,046	0.71%
20	Valladolid	5,885,462	1.57%	44	Segovia	2,554,330	0.68%
21	Girona	5,784,481	1.54%	45	Navarra	2,364,290	0.63%
22	Albacete	5,779,673	1.54%	46	Soria	2,192,344	0.58%
23	Pontevedra	5,252,201	1.40%	47	Guipúzcoa	1,299,438	0.35%
24	Baleares	5,033,301	1.34%	48	Álava	1,076,122	0.29%

Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1922.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Madrid	89,550,304	20.73%	25	Huelva	5,195,527	1.20%
2	Barcelona	70,955,854	16.43%	26	Girona	5,072,523	1.17%
3	Valencia	18,962,980	4.39%	27	Cáceres	4,842,016	1.12%
4	Sevilla	16,308,966	3.78%	28	Almería	4,719,810	1.09%
5	Oviedo	14,967,222	3.46%	29	León	4,360,292	1.01%
6	Zaragoza	9,856,763	2.28%	30	Lugo	4,264,741	0.99%
7	Vizcaya	9,632,299	2.23%	31	Salamanca	4,252,334	0.98%
8	Badajoz	9,011,189	2.09%	32	Lérida	4,148,263	0.96%
9	Coruña (La)	8,880,067	2.06%	33	Burgos	4,012,709	0.93%
10	Málaga	8,707,952	2.02%	34	Castellón	3,966,028	0.92%
11	Cádiz	8,224,749	1.90%	35	Navarra	3,774,220	0.87%
12	Granada	7,839,934	1.81%	36	Ourense	3,402,944	0.79%
13	Murcia	7,785,909	1.80%	37	Palencia	3,095,094	0.72%
14	Córdoba	7,690,274	1.78%	38	Huesca	2,864,031	0.66%
15	Alicante	7,444,081	1.72%	39	Logroño	2,858,221	0.66%
16	Santander	7,392,747	1.71%	40	Zamora	2,779,784	0.64%
17	Toledo	7,170,145	1.66%	41	Cuenca	2,646,879	0.61%
18	Ciudad Real	6,598,108	1.53%	42	Guadalajara	2,546,346	0.59%
19	Jaén	6,046,789	1.40%	43	Teruel	2,336,506	0.54%
20	Albacete	5,908,178	1.37%	44	Guipúzcoa	2,311,069	0.53%
21	Valladolid	5,886,841	1.36%	45	Ávila	2,155,420	0.50%
22	Pontevedra	5,574,809	1.29%	46	Segovia	1,989,627	0.46%
23	Baleares	5,572,076	1.29%	47	Soria	1,635,782	0.38%
24	Tarragona	5,373,834	1.24%	48	Álava	1,416,533	0.33%

Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1928.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Madrid	139,998,486	19.92%	25	Huelva	8,654,883	1.23%
2	Barcelona	114,474,468	16.29%	26	Girona	8,584,719	1.22%
3	Valencia	34,153,911	4.86%	27	Valladolid	8,329,302	1.19%
4	Sevilla	27,000,129	3.84%	28	Cáceres	8,323,702	1.18%
5	Oviedo	19,340,226	2.75%	29	Almería	7,478,721	1.06%
6	Vizcaya	18,859,334	2.68%	30	Salamanca	7,045,037	1.00%
7	Málaga	16,768,550	2.39%	31	Lérida	6,404,082	0.91%
8	Zaragoza	15,965,136	2.27%	32	Lugo	6,308,111	0.90%
9	Granada	15,542,710	2.21%	33	León	6,226,783	0.89%
10	Badajoz	15,504,008	2.21%	34	Ourense	5,892,865	0.84%
11	Cádiz	15,156,055	2.16%	35	Burgos	5,850,179	0.83%
12	Murcia	13,950,804	1.99%	36	Palencia	4,781,557	0.68%
13	Coruña (La)	13,814,047	1.97%	37	Logroño	4,558,665	0.65%
14	Alicante	13,233,294	1.88%	38	Zamora	4,527,786	0.64%
15	Córdoba	12,611,886	1.79%	39	Cuenca	4,372,398	0.62%
16	Tarragona	11,506,464	1.64%	40	Huesca	4,136,771	0.59%
17	Jaén	11,102,026	1.58%	41	Guadalajara	3,851,297	0.55%
18	Santander	10,933,354	1.56%	42	Guipúzcoa	3,831,005	0.55%
19	Toledo	9,948,188	1.42%	43	Ávila	3,735,150	0.53%
20	Ciudad Real	9,902,868	1.41%	44	Teruel	3,683,302	0.52%
21	Baleares	9,764,656	1.39%	45	Segovia	3,411,310	0.49%
22	Albacete	8,802,667	1.25%	46	Navarra	2,876,699	0.41%
23	Castellón	8,705,261	1.24%	47	Soria	2,485,196	0.35%
24	Pontevedra	8,668,565	1.23%	48	Álava	1,649,795	0.23%

Sources: See Chapter 2 and Section 3.4.

Table 3A1: Tax contributions per provinces in real terms, 1934.

Rank	Provinces	Total Revenues	% of total Contributions	Rank	Provinces	Total Revenues	% of total Contributions
1	Barcelona	143,394,676	17.35%	25	Castellón	11,016,551	1.33%
2	Madrid	120,096,829	14.53%	26	Pontevedra	10,915,778	1.32%
3	Valencia	41,704,010	5.05%	27	Tarragona	10,810,119	1.31%
4	Sevilla	33,023,737	4.00%	28	Almería	9,746,457	1.18%
5	Oviedo	23,448,970	2.84%	29	Salamanca	9,418,936	1.14%
6	Alicante	22,704,710	2.75%	30	Albacete	9,173,298	1.11%
7	Vizcaya	21,742,207	2.63%	31	Lérida	8,039,019	0.97%
8	Granada	21,633,702	2.62%	32	León	7,905,505	0.96%
9	Badajoz	21,627,330	2.62%	33	Burgos	7,840,778	0.95%
10	Cádiz	20,895,698	2.53%	34	Logroño	6,983,498	0.84%
11	Zaragoza	20,370,068	2.46%	35	Ourense	6,941,032	0.84%
12	Málaga	19,017,099	2.30%	36	Lugo	6,782,424	0.82%
13	Murcia	18,630,893	2.25%	37	Palencia	6,199,720	0.75%
14	Coruña (La)	17,852,548	2.16%	38	Cuenca	5,266,427	0.64%
15	Córdoba	15,863,581	1.92%	39	Zamora	4,803,506	0.58%
16	Jaén	14,984,178	1.81%	40	Ávila	4,781,293	0.58%
17	Girona	12,360,121	1.50%	41	Huesca	4,723,211	0.57%
18	Ciudad Real	12,190,010	1.47%	42	Guadalajara	4,579,593	0.55%
19	Toledo	12,177,964	1.47%	43	Teruel	4,576,352	0.55%
20	Huelva	11,552,119	1.40%	44	Guipúzcoa	4,461,243	0.54%
21	Cáceres	11,429,493	1.38%	45	Segovia	4,011,332	0.49%
22	Valladolid	11,409,753	1.38%	46	Navarra	2,822,793	0.34%
23	Baleares	11,193,772	1.35%	47	Soria	2,736,028	0.33%
24	Santander	11,046,118	1.34%	48	Álava	1,729,087	0.21%

Sources: See Chapter 2 and Section 3.4.

4

Agrarian tax pressure in Spain after the
implementation of the land cadastre,
1901-1934

4.1 Introduction

The taxation of agriculture is of particular relevance in developing countries, where the sector accounts for an important part of the countries' output and employment. Yet a high share of agriculture in GDP is also a proxy on the difficulties of imposing taxation.¹ Spain was a developing dual economy at the beginning of the 20th Century with only a few industrialised regions while the rest of the economy remained predominantly agrarian; the agrarian sector accounted for about one third of GDP and two-thirds of the active population workforce in 1910.² Several models in development economics discuss the importance of taxing excess revenues from the agricultural sector and channel them as investment towards the development of the industrial sector to foster economic growth. Hence, studying the taxation of agriculture in developing economies is crucial to understand its economic development. In Spain, the land tax, the *Contribución Territorial* (hereafter, the territorial contribution) was the main source of tax revenues for the Spanish state during the second half the 19th Century, providing 30% of total tax revenues for the period 1850-1900.³ Nonetheless, the previous chapter showed low tax burdens in the predominantly agrarian provinces.

This chapter studies the impact of the implementation of the land cadastre on agrarian tax pressure. A land cadastre is a crucial statistical and fiscal database to measure land wealth. Spain did not have a land cadastre until 1906; since the creation of the territorial contribution in 1845, the tax was levied yearly on land properties based on declarations done by the landowners themselves. As the Spanish central government had no means to verify the validity of these declarations without a

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1. Robin Burgess and Nicholas Stern, "Taxation and Development," *Journal of Economic Literature* 31 no. 2 (June 1993): 792.
 2. Simpson, "Economic development in Spain, 1850–1936," 354; Sánchez-Albornoz, *España hace un siglo: una economía dual*; Joan R. Rosés, "Why Isn't the Whole of Spain Industrialized?," 995–1022.
 3. Rafael Vallejo Pousada, "La Estadística territorial española desde 1845 a 1900. ¿Por qué no se hizo un Catastro en el siglo XIX?" *CT: Catastro* 68 (April 2010): 83.

cadastre, landowners consistently cheated in their declarations to avoid paying taxes. Hence, the state did not know the exact extent of the agrarian tax base throughout the second half of the 19th Century.

The cadastre law approved in 1906 had two major objectives: to increase the territorial contribution tax revenues and to offer more accurate estimates of the agrarian tax base. However, elaborating a cadastre is a long and costly process. The cadastre was progressively implemented across Spanish provinces, and it took decades to be completed – it was only finished in the 1960s.⁴ As a consequence, a dual agrarian taxation system emerged in the first four decades of the 20th Century: in the provinces where the cadastre was completed first, landowners would pay the territorial contribution based on observable statistics of land wealth verified and approved by the Spanish state. In the provinces where the cadastre works had not yet started, landowners would continue to pay the territorial contribution based on their own declarations.

The hypothesis in this chapter is that the cadastre should have increased the agrarian tax pressure by making taxation more responsive to agrarian production in the provinces where it was implemented. Before the cadastre, landowners could lie in their declarations and pay less taxes without facing retribution, but once the cadastre was implemented, it was the state which determined the exact tax base. Hence, I expect the cadastre to increase the agrarian tax pressure as the state uncovered hidden land wealth. To perform the analysis, the chapter uses the territorial contribution series and the cadastre estimates constructed in Chapter 2, together with complementary data (see Section 4.4).

The results show that nominal and real territorial contribution revenues increased in the provinces included in the cadastre, but that the cadastre did not in-

4. Corominas Abadal, “Inequidad, fraude y conservadurismo. La tributación agraria y el catastro parcelario en la España del siglo XX (1906-1966),” 17–36.

crease the agrarian tax pressure. In fact, agrarian tax pressure decreased constantly over the period for all Spanish provinces as agrarian production grew faster than agrarian taxation. The cadastre represented only a marginal improvement with respect to the previous regime of agrarian taxation; it updated land values and led to higher territorial contribution revenues but it fell short of bringing a significant reform. The decrease in agrarian tax pressure suggests a high opportunity cost for the state in foregone revenues and fiscal capacity: had taxation been more responsive to production, the cadastre could have brought more tax revenues to the state. Not only the cadastre did not improve the state's fiscal capacity, it protected the agrarian sector and allowed it to keep the benefits of production and productivity growth.

The chapter is organised as follows: Section 4.2 discusses the literature on agrarian taxation and development, and on the agrarian sector in Spain in the 19th and 20th Centuries. Section 4.3 explains the history of the territorial contribution and the cadastre in Spain. Section 4.4 describes the data and the research methodology. Section 4.5 presents and discusses the results. Section 4.6 concludes.

4.2 Literature Review

The taxation of agriculture is a crucial part of the larger debates on taxation in developing countries, due to the predominant size of the agricultural sector in their economies.⁵ Discussions on the terms of trade between the agricultural and the industrial sectors were key debates in development economics.⁶ Early development

5. Burgess and Stern, "Taxation and Development," 792–93; Ehtisham Ahmad and Nicholas Stern, *The theory and practice of tax reform in developing countries* (Cambridge: Cambridge University Press, 1991), 94–113; David Newbery, "Taxation and Development," in *The theory of taxation for developing countries*, ed. David M. G. Newbery and Nicholas H. Stern (New York: Oxford University Press, 1987), 185–204; David Newbery, "Agricultural Taxation: The Main Issues," in *The theory of taxation for developing countries*, ed. David M. G. Newbery and Nicholas H. Stern (New York: Oxford University Press, 1987), 366–86.

6. Avinash Dixit, "Models of dual economies," in *Models of Economic Growth* ed. J.A. Mirrlees and N.H. Stern (London: Macmillan. International Economic Association Conference Volume, 1973), 325–52; Michael Lipton, *Why Poor People Stay Poor: Urban Bias in World Development*

economists highlighted the important role that taxing agriculture plays in capital formation, thus contributing to a country's development and economic growth. In short, the excess revenues from the agricultural sector should be taxed and redirected as investment towards the development of the industrial sector to foster economic growth.⁷ 19th-Century Japan and England during the Industrial Revolution are examples where the taxation of agriculture mobilised resources to support investment and growth for the industrial sector.⁸

However, taxing agriculture is complicated: it is often impossible to tax transactions between producers and consumers in informal agricultural markets.⁹ Governments can nonetheless use several tax instruments to tax agriculture, such as land taxes, taxing inputs and outputs, an agricultural income tax or trade taxes.¹⁰ Ahmad and Stern argue that land taxes are the optimal tax instruments for agriculture.¹¹ Indeed, developing states often resolve to taxing land, which is "visible, immovable and serves as a good indicator of [agrarian] wealth."¹²

Careful land records, or land cadastres, are required for effective land taxation. They fulfil three important functions: first, they measure the boundaries of all properties. Secondly, they secure owners' property rights over their lands. Thirdly, they determine the tax bases. Thus, cadastres register who the landowners are, protect their property rights, and also determine the land values for tax purposes. Recent

(London: Temple Smith, 1977).

7. See Bruce F. Johnston and John W. Mellor, "The Role of Agriculture in Economic Development," *The American Economic Review* 51, no. 4 (September 1961): 576–80; Evgeny Preobrazhensky, *The New Economics*, trans. Brian Pearce (Oxford: Clarendon Press, 1965), 86–90; John C. H. Fei and Gustav Ranis, *Development of the Labor Surplus Economy. Theory and Policy* (Yale University: The Economic Growth Centre, 1964), 54–5; Ragnar Nurkse, *Problems of Capital Formation in Underdeveloped Countries* (Oxford: Basil Blackwell, 1953), 146–52.
8. Gustav Ranis, "The Financing of Japanese Economic Development," *The Economic History Review* New Series 11, no. 3 (April 1959): 440–54; Patrick O'Brien, "Agriculture and the Industrial Revolution," *Economic History Review* 30 no. 1 (February 1977): 177.
9. Burgess and Stern, "Taxation and Development," 792; Ahmad and Stern, *The theory and practice of tax reform in developing countries*, 94.
10. Ahmad and Stern, *The theory and practice of tax reform in developing countries*, 107–10.
11. Ahmad and Stern, *The theory and practice of tax reform in developing countries*, 112.
12. Burgess and Stern, "Taxation and Development," 793.

research has shown that land cadastres are associated with higher fiscal capacity and positive long-run economic growth. D’Arcy and Nistotskaya showed that countries with advanced cadastres early on in history had a higher early modern fiscal capacity which persists into higher tax revenue collection today, compared to states with lower early modern fiscal capacity.¹³ D’Arcy, Nistotskaya and Olsson found that implementing cadastral institutions was associated with a 2.16 percentage point immediate increase in the level of GDP per capita in a panel of countries for the period 1950-2015.¹⁴

Nonetheless, resistance to land taxation is fierce and effective in developing economies, where land wealth holders are closely intertwined with the political powers and use their position to block such measures. Indeed, tax evaders are unlikely to welcome policies designed to end their fiscal evasion.¹⁵ In Colombia in 1973, landowners lobbied the Ministry of Agriculture and forced the suspension of a law creating an income tax on agricultural land proposed by the parliament.¹⁶ In Argentina in 1986, the farm lobby and government members successfully opposed the implementation of a land tax suggested by the World Bank as part of a conditional loan.¹⁷ The implementation of the land cadastre in Spain and the changes it brought to land taxation was also fiercely opposed by the landowners in the 19th and 20th Centuries. Corominas Abadal and Pro Ruiz document in great detail the historical political opposition to the land cadastre in Spain before and after its implementation.¹⁸

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13. Michelle D’Arcy and Marina Nistotskaya, “The early modern origins of contemporary European tax outcomes,” *European Journal of Political Research* 57, no. 1 (February 2018): 48.
 14. Michelle D’Arcy, Marina Nistotskaya and Ola Olsson. “Land Property Rights, Cadasters and Economic Growth: A Cross-Country Panel 1000-2015 CE (March 9, 2021),” *SSRN Working Papers*: 1-2. Available at SSRN: <https://ssrn.com/abstract=3800791>.
 15. Burgess and Stern, “Taxation and Development,” 801.
 16. William Ascher, “Risk, Politics and Tax Reform: Lessons from Some Latin American Experiences” in *Tax Reform in Developing Countries*, ed. Malcom Gillis (Duke: Duke University Press, 1989), 427–37.
 17. Burgess and Stern, “Taxation and Development,” 802.
 18. See Corominas Abadal, “Inequidad, fraude y conservadurismo. La tributación agraria y el catastro parcelario en la España del siglo XX (1906-1966)” ; Pro Ruiz, *Estado, geometría y propiedad. Los orígenes del catastro en España (1715-1941)*.

The theoretical literature on agrarian taxation in development economics often focuses on contemporary economies, and lacks a broader historical perspective on how processes unfolded in earlier developing agrarian economies.¹⁹ Spain was a dual economy in the late 19th and early 20th Centuries, where an industrial sector was developing in a few regions while the rest of the regions were majoritarily agrarian.²⁰ The historical literature's main debate has centered around determining whether Spanish agriculture was "backwards" or not. Despite its relative size in the Spanish economy of the 19th Century, the agricultural sector contributed little to economic growth.²¹ According to O'Brien and Prados de la Escosura, agricultural output per worker and agricultural output per hectare were well below the levels of the other big Western European economies by the early 20th Century.²² Tortella argues that the development levels were so low in the early 20th Century, that it was virtually impossible for any significant agrarian growth to have occurred during the 19th Century;²³ indeed, Simpson argues that agrarian production growth was minimal, with an estimated yearly rate of increase between 0.64% and 0.76% for the whole 19th Century.²⁴ Garrabou and Sanz nonetheless contend that the rise in agrarian exports in the second half of the 19th Century reflected increases in production and greater specialisation.²⁵

The causes behind Spain's agrarian "backwardness" range from climate to

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19. With the notable exception of the two case studies mentioned in footnote 8, namely 19th-Century Japan and England during the Industrial Revolution.
 20. Sánchez-Albornoz, *España Hace Un Siglo: Una Economía Dual*, 1968), 7–29.
 21. Simpson, "Economic development in Spain, 1850–1936," 354.
 22. Patrick O'Brien and Leandro Prados de la Escosura, "Agricultural Productivity and European Industrialization, 1890-1980," *The Economic History Review* 45, no. 3 (August 1992): 531.
 23. James Simpson, "La producción agraria y el consumo español en el siglo XIX," *Revista de Historia Económica – Journal of Iberian and Latin American Economic History* 7, no. 2 (September 1989): 376.
 24. Simpson, "La producción agraria y el consumo español en el siglo XIX," 379.
 25. Ramón Garrabou and Jesús Sanz Fernández, "Introducción: La Agricultura Española durante el Siglo XIX: ¿Inmovilismo o Cambio?" in *Historia agraria de la España contemporánea. Vol 2. Expansión y crisis (1850-1900)*, ed. Ramón Garrabou y Jesús Sanz (Barcelona: Editorial Crítica, 1985), 7–191.

institutions. Large areas of the country are characterised by medium and extreme aridity climate conditions leading to low yields and cannot be used for agriculture due to terrain ruggedness; the ruggedness also difficultated transport, raised production costs and impede the development of agrarian commercial markets.²⁶ The literature recurrently highlights the unequal distribution of land ownership, especially in the southern half of Spain, where large latifundia predominate. Carrión and Malefakis wrote that transforming the southern latifundia into small landholdings could have led to efficiency gains by replacing extensive production by intensive farming.²⁷ Historians have argued that the liberal reforms of the 19th Century were not able to correct, and even accentuated, this historical rural problem. Fontana retraced the debates on whether the large land sales through disentanglements of church, royal and communal lands in the 19th Century aggravated the land concentration.²⁸ Clar and Pinilla argued that the absence of an agrarian reform to end land concentration distorted mechanisation incentives and slowed agricultural growth.²⁹ Simpson argued that a combination of “government policies, the weakness of urban demand for farm products and in attracting agricultural labour, the difficulties in achieving export-led growth, and the technical restrictions to both improving yields in dry-farming and introducing more labour-intensive crops” were all factors behind the Spanish agrarian “backwardness.”³⁰ Tortella noted that migrations from agriculture to industry were extremely limited during the 19th Century and that the high rate of the labour force

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26. Ernesto Clar and Vicente Pinilla, “The contribution of agriculture to Spanish economic development, 1870-1973,” in *Agriculture and Economic Development in Europe Since 1870*, ed. Pedro Lains and Vicente Pinilla (London: Routledge Explorations in Economic History, 2009), 312.
27. Malefakis, *Reforma agraria y revolución campesina en la España del siglo XX*; Carrion, *Los latifundios en España: su importancia, origen, consecuencias y soluciones*.
28. Josep Fontana, “La crisis agraria de comienzos del siglo XIX y sus repercusiones en España,” in *Historia agraria de la España contemporánea. Vol. 1. Cambio social y nuevas formas de propiedad (1800-1850)*, ed. Ramon Garrabou i Segura and Ángel García-Sanz Marcotegui (Barcelona: Editorial Crítica, 1985), 103–28.
29. Clar and Pinilla, “The contribution of agriculture to Spanish economic development,” 312.
30. James Simpson, *Spanish agriculture: the long Siesta, 1765-1965* (Cambridge: Cambridge Studies in Economic History, 1995), 4.

in an unproductive sector led to low rates of labour productivity.³¹

Agrarian economic outcomes improved significantly in the first decades of the 20th Century. Simpson found that land and labour productivity increased significantly from the 1920s onwards, with the rate of land productivity doubling the rate of labour productivity.³² He also found that labour productivity grew yearly at 1.1% between 1891 and 1933, but with a slow period of growth (0.17% yearly) between 1891 and 1913, followed by a strong surge (2.26% yearly) between 1913 and 1933.³³ Carmona and Rosés showed a fast convergence in relative land prices across provinces between 1904 and 1934, indicating that land markets worked efficiently in the early 20th Century.³⁴ The Spanish government approved the implementation of a land cadastre in 1906. However, the cadastre's three main goals were mostly fiscal in nature: the cadastre aimed to obtain better estimates of the agrarian tax base, higher territorial contribution revenues, and to improve tax fairness across taxpayers

The cadastre undeniably aimed at improving fiscal capacity through a greater state centralisation (see Section 4.3);³⁵ it was probably a smart measure to improve fiscal capacity in Spain. There was economic growth in the agrarian sector, which remained the most important sector of the economy, and the land tax was the main source of fiscal revenues for the state despite the widespread land occultation, and by elaborating a cadastre, the Spanish government sought to unveil the hidden land wealth and collect more tax revenues. In a context of shallow fiscal capacity, agrarian

31. Gabriel Tortella Casares, *El desarrollo de la España contemporánea: historia económica de los siglos XIX y XX* (Madrid: Alianza Editorial, 1998), 71.

32. James Simpson, "La producción y la productividad agraria española, 1890–1936," *Revista de Historia Económica – Journal of Iberian and Latin American Economic History* 12, no. 1 (March 1994): 53.

33. Simpson, "La producción y la productividad agraria española, 1890–1936," 65.

34. Juan Carmona and Joan R. Rosés, "Land markets and agrarian backwardness (Spain, 1904 – 1934)," *European Review of Economic History* 16, no. 1 (February 2012): 74–96.

35. For the literature on the improvement of fiscal capacity through centralisation of state revenues, see D'Arcy, Nistotskaya and Olsson, "Land Property Rights, Cadasters and Economic Growth," 9; Mark Dincecco and Gabriel Katz, "State Capacity and Long-Run Economic Performance," *The Economic Journal* 126, no. 590 (February 2016): 190.

improvements and incipient industrialisation, studying the impact of the cadastre and its impact on agrarians speaks to the debates of the terms of taxation between agriculture and industry, and its relationship with economic development.

4.3 The land cadastre and the territorial contribution

Spain started to elaborate its cadastre in 1906 and finished it in 1966.³⁶ This is relatively late compared to the Western European economies, which started to elaborate their cadastres throughout the 19th Century. Table 4.1 reports the cadastre completion dates in Europe. Under Napoleon, France and Belgium started their cadastres in 1807 and 1808 respectively and completed them by 1850 and 1843 respectively; Italy started in 1866; Switzerland, started in 1811 and some cantons were completely measured as early as 1818.³⁷

Without a land cadastre, it was impossible for the Spanish state to know the exact value of land across its territory. Hence, the territorial contribution, first implemented in 1845 as part of the liberal fiscal reform (see Section 3.3), was collected without proper knowledge of the exact tax base.³⁸ Nonetheless, the territorial contribution was the most important tax of the new liberal fiscal system: it accounted for

36. Corominas Abadal, “Inequidad, fraude y conservadurismo. La tributación agraria y el catastro parcelario en la España del siglo XX (1906-1966),” 17–36.

37. For France, see Zheng Kang, “L’immobilier au XIXe siècle en France : Entre statistique et fiscalité.” *Revue d’économie financière*. Numéro Hors-Série : La crise financière de l’immobilier : Réflexions sur un phénomène mondial Suivi des actes du séminaire Institutional investment in real estate (1993): 73; for Belgium, see Wouter Ronsijn, “Taxer les revenus fonciers en Belgique au XIXe siècle: évaluation de la mesure cadastrales,” in *La Mesure cadastrale. Estimer la valeur du foncier*, ed. by Florence Bourillon and Nadine Vivier (Rennes: Presses universitaires de Rennes, 2012), 169–71. For Italy, see Gabriel García Badell y Abadía, *La contribución territorial y el catastro de riqueza rústica* (Madrid: Instituto de Estudios Fiscales, 1968), 70–71; for Switzerland see García Badell y Abadía, *La contribución territorial y el catastro de riqueza rústica*, 105–06.

38. Vallejo Pousada, “¿Por qué no se hizo un Catastro en el siglo XIX?,” 84.

Table 4.1: Cadastres in European countries.

Country	Start Date	End Date
France	1807	1850
Belgium	1808	1843
Italy	1866	-
Switzerland	1811	1818*
Prussia	-	Before 1871
Bavaria	-	Before 1871
Spain	1906	1966

Notes: *For some Swiss cantons only.

Sources: For France, see Kang, “L’immobilier au XIXe siècle en France : Entre statistique et fiscalité”, 73; for Belgium, see Ronsijn, “Taxer les revenus fonciers en Belgique au XIXe siècle: évaluation de la mesure cadastrales,” 169–71. For the rest, see García Badell y Abadía, *La contribución territorial y el catastro de riqueza rústica*, 70–106.

30% of total tax revenues between 1850 and 1900.³⁹ Similar taxes on agrarian production in neighbouring Portugal and France collected 8.8% and 14.2% respectively for the same period.⁴⁰ This posits the obvious question of how could the territorial contribution be levied without a cadastre in place and without proper knowledge of the agrarian tax base?

The architects of the 1845 reform as well as the successive governments throughout the 19th Century were aware of the problems that arose from establishing the territorial contribution without a cadastre. However, in the mid-19th Century, the Spanish state had massive liquidity issues and was in dire needs of revenues.⁴¹ The government decided thus to first implement the territorial contribution via a fixed quota – a *cupo* in Spanish – assigned on wealth estimates elaborated from the scarce available data, in order to obtain immediate revenues, and then progressively elaborate the cadastre.⁴² On the one hand, they knew that they were sacrificing equity

39. Pro Ruiz, “Ocultación de la riqueza rústica en España (1870-1936),” 90; Rafael Vallejo Pousada, “Los amillaramientos como fuente estadística: una visión crítica desde la contribución territorial,” *Historia Agraria* 20 (April 2000): 97.

40. Vallejo Pousada, “¿Por qué no se hizo un Catastro en el siglo XIX?” 83–4.

41. Comín, *Las Cuentas de la Hacienda Preliberal en España (1800-1855)*, 35-39 and 82.

42. Vallejo Pousada, “Los amillaramientos como fuente estadística,” 97–9.

in taxation across provinces in the short term, as the tax would be levied arbitrarily. Indeed, since its very implementation, politicians in the Spanish Parliament protested that the territorial contribution was unequally distributed across the territory.⁴³ On the other hand, they also hoped that such an arbitrary mechanism would incentivise the creation of the cadastre.⁴⁴ Understandably, the system would not be sustainable without a statistical base, and they believed in the long run landowners would have an interest in paying what corresponded to them.

Unfortunately, the reasonings did not prove to be right, and the cadastre was not elaborated for a variety of reasons. Firstly, parliamentarians raised concerns about its costs: elaborating a cadastre was expensive and technologically costly, and in a state with scarce revenues, devoting money to building a cadastre was not seen as an urgent priority.⁴⁵ Secondly, while the tax quotas were arbitrary, they still only taxed a very small fraction of the richest contributors' real wealth: thus, the representatives of the landed elites in parliament fiercely opposed the creation of the land cadastre, fearing that it would expose their real landed wealth. Without the cadastre, landowners could keep hiding their lands and pay less territorial contribution taxes.⁴⁶

It became clear in the years following the 1845 reform that the cadastre would not be undertaken any time soon. Yet the state still needed a way to know its tax base, so the government came with a second-best solution: from 1850 onwards, each municipality had to produce two documents each year, known as the *amillaramientos* and the *cartillas evaluatorias*. The former listed all the properties within the municipalities as well as its owners; the latter estimated the rents produced by each

43. Comín, ““Una burguesía revolucionaria” poco revolucionaria en cuestiones de Hacienda (1808-1874),” 87.

44. Vallejo Pousada, “Los amillaramientos como fuente estadística,” 100.

45. Comín, *Hacienda y Economía en la España Contemporánea*, 909.

46. Comín, “La corrupción permanente: el fraude fiscal en España,” 487; Comín, ““Una burguesía revolucionaria” poco revolucionaria en cuestiones de Hacienda (1808-1874),” 85.

property. Both documents were voluntary declarations from landowners, created by the local administrations known as *juntas*, who were composed of the municipalities' mayor and the biggest taxpayers. Once the documents were drafted and approved at the local level, they were sent to the provincial authorities. Figure 4.1 shows how the *amillaramientos* regime worked: after the *amillaramientos* were drafted at the local level, they were sent to the provincial authorities, who collected all *amillaramientos* in a province, and then sent them to the central state. With that information, the Spanish government assigned a yearly quota to collect from the territorial contribution at the national level and divided it across provinces. The provincial authorities then used the *amillaramientos* to divide that provincial tax quota among its localities. Once the municipal quotas were set up, it was once again the responsibility of each local *junta* to divide that quota across the municipalities' landowners and of levying the tax.

Importantly, neither the provincial authorities nor the central state had any means to verify the validity of the declarations or the procedures at the local level. Without proper central state supervision of the *amillaramientos*, land hiding was widespread.⁴⁷ Local strongmen, called *caciques*, controlled the decision-making process and the tax collection, and used their position of power to evade taxes and benefit friends, allies and *protégés*⁴⁸ Furthermore, villages as a whole also had an interest to coalesce against provincial authorities to pay less taxes.⁴⁹ This would often pave the way for bitter negotiations between local *juntas* and provincial administrations when it came to dividing the quotas, and any attempted increases in the tax quota would fiercely be opposed by the municipalities.⁵⁰

The *amillaramientos* system was designed as a temporary solution before the

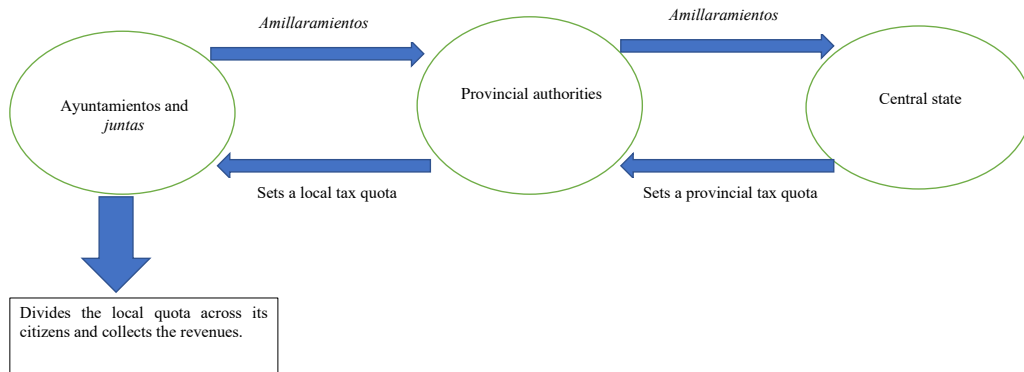
47. Pro Ruiz, "Ocultación de la riqueza rústica en España (1870-1936)," 90; Comín, "La corrupción permanente: el fraude fiscal en España," 487.

48. Comín, "La corrupción permanente: el fraude fiscal en España," 487.

49. Pro Ruiz, "Ocultación de la riqueza rústica en España (1870-1936)," 98.

50. Comín, *Hacienda y Economía en la España Contemporánea*, 908.

Figure 4.1: The *Amillaramientos* regime.



Notes: This diagram shows how the *amillaramientos* system worked. The *ayuntamientos* and *juntas* of a province collected their *amillaramientos* and sent them to the provincial authorities, who then sent them to the central state. Based on these data, the central state set a provincial tax quota that the provincial authorities had to meet. These authorities then divided these quotas across municipalities based on their *amillaramientos*. Finally, the local actors divided the local quota across its citizens and collected the tax revenues on behalf of the central state.

elaboration of a cadastre, yet it ended up lasting for more than a century. Political interests predominated over statistical and equity concerns. Such was the lack of control that the central administration did not have the means to check the validity of the declarations in the *amillaramientos* for most of the first twenty years of its existence. Pro Ruiz showed that in 1868, twenty years after the implementation of the tax, the central Treasury only had copies of *amillaramientos* for 23 provinces and that the extension of hidden land was bigger than the extension of the declared land in at least thirteen provinces.⁵¹ The Treasury minister at the time, Figuerola, estimated

51. Pro Ruiz, “Ocultación de la riqueza rústica en España (1870-1936),” 92.

that 39% of the rustic land of the country, or 18m hectares, were not declared in the *amillaramientos*.

In the 1870s, the government undertook a set of preliminary cadastral works known as the *avances catastrales*. The goal was to undertake a precise measurement of the land plots of each village and to estimate as closely as possible production on those land plots. The *avances catastrales* were undertaken in 9 provinces between 1872 and 1893: they found a land increase of 26.1% with respect to the land declared in the *amillaramientos*.⁵² Pro Ruiz showed that the majority of municipalities in the province of Cádiz, one of the first provinces to be included in the *avance catastral*, either hid their productive land or grossly inflated the amount of unproductive land in the *amillaramientos*, if not both at the same time. Interestingly, he did not find a correlation between high levels of land concentration and undeclared land, suggesting that big landowners actually declared their landholdings properly, probably out of fear of property rights conflicts, but that they would massively declare it as unproductive land.⁵³

Following political pressures for the creation of a cadastre in the 1890s, including an unsuccessful attempt in 1900, the elaboration of a modern cadastre for fiscal purposes was finally approved by law in 1906.⁵⁴ Its implementation over time was slow, with measurement works starting in the Southern and Central provinces: the state believed that occultation was more widespread in those provinces, and there were economies of scale in measuring them due the presence of latifundia, The first provinces to be fully included in the cadastre were Albacete, Ciudad Real and Córdoba by 1911. By 1925, 43% of Spain's total land, or 20.5 million hectares had been registered in the cadastre. As with the *avances catastrales* of the 19th Century, the cadastre unveiled large amounts of hidden land: from 1907 to 1925, the value

52. Pro Ruiz, "Ocultación de la riqueza rústica en España (1870-1936)," 94.

53. Pro Ruiz, "Ocultación de la riqueza rústica en España (1870-1936)," 95–102.

54. Comín, *Hacienda y Economía en la España Contemporánea*, 910–11.

Table 4.2: Share of the territorial contribution in total tax revenues, 1850–1929.

Years	Percentage
1850-1900	30%
1905	18%
1910	19%
1914	16%
1920-1923	9.8%
1929	10.6%

Sources: Own elaboration using Vallejo Pousada, “¿Por qué no se hizo un Catastro en el siglo XIX?” 84; Martorell, “Hacienda y Política en el Primer Tercio del Siglo XX,” 256; Comín, *Hacienda y Economía en la España Contemporánea*, 924.

of total land in the provinces included in the cadastre went up by 99% with respect to what was declared in the *amillaramientos*. Plainly said, the land wealth in the provinces measured by the cadastre doubled in twenty years.⁵⁵

The implementation of the cadastre was not smooth: landowners opposed its elaboration and actively attempted to slow it down.⁵⁶ The measurement works were slow until 1919, then accelerated until 1923, and slowed down again under the dictatorship of General Primo de Rivera (1923–30). Primo de Rivera was supported by landowners, and in return, he protected their interests: a new cadastre law was approved in 1925, which significantly slowed down its elaboration and was in practice a fiscal concession to favour big landowners.⁵⁷ In 1932, the left-wing government who came to power after the democratic elections of 1931 abolished the law from 1925 and reinstated the initial cadastre law. The reactionary government that followed in 1933, abolished it once again and replaced it with a reactionary one. The law was once again derogated in 1936 by the new Popular Front government, shortly before the start of the Civil War.⁵⁸

55. Corominas Abadal, “La Contribución Territorial Rústica y el reparto de la carga tributaria en el siglo XX,” 91.

56. For more detailed information on the attempted and failed reforms between 1906 and 1919, see Comín, *Hacienda y Economía en la España Contemporánea*, 911–12.

57. For more details on the law approved in 1925, see Comín, *Hacienda y Economía en la España Contemporánea*, 914.

58. Comín, *Hacienda y Economía en la España Contemporánea*, 914.

Previous studies on the territorial contribution have found that the share of the territorial contribution revenues in the total state revenues decreased during the first decades of the 20th Century, going from 30% in the 19th Century to roughly 10.6% by 1929.⁵⁹ Table 4.2 reports different estimates of the share of the territorial contribution revenues in total tax revenues at the national level between 1850 and 1929. García Martín and Fernandez-Muro contended that the cadastre led to higher revenues and achieved more equity.⁶⁰ Most recent evidence challenges their view: Comín explained that the relative decline of the share of the territorial contribution in total tax revenues was due to an increase in total tax revenues whereas territorial contribution revenues remained flat.⁶¹ Corominas Abadal confirmed that territorial contribution revenues remained flat because the *amillaramientos* regime quotas remained unchanged for decades, and tax rates were low in the provinces included in the cadastre.⁶²

These studies look at the territorial contribution from a national perspective and tangentially mention the cadastre's impact on the territorial contribution at the provincial level. However, studying the impact of the cadastre on agrarian taxation from a provincial perspective is especially relevant because the cadastre was implemented in some provinces and not in others, thus creating a dual system of agrarian taxation in Spain. The next sections study the impact of the land cadastre from a provincial perspective.

59. Vallejo Pousada, "¿Por qué no se hizo un Catastro en el siglo XIX?," 84; Martorell, "Hacienda y Política en el Primer Tercio del Siglo XX," 256; Comín, *Hacienda y Economía en la España Contemporánea*, 924.

60. José Aurelio García Martín and María Jesús Fernández-Muro Ortiz, "Historia del régimen tributario de la Agricultura en España," *Anales de Economía* 12 (October-December 1971): 101–90.

61. Comín, *Hacienda y Economía en la España Contemporánea*, 924–25.

62. Corominas Abadal, "La Contribución Territorial Rústica y el reparto de la carga tributaria en el siglo XX," 91.

4.4 Data and Model

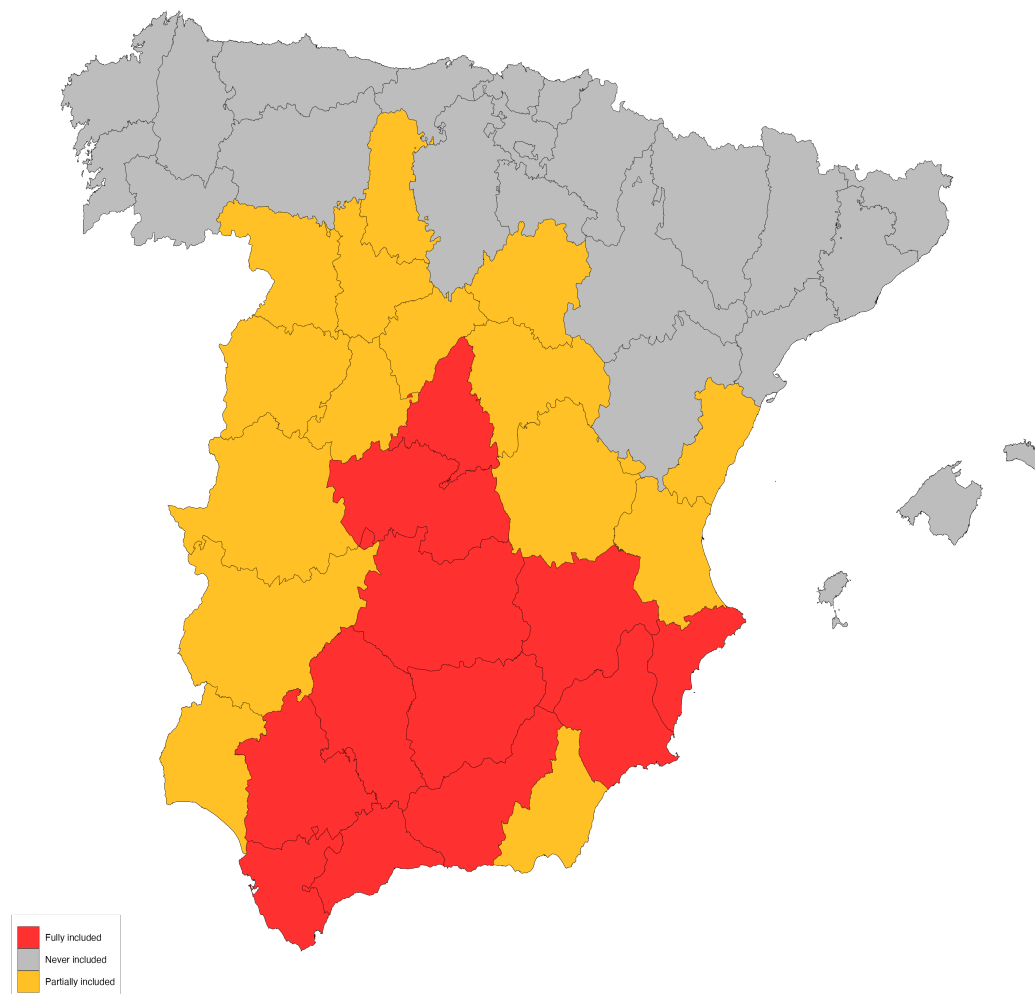
Under the *amillaramientos*, the tax base was determined by the landowners' own declarations. Under the cadastre, the tax base was determined by independent technicians who took into consideration real observable statistics, such as plot sizes, the crops grown, and estimates of production and productivity. The territorial contribution was a flat tax both under the *amillaramientos* and the cadastre. The constant tax rate was equal to 21% of the land value in the land plots in the *amillaramientos* and 16% in the land plots in the cadastre.⁶³ Take the following invented example: a landowner under the *amillaramientos* regime has 200 hectares of land and uses them all for vineyards, but only declares 100 hectares, of which he says 50 are unused and 50 are used for vineyards. Assume the state gives a value of 1.50 peseta to each hectare of land used for vineyards, and 0.5 pesetas on the unused land. The declared land would thus be valued at 100 pesetas, and under the *amillaramientos* regime, he would pay 16 pesetas of territorial contribution. Once his land is measured in the cadastre, its new land value would be 300 pesetas, so he will have to pay 42 pesetas: despite the reduction in the tax rate, his taxes would have increased by 26 pesetas.

Table 4.3 shows the date of completion of the cadastral works for the provinces fully included in the cadastre before 1936.⁶⁴ A province is categorised as a fully included in the year when the whole of a province's territory is included in the cadastre and it thus pays the territorial contribution only under the cadastre regime and not the *amillaramientos*; figure 4.2 shows the map of the provinces fully included in the cadastre, those where cadastral works started but were not fully included, and the provinces which were never included before 1936, and thus remained in the *amillara-*

63. Comín, *Hacienda y Economía en la España Contemporánea*, 936; Real decreto dictando reglas para la ejecución de la ley de 29 de Diciembre último sobre Contribución Territorial, Artículo 4^º, *Gaceta de Madrid* núm. 7 de 7 de enero 1911, 95.

64. Note that the provinces of Sevilla, Murcia and Granada will not be included in the analysis because the agrarian GDP and CPI series end in 1934.

Figure 4.2: Provinces fully, partially, and not included in the cadastre by 1936.



Sources: Own elaboration using the *Gacetas de Madrid*. See Chapter 2.

mientos regime before the Civil War.

My hypothesis is that the agrarian tax pressure should be higher in the provinces fully included in the cadastre than in the provinces under the *amillaramientos* because the more accurate measurement of the tax bases in the provinces included in the cadastre should be reflected through more responsiveness of taxes to real production. To test whether the land cadastre led to a higher agrarian tax pressure, I use the provinces which remained in the *amillaramientos* throughout the whole

Table 4.3: Provinces fully included in the cadastre before 1936 and date of completion of cadastral works.

Province	Completion year
Albacete, Ciudad Real, Córdoba	1911
Cádiz	1914
Madrid	1915
Jaén	1925
Toledo	1926
Alicante	1931
Málaga	1932
Sevilla	1934
Murcia & Granada	1935

Sources: Own elaboration using the *Gacetas de Madrid*. See Chapter 2.

period as a control group, and the provinces included in the cadastre as a treatment group, and I designed the following regression:

$$AgrarianTaxPressure_{it} = \alpha + \beta_1 Cadastre_{it} + \beta_2 X_{it} + c_i + u_{it} + \varepsilon_{it} \quad (4.1)$$

where the dependent variable *Agrarian Tax Pressure* is equal to the real territorial contribution revenues divided by the real production values in province i in year t . It measures how much taxation responds to agrarian production: the closer it is to 0, the less agrarian production is taxed. If over times it moves towards 0, it means that agrarian production grows faster than taxation. The higher the value and the more it moves away from 0, the more taxation follows agrarian production. The dependent variable *Tax Pressure* is regressed on the variable *Cadastre*, which is the treatment variable and indicates whether a province i is fully included in the cadastre in year t (see Table 4.3). X is the vector of control variables, and c and u are province and time fixed effects respectively. To account for spatial autocorrelation issues, I cluster standard errors at the regional level.

The dependent variable *Agrarian Tax Pressure* is obtained by dividing the

Table 4.4: Summary statistics and descriptions of variables.

Variables	Description	Mean (Standard Deviation)
<i>Dependent Variable</i>		
Agrarian Tax Pressure	Real Territorial Contribution Revenues _{it} / Real Agrarian Production _{it}	0.026 (0.013)
<i>Control Variables</i>		
Rainfall	Total Rainfall in milliliters _{it}	2.76 (0.158)
Temperature	Average Temperature in Celsius _{it}	1.08 (0.077)
Frosty Days	Number of Frosty Days _{it}	1.84 (0.210)
Rainy Days	Number of Rainy Days _{it}	2.09 (0.081)
Real Land Prices	Real Land Prices from Land Sales _{it}	2.95 (0.372)

Notes: All variables are in logs.

Sources: Real Agrarian Tax Pressure is obtained using the tax series from Chapter 2; agrarian production from Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 244–57; and CPIs from Rosés and Sánchez-Alonso, “Regional wage convergence in Spain 1850-1930,” 404–25. Climatic variables are obtained from Goerlich Gisbert, “Datos climáticos históricos para las regiones españolas. CRU TS 2.1.,” 29–40; real land prices are obtained from Carmona and Rosés, “Land markets and agrarian backwardness (Spain, 1904-1934),” 74–96.

real territorial contribution revenues by the real agrarian production. I use my series from Chapter 2 for the territorial contribution revenues, and Rosés, Martínez-Galarraga and Tirado’s estimates for agrarian production.⁶⁵ Both estimates are deflated using Rosés and Sánchez Alonso’s CPIs.⁶⁶ For control variables, I use Goerlich Gisbert’s climate data and I retrieved the variables *rainfall*, *temperature*, *frosty days*, and *rainy days*.⁶⁷; for land prices, I use Carmona and Rosés’s data.⁶⁸ The summary statistics are reported in Table 4.4.

65. The original provincial agrarian production are part of the GDP estimates in Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 244–57.

66. The original CPIs are used in Rosés and Sánchez-Alonso, “Regional wage convergence in Spain 1850-1930,” 404–25.

67. Francisco J. Goerlich Gisbert, “Datos climáticos históricos para las regiones españolas. CRU TS 2.1.,” *Investigaciones de Historia Económica* 8, no. 1 (Febrero 2012): 29–40

68. Carmona and Rosés, “Land markets and agrarian backwardness (Spain, 1904-1934),” 74–96.

4.5 Results

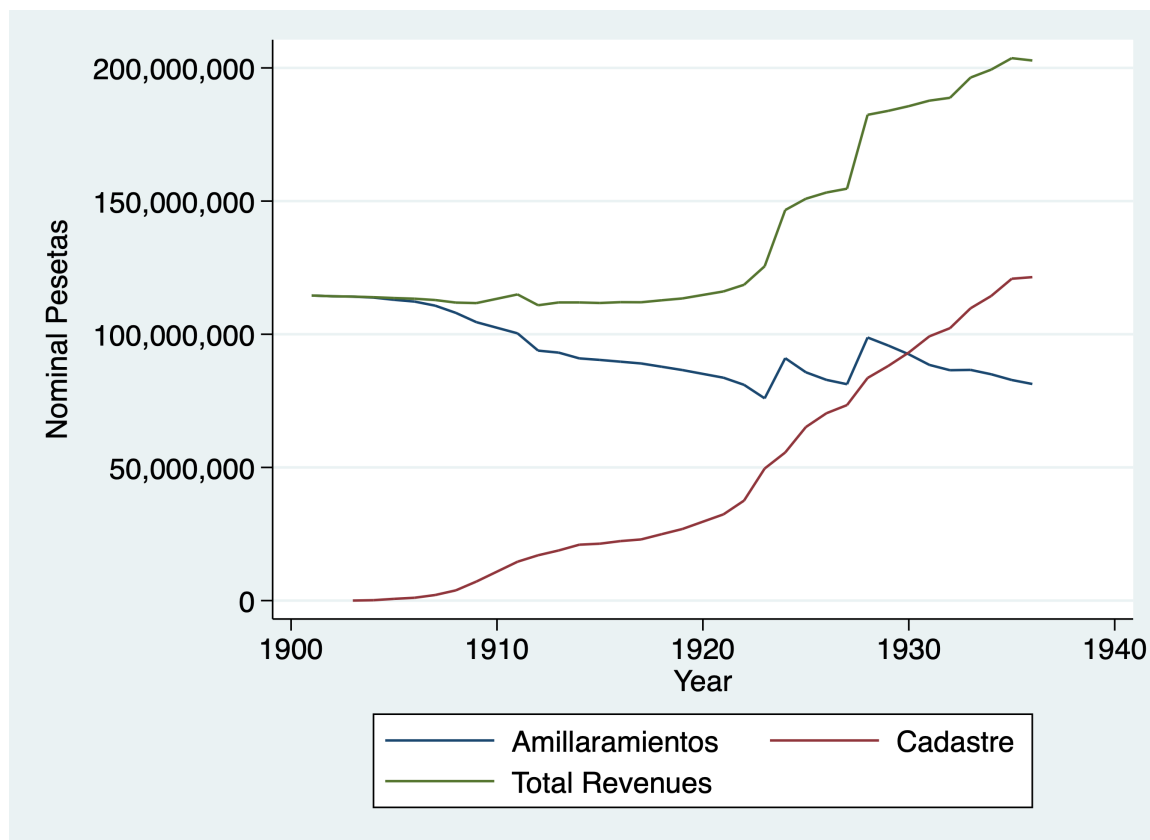
4.5.1 Main Results

Figure 4.3 shows the total nominal territorial contribution revenues collected in the provinces in the *amillaramientos* regime and in those included in the cadastre between 1901 and 1936. The graph shows a clear increase over time of the revenues collected by the provinces in the cadastre, and a steady decrease in the total nominal revenues of the provinces in the *amillaramientos*. These trends are the result of land switching from one regime to the other: for every peseta of tax that dropped out of the *amillaramientos*, several more pesetas of taxes were collected in the cadastre. There are two noticeable hikes in collection in the *amillaramientos* provinces in the years 1924 and 1928. In those years, the Treasury Minister Calvo Sotelo artificially increased all land values declared in the *amillaramientos*, and as a consequence, the territorial contribution revenues collected under the *amillaramientos* regime increased too.⁶⁹ Calvo Sotelo knew the imbalances between the cadastre and the *amillaramientos*, and his decisions to increase the land values in the *amillaramientos* were attempts to equalise the two regimes, although the effects were short-lasting. In both cases the artificial hikes were one-off measures which did not alter the downward trend exhibited by the territorial contribution revenues in the *amillaramientos* regime. The territorial contribution revenues in the cadastre revenues increased substantially in the 1920s, and total territorial contribution revenues consequently increased too. Before the 1920s, the decrease in the *amillaramientos* and the increase in the cadastre cancelled out, and total revenues remained flat. By 1930, more territorial contribution revenues were collected in the cadastre regime than in the *amillaramientos* regime.

The 1910s were a period of inflationary pressures due to World War I, before a stabilisation at higher price levels occurred in the 1920s. To account for inflation, fig-

69. Comín, *Hacienda y Economía en la España Contemporánea*, 918–20.

Figure 4.3: Total nominal territorial contribution revenues in Spain, 1901–1936.

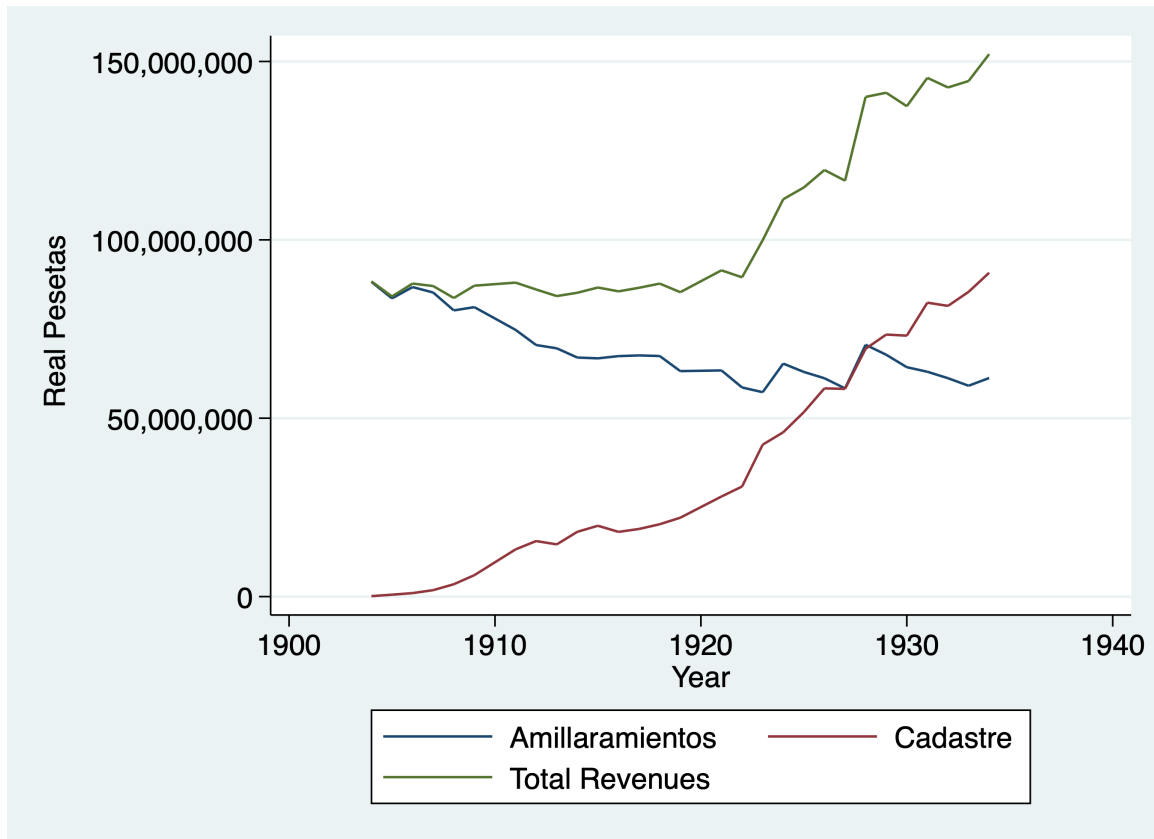


Sources: Own elaboration using the *Gacetas de Madrid* (1901-1936).

Figure 4.4 shows the total real total contribution revenues. The slopes' steepness change marginally, but the trends remain the same. In real terms the revenues collected under the cadastre caught up with the revenues collected under the *amillaramientos* by 1928, compared to 1930 in nominal terms. Interestingly, the second hike decided by Calvo Sotelo led to the matching of real territorial revenues under the cadastre and the *amillaramientos*. The upwards trend of real revenues collected in the cadastre highlights that inflation a marginal driver behind the increase in nominal revenues and that it was the cadastre that led to an overall increase in territorial contribution revenues.

Figure 4.5 shows the evolution of the mean real agrarian tax pressures of the provinces fully included in the cadastre (treatment group) compared to the provinces

Figure 4.4: Total real territorial contribution revenues in Spain, 1904–1934.



Notes: Own elaboration using the *Gacetas de Madrid* (1901-1936).

never included in the cadastre (control group); the vertical lines show the years when provinces are fully included in the cadastre.⁷⁰ The figure provides three findings. Firstly, there is a generalised downwards trend in the agrarian tax pressure for both sets of provinces. The mean agrarian tax pressure went from 0.0394 in 1904 to 0.0218 in 1934 for the control group and from 0.0468 in 1904 to 0.0189 in 1934 for the treatment group. While the general trends are downwards, there is first a clear decrease until the year 1919 in both groups, with nearly identical mean agrarian tax pressures in the second half of the 1910s, before the two trends start flattening, diverging and exhibiting some volatility until 1934. Secondly, before 1915, the provinces fully included have a higher mean agrarian tax pressure than the provinces never included;

70. The provinces included are Albacete, Ciudad Real, and Córdoba in 1911; Cádiz in 1913; Madrid in 1915; Jaén in 1923; Toledo in 1926; Alicante in 1931; and Málaga in 1932 (see 4.3).

by 1934, the mean real agrarian tax pressure is lower in the provinces fully included than in those never included. There is a sharp decrease in the mean real agrarian tax pressure of the treatment group from 1904 to 1911, before increasing following the full inclusion of the first provinces in the cadastre, and then decreasing again. The third and final observation is that at first sight, there is a noticeable but brief increase in the agrarian tax pressure for the provinces fully included by 1911, while no changes are visible for the provinces never included. There are two other upwards changes in the mean real agrarian tax pressure of the treated provinces, in 1925 and 1932, but such increases are observable too in the provinces never included.

Disaggregating the mean real agrarian tax pressures of the provinces fully included into individual provinces offers a more precise view. Figure 4.6 shows the real agrarian tax pressure of the 9 provinces included in the cadastre before 1932 compared to the mean real agrarian tax pressure of the control provinces.⁷¹ There was a short-lived increase in the agrarian tax pressure after the inclusion in the cadastre of the first three provinces in 1911, Albacete, Ciudad Real, and Córdoba, but there were no noticeable increases in agrarian tax pressure in the other fully included provinces. The increases in 1925 and 1932 in figure 4.5, when Jaén and Málaga respectively are fully included in the cadastre, do not correspond to changes in their individual trends. In other words, it was not the inclusion in the cadastre of these two provinces that increased the mean real agrarian tax pressure of the fully included provinces in figure 4.5. It can only be explained by other factors raising the real agrarian tax pressure of all other provinces and driving the mean upwards.

Figures 4.5 and 4.6 are visual observations of the behaviours of the trends in the real agrarian tax pressure, but they do not in itself isolate the impact of the cadastre on agrarian tax pressure. The figures do not control for confounding

71. For simplicity, I have aggregated the three provinces that were fully included in 1911 into a single group (i.e. Group 1911 = Albacete, Ciudad Real and Córdoba).

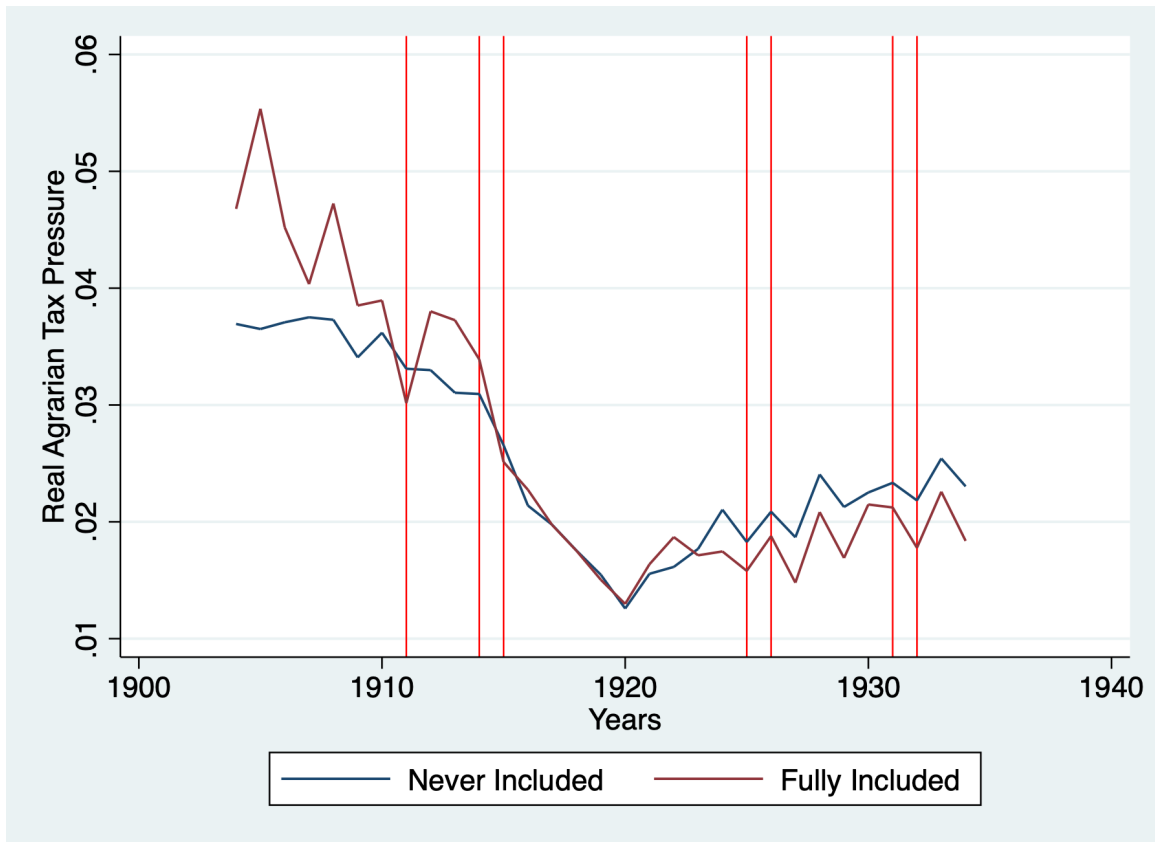
factors, and the trends might be driven by external factors: climatic factors impacting harvests and agrarian production can lead to fluctuations in agrarian tax pressure by changing the denominator. To isolate as much as possible the effect of the cadastre on territorial contribution revenues, I run equation (4.1) which controls for the main confounding factors which can affect the real agrarian tax pressure, namely climatic variables and the real land values, and I also included fixed effects to account for differences in time-invariant unobservables across provinces. Note that the following regressions are not Difference-in-Difference regressions, because as can be observed from figures 4.5 and 4.6, the crucial parallel trends assumption for a Difference-in-Difference regression does not hold. One can think of these regressions as event study designs; the regressions show what happens to a variable of interest after a specific event happens. Due to this shortcoming, I cannot claim causality, and for that reason, the results must be read with prudence.⁷²

The main specification looks at the impact of a full inclusion in the cadastre on agrarian tax pressure.⁷³ The results can be found in column (1) of table 4.5 and in figure 4.7. Figure 4.7 shows the average treatment effect on the agrarian tax pressure in the provinces fully included in the cadastre. The year of the full inclusion in the cadastre is $t = 0$. One can immediately see that the parallel trends assumption does not hold as the point estimates fluctuate before treatment; however, in the five years prior to the full inclusion of the cadastre, the point estimates are close to 0, suggesting a relative closeness of trends on average in the years leading to the full inclusion of the cadastre. Once the treatment takes place and a province is fully included in the cadastre, the mean agrarian tax pressure does increase slightly afterwards, but the

72. For simplicity, I will nonetheless use the classic Difference-in-Difference vocabulary and call the effects after treatment (i.e. inclusion in the cadastre) the average treatment effects.

73. Recall that a province is fully included when all the land plots in a province are in the cadastre and they only pay the territorial contribution under the cadastre regime. The treatment group are the provinces fully included in the cadastre, whereas the control group are the provinces never included in the cadastre. The treatment and control groups will be changed in the robustness checks (see section 4.5.2).

Figure 4.5: Mean real agrarian tax pressure in provinces fully and never included in the cadastre, 1904–1934.

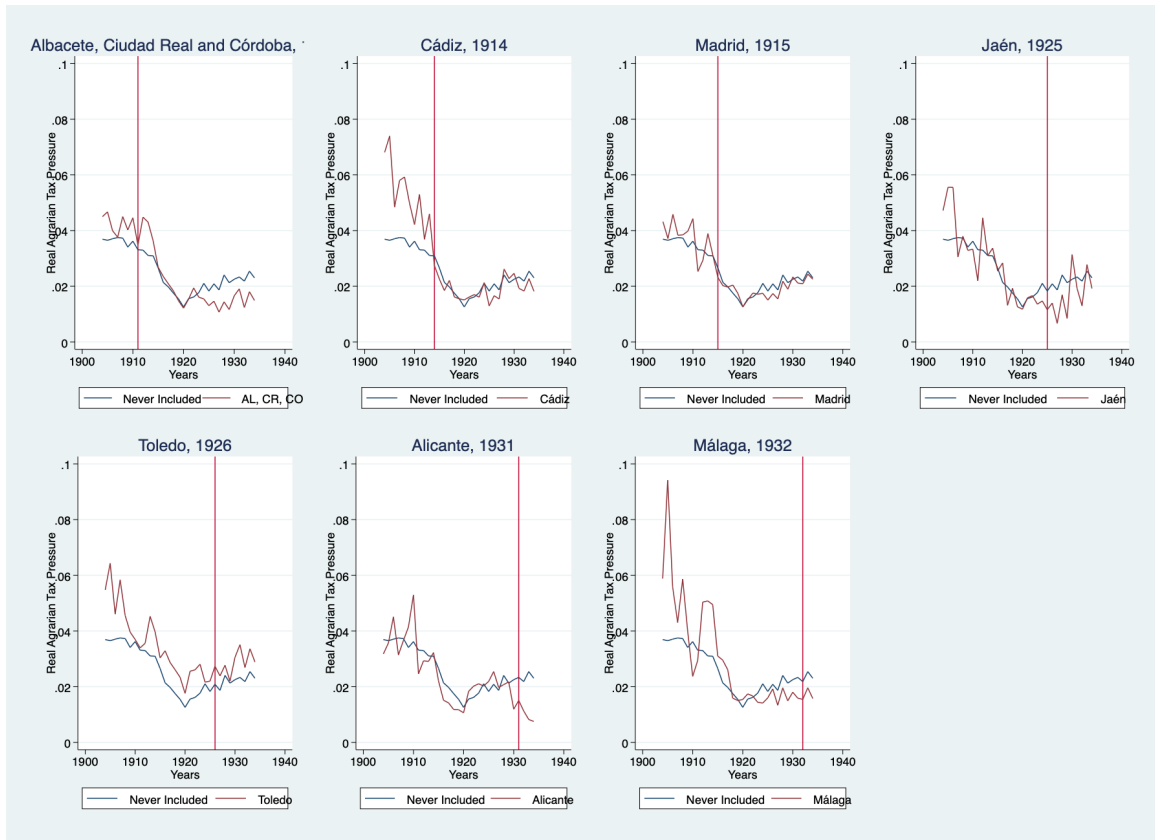


Notes: Own elaboration using the *Gacetas de Madrid* (1901–1936).

confidence intervals are large, never significantly above 0 and point estimates decrease over time. In short, it is difficult to isolate any significant impact of the cadastre on the mean agrarian tax pressure in the short term.

Columns (2) to (8) of table 4.5, and figure 4.8 report the results for each province separately. The regressions find majoritarily a negative but insignificant effect of the dummy variable *Cadastre* on a province’s agrarian tax pressure. There is some variation in the coefficient signs: two are positive but insignificant, six are insignificant, and they are only negative and significant for Cádiz and Alicante. Figure 4.8 shows that the point estimates before treatment vary wildly across provinces: while the point estimates before treatment are consistently 0 for Albacete, Ciudad

Figure 4.6: Real agrarian tax pressure in the provinces fully included in the cadastre compared to the mean real agrarian tax pressure of the provinces never included.

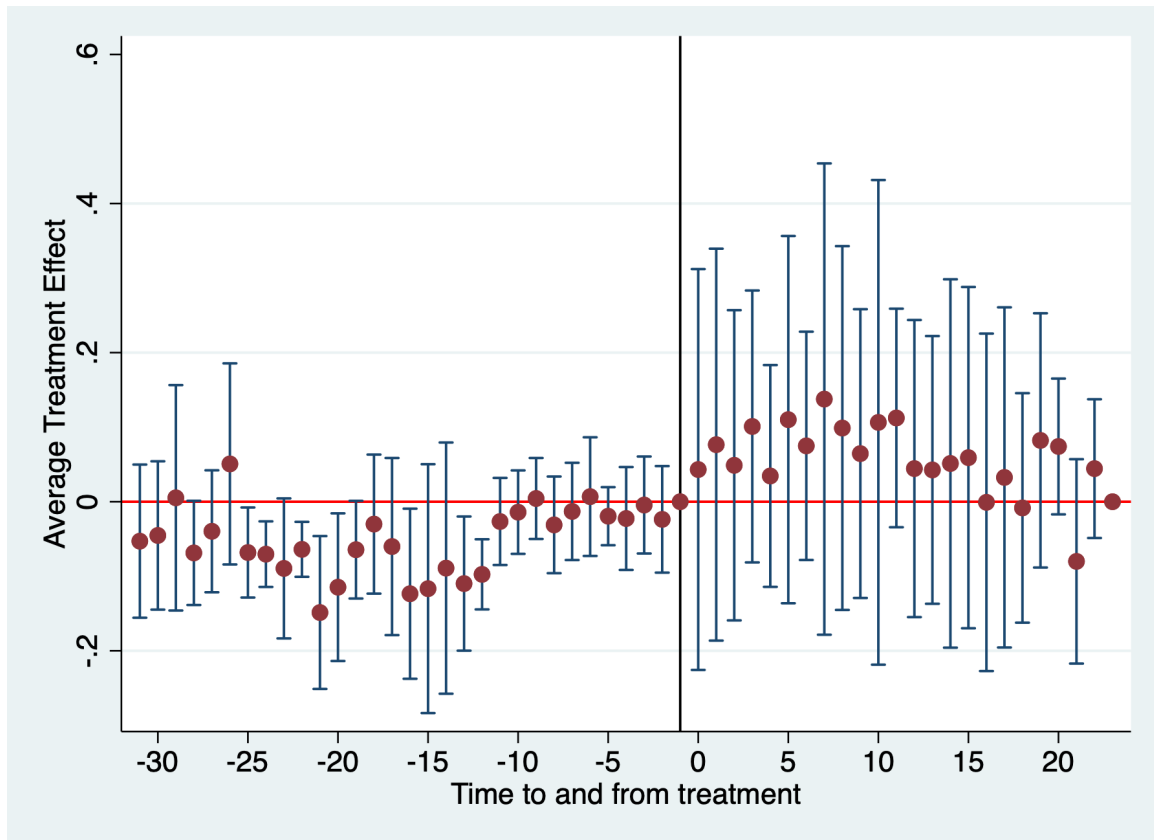


Notes: Own elaboration using the *Gacetas de Madrid* (1901–1936) and Rosés et. al. (2012).

Real and Córdoba, they are consistently above 0 for Alicante. Similar fluctuations can be observed in the point estimates after the treatment comes into place: some provinces experiment an increase after treatment followed by a constant decrease (Albacete, Ciudad Real and Córdoba), others see a decreased followed by an increase (Cádiz and Madrid) and others see no change (Málaga). Despite the volatility and the differences, coefficients are nonetheless never significantly different from 0.

It is unfortunately not possible to design a proper Difference-in-Difference specification with the data at hand and the absence of parallel trends prevents me from presenting causal claims. As a result, I approached the issue with a second-best solution, but there does not seem to be a clear uni-directional effect of

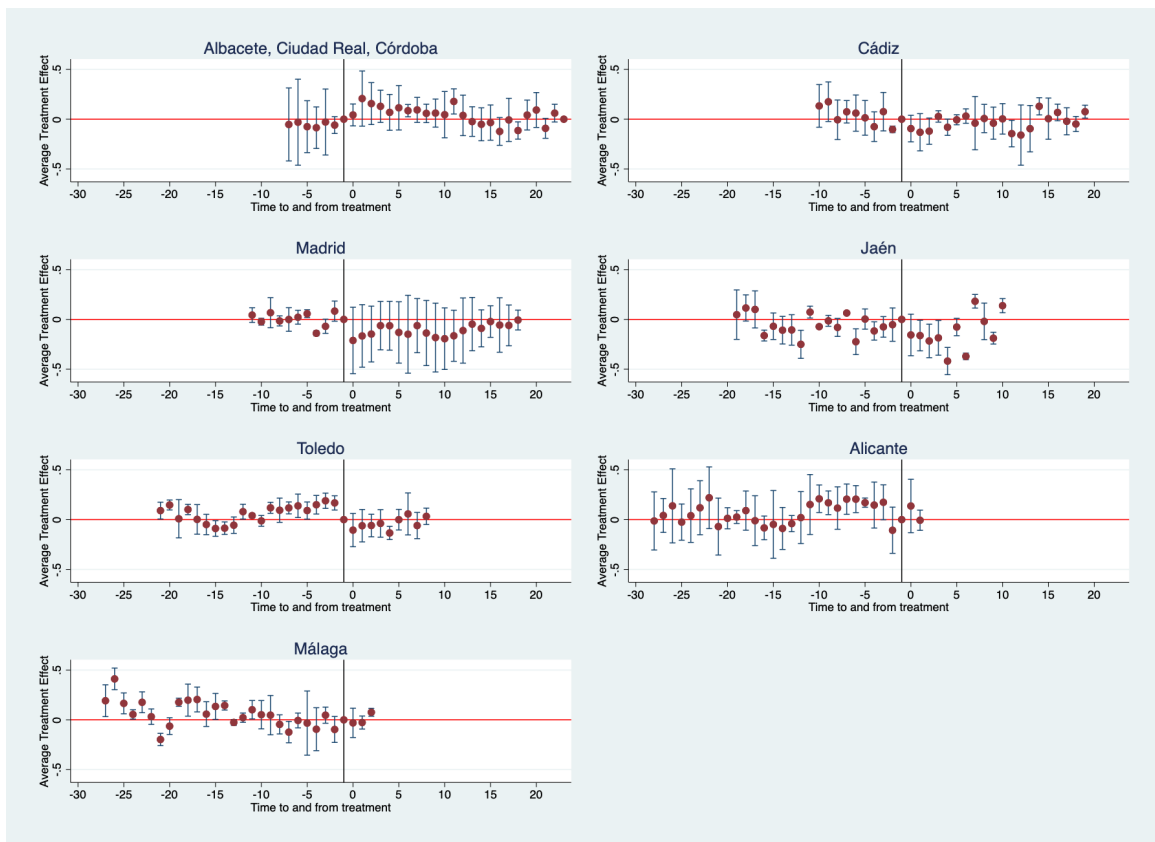
Figure 4.7: Divergence in the average agrarian tax pressure before and after the full inclusion of provinces in the cadastre.



Notes: The point estimates are displayed with 95% Confidence Intervals.

the cadastre. It is difficult to even argue that the cadastre had an effect at all, given the heterogeneity of effects in all provinces and that point estimates do not differ significantly from 0.

Figure 4.8: Divergence in the average agrarian tax pressure before and after the full inclusion of provinces in the cadastre.



Notes: The point estimates are displayed with 95% Confidence Intervals.

Table 4.5: Regression Results. Main Specification and Fully Included Provinces vs Never Included Provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Cadastre	-0.142 (0.168)	-0.156 (0.150)	-0.0741 (0.0481)	0.142 (0.111)	0.0121 (0.0569)	0.166 (0.0608)	-0.263 (0.145)	-0.0317 (0.0324)
Rainfall	-0.0508 (0.103)	0.0323 (0.187)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.203)	0.0415 (0.197)
Temperature	-0.499 (1.378)	-1.068 (1.571)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.670)	-1.187 (1.617)
Frosty Days	-0.0623 (0.170)	-0.223 (0.192)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.209)	-0.254 (0.202)
Rainy Days	0.0442 (0.307)	-0.0190 (0.581)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.644)	-0.150 (0.624)
Real Land Prices	0.00767 (0.0241)	0.0147 (0.0261)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0237)	0.0258 (0.0229)
Constant	-1.077 (2.008)	-0.317 (2.623)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.827)	0.0911 (2.737)
R^2	0.740	0.730	0.734	0.727	0.732	0.733	0.730	0.734
N	992	713	651	651	651	651	651	651

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

4.5.2 Robustness Checks

The specifications above have weaknesses, and some robustness checks need to be undertaken. Firstly, the regressions only compare the provinces fully included in the cadastre to the provinces never included, leaving aside the provinces partially included; the robustness checks below include these provinces too and change the treatment and control groups. Secondly, the dummy variable *Cadastre* assumes a binary outcome: a province is not considered to be included in the cadastre until the whole province is measured. This overlooks the possibility of the cadastre affecting agrarian tax pressure *while* it is elaborated; similarly, it overlooks the possibility that the cadastre's impact takes place when a province is first measured. The *Cadastre* variable will take alternative specifications. Finally, it is also possible that the cadastre impacts other variables, such as the share of total territorial contribution revenues with respect to total taxes in a province, or the share of the total territorial contribution revenues on provincial GDPs. The robustness checks will also account for these possibilities. Table 4.6 summarises the changes undertaken in each robustness check.

The first three robustness checks use the Initial Inclusion Year as a variable of interest and the fully included provinces as treatment group. Each robustness check changes the control group (see Table 4.6).

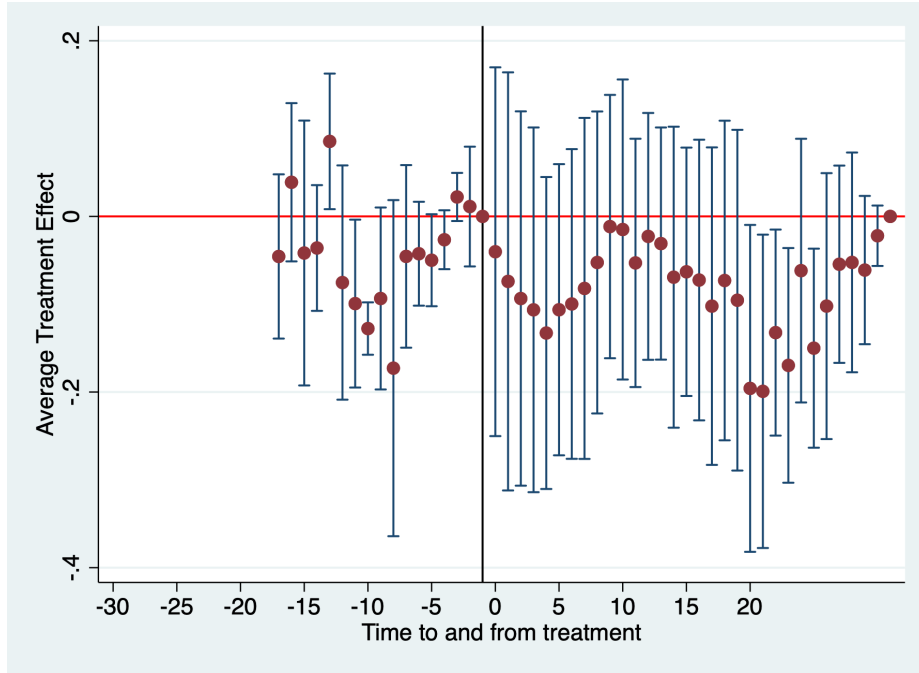
Table 4.6: List of Robustness Checks

Robustness Check	Variable of Interest	Treatment Group	Control Group
First	Initial Inclusion Year	Fully Included provinces	Never Included Provinces
Second	Initial Inclusion Year	Fully Included provinces	Partially Included Provinces
Third	Initial Inclusion Year	Fully Included provinces	Partially and Never Included Provinces
Fourth	Completion Year	Fully Included provinces	Partially Included Provinces
Third	Cadastre Proportion	-	-
Alternative Dependent Variable			
Sixth	Share of total territorial contribution revenues with respect to total taxes in a province		
Seventh	Share of total territorial contribution revenues on provincial GDPs		
Alternative Deflator			
Eighth	Prados de la Escosura Agrarian Deflator		

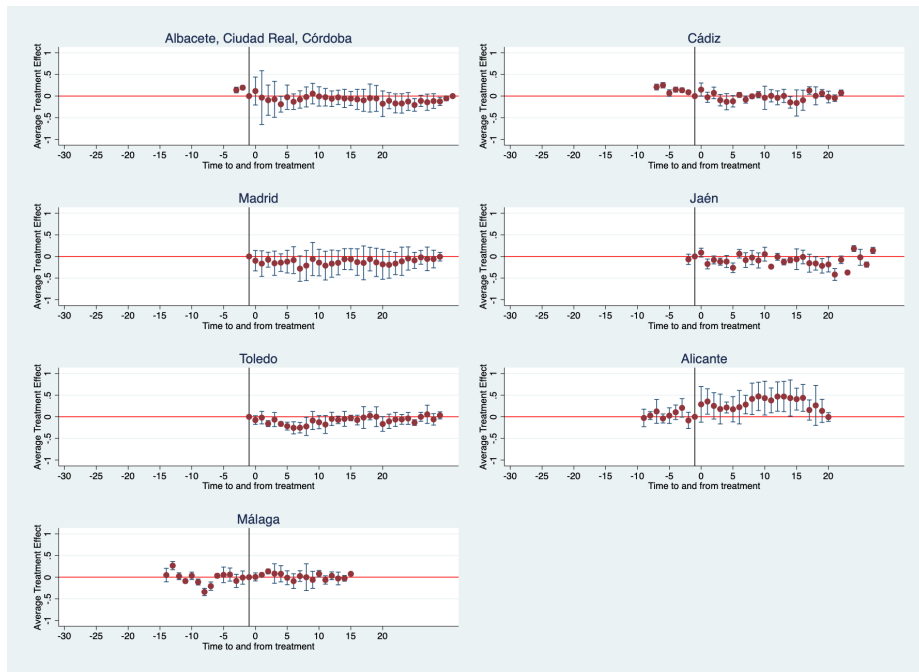
The first robustness check uses the never included provinces as the control group (i.e. the same control and treatment groups than in the mean specification). The results are reported in figure 4.9 and table 4.7. The trends prior to the new “treatment” are consistently different to 0, suggesting again a difference in trends between the two groups of provinces. The point estimates remain below 0 after its inclusion and with large confidence intervals. Disaggregating between provinces shows that the pre-treatment trends are heavily distorted by the lack of pre-treatment in the provinces included in the cadastre early on (Toledo, Madrid, Albacete, Ciudad Real and Córdoba). Indeed, their year of inclusion coincide closely with the sample’s initial year. The figure suggests that the initial year of the cadastre had no effect on agrarian tax pressure, as point estimates are negative both before and after a province’s inclusion in the cadastre. This is not too surprising, as in many cases, the first year of inclusion in the cadastre resulted in a small amount of lands measured and to a small marginal change in territorial contribution revenues. The robustness check points out a possible selection effect, namely that the provinces included in the cadastre had lower agrarian tax pressure on average in the years leading to the cadastre than the control provinces. The full regressions results reported in table 4.7 should be interpreted with caution, as the trends prior to treatment do not hold for the full specification, and there is a lack of pre-treatment observations for individual provinces.

Figure 4.9: Robustness Check 1: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Initial Inclusion Year - Treatment Group: Fully Included Provinces vs Control Group: Never Included Provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The point estimates are displayed with 95% Confidence Intervals.

Table 4.7: Robustness Check 1: Average Treatment Effect on Agrarian Tax Pressure
- Variable of Interest: Initial Inclusion Year - Treatment Group: Fully Included Provinces vs Control Group: Never Included Provinces.

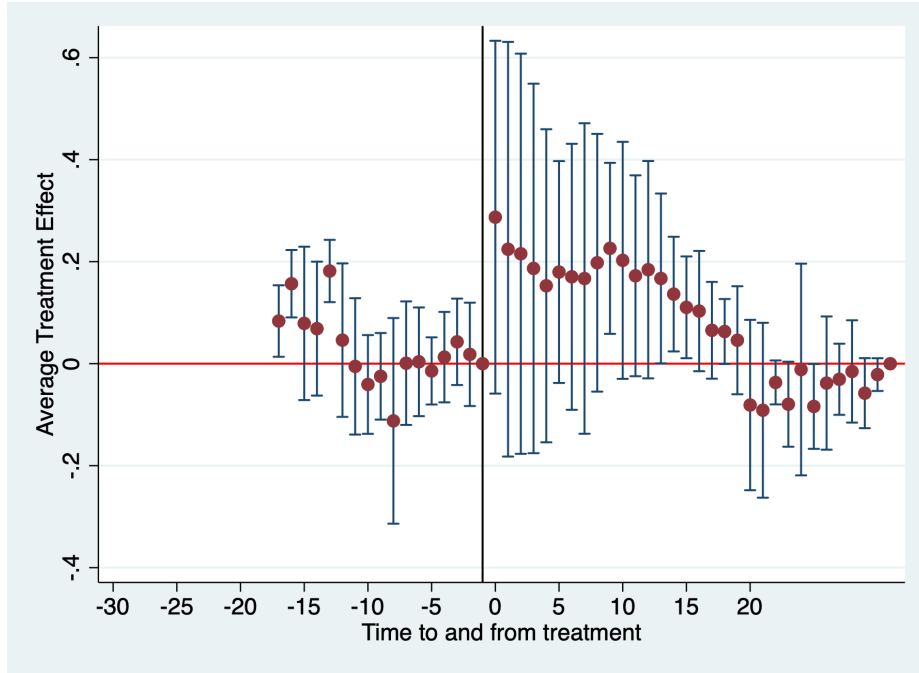
	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Start Year	0.0200 (0.0837)	-0.317** (0.0494)	0.00108 (0.0436)	0.545 (0.207)	-0.103* (0.0357)	0.664* (0.219)	-0.277 (0.113)	-0.176** (0.0208)
Rainfall	-0.00484 (0.102)	0.114 (0.176)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.203)	0.0415 (0.197)
Temperature	-0.429 (1.411)	-1.148 (1.576)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.670)	-1.187 (1.617)
Frosty Days	-0.0644 (0.194)	-0.181 (0.222)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.209)	-0.254 (0.202)
Rainy Days	0.00505 (0.329)	-0.365 (0.524)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.644)	-0.150 (0.624)
Real Land Prices	0.00830 (0.0203)	0.0211 (0.0205)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0237)	0.0258 (0.0229)
Constant	-1.193 (2.103)	0.156 (2.528)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.737)	0.0911	0.0911	0.0911
R^2	0.742	0.740	0.734	0.727	0.732	0.733	0.730	0.734
N	992	713	651	651	651	651	651	651

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

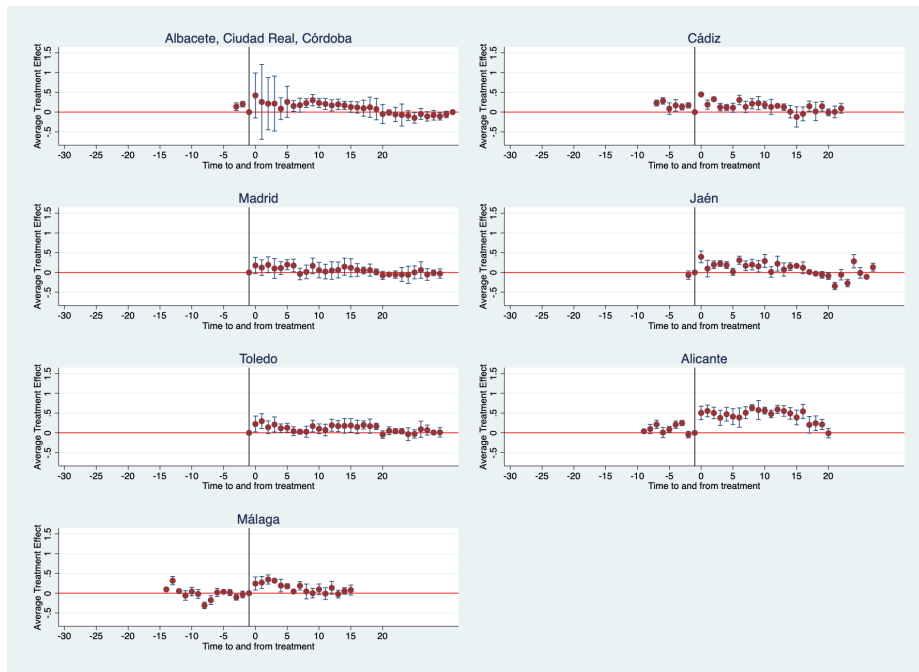
The second robustness check uses the partially included provinces as a control group. The results are reported in figure 4.10, and table 4.8. The pre-treatment point estimates are also different from 0 and they increase substantially after treatment before decreasing over time. Disaggregating across provinces shows that for most of them the point estimates are not significantly different from 0, except for Alicante, where a persistent increase after treatment is noticeable. The third robustness check uses the partially and never included provinces as a control group. The results are reported in figure 4.11 and table 4.9, and provinces with the same start dates are aggregated into groups. Once again, the trends prior to the new “treatment” differ from 0 and indicate a difference in trends between the two groups. In this case the point estimates converge to 0 by the time of treatment, before dropping after treatment with large confidence intervals. Like in the previous robustness checks, when figures are disaggregated by provinces, point estimates are not significantly different from 0. The results of the three robustness checks are not too dissimilar from the main results: they all suggest that changing the variable of interest to the initial year of inclusion of the cadastre does not fundamentally alter the main findings.

Figure 4.10: Robustness Check 2: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Initial Inclusion Year - Treatment Group: Fully Included Provinces vs Control Group: Partially Included Provinces.

Average Treatment Effect for all provinces



Average Treatment Effect for each province individually.



Notes: The point estimates are displayed with 95% Confidence Intervals.

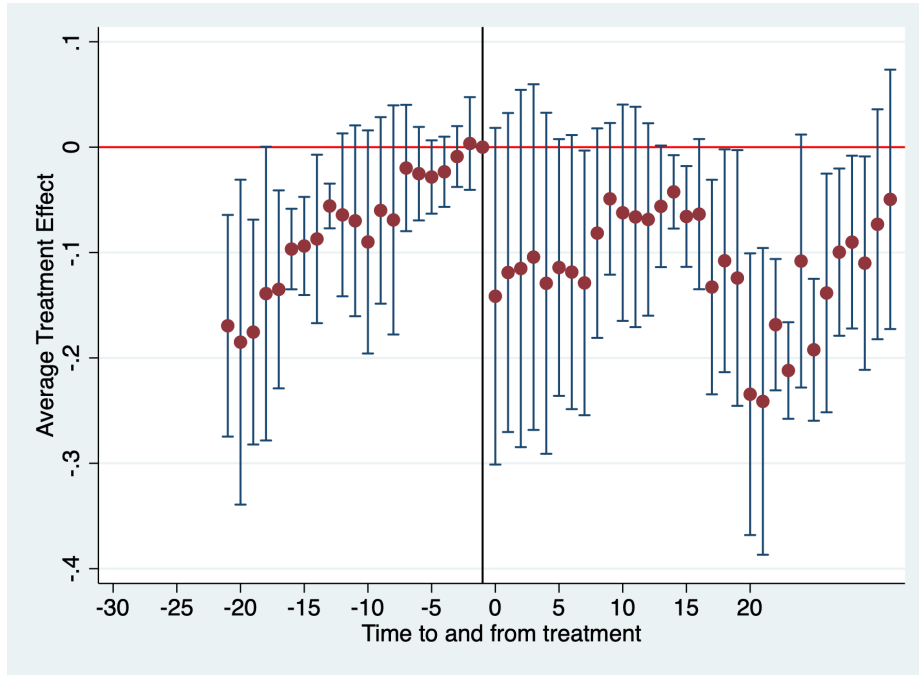
Table 4.8: Robustness Check 2: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Initial Inclusion Date Year - Treatment Group: Fully Included Provinces vs Control Group: Partially Included Provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Start Year	-0.324* (0.100)	-0.641** (0.0834)	-0.277*** (0.0136)	-0.0939 (0.0794)	-0.411** (0.0441)	0.00173 (0.0606)	-0.492** (0.0534)	-0.445** (0.0483)
Rainfall	-0.0286 (0.107)	0.0536 (0.147)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)
Temperature	-0.224 (1.331)	-1.458 (0.943)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)
Frosty Days	-0.157 (0.122)	-0.442 (0.230)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)
Rainy Days	-0.0132 (0.214)	-0.411 (0.215)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)
Real Land Prices	-0.0168** (0.00283)	-0.00103 (0.0159)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)
Constant	-0.525 (1.978)	2.238 (1.485)	2.028 (1.555)	2.028 (1.555)	2.028 (1.555)	2.028 (1.555)	1.917 (1.570)	2.028 (1.555)
R^2	0.788	0.816	0.815	0.805	0.819	0.804	0.817	0.818
N	837	558	496	496	496	496	496	496

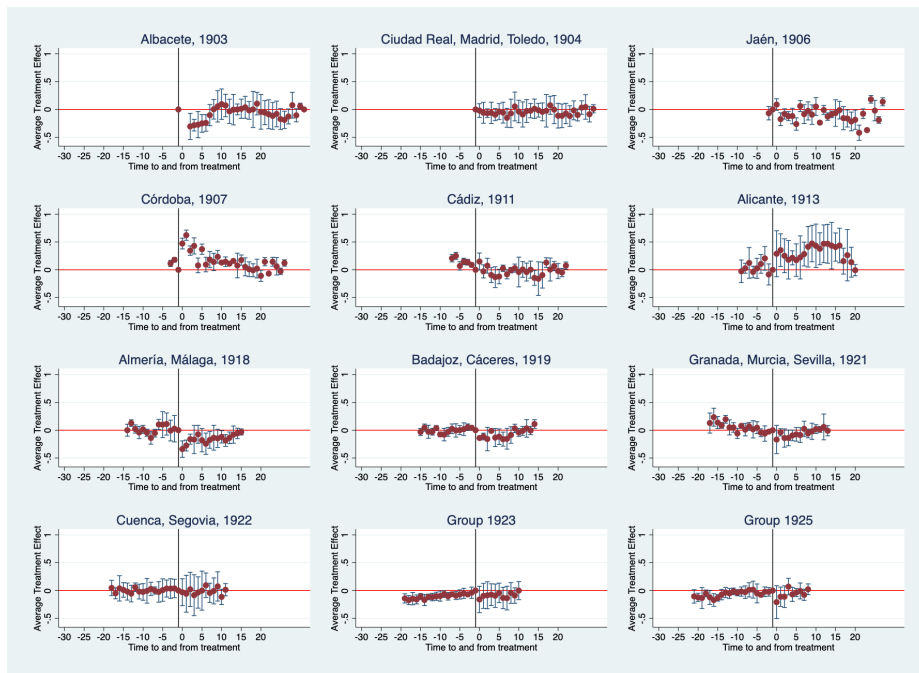
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4.11: Robustness Check 3: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Initial Inclusion Year - Treatment Group: Fully Included Provinces vs Control Group: Partially and Never Included Provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The point estimates are displayed with 95% Confidence Intervals.

Table 4.9: Robustness Check 3: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Initial Inclusion Year - Treatment Group: Fully Included Provinces vs Control Group: Partially and Never Included Provinces.

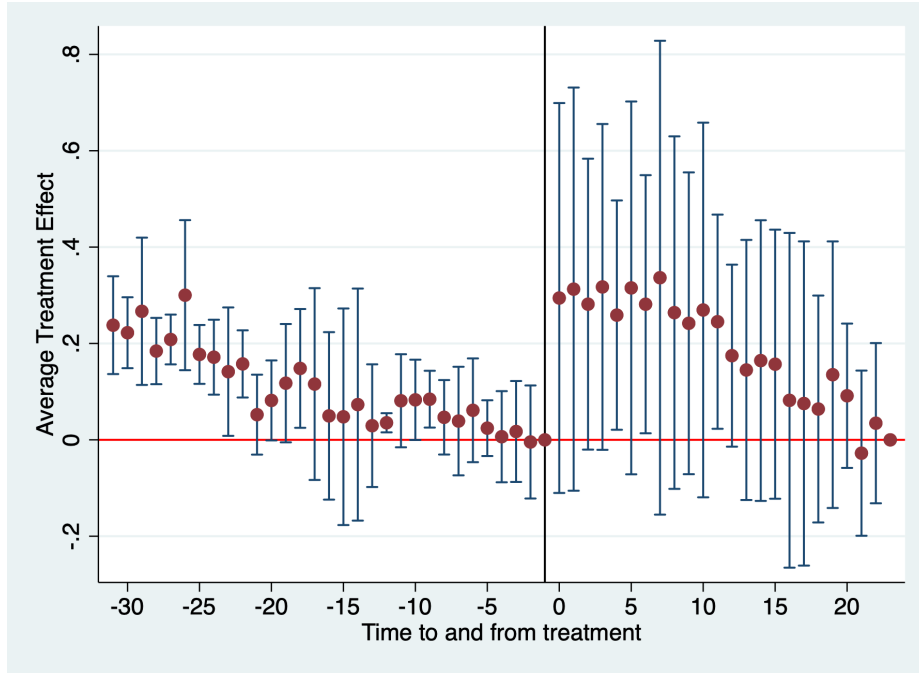
	All	1903	1904	1906	1907	1911	1913	1918	1919	1921	1922	1923	1925
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Dependent Variable: Agrarian Tax Pressure</i>													
Start Year	0.158 (0.0740)	0.389*** (0.0426)	0.629 (0.230)	-0.103* (0.0357)	-0.529*** (0.0390)	0.00108 (0.0436)	-0.277 (0.113)	0.295** (0.0463)	0.195*** (0.0190)	0.230*** (0.0219)	0.114 (0.130)	0.178 (0.0824)	0.142 (0.0916)
Rainfall	-0.0900 (0.0522)	0.0415 (0.197)	-0.00238 (0.195)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.197)	0.0415 (0.203)	-0.117 (0.260)	0.0591 (0.192)	0.0475 (0.182)	0.0655 (0.190)	0.0153 (0.137)	0.0261 (0.167)
Temperature	-0.538 (0.936)	-1.187 (1.617)	-1.198 (1.587)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.617)	-1.187 (1.670)	-0.816 (1.670)	-1.189 (1.601)	-0.939 (1.603)	-1.222 (1.541)	-1.197 (1.275)	-1.313 (1.548)
Frosty Days	-0.112 (0.102)	-0.254 (0.202)	-0.265 (0.194)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.202)	-0.254 (0.209)	-0.176 (0.199)	-0.256 (0.200)	-0.179 (0.197)	-0.265 (0.193)	-0.311 (0.141)	-0.268 (0.189)
Rainy Days	0.203 (0.224)	-0.150 (0.624)	-0.0312 (0.608)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.624)	-0.150 (0.644)	0.244 (0.745)	-0.188 (0.608)	-0.126 (0.554)	-0.207 (0.585)	-0.104 (0.454)	-0.149 (0.567)
Real Land Prices	0.00421 (0.0139)	0.0258 (0.0229)	0.0187 (0.0204)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0229)	0.0258 (0.0237)	0.0173 (0.0249)	0.0270 (0.0224)	0.0237 (0.0233)	0.0127 (0.0208)	0.0266 (0.0181)	0.0328 (0.0204)
Constant	-1.134 (1.354)	0.0911 (2.737)	0.0116 (2.634)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.737)	0.0911 (2.827)	-0.817 (2.843)	0.125 (2.701)	-0.369 (2.597)	0.239 (2.575)	0.186 (2.033)	0.267 (2.578)
R ²	0.743	0.728	0.740	0.732	0.748	0.734	0.730	0.709	0.737	0.734	0.739	0.746	0.737
N	1457	651	713	651	651	651	651	682	682	713	682	806	744

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

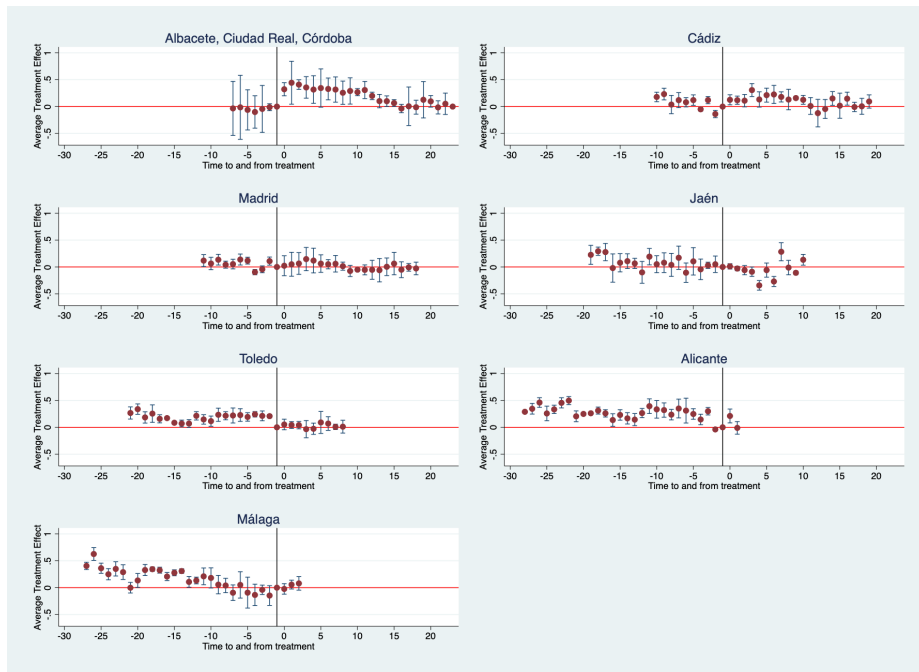
The fourth robustness check uses the full inclusion of a province in the cadastre as a variable of interest, the provinces fully included as the treatment group and the provinces partially included as the control group. The results are reported in figure 4.12, and table 4.10. The pre-treatment point estimates are different from and above 0, but they converge to 0 in the last years before treatment. Once the treatment happens, the point estimates jump clearly above 0, with large confidence intervals, before initiating a slow decrease towards 0 over time. Looking at provinces individually, the increase for the provinces of Albacete, Ciudad Real and Córdoba is obvious, but it is less clear for Cádiz and disappears completely for the rest. Albacete, Ciudad Real and Córdoba have a pre-treatment trend which does not differ significantly from the control provinces, while the others do have significant differences. This robustness checks shows that they were differences between fully treated and partially treated provinces before their inclusion in the cadastre. The inclusion in the cadastre did not increase significantly the agrarian tax pressure of the fully included provinces with respect to the partially included provinces on average. The provinces of Albacete, Ciudad Real and Córdoba are an exception, but their point estimates also declined to 0. The robustness check suggests that changing the control and treatment groups does not fundamentally change the initial results, but again, with large confidence intervals and without parallel trends, the results must be read prudently.

Figure 4.12: Robustness Check 4: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Completion Year - Treatment Group: Fully Included Provinces vs Control Group: Partially Included Provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The point estimates are displayed with 95% Confidence Intervals.

Table 4.10: Robustness Check 4: Average Treatment Effect on Agrarian Tax Pressure - Variable of Interest: Completion Year - Treatment Group: Fully Included Provinces vs Control Group: Partially Included Provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Cadastré	-0.398 (0.210)	-0.445 (0.184)	-0.328*** (0.0156)	-0.0588 (0.0613)	-0.119 (0.0464)	0.0431 (0.0294)	-0.243* (0.0581)	-0.136 (0.0513)
Rainfall	-0.0361 (0.0595)	0.0138 (0.138)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)	0.00959 (0.134)
Temperature	-0.305 (1.303)	-1.293 (1.225)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)	-1.553 (1.060)
Frosty Days	-0.164 (0.100)	-0.479 (0.238)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)	-0.554 (0.216)
Rainy Days	-0.0266 (0.188)	-0.229 (0.167)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)	-0.366 (0.213)
Real Land Prices	-0.0107 (0.00618)	-0.00605 (0.00921)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)	0.00404 (0.0185)
Constant	-0.474 (1.958)	1.546 (1.918)	2.028 (1.555)	2.028 (1.555)	2.028 (1.555)	2.028 (1.555)	1.668 (1.574)	2.028 (1.555)
R^2	0.783	0.794	0.815	0.805	0.819	0.804	0.817	0.818
N	837	558	496	496	496	496	496	496

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

The fifth robustness check changes the variable of interest to the proportion of a province's inclusion in the cadastre. It takes the value 0 when a province is not yet included in the cadastre, and the value 1 when a province is fully included in the cadastre. In between it increases progressively as a province is being included in the cadastre.⁷⁴ This specification will show marginal changes in agrarian tax pressure in response to marginal increases in cadastre measurements. The results are reported in table 4.11. The coefficient on the variable of interest is positive but insignificant in the first column, which shows the specification for all treated provinces. Disaggregating between fully and partially included provinces suggests that the insignificance is probably driven by the coefficient of fully included provinces, which is not significantly different from 0. However, the provinces partially included have a positive and significant sign on the coefficient. In short, the partially included provinces did have significant marginal increases in their agrarian tax pressure as they were progressively measured in the cadastre, but the same effect cannot be found for the fully included provinces. A potential explanation for this phenomenon might be found in the timing of inclusion in the cadastre as on average, the measurement in the provinces fully included started earlier than in the provinces partially included.

In the last three set of robustness checks, I repeat all regressions and robustness checks above. For space purposes and to avoid an unnecessary repetition of figures and tables, I report all the results in the Appendix. In the sixth robustness check, I use an alternative dependent variable: the share of total territorial contribution revenues with respect to total taxes in a province. In the seventh robustness check, I use another alternative dependent variable: the share of total territorial contribution revenues on provincial GDPs. In both cases, I do not find significant effects of the cadastre on the alternative dependent variable. Finally, in the eighth and last robustness check, I use Prados de la Escosura's agrarian deflator to obtain the real

74. In short, the variables takes the decimal values of column *% of Province* in Table 2A2.

Table 4.11: Robustness Check 4.5 - Marginal Changes on Agrarian Tax Pressure due to Changes in Cadastre Proportion.

	All included (1)	Fully Included (2)	Partially Included (3)
<i>Dependent Variable: Agrarian Tax Pressure</i>			
Cadastre Proportion	0.0864 (0.0791)	0.00282 (0.0630)	0.331*** (0.0569)
Rainfall	-0.182* (0.0753)	-0.0168 (0.0886)	-0.00777 (0.100)
Temperature	-0.270 (0.849)	-0.406 (1.395)	-0.824 (0.894)
Frosty Days	-0.0445 (0.0832)	-0.0731 (0.158)	-0.210 (0.148)
Rainy Days	0.257 (0.253)	0.00992 (0.292)	-0.167 (0.322)
Real Land Prices	0.00252 (0.0123)	0.00737 (0.0212)	0.0102 (0.00968)
Constant	-1.430 (1.270)	-1.163 (2.024)	-0.161 (1.464)
<i>N</i>	1457	992	1085

Notes: * = significant at 10% level; ** = significant at 5% level;
*** = significant at 1% level. Standard errors in parentheses.

values.⁷⁵ Prados de la Escosura's agrarian deflator is constructed at the national level and is thus the same for all provinces. Changing the deflator does not yield any significant changes to the main results and observations. The last three robustness checks confirm that there are no significant effects of the cadastre on alternative dependent variables, nor does a change in deflator change the results.

75. See Prados de la Escosura, *Spanish Economic Growth, 1850-2015*.

4.5.3 Discussion

The evidence suggests that agrarian tax pressure was not altered by the cadastre in the measured provinces relative to those not included in the cadastre. This observation holds to different control and treatment groups, different variables of interest and to overall and disaggregated observations. The hypothesis that the cadastre should have increased the agrarian tax pressure does not hold. In fact, that agrarian tax pressure fell dramatically between 1904 and 1934 both in the provinces in the *amillaramientos* and the provinces in the cadastre (see figure 4.7). A generalised decline could have been expected for the provinces included in the *amillaramientos* which had constant tax quotas: any increases in agrarian production would not have been captured by taxation, thus leading to decreases in agrarian tax pressure. However, under the cadastre and with updated tax bases, one could have expected more responsive taxation and higher agrarian tax pressures.

The problem was that the cadastre did not address the fundamental flaw of the territorial contribution: its flat tax nature. Both under the cadastre and under the *amillaramientos*, the territorial contribution remained a flat tax on a frozen tax base that became outdated over time. The substantial difference between the two regimes is that under the *amillaramientos* the tax base estimates were based on landowners' declarations and thus prone to fraud, whereas under the cadastre the new updated lands values were measured and approved by the state. In any case, both regimes merely offered a fixed image of a province's land values at a given point in time. Hence, in the case of the cadastre, once new land values were assigned to land plots, a fixed tax base and territorial contribution proceeds held for the next years which reflected land values at the time the cadastre was measured.

In short, it was a completely inelastic system where changes in production and land values were not reflected in taxation. This point can be proven by looking

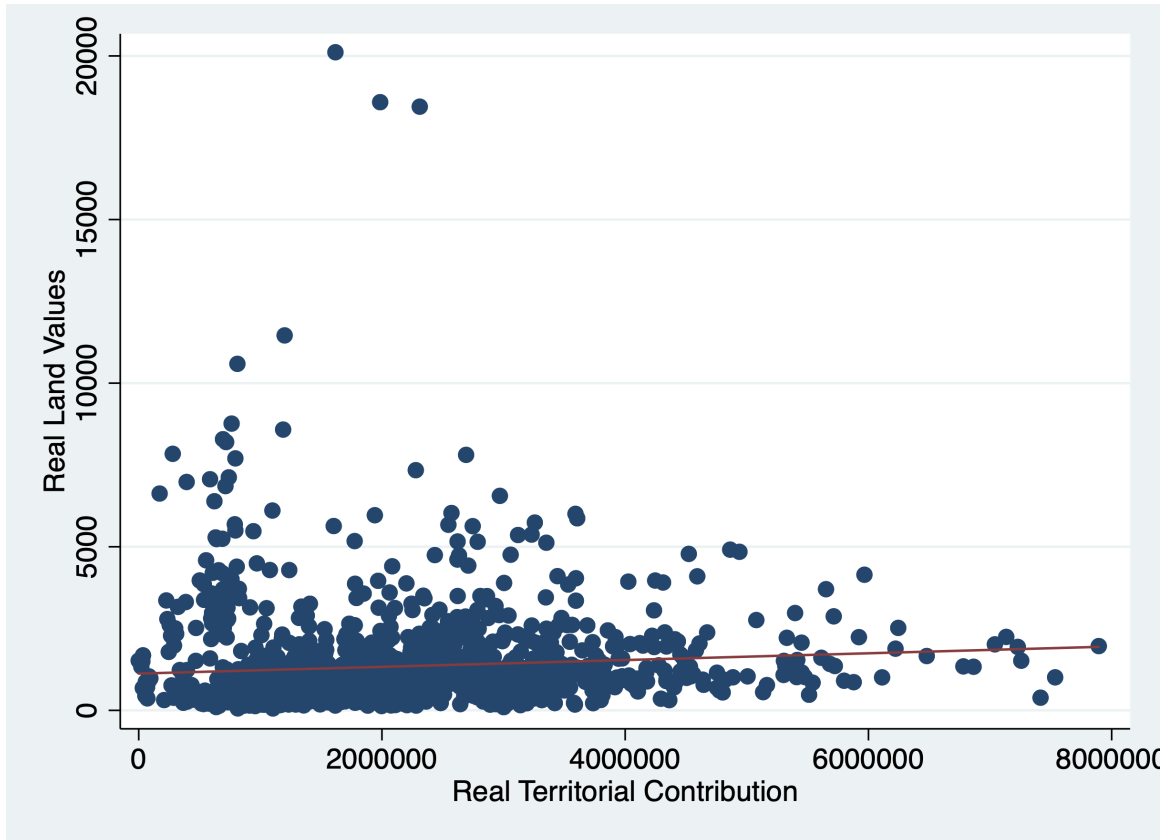
at the correlation of the real land prices in each province in a given period $t-1$ and its real territorial contribution revenues in period $t+1$. Under efficient market conditions, real land prices are a good proxy reflecting real land values, and Carmona and Rosés demonstrated that land markets in Spain were well integrated and efficient for this period.⁷⁶ Thus, an inelastic tax like the territorial contribution should not respond to changes in real land prices. The two variables are plotted against each other in figure 4.13 and indeed, there is no correlation between real land prices in a province in period $t-1$ and its territorial contribution revenues in period $t+1$.⁷⁷ The outliers suggest that some provinces with high real land prices collected relatively little territorial contribution revenues and other provinces with low real land prices collected important amounts of territorial contribution revenues.

The results of this chapter suggest that the cadastre did not improve Spain's fiscal capacity, and that there was a considerable opportunity cost in foregone territorial contribution revenues: had agrarian taxation been more elastic under the cadastre, it could have brought more tax revenues to the state in a period where agrarian production was increasing (see Section 4.2). The tax inelasticity and the decreases in agrarian tax pressure indicate that agrarian production grew at higher rates than agrarian taxation throughout the period. The cadastre merely updated the tax bases and it did not change the inelastic nature of the territorial contribution. It did not bring a significant reform to agrarian taxation and it maintained the regressive flat tax structure. The long and unequal implementation of the cadastre across provinces was a symptom of the low fiscal capacity in the first place, as the state was not able to do a quick and uniform implementation across the territory. Similarly, the lack of official data on agriculture and on the cadastre as late as in the

76. See Carmona and Rosés, "Land markets and agrarian backwardness (Spain, 1904-1934)".

77. The same results hold for changing the periods to $t+2$ and $t+3$ (See figure 4A4.1 in the Subappendix).

Figure 4.13: Correlation between real land values in period $t-1$ and real territorial contribution revenues in period $t+1$.



Notes: All values are in real pesetas.

20th Century are another evidence of was another Spain's low state capacity.⁷⁸

In fact, the fiscal reform of 1900 explicitly attempted to shift the relative tax burden away from the agrarian sector towards the industrial sector.⁷⁹ According to Comín, in the 19th Century, territorial contribution revenues accounted for 6 to 10% of agrarian GDP, whereas industrial contribution revenues accounted for only 3 to 3.5% of industrial GDP, indicator a lower tax pressure on industry than on agriculture. By 1914 the agrarian and industrial tax pressures fell to 3-4% and 2-2.5% respectively, and by 1923, the agrarian tax pressure was lower than the industrial

78. Simpson and Carmona, *Why Democracy Failed*, 70–4.

79. Comín, “Raimundo Fernández Villaverde,” 651–55.

tax pressure.⁸⁰ Under the dictatorship of Primo de Rivera, the Treasury Minister Calvo Sotelo imperceptibly favoured industry: under his tenure, territorial contribution revenues as a percentage of total revenues increased slightly while industrial contribution revenues as a percentage of total revenues decreased.⁸¹ However, as I explained previously, Primo de Rivera's regime was supported by landowners, and Calvo Sotelo's measures were unsuccessful. The government did manage to reduce the agricultural tax burden and the results of this chapter confirm that the cadastre's impact on agrarian tax pressure was practically nonexistent.

In the absence of efficient agrarian taxation, the benefits from agricultural productivity improvements mostly remained in the hands of agrarian producers. Whether the low levels of agrarian taxation offered incentives to increase agrarian productivity in order to accumulate profits is a possibility that remains to be explored in future research. In addition, when the First World War broke in the European continent, Spain experimented a period of inflation between 1914 and 1920, with increases in food and consumer prices before stabilising at higher levels throughout the 1920s.⁸² The inflationary burst of the 1910s followed by the higher price level of the 1920s benefited the agrarian sector: farmers could their production at higher prices and the real values of their taxes decreased. This was especially true for the provinces that remained in the *amillaramientos* and had to pay a fixed quota of taxes but a similar phenomenon occurred in the provinces included in the cadastre, although attenuated.

It has always been assumed that the cadastre was a detrimental measure for the agrarian sector, hence the strong political opposition from the landed elites throughout the 19th and early 20th Centuries. In fact, the results of this chapter

80. Comín, *Hacienda y Economía en la España Contemporánea*, 590.

81. Comín, *Hacienda y Economía en la España Contemporánea*, 904–5.

82. Jordi Maluquer de Motes, *La inflación en España. Un índice de precios de consumo, 1830–2012*, (Madrid: Banco de España. Servicio de Estudios: Estudios de Historia Económica no. 64, 2013), 69–72; Jordi Maluquer de Motes, “Consumo y precios,” in *Estadísticas Históricas de España, siglos XIX-XX*, ed. Albert Carreras and Xavier Tafunell (Bilbao: Fundación BBVA, 2005), 1266–67.

suggest that the cadastre was not detrimental for the sector, quite the opposite: it did not increase the agrarian tax pressure, and in a context of agrarian economic growth and development, it actually probably benefited landowners which reaped off all the rewards of the productivity and production increases. There are nonetheless an important caveat: the individual distributive effects of the cadastre in the agrarian sector are left unaddressed. The current data which does not allow for interpersonal inequality analyses: yet flat taxes benefit richer taxpayers, who have to pay less in proportion to their wealth or income than poorer taxpayers, and the literature has highlighted that the tax burdens were deliberately shifted onto the poorer peasants, suggesting strong distribution imbalances of the agrarian tax pressure within regions. The geographical distributive effects are nonetheless clear: the landowners in the provinces which remained in the *amillaramientos* kept paying taxes on fraudulent declarations for the whole period, whereas the landowners in the cadastre did see an increase in their contributions.

4.6 Conclusions

The implementation of the cadastre in Spain led to a dual regime of agrarian taxation in Spain. In the provinces where the cadastre was implemented, landowners paid the territorial contribution on land values measured and certified by the state, whereas in the provinces which remained under the *amillaramientos* regime, landowners paid the tax on their own fraudulent declarations. This chapter studied the impact of the land cadastre on agrarian taxation exploiting differences across provinces introduced by the unequal implementation of the cadastre. The findings show that the Spanish land cadastre succeeded in updating the tax bases and increased territorial contribution revenues in the provinces where it was implemented. However, none of this significantly altered the agrarian tax pressure.

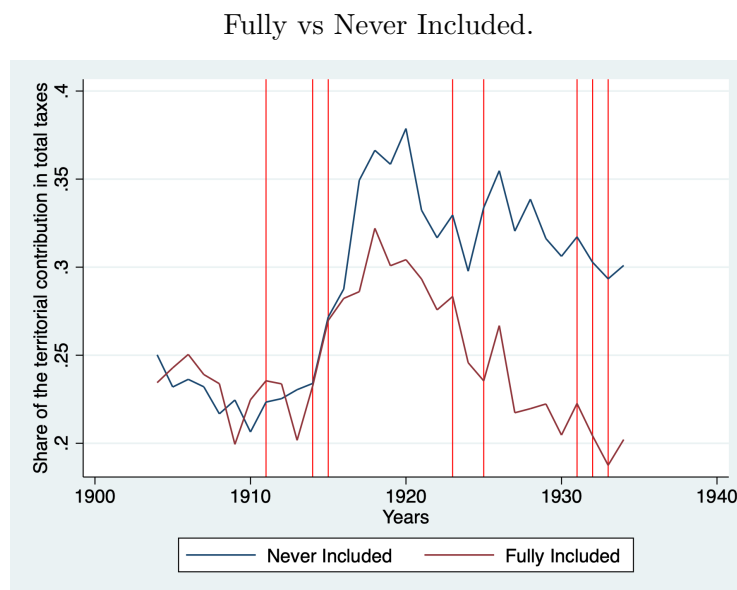
The cadastre did not bring a significant agrarian taxation reform: the territorial contribution remained a flat tax levied on a frozen tax base, which was unresponsive to fluctuations in land values or production changes. Indeed, as agrarian production increased substantially in the first decades of the 20th Century, the territorial contribution revenues did not keep track. The state lost the opportunity to improve its fiscal capacity by increasing taxes on its growing agrarian sector; it incurred a considerable opportunity cost in foregone territorial contribution revenues which could have been obtained had the cadastre been more responsive to real agrarian production.

This chapter offers new evidence on Spain's shallow fiscal capacity. More specifically, it shows that the predominant agrarian sector was not efficiently taxed. The cadastre sought to remedy the situation but failed to have a significant impact on agrarian taxation. Theoretically, the land cadastre could have led to an increase in fiscal capacity; in practice, it maintained a regressive system of agrarian taxation, favouring the agrarian sector by maintaining a low agrarian tax pressure. As a result, the state lost the chance to significantly increase its fiscal capacity at a time when productivity increased and production grew.

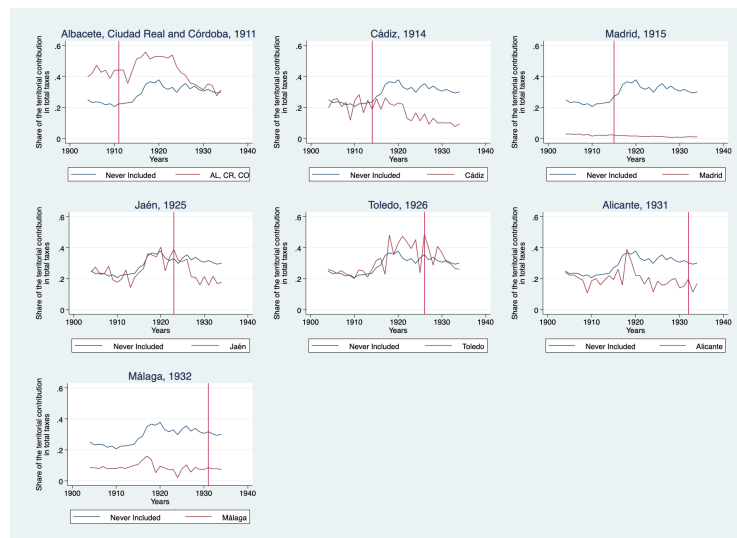
4.A Subappendix

Robustness Check 6: Alternative Dependent Variable – proportion of total territorial contribution revenues with respect to total taxes in a province.

Figure 4A1.1: Mean share of the territorial contribution in total taxes in provinces fully and never included in the cadastre, 1904-1934.



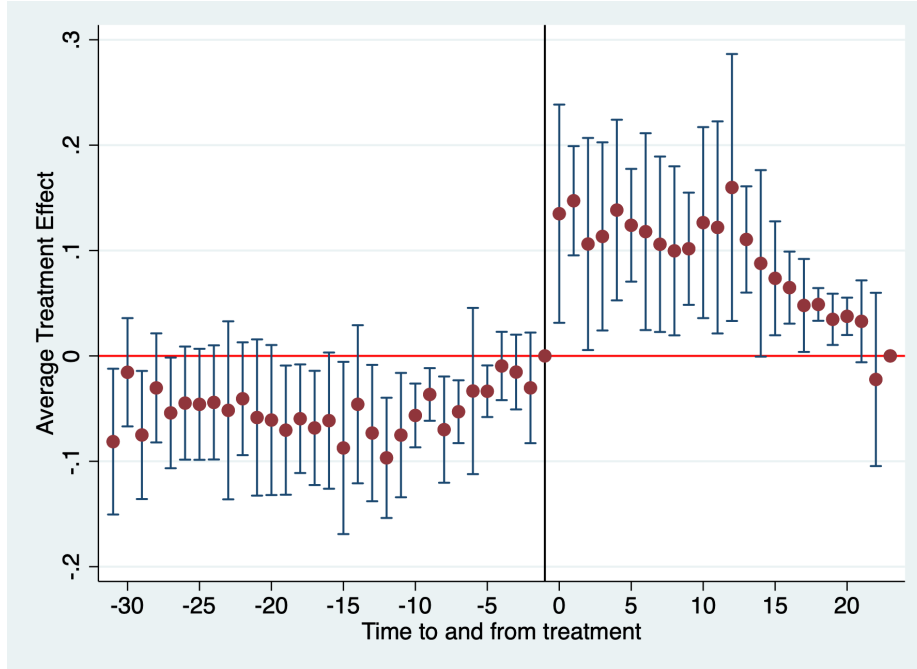
Each province individually.



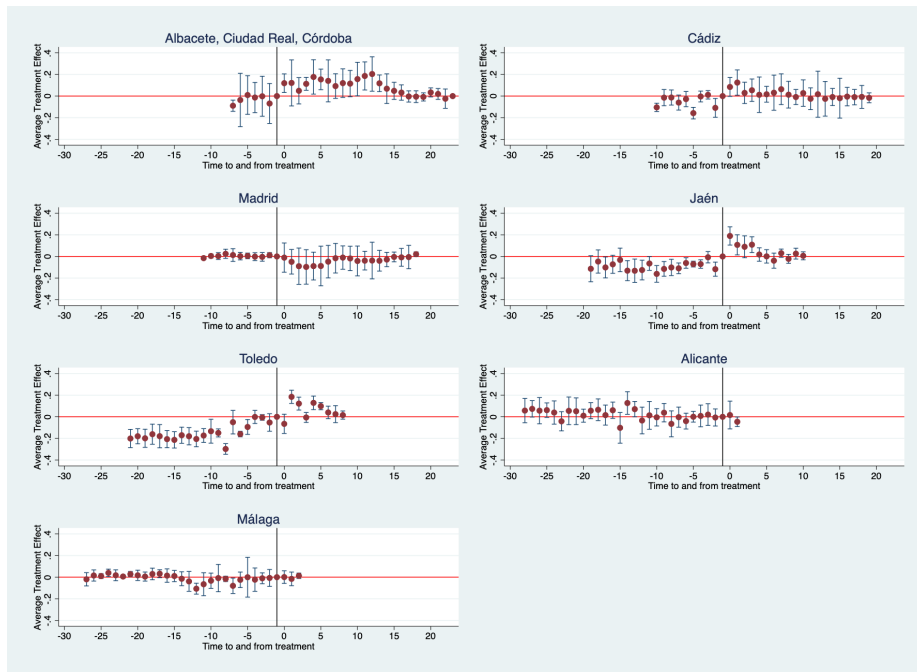
Notes: Own elaboration using the *Gacetas de Madrid* (1901-1936).

Figure 4A1.2: Divergence in the mean share of the territorial contribution in total taxes before and after the full inclusion of provinces in the cadastre.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

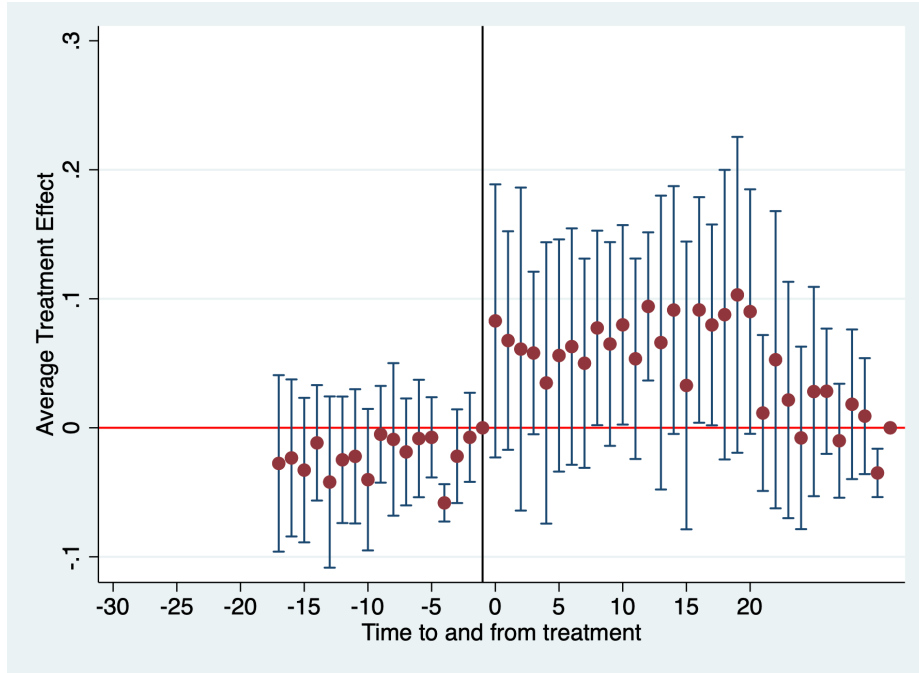
Table 4A1.1: Regression Results - Main Specification. Fully included vs never included.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in total taxes</i>								
Cadastre Full	-0.167** (0.0320)	-0.134** (0.0206)	-0.162* (0.0399)	-0.00801 (0.0424)	-0.140* (0.0380)	-0.169** (0.0248)	0.0149 (0.0493)	0.0178 (0.0232)
Rainfall	0.0455 (0.0419)	0.0652 (0.0823)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0876)	0.0275 (0.0848)
Temperature	-0.0729 (0.813)	-0.269 (0.928)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.999)	-0.285 (0.968)
Frosty Days	0.0705 (0.134)	-0.00117 (0.196)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.213)	-0.00698 (0.207)
Rainy Days	-0.00709 (0.127)	0.0327 (0.241)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.284)	0.0584 (0.275)
Real Land Prices	-0.00875 (0.0242)	-0.0167 (0.0258)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0289)	-0.0150 (0.0280)
Constant	0.187 (1.260)	0.411 (1.615)	0.485 (1.705)	0.485 (1.705)	0.485 (1.705)	0.485 (1.705)	0.485 (1.761)	0.485 (1.705)
R^2	0.843	0.842	0.817	0.830	0.817	0.821	0.816	0.822
N	992	713	651	651	651	651	651	651

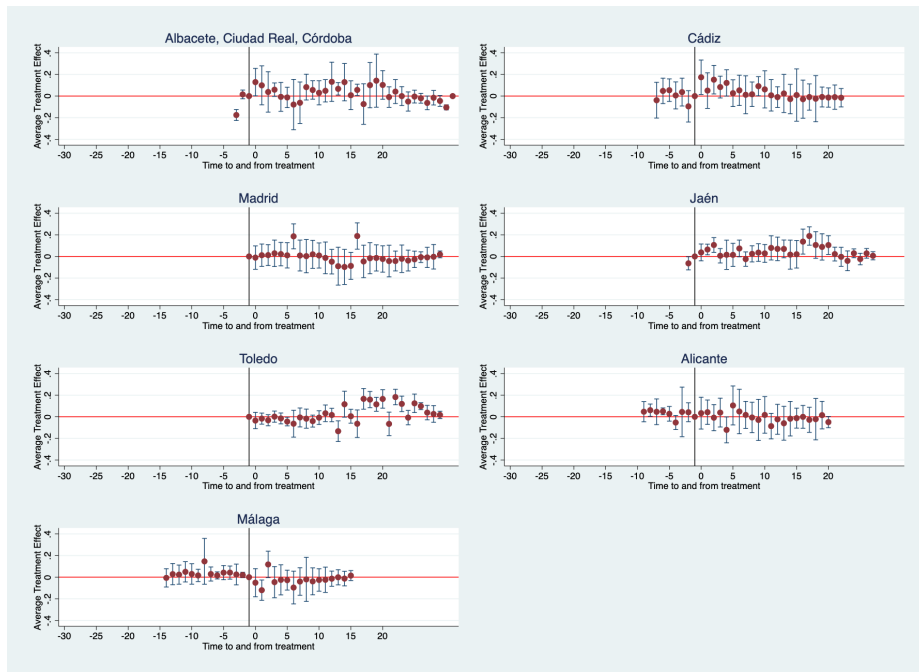
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A1.3: Robustness Check 1 – Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after their initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

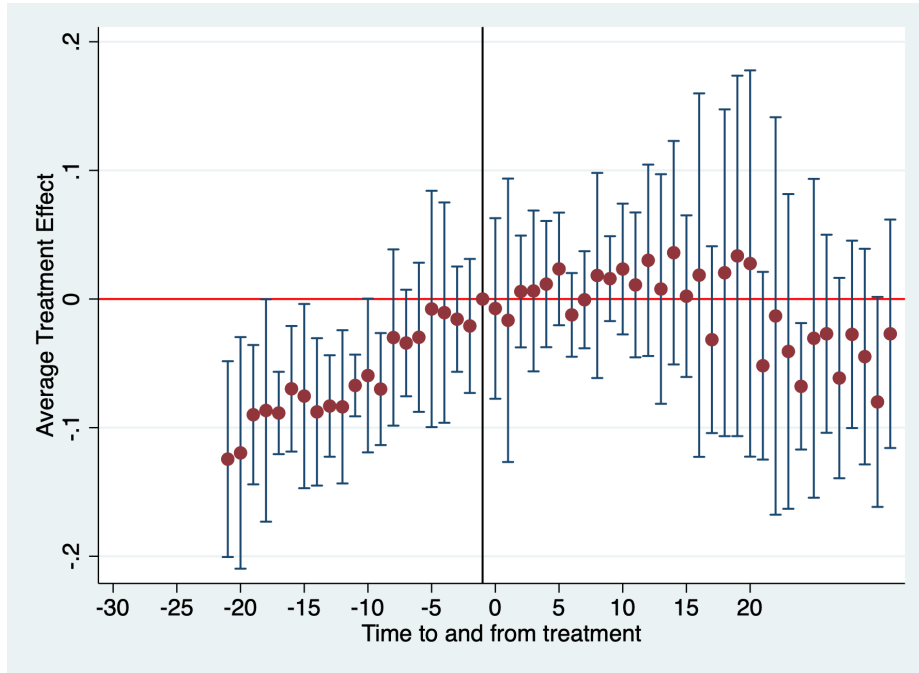
Table 4A1.2: Robustness Check 1 - Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after their initial year of inclusion in the cadastre compared to the never treated provinces

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in total taxes</i>								
Start Year	-0.0903 (0.0444)	-0.254*** (0.0295)	-0.159** (0.0325)	-0.272 (0.106)	-0.0929* (0.0206)	-0.00900 (0.112)	0.00456 (0.0449)	0.0322 (0.0366)
Rainfall	0.0203 (0.0518)	0.0764 (0.0808)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0876)	0.0275 (0.0848)
Temperature	-0.122 (0.803)	-0.303 (0.955)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.999)	-0.285 (0.968)
Frosty Days	0.0241 (0.127)	0.0413 (0.197)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.213)	-0.00698 (0.207)
Rainy Days	0.0447 (0.159)	-0.0788 (0.241)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.284)	0.0584 (0.275)
Real Land Prices	-0.0157 (0.0200)	-0.0132 (0.0262)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0289)	-0.0150 (0.0280)
Constant	0.300 (1.245)	0.548 (1.604)	0.485 (1.705)	0.485 (1.705)	0.485 (1.705)	0.485 (1.705)	0.485 (1.761)	0.485 (1.705)
R^2	0.837	0.846	0.817	0.830	0.817	0.821	0.816	0.822
N	992	713	651	651	651	651	651	651

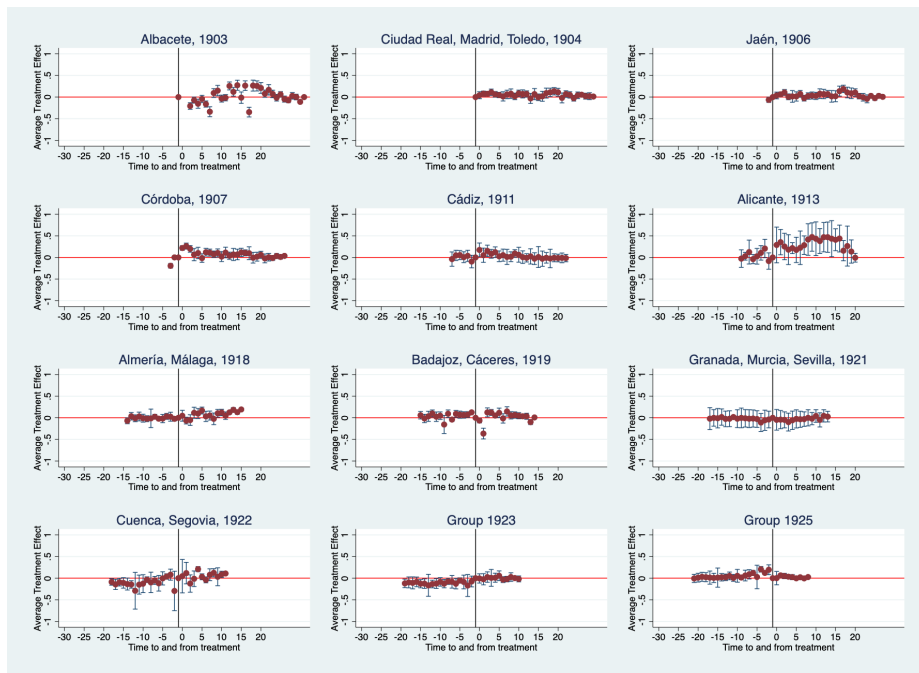
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A1.4: Robustness Check 2 - Divergence in the mean share of the territorial contribution in total taxes in all treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

Table 4A1.3: Robustness Check 2 - Divergence in the mean share of the territorial contribution in total taxes in all treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

	All	1903	1904	1906	1907	1911	1913	1918	1919	1921	1922	1923	1925
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Alternative Dependent Variable: share of the territorial contribution in total taxes</i>													
Start Year	0.00444 (0.0527)	0.0897* (0.0292)	-0.0214 (0.118)	-0.0929* (0.0206)	-0.270*** (0.0222)	-0.159** (0.0325)	-0.277 (0.113)	0.0443 (0.0375)	0.215** (0.0424)	0.0115* (0.00377)	0.0523 (0.103)	0.0311 (0.0386)	0.161* (0.0342)
Rainfall	-0.0894 (0.0491)	0.0275 (0.0848)	-0.00844 (0.0947)	0.0275 (0.0848)	0.0275 (0.0848)	0.0275 (0.0848)	0.0415 (0.203)	0.0133 (0.0755)	0.0305 (0.0821)	0.0598 (0.0811)	-0.00482 (0.0948)	-0.0508 (0.0832)	-0.0199 (0.0968)
Temperature	0.0124 (0.613)	-0.285 (0.968)	-0.320 (0.953)	-0.285 (0.968)	-0.285 (0.968)	-0.285 (0.968)	-1.187 (1.670)	-0.184 (0.956)	-0.318 (0.956)	-0.148 (0.948)	-0.492 (0.881)	-0.154 (0.778)	-0.440 (0.885)
Frosty Days	0.0658 (0.111)	-0.00698 (0.207)	-0.0241 (0.204)	-0.00698 (0.207)	-0.00698 (0.207)	-0.00698 (0.207)	-0.254 (0.209)	0.00173 (0.193)	-0.0179 (0.205)	0.0140 (0.184)	-0.0473 (0.187)	0.0187 (0.146)	-0.00429 (0.198)
Rainy Days	0.290 (0.142)	0.0584 (0.275)	0.156 (0.293)	0.0584 (0.275)	0.0584 (0.275)	0.0584 (0.275)	-0.150 (0.644)	0.0766 (0.244)	0.0602 (0.270)	-0.00969 (0.234)	0.139 (0.293)	0.165 (0.208)	0.193 (0.326)
Real Land Prices	-0.0125 (0.0138)	-0.0150 (0.0280)	-0.0141 (0.0243)	-0.0150 (0.0280)	-0.0150 (0.0280)	-0.0150 (0.0280)	0.0258 (0.0237)	-0.0165 (0.0271)	-0.0144 (0.0274)	-0.0208 (0.0253)	-0.0273 (0.0214)	-0.0121 (0.0197)	-0.00545 (0.0284)
Constant	-0.131 (0.971)	0.485 (1.705)	0.441 (1.658)	0.485 (1.705)	0.485 (1.705)	0.485 (1.705)	0.0911 (2.827)	0.371 (1.627)	0.526 (1.683)	0.377 (1.576)	0.722 (1.558)	0.287 (1.270)	0.453 (1.640)
R^2	0.843	0.864	0.833	0.817	0.818	0.817	0.730	0.830	0.853	0.823	0.869	0.845	0.817
N	1457	651	713	651	651	651	651	682	682	713	682	806	744

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

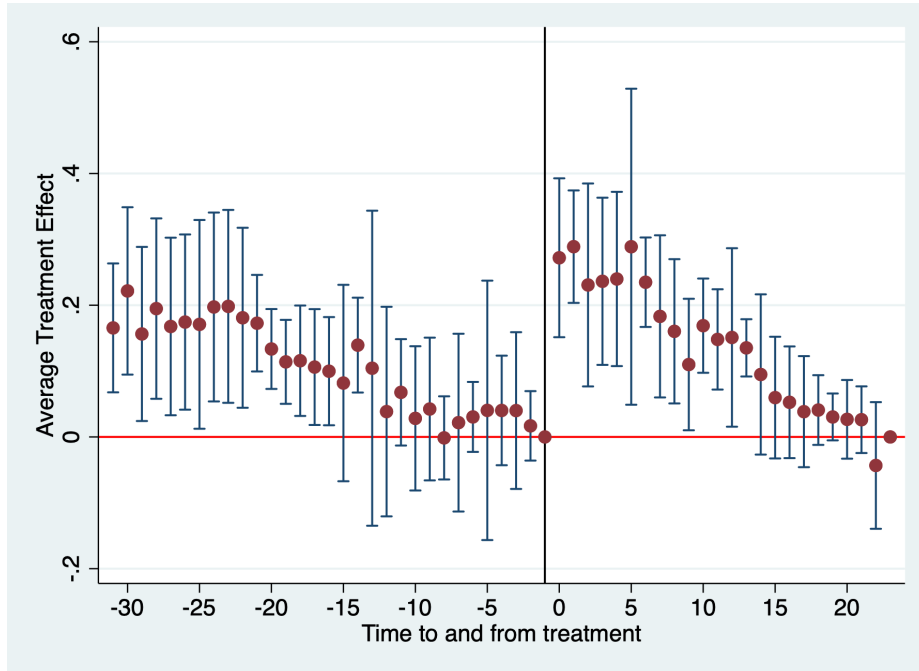
Table 4A1.4: Robustness Check 3 – Marginal Changes on Agrarian Tax Pressure due to Changes in Cadastre Proportion.

	All included (1)	Fully Included (2)	Partially Included (3)
<i>Dependent Variable: share of the territorial contribution in total taxes</i>			
Cadastre Proportion	0.0631 (0.0392)	0.00846 (0.0249)	0.228*** (0.0380)
Rainfall	-0.162* (0.0699)	0.0653* (0.0328)	-0.0901 (0.0925)
Temperature	0.219 (0.576)	-0.138 (0.867)	0.0657 (0.545)
Frosty Days	0.124 (0.134)	0.0315 (0.130)	0.0656 (0.157)
Rainy Days	0.354* (0.167)	-0.00208 (0.118)	0.199 (0.211)
Real Land Prices	-0.0108 (0.0139)	-0.00821 (0.0203)	-0.0177 (0.0178)
Constant	-0.416 (0.998)	0.261 (1.315)	0.00190 (0.966)
<i>N</i>	1457	992	1085

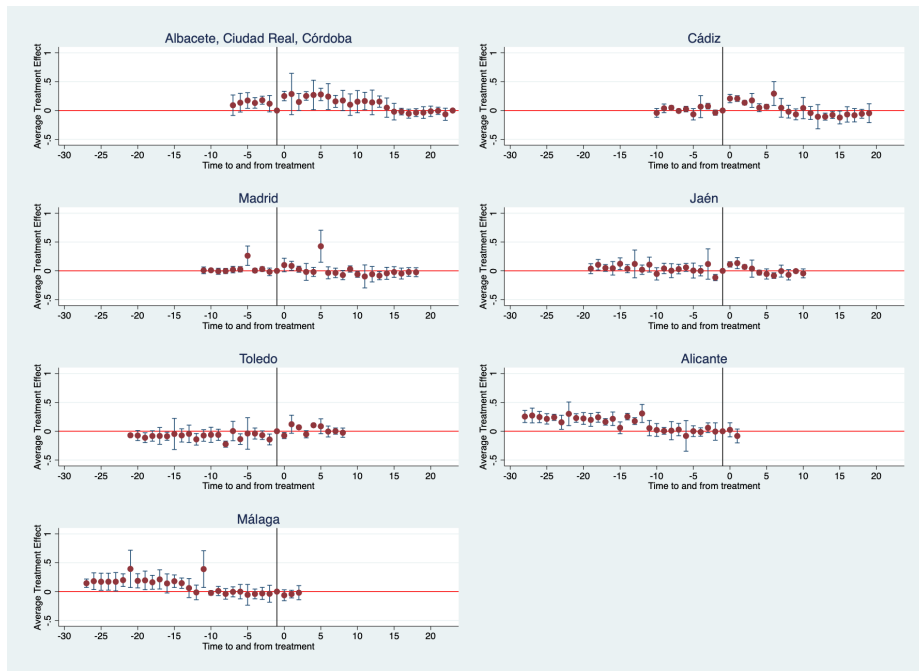
Notes: * = significant at 10% level; ** = significant at 5% level;
*** = significant at 1% level. Standard errors in parentheses.

Figure 4A1.5: Robustness Check 4 - Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

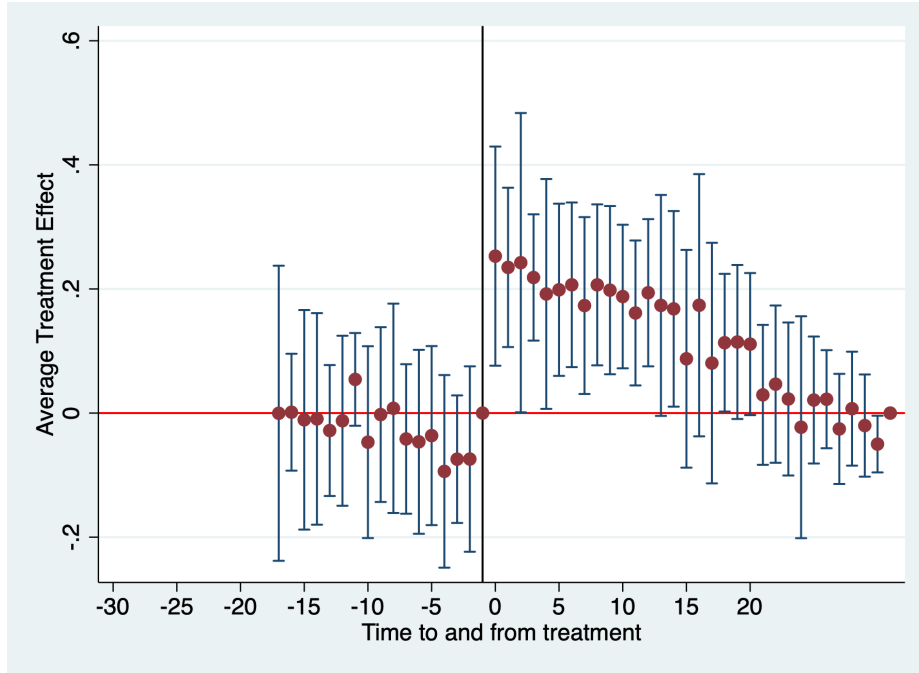
Table 4A1.5: Robustness Check Number 4–Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in total taxes</i>								
Cadastre	-0.333*** (0.0245)	-0.308*** (0.0213)	-0.266** (0.0245)	-0.157* (0.0300)	-0.127** (0.0112)	-0.222** (0.0370)	0.0442 (0.0337)	0.0454 (0.0471)
Rainfall	-0.0704 (0.102)	-0.0668 (0.134)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)
Temperature	0.113 (0.934)	-0.386 (1.138)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)
Frosty Days	0.0779 (0.0795)	-0.0594 (0.153)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)
Rainy Days	0.137 (0.173)	0.184 (0.170)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)
Real Land Prices	-0.00664 (0.00781)	-0.0116 (0.0127)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)
Constant	0.299 (1.188)	1.049 (1.471)	0.981 (1.497)	0.981 (1.497)	0.981 (1.497)	0.981 (1.497)	0.543 (1.516)	0.981 (1.497)
R^2	0.861	0.826	0.842	0.858	0.837	0.834	0.840	0.850
N	837	558	496	496	496	496	496	496

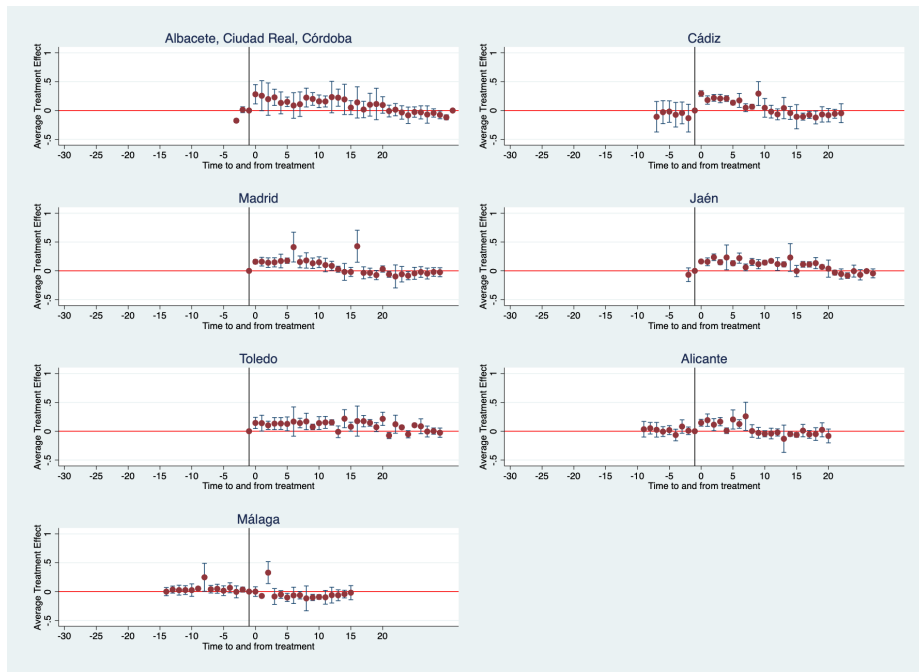
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A1.6: Robustness Check 5 - Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

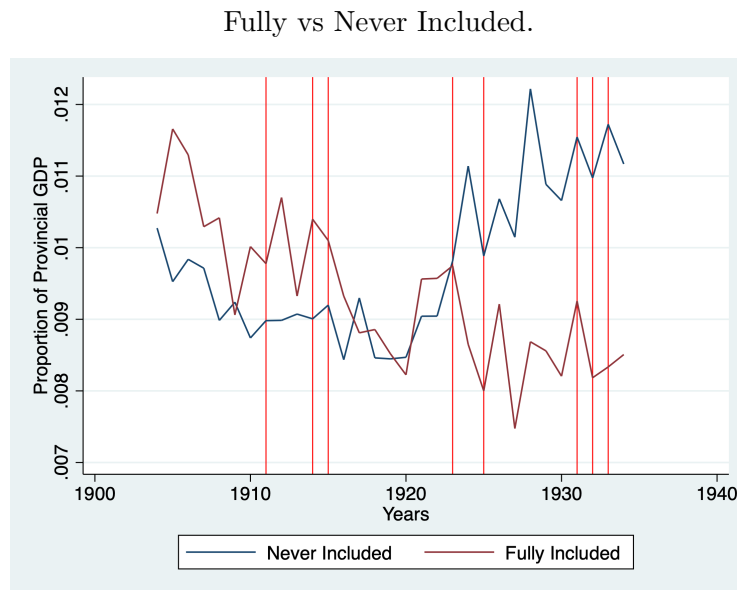
Table 4A1.6: Robustness Check 5 –Divergence in the mean share of the territorial contribution in total taxes in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in total taxes</i>								
Start Year	-0.307** (0.0464)	-0.424*** (0.0169)	-0.317*** (0.0200)	-0.578** (0.0831)	-0.234*** (0.0176)	-0.316** (0.0540)	-0.176* (0.0495)	-0.0902* (0.0226)
Rainfall	-0.0837 (0.116)	-0.0789 (0.121)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)	-0.109 (0.111)
Temperature	0.0592 (0.978)	-0.405 (0.907)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)	-0.444 (1.130)
Frosty Days	0.0442 (0.0899)	0.0212 (0.114)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)	-0.0702 (0.172)
Rainy Days	0.160 (0.195)	0.136 (0.130)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)	0.200 (0.168)
Real Land Prices	-0.0105 (0.0105)	-0.00801 (0.0164)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)	-0.00982 (0.0146)
Constant	0.438 (1.241)	1.183 (1.128)	0.981 (1.497)	0.981 (1.497)	0.981 (1.497)	0.981 (1.497)	0.763 (1.521)	0.981 (1.497)
R^2	0.857	0.825	0.842	0.858	0.837	0.834	0.840	0.850
N	837	558	496	496	496	496	496	496

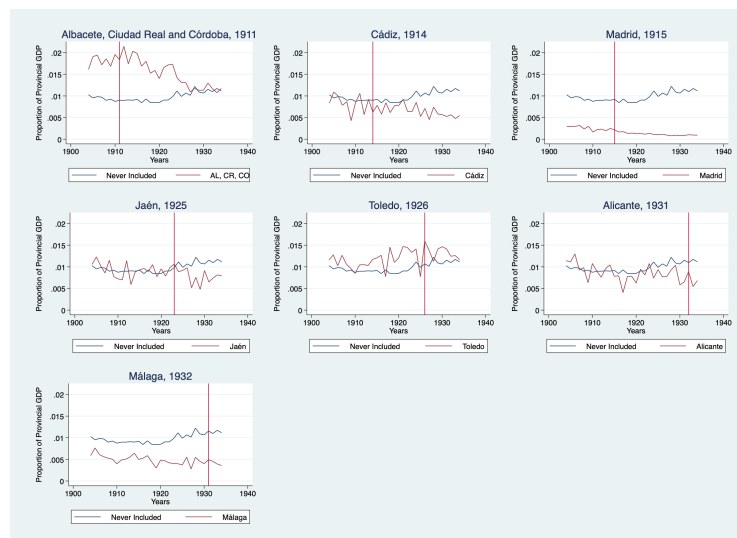
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Robustness Check 7 - Alternative Dependent Variable – Tax burden of the total territorial contribution revenues on the total GDP

Figure 4A2.1: Mean share of the territorial contribution in provincial GDP in provinces fully and never included in the cadastre, 1904-1934.



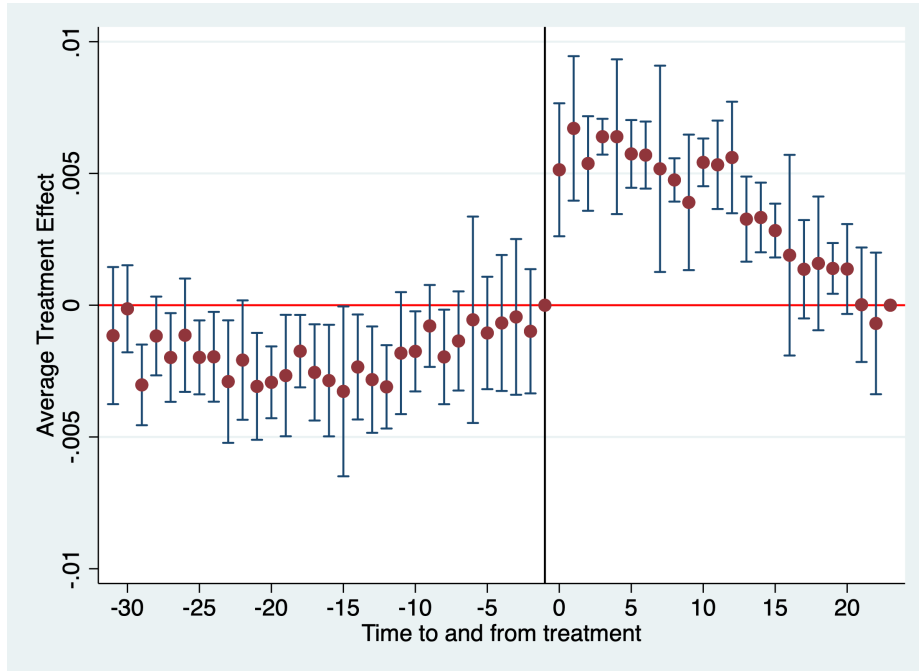
Each province individually.



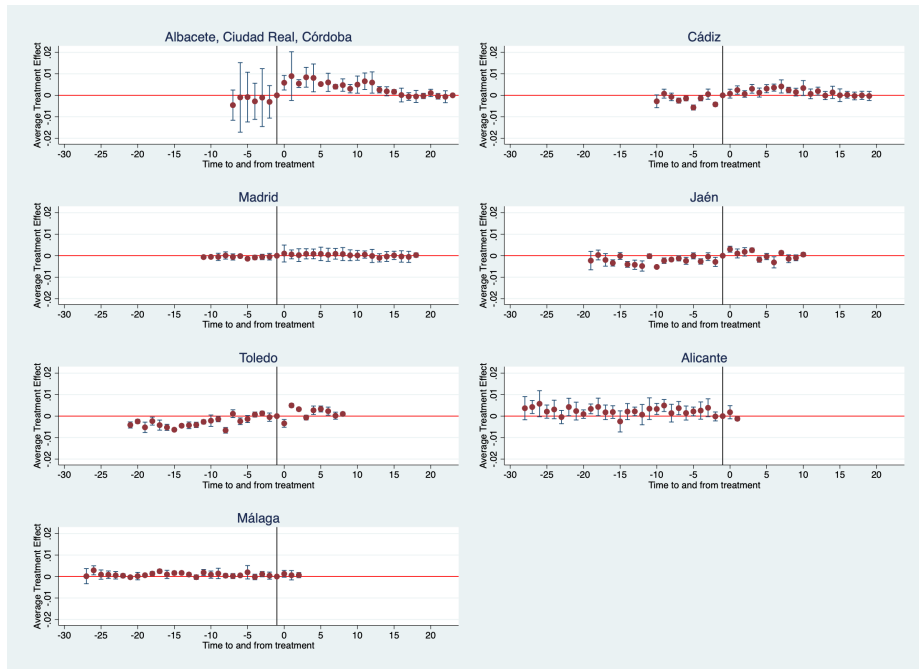
Notes: Own elaboration using the *Gacetas de Madrid* (1901-1936).

Figure 4A2.2: Divergence in the mean share of the territorial contribution in provincial GDP before and after the full inclusion of provinces in the cadastre.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

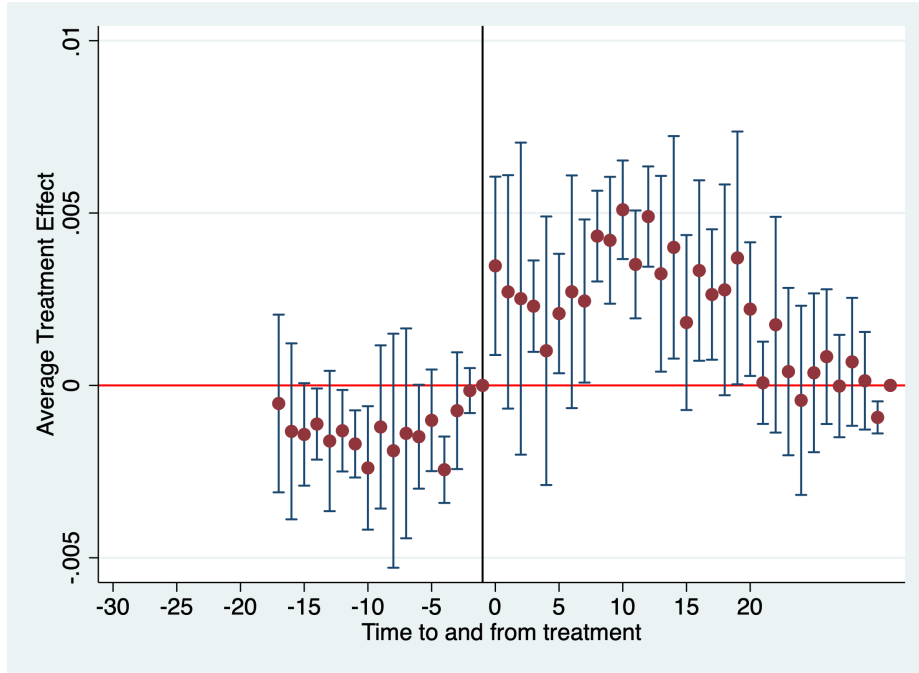
Table 4A2.1: Regression Results - Main Specification. Fully included vs never included.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>								
Cadastré	-0.00672** (0.00157)	-0.00726*** (0.000599)	-0.00398** (0.000619)	-0.00103 (0.000768)	-0.00303** (0.000440)	-0.00290** (0.000387)	0.000532 (0.00169)	-0.000191 (0.000746)
Rainfall	0.000952 (0.00197)	0.000258 (0.00236)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00226)	-0.00121 (0.00219)
Temperature	-0.0144 (0.0129)	-0.0212 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0113)	-0.0231 (0.0110)
Frosty Days	0.00131 (0.00172)	-0.000335 (0.00191)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00201)	-0.000480 (0.00194)
Rainy Days	-0.00382 (0.00381)	-0.000667 (0.00785)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00941)	0.00107 (0.00911)
Real Land Prices	-0.000430 (0.000519)	-0.000578 (0.000476)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000469)	-0.000495 (0.000454)
[1em] Constant	0.0272 (0.0202)	0.0329 (0.0251)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0273)	0.0353 (0.0265)
R^2	0.827	0.846	0.798	0.815	0.801	0.819	0.801	0.799
N	992	713	651	651	651	651	651	651

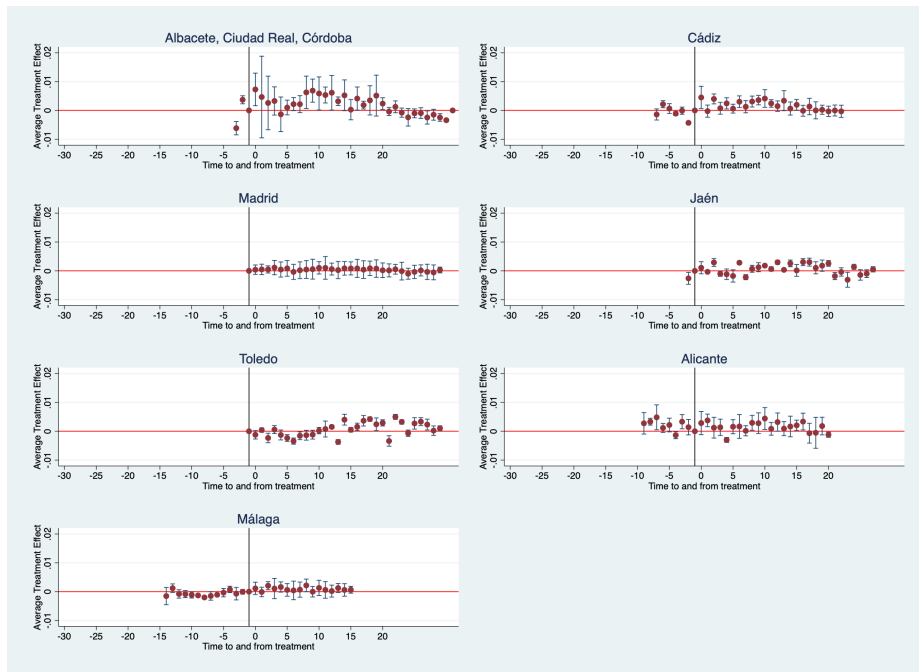
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A2.3: Robustness Check 1 – Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after their initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

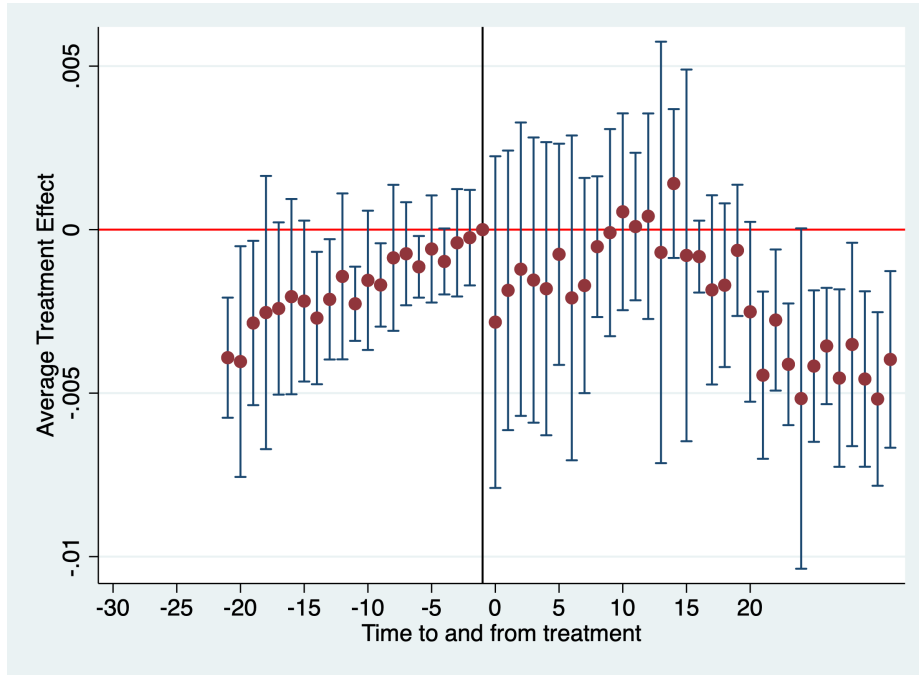
Table 4A2.2: Robustness Check 1 - Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after their initial year of inclusion in the cadastre compared to the never treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>								
Start Year	-0.00404* (0.00135)	-0.0144*** (0.000558)	-0.00260 (0.000958)	-0.00386 (0.00141)	-0.00337** (0.000575)	0.00733** (0.00151)	-0.000401 (0.00123)	-0.00188 (0.000790)
Rainfall	0.000548 (0.00237)	0.00107 (0.00250)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00226)	-0.00121 (0.00219)
Temperature	-0.0132 (0.0140)	-0.0236 (0.0109)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0113)	-0.0231 (0.0110)
Frosty Days	0.000339 (0.00148)	0.00103 (0.00243)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.000480 (0.00201)	-0.000480 (0.00194)
Rainy Days	-0.00196 (0.00503)	-0.00620 (0.00822)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00911)	0.00107 (0.00941)	0.00107 (0.00911)
Real Land Prices	-0.000722 (0.000427)	-0.000430 (0.000386)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000454)	-0.000495 (0.000469)	-0.000495 (0.000454)
Constant	0.0256 (0.0219)	0.0413 (0.0236)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0265)	0.0353 (0.0273)	0.0353 (0.0265)
R^2	0.818	0.865	0.798	0.815	0.801	0.819	0.801	0.799
N	992	713	651	651	651	651	651	651

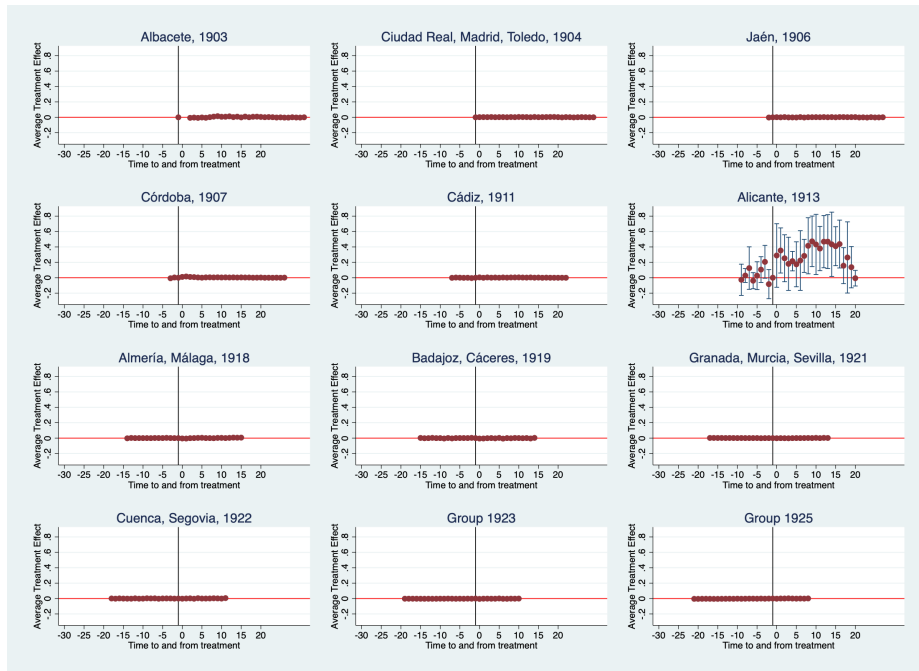
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A2.4: Robustness Check 2 - Divergence in the mean share of the territorial contribution in provincial GDP in all treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

Table 4A2.3: Robustness Check 2 - Divergence in the mean share of the territorial contribution in provincial GDP in all treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

	1903	1904	1906	1907	1911	1913	1918	1919	1921	1922	1923	1925	
All	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>													
Cadastre Start Year	0.00330 (0.00234)	0.00676*** (0.000603)	0.00617* (0.00162)	-0.00337** (0.000575)	-0.0151*** (0.000849)	-0.00260 (0.000958)	-0.277 (0.113)	0.00534*** (0.000833)	0.00615*** (0.000304)	0.00286* (0.000725)	0.00355 (0.00372)	0.00515** (0.00112)	0.000663 (0.000579)
Rainfall	-0.00190 (0.000801)	-0.00121 (0.00259)	-0.00121 (0.00219)	-0.00121 (0.00219)	-0.00121 (0.00219)	0.0415 (0.203)	-0.00328 (0.00330)	-0.000558 (0.00219)	0.000654 (0.00262)	-0.00157 (0.00224)	-0.00161 (0.00181)	-0.00198 (0.00251)	
Temperature	-0.0133 (0.0152)	-0.0252 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-0.0231 (0.0110)	-1.187 (1.670)	-0.0159 (0.0151)	-0.0231 (0.0108)	-0.0165 (0.0140)	-0.0261 (0.00977)	-0.0247* (0.00914)	-0.0271 (0.00962)	
Frosty Days	0.000371 (0.00159)	-0.000480 (0.00209)	-0.00117 (0.00209)	-0.000480 (0.00194)	-0.000480 (0.00194)	-0.254 (0.209)	0.000232 (0.00196)	-0.000542 (0.00193)	0.000579 (0.00213)	-0.00131 (0.00171)	-0.00199 (0.00129)	-0.000794 (0.00167)	
Rainy Days	0.00262 (0.00243)	0.00107 (0.00911)	0.00413 (0.00978)	0.00107 (0.00911)	0.00107 (0.00911)	-0.150 (0.644)	0.00574 (0.0105)	-0.000305 (0.00885)	-0.00229 (0.00744)	0.00211 (0.00899)	-0.000755 (0.00650)	0.00283 (0.00967)	
Real Land Prices	-0.000807 (0.000423)	-0.000495 (0.000397)	-0.000541 (0.000397)	-0.000495 (0.000454)	-0.000495 (0.000454)	0.0258 (0.0237)	-0.000646 (0.000499)	-0.000492 (0.000445)	-0.000639 (0.000507)	-0.000961 (0.000594)	-0.000609 (0.000346)	-0.000234 (0.000422)	
Constant	0.0238 (0.0206)	0.0353 (0.0251)	0.0355 (0.0265)	0.0353 (0.0265)	0.0353 (0.0265)	0.0911 (2.827)	0.0228 (0.0308)	0.0366 (0.0260)	0.0290 (0.0263)	0.0399 (0.0235)	0.0453* (0.0160)	0.0376 (0.0232)	
R^2	0.841	0.895	0.855	0.801	0.798	0.730	0.815	0.910	0.784	0.879	0.856	0.806	
N	1457	651	713	651	651	651	682	682	713	682	806	744	

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

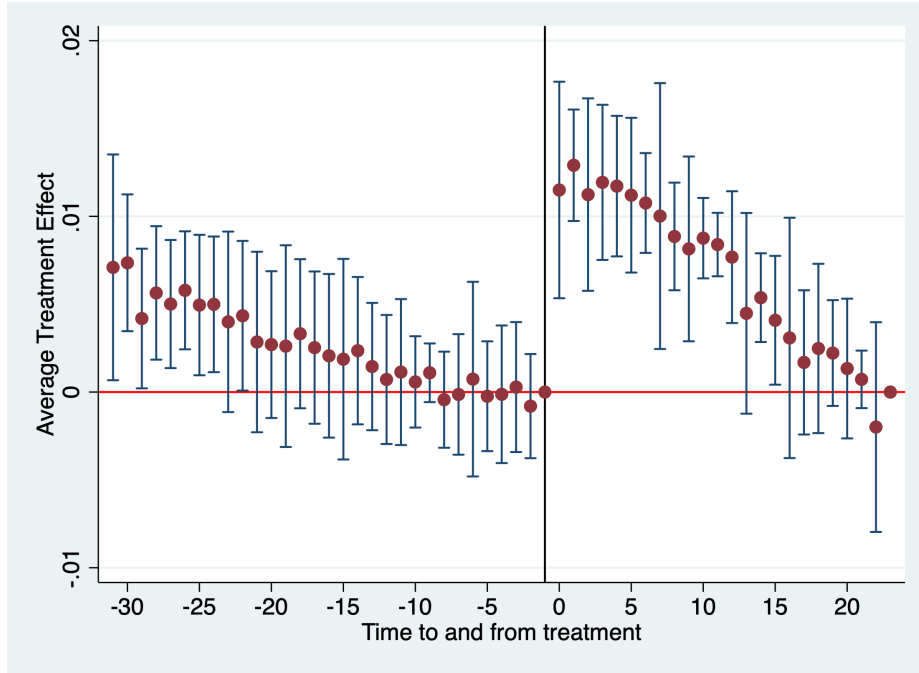
Table 4A2.4: Robustness Check 3 – Marginal Changes on Agrarian Tax Pressure due to Changes in Cadastre Proportion.

	All included (1)	Fully Included (2)	Partially Included (3)
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>			
Cadastre Proportion	0.00383* (0.00169)	0.000995 (0.00119)	0.0105*** (0.00143)
Rainfall	-0.00371* (0.00163)	0.00225 (0.00192)	-0.000463 (0.00230)
Temperature	-0.00443 (0.0151)	-0.0134 (0.0179)	-0.0138 (0.00839)
Frosty Days	0.00237 (0.00237)	0.000630 (0.00186)	-0.000362 (0.00250)
Rainy Days	0.00547 (0.00452)	-0.00336 (0.00363)	-0.00317 (0.00614)
Real Land Prices	-0.000624* (0.000298)	-0.000387 (0.000377)	-0.000766* (0.000323)
Constant	0.00873 (0.0226) (0.0212)	0.0230 (0.0267) (0.0262)	0.0332* (0.0163) (0.0158)
<i>N</i>	1457	992	1085

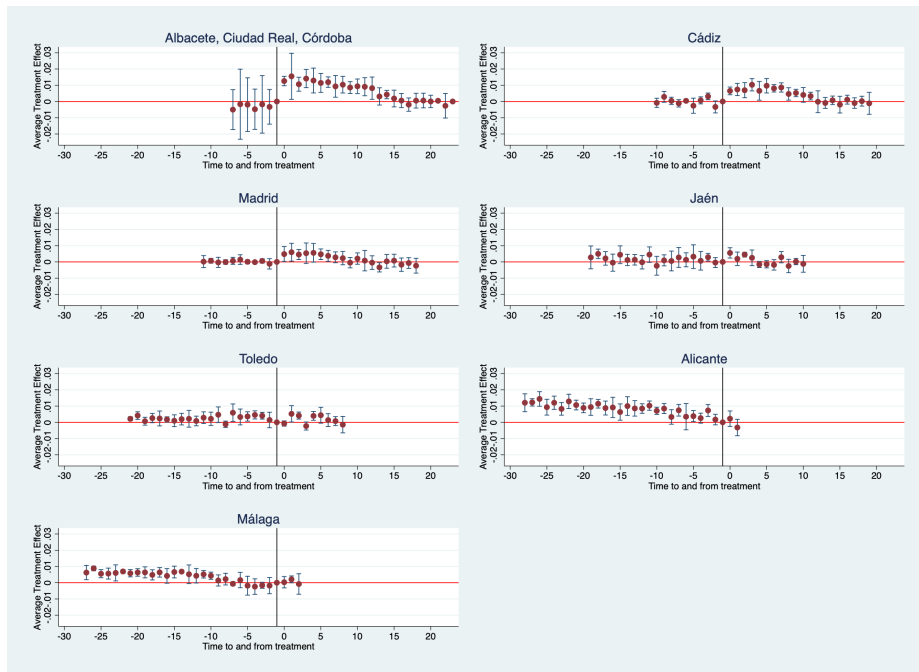
Notes: * = significant at 10% level; ** = significant at 5% level;
*** = significant at 1% level. Standard errors in parentheses.

Figure 4A2.5: Robustness Check 4 - Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

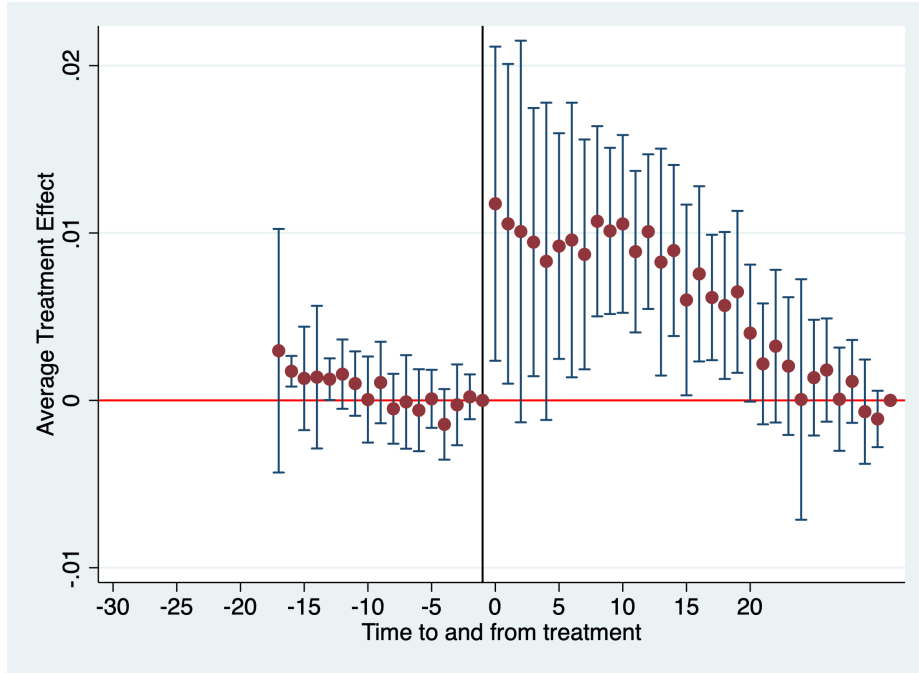
Table 4A2.5: Robustness Check 4 – Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>								
Cadastre	-0.0134* (0.00266)	-0.0147*** (0.00112)	-0.00929** (0.00133)	-0.00566* (0.00127)	-0.00547* (0.000951)	-0.00314 (0.00135)	0.00311 (0.00153)	-0.00216 (0.00132)
Rainfall	0.000761 (0.00343)	0.000562 (0.00504)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)
Temperatre	-0.0126 (0.0402)	-0.0340 (0.0422)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)
Frosty Days	-0.00312 (0.00194)	-0.0105* (0.00302)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)
Rainy Days	-0.00859 (0.00419)	-0.0111 (0.00660)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)
Real Land Prices	-0.000833* (0.000258)	-0.00108 (0.000417)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)
Constant	0.0628 (0.0532)	0.110 (0.0572)	0.110 (0.0527)	0.110 (0.0527)	0.110 (0.0527)	0.110 (0.0527)	0.0916 (0.0538)	0.110 (0.0527)
R^2	0.835	0.804	0.830	0.848	0.827	0.822	0.827	0.837
N	837	558	496	496	496	496	496	496

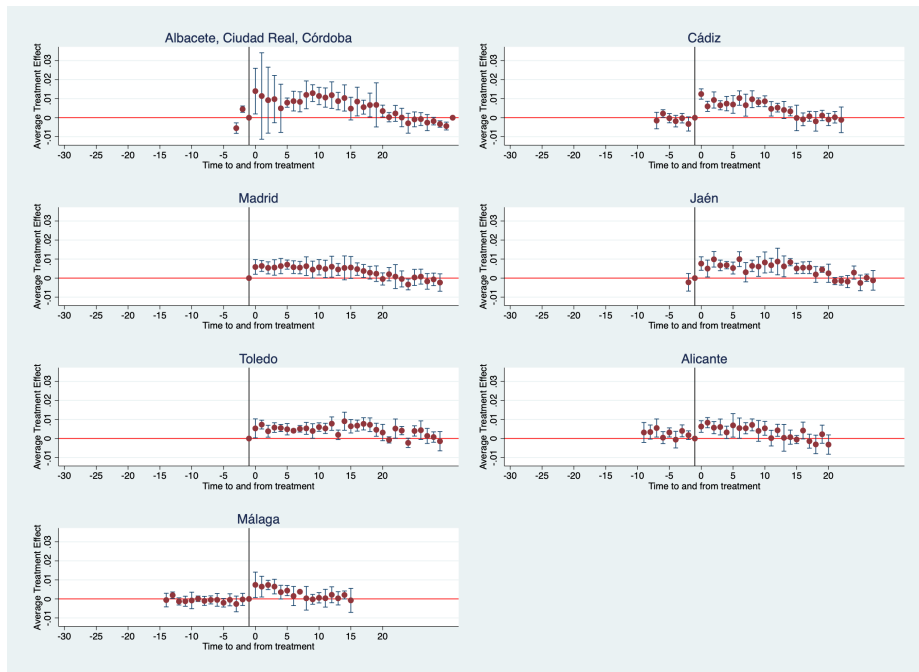
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A2.6: Robustness Check 5 - Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

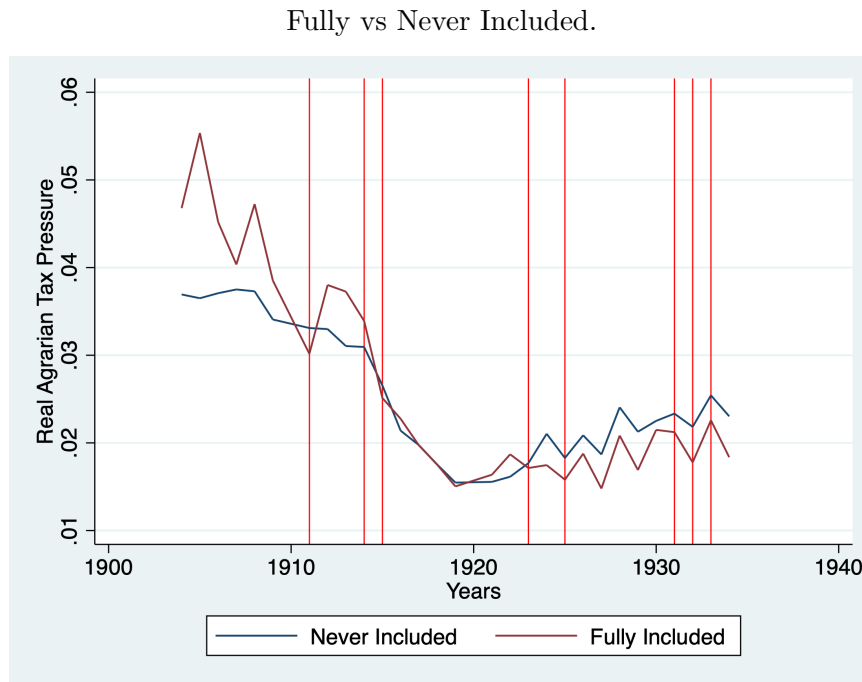
Table 4A2.6: Robustness Check 5 – Divergence in the mean share of the territorial contribution in provincial GDP in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Alternative Dependent Variable: share of the territorial contribution in provincial GDP</i>								
Start Year	-0.0132* (0.00231)	-0.0212** (0.00169)	-0.00999*** (0.000684)	-0.0207** (0.00230)	-0.0104*** (0.000701)	-0.0104** (0.00162)	-0.00578* (0.00109)	-0.00902** (0.00146)
Rainfall	0.000102 (0.00474)	0.000822 (0.00502)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)	-0.000754 (0.00444)
Temperature	-0.0121 (0.0424)	-0.0377 (0.0324)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)	-0.0389 (0.0392)
Frosty Days	-0.00337 (0.00145)	-0.00804 (0.00355)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)	-0.0111* (0.00273)
Rainy Days	-0.00574 (0.00671)	-0.0143 (0.00695)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)	-0.0112 (0.00689)
Real Land Prices	-0.00108 (0.000380)	-0.00103 (0.000563)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)	-0.00102 (0.000511)
Constant	0.0611 (0.0550)	0.123 (0.0430)	0.110 (0.0527)	0.110 (0.0527)	0.110 (0.0527)	0.110 (0.0527)	0.100 (0.0530)	0.110 (0.0527)
R^2	0.832	0.812	0.830	0.848	0.827	0.822	0.827	0.837
N	837	558	496	496	496	496	496	496

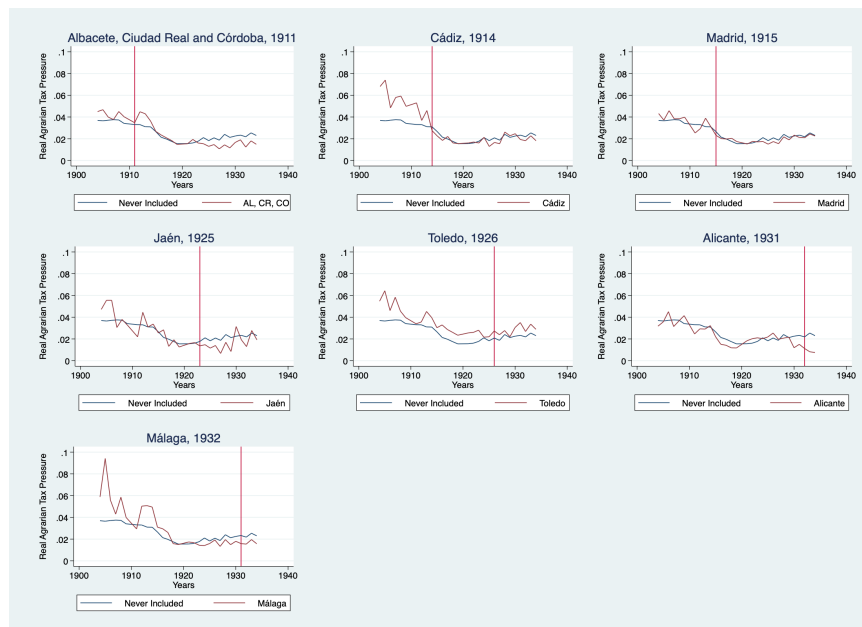
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Robustness Check 8: Prados de la Escosura's agrarian deflator.

Figure 4A3.1: Mean real agrarian tax pressure in provinces fully and never included in the cadastre, 1904–1934.



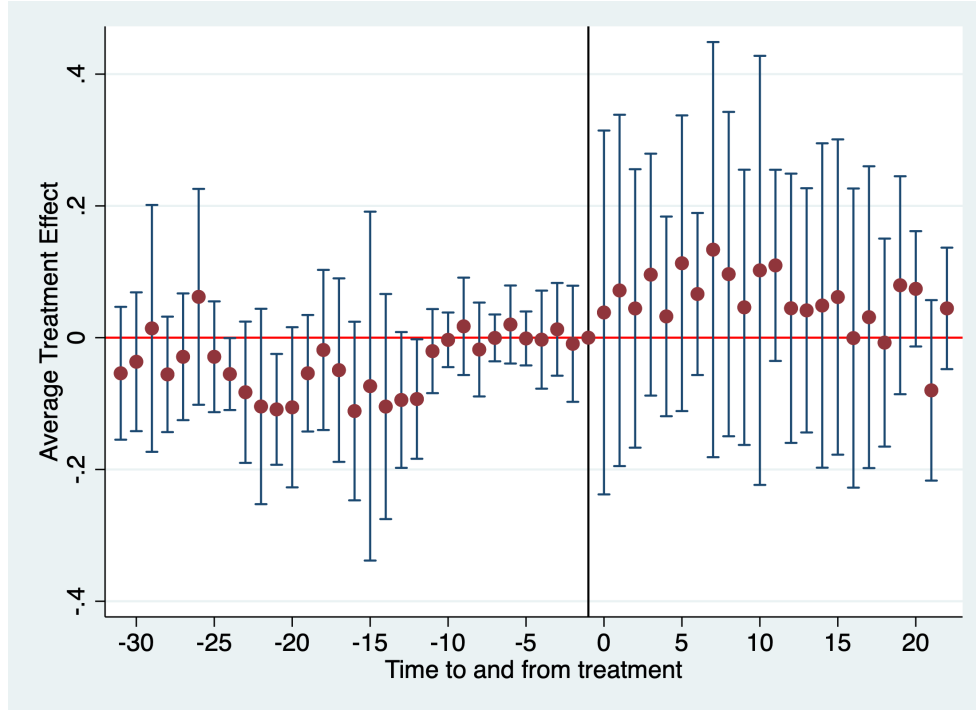
Each province individually.



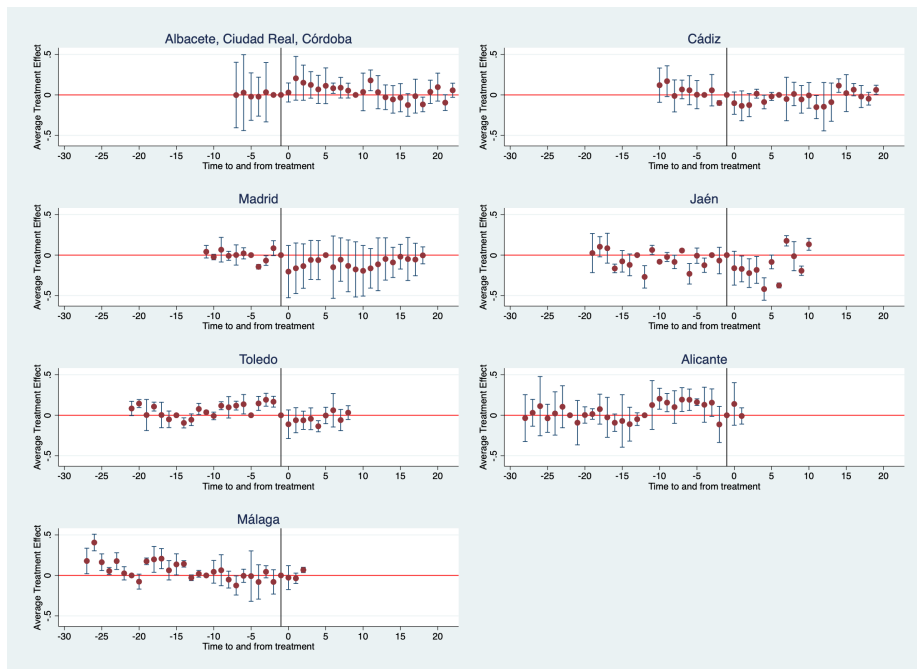
Notes: Own elaboration using the *Gacetas de Madrid*.

Figure 4A3.2: Divergence in the average agrarian tax pressure before and after the full inclusion of provinces in the cadastre

Average Treatment Effect for all provinces



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

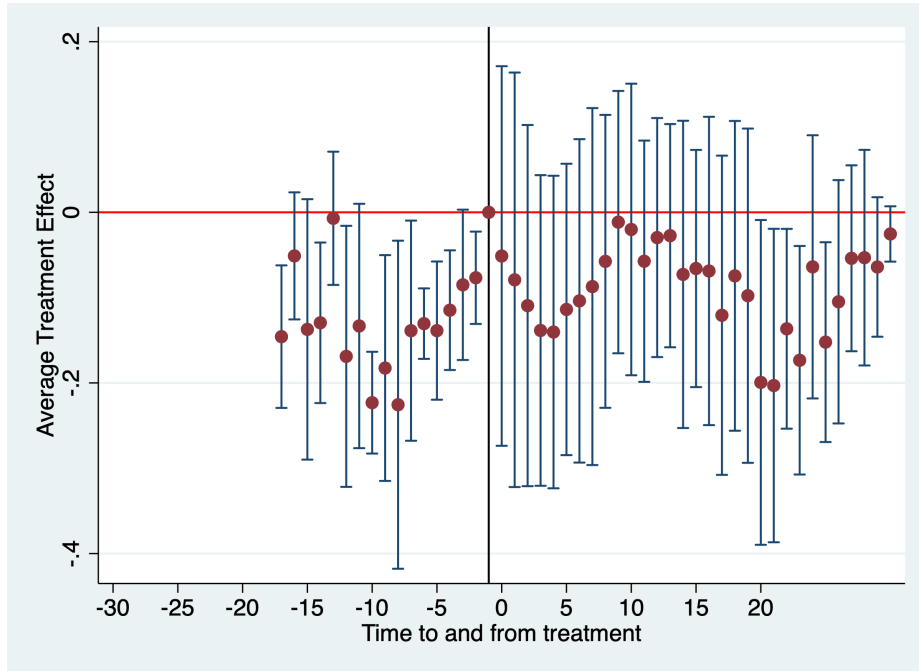
Table 4A3.1: Regression Results - Main Specification. Fully included vs never included.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Cadastre	-0.125 (0.173)	-0.0918 (0.129)	-0.0681 (0.0484)	0.140 (0.110)	0.00879 (0.0572)	0.168 (0.0618)	-0.282 (0.140)	-0.0194 (0.0301)
Rainfall	-0.0434 (0.116)	0.0217 (0.184)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.197)	0.0335 (0.191)
Temperature	-0.479 (1.369)	-1.014 (1.554)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.646)	-1.130 (1.594)
Frosty Days	-0.00277 (0.177)	-0.164 (0.206)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.226)	-0.185 (0.219)
Rainy Days	0.0683 (0.283)	0.0823 (0.545)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.604)	-0.0416 (0.584)
Real Land Prices	0.00844 (0.0259)	0.0117 (0.0284)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0256)	0.0246 (0.0248)
Constant	-1.308 (1.958)	-0.685 (2.559)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.762)	-0.327 (2.674)
R^2	0.727	0.716	0.721	0.713	0.719	0.720	0.715	0.722
N	928	667	609	609	609	609	609	609

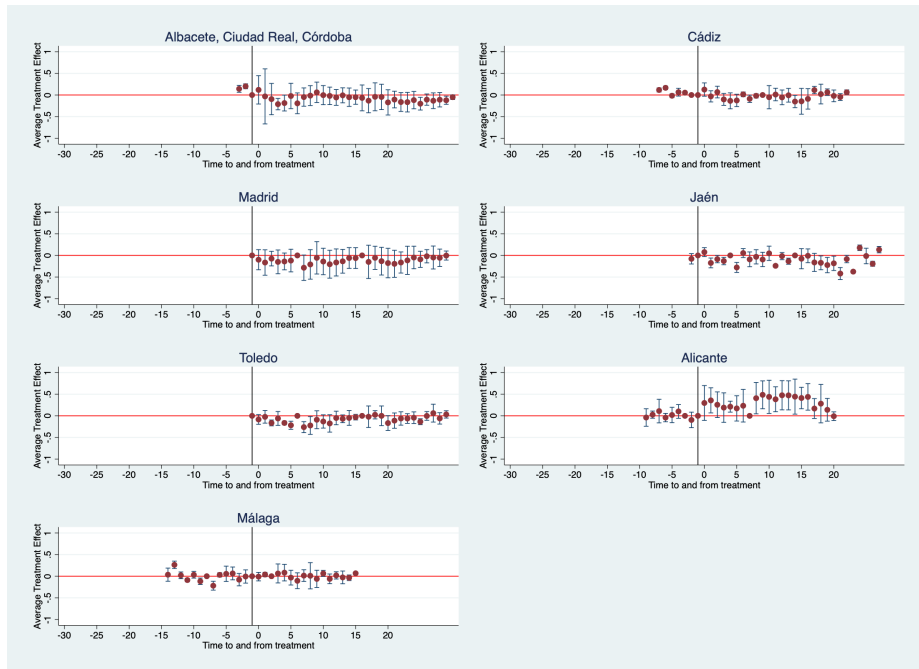
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A3.3: Robustness Check 1 – Divergence in the average agrarian tax pressure in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

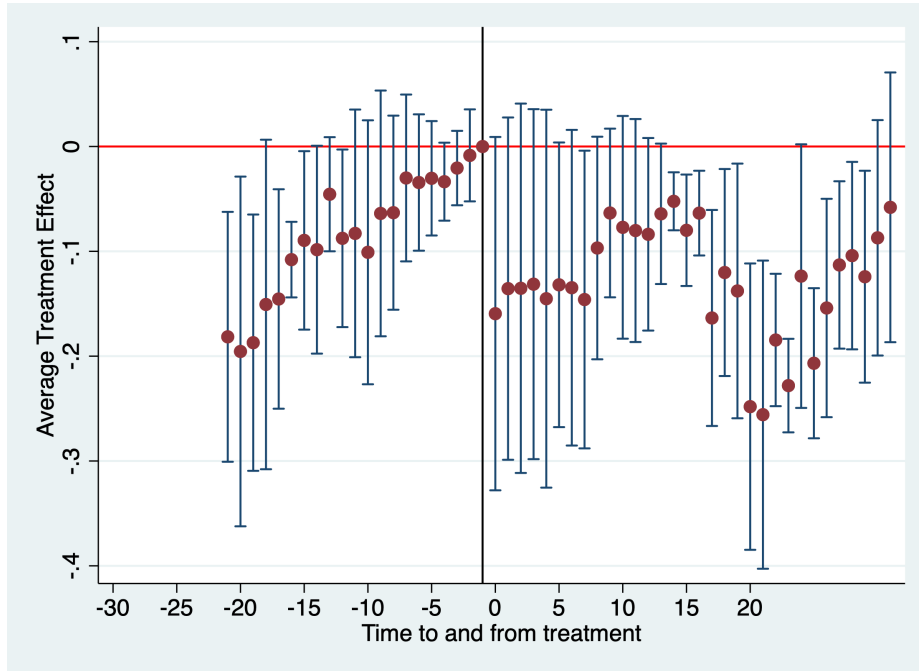
Table 4A3.2: Robustness Check 1 - Divergence in the average agrarian tax pressure in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Start Year	-0.0583 (0.0955)	-0.319** (0.0530)	-0.0715 (0.0439)	0.572 (0.208)	-0.0946 (0.0347)	0.699* (0.224)	-0.285 (0.109)	-0.162** (0.0206)
Rainfall	-0.00215 (0.104)	0.0992 (0.173)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.197)	0.0335 (0.191)
Temperature	-0.415 (1.391)	-1.112 (1.558)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.646)	-1.130 (1.594)
Frosty Days	-0.0252 (0.181)	-0.140 (0.232)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.226)	-0.185 (0.219)
Rainy Days	0.0659 (0.311)	-0.280 (0.506)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.604)	-0.0416 (0.584)
Real Land Prices	0.00770 (0.0215)	0.0221 (0.0214)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0256)	0.0246 (0.0248)
Constant	-1.439 (2.046)	-0.123 (2.500)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.762)	-0.327 (2.674)
R^2	0.730	0.730	0.721	0.713	0.719	0.720	0.715	0.722
N	928	667	609	609	609	609	609	609

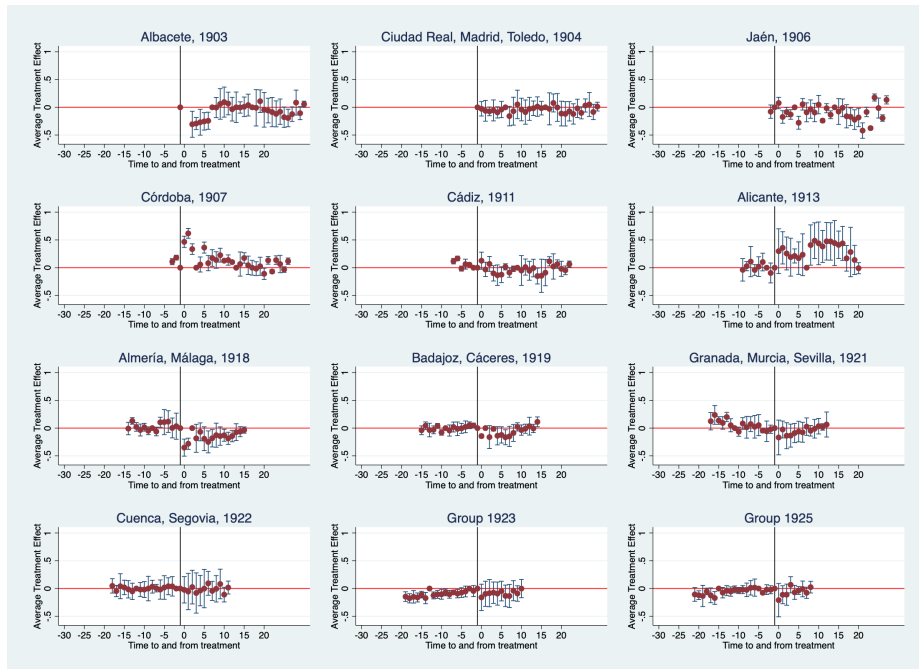
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A3.4: Robustness Check 2 - Divergence in the average agrarian tax pressure in all treated provinces after the initial year of inclusion in the cadastre.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

Table 4A3.3: Robustness Check 2 - Divergence in the average agrarian tax pressure in all treated provinces after the initial year of inclusion in the cadastre.

	All	1903	1904	1906	1907	1911	1913	1918	1919	1921	1922	1923	1925
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Dependent Variable: Agrarian Tax Pressure</i>													
Cadastre Start Year	0.400*** (0.0464)	0.668* (0.233)	-0.0946 (0.0347)	-0.516*** (0.0391)	-0.0715 (0.0439)	-0.285 (0.109)	0.307** (0.0455)	0.198*** (0.0219)	0.230*** (0.0252)	0.115 (0.127)	0.174 (0.0822)	0.142 (0.0918)	
Rainfall	0.0335 (0.191)	-0.0123 (0.190)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.191)	0.0335 (0.197)	-0.128 (0.257)	0.0555 (0.187)	0.0458 (0.177)	0.0591 (0.185)	0.00739 (0.131)	0.0211 (0.162)	
Temperature	-1.130 (1.594)	-1.147 (1.566)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.594)	-1.130 (1.646)	-0.758 (1.651)	-1.133 (1.577)	-0.885 (1.581)	-1.159 (1.520)	-1.168 (1.260)	-1.250 (1.527)	
Frosty Days	-0.185 (0.219)	-0.196 (0.210)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.219)	-0.185 (0.226)	-0.106 (0.214)	-0.188 (0.217)	-0.114 (0.213)	-0.196 (0.212)	-0.250 (0.156)	-0.203 (0.207)	
Rainy Days	-0.0416 (0.584)	0.0785 (0.577)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.584)	-0.0416 (0.604)	0.354 (0.714)	-0.0887 (0.571)	-0.0381 (0.514)	-0.106 (0.549)	-0.0238 (0.433)	-0.0566 (0.532)	
Real Land Prices	0.0246 (0.0248)	0.0186 (0.0216)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0248)	0.0246 (0.0256)	0.0152 (0.0274)	0.0257 (0.0242)	0.0224 (0.0247)	0.0109 (0.0218)	0.0239 (0.0181)	0.0306 (0.0212)	
Constant	-0.327 (2.674)	-0.403 (2.581)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.674)	-0.327 (2.762)	-1.231 (2.779)	-0.282 (2.639)	-0.752 (2.528)	-0.172 (2.517)	-0.125 (1.986)	-0.121 (2.521)	
R^2	0.713	0.727	0.719	0.736	0.721	0.715	0.695	0.724	0.719	0.724	0.731	0.722	
N	609	667	609	609	609	609	638	638	667	638	754	696	

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

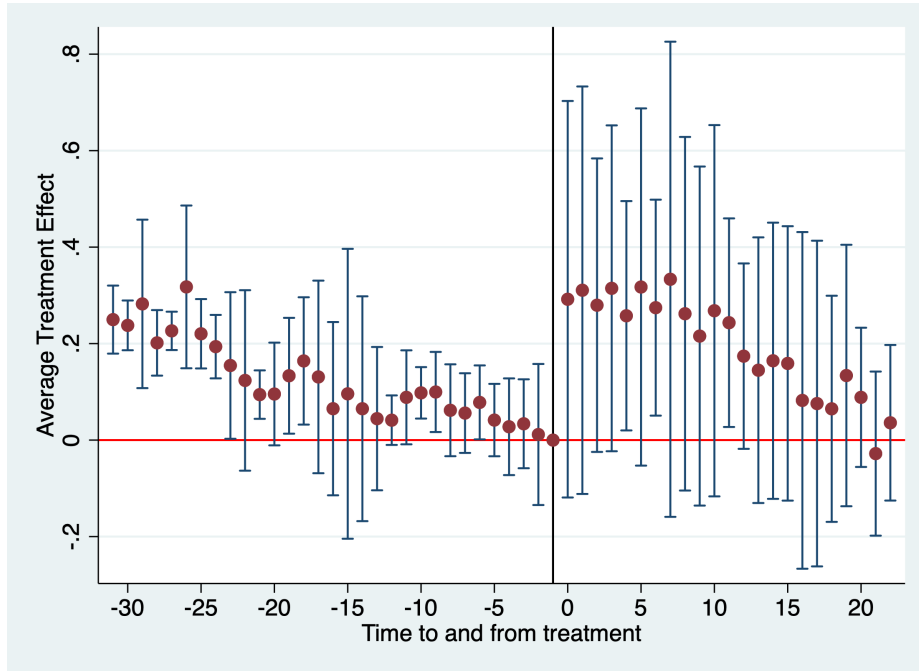
Table 4A3.4: Robustness Check 3 – Marginal Changes on Agrarian Tax Pressure due to Changes in Cadastre Proportion.

	All included (1)	Fully Included (2)	Partially Included (3)
<i>Dependent Variable: Agrarian Tax Pressure</i>			
Cadastre Proportion	0.0831 (0.0844)	-0.000182 (0.0695)	0.331*** (0.0602)
Rainfall	-0.186* (0.0847)	-0.00518 (0.0975)	-0.0111 (0.0978)
Temperature	-0.264 (0.824)	-0.355 (1.371)	-0.787 (0.884)
Frosty Days	0.00788 (0.0809)	-0.0127 (0.156)	-0.152 (0.159)
Rainy Days	0.270 (0.240)	0.0222 (0.263)	-0.135 (0.315)
Real Land Prices	0.000642 (0.0123)	0.00701 (0.0229)	0.00880 (0.00899)
Constant	-1.570 (1.189)	-1.413 (1.952)	-0.386 (1.446)
<i>N</i>	1363	928	1015

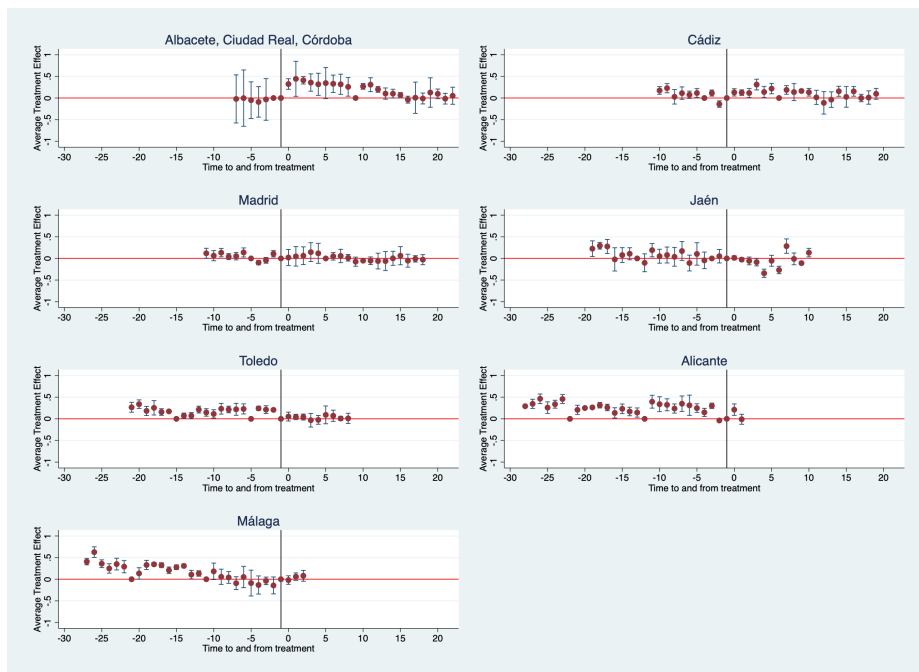
Notes: * = significant at 10% level; ** = significant at 5% level;
*** = significant at 1% level. Standard errors in parentheses.

Figure 4A3.5: Robustness Check 4 - Divergence in the average agrarian tax pressure in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

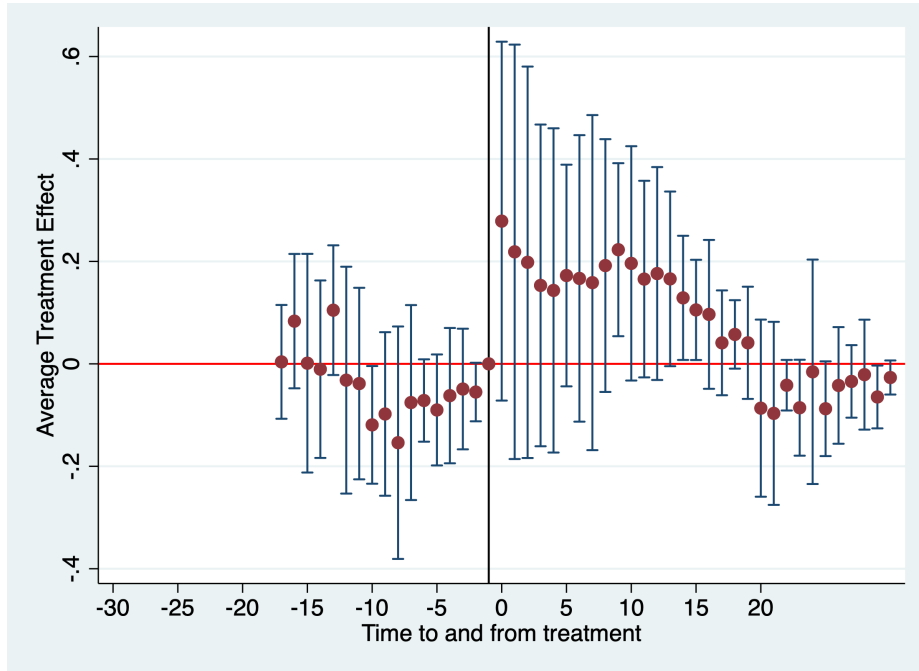
Table 4A3.5: Robustness Check 4 – Divergence in the average agrarian tax pressure in the fully treated provinces after the full inclusion in the cadastre compared to the partially treated provinces.

	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Cadastre	-0.380 (0.219)	-0.433 (0.167)	-0.338*** (0.0127)	-0.0575 (0.0617)	-0.120 (0.0467)	0.0422 (0.0300)	-0.241* (0.0606)	-0.137 (0.0505)
Rainfall	-0.0409 (0.0440)	0.00482 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)
Temperature	-0.331 (1.325)	-1.265 (1.259)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)
Frosty Days	-0.120 (0.0852)	-0.469 (0.247)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)
Rainy Days	-0.0462 (0.193)	-0.238 (0.188)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)
Real Land Prices	-0.0137 (0.00847)	-0.0112 (0.0101)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)
Constant	-0.485 (1.993)	1.547 (1.973)	2.013 (1.609)	2.013 (1.609)	2.013 (1.609)	2.013 (1.609)	1.653 (1.627)	2.013 (1.609)
R^2	0.766	0.774	0.792	0.778	0.797	0.778	0.792	0.796
N	783	522	464	464	464	464	464	464

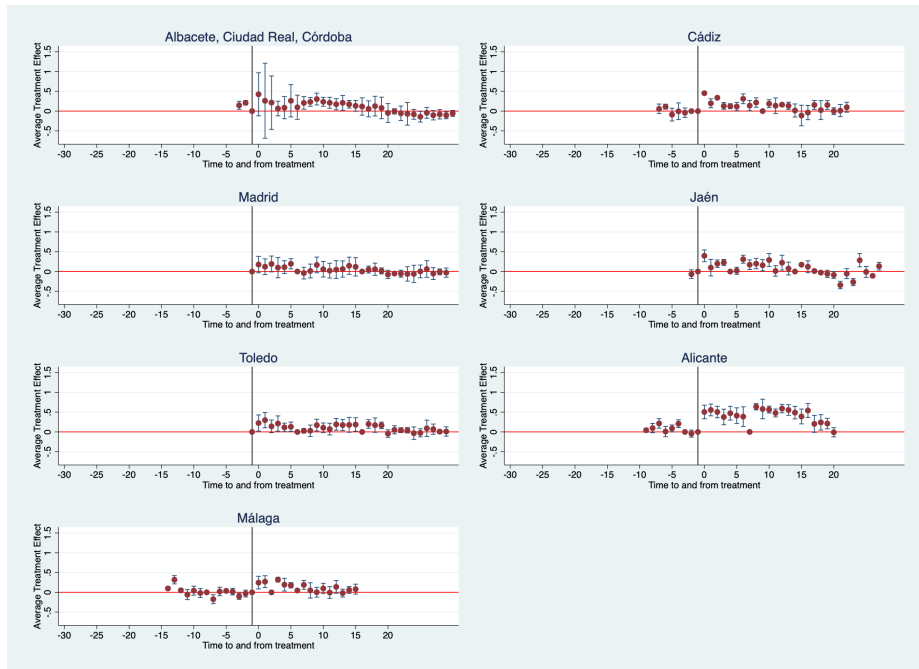
Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

Figure 4A3.6: Robustness Check 5 - Divergence in the average agrarian tax pressure in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

Average Treatment Effect for all provinces.



Average Treatment Effect for each province individually.



Notes: The red point estimates are displayed with 95% Confidence Intervals.

Table 4A3.6: Robustness Check 5 – Divergence in the average agrarian tax pressure in the fully treated provinces after the initial year of inclusion in the cadastre compared to the never treated provinces.

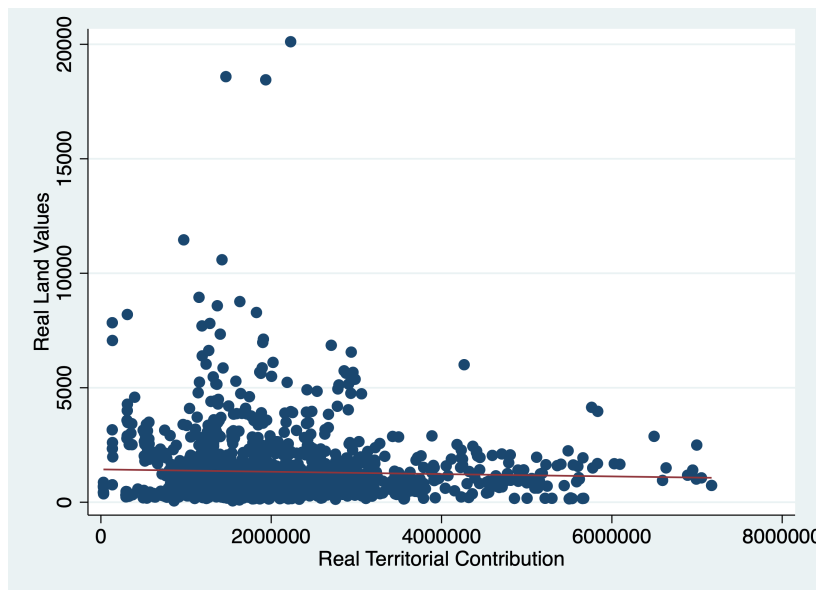
	All (1)	Group 1911 (2)	Cádiz (3)	Madrid (4)	Jaén (5)	Toledo (6)	Alicante (7)	Málaga (8)
<i>Dependent Variable: Agrarian Tax Pressure</i>								
Start Year Cadastre	-0.390* (0.115)	-0.644** (0.0750)	-0.454*** (0.0323)	-0.0960 (0.0824)	-0.413** (0.0436)	-0.00130 (0.0623)	-0.491** (0.0555)	-0.446** (0.0486)
Rainfall	-0.0464 (0.0894)	0.0245 (0.146)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)	0.00360 (0.142)
Temperature	-0.259 (1.372)	-1.535 (0.948)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)	-1.535 (1.074)
Frosty Days	-0.138 (0.115)	-0.464 (0.233)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)	-0.527 (0.230)
Rainy Days	0.00726 (0.228)	-0.410 (0.235)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)	-0.377 (0.236)
Real Land Prices	-0.0191* (0.00498)	-0.00363 (0.0169)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)	-0.000226 (0.0186)
Constant	-0.441 (2.014)	2.455 (1.514)	2.013 (1.609)	2.013 (1.609)	2.013 (1.609)	2.013 (1.609)	1.903 (1.624)	2.013 (1.609)
R^2	0.774	0.805	0.792	0.778	0.797	0.778	0.792	0.796
N	783	522	464	464	464	464	464	464

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

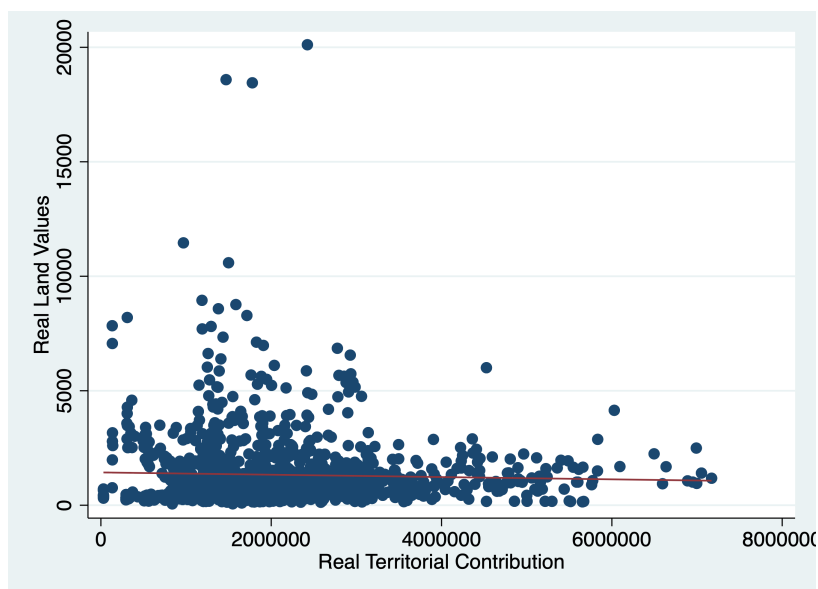
Correlation between real land values and real territorial contribution revenues

Figure 4A4.1: Correlation between real land values in period $t-1$ and real territorial contribution revenues in periods $t+2$ and $t+3$.

Real land values in period $t-1$ and real territorial contribution revenues in $t+2$.



Real land values in period $t-1$ and real territorial contribution revenues in $t+3$.



Notes: All values are in real pesetas.

5

Taxation and Politics during the Spanish Restoration, 1901–1923

5.1 Introduction

Did Spanish Restoration politicians keep fiscal capacity low for political gain? The public choice literature assumes that politicians are rational economic agents who maximise their utility function by winning elections and seeking re-election. An abundant literature has developed in public economics on how politicians engage in pork-barrel politics, lobby to obtain targeted benefits for their constituents and influence economic outcomes in order to win elections. The previous chapter studied the implementation of the land cadastre in the early 20th Century and showed that the policy had no impact on agrarian tax pressure. Was keeping a low fiscal capacity a winning strategy for members of parliament during the Restoration? Was there a relationship between politics and taxation?

This chapter studies the relationship between politics and taxation in Spain between 1901 and 1923. Spain was a semi-democracy between 1878 and 1923. Since 1878, two parties, the Conservatives and the Liberals, agreed to alternate in power peacefully through rigged elections in what was known as the *turno pacífico*. To implement the peaceful alternation, the support of clientelistic local elites was crucial, as the electoral results were rigged at the local level by local strongmen known as *caciques*; in exchange, national politicians buttressed the *caciques* with targeted economic benefits which allowed them to run their patronage networks. Likewise, they could also punish local elites who failed to support them. This was possible because Spain was a “weakly institutionalised polity”, as defined by Acemoglu, Robinson and Verdier, where “formal institutions did not place significant restrictions on politicians’ actions nor made them accountable to citizens”.¹

Curto-Grau, Herranz-Loncán and Solé-Ollé found evidence of pork-barrelling

1. Daron Acemoglu, James A. Robinson and Thierry Verdier, “Kleptocracy and Divide-and-Rule: A Model of Personal Rule,” *Journal of the European Economic Association* 2, no. 2-3 (April-May 2004): 163.

in the distribution of road expenses in Restoration Spain.² There is qualitative evidence suggesting that taxes were used as targeted benefits for the local elites in order to maintain the alternation in power of the Conservative-Liberal duopoly. This chapter investigates the relationship between taxation and politics in the last two decades of the Restoration using the tax series obtained in Chapter 2 and additional data on general elections, parliamentarians (MPs), budgets, and Prime and Treasury Ministers.

Undertaking a comparative analysis across provinces and an analysis of budgets and governments, the chapter argues that political negotiations over the Treasury, the ministry with power over taxation, had a central role in the Restoration politics of the early 20th Century: political influence on taxation started with who held the Treasury. The chapter offers three main findings of the relationship between politics and taxes at the provincial level. Firstly, as the Restoration settlement collapsed, the Catalan Regionalist Party joined the Restoration governments and held the Treasury twice before 1923. Secondly, Galicia was a safe haven for the Dynastic parties and Treasury Ministers: the region always elected MPs from the Dynastic parties and it elected one-third of all Treasury Ministers between 1901 and 1923. Thirdly, the chapter also shows that budgets were not passed when the government had a minority of MPs in parliament. Lastly, the chapter also finds that the Basque provinces and Navarre had structurally lower levels of direct taxation due to historical fiscal privileges that remained in place in the 20th Century and that were ardently defended by local MPs, suggesting that Spain's shallow fiscal capacity was also explained by the failure to fully centralise taxation in the 19th Century.

The rest of the chapter goes as follow. Section 5.2 reviews the theoretical and the empirical public economics literature. Section 5.3 explains the political system of

2. Marta Curto-Grau, Alfonso Herranz-Loncán and Albert Solé-Ollé, "Pork-Barrel Politics in Semi-Democracies: The Spanish "Parliamentary Roads," 1880–1914," *Journal of Economic History* 72 (August 2012): 771–96.

the Spanish Restoration between 1901 and 1923. Section 5.4 studies the relationship between politics and taxation during the Restoration and Section 5.5 concludes.

5.2 Literature Review

5.2.1 The Theoretical Literature

Pork-barrel projects are “discrete, highly divisible benefits targeted to specific populations” on which politicians “have a strong incentive to devote time and energy,” in order to gain and claim credit for the particularised benefits obtained for their constituents.³ Analyses of pork-barrel politics are part of the larger public choice literature, where a crucial assumption driving the debates is that the fundamental goal for every politician is to win elections and re-elections. It was bluntly formulated by Downs: “political parties in a democracy formulate policy strictly as a means of gaining votes.”⁴ Pork-barrel politics occur when politicians are already in power and they can use their position to obtain benefits for their constituents and seek re-election.

More generally, the public choice literature has modelled extensively the interactions in competitive democracies between politicians on the one hand, and “core” and “swing” voters on the other hand.⁵ “Swing” voters “are not ideologically attached to a political party” and thus attract policy favours and redistribution because they become the focus of electoral competition;⁶ “core” voters are “predisposed in favor of [a party] on partisan or programmatic grounds”.⁷ At the centre of these

3. Diana Evans, “Pork Barrel Politics,” in *The Oxford Handbook of the American Congress*, ed. George C. Edwards III, Frances E. Lee, and Eric Schickler (Oxford: Oxford University Press, 2011), 315–17.

4. Anthony Downs, “An Economic Theory of Political Action in a Democracy,” *Journal of Political Economy* 65, no. 2 (April 1957): 137.

5. Gary Cox, “Swing voters, core voters, and distributive politics,” in *Political Representation*, ed. Ian Shapiro, Susan C. Stokes, Elisabeth Jean Wood, and Alexander S. Kirshner (Cambridge: Cambridge University Press, 2010), 342.

6. James A. Robinson and Ragnar Torvik, “The Real Swing Voter’s Curse,” *The American Economic Review* 99, no. 2 (May 2009): 310.

7. Susan C. Stokes, “Perverse Accountability: A Formal Model of Machine Politics with Evidence

interactions are distributive debates, in which voters have preferences, and parties propose distributions of welfare among the various groups in their constituencies.

Describing which of these voters politicians target has been the focus of several economic models since the 1980s. Cox and McCubbins's argued that parties target "core" voters, and "that risk-averse candidates tend to over-invest in their closest supporters [to maximise their expected vote]."⁸ Lindbeck and Weibull argued that parties will target "swing" voters, with parties selecting the same redistribution policy in equilibrium in order to maximise their expected votes from selfish voters.⁹ Dixit and Londregan encompassed both views in a general model: when parties have no special relationship with its constituency voters, they target the "swing" voters. If constituents have party affinities, and "each party is more effective in delivering favours to its own support group", then each party will favour its own group.¹⁰ Feddersen and Pesendorfer developed the concept of the "swing voter's curse": less informed indifferent voters prefer to abstain rather than vote for either candidate even when voting is costless.¹¹ Robinson and Torvik offered the reverse of the coin, arguing that incumbent politicians could use violence to eliminate swing voters, as it is more attractive than disenfranchising the core supporters of the opposition.¹²

The public choice literature also offers analyses on political interactions in autocracies and dictatorships. Gandhi and Przeworki argue that "dictators make more extensive policy concessions and share fewer rents when they need cooperation, but make larger concessions and distribute more spoils when the threat of rebellion

from Argentina," *The American Political Science Review* 99, no. 3 (August 2005): 317.

8. Gary W. Cox and Mathew D. McCubbins, "Electoral Politics as a Redistributive Game," *The Journal of Politics* 48, no. 2 (May 1986): 385.
9. Assar Lindbeck and Jörgen W. Weibull, "Balanced-Budget Redistribution as the Outcome of Political Competition," *Public Choice* 52, no. 3 (August 1987): 273–97.
10. Avinash Dixit and John Londregan, "The Determinants of Success of Special Interests in Redistributive Politics," *The Journal of Politics* 58, no. 4 (November 1996): 1132–55.
11. Timothy J. Feddersen and Wolfgang Pesendorfer, "The Swing Voter's Curse," *The American Economic Review* 86, no. 3 (June 1996): 408.
12. Robinson and Torvik, "The Real Swing Voter's Curse," 310.

is greater.”¹³ Acemoglu, Robinson and Verdier coined the term “weakly institutionalised polities” and argued that politicians create and control interest groups and punish citizens who fail to support them, developing a divide-and-rule strategy; the kleptocratic ruler bribes the pivotal groups when faced with the threat of being ousted, thereby intensifying the collective action problem and destroying the coalition against him.¹⁴

Implicit in these discussions is that politicians have incentives to support economic measures targeted towards its most important set of voters in order to win elections. Alesina Roubini and Cohen reviewed the models describing how politicians affect the macroeconomic cycles in order to win elections. They divide the literature into two categories: opportunistic and partisan models.¹⁵ In opportunistic models, all politicians, regardless of ideology, behave opportunistically in order to win. For instance, an incumbent government would stimulate the economy before an election, and then reduce inflation with an induced recession after the election has taken place.¹⁶ In these models, voters are myopic and they reward the government with votes because the election takes place in a booming economy.¹⁷ However, in models where voters have rational expectations, they can put checks on opportunistic politicians.¹⁸ In partisan models, “partisan policy-makers want to win in order to

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13. Jennifer Gandhi and Adam Przeworski, “Cooperation, Cooptation, and Rebellion Under Dictatorships,” *Economics & Politics* 18, no. 1 (March 2006): 1–26.
 14. Acemoglu, Robinson and Verdier, “Kleptocracy and Divide-and-Rule,” 162–92.
 15. Alberto Alesina and Nouriel Roubini with Gerald D. Cohen, *Political Cycles and the Macroeconomy* (Cambridge: MIT Press, 1997), 1–13.
 16. William D. Nordhaus, “The Political Business Cycle,” *The Review of Economic Studies* 42, no. 2 (April 1975): 187–89; Assar Lindbeck, “Stabilization Policies in Open Economies with Endogenous Politicians,” *American Economic Review* 66, no. 2 (May 1976): 13.
 17. Alesina, Roubini and Cohen, *Political Cycles and the Macroeconomy*, 15.
 18. See Alex Cukierman, and Allan H. Meltzer, “A Positive Theory of Discretionary Policy, the Cost of Democratic Government, and the Benefits of a Constitution,” *Economic Inquiry* 24, no. 3 (July 1986) 367–88; Kenneth Rogoff and Anne Sibert, “Elections and Macroeconomic Policy Cycles,” *Review of Economic Studies* 55, no. 1 (January 1988): 1–16; Kenneth Rogoff, “The Optimal Degree of Commitment to an Intermediate Monetary Target,” *The Quarterly Journal of Economics* 100, no. 4 (November 1985): 1169–90; Torsten Persson and Guido Tabellini, “Designing Institutions for Monetary Stability,” *Carnegie-Rochester Conference Series on Public Policy* 39 (December 1993): 53–84.

implement their desired policies.”¹⁹ Hibbs empirically showed that governments pursue macroeconomic policies in accordance with the interests and preferences of their political constituents.²⁰ Alesina developed the rational partisan theory, where he incorporated partisan preferences into a rational expectation model with sticky prices and he found that partisan politics can lead to short-run effects on unemployment and growth, but permanent effects on inflation.²¹

5.2.2 The Empirical Literature

At the core of all these models is the maximisation of electoral outcomes, either through the allocation of distributive benefits (e.g. targeted spending and taxation) or through the manipulation of the macroeconomic cycles (e.g. generalised public spending to stimulate the economy); all models end up with different optimal, Nash or general equilibria. Empirical studies testing these models and theories have become common in recent decades. The United States, with its political architecture, namely two consolidated parties competing competitively at elections at the federal, state and local level, have become an immensely prolific ground of empirical research for pork-barrell politics. Empirical studies find support for both core-voter-targeting and swing-voter-targeting models.

Analysis on pork-barrelling in the US go as early as to study whether Roosevelt’s New Deal was driven by political motives in order to maximise electoral success. Arrington was the first one to observe that New Deal spending was higher in the richer Western States, less favourable to the Democratic party, than in the poorer Southern states, which were decidedly democrats.²² Reading found

19. Alesina, Roubini and Cohen, *Political Cycles and the Macroeconomy*, 46.

20. Douglas A. Hibbs Jr., “Political Parties and Macroeconomic Policy,” *The American Political Science Review* 71, no. 4 (December 1977): 1467.

21. Alberto Alesina, “Macroeconomic Policy in a Two-Party System as a Repeated Game,” *The Quarterly Journal of Economics* 102, no. 3 (August 1987): 651–78.

22. Leonard Arrington, “The New Deal in the West: A Preliminary Statistical Inquiry,” *Pacific Historical Review* 38, no. 3 (August 1969): 311–16; Leonard Arrington, “Western Agriculture

spending was higher in areas where income had gone down between 1929 and 1933;²³ using the same data, Wright argued that New Deal spending was driven mostly by political factors to maximise Democrat voting patterns in swing states.²⁴ Anderson and Tollison studied the influence of Congress and found that it had some clout in assigning the spending patterns.²⁵ Wallis revisited the whole literature and argued that most models were misspecified, that excluding Nevada dramatically changed all the political variables, and that most of the results were driven by population sizes and not political influence.²⁶

For the US in the second half of the 20th Century, Ansolabehere and Snyder found that governing parties favoured areas that provided them with the strongest electoral support with more funds.²⁷ In more detail, Alvarez and Saving found evidence of pork-barrelling in the 1980s: they argued that “additional federal outlays strongly affected Democratic reelection margins but barely impacted the electoral fortunes of Republicans.”²⁸ Similarly, Levitt and Snyder wrote that “the number of Democratic voters was an important predictor of the amount of federal dollars flowing to a district. Furthermore, they argue that “programs in the latter half of the 1970s, a time of solid Democratic control, exhibit the greatest bias towards Democrats.”²⁹

Bickers and Stein found that the flow of new awards early in a Congressional term was

and the New Deal,” *Agricultural History* 44, no. 4 (October 1970): 337–53.

23. Don C. Reading, “New Deal Activity and the States, 1933 to 1939,” *The Journal of Economic History* 33, no. 4 (December 1973): 792–810.
24. Gavin Wright, “The Political Economy of New Deal Spending: An Econometric Analysis,” *The Review of Economics and Statistics* 56, no. 1 (February 1974): 30–38.
25. Gary M. Anderson and Robert D. Tollison, “Congressional Influence and Patterns of New Deal Spending, 1933–1939,” *The Journal of Law & Economics* 34, no. 1 (April 1991): 161–75.
26. John Joseph Wallis, “The Political Economy of New Deal Spending Revisited, Again: With and without Nevada,” *Explorations in Economic History* 35, no. 2 (April 1998): 140–70.
27. Stephen Ansolabehere and James M. Snyder, Jr., “Party Control of State Government and the Distribution of Public Expenditures,” *The Scandinavian Journal of Economics* 108, no. 4, Political Economy (December 2006): 547.
28. R. Michael Alvarez and Jason L. Saving, “Congressional Committees and the Political Economy of Federal Outlays,” *Public Choice* 92, no. 1/2 (July 1997): 55–73.
29. Steven D. Levitt and James M. Snyder, Jr., “Political Parties and the Distribution of Federal Outlays,” *American Journal of Political Science*, 39, no. 4 (November 1995): 958–80.

higher in districts where the incumbent was elected by a narrow margin and hence most vulnerable. They also found that in the 1990s, the Republican-controlled House of Representatives produced significantly more legislation which was ideologically and politically compatible with Republican interests.³⁰ Herron and Theodos found that spending before the 2000 general election in Illinois was disproportionately allocated to districts that were politically competitive.³¹ Balla, Laurence, Maltzman and Sigelman showed that the majority party have incentives to include the minority in pork barrel coalitions while at the same time reserving the most valuable awards for its members.³² Levitt and Poterba found that “states represented by very senior Democratic congressmen grew more quickly during the 1953–1900 period than states that were represented by more junior congressional delegations.”³³ Similarly, they found that states with a large fraction of politically competitive House districts also grew faster than average but they could not affirm that this was driven by Federal Spending. Finally, Alvarez and Saving found “considerable evidence that congressional committees play a major role in the allocations of federal benefits across congressional districts.”³⁴

Empirical studies for European countries have also gained traction in the literature in the past decades. Moving out from an excessively US-centred view,

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30. Kenneth N. Bickers and Robert M. Stein, “The Electoral Dynamics of the Federal Pork Barrel,” *American Journal of Political Science* 40, no. 4 (November 1996): 1300–26; Kenneth N. Bickers and Robert M. Stein, “The Congressional Pork Barrel in a Republican Era,” *The Journal of Politics* 62, no. 4 (November 2000): 1070–86; Robert M. Stein and Kenneth N. Bickers, “Congressional Elections and the Pork Barrel,” *The Journal of Politics* 56, no. 2 (May 1994): 377–99.
 31. Michael C. Herron and Brett A. Theodos, “Government Redistribution in the Shadow of Legislative Elections: A Study of the Illinois Member Initiative Grants Program,” *Legislative Studies Quarterly* 29, no. 2 (May 2004): 287–311.
 32. Steven J. Balla, Eric D. Lawrence, Forrest Maltzman and Lee Sigelman, “Partisanship, Blame Avoidance, and the Distribution of Legislative Pork,” *American Journal of Political Science* 46, no. 3 (July 2002): 515–25.
 33. Steven D. Levitt and James M. Poterba, “Congressional Distributive Politics and State Economic Performance,” *Public Choice* 99, no. 1-2 (April 1999): 185–216.
 34. Alvarez and Saving, “Congressional Committees and the Political Economy of Federal Outlays,” 55–73.

Lancaster suggested that there is a link between a country's electoral system and its degree of pork barrel activity. Indeed, he found a strong correlation between the number of representatives per district and the degree of pork barrel politics: countries with single-member districts had stronger electoral accountability than countries with at-large districts. This finding is particularly relevant because European countries have a variety of political systems, from a purely first-past-the-post in the UK to proportional representation in countries like Spain or Belgium.³⁵

Studies on European countries have yielded similar results to its US counterparts. For postwar Italy, Golden and Picci found that “districts that elected politically more powerful deputies from the governing parties received more investments” between 1953 and 1994.³⁶ For France, Cadot, Röller and Stephan studied infrastructure spending between 1985 and 1992 and bluntly stated that “roads were built to get politicians reelected”: they found that “electoral concerns and influence were significant determinants of transportation infrastructure investments”.³⁷ For England, John and Ward found that after 1988, “the central government used grants to local authorities to spatially target marginal seats, temporarily allocating resources to win local elections and allocate greater funds near national elections, conditional on its opinion-poll ratings.”³⁸ For Germany, Stratmann and Baur found that “legislators elected through a first-past-the-post system tend to seat in committees that allow them to service their geographically-based constituents.”³⁹ Studies on other European

35. Thomas D. Lancaster, “Electoral Structures and Pork Barrel Politics,” *International Political Science Review / Revue internationale de science politique* 7, no. 1 (January 1986): 67–81.

36. Miriam A. Golden and Lucio Picci, “Pork-Barrel Politics in Postwar Italy, 1953–94,” *American Journal of Political Science* 52, no. 2 (April 2008): 268–89.

37. Olivier Cadot, Lars-Hendrik Röller and Andreas Stephan, “Contribution to productivity or pork barrel? The two faces of infrastructure investment,” *Journal of Public Economics* 90, no. 6–7 (August 2006): 1133–53.

38. Hugh Ward and Peter John, “Targeting Benefits for Electoral Gain: Constituency Marginality and the Distribution of Grants to English Local Authorities,” *Political Studies* 47, no. 1 (March 1999): 32–52; Peter John and Hugh Ward, “Political manipulation in a majoritarian democracy: central government targeting of public funds to English subnational government, in space and across time,” *British Journal of Politics and International Relations* 3, no. 3 (October 2001): 308–39.

39. Thomas Stratmann and Martin Baur, “Plurality Rule, Proportional Representation, and the

countries include Case on Albania and Dahlberg and Johansson on Sweden.⁴⁰

Pork barrel politics have also been identified in Latin America: for Argentina, Calvo and Murillo studied the determinants of patronage and Stokes found evidence that parties were able “to monitor constituents’ votes, rewarding them for their support and punishing them for defection”;⁴¹ Porto and Sanguinetti found that more populous and less represented states in the Argentinian senate and lower chamber received on average less resources from the national government than the overrepresented provinces.⁴² For Colombia, Crips and Ingall show that senators had a higher probability of initiating bills with a pork-barrel propensity if they were elected in geographically concentrated constituencies.⁴³ For Peru, Schady found that the expenditures of the Peruvian Social Fund between 1991 and 1995 increased significantly before national elections and were directed at provinces in which the marginal political effect of expenditures was likely to be largest.⁴⁴

Studies on the rest of the world include research on Australia, where Worthington and Dollery found that grants were used by federal government politicians to improve their reelection chances between 1981 and 1992;⁴⁵ Denmark confirmed Aus-

German Bundestag: How Incentives to Pork-Barrel Differ across Electoral Systems,” *American Journal of Political Science* 46, no. 3 (July 2002): 506–14.

40. Anne Case, “Election goals and income redistribution: Recent evidence from Albania,” *European Economic Review* 45, no.3 (March 2001): 405–23; Matz Dahlberg and Eva Johansson, “On the Vote-Purchasing Behavior of Incumbent Governments,” *The American Political Science Review* 96, no. 1 (March 2002): 27–40.
41. Ernesto Calvo and Maria Victoria Murillo, “Who Delivers? Partisan Clients in the Argentine Electoral Market,” *American Journal of Political Science* 48, no. 4 (October 2004): 742–57; Stokes, “Perverse Accountability: A Formal Model of Machine Politics with Evidence from Argentina,” 315–25.
42. Alberto Porto and Pablo Sanguinetti, “Political Determinants of Intergovernmental Grants: Evidence from Argentina,” *Economics and Politics* 13, no. 3 (November 2001): 237–56.
43. Brian Crisp and Rachael E. Ingall, “Institutional Engineering and the Nature of Representation: Mapping the Effects of Electoral Reform in Colombia,” *American Journal of Political Science*, 46, no. 4 (October 2002): 733–48.
44. Norbert R. Schady, “The Political Economy of Expenditures by the Peruvian Social Fund (FONCODES), 1991–95,” *The American Political Science Review* 94, no. 2 (June 2000): 289–304.
45. Andrew C. Worthington and Brian E. Dollery, “The Political Determination of Intergovernmental Grants in Australia,” *Public Choice* 94, no. 3–4 (March 1998): 299–315.

tralian politics were dominated by partisan politics and marginal seats priorities.⁴⁶ For Canada, Kneebone and McKenzie found evidence of an electoral cycle in spending and taxation: provincial governments, regardless of ideology halted tax increases and increased spending in elections years.⁴⁷ For Japan, Horiuchi and Saito found “that municipalities in overrepresented districts received significantly more subsidies per capita, as compared than municipalities in underrepresented districts.”⁴⁸ For Korea, Kwon found “that levels of government expenditure increased according to the electoral calendar and that national subsidies tended to be allocated to ‘swing’ provinces in which electoral contests were competitive.”⁴⁹

Studies of pork-barrel politics in Spain have focused on infrastructure spending. While de la Fuente and Vives did not find political affinities drivers for public investment in the 1980s, Castells and Solé-Ollé did find that the government invests more in the regions where electoral returns were higher for the period 1987–1996.⁵⁰ Agnani and Aray supported this claims and found evidence that the combination of parties holding office in the central and regional governments had significant effects on the growth rate of public infrastructure between 1988 and 2004.⁵¹ Going back in time, Curto-Grau, Herranz-Loncán and Solé-Ollé studied pork-barrelling during the construction of roads between 1880 and 1914 and found that “provinces whose

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46. David Denemark, “Partisan Pork Barrel in Parliamentary Systems: Australian Constituency-Level Grants,” *The Journal of Politics* 62, no. 3 (August 2000): 896–915.
47. Ronald D. Kneebone and Kenneth J. McKenzie, “Electoral and Partisan Cycles in Fiscal Policy: An Examination of Canadian Provinces,” *International Tax and Public Finance* 8, no. 5-6 (November 2001): 753–74.
48. Yusaku Horiuchi and Jun Saito, “Reapportionment and Redistribution: Consequences of Electoral Reform in Japan,” *American Journal of Political Science* 47, no. 4 (October 2003): 669–82.
49. Hyeok Yong Kwon, “Targeting Public Spending in a New Democracy: Evidence from South Korea,” *British Journal of Political Science* 35, no. 2 (April 2005): 321–41.
50. Angel de la Fuente and Xavier Vives, “Infrastructure and Education as Instruments of Regional Policy: Evidence from Spain,” *Economic Policy* 10, no. 20 (April 1995): 11–51; Antoni Castells and Albert Solé-Ollé, “The regional allocation of infrastructure investment: The role of equity, efficiency and political factors,” *European Economic Review* 49, no. 5 (July 2005): 1165–1205.
51. Betty Agnani and Henry Aray, “Testing for Pork Barrel Politics in Public Infrastructure Accumulation: the case of Spain,” *Working Paper* (2010). Available at: <https://dialnet.unirioja.es/descarga/articulo/3632377.pdf>

districts did not accept the two-party alternation system and, specially, those where more districts elected third-party candidates, received relatively less road expenditures".⁵²

Nearly all the empirical studies above focus on the pork-barrel allocation of spending, specially on the allocation of grants and infrastructure spending. Surprisingly, there is very scarce literature on pork-barrel politics on taxation. Only Kneebone and McKenzie's research on Canada explicitly look at taxes, finding that tax increases halted in election years regardless of the government's ideologies. Yet taxation is a crucial component of distributive discussions, and there is an extensive literature on optimal income taxation models.⁵³ Furthermore, voters have preferences over taxation outcomes - both on partisan and opportunistic grounds. For instance, Snyder and Kramer find that the desire of middle-income citizens to reduce their own tax burden drives the demand for more progressive marginal rate of income taxation, instead of a preference for a more 'fair' distribution of income.⁵⁴ Romer found that "majority voting does not necessarily lead to the adoption of a tax function which has the average tax rate rising with income."⁵⁵ Aumann and Kurz found that under a majority vote structure, the size of the tax depends upon attitudes toward risking

52. Curto-Grau, Herranz-Loncán and Solé-Ollé, "Pork-Barrel Politics in Semi-Democracies: The Spanish "Parliamentary Roads," 1880–1914," 771–96.

53. See for instance: Peter A. Diamond and James A. Mirrlees, "Optimal Taxation and Public Production I: Production Efficiency," *The American Economic Review* 61, no. 1 (March 1971): 8–27; Peter A. Diamond and James A. Mirrlees, "Optimal Taxation and Public Production II: Tax Rules," *The American Economic Review* 61, no. 3 (June 1971): 261–78; Angus Deaton, "The Distance Function in Consumer Behaviour with Applications to Index Numbers and Optimal Taxation," *The Review of Economic Studies* 46, no. 3 (July 1979): 391–405; Paul A. Samuelson, "Theory of Optimal Taxation," *Journal of Public Economics* 30, no. 2 (July 1986): 137–43; James A. Mirrlees, "An Exploration in the Theory of Optimum Income Taxation," *The Review of Economic Studies* 38, no. 2 (April 1971): 175–208; Efraim Sadka, "On Income Distribution, Incentive Effects and Optimal Income Taxation," *The Review of Economic Studies* 43, no. 2 (June 1976): 261–7; Matti Tuomala, "On the Optimal Income Taxation and Educational Decisions," *Journal of Public Economics* 30, no. 2 (July 1986): 183–98.

54. James M. Snyder and Gerald H. Kramer, "Fairness, Self-Interest, and the Politics of the Progressive Income Tax," *Journal of Public Economics* 36, no. 2 (July 1988): 197–230.

55. Thomas Romer, "Individual Welfare, Majority Voting and the Properties of a Linear Income Tax," *Journal of Public Economics* 4, no. 2 (February 1975): 163–85.

large losses.⁵⁶ Finally, De Donder and Hindriks found that maximum progressivity is a majority winning tax policy.⁵⁷

5.3 The Political System of the Spanish Restoration

The Spanish Restoration period started in 1874 when the Bourbon dynasty came back to power following six years of political upheaval, and it ended decades of political and military instability. The 19th Century had been marked by Civil Wars, military coups and the continuous conflict between defenders of the *ancien régime* and defenders of liberalism. Between 1808 and 1874, there were 43 military uprisings in Spain, one every 18 months. Under the Restoration, there were four in 49 years.⁵⁸ The stability of the Restoration was achieved thanks to an arrangement between the two biggest political factions, the Conservatives and the Liberals, who agreed to peacefully alternate in power under what came to be known as the *turno pacífico*.

In the *turno pacífico*, the monarch appointed a new Prime Minister before each parliamentary election and then dissolved parliament. Before the election took place, the *Ministerio de la Gobernación* (the Interior Ministry) of the new government elaborated the *encasillado*, a list of candidates which selected the official winner of each district in advance and designed an electoral majority in parliament for the new government. The *encasillado* was often negotiated with the other Dynastic party to ensure the system's stability.⁵⁹ To implement the planned electoral results, the

56. Robert J. Aumann and Mordecai Kurz, "Power and Taxes," *Econometrica* 45, no. 5 (July 1977): 1137–61.

57. Philippe de Donder and Jean Hindriks, "Majority support for progressive income taxation with corner preferences," *Public Choice* 118, no. 3–4 (March 2004): 437–49.

58. Juan J. Linz, José Ramón Montero and Antonia M. Ruiz, "Elecciones y política," in *Estadísticas Históricas de España*, ed. Antonio Carreras and Xavier Tafunell (Bilbao: Fundación BBVA, 2005): 1085–86.

59. Javier Tusell, "El sufragio universal en España (1981-1936): un balance historiográfico." *Ayer* 3 (1991): 28.

central state relied on local *caciques*, who enforced the *encasillado* results in exchange of economic advantages for themselves and for their clientele.⁶⁰ As Ziblatt puts it, “voting occurred but its chief purpose was to support the already-determined election outcomes.”⁶¹

The Restoration regime is intrinsically associated with the concept of *caciquismo*.⁶² *Caciquismo* englobes the “clientelist practices and patronage networks managed by the *caciques*”.⁶³ Azcárate, a contemporary observer, wrote in 1885 that “*caciques* and governments organise the elections between them and both of them need the member of parliament to nurture their constituency.”⁶⁴ On the one hand, these local bosses managed the administrative and economic resources that the central state provided them in exchange for their support to the power alternation. On the other hand, the Spanish social oligarchy maintained its grip on power thanks to these clientelist practices.⁶⁵ Indeed, the Conservative and the Liberal parties were cliques of notables followed by their clienteles in exchange of favours.⁶⁶ Political clientelism was the rule in all provinces, and *Caciquismo* was predominant in rural areas; under the Electoral Law of 1878, urban districts incorporated large parts of rural areas in obvious cases of electoral gerrymandering.⁶⁷ Indeed, rural voters were easier to manipulate than urban voters due to the existing historical rural structures of pat-

60. Javier Moreno Luzón, “Political Clientelism, Elites and Caciquismo in Restoration Spain (1875-1923)”, *European History Quarterly* 37, no. 3 (2007), 418.

61. Daniel Ziblatt, *Conservative Parties and the Birth of Democracy* (Cambridge: Cambridge University Press, 2017), 34

62. The historiography on *caciquismo* is extense. For useful overviews of the literature, see: Moreno Luzón, “Teoría del Clientelismo y Estudio de la Política Caciquil (I)”, 191–224; Moreno Luzón, “Caciquismo in Restoration Spain,” 417–41; Salvador Cruz Artacho, “Clientes, clientelas y política en la España de la Restauración (1875-1923)”, *Ayer* 36 (1999): 105–29; Dardé, López Blanco, Moreno Luzón, and Yanini, “Conclusiones,” 559–615.

63. Moreno Luzón, “Caciquismo in Restoration Spain (1875-1923),” 417–21

64. Gumersindo de Azcárate, *El régimen parlamentario en la práctica* (Madrid, 1885, 1931), 117.

65. Moreno Luzón, “Caciquismo in Restoration Spain”, 422–24

66. Carlos Dardé, Rogelio López Blanco, Javier Moreno Luzón, and Alicia Yanini, “Conclusiones,” in *El poder de la influencia. Geografía del caciquismo en España (1875-1923)*, ed. José Varela Ortega (Madrid: Marcial Pons, 2001), 565.

67. Dardé, López Blanco, Moreno Luzón and Yanini “Conclusiones,” 561–2.

ronage, although urban voters who depended on government jobs were also subject to clientelism.⁶⁸

An important step in the consolidation of a state's fiscal capacity is the abolition of the use of patronage to collect taxes. Yet in Spain, as Carmona and Simpson note, "the increase in the scale of government led to the development of clientelism and the appearance of complex hierarchical political machines based on the reciprocal exchange of favours, rather than the creation of impersonal mechanisms to collect taxes".⁶⁹ At the national level, MPs were agents of the *caciques* controlling their electoral constituencies.⁷⁰ MPs negotiated competitively in parliament to obtain economic advantages for the local *caciques* in exchange for their support in enforcing the results of the rigged elections. Fierce negotiations took place each year around the national budget over where spending and taxes would be allocated.⁷¹

Hence, Spain was not a full parliamentary democracy. In the late 19th and early 20th Centuries, European landed elites were progressively surrendering their political power, and they faced dilemmas as to which strategies to maintain in order to keep in power. Ziblatt argues that traditional elites accepted democratic elections peacefully when a well-organised mass political party, most generally a Conservative party representing their interests and capable of winning elections, existed before the transition to universal suffrage. When it was not the case, they delayed the transition to fully parliamentary democracies, resorting instead to electoral fraud, clientelism and corruption: this was the case of the *turno pacífico* in Spain, but similar arrangements occurred in Germany, Italy and Portugal.⁷² Universal suffrage, which was approved in Spain in 1891, represented a threat to the established order as it

68. Javier Moreno Luzón, "Teoría del Clientelismo y Estudio de la Política Caciquil (I)", *Revista de Estudios Políticos* 89 (Julio-Septiembre 1995): 224.

69. Simpson and Carmona, *Why Democracy Failed*, 25.

70. Moreno Luzón, "Caciquismo in Restoration Spain", 419–29

71. Comín, *Hacienda y Economía en la España Contemporánea*, 504.

72. Ziblatt, *Conservative Parties and the Birth of Democracy*, 34.

raised the numbers of voters from 800,000 to over 5,000,000 and made it harder for *caciques* to rig the voting process.⁷³

Indeed, since the 1890s, opposition parties started gaining seats in the national parliament, increasingly challenging the Liberal-Conservative Duopoly. Moreover, the loss of the last Spanish colonies in 1898, the death of the historical leaders of the two parties and the rise of new social groups weakened the *turno pacífico*. By 1900, three major opposition movements can be identified. Firstly, the Republican parties, who opposed Monarchy and the *turno pacífico* and fought for the obtention of a complete democracy. Secondly, the Catalan conservative Regionalist party, the *Lliga Regionalista*.⁷⁴ Thirdly, the Carlists, who defended the return to an absolute monarchy and the predominance of the traditional Church. They idealised village society and rejected liberal ideas and urbanisation.⁷⁵ The Carlists were present in Spain since the 1830s and had waged three civil wars in the 19th Century, which all ended in defeats. They nonetheless remained a strong political force in the region of Navarra.

Slowly but surely, the *turno pacífico* deteriorated progressively in the 20th Century as it could not accommodate the political parties and interests of the opposition. Between 1901 and 1923, instability was the norm again: there were eleven general elections, 34 Prime Minister changes, and 30 different Treasury Ministers. Figure 5.1 shows the tenures of all the Presidents of the Council of Ministers and all the Treasury Ministers between 1901 and 1923. Eventually, the system suffered a full-blown crisis in 1913. The two traditional parties divided into factions led by different leaders, and the years 1913–1917 were characterised by widespread parlia-

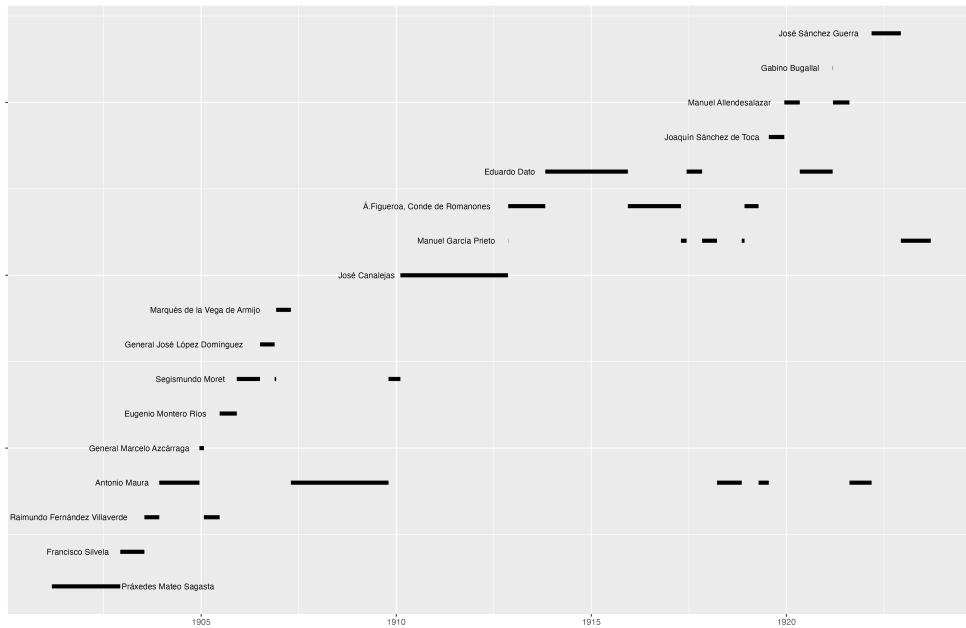
73. Tusell, “El sufragio universal en España (1881-1936): un balance historiográfico,” 17; Ziblatt, *Conservative Parties and the Birth of Democracy*, 26–7.

74. For a summary of the emergence of the *Lliga Catalan*, see Angel Smith, “The Lliga Regionalista, the Catalan Right and the Making of the Primo de Rivera Dictatorship, 1916-23,” in *The Agony of Spanish Liberalism: From Revolution to Dictatorship, 1913-23*, ed. Francisco J. Romero Salvadó and Angel Smith (London: Palgrave Macmillan, 2010), 145–74.

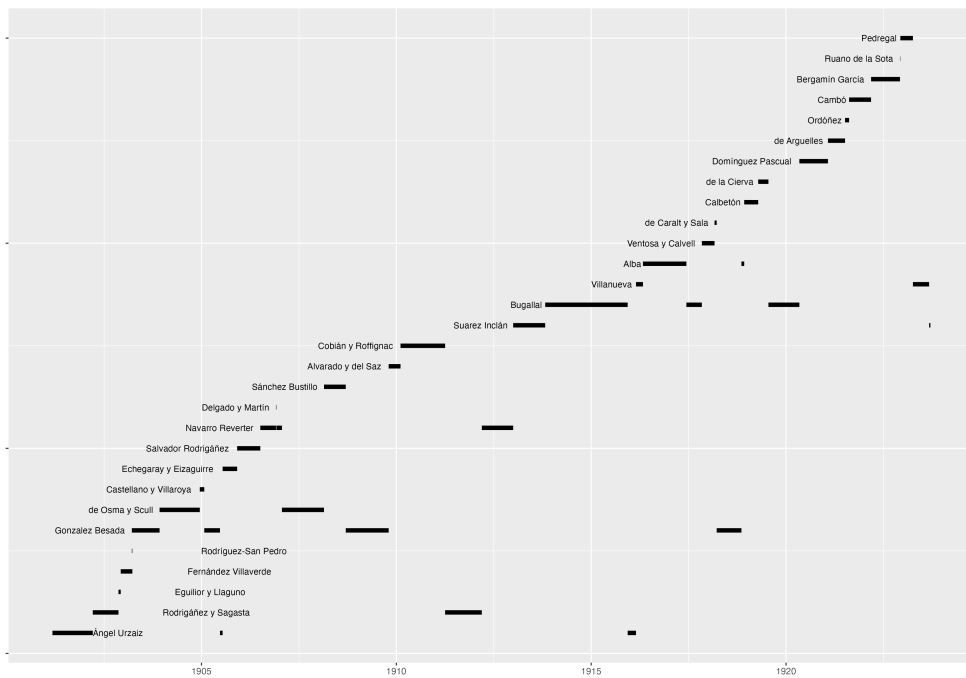
75. Simpson and Carmona, *Why Democracy Failed*, 61–62.

Figure 5.1: All Treasury and Prime Ministers tenures, 1901–1923.

Prime Ministers Tenures, 1901–1923.



Treasury Ministers Tenures, 1901–1923.



Sources: Own elaboration using La Moncloa, *Relación cronológica de los presidentes del Consejo de Ministros y del Gobierno*.

mentary obstruction and legislative paralysis: only one budget was voted throughout the period.⁷⁶ There was also an increase in the number of constituencies which elected *propios* MPs. The *propios* were MPs which won elections and sat in their constituencies for several legislatures in a row, regardless of who was in power.⁷⁷ They nearly always were Conservatives and Liberals who would not respect the *encasillado*, and would get elected continuously in their own district, turning them into personal fiefs. From 1918 onwards, it became very difficult to rig the elections and achieve a parliamentary majority for a single party.⁷⁸

Outside of parliamentary politics, the period between 1918 and 1920 came to be known as the “Bolshevik Triennium”.⁷⁹ Communism and anarcho-syndicalism had gained popularity after the First World War, trade unions and strikes proliferated, and social unrest was widespread in rural and urban areas.⁸⁰ To add insult to injury, the Spanish Army was massacred in the colonial Moroccan War (1917-1923).⁸¹ The Restoration came to an end after the *coup d'état* of General Primo de Rivera on the 13th September 1923.⁸²

76. Miguel Martorell, “La crisis parlamentaria de 1913-1917. La quiebra del sistema de relaciones parlamentarias de la Restauración,” *Revista de Estudios Políticos* 96 (Abril-Junio 1997): 137.

77. The name comes from the concept *diputados propios de un distrito* in Spanish, which means literally “a district’s own MP”.

78. Moreno Luzón, “Caciquismo in Restoration Spain (1875-1923),” 435.

79. Simpson and Carmona, *Why Democracy Failed*, 66.

80. Smith, “The Lliga Regionalista, the Catalan Right and the Making of the Primo de Rivera Dictatorship, 1916-23,”; Francisco J. Romero Salvadó, “*Si Vis Pacem Para Bellum: The Catalan Employers’ Dirty War, 1919-23*,” in *The Agony of Spanish Liberalism: From Revolution to Dictatorship, 1913-23*, eds. Francisco J. Romero Salvadó and Angel Smith (London: Palgrave Macmillan, 2010), 175-201; Francisco Cobo Romero, “‘The Red Dawn’ of the Andalusian Countryside: Peasant Protest during the Bolshevik Triennium, 1820-20,” in *The Agony of Spanish Liberalism: From Revolution to Dictatorship, 1913-23*, eds. Francisco J. Romero Salvadó and Angel Smith (London: Palgrave Macmillan, 2010), 121-44.

81. Pablo La Porte, “The Moroccan Quagmire and the Crisis of Spain’s Liberal System, 1917-23,” in *The Agony of Spanish Liberalism: From Revolution to Dictatorship, 1913-23*, eds. Francisco J. Romero Salvadó and Angel Smith (London: Palgrave Macmillan, 2010), 230-54.

82. María Teresa González Calbet, *La Dictadura de Primo de Rivera. El Directorio Militar* (Madrid: Ediciones Arquero: 1987), 55-95.

5.4 The fiscal battle over the Treasury: the interplay between politics and taxation during the Spanish Restoration, 1901–1923

To study taxation and politics in the Spanish Restoration, the chapter uses the series from Chapter 2. Data on MPs and political parties is obtained from Varela Ortega.⁸³ Elections dates are recompiled from the Spanish Parliament digital archives; the Presidents' names and tenures from *La Moncloa*, the official website of the President of the Council of Ministers; the Treasury Ministers' names and tenures from the book *Ministros de Hacienda y de Economía de 1700 a 2005: Tres siglos de Historia*, published by the Spanish Treasury;⁸⁴ and the budget approval dates are compiled for each year using the *Gacetas de Madrid*. The detailed links to all online sources are available in the Bibliography. The chapter's sample is composed of the 11 general elections that took place between 1901 and 1923, with a constant number of 397 elected Members of Parliaments per election across 48 provinces.⁸⁵ Table 5.1 shows the general election results by political families between 1901 and 1923. There is a perfect alternation between the Conservatives and the Liberals before 1916. Then the arrangement collapses with the parliamentary crisis of 1913–1917, when the liberal win twice in a row, followed by a Conservative victory twice in a row too. In both cases, one of the two consecutive victories was achieved without the super-majorities obtained in the previous rigged elections.

Next, four political variables of interest are defined: firstly, the chapter uses Curto-Grau, Herranz-Loncán and Solé-Ollé's *Dynastic* and *Minority* MPs variables:

83. José Varela Ortega, ed., *El poder de la influencia. Geografía del caciquismo en España (1875-1923)* (Madrid: Marcial Pons, 2001).

84. Ministerio de Hacienda, *Ministros de Hacienda y de Economía de 1700 a 2005: Tres siglos de Historia* (Madrid: Ministerio de Hacienda, 2005).

85. Once again, the two provinces from the Canary Islands are excluded.

Table 5.1: Winners of a parliamentary majority and seats obtained in each election by political families, 1901–1923.

Year	Winners	Total	Liberals	Conservatives	Republicans	Regionalists	Carlists	Others
1901	Liberals	397	258	96	17	6	11	9
1903	Conservatives	397	104	226	37	5	13	1
1905	Liberals	397	218	128	31	7	9	4
1907	Conservatives	397	80	244	35	16	21	1
1910	Liberals	397	213	113	40	11	15	7
1914	Conservatives	397	118	216	34	14	12	3
1916	Liberals	397	225	110	32	15	14	1
1918	Liberals	397	167	150	35	31	12	2
1919	Conservatives	397	143	188	33	24	13	5
1920	Conservatives	397	113	219	30	20	8	7
1923	Liberals	397	195	121	40	24	7	10

Sources: The results are constructed using Varela Ortega (2001). The exact dates of the elections can be found in the Appendix.

Notes: MPs for the Canary Islands are excluded. The Socialist MPs are included as Republicans in this table.

a dynastic MP is an MP from one of the two dynastic parties and a Minority MP is an MP who is neither from the Liberal nor the Conservative family. The other two *political* variables are the share of *propios* MPs in each province, and the share of current and past Presidents and Treasury Ministers in each province. MPs are classified as *propios* when they sat in the same constituency for five consecutive elections or more or when they sat in the same constituency for four consecutive elections and at least two times under a different winner; for instance, a conservative elected in a given district in 1914, 1916, 1918 and 1919 will be considered a *propio*, as he won twice under Liberal victories, in 1916 and 1918 (see Table 5.1).⁸⁶ For the share of current and past Prime and Treasury Ministers in each province, the names of the Prime and the Treasury Ministers are matched with the constituencies where they were elected. The focus is on these ministers because they were the two main positions in government with power over taxation.

A potential hypothesis regarding taxation in Restoration Spain is that the provinces which did not support the duopoly in power were punished with higher

86. The definition of *propios* has been purposely restricted in order to minimise the possibility of wrongly assigning MPs as *propios*. A discussion on the methodology on *propios* can be found in the Subappendix.

taxes. The alternative is that the provinces which did not support the duopoly in power paid less taxes if Minority MPs could successfully negotiate lower taxes for their constituents. As Restoration Spain was not a competitive democracy, one can think of the Conservatives and the Liberals as a duopoly using the geographical allocation of public resources to maintain the *turno pacífico*.⁸⁷ The Conservative-Liberal duopoly is thus a single political agent, whereas the parties challenging the alternation are the opposition parties. The main goal of Restoration governments was to perpetuate the *turno pacífico*. To test the two hypotheses, the chapter first replicates Curto-Grau, Herranz-Loncán and Solé-Ollé's Pooled OLS regression:

$$Taxes_{it} = \alpha + \beta_1 Political_{it} + \beta_2 Economic_{it} + \gamma_i + \gamma_t + \varepsilon_{it} \quad (5.1)$$

where *Taxes* are tax indicators in province *i* in year *t*; the dependent variable is regressed on political variables of interest (*Political_{it}*), and the coefficient of interest is β_1 . Finally, a series of economic controls (*Economic_{it}*) are included together with time-fixed and province-fixed effects. Standard errors are clustered at the provincial and election level to account for spatial autocorrelation. The summary statistics for all variables are reported in table 5.2.

The dependent variable *Taxes* takes three specifications: the first specification is the *Log(Nominal Direct Tax Revenues)*, which are obtained by summing the tax revenues of the six direct taxes in the sample: the *contribución territorial*, the *contribución industrial*, the *utilidades*, the *minas*, the *cédulas personales* and the *derechos reales* taxes (see Table 2.1 in Chapter 2). Nominal direct taxes are used as a dependent variable because politicians could directly influence direct taxes. The government had discretionary power in deciding how much to collect each year across the territory on direct taxes (see the territorial contribution in Chapter 4); on the

87. This framework was suggested by Curto-Grau, Herranz-Loncán and Solé-Ollé, "Pork-Barrel Politics in Semi-Democracies," 771–96.

Table 5.2: Summary statistics and descriptions of variables.

Variable	Description	Mean (Standard Deviation)
<i>Dependent Variable</i>		
Log(Total Nominal Direct Tax Revenues)	Log Sum of Direct Tax Revenues	6.69 (0.30)
Log(Nominal Direct Tax Burden per capita)	Log(Sum of Direct Tax Revenues _{it} / Active Population _{it})	1.45 (0.15)
Log(Nominal Direct Tax Burden as share of GDP)	Log(Sum of Direct Tax Revenues _{it} / Provincial GDP _{it})	0.39 (0.16)
<i>Variables of Interest: Political</i>		
Dynastic MPs (%)	Dynastic MPs _{it} / Total MPs _{it}	0.36 (0.25)
Minority MPs (%)	Minority MPs' seats _{it} /Total MPs _{it}	0.15 (0.23)
<i>Propios</i> MPs (%)	<i>Propios</i> MPs _{it} / Total MPs _{it}	0.43 (0.19)
Past Ministers (%)	Past Ministers MPs _{it} / Total MPs _{it}	0.025 (0.067)
<i>Economic Control Variables</i>		
Log(GDPpc)	Log of GDP per capita _{it}	2.74 (0.14)
Agriculture	Share of agriculture _{it}	0.40 (0.17)
Inflation	Consumer Price Index _{it}	129.10 (40.14)
Growthpc	Growth per capita _{it}	0.009 (0.88)
Urbanisation	Share of urbanisation _{it}	0.14 (0.13)
Active Population	Share of Active Population _{it}	0.47 (0.026)

Sources: For the dependent variables, see Chapter 2. For *Variables of Interest Political* and the *Economic Control Variables* see the present Section 5.4.

other hand, indirect taxes were driven by consumption and were not directly related to political decision-making, and are thus irrelevant for the analysis. To control for differences in population and income, the other two specifications of the dependent variable are the direct tax burden per capita and the direct tax burden as a share of GDP, although Restoration politicians did not have such tax indicators.

The economic control variables are the log level of per capita income ($\log(GDP)$), which controls for the expectation that the tax share of GDP will be higher where incomes are higher; the share of agriculture in the national economy (*Agriculture*), which reflects the greater difficulty of taxing agricultural production; the level of inflation (*inflation*), which is expected to have a positive impact on the value of nominal tax collection; the per capita growth rate (*growthpc*), which is expected to be positively correlated with higher tax collection; *Urbanisation*, which captures the share of urbanisation and controls for the expectations that taxes will be higher in urban centres; and finally *Active Population*, which captures the share of the active population and controls for expectations that taxes are higher where more people are working and consuming.

Table 5.3 presents the outcomes of regression (5.1) for the three variables of interests *Log Nominal Direct Taxes*, *Log Tax Burden Per Capita*, and *Log Tax Burden as a share of GDP*. The table reports the results for a specification where only Dynastic and Minority MPs are included, and then the full specification with all political variables of interest. The findings in table 5.3 show no correlation between the three tax indicators and provinces with a higher share of Dynastic MPs and a positive but insignificant correlation with respect to provinces with a higher share of Minority MPs. The regression results could potentially support the first hypothesis: in provinces with higher shares of Dynastic MPs and where the alternation of power was respected, there is no correlation between tax indicators and the political composition of the province at the time; however, in provinces with higher shares of Minority MPs and where the *turno pacífico* was challenged, there is a positive correlation with the tax indicators. However, the pooled OLS equation only captures correlations; it does not allow for drawing causal claims and there are important endogeneity concerns. Moreover, the regressions do not show crucial provincial differences which are likely to drive and bias the results.

Firstly, twelve provinces elected a 100% of Dynastic MPs between 1901 and 1923, whereas 36 provinces had at least one Minority MP; in the vast majority of cases, these were Republicans elected in urban districts. Most importantly, there were seven provinces where the *turno pacífico* was systematically not respected and where Dynastic parties failed to win a majority of the provinces' districts between 1901 and 1923: Barcelona, Girona, Lérida, Tarragona, Navarra, Álava and Guipúzcoa. Vizcaya can also be included although Dynastic MPs had a consistent majority of two-thirds of the districts until 1916 before losing the majority until 1923. On average, 56.5% of the districts in those eight provinces were held by Minority MPs between 1901 and 1923; in the 40 remaining provinces, 14.9% of districts elected Minority MPs. Outside of these provinces, the Dynastic parties only lost a majority of districts in in Oviedo

Table 5.3: Regression Results. Pooled Ordinary Least Squares.

	(1)	(2)	(3)	(4)	(5)	(6)
	Direct Taxes		Tax Burden	(Population)	Tax Burden (GDP)	
Dynastic MPs	-0.00238 (0.0108)	-0.00540 (0.00864)	-0.00414 (0.0100)	-0.00738 (0.00851)	-0.00295 (0.0103)	-0.00669 (0.00859)
Minority MPs	0.0451 (0.0358)	0.0482 (0.0378)	0.0366 (0.0313)	0.0400 (0.0337)	0.0369 (0.0306)	0.0409 (0.0329)
<i>Propios</i> MPs		0.0420 (0.0421)		0.0442 (0.0365)		0.0504 (0.0365)
Past Ministers		-0.000512 (0.0517)		0.00267 (0.0473)		0.00516 (0.0479)
Constant	5.862*** (0.568)	5.845*** (0.570)	1.015 (0.451)	0.997 (0.452)	2.228** (0.481)	2.207** (0.481)
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.978	0.978	0.929	0.930	0.926	0.927
N	893	893	893	893	893	893

Notes: * = significant at 10% level; ** = significant at 5% level; *** = significant at 1% level. Standard errors in parentheses.

in 1923, when 8 districts went to Minority MPs and 6 went to Dynastic MPs. Madrid was hotly contested in several elections with Minority MPs obtaining 6 seats and the Dynastic Parties obtaining 7 seats, but the Liberal-Conservative duopoly never lost the majority.

The eight provinces that systematically opposed the Dynastic duopoly had a unique mix of Minority MPs: Republicans, Carlists, and Regionalist and Nationalist parties. Figure 5.2 shows the geographical distribution of Minority MPs – namely which provinces had at least one Minority MP between 1901 and 1923. These provinces’ particularities require an approach that goes beyond regressions to understand the relationship between taxation and politics in Spain. Below the chapter undertakes a comparative analysis between the eight *Minority Provinces* and similar provinces in the rest of Spain. To do so, the chapter matches and compares provinces with the same number of districts. For instance, it compares the six provinces with five parliamentarians, the five provinces with six parliamentarians, etc. Table 5.4 shows the averages of GDP, taxes, and Dynastic, Minority and *propios* MPs across

Table 5.4: Summary Statistics of provinces with the same number of electoral districts

Province	GDP	Taxes	Averages		<i>Propios</i>
			Dynastic MPs	Minority MPs	
<i>Four-District Provinces</i>					
Ávila	108.35	2,408,313	100.00%	0.00%	57.61%
Logroño	90.68	2,957,002	97.83%	2.17%	53.26%
Segovia	80.15	2,651,145	100.00%	0.00%	57.61%
Soria	80.14	1,741,551	96.74%	3.26%	44.57%
Álava	63.77	871,934	56.52%	43.48%	46.38%
Four-District Average	89.83	2,439,503	98.64%	1.36%	53.26%
<i>Five-District Provinces</i>					
Albacete	173.12	4,906,157	100.00%	0.00%	13.91%
Guadalajara	88.68	3,118,999	89.57%	10.43%	37.39%
Huelva	154.17	4,498,788	96.52%	3.48%	41.30%
Palencia	103.30	3,388,249	93.04%	6.96%	21.74%
Santander	174.32	5,624,691	98.26%	1.74%	54.78%
Guipúzcoa	158.86	1,838,922	29.57%	70.43%	38.26%
Five-District Average	138.72	4,307,377	95.48%	4.52%	33.83%
<i>Six-District Provinces</i>					
Ciudad Real	175.59	6,115,967	92.03%	7.97%	2.90%
Cuenca	106.54	3,089,295	100.00%	0.00%	67.39%
Teruel	114.62	3,210,628	100.00%	0.00%	52.90%
Valladolid	167.61	5,440,246	92.03%	7.97%	41.30%
Vizcaya	367.30	5,441,046	57.97%	42.03%	52.90%
Six-District Average	141.09	4,464,034	96.01%	3.99%	41.12%
<i>Seven-District Provinces</i>					
Baleares	206.01	4,238,920	97.52%	2.48%	50.31%
Cáceres	133.91	4,741,705	95.03%	4.97%	26.09%
Castellón	201.13	3,572,987	85.09%	14.91%	47.20%
Huesca	141.56	3,285,520	83.23%	16.77%	54.04%
Salamanca	202.44	4,830,834	83.23%	16.77%	30.43%
Zamora	126.95	3,438,133	97.52%	2.48%	40.37%
Navarra	194.97	2,436,632	37.27%	62.73%	35.40%
Seven-District Average	168.67	4,133,993	90.27%	9.73%	41.41%

Continued on next page.

provinces with the same number of districts.

Comparing five-district provinces, Guipúzcoa is richer and has lower average direct taxes than the other provinces. The same is true for Navarra with respect to the rest of seven-district provinces. Vizcaya is also the richest province of the six-district provinces, but has higher average direct taxes than the other provinces, whereas Álava

Table 5.4: Summary Statistics of provinces with the same number of electoral districts

Province	GDP	Taxes	Averages		
			Dynastic MPs	Minority MPs	<i>Propios</i>
<i>Eight-District Provinces</i>					
Girona	256.08	4,925,357	37.50%	62.50%	45.65%
Lérida	178.79	3,730,555	50.00%	50.00%	36.41%
Tarragona	267.28	4,636,804	55.98%	44.02%	38.59%
Almería	160.44	3,906,000	91.30%	8.70%	39.13%
Burgos	199.50	4,022,624	98.37%	1.63%	47.83%
Toledo	220.14	6,873,487	97.83%	2.17%	43.48%
Average Catalan Provinces	234.05	4,430,905	47.83%	52.17%	40.22%
Eight-District Average	193.36	4,934,037	95.83%	4.17%	43.48%
<i>Nine-District Provinces</i>					
Córdoba	269.07	7,458,742	95.17%	4.83%	52.66%
Jaén	216.96	7,338,645	96.14%	3.86%	40.58%
Ourense	152.44	3,259,450	98.07%	1.93%	56.52%
Nine-District Average	243.01	7,398,694	95.65%	4.35%	46.62%
<i>Eleven-District Provinces</i>					
Lugo	172.54	3,855,458	98.81%	1.19%	62.06%
Pontevedra	159.45	5,016,689	99.60%	0.40%	83.40%
Granada	332.27	6,503,608	97.23%	2.77%	39.13%
Málaga	278.09	6,754,711	93.68%	6.32%	34.39%
Murcia	295.85	6,411,208	98.81%	1.19%	38.74%
Average Galician Provinces	166.00	4,436,074	99.21%	0.79%	72.73%
Eleven-District Average	302.07	6,556,509	96.57%	3.43%	37.42%
<i>Thirteen-District Provinces</i>					
Coruña	329.59	7,305,122	98.14%	1.86%	38.20%
Oviedo	407.11	9,304,822	77.64%	22.36%	64.29%
<i>Barcelona (20 districts) and Valencia (15 districts)</i>					
Barcelona	2,010.18	39,700,000	23.70%	76.30%	31.96%
Valencia	690.21	14,800,000	78.26%	21.74%	24.06%

Sources: For data on GDP, Rosés, Martínez-Galarraga and Tirado, “The upswing of regional income inequality in Spain,” 244–57. For data on taxes, Chapter 2. For the political variables, own elaboration using Varela Ortega, *El poder de la influencia. Geografía del caciquismo en España (1875-1923)*.

is poorer and pay less direct taxes on average than similar four-district provinces. However, if one divides average taxes by average GDP for Álava and Vizcaya and their comparable provinces, Álava and Vizcaya exhibit a much lower tax burden. Thus, Guipúzcoa and Navarra are richer on average and pay lower direct taxes than provinces with identical number of districts, and although Vizcaya is richer and pays more taxes on average and Álava is poorer but pays less taxes on average, both still

have lower tax burdens than their comparable provinces.

The regression results from Table 5.3 are hard to reconcile with the observations that the Basque provinces and Navarra paid less taxes or enjoyed lower tax burdens than their comparable provinces. In fact, Table 5.4 highlights the structural low levels of taxation enjoyed by the Basque provinces and Navarra. This was due to an important aspect of Spain's institutional structure: the tax exemptions enjoyed by the Basque provinces and Navarra. As discussed in Section 3.2, the 1878 reform legally abolished the Basque *fueros*, but in reality it merely changed their legal structure. The Basque provinces, and Navarra since 1841, conserved prerogatives with respect to taxation and maintained local treasuries. For instance, the four provinces were exempted from sending their *amillaramientos* to the central state, and negotiated a unilateral quota on the territorial contribution with the central state. In the primary data used in Chapter 2, the quotas for the Basque provinces and Navarra are reported separately and visibly lower than the quotas for similar provinces. The quotas were unaffected by Calvo Sotelo's hikes of land values in the *amillaramientos* regime and remained unchanged for years. In other cases, such as with the *contribución industrial*, the local Treasuries were in charge of collecting the tax.⁸⁸

Hence, lower levels of direct taxes were enshrined in Navarre and the Basque provinces due to the political agreements of 1841 and 1878. In addition, the four provinces had a strong national identity that became more important during the late 19th and the early 20th Centuries and defending the fiscal privileges was strongly associated with national identity. Navarre was a Carlist stronghold (Section 5.3); in that region and in Guipúzcoa, Carlists regularly held 80% of districts. The *Partido Nacionalista Vasco* (the Basque Nationalist Party) did not have MPs before 1918, and then held between five and seven MPs across Vizcaya, Guipúzcoa and Navarra

88. Moreno Lázaro, "El fraude en el pago de la Contribución Industrial y de Comercio en España," 166.

until 1923.

Both Carlists and Basque Nationalists MPs in Navarra and the Basque provinces defended the fiscal privileges ardently. Nowhere can this be seen more clearly than in the popular protest known as the *Gamazada* in 1893.⁸⁹ In May 1893, the Treasury Minister Germán Gamazo proposed the complete abolition of the Navarran *fueros* by law. Said plainly, from 1894 onwards, Navarra would no longer have fiscal exceptions and would contribute to the central state like any other Spanish province. Navarran MPs fiercely opposed the proposal in the national parliament, and they were promptly followed by the Navarran citizens: between the months of June and July, a popular uprising took place in Navarra, with dozens of thousands of citizens protesting in the streets and signing petitions for the defense of the fiscal privileges. The situation could have degenerated when a few military members went up in arms too; eventually, Gamazo's proposal was dropped, and Navarra maintained its fiscal exceptionality within Spain. The Basque Provinces, where protests took place in solidarity with Navarra, saw their fiscal exceptionality protected too. The arrangements with both provinces would remain untouched for the rest of the Restoration, and the results are visible in the lower tax levels in the first of decades of the 20th Century.

The Catalan provinces did not have fiscal privileges, yet the eight-district Catalan provinces (Girona, Lérida and Tarragona) were richer, paid less direct taxes on average, and had an average of 52.17% Minority MPs compared to 4.17% in the comparable provinces. Barcelona was by far the richest Spanish province and where more taxes were collected. It was also the province which elected the most MPs, 76.3% of them Minority MPs between 1901 and 1923. In fact, the results from table 5.3 suggesting a correlation between the share of Minority MPs and a higher level of

89. This paragraph is based on the work of Ángel García-Sanz Marcotegui, "La insurrección fuerista en 1893. Foralismo oficial versus foralismo popular durante la Gamazada," *Príncipe de Viana* 49, no. 185 (1988): 659–708.

direct taxes are very likely driven by Barcelona's figures. The vast majority of Spanish provinces collected low levels of direct taxes and Minority MPs were scarcely or not represented at all. Furthermore, when Barcelona (20 MPs) is compared to Valencia (15 MPs), one can see that Barcelona was three times richer than Valencia but that it also paid three times as many taxes; hence, there is no difference in tax burdens as share of GDP between the two provinces, yet, even controlling for economic factors, Barcelona is a massive outlier that biases the regressions results.

In Barcelona, the Dynastic parties never held a majority of districts after 1903 and even lost in all districts in the 1907 election. In the other three Catalan provinces, elections were more disputed but Minority MPs prevailed over the Liberal-Conservative duopoly. The high share of Minority MPs in the Catalan provinces was driven by the success of the Catalan Regionalist party. In Barcelona, 40% of MPs on average were from the *Lliga Catalana*. They obtained 50% or more of seats in 1907, 1914, 1916, 1918 and 1923. In the three other provinces, the average was 18%. One of every five MPs was a Regionalist MP, and these results are driven downwards by the first years of the period when the *Lliga* was not yet consolidated and by the province of Tarragona which elected less Regionalist MPs. For Girona and Lérida after 1907, the numbers go up to 30%.

Unlike the Carlists and the Basque Nationalist MPs, grievances over direct taxation were not central demands of the *Lliga Catalana*; the *Lliga* had demands over indirect taxation, especially lobbying for higher tariffs on manufactured goods to protect the local industries. Other demands included more political autonomy within the Spanish institutional structure, and more participation in national decisions taken at the central level.⁹⁰ Over time and as the *turno pacífico* progressively deteriorated, it became impossible for the Dynastic Duopoly to ignore the political strength of the

90. Smith, "The Lliga Regionalista, the Catalan Right and the Making of the Primo de Rivera Dictatorship, 1916-23," 145-74.

Lliga in Catalonia, especially considering that 44 of the 398 MPs were elected in the region. Eventually, the *Lliga* joined concentration governments. Strikingly, in their governments' participation they obtained twice the most important Ministry besides the Presidency: the Treasury. Juan Ventosa y Calvell and Francesc Cambó were Treasury Ministers between November 1917 and March 1918 and between August 1921 and March 1922 respectively. In line with the *Lliga* demands, Cambó implemented a new tariff during his tenure, hence increasing indirect taxation.⁹¹ This finding underscores the importance of the Treasury in the political negotiations of the Restoration, as the first party outside the *turno* to join the government obtained an important Ministry in exchange for its support to the ailing system and immediately used their position to influence taxation.

Table 5.3 indicated a positive correlation between the tax indicators and provinces with a higher share of *propios*. Curto-Grau, Herranz-Loncán and Solé-Ollé found that these MPs had a significant and positive impact on road spending in their constituencies.⁹² In this case, the positive coefficient might be capturing a different correlation, namely that provinces with higher direct tax revenues were more likely to elect *propios*. Furthermore, the variables Past Ministers and *propios* are probably correlated, with the variable *propios* capturing part of the effect of the variable Past Ministers: indeed nearly all Treasury and Prime Ministers were *propios*. Moreover the Past Minister variable's size is small as only a handful of provinces had current or past Treasury and Prime Ministers.

A comparative analysis of *propios* across provinces brings nuances to the initial results. Firstly, the average share of *propios* was 43% in all provinces between 1901 and 1923, compared to 30% between 1880 and 1914.⁹³ In a context of dis-

91. Smith, "The Lliga Regionalista, the Catalan Right and the Making of the Primo de Rivera Dictatorship, 1916-23," 145-74.

92. See Curto-Grau, Herranz-Loncán and Solé-Ollé, "Pork-Barrel Politics in Semi-Democracies," 787-93.

93. See Curto-Grau, Herranz-Loncán and Solé-Ollé, "Pork-Barrel Politics in Semi-Democracies,"

integration of the *turno pacífico*, the number of *Propios* increased everywhere, but it was especially high in Galicia. The four Galician provinces were clear Dynastic strongholds. Together, they elected 45 MPs and all districts were held by the Dynastic duopoly between 1901 and 1923.⁹⁴ On average, 83.40% of MPs in Pontevedra were *propios* during that time; with five Treasury Ministers, it was also the province which elected the most Treasury Ministers. Ourense, with 56.52% of *propios* MPs, followed with three Treasury Ministers, and Lugo, with 62.06% of *propios*, also had two Treasury Ministers. The coefficients on *propios* and *Past Ministers* are very likely driven by the high figures encountered in Galicia, which had clearly more *propios* and Treasury Ministers than the rest of Spain.

Furthermore, these results also suggest that Dynastic politicians which chances to hold the Treasury would get elected in an extremely safe region where the Dynastic parties were assured of their victory. Knowing that the *encasillado* was done by the party in power to ensure its victory in the coming elections, it suggests that the Dynastic parties used Galicia as a safe fief from which to appoint Dynastic MPs which then would be Treasury Ministers. Again, these findings highlight the crucial role held by Treasury in the political negotiations of the Restoration.

Finally, Table 5.3 does not give any information on budget votes, the key moment when MPs could influence taxes.⁹⁵ Hence, the chapter retrieved all the budget dates for the period 1901–1923, and crossed them against the parliaments' and the governments' compositions. Table 5.5 summarises the situation for every year. Under the political rules of the Restoration a change of government sign occurred *before* a general election granted the new government a majority. Take the year 1902 as an example. Throughout that year, there was both a Liberal government and a Liberal

786.

94. The exception is the district of Redondela in Pontevedra, which was won once by a Republican in 1923.

95. Comín, *Hacienda y Economía en la España Contemporánea*, 504.

Table 5.5: Governments, parliamentary majorities and national budget votes, 1901–1923.

Year	President when Budget voted	Majority when Budget Voted	Budget Approved?	Elections
1901	Liberal	Liberal	Yes	Elections
1902	Conservative	Liberal	No	
1903	Conservative	Conservative	Yes	Elections
1904	Conservative	Conservative	No	
1905	Liberal	Liberal	Yes	Elections
1906	Liberal	Liberal	Yes	
1907	Conservative	Conservative	Yes	Elections
1908	Conservative	Conservative	Yes	
1909	Liberal	Conservative	No	
1910	Liberal	Liberal	Yes	Elections
1911	Liberal	Liberal	No	
1912	Liberal	Liberal	Yes	
1913	Conservative	Liberal	No	
1914	Conservative	Conservative	Yes	Elections
1915	Liberal	Conservative	No	
1916	Liberal	Liberal	Yes	Elections
1917	Conservative	Liberal	No	
1918	Liberal	Liberal	No	Elections
1919	Conservative	Conservative	No	Elections
1920	Conservative	Conservative	Yes	Elections
1921	Conservative	Conservative	No	
1922	Conservative	Conservative	Yes	
1923	Liberal	Conservative	No	Elections

Sources: For elections and budgets approval dates, see the primary data in the Appendix. To determine what the majority was when the budget was voted, I used data from Varela Ortega (2001).

Notes: From 1901 to 1918, the budgets were always voted in December, and published in the *Gacetas* in late December or early January. Due to the political instability, the budget of 1918 was extended for several months, and the budget of 1919 was only approved on the 15th August 1919. At the same time, the government changed the fiscal year from 1st January to 31st December to 1st April to 31st of March. The budget approved was thus for the year 1919-1920. The remaining budgets until the beginning of the dictatorship (1920-1921, 1921-1922, 1922-1923, 1923-1924) also encompassed this new fiscal year.

majority in parliament, until the 6th December 1902, when a Conservative government was appointed; elections giving the Conservatives a majority in parliament would only follow four months later, on the 26th March 1903. During that period, a conservative government cohabited with a liberal majority. One should expect minority governments like the Conservative one in 1902 to have trouble approving its budgets, as the opposition had a parliamentary majority which would vote against it. Table 5.5 shows that on years with minority governments and a parliamentary majority in opposition, budgets were never approved, forcing the minority governments to extend

the previous year's budget. On years where both the parliamentary majority and government coincided, budgets were usually approved.

The results suggest that political fights over the budgets were fierce despite the *turno pacífico*: the Conservatives and the Liberals accepted the alternation in power, but would staunchly oppose each other on budgets. Comín highlighted that the Treasury played a central role in the budget negotiations because it was the ministry that allocated tax quotas across the territory.⁹⁶ If power fights over the budgets were fierce, one can infer that power fights over who would hold the Treasury in the first place and design such budgets must have been too. It comes as no coincidence that the region with the highest share of *propios* and where Dynastic MPs were always elected was the region which elected a third of Treasury Ministers. Combined with the previous findings on the *Lliga* Treasury Ministers, the chapter argues that the political negotiations around the Treasury were central in the Restoration politics of the early 20th Century and that political influence on taxation started with who held the Treasury.

5.5 Conclusions

Restoration Spain was a weakly institutionalised semi-democracy. The Conservatives and the Liberals agreed to peacefully alternate in power at each election, and they decided before each election the winners of every district. In order to obtain the desired political outcomes, national politicians bought the support of local elites to rig the elections. Over time the system started to break down, elections became more competitive, and parties opposed to the Dynastic duopoly entered parliament.

The chapter argues that the political negotiations around the Treasury were central in the Restoration politics of the early 20th Century and that political influ-

96. Comín, *Hacienda y Economía en la España Contemporánea*, 506 and 674; See also Chapter 4.

ence on taxation started with who held the Treasury. Three findings support the claim: firstly, when the Catalan Regionalist party joined the last ailing Restoration governments, it held the Treasury twice and used it to implement changes in indirect taxation. Secondly, a third of Treasury Ministers were elected in Galicia between 1901 and 1923; the region also had the highest share of *propios* MPs in Spain and always elected Dynastic MPs. Given that the *encasillado* was designed by the government, this suggests that Galicia was a Dynastic stronghold from which the Conservatives and the Liberals safely appointed Treasury Ministers. Thirdly, budgets were seldom passed when the government did not have a majority in parliament; political fights over the budgets were fierce, and this suggest that political infighting must have happend over the Treasury too as this was the ministry which designed the budgets.

Lastly, the chapter also finds that the Basque Country and Navarre had lower level of taxes on average than provinces with a similar number of MPs, and that this was due to Spain's institutional arrangements of the 19th Century which guaranteed the provinces fiscal privileges and lower tax contributions to the central state, suggesting that an overlooked aspect of the *turno pacífico* is that it relied on the Duopoly's acceptance of the fiscal exceptionality of the Basque Country and Navarre. The findings also suggest that Spain's low fiscal capacity in the early 20th Century can partially be explained by the failure to fully centralise taxation in the 19th Century. Finally, the chapter's findings and argument are an open invitation for further research on the relationship between taxation and politics at the provincial level in Restoration Spain, and especially for the identification of channels of causality on how the negotiations over the Treasrury and the resulting political outcomes affected taxation.

5.A Subappendix

A note on the measurement of *Propios*

There is not an agreed classification of which MPs can be categorised as *propios*. Some MPs were obvious *propios*, for instance if they were elected for 20 years or more in the same constituency. In the rest of cases, however, classification is up to the researcher. Curto-Grau, Herranz-Loncán and Solé-Ollé measure *propios* as “the share of deputies who: i) had been elected in the past in the same district; and ii) had sat with the opposition for at least one term of office (i.e., had not adapted to the turn system).”⁹⁷ This measurement might be too loose.

This chapter classified MPs as *propios* when they sat in the same constituency for five consecutive elections or more; or when they sat in the same constituency for four consecutive elections and at least two times under a different winner (e.g. a conservative elected in a given district in 1914, 1916, 1918 and 1919 will be considered a *propio* as he won twice under Liberal victories, in 1916 and 1918). This cutoff rate is an attempt to minimise the possibility that an MP is assigned to win a constituency by the *encasillado* even when its party does not win the election. For instance, it could be that an MP remains several years in one constituency because the *encasillado* assigned this constituency to the party losing that elections. Take the following example of a Conservative MP seating 3 times in a row in the same constituency: the Conservative MP seats in the constituency in 1901 when its party loses the election, then again in 1903 when its party wins it, and then again in 1905 when its party loses again. There is the possibility that the *encasillado* designed by the Liberals in 1901 and 1905 assigned him to “win” that constituency in both years as part of the assigned Conservative MPs assigned in both years. Defining that MP as a *propio* would not be correct.

97. Curto-Grau, Herranz-Loncán and Solé-Ollé, “Pork-Barrel Politics in Semi-Democracies,” 785.

Hence, this chapter is more restrictive in measuring *propios*, although it cannot completely rule out the possibility that some MPs assigned by the *encasillado* will be categorised as *propios*. The chapter argues that an MP sitting 3 times in the same constituency is not enough evidence to be a *propio* and that those who are elected for 5 elections or more can more confidently be categorised as *propios*. For MPs who were elected four times, a judgment call was made: those who sat in four elections and at least two times under a different winner were considered *propios*. It was considered that being elected four times in a row and twice in a situation where the other party was winning the election can be considered as a *propio*.

6

Conclusions

This thesis provides an alternative approach to the debates on fiscal capacity in Spain in the early 20th Century and offers new evidence by constructing a novel dataset on taxes for 48 provinces between 1901 and 1934 in Chapter 2. Chapter 3 finds that Madrid and Barcelona were the provinces which collected the most tax revenues and had the highest tax burdens per capita between 1904 and 1934. Furthermore, the chapter shows that total real tax revenues increasingly concentrated in the top contributing provinces over time and that tax burdens as percentage of provincial GDPs were low in the whole of Spain and relatively higher in Madrid due to a “capital” effect. The chapter also demonstrates that tax sacrifices decreased to low levels across the country between 1904 and 1934 as GDP per capita increased.

Given that Spain was predominantly an agrarian economy, yet taxes were mostly collected in urban centres, Chapter 4 looked at the fiscal capacity of the agrarian sector and studied the implementation of the land cadastre. The chapter shows that the cadastre did not bring a significant agrarian taxation reform: the cadastre succeeded in updating the tax bases and increased territorial contribution revenues in the provinces where it was implemented, but it did not alter the agrarian tax pressure. Hence, the state incurred a considerable opportunity cost in foregone territorial contribution revenues because the territorial contribution remained a flat tax levied on a frozen tax base.

Looking at the relationship between taxation and politics, Chapter 5 shows that a third of Treasury Ministers came from one single region which consistently elected MPs from the Conservatives and the Liberals, the Catalan Regionalist Party held the Treasury in a coalition government led by the Conservatives, and budgets were not voted when governments were in minority in Parliament. Furthermore, the chapter shows that the lower tax levels in the Basque Country and Navarre were due to historical fiscal privileges that local MPs defended ardently. The chapter suggests

that political influence on taxation was determined by who held the Treasury and that as such political negotiations around the Treasury were crucial in the politics of Restoration's Spain.

The thesis is aware of its limitations and discussed them throughout the chapters. Most of the initial data limitations were overcome by the construction of the taxes dataset using different sources and a multiple imputation model. Yet, due to the studied variables' endogeneity, the econometric regressions of this thesis point at correlations rather than causal effects.

This thesis contributes to the historical understanding of Spain's low fiscal capacity: by offering novel evidence and a province-level analysis, the thesis specifically shows that the Spanish state did not tax efficiently across its territory and relied on the tax revenues obtained in provinces with high urbanisation rates. The case study on the land cadastre illustrates the difficulties encountered by the Spanish state when it attempted to increase fiscal capacity in the agrarian sector and how the failure to change the structure of agrarian taxation impeded a significant improvement in overall fiscal capacity. The political infighting around the cadastre, the Treasury and the national budgets all suggest that the Spanish political situation partially explain the country's shallow fiscal capacity.

The thesis also shows that Spain's fiscal capacity remained low after the First World War and in the 1920s. Spain in the early 20th Century differed from its Western European neighbours which fought the war: it already started with lower fiscal capacity than its neighbours prior to the war, it maintained its neutrality and it did not see an increase in fiscal capacity after the conflict ended. All in all, the thesis confirms that Spain had a shallow fiscal capacity in the first decades of the 20th Century and supports previous studies and claims on the matter.

Understanding the roots of Spain's shallow fiscal capacity in the early 20th

Century is of crucial importance to understand contemporary economic outcomes: according to the most recent OECD data, Spain still has lower Tax-to-GDP ratios than the other three big European Union economies, namely France, Italy or Germany. There are multiple historical reasons to the persistent low fiscal capacity in Spain. Hence, studies on Spanish fiscal capacity in the 20th Century – from the Restoration to the dictatorship and the return to democracy – offer important long-term perspectives on Spain’s development.

The results also highlight future avenues of research: the thesis explicitly centered on taxes levied at the provincial level *for* the central state. However, there were taxes levied at the local level and which revenues were not sent to the central state. For example, localities were allowed to collect an extra 16% tax (*recargo*) on the *contribución territorial* quotas, which then remained at the local level and was used to finance primary education. Further research on these tax revenues can shed light on different layers of fiscal capacity in Spain.

There are many studies on taxation and fiscal capacity in Spain: at the local, provincial and national levels, and from Early Modern times to the early 21st Century. These studies have produced substantial quantitative evidence but remain often independent of each other. The creation of a project that includes all the tax data for Spain, together with references to the relevant studies and conclusions should be explored in the future. Making previous research and data available in a single repository will make future research easier and offer incentives to future researchers: creating a larger project on historical taxation and fiscal capacity in Spain would be a natural continuation for this research. In that way, the thesis would keep contributing to explaining the history of Spain in fiscal terms.

7

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21 st April 1907	Historia del Congreso: Elecciones de 21 de abril de 1907. https://www.congreso.es/cem/elec19070421
8 th May 1910	Historia del Congreso: Elecciones de 8 de mayo de 1910. https://www.congreso.es/cem/elec19100508
8 th March 1914	Historia del Congreso: Elecciones de 8 de marzo 1914. https://www.congreso.es/cem/elec19140308
9 th April 1916	Historia del Congreso: Elecciones de 9 de abril 1916. https://www.congreso.es/cem/elec19160409
24 th February 1918	Historia del Congreso: Elecciones de 24 de febrero de 1918. https://www.congreso.es/cem/elec19180224
1 st June 1919	Historia del Congreso: Elecciones de 1 de junio de 1919. https://www.congreso.es/cem/elec19190601
19 th December 1920	Historia del Congreso: Elecciones de 19 de diciembre de 1920. https://www.congreso.es/cem/elec19201219
29 th April 1923	Historia del Congreso: Elecciones de 29 de abril de 1923. https://www.congreso.es/cem/elec19230429

Presidents' names and tenures

Relación cronológica de los presidentes del Consejo de Ministros y del Gobierno.

<https://www.lamoncloa.gob.es/presidente/presidentes-desde-1823/Paginas/index.aspx>

A

Appendix: Taxes

A.1 Contribución Territorial

Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	575,000	1,830,163	2,834,501	1,874,292	1,455,693	3,934,159
1902	575,000	1,824,761	2,831,671	1,871,983	1,450,096	3,924,116
1903	575,000	1,808,739	2,832,175	1,872,370	1,450,518	3,928,159
1904	575,000	1,848,237	2,832,788	1,864,309	1,450,519	3,924,765
1905	575,000	1,838,315	2,830,636	1,828,914	1,450,902	3,920,658
1906	575,000	2,004,064	2,821,560	1,793,479	1,450,722	3,922,307
1907	575,000	2,122,894	2,808,308	1,789,979	1,447,154	3,913,090
1908	575,000	2,406,221	2,783,764	1,780,772	1,433,528	3,889,743
1909	575,000	2,540,927	2,778,148	1,780,336	1,430,971	3,897,536
1910	575,000	3,279,657	2,842,904	1,852,215	1,421,040	3,913,365
1911	575,000	4,663,432	2,801,816	1,963,128	1,437,830	4,004,159
1912	575,000	4,663,432	2,735,211	1,795,875	1,406,607	3,858,698
1913	575,000	4,663,432	2,690,944	1,801,850	1,402,234	3,852,957
1914	575,000	4,663,432	2,792,530	1,802,457	1,402,709	3,854,848
1915	575,000	4,663,432	2,879,455	1,802,756	1,401,505	3,854,826
1916	575,000	4,663,432	2,618,088	1,802,392	1,401,564	3,854,986
1917	575,000	4,663,432	2,506,634	1,801,984	1,400,985	3,855,840
1918	575,000	4,663,432	2,494,292	2,244,146	1,400,967	3,857,280
1919	575,000	4,663,432	2,542,861	2,707,828	1,401,223	4,135,712
1920	575,000	4,663,432	2,598,906	3,328,071	1,446,508	4,513,420
1921	575,000	4,663,432	2,727,424	3,341,198	1,403,512	4,579,730
1922	575,000	4,663,432	2,733,818	4,020,309	1,404,169	5,152,677
1923	575,000	4,663,432	3,275,190	4,697,267	1,789,870	5,496,468
1924	575,000	4,663,432	3,195,107	4,948,226	2,436,560	6,122,393
1925	575,000	4,663,432	3,152,287	4,743,984	2,677,535	6,633,972
1926	575,000	4,663,432	3,300,134	4,949,685	2,921,000	6,241,702
1927	575,000	4,663,432	3,058,512	5,110,273	2,986,212	6,630,409
1928	59,320	4,663,432	3,912,195	5,898,560	3,382,928	7,122,643
1929	59,320	4,663,432	3,969,422	5,898,519	3,408,285	7,492,340
1930	59,320	4,663,432	3,864,590	5,831,892	3,087,948	7,816,580
1931	59,320	4,663,432	3,698,058	6,148,534	3,478,172	8,091,640
1932	60,061	4,663,432	4,127,437	7,000,176	3,234,754	7,763,082
1933	60,000	4,663,432	4,127,437	6,819,299	3,839,073	8,985,170
1934	60,000	4,663,432	4,127,437	8,260,956	3,757,206	8,330,357

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Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	1,767,301	3,023,697	2,001,257	2,665,274	3,131,269	1,766,039
1902	1,759,765	3,009,499	1,997,144	2,665,620	3,122,253	1,762,818
1903	1,760,636	3,008,367	1,997,794	2,666,877	3,006,719	1,765,043
1904	1,759,156	2,932,692	1,998,521	2,669,719	2,932,686	1,764,984
1905	1,748,168	2,819,742	2,000,101	2,669,397	2,925,604	1,765,208
1906	1,742,988	2,759,157	1,995,452	2,670,878	2,918,188	1,773,047
1907	1,732,782	2,688,090	1,988,508	2,670,300	2,903,181	1,774,658
1908	1,711,583	2,651,608	1,972,890	2,665,516	2,880,087	1,768,589
1909	1,707,371	2,645,825	1,969,758	2,665,088	2,876,268	1,769,733
1910	1,699,019	2,744,045	1,994,651	2,828,397	2,906,438	1,825,658
1911	1,671,826	2,603,625	2,018,967	3,055,960	3,555,925	1,966,531
1912	1,668,969	2,698,316	1,946,641	2,722,042	2,205,824	1,790,205
1913	1,662,459	2,836,245	1,941,307	2,735,730	2,845,988	1,789,101
1914	1,662,340	2,858,496	1,941,393	2,735,876	2,287,527	1,790,729
1915	1,661,394	2,853,161	1,940,571	2,734,947	2,284,791	1,791,981
1916	1,660,415	2,850,163	1,939,526	2,734,776	2,284,791	1,796,838
1917	1,675,887	2,845,440	1,938,699	2,735,373	2,284,791	1,797,611
1918	1,675,991	2,833,844	1,937,949	2,738,870	2,284,791	1,801,056
1919	1,675,927	2,828,138	1,938,082	3,118,757	2,284,791	1,802,747
1920	1,644,807	2,828,138	1,938,082	3,431,654	2,284,791	1,802,747
1921	1,667,806	2,826,094	1,938,464	3,493,759	2,284,791	1,806,981
1922	1,668,983	2,825,191	1,939,275	4,152,572	2,284,791	1,811,175
1923	1,672,541	2,831,291	1,940,499	4,346,454	2,284,791	2,732,407
1924	2,093,781	3,544,414	2,425,843	5,306,345	2,284,791	3,750,236
1925	2,100,577	3,545,124	2,432,482	5,369,655	2,284,791	4,175,503
1926	2,089,318	3,531,066	2,421,702	5,675,511	2,284,791	4,303,006
1927	2,089,341	3,523,868	2,435,811	5,801,134	2,284,791	4,415,243
1928	2,650,886	4,456,625	3,075,513	6,577,900	2,284,791	5,441,961
1929	2,656,668	4,437,297	3,080,232	7,007,945	2,284,791	4,524,594
1930	2,659,391	4,421,475	3,086,677	7,040,289	2,284,791	4,842,424
1931	2,672,246	4,414,308	3,093,252	7,374,746	2,284,791	4,560,945
1932	2,681,275	4,408,726	3,098,551	7,241,802	2,284,791	5,133,422
1933	2,698,214	4,440,104	3,266,052	7,964,853	2,284,791	5,262,922
1934	2,725,347	4,472,510	3,258,306	7,931,259	2,284,791	6,136,031

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Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	3,110,939	4,370,489	3,262,488	2,120,962	2,150,507	3,088,548
1902	3,109,006	4,357,323	3,247,626	2,112,368	2,142,818	3,079,036
1903	3,115,866	4,345,908	3,247,356	2,112,762	2,142,707	3,080,084
1904	3,167,089	4,345,218	3,244,811	2,111,112	2,140,958	3,071,409
1905	3,105,691	4,352,262	3,239,984	2,107,653	2,137,487	3,066,967
1906	3,112,020	4,344,542	3,234,421	2,104,757	2,133,801	3,063,406
1907	3,119,199	4,247,445	3,219,992	2,096,152	2,125,390	3,055,024
1908	3,424,941	4,089,107	3,184,373	2,074,916	2,103,179	3,025,652
1909	3,926,795	3,299,676	3,177,558	2,071,384	2,099,286	3,021,203
1910	3,379,486	3,297,943	3,171,939	2,055,720	2,089,608	3,036,192
1911	3,459,889	2,039,106	3,104,041	2,050,286	2,120,463	3,072,591
1912	3,459,889	2,039,106	3,102,119	2,030,572	2,065,860	2,981,096
1913	3,459,889	2,039,106	3,089,874	2,023,883	2,062,082	2,969,386
1914	3,459,889	2,039,106	3,089,563	2,024,508	2,060,601	2,968,445
1915	3,459,889	2,039,106	3,088,292	2,023,616	2,061,820	2,967,043
1916	3,459,889	2,039,106	3,085,902	2,022,730	2,060,839	2,970,954
1917	3,459,889	2,039,106	3,083,897	2,021,872	2,059,944	2,970,120
1918	3,459,889	2,039,106	3,083,958	2,022,396	2,060,414	2,971,499
1919	3,459,889	2,039,106	3,083,819	2,022,561	2,060,358	2,971,669
1920	3,459,889	2,039,106	3,083,819	2,022,561	2,060,358	2,918,032
1921	3,459,889	2,039,106	3,084,789	2,023,308	2,061,045	3,172,357
1922	3,459,889	2,039,106	3,086,142	2,128,376	2,061,632	3,665,353
1923	3,459,889	2,039,106	3,092,850	2,330,566	2,065,757	3,865,143
1924	3,459,889	2,039,106	3,871,816	2,854,468	2,585,608	4,686,496
1925	3,459,889	2,039,106	3,884,353	3,053,852	2,592,966	5,773,345
1926	3,459,889	2,039,106	3,862,118	3,109,838	2,582,295	6,364,159
1927	3,459,889	2,039,106	3,862,165	3,308,659	2,581,480	6,377,216
1928	3,459,889	2,039,106	4,889,854	3,956,847	3,262,608	7,363,808
1929	3,459,889	2,039,106	4,895,671	4,012,311	3,267,500	7,683,286
1930	3,459,889	2,039,106	4,905,824	4,133,010	3,273,628	7,626,140
1931	3,459,889	2,039,106	4,916,762	4,468,726	3,269,873	8,539,300
1932	3,459,889	2,039,106	4,925,805	4,223,047	3,275,392	8,719,057
1933	3,459,889	2,039,106	4,940,835	4,810,506	3,287,725	8,915,867
1934	3,459,889	2,039,106	4,965,760	4,764,333	3,306,072	10,132,596

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Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	2,100,367	797,766	1,298,547	2,186,713	3,284,327	2,684,435
1902	2,093,142	797,766	1,299,642	2,180,524	3,286,438	2,672,275
1903	2,093,747	797,766	1,299,988	2,182,835	3,288,975	2,672,018
1904	2,093,247	797,766	1,300,297	2,183,517	3,293,724	2,669,912
1905	2,092,292	797,766	1,300,804	2,183,055	3,304,166	2,665,963
1906	2,090,473	797,766	1,300,918	2,178,710	3,317,366	2,661,908
1907	2,082,807	797,766	1,301,642	2,166,851	3,310,023	2,650,280
1908	2,062,231	850,000	1,305,743	2,123,480	3,131,048	2,620,996
1909	2,053,642	850,000	1,306,623	2,086,960	3,208,311	2,615,745
1910	2,046,985	850,000	1,369,609	2,115,241	3,092,160	2,606,082
1911	2,048,492	850,000	1,573,861	2,064,993	2,728,615	2,557,739
1912	2,012,515	850,000	1,347,258	2,068,796	3,244,631	2,556,240
1913	1,999,681	850,000	1,347,489	2,083,144	3,011,424	2,548,425
1914	2,000,567	850,000	1,347,507	2,083,472	3,248,846	2,546,413
1915	2,000,083	850,000	1,349,913	2,082,735	3,141,452	2,546,589
1916	1,997,409	850,000	1,350,030	2,088,182	3,455,039	2,545,171
1917	1,996,264	850,000	1,350,188	2,082,503	3,086,785	2,543,562
1918	1,995,856	850,000	1,350,405	2,082,578	3,657,806	2,543,456
1919	1,995,952	850,000	1,351,352	2,082,543	3,191,221	2,543,320
1920	1,995,952	850,000	1,307,483	2,082,543	3,487,942	2,543,320
1921	1,998,683	850,000	1,351,828	2,083,536	3,611,041	2,544,122
1922	2,000,109	850,000	1,352,389	2,086,039	3,147,164	2,545,279
1923	1,833,927	850,000	1,512,542	2,090,876	3,821,620	2,550,774
1924	2,544,694	850,000	2,238,846	2,619,199	3,829,067	3,193,206
1925	2,685,536	850,000	2,513,526	2,632,609	3,791,831	3,203,619
1926	2,512,703	850,000	2,856,242	2,627,965	3,791,831	3,216,754
1927	2,645,491	850,000	3,071,194	2,630,426	3,791,831	3,217,034
1928	3,216,934	379,722	3,413,704	3,331,442	3,791,831	4,071,025
1929	3,212,296	379,722	3,638,812	3,341,205	3,791,831	4,074,414
1930	3,334,708	379,722	3,902,292	3,353,703	3,791,831	4,082,179
1931	3,517,115	379,722	3,827,847	3,366,434	3,791,831	4,091,606
1932	3,487,833	384,468	4,130,963	3,373,498	3,791,831	4,099,852
1933	3,776,427	384,468	4,814,898	3,480,112	3,791,831	4,130,086
1934	3,647,931	384,468	4,678,135	3,533,598	3,791,831	4,161,261

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Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	2,030,384	1,646,958	2,366,683	2,682,798	2,784,080	2,411,878
1902	2,023,846	1,642,547	2,355,850	2,679,299	2,774,838	2,404,930
1903	2,024,044	1,642,465	2,355,619	2,680,847	2,771,387	2,409,200
1904	2,023,361	1,641,923	2,353,810	2,632,905	2,768,204	2,410,610
1905	2,022,307	1,641,454	2,350,160	2,672,508	2,751,773	2,409,846
1906	2,019,476	1,630,248	2,346,083	2,626,462	2,744,150	2,413,392
1907	1,971,387	1,596,917	2,335,365	2,529,327	2,732,337	2,410,769
1908	1,920,063	1,549,402	2,309,531	2,514,760	2,706,912	2,390,391
1909	1,908,181	1,540,909	2,304,556	2,485,358	2,701,563	2,386,247
1910	1,954,684	1,598,232	2,248,149	2,428,604	2,639,767	2,375,150
1911	1,976,646	1,648,006	2,251,088	2,131,763	2,717,636	2,402,875
1912	1,891,239	1,538,474	2,250,077	2,383,138	2,651,503	2,350,434
1913	1,939,704	1,532,937	2,241,505	2,368,225	2,644,433	2,343,872
1914	1,954,391	1,533,698	2,241,484	2,324,004	2,647,196	2,346,047
1915	1,959,547	1,535,560	2,240,386	2,231,880	2,646,780	2,346,734
1916	1,959,327	1,537,338	2,238,880	2,231,880	2,645,550	2,345,656
1917	1,958,357	1,537,260	2,237,947	2,231,880	2,642,449	2,344,826
1918	1,958,877	1,546,438	2,237,949	2,231,880	2,219,289	2,345,508
1919	1,958,879	1,548,530	2,237,879	2,231,880	2,232,280	2,345,556
1920	1,958,879	1,548,530	2,237,879	2,231,880	2,440,177	2,345,556
1921	1,959,705	1,549,353	2,238,714	2,231,880	2,527,697	2,675,763
1922	1,961,231	1,550,245	2,239,762	2,231,880	2,488,060	3,212,621
1923	1,964,530	1,552,420	2,244,525	2,231,880	2,379,020	4,176,286
1924	2,458,217	1,942,649	2,810,341	2,231,880	2,347,967	4,003,954
1925	2,464,164	1,946,510	2,819,746	2,231,880	3,023,158	4,402,144
1926	2,454,903	1,943,915	2,804,788	2,231,880	3,111,982	4,985,443
1927	2,456,296	1,943,938	2,804,656	2,231,880	3,027,666	5,381,330
1928	3,099,276	2,447,146	3,550,813	2,231,880	3,974,309	5,883,350
1929	3,102,310	2,452,049	3,553,992	2,231,880	3,580,018	6,877,837
1930	3,107,473	2,452,175	3,560,475	2,231,880	3,914,864	7,270,595
1931	3,113,789	2,461,246	3,567,772	2,231,880	3,391,407	7,491,028
1932	3,117,684	2,464,614	3,573,767	2,231,880	3,267,291	7,834,200
1933	3,129,595	2,534,818	3,584,633	2,231,880	3,267,291	7,830,872
1934	3,142,380	2,541,949	3,593,077	2,231,880	3,267,291	7,831,258

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Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	2,000,000	2,189,923	2,613,221	1,920,088	2,574,711	2,617,255
1902	2,000,000	2,179,872	2,601,701	1,926,070	2,563,053	2,608,167
1903	2,000,000	2,179,679	2,601,519	1,907,057	2,562,809	2,608,781
1904	2,000,000	2,177,982	2,600,547	1,896,246	2,560,793	2,617,636
1905	2,000,000	2,174,847	2,596,937	1,892,142	2,556,999	2,616,188
1906	2,000,000	2,170,793	2,593,123	1,890,466	2,552,385	2,613,425
1907	2,000,000	2,185,593	2,581,809	1,890,455	2,539,993	2,602,632
1908	2,000,000	2,161,390	2,553,920	1,888,359	2,511,400	2,583,100
1909	2,000,000	2,156,721	2,549,027	1,883,244	2,505,994	2,573,907
1910	2,000,000	2,111,387	2,513,267	1,975,094	2,481,132	2,605,601
1911	2,000,000	2,106,805	2,491,465	2,225,359	2,447,961	2,642,357
1912	2,000,000	2,105,481	2,490,291	1,929,781	2,446,442	2,547,755
1913	2,000,000	2,097,151	2,480,367	1,929,690	2,436,762	2,540,226
1914	2,000,000	2,096,934	2,480,048	1,926,751	2,436,598	2,540,573
1915	2,000,000	2,095,691	2,478,953	1,926,944	2,435,194	2,540,218
1916	2,000,000	2,094,436	2,477,529	1,927,299	2,433,733	2,537,406
1917	2,000,000	2,093,062	2,476,137	1,922,373	2,432,155	2,536,419
1918	2,000,000	2,093,107	2,476,396	1,921,401	2,432,398	2,535,088
1919	2,000,000	2,092,994	2,476,296	1,922,322	2,432,268	2,535,195
1920	2,000,000	2,092,994	2,476,296	1,922,322	2,432,268	2,535,195
1921	2,000,000	2,093,640	2,477,156	1,923,849	2,433,065	2,536,206
1922	2,000,000	2,094,575	2,478,696	1,924,153	2,434,162	2,538,195
1923	2,000,000	2,099,066	2,484,255	1,926,820	2,439,382	2,542,653
1924	2,000,000	2,627,732	3,112,815	2,409,250	3,053,758	2,950,332
1925	2,000,000	2,636,219	3,123,186	2,427,626	3,063,621	3,400,660
1926	2,000,000	2,620,632	3,105,717	2,446,263	3,045,740	3,509,521
1927	2,000,000	2,620,216	3,105,831	2,356,050	3,045,256	3,607,731
1928	2,000,000	3,317,145	3,933,069	2,878,101	3,855,274	4,127,147
1929	2,000,000	3,320,966	3,937,596	2,810,828	3,859,716	4,461,868
1930	2,000,000	3,327,692	3,946,551	2,697,972	3,868,999	4,345,977
1931	2,000,000	3,335,097	3,955,334	2,848,173	3,877,794	4,782,718
1932	2,000,000	3,341,231	3,962,100	2,695,267	3,884,964	4,655,943
1933	2,000,000	3,351,690	3,984,625	2,848,999	3,895,802	5,759,921
1934	2,000,000	3,359,819	4,020,202	2,791,838	3,904,989	5,877,605

Continued on Next Page.

Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	853,912	1,625,523	5,240,811	1,046,460	2,403,295	1,916,025
1902	854,336	1,625,512	5,236,814	1,044,272	2,393,838	1,910,574
1903	850,293	1,626,777	5,252,080	1,044,261	2,376,111	1,910,604
1904	850,696	1,627,956	5,252,404	1,044,527	2,340,990	1,909,754
1905	851,484	1,627,667	5,241,667	1,044,486	2,238,744	1,908,933
1906	853,222	1,627,524	5,240,062	1,044,500	2,171,455	1,906,935
1907	852,827	1,625,927	5,228,970	1,042,343	2,138,201	1,901,309
1908	851,656	1,618,811	5,182,416	1,036,902	2,116,319	1,888,118
1909	852,648	1,617,687	5,172,730	1,036,100	2,112,123	1,885,512
1910	888,592	1,651,428	5,157,661	1,068,858	2,180,397	1,889,415
1911	1,007,720	1,799,305	5,104,033	1,144,233	2,099,928	1,993,687
1912	876,561	1,631,768	5,057,212	1,042,480	2,077,447	1,876,920
1913	876,988	1,629,764	5,041,300	1,048,688	2,211,313	1,872,750
1914	878,739	1,630,736	5,042,552	1,047,859	2,248,526	1,874,422
1915	880,037	1,632,072	5,040,807	1,047,819	2,256,671	1,874,528
1916	883,482	1,632,350	5,043,780	1,047,747	2,259,172	1,874,940
1917	883,824	1,632,528	5,046,501	1,047,829	2,234,817	1,870,521
1918	884,709	1,633,012	5,037,292	1,047,723	2,230,373	1,870,733
1919	887,147	1,633,333	5,036,629	1,048,062	2,229,065	1,870,639
1920	887,147	1,633,333	4,496,897	1,048,062	2,229,065	1,870,639
1921	885,933	1,635,100	4,367,008	1,048,092	2,255,814	1,871,033
1922	887,095	1,629,875	4,815,653	1,049,376	2,254,586	1,871,668
1923	888,578	1,745,542	4,442,422	1,068,953	2,256,955	1,875,206
1924	1,110,934	2,219,962	5,266,861	1,313,287	2,825,597	2,346,296
1925	1,113,495	2,103,693	4,966,328	1,419,335	2,834,338	2,352,662
1926	1,121,989	2,265,983	5,043,479	1,456,003	2,819,606	2,344,336
1927	1,124,918	2,301,577	5,201,247	1,513,294	2,819,204	2,345,383
1928	1,418,196	2,546,650	6,986,967	1,854,713	3,565,684	2,970,643
1929	1,418,366	2,634,002	5,757,032	1,917,297	3,621,803	2,975,478
1930	1,444,600	2,443,404	6,709,188	1,872,194	3,628,996	2,980,927
1931	1,447,959	2,778,450	5,596,194	2,034,032	3,643,928	2,985,602
1932	1,451,880	2,495,045	6,040,395	2,009,652	3,648,837	2,989,185
1933	1,503,294	2,835,535	6,625,030	2,178,224	3,737,533	3,028,086
1934	1,504,009	2,687,904	6,156,234	2,235,283	3,758,500	3,070,360

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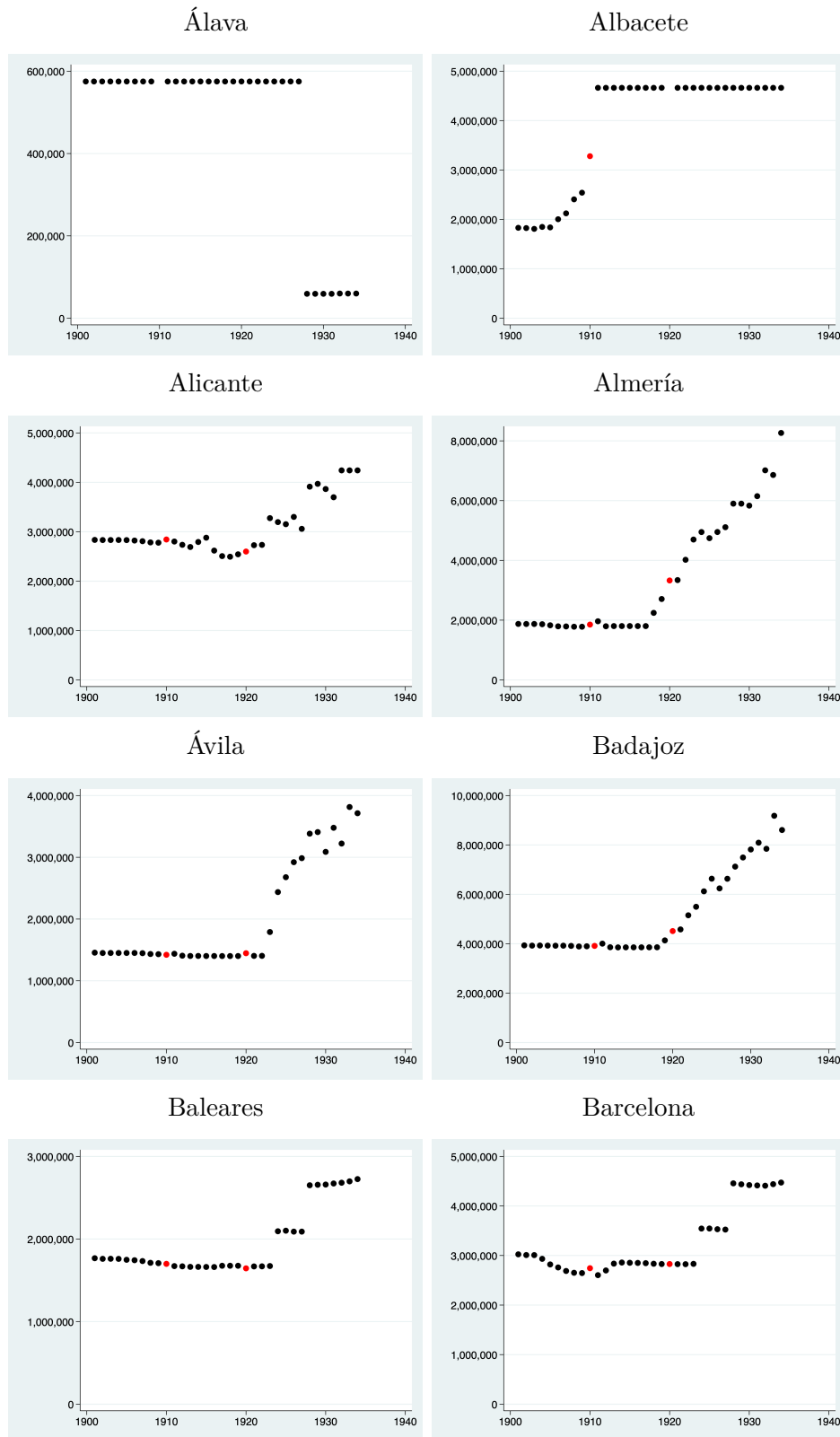
Table A1: Contribución Territorial Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	3,941,360	6,007,325	2,589,931	997,297	2,200,831	3,592,374
1902	3,928,715	6,001,309	2,584,042	997,297	2,194,844	3,581,304
1903	3,927,037	6,004,087	2,584,879	997,297	2,195,098	3,581,569
1904	3,900,851	6,003,624	2,583,092	997,297	2,194,353	3,579,655
1905	3,953,317	6,000,797	2,582,048	997,297	2,191,788	3,575,888
1906	3,817,597	5,997,737	2,579,040	997,297	2,192,121	3,572,169
1907	3,840,967	5,986,296	2,569,370	997,297	2,187,866	3,548,457
1908	3,483,606	5,961,849	2,547,957	1,205,876	2,170,678	3,521,929
1909	3,581,250	5,956,399	2,545,456	1,205,876	2,167,758	3,520,614
1910	3,909,916	5,981,166	2,537,387	1,205,876	2,212,948	3,549,800
1911	3,797,123	6,584,872	2,568,455	1,205,876	2,304,785	3,652,032
1912	3,886,195	5,997,506	2,505,526	1,205,876	2,160,484	3,498,883
1913	4,428,694	5,989,263	2,497,132	1,205,876	2,155,185	3,491,317
1914	4,601,105	5,989,737	2,496,930	1,205,876	2,155,146	3,493,238
1915	4,503,225	5,988,461	2,496,698	1,205,876	2,155,017	3,510,773
1916	4,756,831	5,987,488	2,498,465	1,205,876	2,154,727	3,509,038
1917	5,225,296	5,989,957	2,496,991	1,205,876	2,153,916	3,529,291
1918	5,387,208	5,990,644	2,498,090	1,226,951	2,155,651	3,526,128
1919	5,358,925	5,992,573	2,502,807	1,226,951	2,153,407	3,524,349
1920	5,794,145	5,992,573	2,502,807	1,226,951	2,153,407	3,524,349
1921	5,730,116	5,996,378	2,507,203	1,226,951	2,153,929	3,527,688
1922	5,199,198	5,998,496	2,513,754	1,226,951	2,157,926	3,529,764
1923	6,227,339	6,821,360	2,775,743	1,226,951	2,160,954	3,539,199
1924	6,029,706	8,893,948	3,385,992	1,226,951	2,557,847	4,430,032
1925	5,983,297	8,997,654	3,254,140	1,226,951	2,844,724	4,441,657
1926	5,917,289	8,871,096	3,193,903	1,226,951	2,936,105	4,462,387
1927	5,917,289	8,784,878	3,020,558	1,226,951	2,829,096	4,496,776
1928	5,917,289	11,215,653	3,211,423	1,072,288	3,255,196	5,680,533
1929	5,917,289	11,860,346	3,517,676	1,072,288	3,337,050	5,691,004
1930	5,917,289	11,814,925	3,368,678	1,072,288	3,322,390	5,706,893
1931	5,917,289	11,705,411	3,706,559	1,072,288	3,153,890	5,719,604
1932	5,917,289	11,754,317	3,439,819	1,085,692	2,930,014	5,702,272
1933	5,917,289	11,220,910	3,930,762	1,085,692	3,116,213	5,834,430
1934	5,917,289	12,052,825	3,674,691	1,085,692	3,041,389	6,011,291

Sources: See Chapter 2.

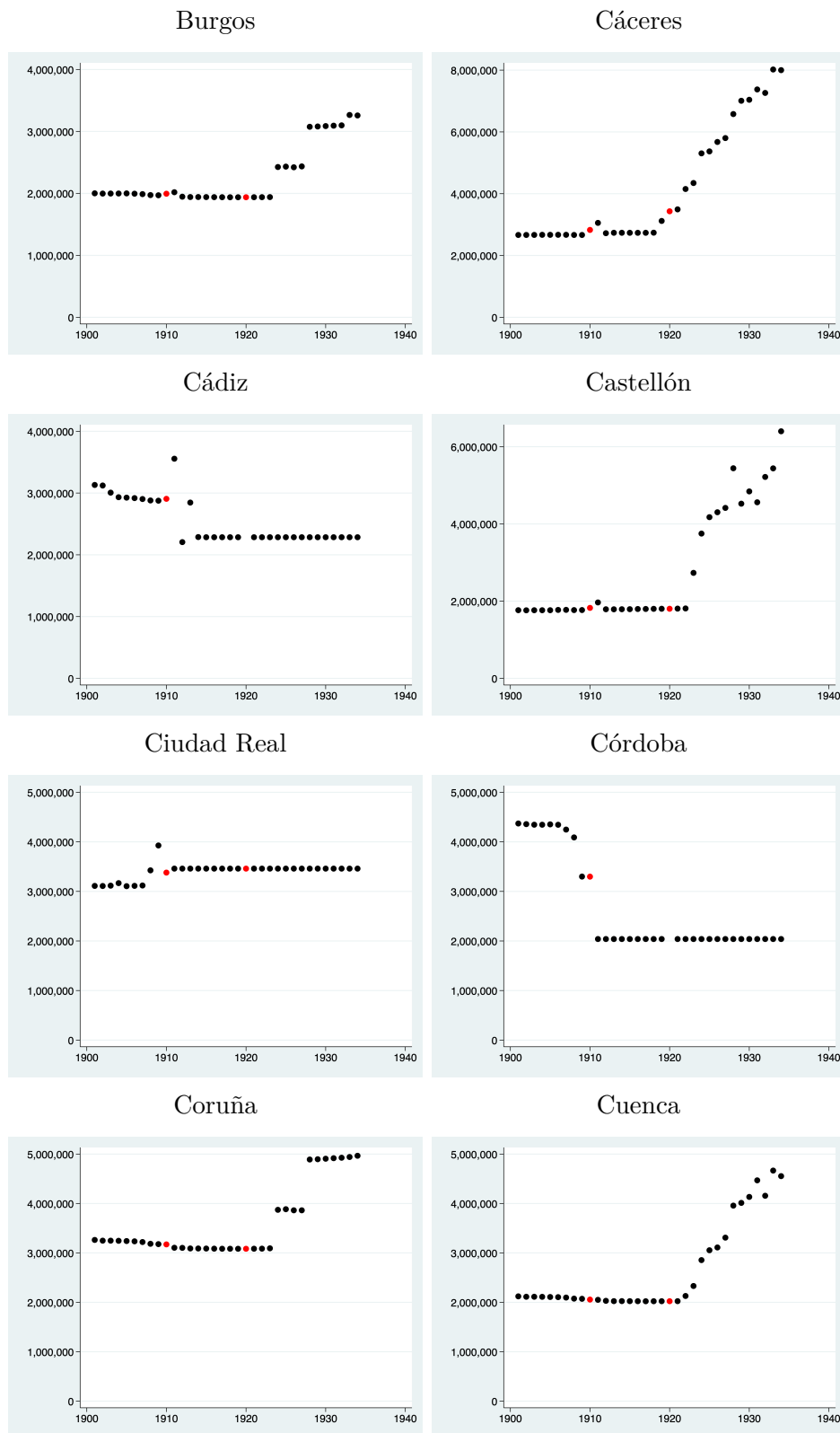
Notes: All data are in nominal values.

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



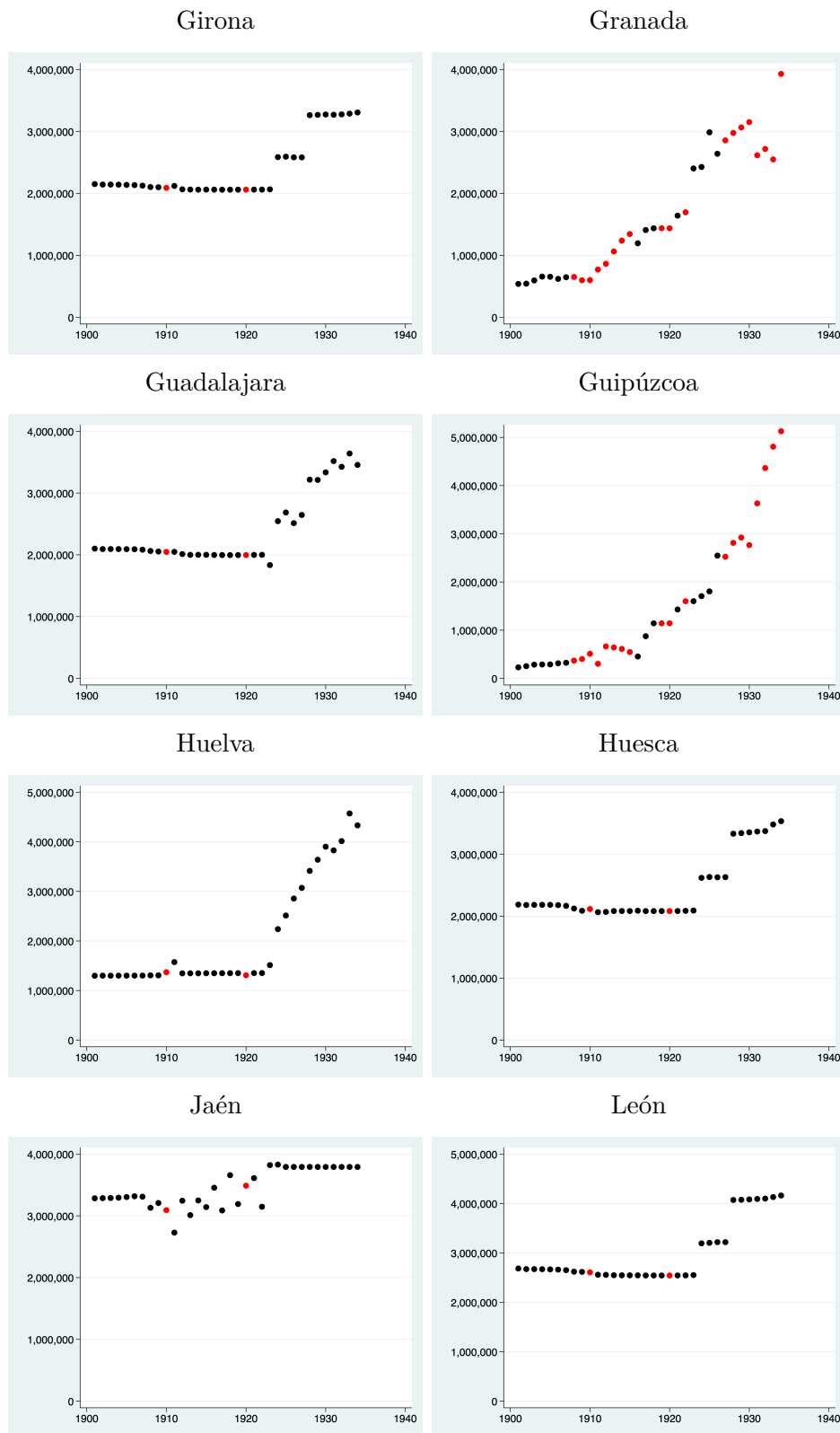
Notes: The original data points are in black; the imputed data points are in red.

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



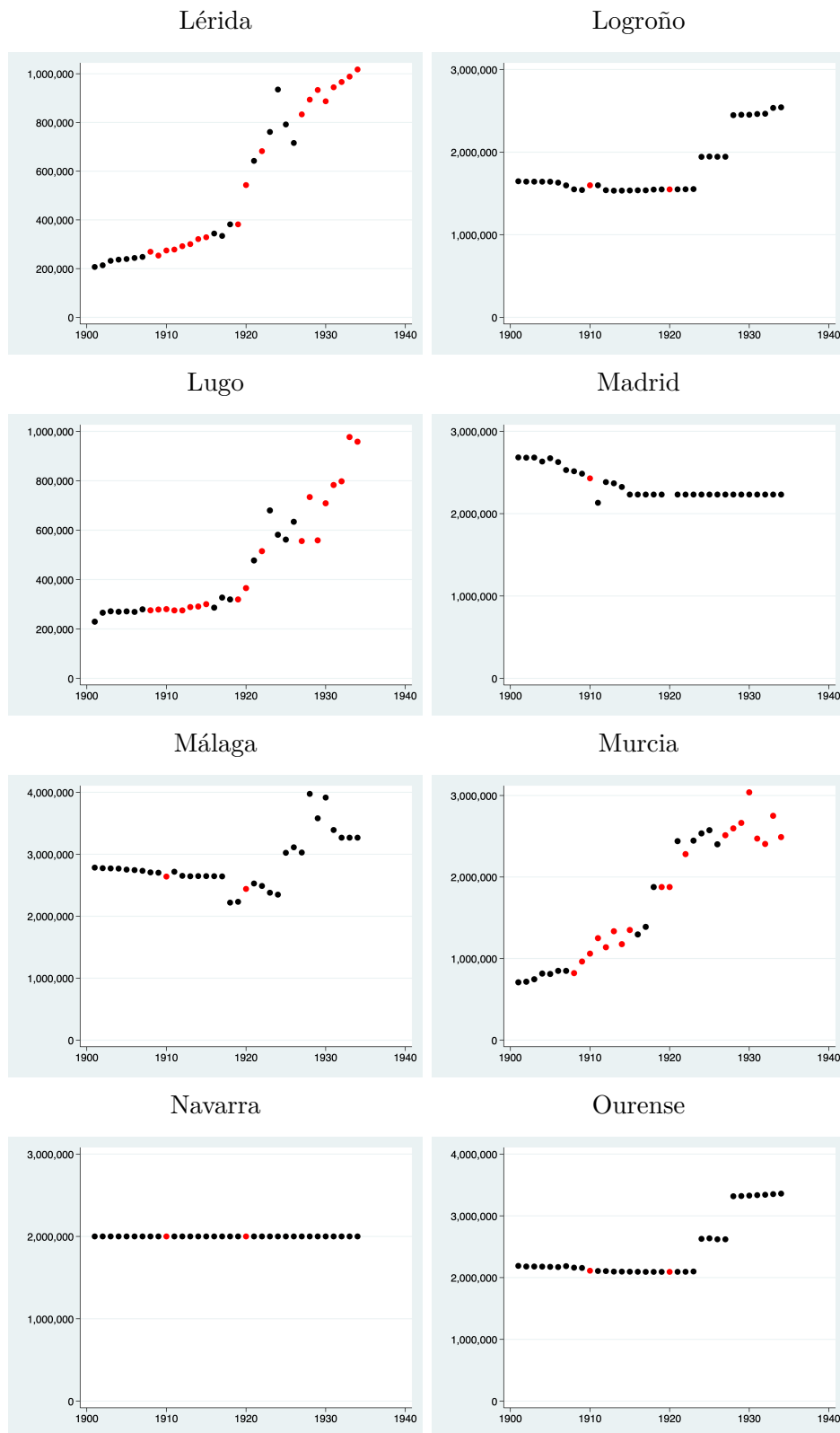
Notes: The original data points are in black; the imputed data points are in red.

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



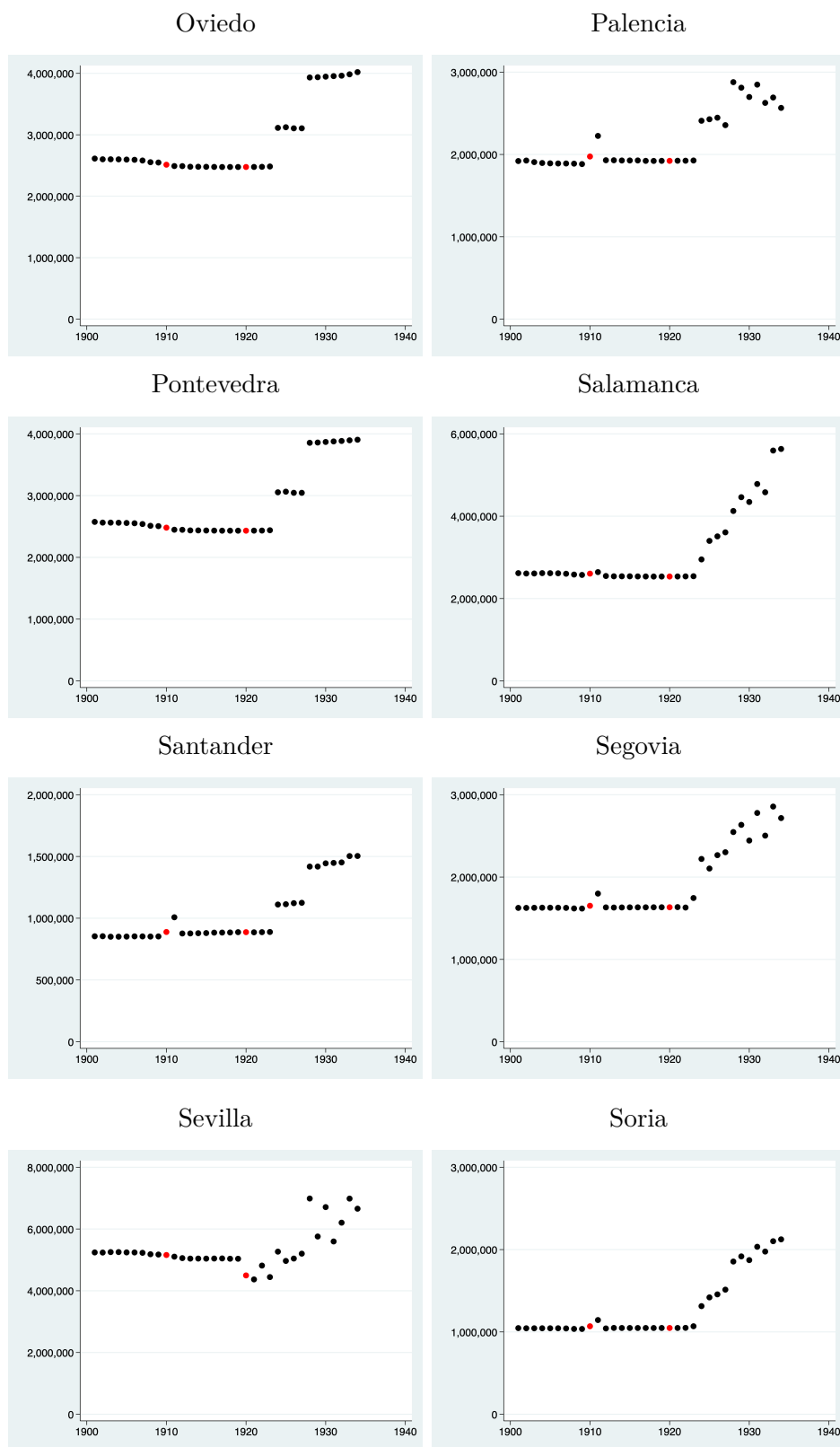
Notes: The original data points are in black; the imputed data points are in red.

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



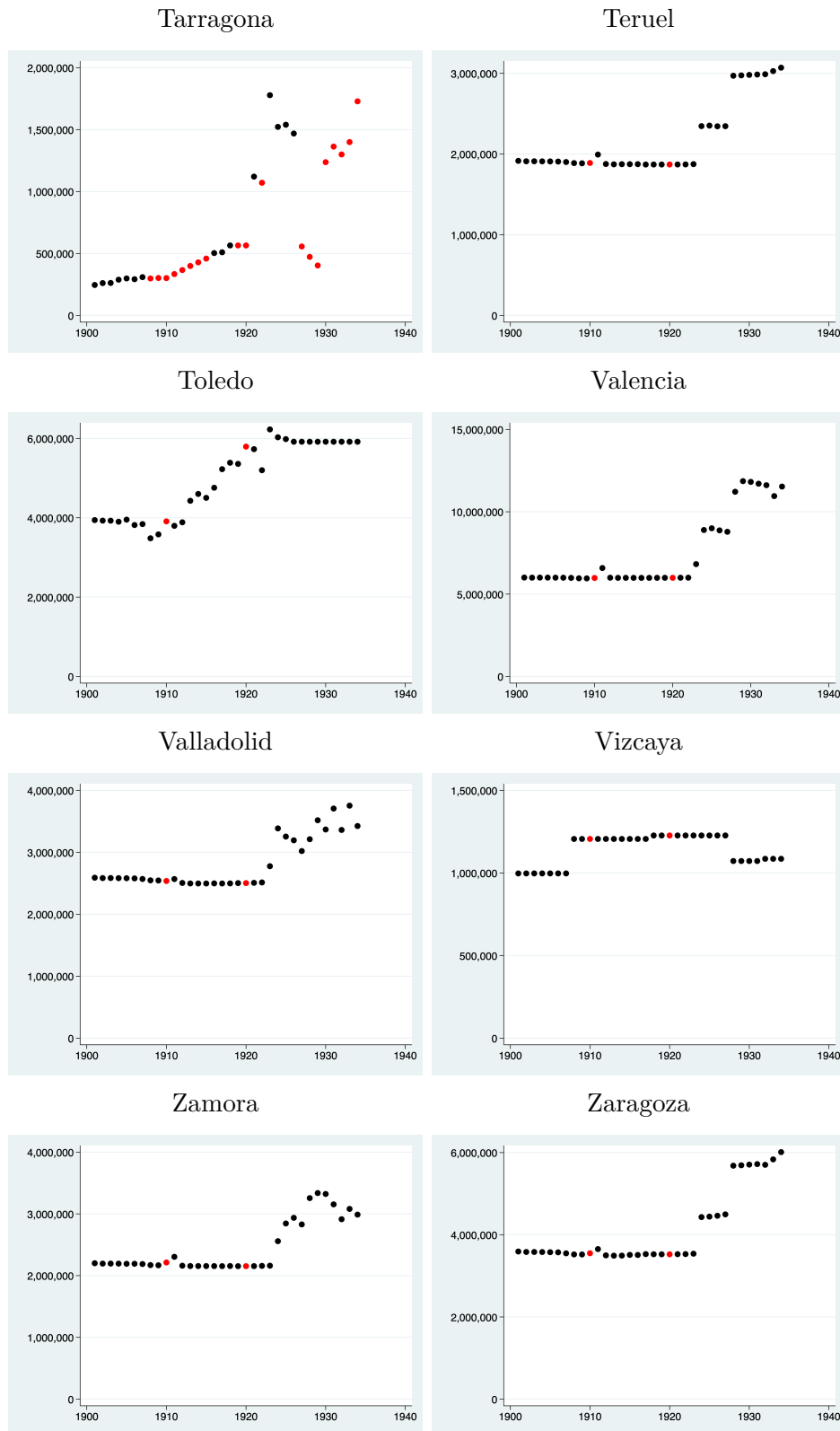
Notes: The original data points are in black; the imputed data points are in red.

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red..

Figure A1: Contribución Territorial Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.2 Contribución Industrial

Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	235,309	715,414	309,593	223,784	497,107
1902	-	226,093	673,878	316,519	209,805	490,968
1903	-	238,591	712,931	306,185	233,845	524,412
1904	-	244,746	697,019	321,230	230,169	569,433
1905	-	237,452	646,247	257,814	220,211	513,218
1906	-	225,885	656,093	260,415	230,964	518,445
1907	-	235,751	626,376	247,851	235,436	528,739
1908	-	255,450	714,824	217,184	235,535	522,992
1909	-	276,040	734,499	189,224	244,266	673,025
1910	-	260,304	708,092	165,956	242,808	691,438
1911	-	272,765	816,584	207,690	241,952	672,127
1912	-	275,791	820,332	239,935	241,076	635,779
1913	-	269,828	803,067	252,334	241,431	634,588
1914	-	271,090	805,700	279,291	238,746	632,337
1915	-	314,831	862,673	275,561	237,181	581,054
1916	-	287,108	857,853	232,927	236,878	633,832
1917	-	357,267	916,526	277,808	237,621	592,597
1918	-	341,734	964,891	241,596	244,374	791,790
1919	-	454,584	2,163,123	507,596	309,744	631,284
1920	-	644,237	3,639,932	652,060	328,330	863,467
1921	-	677,630	1,600,122	458,099	358,150	1,341,438
1922	-	719,974	1,309,731	466,795	430,536	1,489,464
1923	-	839,992	1,996,771	591,784	473,318	1,584,826
1924	-	1,260,674	3,227,578	903,328	668,116	2,228,696
1925	-	1,460,607	3,868,771	991,799	748,651	2,938,195
1926	-	1,465,695	4,024,344	953,960	705,652	3,058,968
1927	-	1,653,124	4,759,359	998,725	855,244	3,445,404
1928	-	1,941,238	6,180,166	1,240,290	928,164	3,891,657
1929	-	2,077,766	6,847,946	1,317,698	1,060,097	4,334,330
1930	-	2,144,090	10,554,166	1,404,778	1,111,331	4,548,748
1931	-	2,238,823	8,810,794	1,318,972	1,177,844	4,931,440
1932	-	2,477,366	11,114,054	1,267,908	1,236,795	5,302,814
1933	-	2,577,164	14,704,258	1,474,060	1,312,957	5,743,075
1934	-	2,844,221	16,082,995	1,530,278	1,403,366	6,168,020

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Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	524,830	7,984,327	545,101	315,276	1,481,162	464,408
1902	548,741	8,666,235	573,223	336,646	1,543,355	470,087
1903	582,276	9,218,018	578,135	382,977	1,552,849	508,915
1904	580,963	9,301,961	561,794	368,797	1,604,153	582,239
1905	577,179	9,614,251	558,417	371,267	1,465,887	529,278
1906	572,922	9,898,015	567,169	376,437	1,437,587	525,318
1907	584,789	9,959,142	583,503	419,606	1,404,131	496,584
1908	578,927	9,908,981	522,501	406,134	1,417,666	534,370
1909	604,468	10,052,420	498,823	437,630	1,384,039	541,171
1910	603,684	10,123,306	511,596	448,312	1,341,016	543,886
1911	656,481	10,502,990	518,079	440,441	1,361,214	527,777
1912	623,185	10,291,630	540,505	428,226	1,370,516	533,353
1913	601,803	10,617,648	546,201	440,877	1,381,684	519,620
1914	556,270	11,022,470	589,002	438,709	1,372,220	515,067
1915	551,805	11,611,358	598,533	439,290	1,387,307	503,231
1916	565,623	11,438,260	639,022	428,102	1,381,140	462,856
1917	627,379	11,940,813	660,133	454,330	1,383,091	452,439
1918	601,740	12,165,803	646,436	467,482	1,420,371	500,313
1919	601,740	17,670,094	960,373	377,476	2,373,089	500,313
1920	601,740	17,670,094	1,081,929	477,340	2,403,590	1,072,264
1921	892,423	19,948,816	982,703	721,053	2,159,811	859,519
1922	1,054,340	20,301,164	1,102,654	842,324	2,250,748	1,130,853
1923	2,021,328	23,005,005	1,261,124	878,426	2,580,381	1,384,719
1924	2,589,651	32,516,276	1,551,747	1,461,765	3,695,743	2,008,960
1925	2,715,055	35,514,528	1,831,823	1,612,860	4,907,793	2,383,901
1926	2,940,134	32,904,073	1,795,883	1,804,990	4,128,009	2,333,106
1927	3,643,970	34,835,114	2,073,244	2,018,202	4,857,971	3,275,238
1928	4,438,918	35,145,763	2,127,088	2,232,924	4,478,101	4,037,007
1929	3,495,741	35,316,422	2,493,938	2,505,491	5,228,647	4,751,253
1930	4,505,233	35,247,662	2,529,433	2,643,510	5,889,872	5,512,958
1931	4,013,483	35,205,069	2,731,236	2,865,466	6,161,666	4,969,832
1932	2,501,188	35,126,934	2,985,044	3,073,915	6,098,215	5,436,396
1933	5,467,447	35,186,815	3,081,747	3,291,217	6,144,768	5,923,072
1934	3,081,396	35,324,824	3,341,402	3,591,747	6,996,959	5,800,970

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Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	485,334	571,033	922,657	171,241	919,534	510,611
1902	456,404	592,796	971,906	170,197	973,076	656,373
1903	449,026	597,949	1,021,477	183,430	984,062	676,563
1904	446,402	610,815	1,018,744	196,487	981,180	703,419
1905	429,174	605,550	1,060,361	179,035	999,856	658,409
1906	436,172	634,734	1,048,097	181,518	973,465	687,416
1907	422,687	632,271	1,046,070	169,022	968,812	736,971
1908	421,221	647,031	1,044,428	209,320	927,914	688,264
1909	540,653	679,410	1,045,294	221,080	884,289	700,455
1910	533,183	679,034	1,045,413	226,252	818,425	696,184
1911	508,864	703,785	1,043,768	229,412	890,891	655,612
1912	610,681	706,685	1,054,399	238,972	868,628	641,590
1913	737,618	746,515	1,052,708	242,028	922,637	601,237
1914	685,666	752,692	1,052,092	248,111	991,312	568,081
1915	685,700	775,558	1,053,269	254,818	1,090,949	548,062
1916	560,584	754,313	1,114,418	256,455	1,129,328	517,821
1917	622,233	816,425	1,027,504	276,738	1,086,002	561,235
1918	647,060	887,165	1,043,046	282,491	1,187,903	537,646
1919	647,060	1,102,671	823,292	265,433	2,299,834	1,385,594
1920	647,060	1,246,382	1,170,792	316,132	2,214,044	1,607,788
1921	1,040,341	1,498,045	1,641,773	423,214	1,836,915	1,068,179
1922	367,103	1,390,580	1,823,730	548,626	1,732,773	996,096
1923	1,243,604	1,770,781	2,026,943	609,893	1,886,020	1,261,497
1924	1,739,166	2,429,291	2,622,047	970,505	2,465,551	1,851,699
1925	3,074,244	3,243,960	3,623,612	1,084,281	3,631,442	2,057,295
1926	2,367,957	3,269,984	3,166,438	1,040,860	3,056,241	2,000,695
1927	4,800,017	4,376,995	3,648,845	1,285,769	3,703,525	2,113,422
1928	2,843,747	3,618,100	3,312,032	1,424,734	3,985,714	2,243,350
1929	4,023,827	4,906,176	3,861,853	1,588,528	4,991,832	2,351,687
1930	3,046,568	4,375,802	4,585,479	1,652,634	5,901,181	2,442,200
1931	3,034,716	4,766,646	5,200,842	1,806,071	6,029,463	2,034,551
1932	4,851,116	5,273,865	5,163,364	1,965,238	5,875,480	2,154,324
1933	4,038,958	5,053,985	5,120,797	2,109,710	5,982,634	2,042,170
1934	4,597,350	5,931,082	5,735,635	2,280,372	6,679,799	3,223,019

Continued on Next Page.

Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	267,552	-	449,691	292,069	458,790	303,334
1902	260,955	-	412,841	294,166	490,439	303,441
1903	259,092	-	482,465	305,682	498,643	341,326
1904	263,559	-	480,799	302,000	523,576	355,836
1905	262,787	-	442,924	292,041	528,256	372,520
1906	278,097	-	434,784	294,727	523,934	373,726
1907	268,479	-	449,799	293,081	585,106	377,674
1908	271,140	-	484,340	293,457	577,432	371,972
1909	268,826	-	473,801	295,005	608,618	372,219
1910	271,574	-	487,448	293,929	613,185	374,853
1911	267,925	-	488,756	292,897	635,810	377,085
1912	271,306	-	500,781	294,946	611,236	383,125
1913	274,702	-	505,721	290,703	638,707	385,306
1914	276,385	-	528,408	292,549	640,302	390,372
1915	275,087	-	550,116	291,785	660,259	392,025
1916	289,460	-	559,122	283,804	636,458	399,937
1917	284,161	-	563,798	286,570	701,115	396,289
1918	274,305	-	561,292	306,862	740,709	400,617
1919	274,305	-	561,292	445,163	938,031	607,484
1920	367,935	-	561,292	389,624	1,149,892	869,494
1921	441,035	-	771,664	445,270	1,309,339	720,585
1922	477,375	-	910,406	516,155	1,138,315	821,143
1923	508,442	-	976,020	572,164	1,545,654	902,798
1924	703,579	-	1,239,948	798,765	2,087,169	1,240,337
1925	902,773	-	1,470,127	934,257	2,834,523	1,423,320
1926	839,823	-	1,697,304	1,022,443	2,784,394	1,396,008
1927	996,817	-	1,832,781	1,161,323	4,413,864	1,650,429
1928	1,059,569	-	1,984,722	1,277,595	3,112,425	1,756,060
1929	1,221,283	-	2,076,671	1,336,078	4,586,016	2,126,682
1930	1,272,054	-	2,075,816	1,538,758	3,230,909	2,373,225
1931	1,353,508	-	2,441,193	1,613,751	3,728,098	2,462,948
1932	1,479,623	-	2,712,697	1,759,255	4,342,032	2,606,609
1933	1,534,034	-	2,950,673	2,054,150	3,838,417	2,666,265
1934	1,691,387	-	2,983,601	2,262,531	4,411,482	2,918,478

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Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	417,676	369,959	239,798	6,581,815	922,145	778,938
1902	445,405	366,746	248,487	6,744,288	973,553	811,876
1903	460,724	381,700	307,701	7,007,422	1,010,727	856,855
1904	463,614	371,292	288,772	7,295,570	1,049,818	837,018
1905	450,025	360,041	307,668	7,099,264	1,091,077	821,389
1906	433,704	352,877	305,894	7,266,176	1,129,419	881,577
1907	413,486	347,151	307,711	7,350,202	1,140,164	900,023
1908	449,825	342,099	315,560	7,141,350	1,096,678	786,359
1909	461,551	345,789	322,686	7,123,106	1,151,013	780,483
1910	463,841	339,428	328,276	7,105,838	1,248,060	772,985
1911	476,299	329,754	318,740	7,056,516	1,146,464	769,098
1912	494,535	345,563	315,409	7,118,945	1,061,398	748,675
1913	512,217	341,681	337,232	7,050,689	1,021,409	755,509
1914	525,880	341,850	339,895	7,025,995	981,777	720,397
1915	544,123	344,031	353,569	6,945,811	984,150	726,324
1916	542,151	339,695	345,204	6,737,792	876,687	639,630
1917	577,838	369,290	369,565	7,037,268	908,664	714,384
1918	611,745	411,984	386,569	7,123,109	978,026	746,269
1919	611,745	690,616	350,939	10,634,991	1,816,398	689,170
1920	611,745	1,100,189	797,358	13,075,202	1,961,714	1,325,966
1921	1,011,879	768,130	632,224	12,219,089	1,856,123	1,158,637
1922	1,394,314	1,139,443	781,289	13,439,605	2,007,695	924,177
1923	1,120,562	959,906	769,896	15,387,303	2,224,639	1,501,733
1924	1,460,635	1,319,264	915,474	19,400,270	3,059,927	2,275,070
1925	1,970,279	1,563,052	1,293,400	20,179,350	3,399,136	3,245,485
1926	1,794,193	1,485,337	1,191,063	19,994,431	3,298,206	3,196,106
1927	2,062,565	2,097,681	1,590,470	19,989,365	4,128,680	3,816,518
1928	2,013,238	2,300,152	1,381,905	20,233,062	4,168,312	4,507,668
1929	2,068,240	2,722,324	1,947,678	21,209,701	4,917,740	5,135,783
1930	2,666,400	2,875,901	1,779,417	22,987,176	5,154,447	6,538,728
1931	2,574,927	3,338,554	1,785,504	21,405,946	4,937,256	5,510,124
1932	2,735,016	3,252,376	1,924,829	20,279,950	4,728,224	5,795,348
1933	2,950,613	3,506,105	1,708,574	21,110,750	4,436,399	7,164,843
1934	3,115,945	3,827,484	1,938,121	22,759,534	5,057,790	6,959,061

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Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	185,664	1,166,600	368,204	483,145	488,545
1902	-	190,799	1,298,288	383,227	526,838	512,791
1903	-	212,293	1,440,301	391,218	583,326	562,132
1904	-	216,204	1,461,428	385,822	597,911	548,678
1905	-	203,917	1,438,795	394,819	628,330	545,636
1906	-	203,336	1,375,341	412,250	668,686	550,227
1907	-	221,558	1,363,217	405,105	683,417	565,280
1908	-	233,584	1,311,235	399,076	671,092	542,269
1909	-	243,430	1,238,273	397,165	679,843	507,331
1910	-	252,860	1,188,085	402,505	680,932	526,350
1911	-	251,335	1,194,441	402,142	691,316	581,774
1912	-	253,181	1,225,283	406,108	704,152	590,735
1913	-	255,812	1,201,647	405,986	715,787	562,205
1914	-	254,469	1,166,521	408,452	717,768	605,818
1915	-	256,550	1,177,873	402,769	735,240	595,575
1916	-	259,758	1,227,976	419,226	731,670	611,612
1917	-	256,581	1,234,202	400,143	733,962	611,230
1918	-	266,399	1,319,011	406,720	805,496	626,172
1919	-	262,211	1,441,885	519,280	968,000	948,957
1920	-	241,380	1,968,299	608,184	1,155,978	847,002
1921	-	409,782	2,189,297	598,777	1,339,638	958,418
1922	-	454,283	2,467,458	664,122	1,558,860	1,132,316
1923	-	534,867	2,823,884	734,255	1,633,691	1,151,114
1924	-	707,597	3,570,930	914,459	2,051,780	1,795,829
1925	-	1,003,701	4,236,843	1,137,498	2,807,270	1,975,235
1926	-	1,006,119	4,530,001	1,141,464	2,403,393	1,805,747
1927	-	1,212,932	4,842,114	1,256,701	2,886,860	2,207,109
1928	-	1,366,634	5,021,801	1,339,431	2,882,145	2,397,828
1929	-	1,473,690	5,561,871	1,629,165	3,100,541	2,690,397
1930	-	1,523,746	5,891,743	1,686,250	3,469,116	2,827,135
1931	-	1,620,406	6,081,163	1,784,939	3,412,736	3,071,682
1932	-	1,699,099	6,189,480	1,919,740	3,347,806	3,260,377
1933	-	1,721,116	6,710,472	1,985,982	3,416,962	3,487,601
1934	-	1,854,950	7,212,655	2,166,272	3,706,128	3,731,313

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Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	993,239	228,715	1,654,868	177,116	703,213	177,499
1902	1,051,771	230,789	1,687,312	180,438	695,107	205,196
1903	1,063,705	252,268	1,767,027	191,790	680,581	208,857
1904	1,098,232	258,961	1,744,071	191,671	667,272	207,611
1905	1,102,125	255,187	1,683,618	193,130	652,471	205,773
1906	1,081,174	260,435	1,654,918	186,888	724,115	213,239
1907	1,103,045	260,438	1,671,433	189,067	712,588	228,271
1908	1,086,927	276,251	1,671,132	178,657	642,452	284,494
1909	1,084,038	279,475	1,742,083	163,365	789,868	330,036
1910	1,080,735	291,700	1,729,177	168,102	684,724	329,422
1911	1,076,498	287,902	1,787,300	167,155	817,585	338,269
1912	1,070,494	288,053	1,723,751	170,563	785,893	303,934
1913	1,066,974	286,581	1,746,427	174,688	921,604	298,268
1914	1,060,552	294,024	1,722,424	181,889	720,628	280,916
1915	1,055,855	292,672	1,721,697	205,851	573,868	282,555
1916	1,059,417	298,514	1,675,283	199,357	738,456	281,146
1917	1,032,011	287,500	1,717,648	198,414	850,111	295,436
1918	1,034,671	297,081	1,791,957	188,435	871,050	304,572
1919	1,575,316	311,707	1,847,674	289,473	871,050	304,572
1920	1,879,350	256,663	2,076,568	216,937	871,050	468,130
1921	1,715,918	438,509	2,987,354	291,009	1,440,276	472,548
1922	1,870,046	560,018	3,426,663	333,588	2,106,972	541,796
1923	2,057,352	610,185	3,535,438	345,371	1,719,689	491,057
1924	2,642,125	945,027	4,781,874	489,697	2,519,108	947,133
1925	2,874,200	907,788	5,286,875	523,686	3,088,867	1,094,521
1926	2,914,134	894,951	5,977,808	543,237	2,752,781	1,013,763
1927	3,067,968	1,094,928	6,308,133	611,816	4,981,690	1,365,879
1928	3,108,016	1,223,072	7,510,019	680,747	10,642,455	1,345,215
1929	3,440,977	1,089,624	7,754,837	730,969	6,632,871	1,476,767
1930	3,571,497	1,097,760	8,256,772	782,286	5,120,766	1,612,234
1931	3,355,969	1,260,999	8,949,891	838,388	5,344,216	1,677,418
1932	3,136,733	1,314,049	9,803,118	892,213	5,819,703	1,887,144
1933	3,252,090	1,487,275	10,799,700	959,041	6,102,276	2,004,719
1934	3,436,427	1,610,579	11,301,782	1,017,114	6,072,667	2,338,601

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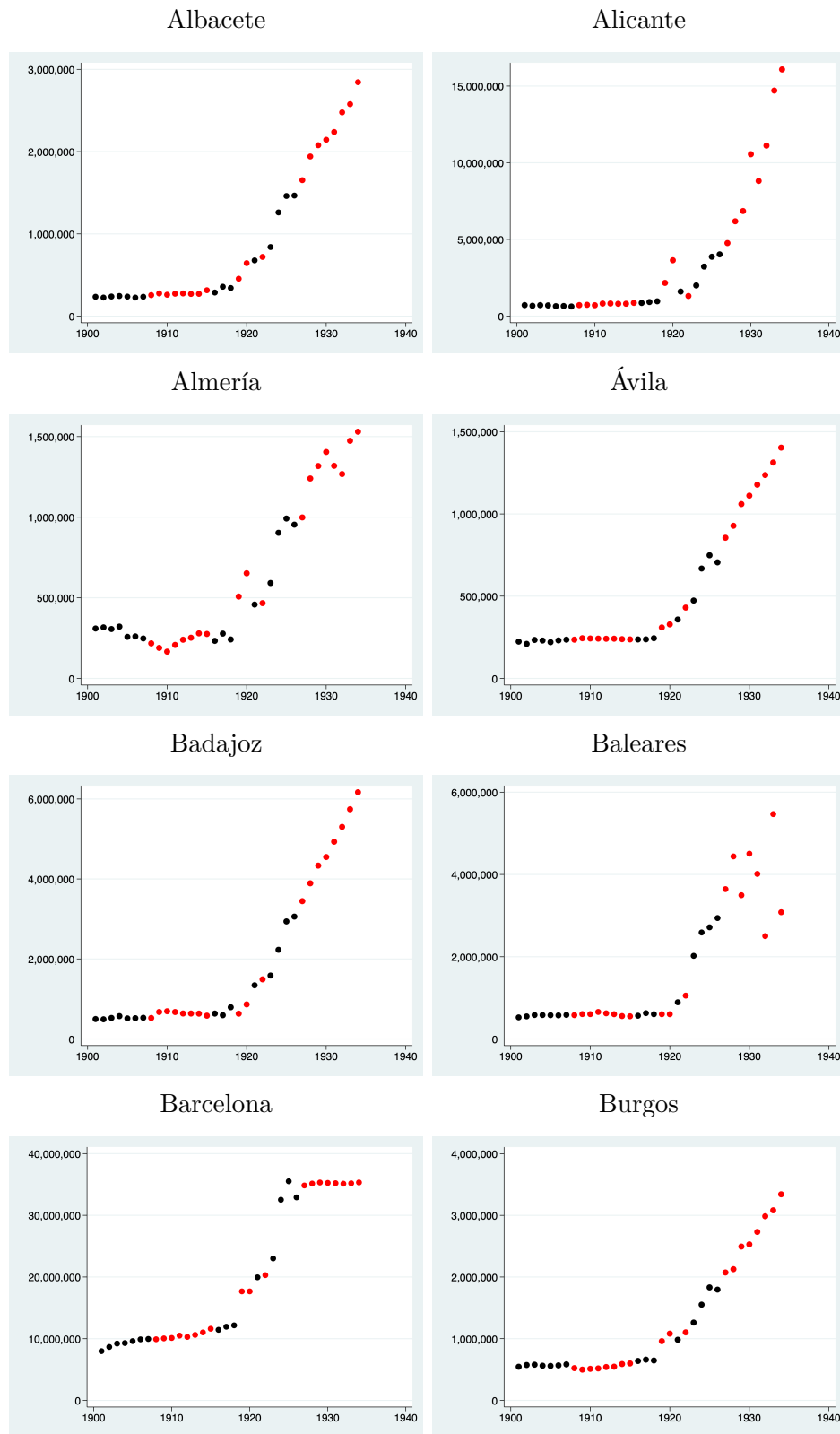
Table A2: Contribución Industrial Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	400,714	1,758,475	783,586	-	268,564	1,075,057
1902	409,369	1,922,320	813,979	-	279,894	1,176,105
1903	451,219	1,901,473	851,514	-	302,191	1,272,254
1904	458,384	1,844,567	826,595	-	325,899	1,347,470
1905	464,008	1,931,607	787,409	-	318,459	1,255,263
1906	471,745	1,978,190	782,266	-	314,057	1,273,259
1907	489,472	2,099,188	800,261	-	320,091	1,334,357
1908	540,886	2,034,127	770,217	-	321,152	1,296,300
1909	614,419	2,068,477	783,364	-	318,722	1,306,595
1910	673,683	2,073,700	777,089	-	315,739	1,307,791
1911	677,535	2,095,313	775,267	-	317,399	1,325,957
1912	699,819	2,097,236	777,800	-	330,705	1,333,324
1913	665,419	2,109,222	775,415	-	333,890	1,311,140
1914	713,840	2,125,860	762,098	-	335,194	1,304,106
1915	778,114	2,144,941	778,630	-	337,921	1,298,456
1916	655,290	2,044,415	754,709	-	310,272	1,328,173
1917	781,936	2,097,490	740,551	-	341,167	1,276,824
1918	863,761	2,225,493	754,193	-	344,561	1,380,016
1919	871,503	5,694,158	853,925	-	212,832	1,880,932
1920	1,133,649	7,688,135	1,245,761	-	534,406	2,317,697
1921	1,200,081	5,290,628	1,205,792	-	513,342	2,363,354
1922	1,251,706	5,010,116	1,319,127	-	627,360	2,738,145
1923	1,433,462	6,219,531	1,469,913	-	603,019	3,113,922
1924	2,102,027	8,192,819	2,037,822	-	1,009,108	3,778,037
1925	2,281,298	11,386,801	2,415,288	-	1,191,695	4,225,633
1926	2,417,439	10,264,798	2,424,978	-	1,074,081	4,352,490
1927	2,708,019	13,121,092	2,782,188	-	1,387,921	4,895,331
1928	2,849,819	14,636,249	2,981,864	-	1,214,042	5,340,693
1929	3,354,560	16,694,176	3,470,641	-	1,599,583	5,740,719
1930	3,258,638	17,707,212	3,631,851	-	1,641,286	6,172,526
1931	3,376,903	14,760,696	3,874,237	-	1,656,982	6,522,901
1932	3,787,238	15,237,543	4,179,153	-	1,863,978	6,903,803
1933	3,920,554	14,716,788	4,320,204	-	1,901,540	7,333,229
1934	4,297,612	14,850,308	4,745,243	-	2,123,484	7,932,953

Sources: See Chapter 2.

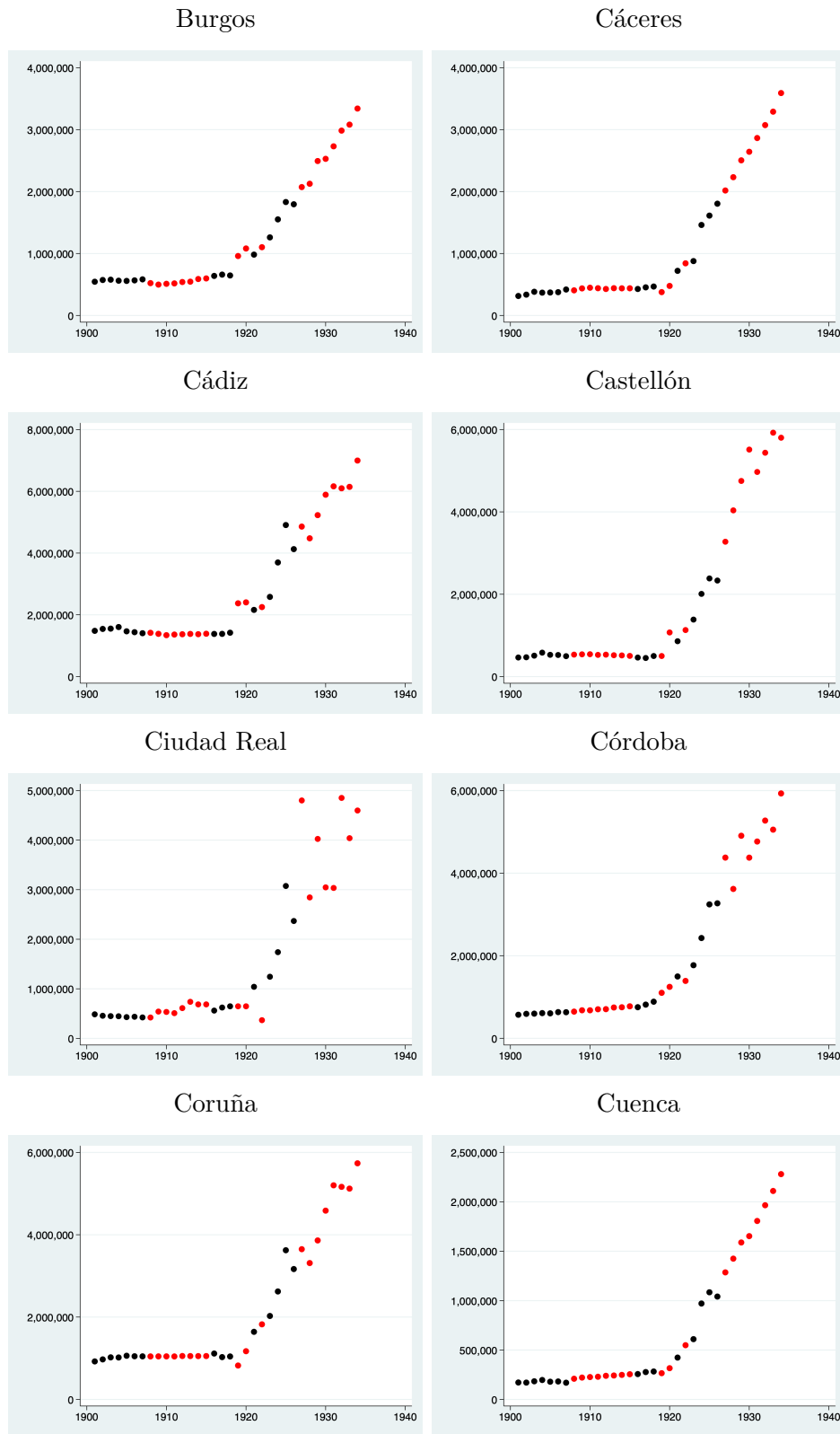
Notes: All data are in nominal values. I corrected for outliers in Guadalajara, Huelva, L rida and Teruel in 1919; and in Huelva and L rida in 1920.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



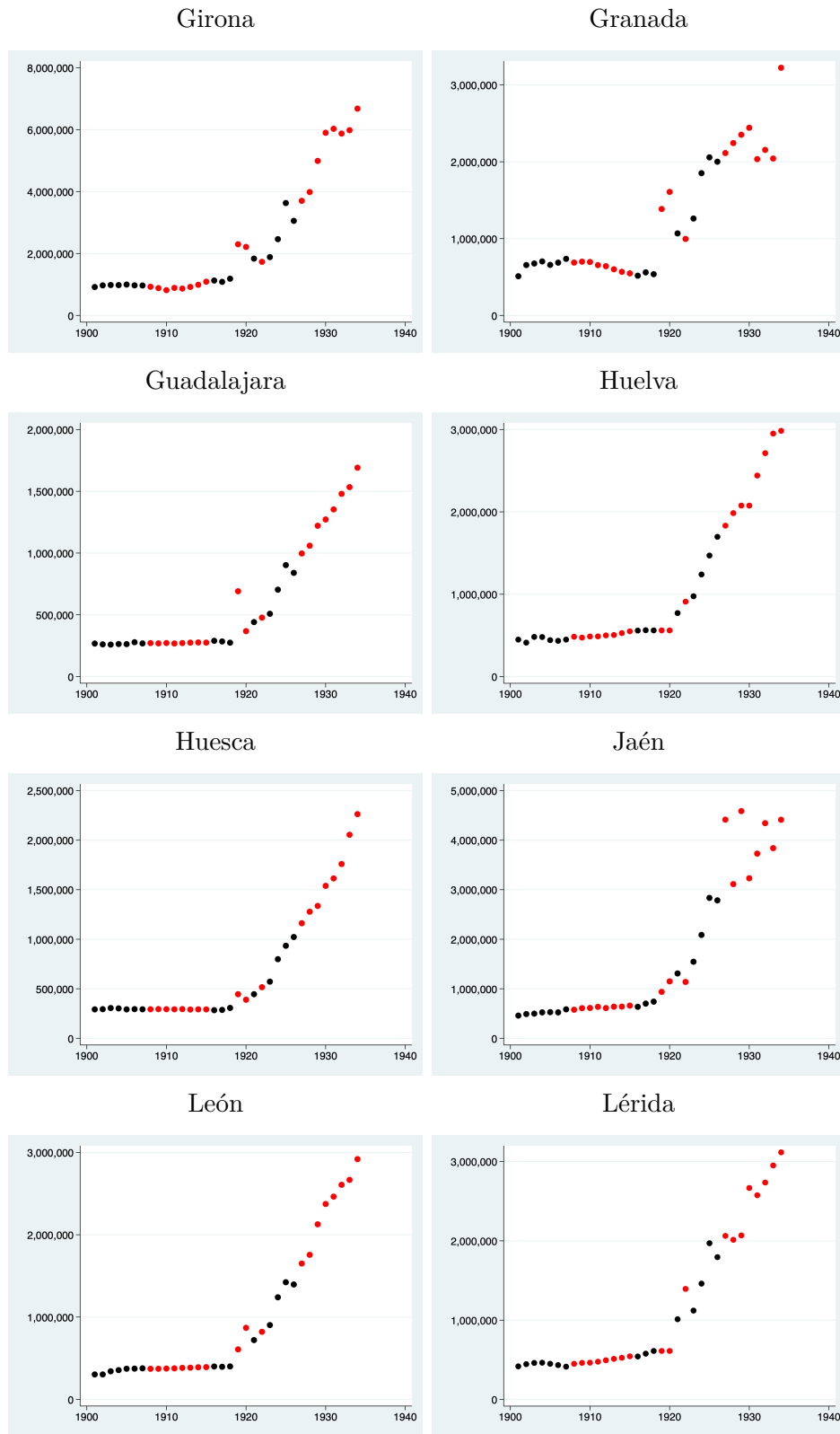
Notes: The original data points are in black; the imputed data points are in red.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



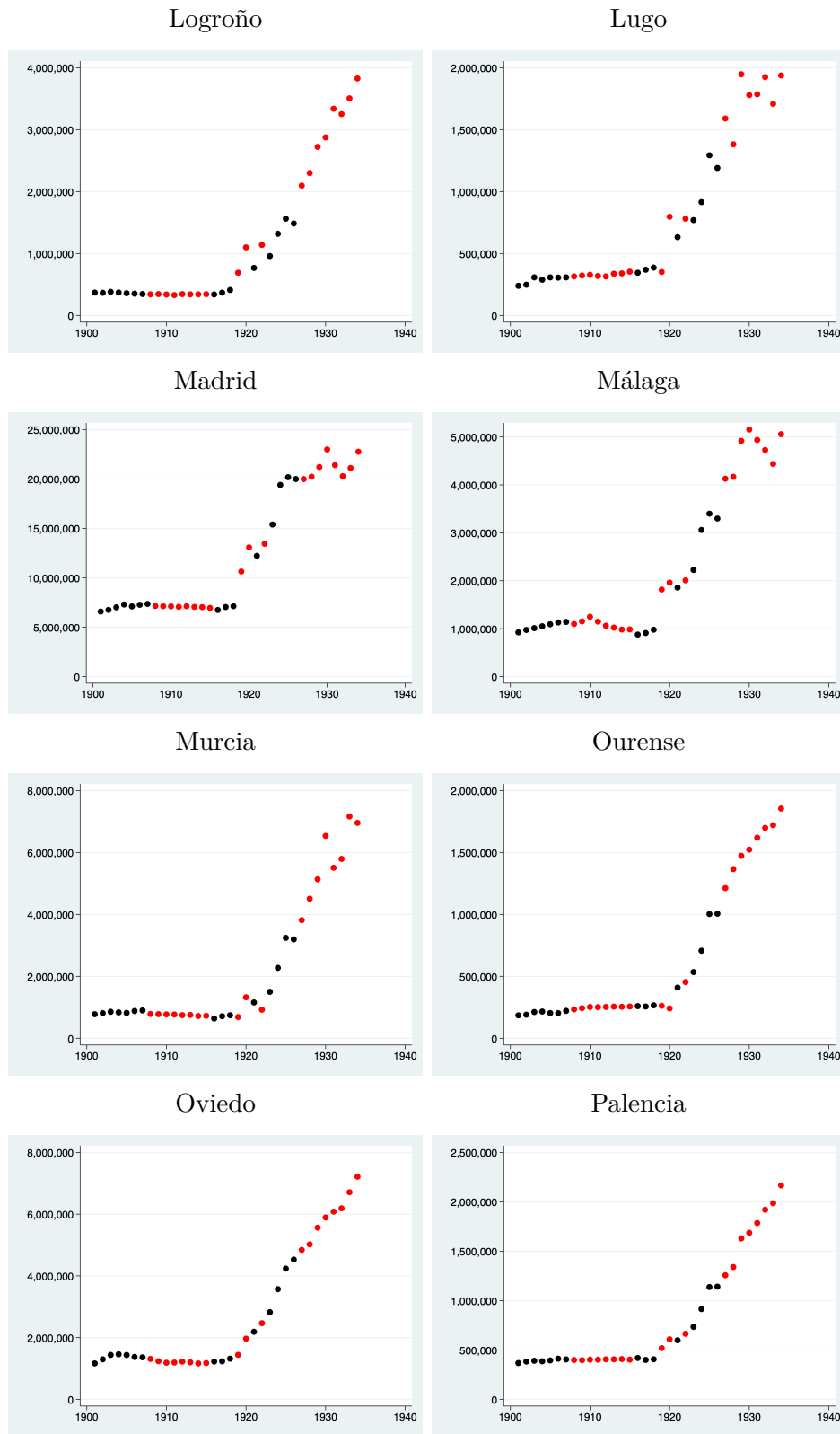
Notes: The original data points are in black; the imputed data points are in red.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



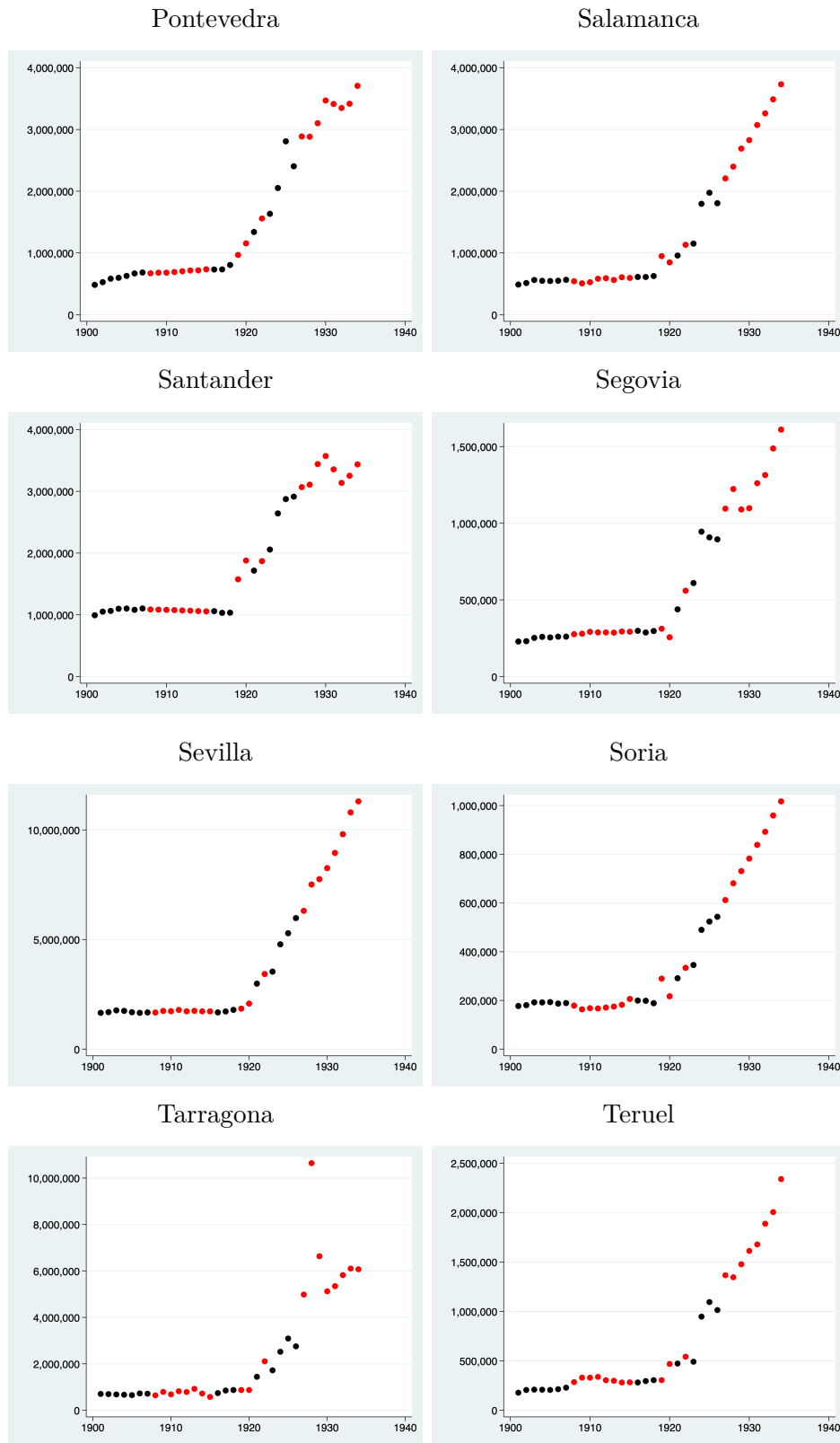
Notes: The original data points are in black; the imputed data points are in red.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



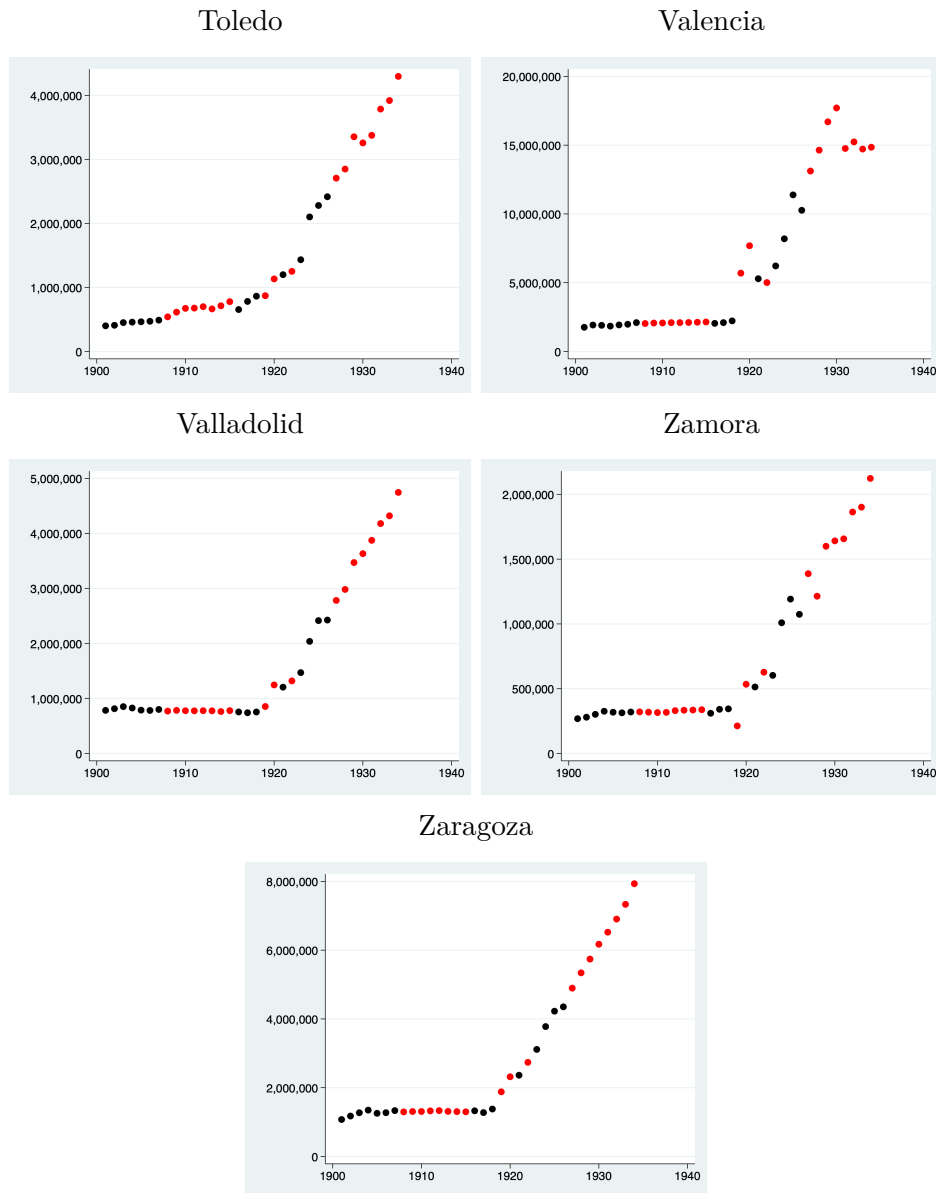
Notes: The original data points are in black; the imputed data points are in red.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A2: Contribución Industrial Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.3 Utilidades

Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	118,065	207,284	392,563	260,341	188,155	414,738
1902	122,188	216,241	405,875	258,066	194,768	425,604
1903	123,621	215,903	426,930	259,402	200,990	495,004
1904	118,998	212,587	475,584	277,480	207,158	460,803
1905	123,679	200,554	428,562	272,998	215,032	443,638
1906	128,800	218,651	454,553	277,412	208,431	442,033
1907	132,145	221,601	507,216	297,800	213,779	452,407
1908	129,367	245,998	519,280	317,979	226,430	465,891
1909	133,079	270,465	530,453	351,302	215,906	558,894
1910	132,737	262,571	521,281	357,393	229,986	574,714
1911	138,784	280,778	627,372	296,571	231,177	567,726
1912	151,185	284,198	624,205	274,183	239,214	556,108
1913	157,019	279,002	617,282	273,624	238,830	559,360
1914	160,875	295,515	608,714	258,591	248,869	564,066
1915	170,497	335,550	661,639	296,156	251,984	539,947
1916	173,870	338,677	674,201	469,396	237,395	580,736
1917	175,001	340,497	702,890	404,571	248,446	554,132
1918	198,033	402,565	760,672	436,681	274,020	685,036
1919	233,933	853,857	761,672	1,003,873	458,289	767,353
1920	211,445	992,531	788,187	1,015,387	456,877	791,799
1921	288,315	772,320	1,359,922	751,788	448,567	973,073
1922	382,206	740,851	2,156,500	772,896	464,997	1,064,303
1923	488,181	979,411	2,654,432	962,657	511,181	1,155,685
1924	449,836	732,811	2,651,209	928,457	482,894	958,282
1925	446,621	797,415	2,540,126	910,515	447,698	1,001,686
1926	461,765	974,367	3,233,895	837,925	440,315	1,256,931
1927	544,065	903,183	3,371,568	839,810	429,713	1,208,051
1928	664,997	997,424	3,346,377	936,437	453,857	1,427,398
1929	624,706	1,020,049	3,674,815	941,336	401,526	1,398,158
1930	689,686	964,290	2,546,032	927,645	396,452	1,447,083
1931	721,899	802,024	3,629,080	822,922	409,154	1,587,592
1932	772,293	892,514	3,213,657	727,699	409,593	1,640,316
1933	805,745	817,306	3,225,428	808,725	443,605	1,792,459
1934	849,946	870,557	3,734,092	790,912	431,720	1,788,602

Continued on Next Page.

Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	480,706	2,450,701	365,434	239,198	1,131,596	241,392
1902	500,352	2,615,231	403,934	315,784	1,077,423	238,165
1903	518,229	2,675,786	420,936	310,124	1,193,309	238,672
1904	534,538	2,648,473	424,439	310,811	1,245,499	250,873
1905	545,203	2,802,803	422,698	334,212	1,193,551	262,740
1906	574,093	2,939,157	439,965	326,910	1,211,380	263,104
1907	595,202	3,305,357	471,162	355,775	1,209,661	267,888
1908	659,613	4,160,227	402,499	395,163	1,208,718	210,868
1909	718,827	4,609,869	384,027	392,694	1,192,259	203,301
1910	749,581	4,914,853	395,436	399,545	1,165,031	187,742
1911	816,630	5,177,639	398,170	416,452	1,308,635	210,609
1912	834,089	8,702,982	418,421	453,486	1,421,411	232,041
1913	852,013	9,452,347	421,579	446,264	1,552,879	260,296
1914	859,386	10,045,379	456,870	461,688	1,659,480	269,524
1915	888,823	9,610,606	463,459	471,255	1,797,083	301,398
1916	918,596	10,911,151	487,069	476,820	1,862,927	363,615
1917	1,014,504	14,750,811	499,071	482,829	2,081,583	355,096
1918	1,061,928	18,285,260	525,195	500,877	2,177,325	391,111
1919	1,061,928	29,633,556	729,478	615,871	2,804,547	391,111
1920	1,061,928	36,145,196	519,927	605,724	2,327,466	359,742
1921	1,400,863	28,948,774	762,788	642,465	2,724,232	612,194
1922	1,446,892	37,892,415	866,181	666,743	3,657,177	720,089
1923	1,850,187	46,625,825	942,467	673,209	4,545,450	934,169
1924	2,010,355	60,122,635	933,139	790,742	5,073,521	789,971
1925	1,912,396	58,687,630	861,733	609,852	4,512,860	872,069
1926	2,004,486	52,976,084	1,032,184	794,986	4,417,981	1,105,616
1927	2,227,554	65,946,736	1,024,088	821,228	5,585,723	895,809
1928	2,494,774	72,502,931	1,191,158	941,512	6,710,800	781,804
1929	2,079,871	77,963,967	1,073,174	906,643	6,906,346	714,546
1930	2,443,866	76,325,138	1,200,540	920,058	7,253,091	626,890
1931	2,194,398	81,384,304	1,225,469	1,008,509	7,796,509	1,025,149
1932	1,548,366	83,645,518	1,197,357	1,092,773	8,592,573	1,042,966
1933	2,661,374	86,920,829	1,329,270	1,202,983	9,238,364	1,042,162
1934	1,673,656	89,700,338	1,311,340	1,117,343	9,322,147	1,333,844

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Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	294,014	426,469	824,381	179,381	251,640	538,632
1902	330,476	446,616	960,069	171,974	260,512	543,634
1903	298,398	493,695	982,560	184,412	258,593	595,336
1904	313,294	537,135	998,672	199,863	244,532	656,809
1905	315,361	512,588	996,899	200,798	278,204	653,989
1906	319,456	556,174	1,040,735	205,579	275,584	620,608
1907	344,581	581,088	1,093,233	213,767	294,429	646,608
1908	341,633	742,015	1,115,924	211,661	265,280	650,891
1909	447,430	925,840	1,165,751	214,940	245,386	598,606
1910	443,940	876,879	1,185,691	222,133	203,327	600,310
1911	428,494	988,838	1,207,033	217,654	264,930	770,837
1912	521,719	1,123,069	1,242,401	220,949	250,673	863,965
1913	626,465	1,252,668	1,279,261	227,631	297,759	1,063,394
1914	595,352	1,302,722	1,329,194	226,647	356,039	1,237,376
1915	603,954	1,450,293	1,374,802	228,406	438,757	1,343,697
1916	536,448	1,277,793	1,386,456	220,511	424,672	1,194,715
1917	505,241	2,619,761	1,447,362	221,642	479,176	1,408,989
1918	651,099	1,460,384	1,529,759	240,529	529,541	1,436,995
1919	665,613	1,298,201	2,044,769	427,985	1,139,879	1,436,995
1920	599,492	1,352,513	2,154,248	428,922	1,091,267	1,436,995
1921	934,427	1,350,359	2,061,910	443,741	803,581	1,640,448
1922	1,194,688	1,487,597	2,531,483	454,593	811,379	1,695,510
1923	1,166,308	1,735,767	2,857,015	477,694	986,511	2,403,236
1924	902,494	2,027,906	3,767,039	448,838	1,206,825	2,426,700
1925	900,475	2,129,535	3,303,089	438,292	1,845,352	2,985,766
1926	1,064,550	2,096,967	3,273,114	522,334	1,640,653	2,640,098
1927	562,798	2,555,497	3,880,608	484,334	1,944,265	2,855,938
1928	1,148,302	2,423,194	4,199,477	511,115	2,098,847	2,975,190
1929	962,972	2,821,296	4,487,462	508,697	2,677,949	3,064,506
1930	1,227,952	2,690,345	4,556,847	524,788	3,200,852	3,150,287
1931	1,342,762	2,861,342	4,829,955	542,515	3,273,262	2,615,477
1932	985,382	3,055,269	5,121,980	526,691	3,181,088	2,717,529
1933	1,284,506	3,067,637	5,419,203	550,291	3,248,475	2,548,367
1934	1,263,834	3,369,857	5,725,530	555,092	3,642,477	3,928,906

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Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	198,442	228,878	277,631	195,894	309,643	262,272
1902	218,144	253,157	302,349	214,020	311,229	272,799
1903	228,782	284,521	301,488	231,530	331,532	279,891
1904	237,057	287,674	281,256	245,921	332,571	277,726
1905	239,201	289,749	347,099	237,574	340,943	278,396
1906	248,479	312,648	329,054	237,968	363,045	290,742
1907	254,826	323,807	355,763	248,108	380,246	307,959
1908	235,734	368,232	449,079	263,390	460,377	311,156
1909	249,715	401,440	458,632	272,906	509,408	340,054
1910	207,322	509,774	491,036	280,794	533,223	332,528
1911	231,645	302,420	506,401	283,972	577,820	333,635
1912	230,113	662,704	535,351	290,221	630,442	318,481
1913	213,778	640,127	556,042	296,844	684,169	337,552
1914	213,314	611,552	604,325	301,481	733,880	321,726
1915	239,367	546,091	652,251	307,631	788,611	347,134
1916	266,206	453,434	651,396	320,785	800,827	315,542
1917	258,174	874,322	706,557	305,571	940,739	334,102
1918	304,210	1,142,185	708,950	331,479	953,492	392,808
1919	536,420	1,142,185	847,745	311,489	412,027	620,875
1920	516,020	1,142,185	892,263	334,902	554,009	402,648
1921	520,875	1,429,457	1,036,379	461,464	1,124,739	713,714
1922	518,403	1,599,902	1,386,108	574,426	1,253,357	837,211
1923	518,630	1,601,523	1,724,523	676,210	1,634,897	1,009,689
1924	535,184	1,705,973	1,456,094	660,156	1,770,426	818,755
1925	536,864	1,805,214	1,494,175	604,539	2,869,719	764,782
1926	551,254	2,547,499	1,625,672	641,598	3,579,448	884,512
1927	553,842	2,523,597	1,734,328	680,400	3,877,771	868,977
1928	555,070	2,811,607	1,672,741	720,622	4,283,238	955,429
1929	570,394	2,922,121	1,531,979	851,930	4,914,016	720,919
1930	570,814	2,765,758	1,758,601	776,461	4,989,249	548,245
1931	575,022	3,630,889	1,722,633	877,391	5,524,246	651,096
1932	585,384	4,364,008	2,040,674	864,742	6,087,572	689,189
1933	585,210	4,807,874	2,267,708	622,093	6,590,374	841,671
1934	599,690	5,127,148	1,913,783	515,715	7,180,209	758,472

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Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	206,893	251,951	229,313	6,741,507	574,405	708,396
1902	213,797	273,586	265,610	9,361,763	601,420	715,552
1903	232,051	272,613	271,464	9,151,456	696,238	746,069
1904	236,932	268,252	269,490	12,024,239	699,590	815,671
1905	239,488	269,845	271,001	9,566,159	719,258	810,874
1906	243,762	277,248	268,964	11,237,362	759,707	848,842
1907	248,110	283,560	279,359	11,418,942	776,624	848,896
1908	269,274	269,101	275,387	12,339,039	820,774	820,924
1909	253,666	267,363	278,501	12,800,364	811,954	963,327
1910	274,467	265,643	280,142	13,021,439	738,924	1,060,299
1911	278,311	276,334	275,024	14,744,849	925,634	1,250,048
1912	292,040	285,913	275,049	18,636,719	1,134,998	1,138,535
1913	300,552	298,161	288,512	19,156,642	1,283,656	1,334,854
1914	321,269	308,686	290,775	21,243,958	1,418,749	1,176,373
1915	328,767	319,961	300,248	21,554,903	1,523,873	1,349,937
1916	344,076	316,716	286,131	24,506,052	1,551,620	1,295,646
1917	334,265	343,943	326,894	27,267,514	1,966,402	1,388,629
1918	381,744	348,980	319,349	37,136,792	1,832,280	1,877,076
1919	381,744	577,924	319,349	39,923,748	1,897,263	1,877,076
1920	542,982	478,762	365,313	46,885,940	2,071,389	1,877,076
1921	642,380	616,699	477,177	52,035,439	2,140,603	2,440,073
1922	682,294	604,437	514,801	64,065,459	2,863,209	2,280,878
1923	761,088	828,398	679,726	80,584,978	3,928,704	2,446,170
1924	935,262	663,999	581,318	91,145,822	3,631,583	2,535,193
1925	791,903	813,408	561,745	95,720,825	4,015,658	2,574,426
1926	715,883	741,017	633,862	92,766,643	4,352,079	2,401,445
1927	833,265	698,911	555,821	92,735,540	4,901,907	2,512,358
1928	893,770	719,698	733,880	92,058,240	5,373,163	2,596,713
1929	933,384	663,025	558,606	91,492,580	5,752,479	2,663,714
1930	887,040	667,688	708,690	94,234,555	5,969,906	3,038,866
1931	944,524	607,176	782,734	90,360,702	6,446,218	2,471,619
1932	966,164	705,947	797,688	85,553,059	6,927,765	2,405,648
1933	988,200	712,851	976,900	85,062,296	7,448,898	2,750,946
1934	1,017,633	702,841	958,099	86,232,629	7,897,395	2,489,657

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Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	210,187	249,434	575,510	181,542	359,776	350,955
1902	209,944	253,257	608,054	190,350	369,205	383,552
1903	207,662	259,891	670,600	195,159	395,337	397,229
1904	215,887	257,983	714,027	199,246	400,029	397,343
1905	223,959	264,853	696,376	198,940	405,221	396,508
1906	218,624	271,917	722,749	202,971	416,513	413,414
1907	228,063	281,195	759,226	203,219	435,592	426,045
1908	228,100	290,758	612,745	174,464	443,074	394,487
1909	232,623	302,469	359,501	158,967	508,471	340,842
1910	238,118	319,957	227,155	162,254	570,186	370,567
1911	236,477	314,725	425,497	175,005	569,041	456,969
1912	239,945	313,710	885,477	192,806	598,803	470,160
1913	236,001	323,470	958,380	203,613	616,732	425,541
1914	236,321	312,227	941,628	221,699	688,048	492,713
1915	252,741	317,523	1,283,821	217,437	683,306	476,603
1916	264,303	320,050	1,807,873	237,560	655,968	510,009
1917	258,868	310,268	2,243,987	244,598	652,583	493,466
1918	277,405	336,431	3,190,232	261,301	772,644	526,923
1919	309,035	490,670	4,384,608	416,086	1,046,165	872,834
1920	425,425	524,018	4,497,844	365,911	1,168,217	777,831
1921	432,854	488,133	4,629,768	408,227	1,302,808	828,298
1922	689,326	607,383	5,134,912	485,065	1,463,438	959,138
1923	554,792	643,082	5,979,893	582,838	1,519,729	1,126,641
1924	552,641	787,196	5,251,668	551,143	1,997,053	1,116,272
1925	793,457	569,958	5,844,291	579,742	1,982,826	1,141,799
1926	710,027	619,459	5,751,854	579,592	2,033,598	1,067,123
1927	802,416	643,718	6,282,188	657,185	2,285,117	1,213,998
1928	871,458	653,917	6,726,560	706,251	2,423,940	1,302,611
1929	951,043	704,830	6,925,031	686,470	2,591,600	1,289,862
1930	1,018,721	780,945	7,071,070	714,126	2,721,964	1,333,891
1931	1,082,194	840,938	7,492,811	757,537	2,854,333	1,361,064
1932	1,146,887	915,556	7,940,321	788,248	2,984,751	1,428,043
1933	1,195,507	1,051,202	8,186,749	846,326	3,140,412	1,490,308
1934	1,300,541	1,084,365	8,453,100	868,170	3,320,477	1,540,409

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Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	439,351	194,841	898,493	136,864	246,115	198,565
1902	529,302	192,598	882,904	140,672	261,303	183,035
1903	503,356	199,911	878,770	151,046	262,508	185,937
1904	498,489	200,114	881,018	155,038	288,820	182,957
1905	487,339	205,348	898,384	147,754	298,870	193,977
1906	492,283	210,159	943,616	153,455	292,840	198,968
1907	530,648	221,552	1,000,139	156,960	309,467	207,056
1908	491,335	251,749	865,962	138,296	298,686	243,919
1909	525,401	267,573	1,896,981	120,754	302,480	293,577
1910	607,121	284,244	1,737,344	123,269	301,660	273,944
1911	642,219	279,943	2,782,731	124,063	334,321	297,799
1912	922,103	280,253	1,981,309	129,983	366,544	248,616
1913	984,333	278,415	2,467,491	135,884	399,547	247,217
1914	1,164,331	280,796	2,292,471	144,896	428,555	228,701
1915	1,320,346	280,443	2,457,388	171,393	459,069	236,705
1916	1,529,239	264,313	1,998,256	167,881	503,678	232,867
1917	1,630,261	267,075	2,490,979	161,973	510,012	253,867
1918	2,319,494	314,478	4,146,502	175,102	565,223	274,869
1919	2,407,830	495,674	4,470,435	335,528	565,223	467,709
1920	2,906,698	475,376	4,605,159	313,643	565,223	424,851
1921	2,418,712	497,653	5,291,404	316,313	1,120,806	439,700
1922	2,833,220	514,085	5,386,040	337,454	1,071,140	446,901
1923	3,620,944	555,554	4,806,617	359,535	1,778,066	457,782
1924	3,740,282	506,330	6,164,100	357,192	1,522,301	462,282
1925	4,751,861	512,077	5,982,535	374,091	1,539,478	444,852
1926	4,332,350	499,589	6,295,767	327,196	1,468,659	470,816
1927	4,748,885	509,813	5,977,401	347,112	556,947	459,756
1928	4,792,269	515,979	7,354,278	375,966	472,894	475,972
1929	5,350,536	431,683	6,714,501	360,811	403,595	481,969
1930	5,540,682	403,563	7,297,903	373,004	1,237,250	484,808
1931	5,145,108	421,917	7,580,877	376,510	1,362,973	494,550
1932	4,746,241	402,450	8,178,072	373,617	1,299,573	493,258
1933	4,922,897	422,962	9,060,775	394,784	1,399,476	499,972
1934	5,214,662	425,508	8,867,446	396,189	1,728,426	490,674

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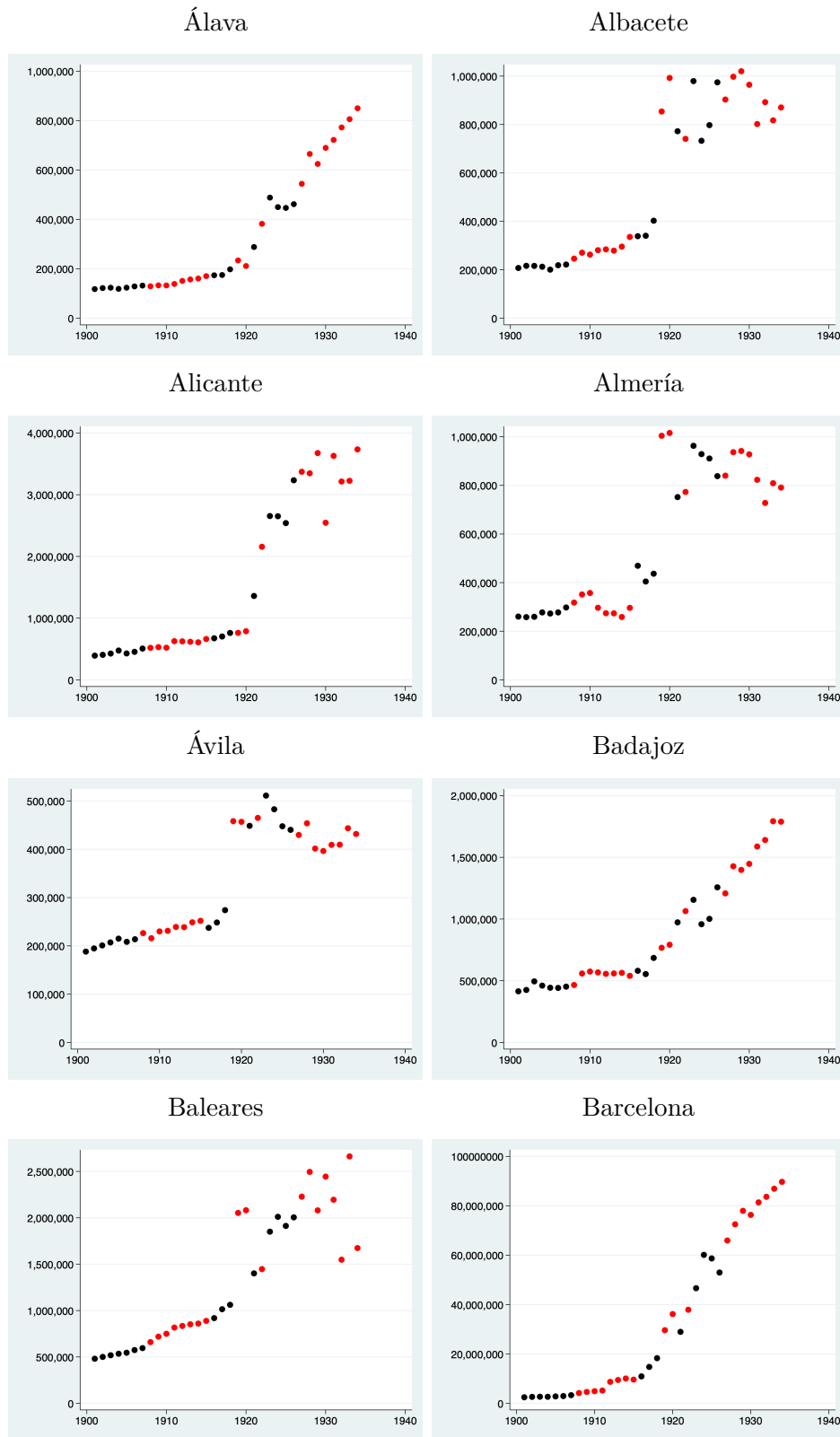
Table A3: Utilidades Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	306,995	943,898	566,696	584,240	231,937	756,304
1902	322,835	1,073,087	630,660	511,426	256,459	768,702
1903	331,670	1,128,373	627,193	556,448	260,426	793,292
1904	333,494	1,092,544	667,914	637,456	256,328	845,429
1905	355,094	1,133,333	661,990	594,995	263,938	868,273
1906	370,485	1,115,139	672,083	588,918	280,959	814,847
1907	388,822	1,251,613	691,923	680,210	295,907	948,864
1908	392,093	1,368,875	501,629	1,164,294	276,173	1,020,130
1909	397,938	1,497,631	254,830	1,491,237	283,804	1,091,977
1910	396,611	1,593,886	239,079	1,510,098	288,873	1,135,739
1911	409,601	1,613,670	280,910	1,833,938	294,729	1,240,960
1912	421,925	1,763,132	364,324	2,176,161	292,058	1,353,007
1913	442,950	1,816,892	452,160	2,554,184	295,499	1,449,753
1914	447,049	1,859,714	811,993	3,098,753	301,224	1,552,785
1915	449,930	1,920,034	624,351	3,882,302	307,477	1,660,477
1916	479,922	2,081,791	1,092,442	3,049,208	318,920	1,716,106
1917	458,231	2,288,106	1,188,857	7,363,220	313,083	1,855,319
1918	503,525	2,166,361	1,365,095	6,311,402	347,674	2,074,978
1919	708,995	2,061,588	2,257,521	6,349,726	605,023	2,109,287
1920	710,249	1,514,769	1,809,125	5,275,874	500,012	2,070,549
1921	665,149	3,099,781	2,064,292	7,294,757	548,787	2,841,478
1922	802,071	4,897,381	2,305,807	8,409,631	593,929	3,747,970
1923	1,010,560	5,776,183	2,470,042	9,041,981	671,664	4,004,321
1924	863,865	6,128,639	2,324,655	8,951,492	657,807	4,927,559
1925	882,254	5,479,580	2,224,471	10,007,562	650,238	4,640,821
1926	868,597	5,521,416	2,214,116	11,854,475	715,358	3,704,184
1927	964,756	6,137,694	2,335,756	13,604,378	725,565	5,038,704
1928	1,013,012	6,497,225	2,442,771	15,466,409	825,997	5,287,701
1929	1,033,956	6,610,913	2,267,339	17,071,578	802,955	5,842,502
1930	1,067,198	6,525,969	2,301,781	17,608,925	837,798	5,208,466
1931	1,118,836	9,507,945	2,369,681	20,010,927	895,990	5,941,494
1932	1,141,293	10,494,118	2,373,723	22,015,732	911,273	6,543,536
1933	1,196,644	12,128,097	2,554,528	23,445,076	967,033	7,008,795
1934	1,229,007	13,410,599	2,449,977	24,749,022	980,576	6,642,976

Sources: See Chapter 2.

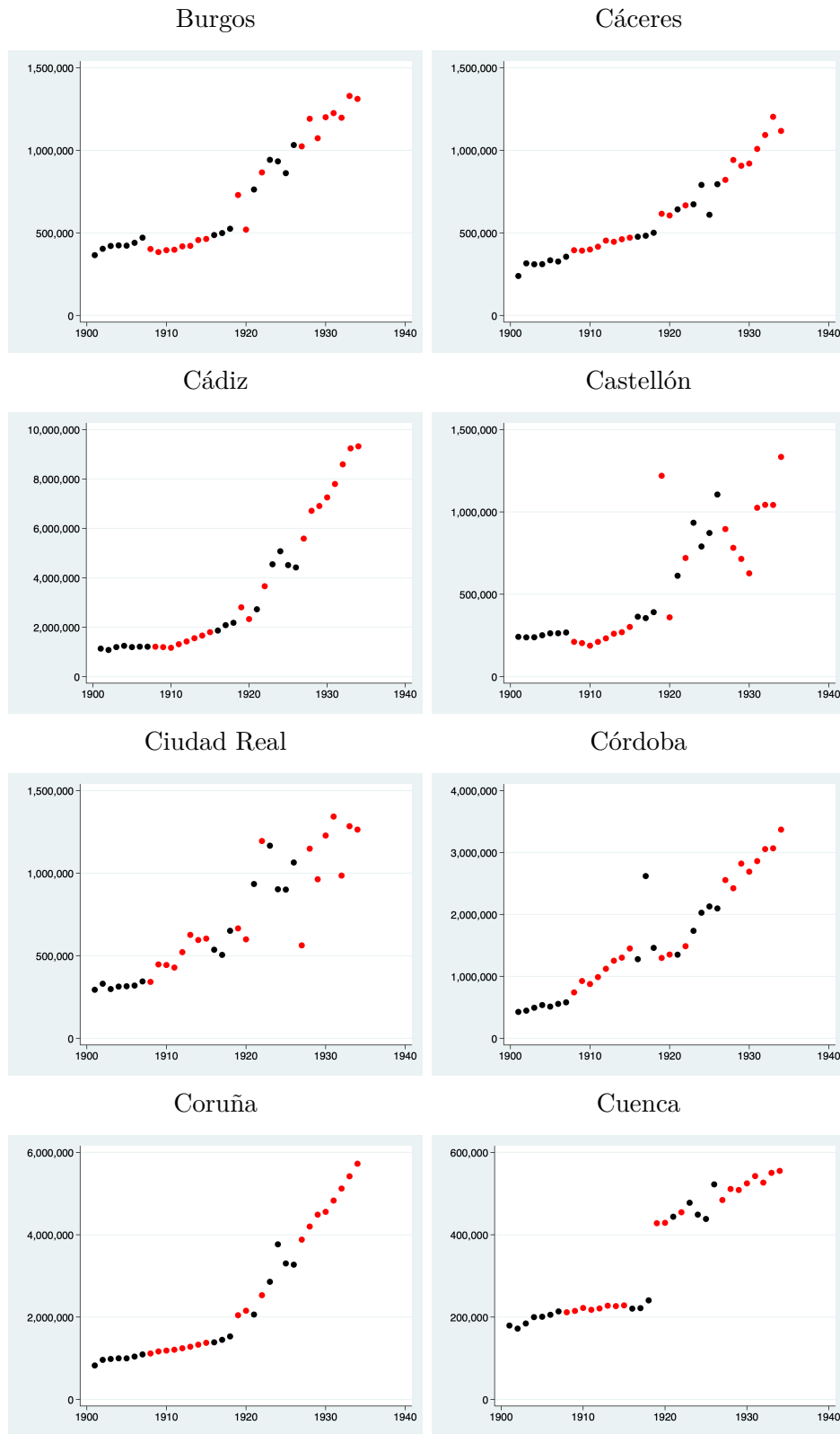
Notes: All data are in nominal values. I corrected for outliers in Guadalajara, Guipúzcoa, Lérida, Lugo and Murcia in 1919; and in Guadalajara, Guipúzcoa, and Murcia in 1920.

Figure A3: Utilidades Revenues by Provinces, 1901–1934.



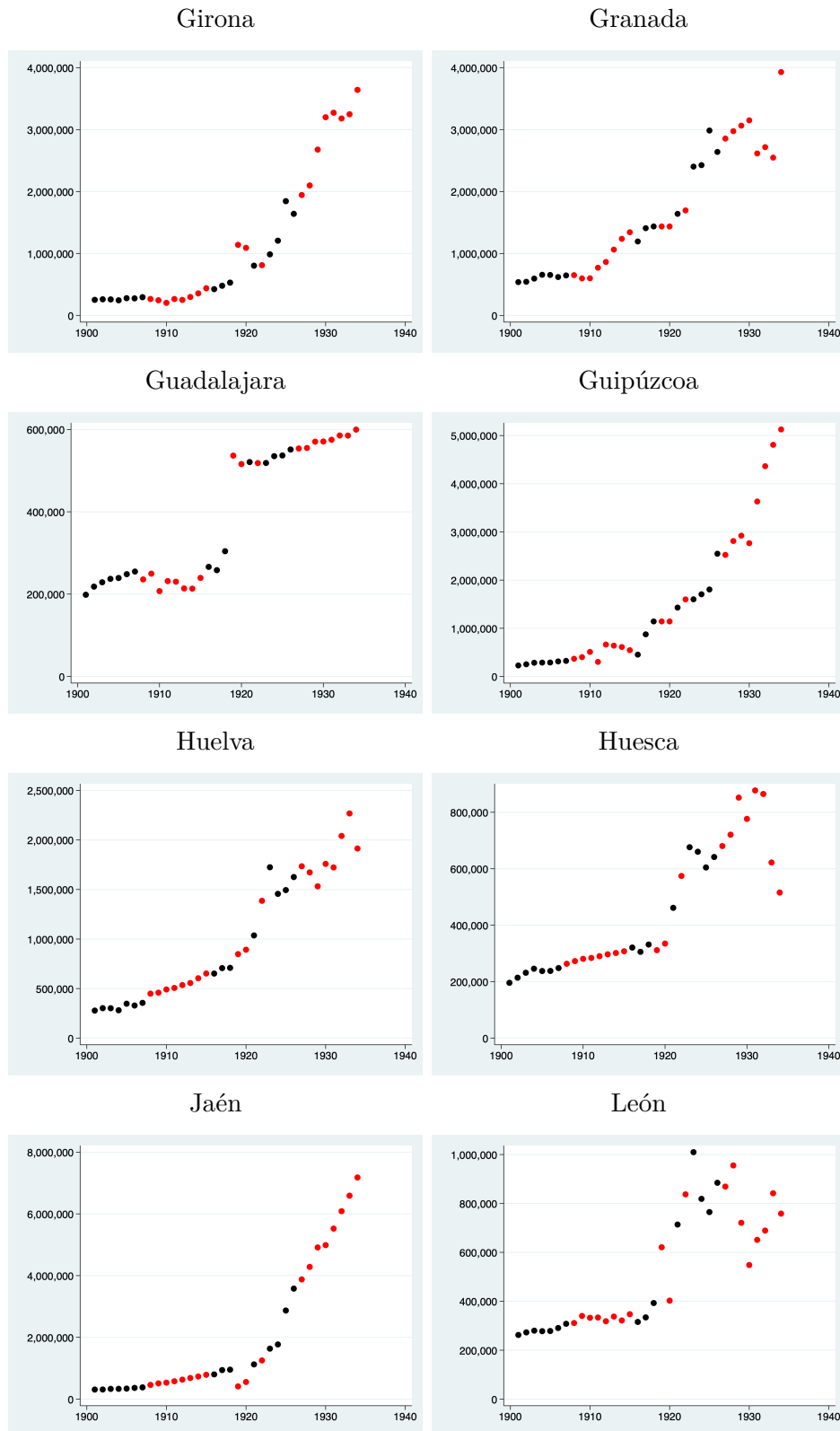
Notes: The original data points are in black; the imputed data points are in red.

Figure A3: Utilidades Revenues by Provinces, 1901–1934.



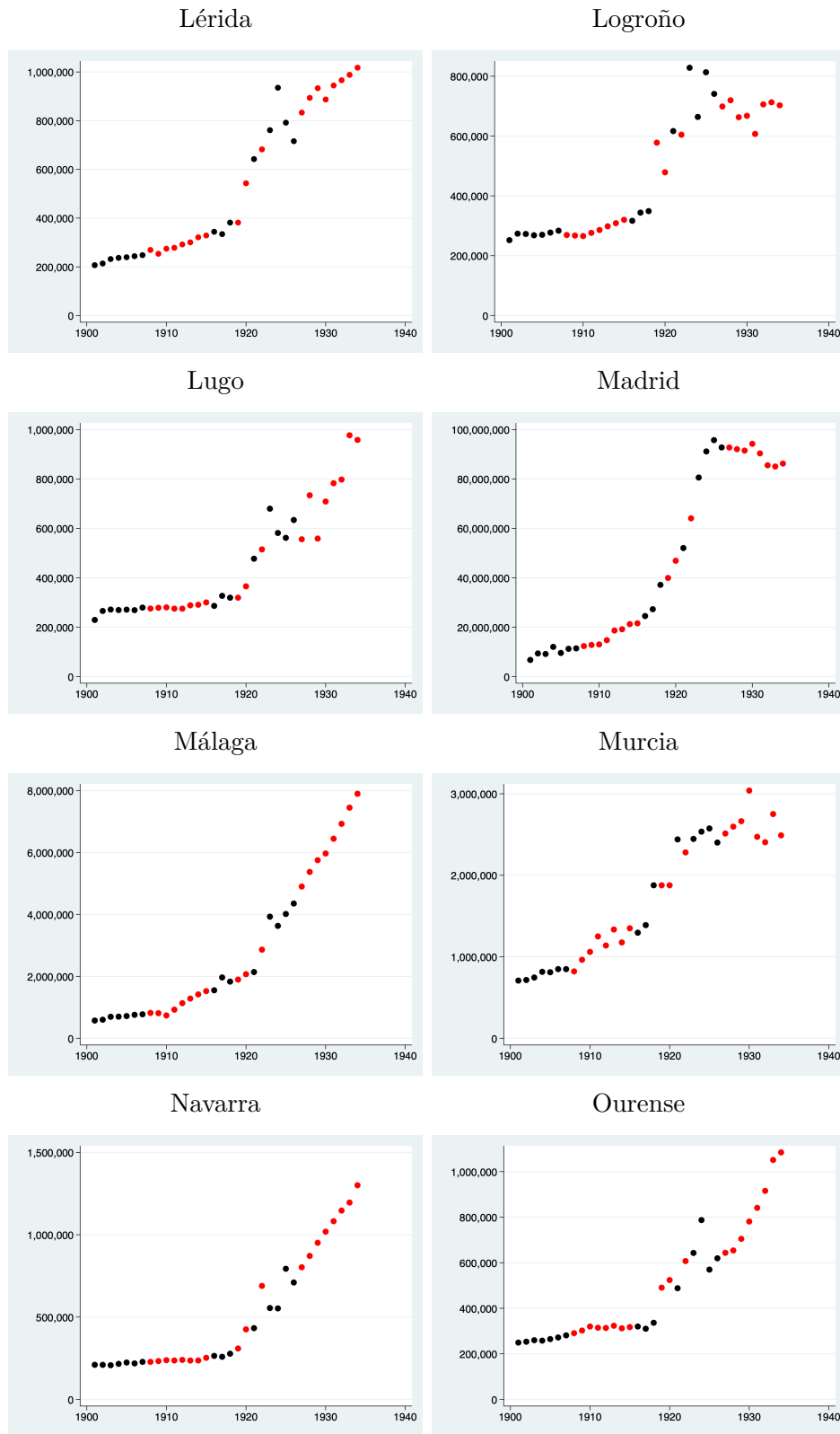
Notes: The original data points are in black; the imputed data points are in red.

Figure A3: Utilidades Revenues by Provinces, 1901–1934.



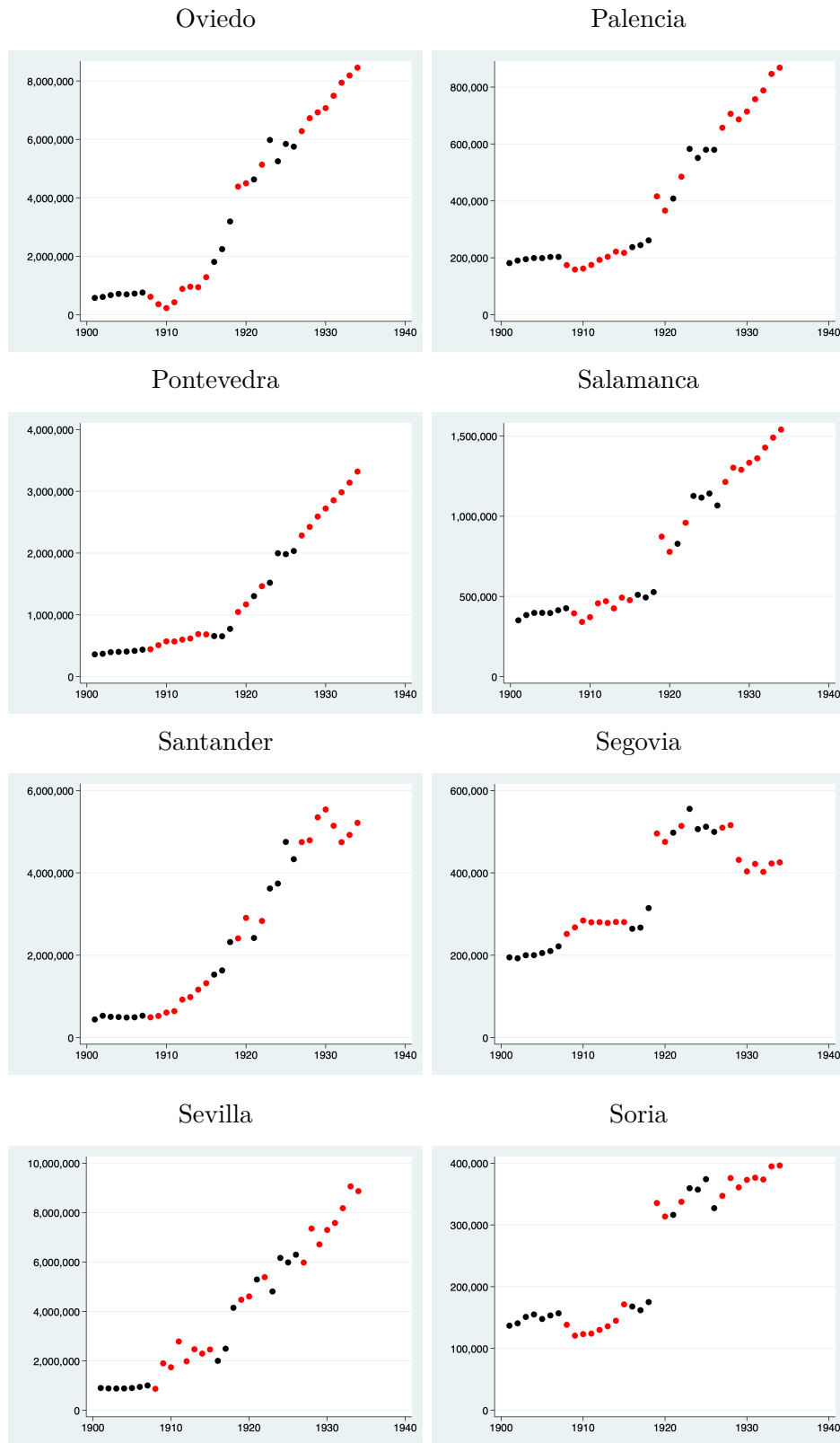
Notes: The original data points are in black; the imputed data points are in red.

Figure A3: Utilidades, 1901 – 1934.



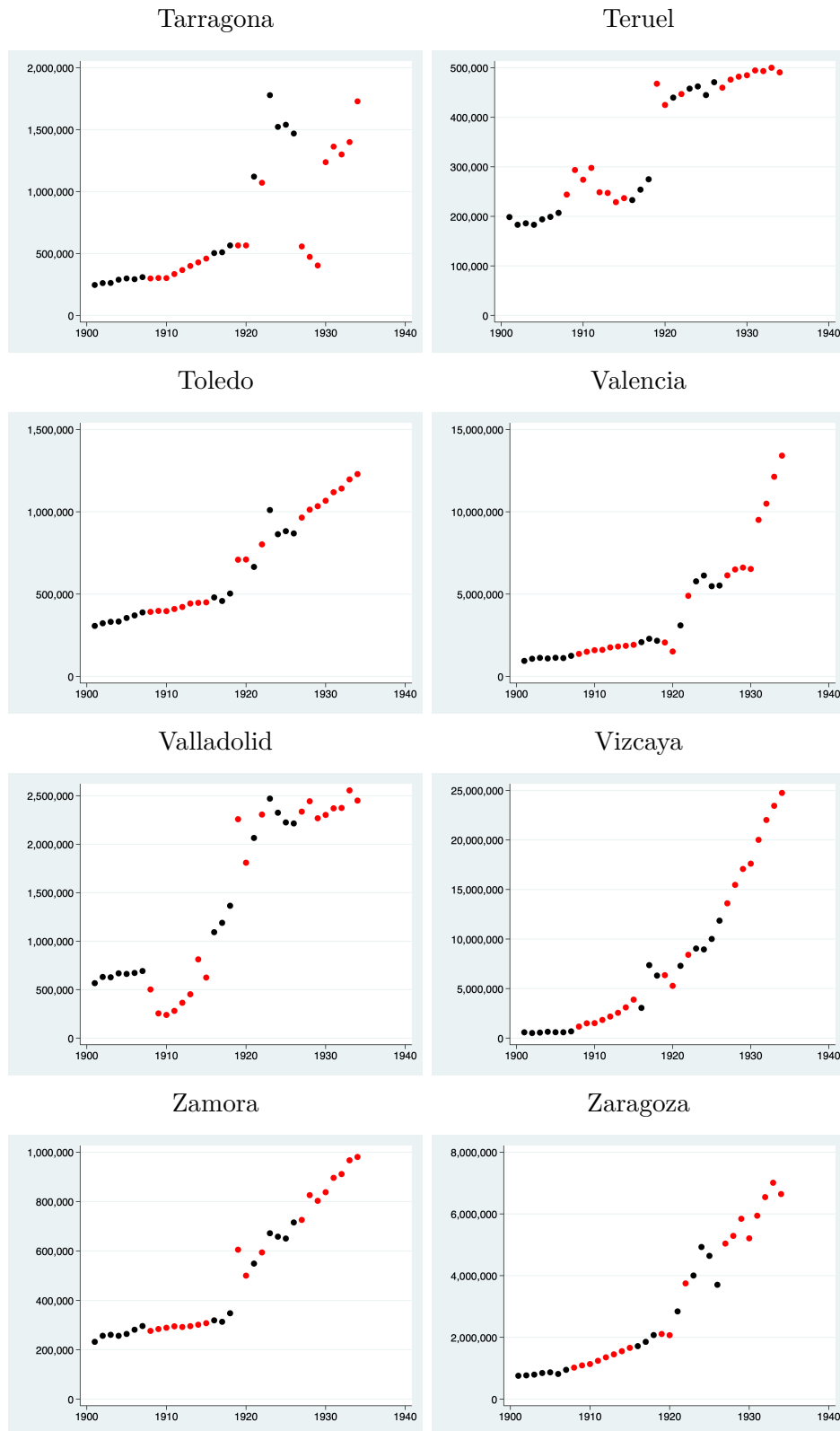
Notes: The original data points are in black; the imputed data points are in red.

Figure A3: Utilidades Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A3: Utilidades Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.4 Derechos Reales

Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	320,995	1,023,353	578,672	229,477	1,069,214
1902	-	443,391	937,450	502,727	299,800	1,104,227
1903	-	404,552	984,399	491,786	204,026	929,675
1904	-	380,120	1,311,584	509,943	248,243	1,262,041
1905	-	285,000	1,148,663	504,645	205,244	880,006
1906	-	304,150	1,321,252	481,182	209,220	1,126,009
1907	-	343,312	1,071,878	468,622	349,414	1,214,347
1908	-	354,581	1,212,673	420,090	285,120	1,075,802
1909	-	395,836	1,251,122	395,895	339,348	1,395,295
1910	-	358,796	1,217,565	364,555	326,882	1,430,375
1911	-	386,345	1,094,906	393,853	319,610	1,380,166
1912	-	365,859	1,143,738	428,815	318,241	1,301,497
1913	-	331,203	1,127,785	447,049	320,472	1,292,775
1914	-	329,091	1,194,842	480,926	304,178	1,284,701
1915	-	473,754	1,089,083	448,068	274,991	1,399,416
1916	-	446,778	1,007,167	497,875	292,692	1,126,049
1917	-	416,706	1,256,376	590,051	334,865	1,240,615
1918	-	481,087	1,075,082	556,866	309,319	1,480,208
1919	-	704,565	1,741,747	660,978	431,011	1,111,111
1920	-	758,590	1,725,168	656,426	413,018	1,812,473
1921	-	741,146	2,008,525	747,655	358,320	1,651,601
1922	-	842,610	1,717,553	784,777	337,211	2,415,640
1923	-	1,104,701	2,228,803	679,719	321,626	2,527,066
1924	-	947,428	2,205,136	882,331	183,119	2,750,166
1925	-	1,047,143	2,053,027	848,729	655,345	2,695,384
1926	-	864,841	1,865,778	526,724	345,377	1,491,544
1927	-	1,036,924	2,433,061	989,040	605,307	4,869,711
1928	-	1,291,655	2,280,230	979,422	422,058	4,972,894
1929	-	1,677,230	3,509,460	1,027,311	1,293,835	5,256,153
1930	-	1,903,956	3,821,397	1,383,092	916,111	3,945,060
1931	-	1,457,000	3,091,000	1,064,000	974,000	6,896,000
1932	-	1,421,000	4,315,000	930,000	764,000	6,126,000
1933	-	1,342,434	4,826,770	1,099,711	534,878	6,803,275
1934	-	1,597,233	5,291,464	1,189,046	709,434	7,372,348

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	636,620	7,585,788	344,224	658,336	1,335,166	499,625
1902	829,352	7,889,495	389,375	444,981	1,543,946	478,484
1903	725,040	7,168,141	484,913	479,346	1,321,053	498,164
1904	684,953	6,717,244	471,281	626,482	1,652,629	616,860
1905	686,269	6,527,105	438,364	423,290	1,249,291	572,865
1906	731,669	6,953,246	735,841	532,744	995,254	551,778
1907	780,898	6,972,869	466,400	424,684	1,241,983	405,811
1908	733,907	7,288,606	477,273	595,160	1,162,678	557,530
1909	744,000	7,452,548	467,603	584,301	1,087,107	468,995
1910	754,954	7,570,529	418,032	587,072	980,923	444,219
1911	752,078	7,714,962	436,778	593,580	1,114,651	426,596
1912	782,730	9,095,647	491,526	677,518	1,237,111	539,394
1913	784,794	9,368,278	533,055	657,219	1,354,762	502,788
1914	799,336	9,596,747	548,999	682,094	1,416,651	635,331
1915	940,636	9,213,562	608,169	831,717	1,526,968	582,335
1916	662,581	10,795,975	678,539	711,434	1,796,587	580,596
1917	880,238	11,069,043	664,533	673,847	1,767,858	521,694
1918	822,719	12,552,436	686,902	703,552	1,775,048	528,562
1919	632,722	14,911,061	807,255	611,115	2,784,250	528,562
1920	1,042,838	19,610,069	849,073	783,614	2,075,559	856,259
1921	1,034,201	19,348,949	1,023,556	826,239	2,304,077	949,324
1922	1,323,789	18,006,423	1,278,517	927,354	2,041,854	925,902
1923	1,242,516	25,030,585	956,434	1,024,748	7,271,022	948,258
1924	1,412,916	23,196,459	1,277,986	1,266,956	3,831,073	1,066,343
1925	1,423,672	23,805,211	1,341,870	1,083,966	2,792,403	1,101,053
1926	1,134,668	12,636,415	636,118	692,156	2,623,699	609,120
1927	1,554,111	36,698,330	1,619,579	1,259,401	2,582,667	1,556,841
1928	2,302,059	29,431,344	1,612,244	1,682,019	4,093,205	1,646,084
1929	2,264,858	34,109,921	2,414,919	2,762,267	6,585,924	1,900,114
1930	1,764,999	35,954,230	1,848,681	2,447,941	4,156,906	2,031,192
1931	2,123,000	37,255,000	3,070,000	1,896,000	3,799,000	1,878,000
1932	3,125,000	32,698,000	1,341,000	2,598,000	3,695,000	2,405,000
1933	2,422,341	37,054,297	2,304,635	2,882,102	5,371,912	2,180,069
1934	3,146,733	41,751,690	2,607,084	2,942,416	5,322,231	2,136,410

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	648,987	1,493,938	929,547	163,221	783,503	1,226,560
1902	705,586	1,114,438	892,053	155,150	713,266	1,363,509
1903	544,466	1,166,459	800,324	152,094	740,475	933,869
1904	978,490	1,445,914	984,462	221,817	709,856	1,158,347
1905	826,002	1,328,760	896,679	324,842	688,386	1,128,539
1906	706,143	1,230,547	1,044,499	227,491	761,626	1,061,591
1907	746,708	1,066,573	1,050,740	237,821	767,530	933,058
1908	822,273	1,519,744	996,534	314,786	823,387	1,127,523
1909	904,648	1,238,577	912,413	342,144	870,509	1,173,809
1910	897,737	1,418,717	963,715	309,136	908,637	1,182,202
1911	865,965	1,237,018	1,091,258	358,989	887,600	1,163,124
1912	954,467	1,847,863	1,195,154	372,864	909,638	1,196,710
1913	1,026,797	1,460,933	1,240,556	335,161	899,050	1,187,566
1914	993,031	1,829,432	1,219,340	370,888	888,661	1,192,472
1915	950,482	1,610,386	1,257,993	387,437	934,170	1,100,367
1916	964,111	2,003,675	1,270,157	470,949	812,528	1,353,873
1917	1,026,128	2,247,261	1,451,140	465,583	895,324	1,336,822
1918	977,613	2,064,341	1,248,526	429,281	874,466	1,317,671
1919	1,091,376	2,484,792	1,459,406	413,083	1,366,041	1,337,052
1920	1,172,014	2,517,824	1,624,159	479,176	1,244,810	1,373,409
1921	1,046,732	3,102,893	1,641,844	581,067	1,284,499	1,899,605
1922	1,290,928	2,911,175	2,014,289	480,053	1,327,196	1,618,424
1923	1,554,505	3,051,599	2,489,381	480,919	1,465,172	1,995,770
1924	1,560,133	3,576,391	2,215,110	627,083	1,448,174	2,169,768
1925	1,832,552	4,372,317	1,853,069	734,551	1,575,721	2,316,137
1926	934,532	2,448,390	1,233,508	746,232	754,804	1,099,830
1927	2,579,905	5,231,047	3,001,061	712,809	1,706,160	2,608,000
1928	2,353,681	5,644,274	3,346,408	1,108,358	2,068,604	3,372,833
1929	2,842,412	7,007,786	4,265,142	1,018,092	2,888,750	3,384,964
1930	2,483,188	4,614,761	3,588,742	918,488	2,411,335	3,553,166
1931	2,314,000	5,183,000	3,576,000	912,000	1,938,000	2,992,000
1932	2,407,000	4,959,000	4,204,000	1,112,000	1,742,000	3,140,000
1933	2,745,134	5,212,866	4,595,754	1,126,730	2,207,668	3,404,572
1934	3,062,552	6,283,176	4,744,152	1,233,235	2,378,189	4,009,376

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	163,054	-	536,759	279,856	1,106,961	254,615
1902	159,838	-	573,717	291,545	1,138,327	294,934
1903	205,804	-	625,710	306,313	1,066,304	527,198
1904	183,142	-	509,036	323,284	1,051,968	325,876
1905	161,865	-	729,972	241,222	1,066,300	329,736
1906	250,376	-	863,380	279,679	1,164,268	412,323
1907	220,027	-	635,272	274,279	1,187,804	390,299
1908	251,690	-	659,335	300,502	1,241,172	391,535
1909	237,556	-	780,968	318,468	1,299,586	420,150
1910	272,559	-	718,483	323,458	1,325,694	425,780
1911	229,070	-	686,418	327,636	1,378,380	433,740
1912	255,909	-	677,147	344,345	1,430,705	449,814
1913	287,939	-	668,705	329,056	1,493,896	476,852
1914	302,038	-	582,545	346,132	1,548,884	486,201
1915	363,848	-	565,880	357,049	1,675,927	517,047
1916	385,615	-	442,892	340,476	1,620,962	432,685
1917	361,959	-	545,460	388,335	1,726,903	622,681
1918	263,419	-	452,197	378,724	1,796,869	585,170
1919	426,767	-	643,515	357,835	1,830,215	721,084
1920	352,189	-	681,415	493,766	2,266,992	774,224
1921	330,654	-	943,401	481,107	2,633,645	711,268
1922	300,104	-	846,834	779,088	1,945,095	932,136
1923	361,870	-	789,997	744,694	2,230,683	761,390
1924	436,285	-	1,004,026	745,021	2,720,948	796,548
1925	490,225	-	1,060,537	698,490	2,940,235	946,234
1926	285,966	-	607,512	395,960	1,557,955	550,105
1927	591,766	-	1,510,226	693,494	3,362,964	818,400
1928	764,685	-	1,467,248	889,945	3,478,399	1,071,215
1929	777,615	-	1,574,356	1,103,584	4,779,486	1,418,462
1930	767,417	-	1,441,505	925,131	4,134,279	1,641,934
1931	767,000	-	1,442,000	823,000	4,834,000	1,055,000
1932	822,000	-	1,672,000	1,245,000	3,113,000	1,188,000
1933	856,095	-	1,668,027	739,370	4,088,442	1,248,835
1934	958,414	-	1,845,638	680,886	4,522,339	1,414,152

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	382,141	319,582	334,180	10,130,324	832,025	1,065,241
1902	415,462	255,612	528,354	11,345,490	863,198	1,113,762
1903	388,880	299,878	374,058	14,849,325	1,275,875	857,622
1904	430,663	293,636	406,219	10,007,722	1,382,808	956,469
1905	456,721	281,965	348,061	11,340,902	1,012,408	928,688
1906	412,245	324,130	354,263	13,775,165	1,021,336	1,116,684
1907	412,391	301,192	419,739	11,139,260	886,778	1,164,873
1908	358,136	297,612	387,033	12,438,607	1,067,765	1,156,201
1909	473,708	292,880	396,859	13,175,419	1,011,806	1,138,842
1910	395,389	292,959	402,694	13,352,115	866,611	1,123,446
1911	445,906	321,709	377,390	14,406,196	988,303	1,026,165
1912	467,878	335,422	377,488	17,437,160	1,168,242	1,135,968
1913	512,705	367,423	475,460	18,076,885	1,254,196	1,060,147
1914	491,581	390,562	498,290	19,554,666	1,317,852	1,172,034
1915	518,373	447,506	524,678	17,029,941	1,320,329	969,848
1916	535,013	401,166	581,241	24,680,191	1,281,031	1,160,126
1917	657,441	436,618	686,608	25,181,192	1,638,882	1,242,613
1918	601,918	442,583	699,669	23,704,079	1,448,586	926,567
1919	601,918	548,656	1,194,078	27,983,846	1,839,230	1,247,330
1920	813,181	645,391	1,059,812	22,165,562	2,027,259	1,868,497
1921	933,187	527,493	1,113,249	31,199,452	2,416,347	1,619,871
1922	891,649	576,431	1,125,992	27,841,931	1,843,238	1,524,326
1923	976,640	816,492	985,339	30,562,540	2,250,600	1,636,151
1924	1,060,668	887,479	1,201,212	27,347,576	2,682,332	1,947,824
1925	1,146,411	945,213	1,379,126	24,812,260	3,257,244	2,144,102
1926	522,899	732,743	647,173	17,603,023	1,969,465	1,167,078
1927	1,201,305	930,075	1,860,797	50,544,166	3,702,100	2,222,159
1928	1,413,994	1,148,468	1,810,363	65,967,255	3,876,617	2,328,895
1929	1,896,339	3,195,687	1,874,192	62,820,843	4,415,039	3,838,135
1930	1,727,869	2,039,905	1,714,746	63,107,989	5,097,221	2,896,147
1931	1,808,000	1,394,000	1,398,000	62,548,000	4,709,000	2,904,000
1932	1,876,000	2,254,000	1,735,000	54,763,000	4,372,000	3,554,000
1933	1,903,559	2,365,563	1,371,256	59,796,206	3,677,514	3,504,204
1934	2,061,708	2,711,389	1,605,318	61,307,201	4,335,457	3,504,854

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	207,286	1,606,599	386,975	464,923	813,644
1902	-	247,062	1,644,144	397,528	523,685	821,844
1903	-	266,335	1,271,434	346,529	565,393	818,638
1904	-	238,717	1,091,216	428,519	519,717	646,747
1905	-	206,402	1,627,705	304,358	518,181	773,778
1906	-	221,901	1,554,501	478,373	595,041	588,116
1907	-	282,740	1,463,370	349,159	646,064	855,918
1908	-	283,136	1,571,817	304,396	722,884	719,118
1909	-	309,769	1,711,783	273,527	674,933	681,258
1910	-	343,104	1,800,170	245,390	592,029	732,133
1911	-	328,844	1,758,092	279,680	673,134	810,033
1912	-	331,771	1,721,841	333,175	701,187	817,435
1913	-	349,545	1,762,449	376,757	749,616	748,701
1914	-	329,560	1,807,097	416,817	666,842	806,718
1915	-	405,923	1,661,980	457,336	733,853	674,446
1916	-	313,854	1,689,464	564,243	847,715	697,749
1917	-	301,534	1,751,460	540,772	1,074,962	916,596
1918	-	367,580	1,567,953	595,719	902,662	745,955
1919	-	410,504	2,531,427	623,052	1,055,493	1,121,301
1920	-	405,700	2,898,585	646,800	1,397,207	1,051,612
1921	-	494,700	3,777,313	840,093	1,252,166	1,097,992
1922	-	482,100	3,073,157	779,027	1,298,833	1,088,229
1923	-	480,238	2,573,409	737,382	1,755,947	1,613,478
1924	-	501,080	2,985,693	943,740	1,568,807	1,698,042
1925	-	927,343	2,771,426	1,011,388	1,196,781	1,463,991
1926	-	362,954	1,742,910	361,598	1,433,517	1,140,769
1927	-	846,791	3,741,162	1,609,580	1,107,705	2,611,659
1928	-	1,031,609	3,605,664	1,616,915	1,471,749	2,255,077
1929	-	1,340,630	3,985,648	1,473,129	2,358,833	2,011,518
1930	-	903,904	5,936,558	1,483,763	2,336,555	2,024,131
1931	-	1,123,000	4,193,000	1,384,000	3,068,000	2,040,000
1932	-	923,000	5,410,000	1,561,000	2,282,000	1,743,000
1933	-	779,248	5,373,294	1,698,609	2,946,946	2,260,554
1934	-	865,108	5,540,322	1,826,951	3,060,957	2,379,630

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Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	1,351,395	213,431	2,293,060	108,449	662,212	143,487
1902	1,119,310	278,852	2,380,130	99,115	663,989	202,556
1903	1,107,059	194,948	2,195,471	107,854	593,072	212,734
1904	982,649	268,054	2,215,844	116,341	759,245	217,487
1905	935,851	241,162	2,317,640	109,322	588,595	186,614
1906	1,145,952	227,359	2,482,483	163,912	626,494	238,678
1907	1,213,629	240,535	2,252,600	144,252	631,354	505,383
1908	1,145,953	235,531	2,618,677	136,856	683,930	413,381
1909	1,206,175	192,580	2,413,002	141,867	577,529	364,455
1910	1,256,496	262,206	2,539,966	139,084	659,725	535,976
1911	1,295,270	232,384	2,469,566	137,396	580,829	397,993
1912	1,432,474	235,305	3,046,913	142,408	642,684	553,970
1913	1,491,536	224,588	3,188,287	144,399	567,844	512,855
1914	1,579,566	307,723	3,522,573	146,302	750,638	533,878
1915	1,472,500	291,897	3,769,969	155,568	926,239	391,043
1916	1,888,988	303,302	4,515,519	153,306	731,204	444,061
1917	1,901,728	320,871	3,945,010	259,207	788,818	339,268
1918	2,099,767	287,918	4,472,896	171,438	769,386	291,080
1919	1,975,751	355,902	5,081,788	209,298	1,359,449	693,629
1920	2,246,753	396,965	5,360,244	227,767	1,392,280	539,951
1921	2,458,636	347,776	7,060,330	231,096	1,424,993	444,328
1922	2,452,290	357,552	5,763,901	250,641	1,238,923	492,212
1923	2,281,375	448,495	6,356,665	252,489	1,242,929	562,283
1924	2,722,020	507,682	6,915,388	283,026	1,552,553	634,338
1925	2,898,963	561,984	7,627,179	340,996	1,634,780	659,651
1926	1,359,469	369,194	3,933,220	208,745	1,223,852	300,152
1927	3,026,051	784,030	9,516,232	463,113	1,379,300	740,001
1928	3,286,709	814,703	9,561,504	474,342	1,563,271	786,292
1929	3,984,624	1,118,737	8,822,543	527,142	2,313,121	938,174
1930	3,960,701	985,545	10,983,501	435,653	2,710,589	1,392,697
1931	2,716,000	701,000	11,369,000	564,000	2,076,000	1,251,000
1932	3,069,000	666,000	8,913,000	493,000	2,584,000	928,000
1933	3,120,409	954,644	10,136,771	553,374	2,447,037	1,178,327
1934	3,337,397	1,029,021	11,353,145	603,500	2,626,110	1,232,282

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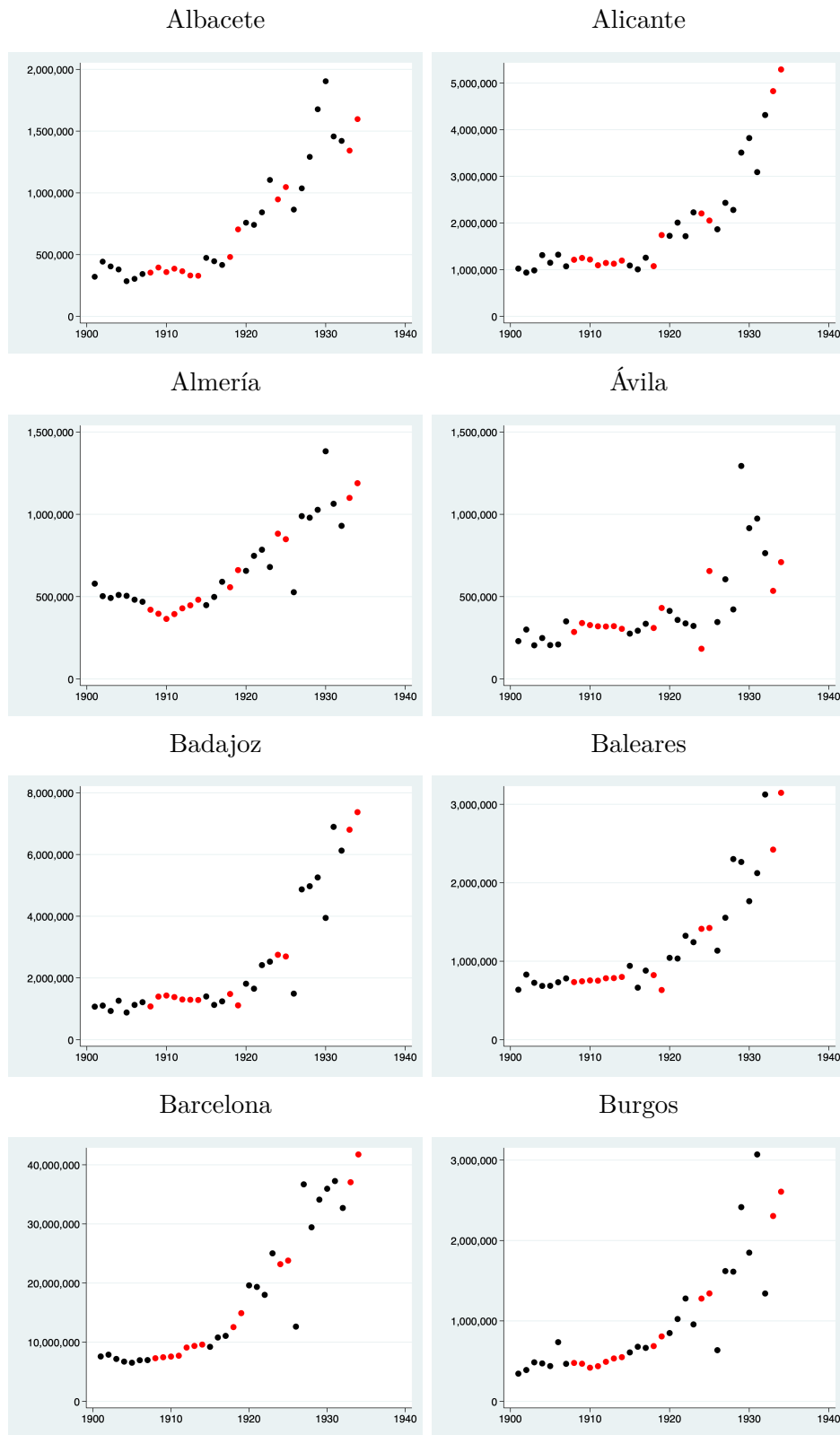
Table A4: Derechos Reales Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	480,557	2,654,074	704,308	-	320,964	879,223
1902	477,297	2,851,139	774,412	-	283,981	1,084,971
1903	493,756	2,565,572	793,507	-	354,178	961,009
1904	512,582	2,518,012	823,369	-	358,966	1,102,863
1905	606,530	2,743,780	751,056	-	275,920	815,580
1906	597,263	2,991,412	647,767	-	316,551	1,028,652
1907	623,682	3,074,030	694,178	-	316,284	841,336
1908	736,993	3,103,482	815,944	-	317,985	966,580
1909	677,797	3,253,513	851,155	-	325,334	1,015,628
1910	568,338	3,338,631	855,665	-	328,941	1,035,742
1911	667,372	3,385,117	842,243	-	331,967	1,143,089
1912	745,041	3,502,961	846,790	-	329,734	1,179,110
1913	982,476	3,565,443	832,818	-	330,635	1,098,723
1914	934,724	3,624,088	810,938	-	333,482	1,086,813
1915	712,863	3,465,312	981,633	-	352,940	1,093,526
1916	1,346,605	4,026,369	793,019	-	354,681	1,248,234
1917	1,112,913	3,807,444	915,425	-	333,412	1,155,194
1918	1,150,016	3,980,821	782,474	-	360,962	1,379,048
1919	1,984,108	3,962,894	832,677	-	369,989	1,320,255
1920	4,038,200	4,604,391	1,167,649	-	439,784	1,905,025
1921	1,101,496	5,643,738	1,331,569	-	627,266	1,966,243
1922	1,488,297	5,145,943	1,432,437	-	468,366	1,957,824
1923	1,167,606	5,711,131	1,507,850	-	539,539	2,274,560
1924	2,525,056	6,463,723	1,600,704	-	639,726	2,547,683
1925	2,464,091	7,158,810	2,030,511	-	758,981	2,862,459
1926	694,265	3,886,058	856,660	-	359,251	1,094,859
1927	1,960,009	9,729,757	2,046,811	-	804,181	2,609,695
1928	2,094,182	9,680,281	2,578,574	-	946,776	4,249,778
1929	1,734,343	9,983,252	3,191,498	-	1,202,872	5,870,849
1930	2,002,802	10,292,869	3,439,048	-	1,119,384	5,500,453
1931	2,538,000	11,189,000	3,587,000	-	1,166,000	4,416,000
1932	1,920,000	11,303,000	3,023,000	-	906,000	5,521,000
1933	1,477,536	11,398,109	3,469,135	-	1,156,027	5,688,576
1934	1,910,137	12,157,755	3,917,350	-	1,277,673	6,421,751

Sources: See Chapter 2.

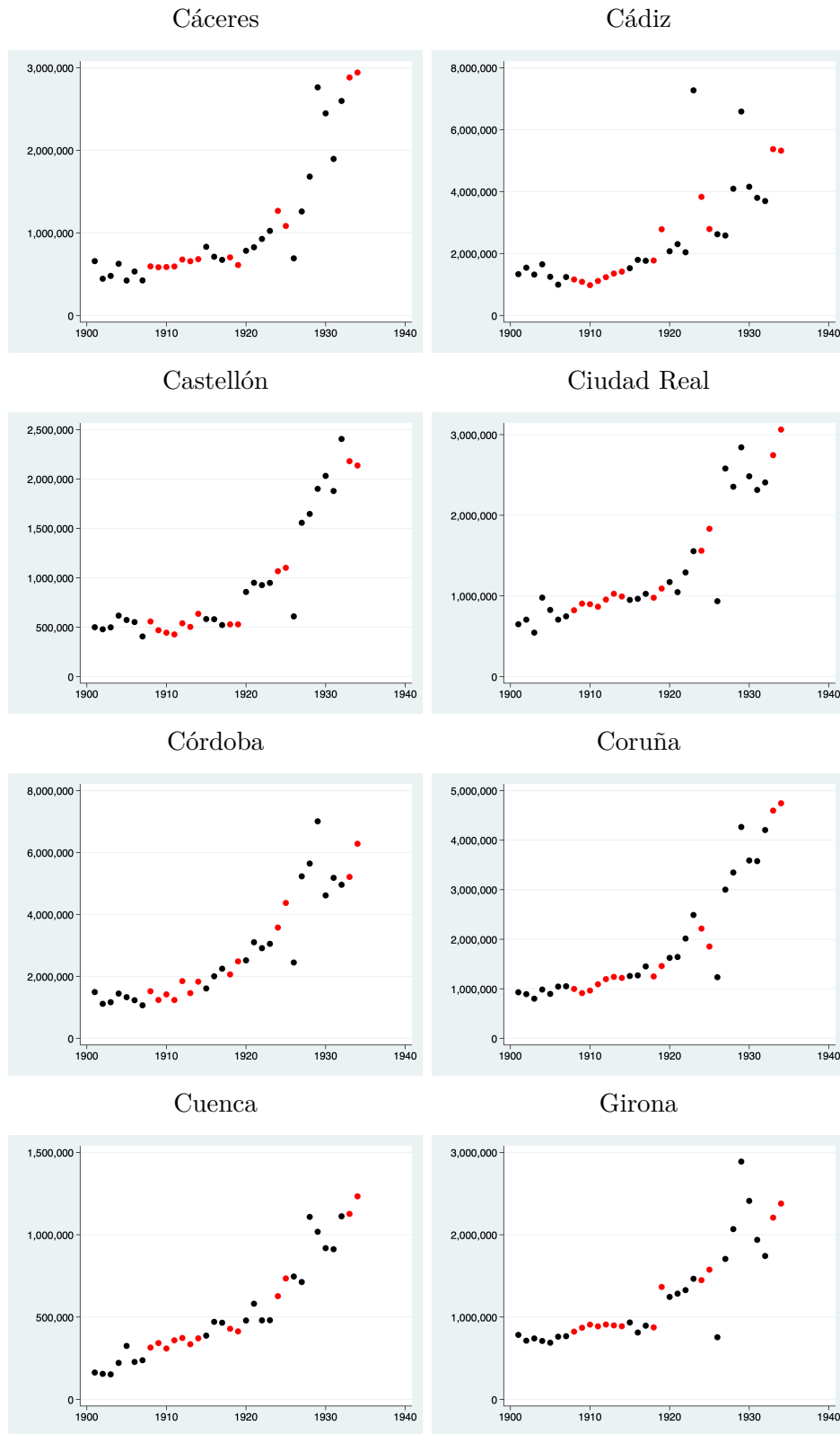
Notes: All data are in nominal values. I corrected for an outlier in Lérida in 1919.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



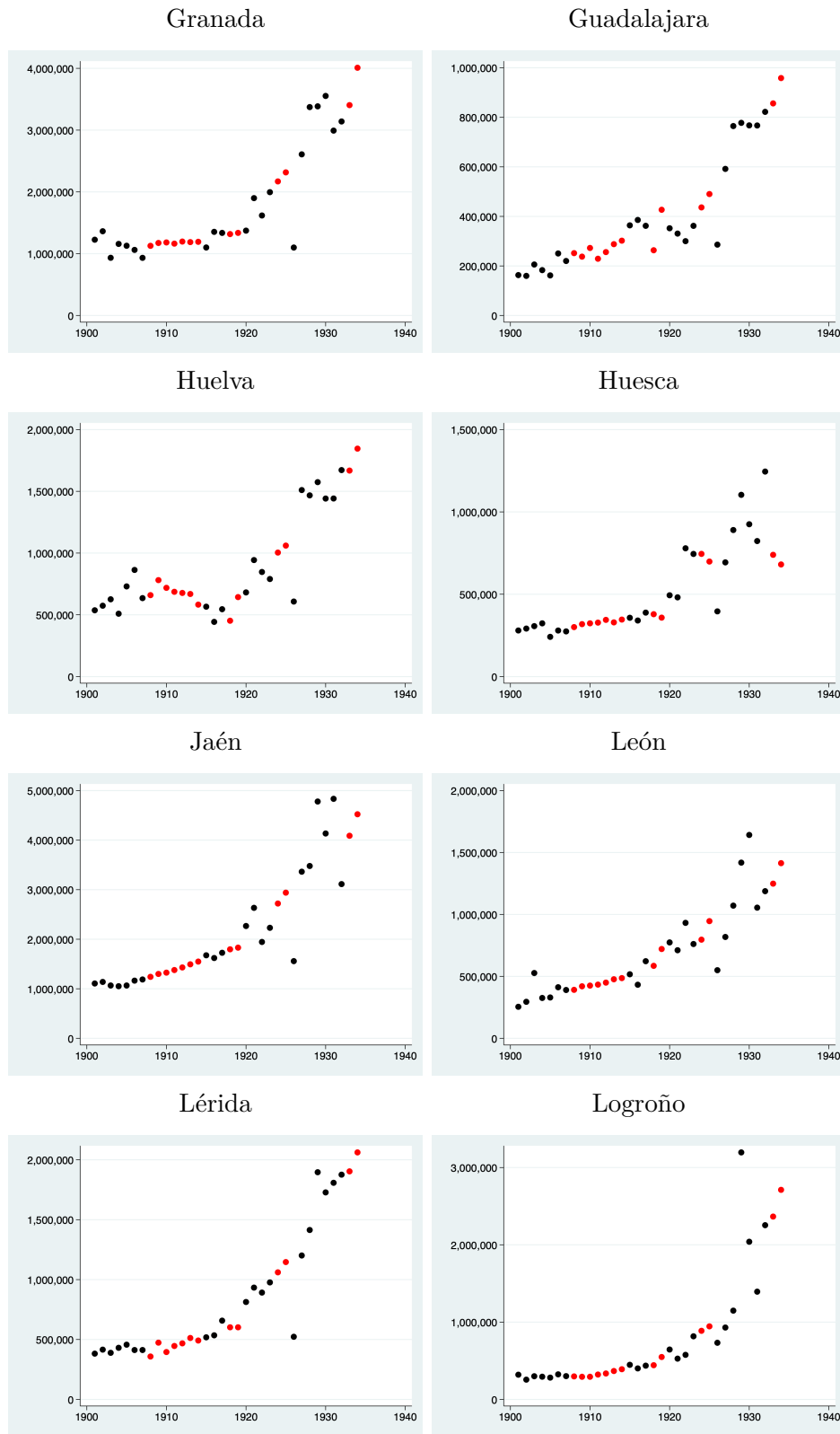
Notes: The original data points are in black; the imputed data points are in red.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



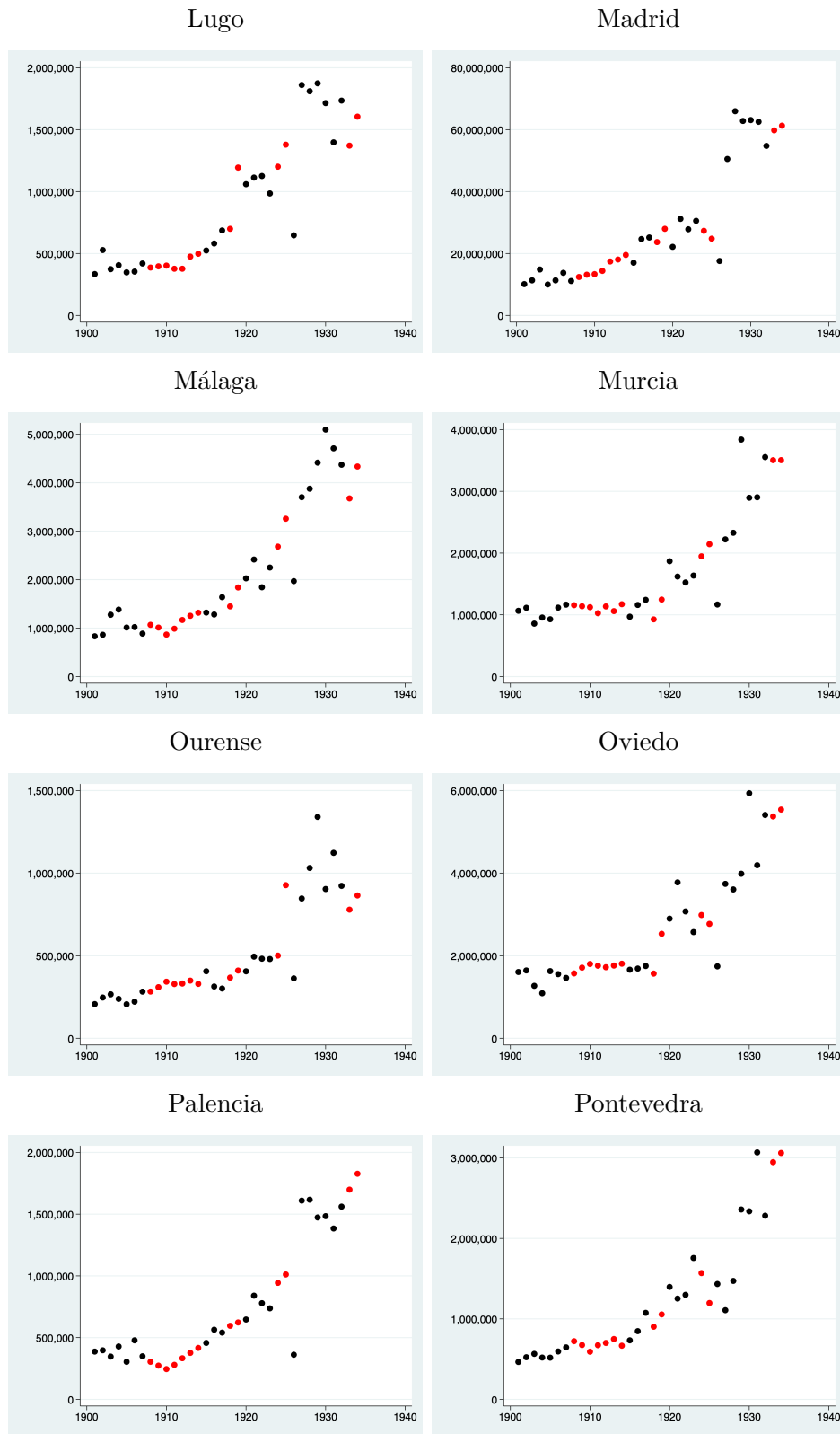
Notes: The original data points are in black; the imputed data points are in red.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



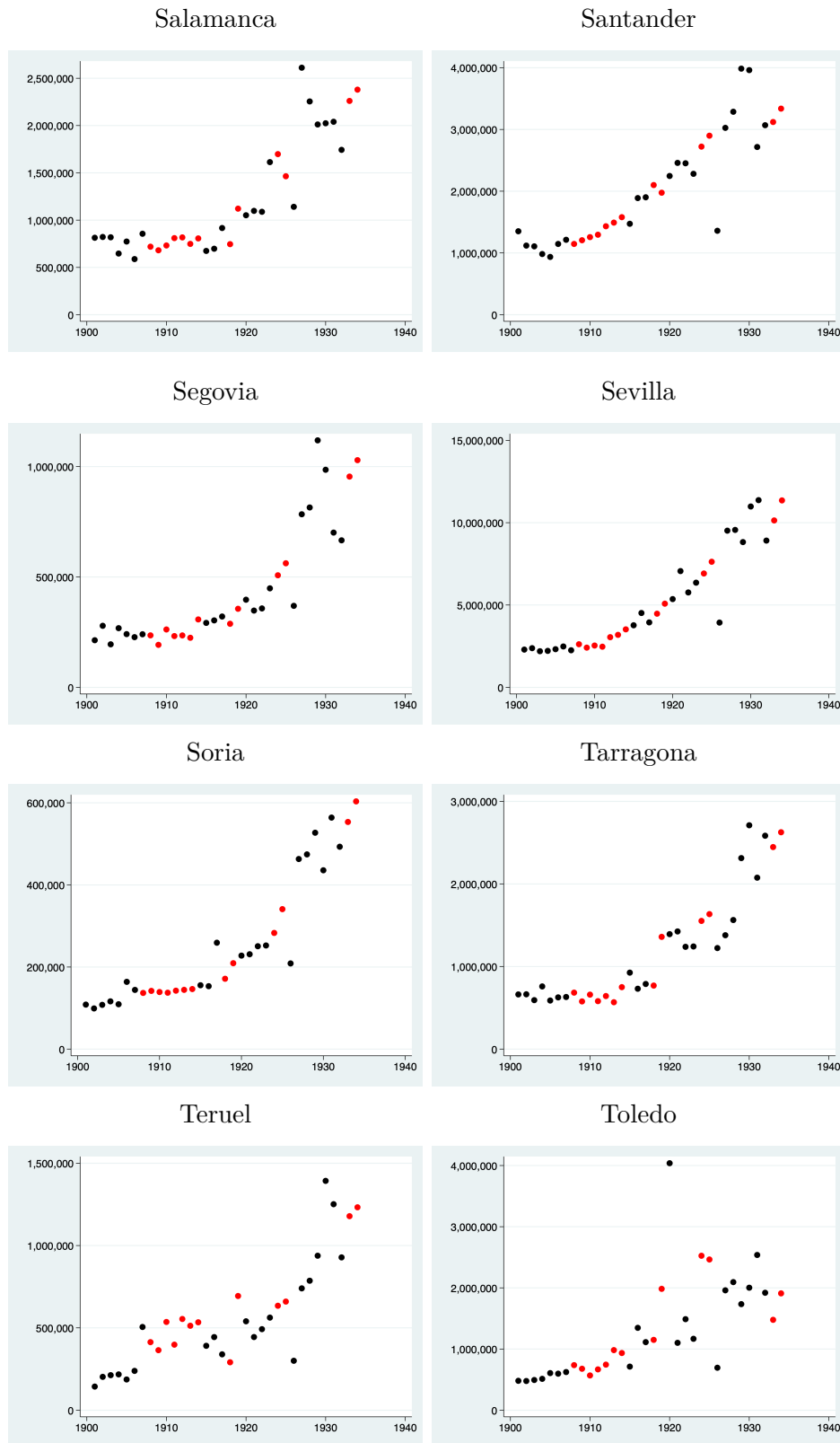
Notes: The original data points are in black; the imputed data points are in red.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



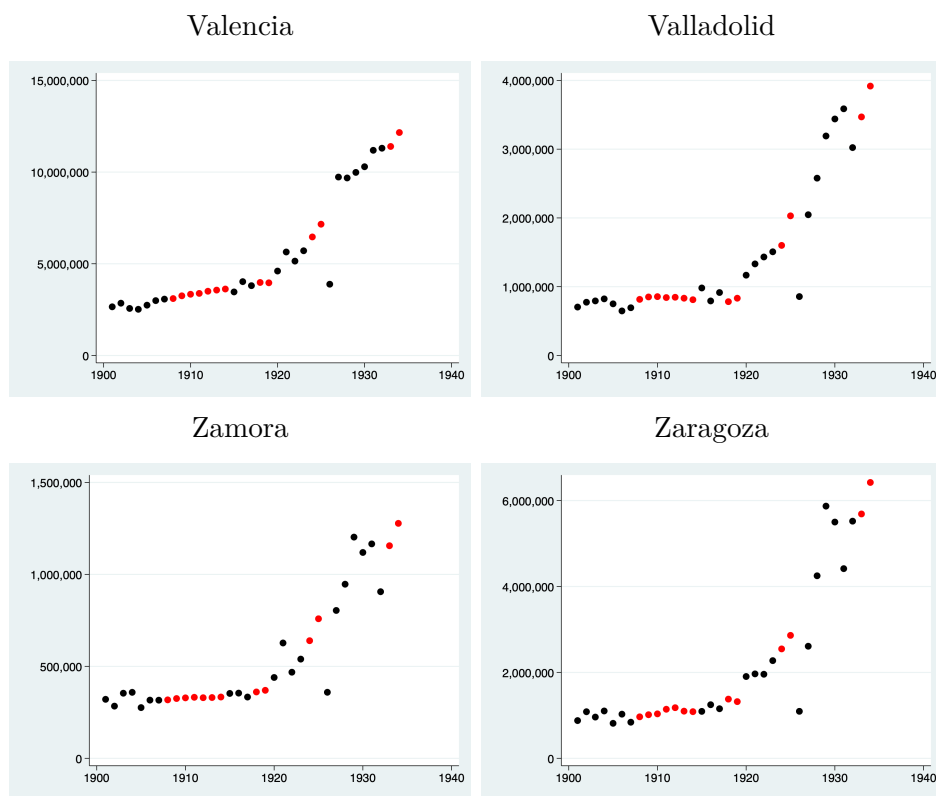
Notes: The original data points are in black; the imputed data points are in red.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A4: Derechos Reales Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.5 Minas

Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	20,486	6,599	9,146	196,831	2,310	168,245
1902	33,056	7,586	9,473	200,416	1,806	227,997
1903	36,324	10,371	10,804	205,440	1,122	228,409
1904	28,997	9,172	11,948	204,207	1,041	210,379
1905	25,785	7,688	13,791	187,194	387	222,816
1906	25,233	8,005	13,499	211,091	342	237,107
1907	24,927	8,280	14,077	231,166	981	273,167
1908	23,737	14,504	18,746	299,778	898	228,652
1909	23,553	17,984	21,134	338,209	511	213,112
1910	22,171	12,196	22,095	328,484	641	211,434
1911	21,829	13,234	22,260	266,220	640	209,896
1912	24,200	17,040	23,958	263,640	931	218,950
1913	24,433	8,536	28,437	469,014	1,002	220,175
1914	22,910	15,849	25,958	255,441	2,086	216,883
1915	22,579	23,199	27,144	291,449	3,186	222,157
1916	20,265	3,892	26,514	397,493	804	202,208
1917	24,060	35,178	28,850	530,605	4,320	225,232
1918	23,997	28,912	29,634	447,301	1,633	201,857
1919	31,075	41,804	28,503	442,699	9,930	266,293
1920	30,064	40,253	29,103	588,809	11,955	252,155
1921	166,343	26,007	27,489	435,775	11,056	176,147
1922	212,641	24,570	28,616	514,718	10,350	157,859
1923	263,613	18,351	26,952	506,558	10,872	157,393
1924	206,735	16,226	26,542	567,497	10,572	188,882
1925	124,897	23,827	30,088	538,854	9,852	209,265
1926	110,320	29,197	28,238	524,173	6,672	241,411
1927	109,678	29,374	32,417	508,358	4,380	183,786
1928	109,850	27,741	31,760	523,220	3,912	155,583
1929	109,718	28,416	32,137	625,525	3,210	162,798
1930	109,868	48,802	30,961	628,414	2,258	163,572
1931	109,538	62,526	31,375	468,149	2,314	143,622
1932	109,108	61,803	31,206	373,096	1,717	106,811
1933	141,660	64,030	33,006	501,864	1,779	98,860
1934	53,811	55,620	32,960	487,453	1,301	111,716

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	10,829	47,804	27,558	18,505	4,580	12,041
1902	20,701	54,909	33,577	23,698	6,128	12,216
1903	22,239	63,089	39,582	21,442	6,385	13,279
1904	19,469	75,343	43,924	20,682	4,356	14,925
1905	7,933	81,573	33,510	22,962	4,959	15,428
1906	9,168	82,436	22,273	28,318	3,206	16,219
1907	8,543	86,125	24,115	32,374	3,840	17,960
1908	9,487	82,296	24,514	50,556	1,556	12,220
1909	10,856	90,709	23,239	38,409	596	14,389
1910	10,173	93,212	19,410	38,061	252	14,072
1911	13,051	113,866	21,648	48,959	721	15,065
1912	10,702	74,341	26,054	73,748	1,121	14,163
1913	7,623	55,976	34,188	62,223	2,419	17,968
1914	5,704	116,707	31,306	74,308	2,999	13,362
1915	5,542	164,637	34,765	79,053	4,842	16,004
1916	7,069	141,896	32,895	77,126	3,910	12,676
1917	9,347	170,334	38,897	92,562	9,121	25,235
1918	5,790	93,637	43,827	81,612	6,583	22,489
1919	24,144	340,005	62,799	119,278	19,229	52,899
1920	64,274	372,992	91,363	154,519	27,420	35,202
1921	47,358	325,724	140,459	85,208	76,348	30,910
1922	24,875	303,343	217,215	70,938	72,091	30,988
1923	13,828	365,782	227,865	61,452	143,833	26,064
1924	14,071	367,293	212,597	63,138	93,823	32,960
1925	25,104	357,699	196,587	58,905	84,421	28,373
1926	29,274	387,545	165,246	49,980	24,829	25,327
1927	24,803	421,008	158,414	45,887	21,943	31,681
1928	26,943	430,374	159,250	49,534	27,555	35,604
1929	26,943	424,297	163,466	50,182	27,975	33,935
1930	32,139	464,766	159,895	49,712	27,697	33,653
1931	16,815	520,842	133,792	44,044	23,655	27,939
1932	154,827	373,535	285,039	118,799	44,878	15,875
1933	57,139	457,560	212,651	75,215	49,213	31,447
1934	130,802	478,902	207,364	44,930	37,446	31,118

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	303,403	216,967	10,446	2,842	61,293	131,422
1902	406,001	385,845	36,105	3,105	74,997	141,119
1903	488,788	405,910	36,572	4,793	90,397	146,894
1904	462,619	355,672	36,487	4,680	89,554	147,495
1905	392,728	314,921	37,555	4,520	95,899	140,043
1906	471,805	310,056	40,479	4,488	62,338	142,570
1907	509,530	403,887	44,635	4,716	68,310	149,086
1908	424,323	371,191	36,550	4,686	64,210	146,922
1909	431,424	546,769	34,278	4,773	58,238	133,304
1910	425,540	495,209	33,897	4,863	51,403	133,666
1911	405,468	608,239	33,620	4,739	50,390	178,300
1912	420,917	466,900	34,145	4,843	49,416	203,009
1913	424,141	797,891	34,226	4,563	56,232	260,527
1914	410,512	602,191	30,917	4,899	49,730	301,282
1915	401,574	660,799	29,422	4,928	51,653	329,148
1916	357,077	635,085	27,097	4,408	39,210	287,577
1917	383,415	770,632	29,403	5,722	60,036	353,362
1918	369,468	804,554	24,765	5,018	50,053	346,664
1919	1,405,260	1,393,439	42,129	6,202	103,583	411,792
1920	1,380,207	1,599,400	42,749	15,073	105,474	442,052
1921	859,170	1,282,438	28,088	12,277	95,923	273,055
1922	570,181	1,054,529	32,239	9,796	97,640	288,717
1923	365,847	889,113	35,866	17,906	97,701	268,215
1924	393,342	1,073,922	35,056	26,483	100,249	265,742
1925	427,744	1,166,447	40,599	28,039	95,478	287,000
1926	421,380	954,187	43,863	19,622	70,360	238,645
1927	401,370	731,965	57,536	35,521	62,722	232,847
1928	381,218	654,857	63,196	46,474	76,320	296,887
1929	398,288	640,877	76,452	31,432	87,550	326,378
1930	407,080	559,593	68,518	31,865	91,883	379,797
1931	328,566	463,327	59,626	46,348	74,593	286,191
1932	49,133	321,710	198,684	34,600	47,270	89,344
1933	142,771	191,885	133,300	46,691	69,149	144,552
1934	122,166	152,749	139,212	48,789	65,003	290,256

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	51,714	92,131	1,322,529	10,138	449,513	197,229
1902	44,207	107,824	1,029,289	15,178	380,734	238,916
1903	45,290	116,795	1,168,370	16,870	397,006	297,105
1904	49,317	112,405	1,099,619	13,599	418,168	259,894
1905	55,376	108,453	1,236,472	20,123	433,798	215,546
1906	62,625	104,242	1,498,416	32,084	539,444	174,052
1907	67,372	104,536	1,883,514	37,251	680,540	189,298
1908	89,257	98,610	1,421,513	23,216	742,740	231,599
1909	89,656	95,614	1,652,992	23,483	890,310	265,483
1910	119,392	96,823	1,581,325	23,089	923,027	254,045
1911	95,927	87,454	1,532,203	20,445	1,027,035	247,795
1912	93,283	93,077	1,526,393	20,581	975,793	226,626
1913	106,583	83,939	1,495,050	30,872	1,374,013	251,306
1914	91,404	83,985	1,290,306	20,693	1,151,075	222,853
1915	70,845	78,373	943,274	20,395	1,246,691	245,286
1916	60,051	70,408	683,417	11,859	1,183,112	189,154
1917	52,885	85,025	1,509,470	13,335	1,452,282	254,127
1918	23,745	79,767	791,485	18,929	1,528,251	274,386
1919	52,296	82,291	1,168,061	43,967	1,046,358	845,963
1920	63,550	87,441	908,271	64,683	1,583,440	1,107,797
1921	52,250	78,226	948,653	83,271	1,488,669	653,022
1922	60,328	76,502	1,099,264	52,319	1,188,140	623,992
1923	67,298	75,091	1,149,782	51,391	1,392,069	385,530
1924	66,350	67,096	1,432,995	40,570	1,894,530	369,287
1925	54,542	55,749	1,404,021	57,655	2,287,353	357,030
1926	45,500	54,635	1,509,838	56,522	2,094,313	371,323
1927	51,180	46,963	1,866,765	43,165	1,498,714	369,762
1928	54,202	48,581	2,336,554	35,760	1,229,128	352,724
1929	51,033	47,965	3,297,964	36,225	1,555,676	341,786
1930	54,085	45,549	3,012,705	35,353	1,515,193	330,543
1931	41,200	45,041	2,204,562	35,691	1,182,211	337,642
1932	136,889	32,699	1,191,618	234,175	678,158	425,498
1933	70,452	29,275	2,207,418	287,959	1,143,919	148,789
1934	78,744	24,587	3,039,255	407,566	1,187,608	169,189

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	40,443	44,356	47,243	7,999	28,902	339,010
1902	52,915	71,377	58,508	19,089	28,811	405,894
1903	52,329	74,735	80,841	16,024	32,740	432,063
1904	41,149	67,571	91,286	14,731	30,689	417,473
1905	46,925	51,508	94,015	15,584	26,595	431,120
1906	63,444	46,541	108,168	12,234	31,841	448,852
1907	64,188	56,154	95,654	10,129	28,818	451,375
1908	46,824	51,678	126,861	12,514	32,271	410,478
1909	64,745	53,354	139,839	12,152	34,605	456,237
1910	55,399	51,303	149,556	11,987	37,633	485,348
1911	65,405	46,186	139,960	12,433	37,899	540,996
1912	73,300	50,503	133,703	15,925	39,131	502,266
1913	79,434	51,893	142,961	16,477	44,246	579,040
1914	85,769	46,131	114,558	15,859	43,163	508,332
1915	96,604	44,882	103,995	14,255	45,762	559,009
1916	93,393	45,940	86,012	15,789	43,935	446,589
1917	125,607	54,624	86,627	17,809	51,853	644,027
1918	118,580	59,408	77,108	23,438	53,444	723,219
1919	357,632	59,841	83,894	41,693	64,050	588,235
1920	381,054	61,324	116,559	35,616	60,743	751,830
1921	228,246	61,324	99,705	32,566	52,105	622,006
1922	258,291	65,593	101,913	24,198	65,184	486,049
1923	262,264	46,966	95,659	22,680	54,186	518,032
1924	236,506	46,720	96,394	21,505	48,688	641,468
1925	224,722	49,530	91,942	20,071	66,813	748,302
1926	223,932	52,243	88,468	19,306	66,311	772,340
1927	359,574	51,452	124,748	19,666	61,741	580,173
1928	310,517	44,949	110,938	16,292	61,097	510,170
1929	321,173	42,429	109,109	19,271	71,784	597,948
1930	319,869	36,922	87,741	22,415	81,183	549,654
1931	328,727	36,450	75,997	22,175	68,733	458,492
1932	354,832	311,285	25,406	51,181	16,562	230,880
1933	365,091	532,311	84,661	37,725	17,137	477,055
1934	378,618	472,318	83,759	35,993	24,428	443,804

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	48,854	28,112	681,294	82,648	26,694	13,548
1902	69,722	37,331	724,066	108,731	27,280	18,704
1903	91,045	48,637	740,963	132,479	21,666	15,950
1904	89,485	35,282	625,595	157,202	14,897	15,627
1905	87,785	27,395	554,371	93,917	10,032	14,202
1906	82,159	14,985	548,988	89,698	14,213	13,294
1907	91,123	19,585	578,922	83,530	22,690	13,703
1908	86,195	37,746	565,520	117,112	16,850	13,219
1909	85,925	45,130	552,943	136,548	16,543	9,531
1910	85,329	52,754	542,128	110,034	15,491	11,899
1911	83,702	49,467	548,166	101,517	16,221	18,894
1912	82,572	51,136	565,260	86,444	16,638	20,188
1913	82,729	71,982	589,193	86,975	20,996	20,353
1914	80,158	51,424	561,391	65,969	16,273	22,387
1915	77,548	52,066	568,592	99,204	17,098	20,402
1916	73,516	38,878	565,125	79,983	16,633	13,958
1917	75,521	59,932	616,419	79,219	17,768	31,505
1918	72,568	59,565	625,930	68,618	18,533	22,201
1919	86,101	94,135	5,519,628	467,802	30,217	27,262
1920	85,654	80,814	8,037,684	483,350	24,927	25,452
1921	236,136	68,990	3,324,008	524,457	16,438	49,886
1922	98,923	78,332	2,569,810	351,332	10,496	21,812
1923	520,454	72,520	852,838	78,511	10,406	24,014
1924	422,222	65,758	828,862	85,274	10,601	19,504
1925	199,830	41,455	812,439	81,436	10,466	18,340
1926	178,633	35,236	797,418	84,658	12,324	13,400
1927	178,933	35,896	789,273	84,492	11,164	41,732
1928	173,427	48,618	762,299	66,794	14,372	123,809
1929	52,629	61,315	648,769	69,126	18,650	208,717
1930	50,505	57,185	665,686	67,748	34,788	219,899
1931	73,104	60,153	649,732	68,412	33,902	122,442
1932	233,556	62,151	70,524	607,256	21,454	68,336
1933	175,698	66,143	734,633	669,971	25,696	228,330
1934	143,077	64,651	687,344	630,468	26,515	270,752

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Table A5: Minas Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	333,132	7,983	154,201	15,632	22,551	61,181
1902	376,601	8,307	230,733	37,744	24,242	73,741
1903	411,558	10,686	246,656	50,782	37,256	75,925
1904	439,853	10,638	197,343	44,515	41,210	87,450
1905	501,325	11,051	187,416	46,968	42,542	82,522
1906	521,751	9,591	185,177	38,715	43,310	78,733
1907	569,772	9,047	188,758	37,774	46,926	89,677
1908	623,998	9,157	184,916	24,057	40,728	169,789
1909	661,501	9,318	227,967	22,841	52,543	217,266
1910	655,150	8,203	220,511	23,232	44,371	225,774
1911	676,165	8,492	258,373	22,044	59,461	225,560
1912	604,121	8,573	220,705	23,926	62,299	207,298
1913	656,323	9,176	254,395	10,269	79,992	150,140
1914	583,016	7,827	224,462	26,473	67,039	184,204
1915	558,401	7,941	223,659	39,541	60,355	175,219
1916	454,570	6,437	223,607	11,883	87,884	190,460
1917	520,437	9,245	222,816	14,248	82,680	268,376
1918	289,223	8,201	245,213	35,236	98,238	158,417
1919	541,529	13,238	581,432	25,118	94,051	379,172
1920	661,544	11,210	632,200	21,199	94,843	310,459
1921	428,326	-	499,313	19,230	132,475	278,160
1922	425,727	9,713	524,614	21,225	90,100	253,634
1923	743,696	8,375	351,407	29,180	100,406	221,148
1924	823,795	8,144	367,527	28,522	141,272	249,818
1925	1,014,345	5,790	314,271	26,262	184,567	247,993
1926	791,161	5,910	294,635	21,661	197,494	191,163
1927	900,996	5,910	256,851	22,627	134,573	309,897
1928	1,001,166	5,940	247,597	19,783	117,366	281,200
1929	1,177,830	5,394	349,663	22,919	124,285	320,839
1930	921,153	8,154	473,053	23,490	118,991	372,090
1931	742,918	7,194	243,542	23,745	82,886	295,335
1932	492,591	78,310	154,113	189,744	15,819	127,865
1933	488,827	-	169,331	120,032	96,906	264,819
1934	525,781	-	153,963	160,404	98,218	272,841

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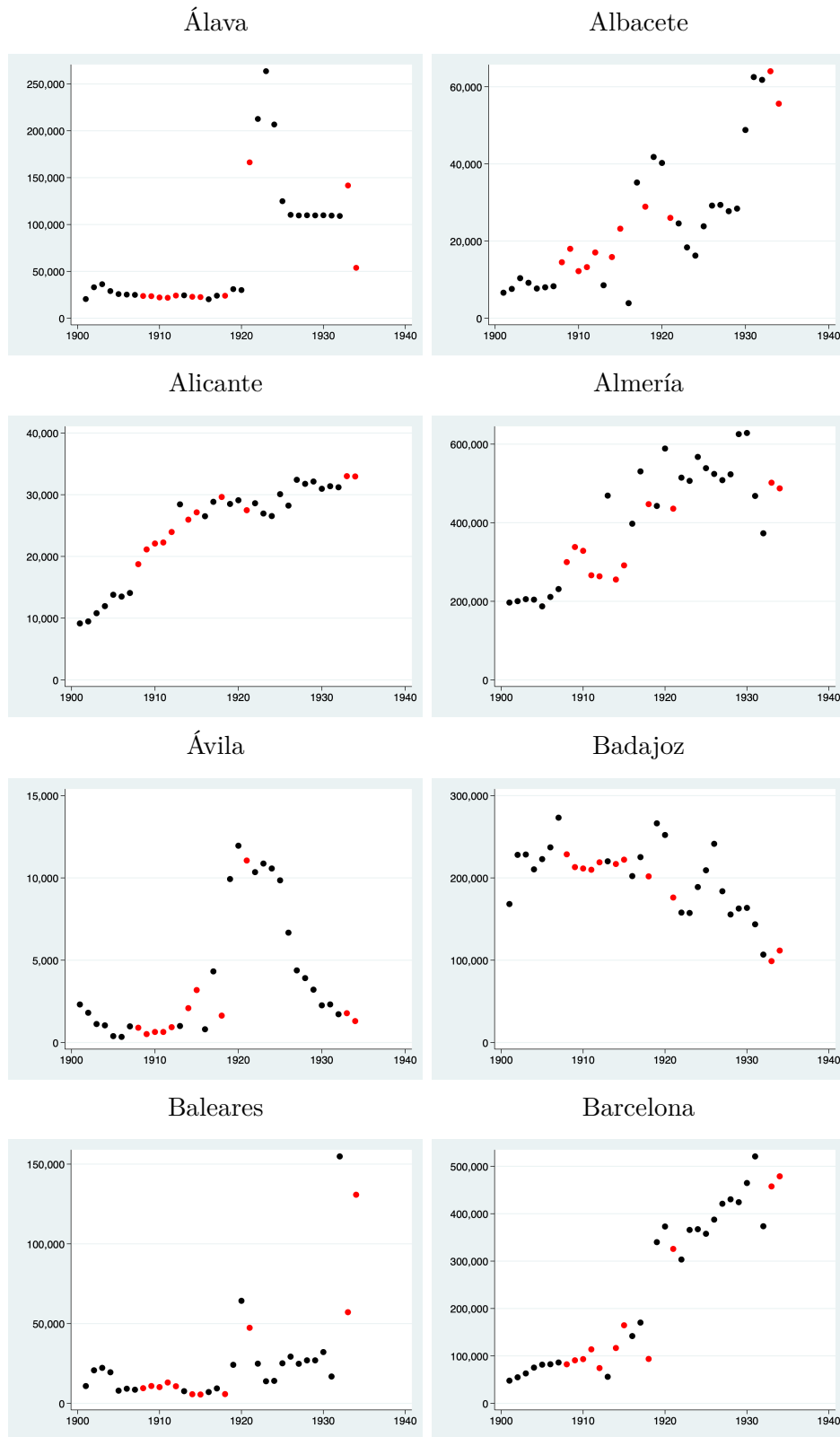
Table A5: Minas

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	4,012	2,021	180	668,513	2,108	23,324
1902	3,624	3,847	153	735,598	7,997	23,909
1903	2,709	3,953	90	783,841	12,086	31,049
1904	3,693	3,160	234	766,964	9,861	40,630
1905	4,291	3,067	189	763,201	7,967	39,940
1906	4,984	3,239	144	762,975	6,015	37,425
1907	3,473	3,774	144	765,409	5,506	42,217
1908	4,432	3,919	68	890,925	9,402	41,697
1909	5,598	5,132	13	960,642	10,586	42,750
1910	6,625	6,507	4	970,244	11,262	43,042
1911	6,399	6,005	10	979,483	13,030	43,671
1912	6,580	8,781	26	905,641	14,807	45,586
1913	3,867	8,322	57	1,097,189	21,151	46,896
1914	6,230	9,364	108	888,119	18,170	49,266
1915	7,198	9,744	113	895,647	19,848	50,962
1916	5,352	14,887	151	748,311	24,041	44,968
1917	7,926	12,434	192	829,986	20,060	60,032
1918	6,887	16,374	226	751,102	26,003	53,669
1919	15,744	25,587	264	1,017,191	27,600	184,691
1920	16,592	18,335	264	939,781	29,810	204,243
1921	15,843	18,682		647,385	25,224	104,429
1922	16,220	17,825	264	206,891	22,293	93,759
1923	12,162	17,405	264	208,441	21,837	72,697
1924	12,403	16,372	372	216,859	18,039	74,034
1925	14,766	15,635	372	190,410	18,525	64,824
1926	22,180	10,713	372	181,117	23,469	69,915
1927	24,504	10,647	372	172,173	23,527	68,450
1928	22,835	12,210	612	157,768	21,390	79,209
1929	17,722	12,184	612	161,342	24,975	155,244
1930	18,653	12,401	612	163,024	24,975	152,507
1931	18,518	11,588	612	158,393	21,852	68,130
1932	19,365	58,478	167,152	8,830	8,672	5,612
1933	21,461	37,660	-	151,062	17,309	53,356
1934	21,902	43,752	-	140,669	16,731	90,698

Sources: See Chapter 2.

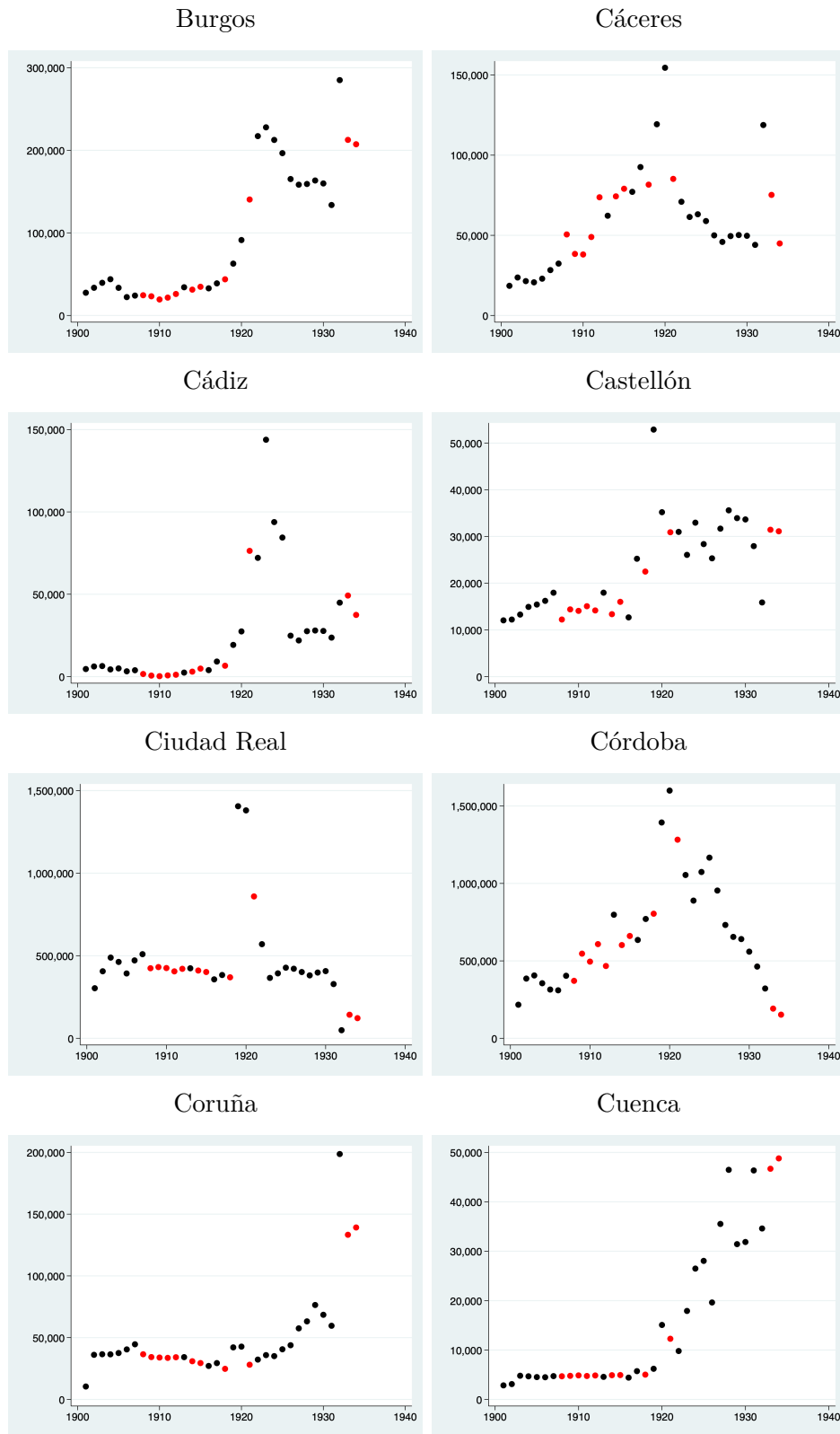
Notes: All data are in nominal values. I corrected for an outlier in Logroño in 1921.

Figure A5: Minas Revenues by Provinces, 1901–1934.



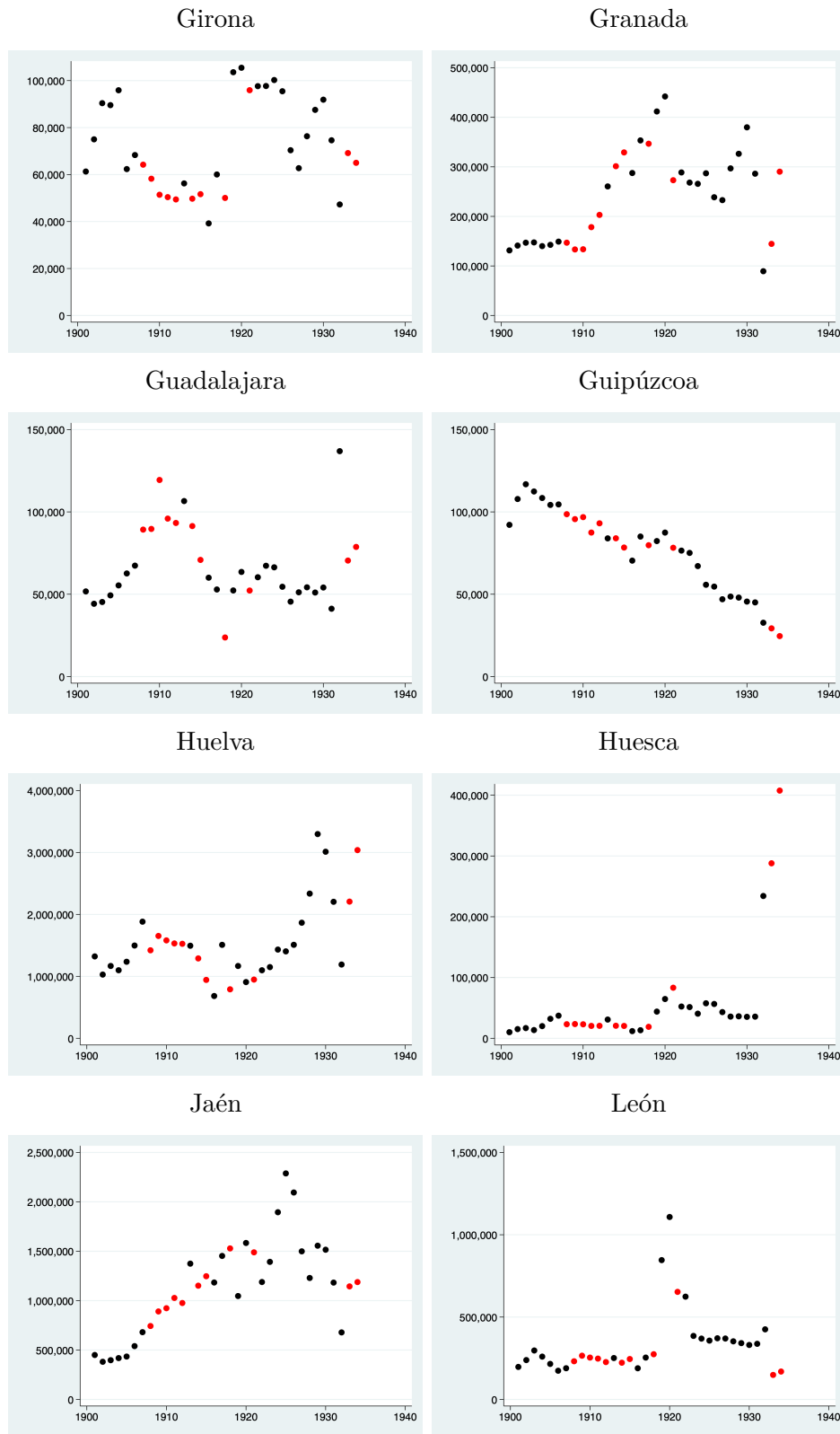
Notes: The original data points are in black; the imputed data points are in red.

Figure A5: Minas Revenues by Provinces, 1901–1934.



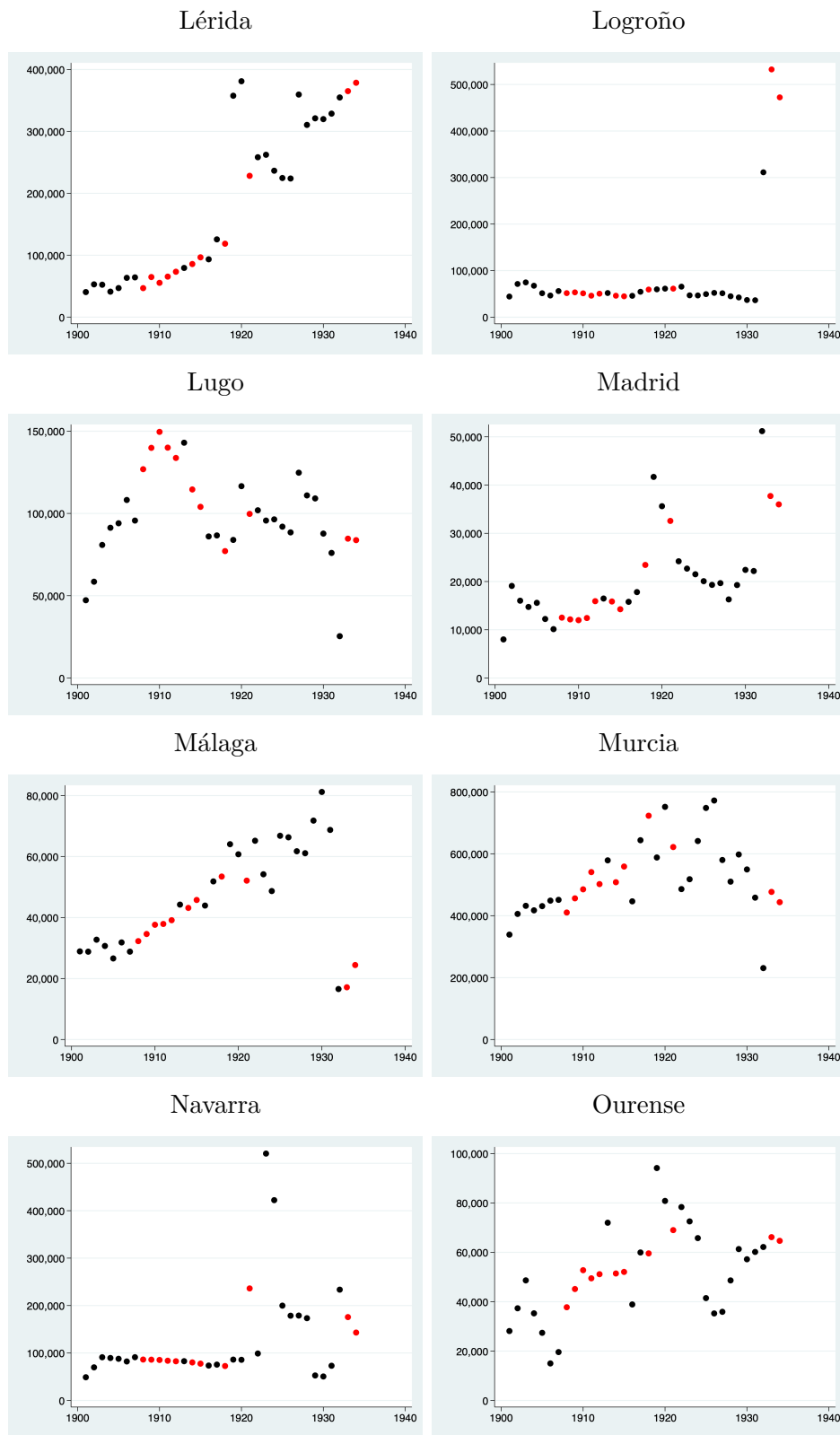
Notes: The original data points are in black; the imputed data points are in red.

Figure A5: Minas Revenues by Provinces, 1901–1934.



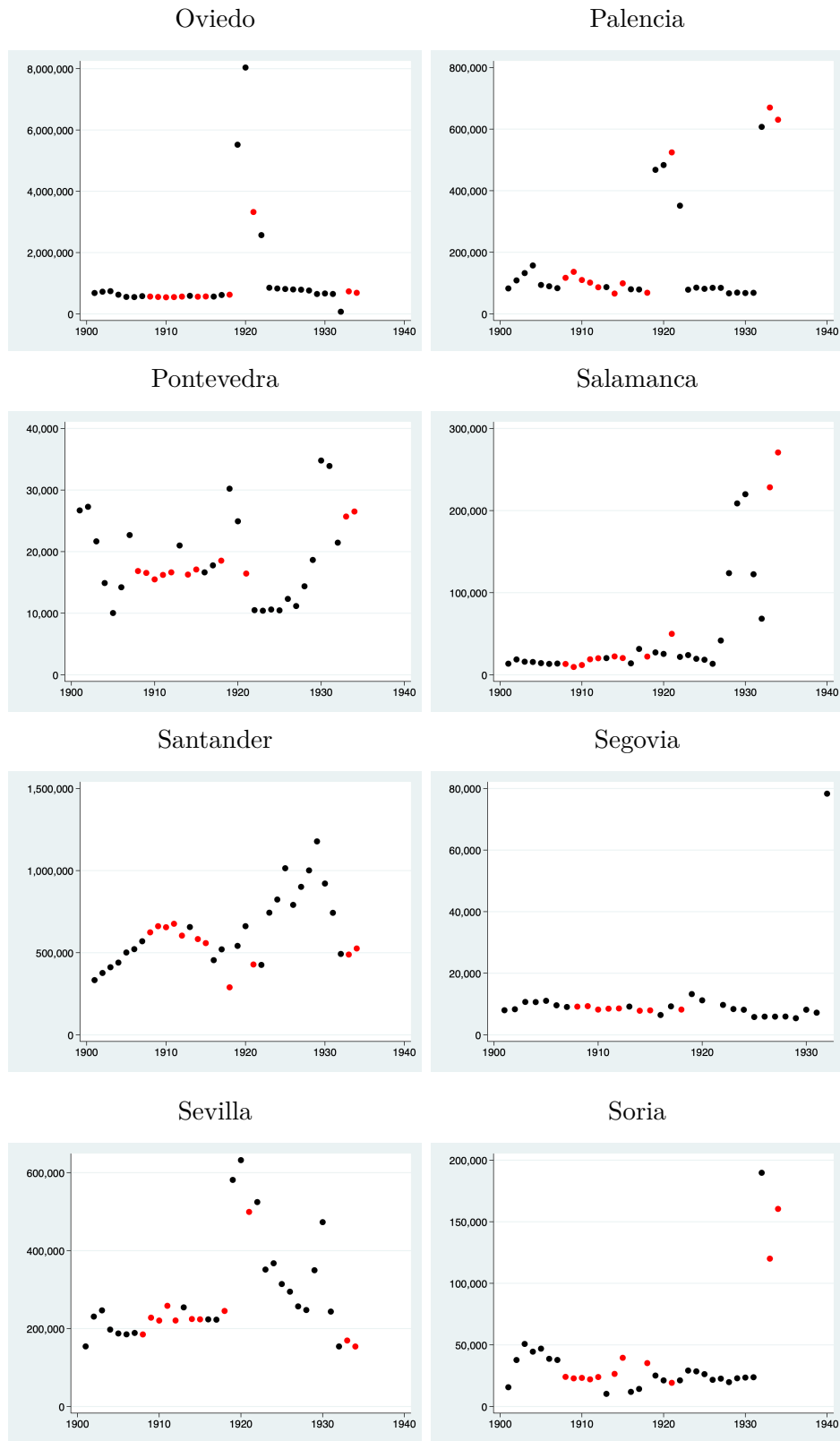
Notes: The original data points are in black; the imputed data points are in red.

Figure A5: Minas Revenues by Provinces, 1901–1934.



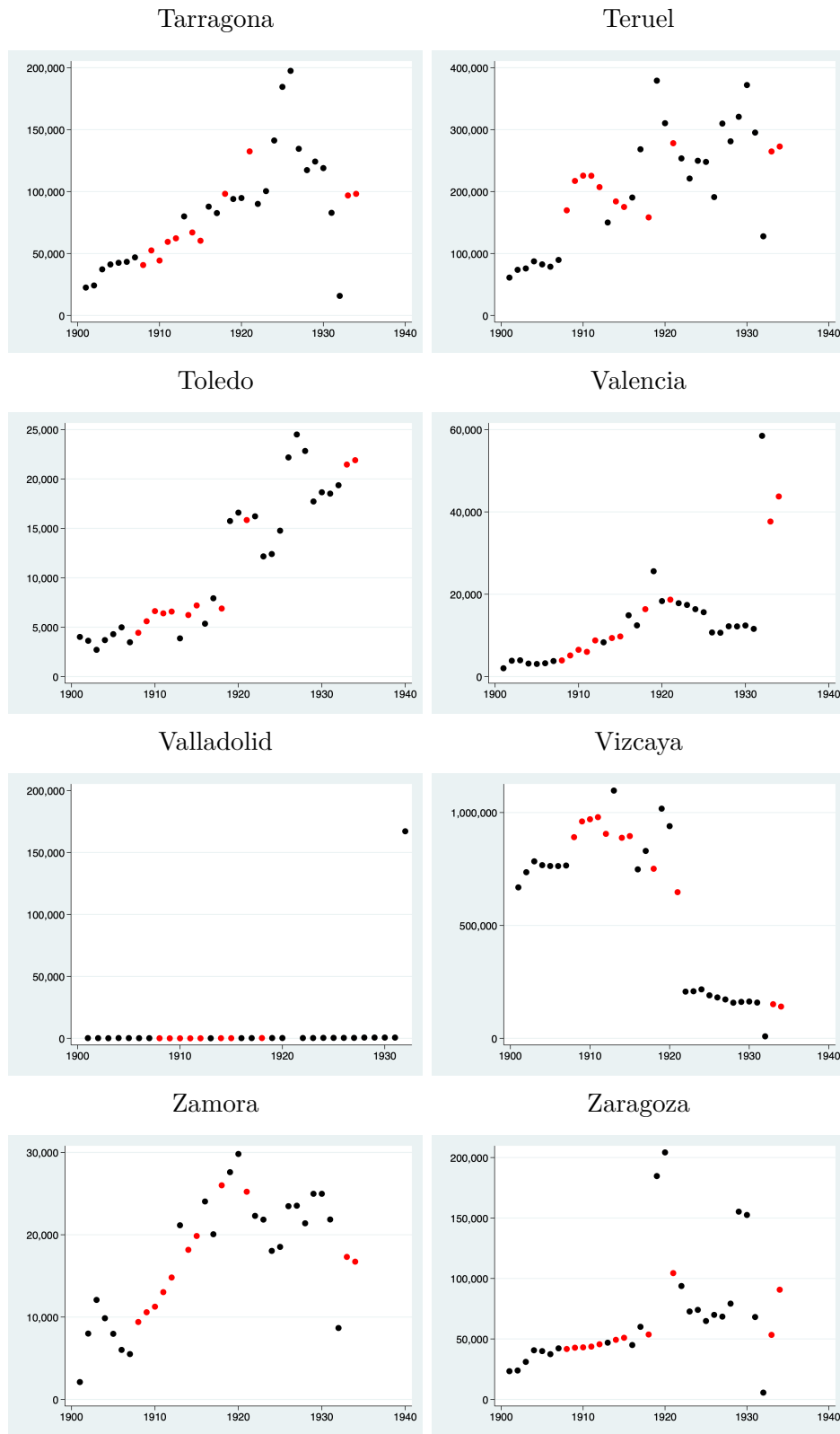
Notes: The original data points are in black; the imputed data points are in red.

Figure A5: Minas Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A5: Minas Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.6 Cédulas Personales

Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	52,996	83,887	96,900	74,974	107,671	126,341
1902	55,526	80,061	116,355	76,041	115,535	140,771
1903	56,485	78,072	122,794	72,861	115,891	138,277
1904	62,608	73,609	124,585	69,899	115,943	139,063
1905	61,291	61,851	117,729	61,032	112,460	138,022
1906	60,648	64,919	117,843	63,347	112,804	153,879
1907	56,945	63,064	106,231	56,373	112,474	115,607
1908	57,009	75,517	101,478	41,516	111,215	126,380
1909	56,450	84,872	96,461	40,402	109,649	123,595
1910	55,435	75,062	87,154	37,415	108,877	118,633
1911	56,251	86,446	95,430	43,745	109,532	118,113
1912	64,714	102,277	93,108	51,999	110,545	118,270
1913	63,643	151,833	91,607	31,269	109,550	119,758
1914	63,295	83,795	71,641	30,285	108,874	111,306
1915	64,028	87,661	91,410	29,411	105,702	111,962
1916	77,804	98,138	82,879	33,072	109,702	116,921
1917	69,866	110,204	72,403	32,301	114,941	90,146
1918	70,849	105,500	80,273	26,705	112,665	94,076
1919	68,034	80,754	65,867	25,034	114,386	135,045
1920	70,156	88,051	73,920	34,145	116,954	168,615
1921	76,500	90,263	78,710	39,716	115,875	82,648
1922	80,262	88,890	79,681	47,076	120,394	185,053
1923	84,375	95,855	96,624	75,759	130,960	185,979
1924	93,390	110,098	127,609	63,650	131,105	264,505
1925	98,606	111,905	120,987	50,330	136,961	272,673
1926	103,894	117,357	135,832	70,858	140,230	276,975
1927	108,840	125,332	151,510	77,585	144,405	314,226
1928	114,276	132,847	168,806	80,065	148,824	298,910
1929	120,897	140,177	183,614	88,372	153,452	357,355
1930	125,049	141,149	213,036	95,033	156,667	362,910
1931	131,136	140,160	214,683	107,752	161,970	373,017
1932	136,874	150,912	236,439	113,398	166,012	383,111
1933	142,974	151,225	267,971	116,880	170,602	386,517
1934	148,727	159,059	286,341	123,247	175,896	418,423

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	137,545	763,100	182,671	167,769	135,680	171,312
1902	149,295	763,100	204,375	179,436	133,594	178,655
1903	154,174	915,200	205,763	185,104	140,757	178,926
1904	164,081	915,200	206,899	188,954	143,483	177,640
1905	166,997	915,200	204,402	190,039	140,486	176,688
1906	169,192	915,200	204,377	187,779	145,835	176,692
1907	165,476	1,089,967	204,289	185,544	136,274	165,403
1908	156,926	762,786	204,101	178,622	113,404	172,225
1909	158,289	758,845	207,582	180,794	101,187	174,826
1910	154,781	724,831	210,279	180,135	87,346	176,905
1911	159,664	649,695	206,558	176,663	91,571	173,542
1912	153,561	662,448	205,693	171,313	89,039	173,370
1913	141,089	350,389	191,960	173,555	76,790	157,957
1914	136,543	347,831	187,574	170,634	67,325	160,010
1915	133,826	358,521	184,004	163,994	61,018	161,251
1916	135,410	342,050	185,711	167,914	67,687	161,504
1917	140,244	349,218	188,419	166,297	65,227	154,638
1918	134,702	346,616	184,317	166,286	86,796	156,671
1919	135,941	337,521	184,335	164,330	77,011	257,330
1920	136,378	351,683	181,178	175,604	73,232	156,576
1921	136,404	366,955	190,245	172,454	78,201	159,799
1922	137,892	391,111	187,516	178,865	75,634	162,724
1923	142,343	375,534	192,776	185,819	105,839	178,151
1924	168,714	433,370	205,471	170,823	105,870	195,490
1925	167,666	455,049	207,967	230,119	112,354	202,862
1926	174,872	459,676	212,870	211,970	122,906	210,533
1927	185,871	463,971	218,165	208,050	130,359	232,805
1928	196,528	466,243	222,789	191,582	137,301	253,070
1929	196,065	467,397	230,175	216,298	147,399	272,269
1930	207,499	466,946	233,348	219,480	158,147	292,253
1931	210,794	467,803	239,751	212,544	167,132	285,422
1932	203,334	467,688	245,620	205,283	173,467	299,340
1933	232,873	468,012	250,812	191,452	181,472	314,098
1934	220,614	468,272	257,018	228,091	190,614	315,632

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	73,750	110,867	353,279	69,156	158,996	87,433
1902	104,736	130,696	349,718	79,477	176,746	96,287
1903	99,688	136,076	349,635	84,412	177,456	113,112
1904	102,361	136,613	354,017	94,288	169,016	112,481
1905	123,165	135,653	349,847	95,173	171,338	101,827
1906	128,408	144,844	347,146	98,084	173,825	100,529
1907	126,187	137,181	348,466	82,761	168,300	82,837
1908	124,540	132,664	339,692	115,602	168,421	81,682
1909	139,670	133,130	338,634	126,783	167,232	73,289
1910	140,332	132,081	334,739	124,134	165,072	66,955
1911	138,854	130,222	327,957	134,481	167,010	77,250
1912	152,848	129,919	323,338	140,908	166,562	82,040
1913	186,776	119,039	312,943	147,769	167,290	54,298
1914	147,142	119,494	301,459	166,365	170,270	127,389
1915	147,553	116,389	309,406	139,501	173,366	103,867
1916	164,641	120,680	308,354	178,414	173,887	107,924
1917	165,933	125,623	299,227	157,979	172,236	97,653
1918	160,781	130,805	298,446	156,601	173,531	80,064
1919	156,056	134,988	232,130	152,287	173,531	87,715
1920	164,570	140,416	301,091	162,467	174,874	96,921
1921	158,553	141,716	175,264	161,918	177,847	81,410
1922	165,147	142,705	275,246	149,417	179,303	82,269
1923	179,659	145,788	290,516	161,683	190,679	114,757
1924	199,763	180,182	332,093	176,759	237,937	120,562
1925	205,227	194,505	336,121	187,916	245,643	131,762
1926	215,309	190,915	362,915	189,356	251,951	136,132
1927	240,388	228,160	372,369	201,930	271,336	145,516
1928	235,338	199,975	385,498	194,984	282,821	154,206
1929	253,292	241,190	399,332	213,402	330,734	162,589
1930	249,436	223,147	405,772	205,789	376,512	168,636
1931	259,164	233,664	413,964	207,543	380,064	160,456
1932	281,294	247,977	417,733	232,389	373,461	169,206
1933	285,092	238,212	423,154	228,251	381,444	170,753
1934	299,278	264,824	430,013	241,354	407,535	213,717

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	121,457	203,229	63,367	102,141	134,342	215,107
1902	135,440	203,229	68,707	112,656	132,086	213,843
1903	138,299	213,460	69,682	118,401	173,337	216,232
1904	142,032	213,460	67,847	117,688	173,337	215,709
1905	147,408	213,460	68,132	108,967	173,337	214,015
1906	147,373	215,652	67,106	110,172	175,760	212,897
1907	141,075	206,796	63,393	111,080	211,722	211,444
1908	153,545	221,006	60,960	114,168	182,018	235,423
1909	155,643	225,401	62,814	115,825	192,136	300,091
1910	166,511	227,439	60,399	116,339	189,549	258,555
1911	157,320	227,735	58,835	116,349	194,439	231,816
1912	157,211	235,870	58,345	117,914	170,919	160,147
1913	175,328	236,651	59,608	123,942	161,909	194,162
1914	148,210	235,237	45,560	112,658	156,595	196,465
1915	135,482	242,732	47,023	117,340	159,006	28,211
1916	133,809	252,339	55,998	119,310	175,947	29,682
1917	132,814	256,738	56,255	127,454	167,118	26,714
1918	134,810	260,092	45,444	118,815	179,932	190,286
1919	134,810	260,092	54,072	143,988	166,359	168,906
1920	138,929	269,572	57,520	132,263	189,301	191,396
1921	136,149	279,019	55,870	144,399	158,571	181,418
1922	142,699	327,097	52,435	125,826	183,756	194,903
1923	144,909	377,555	58,752	125,581	202,456	204,390
1924	157,886	440,471	70,176	150,075	234,218	236,697
1925	161,378	469,342	80,072	160,158	256,445	244,673
1926	168,505	469,245	80,856	169,700	256,529	255,181
1927	173,892	469,194	89,155	176,582	346,614	274,236
1928	176,826	469,251	99,697	182,775	273,129	286,073
1929	187,554	-	116,852	177,857	351,744	315,853
1930	190,796	-	135,573	201,506	279,797	337,033
1931	195,652	-	123,940	199,885	305,073	347,877
1932	203,682	-	122,681	212,391	335,842	361,856
1933	206,255	-	126,111	256,072	307,360	370,997
1934	216,389	-	150,170	281,375	336,069	392,731

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	138,095	70,426	152,838	794,692	81,026	69,594
1902	147,159	69,857	188,343	852,938	88,940	74,697
1903	156,943	70,505	188,960	873,551	266,500	72,855
1904	159,544	71,418	114,156	911,252	266,500	73,619
1905	155,717	62,953	188,051	902,151	170,805	68,224
1906	155,215	60,270	195,720	984,264	170,805	72,730
1907	156,634	56,710	190,178	949,336	168,349	66,426
1908	144,627	57,063	179,570	741,298	162,579	62,571
1909	162,247	57,800	190,354	689,368	142,770	58,190
1910	150,660	57,747	193,665	655,368	122,249	54,145
1911	157,019	64,700	189,450	552,158	120,043	48,303
1912	162,088	72,004	194,165	528,412	138,450	50,653
1913	148,286	37,343	189,327	152,471	58,804	33,703
1914	150,741	36,597	178,389	168,911	49,694	25,372
1915	192,091	148,144	34,762	191,702	154,375	47,572
1916	190,431	148,513	37,728	197,283	160,500	49,961
1917	196,046	125,665	85,042	186,774	159,666	49,971
1918	153,887	60,362	175,289	155,040	48,241	24,622
1919	153,887	127,790	129,750	144,746	34,161	19,220
1920	158,233	91,741	179,899	161,050	41,756	29,542
1921	156,673	157,396	175,764	173,963	30,329	35,714
1922	159,277	105,967	165,343	166,286	41,998	25,000
1923	166,312	116,631	191,510	209,227	64,333	63,293
1924	171,202	120,335	180,695	241,927	69,275	58,620
1925	184,602	120,578	221,992	247,438	70,255	50,890
1926	187,698	124,874	206,430	262,927	77,497	64,229
1927	194,224	80,367	231,164	270,910	93,900	72,236
1928	199,088	73,130	220,880	282,526	97,232	79,579
1929	204,906	49,555	253,875	300,306	113,074	87,713
1930	215,357	47,282	247,712	311,373	119,334	100,626
1931	219,942	29,613	249,938	312,707	118,945	98,524
1932	226,120	38,672	257,242	316,208	118,045	103,029
1933	233,205	34,603	247,466	333,226	116,405	114,731
1934	239,781	27,495	261,297	354,687	129,471	116,892

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	27,928	152,741	236,490	120,961	193,990	198,642
1902	29,708	156,047	237,311	120,763	196,010	198,435
1903	31,237	171,811	241,824	122,036	200,769	203,304
1904	34,300	167,034	234,467	123,901	201,090	205,422
1905	35,393	173,465	227,728	121,922	201,542	205,726
1906	38,935	166,352	230,964	123,386	203,463	199,698
1907	25,354	107,712	225,212	121,328	208,281	192,357
1908	29,643	119,276	215,062	121,863	198,895	195,508
1909	28,115	116,572	208,436	124,040	191,780	206,475
1910	24,375	131,868	203,270	104,336	184,377	197,362
1911	30,708	111,199	200,117	108,572	184,240	179,208
1912	35,364	107,190	199,761	119,006	181,477	179,900
1913	57,824	149,353	188,909	111,585	173,919	184,395
1914	51,491	178,003	194,097	109,492	172,067	184,526
1915	24,713	53,600	193,265	216,651	171,981	179,374
1916	32,207	56,336	189,649	238,238	173,546	183,999
1917	27,820	54,536	157,825	200,104	169,189	181,207
1918	60,037	147,915	196,513	109,523	166,552	179,051
1919	47,132	138,307	175,042	98,671	166,552	184,542
1920	62,619	132,547	196,077	108,219	165,300	183,538
1921	57,932	146,197	197,621	89,978	169,691	188,801
1922	73,061	169,926	202,244	112,484	167,561	183,100
1923	76,775	157,082	205,059	118,681	172,483	200,771
1924	87,303	159,822	258,236	129,494	199,602	209,934
1925	100,630	170,893	275,103	131,236	207,410	226,986
1926	104,808	178,679	272,853	139,373	207,230	231,506
1927	113,111	183,837	283,865	146,667	217,957	241,846
1928	121,456	189,681	277,136	152,491	219,999	247,549
1929	130,553	197,119	298,885	165,396	228,027	266,275
1930	138,132	204,781	310,867	170,574	239,070	273,128
1931	146,821	211,900	305,530	177,460	240,413	286,047
1932	155,256	218,890	293,465	184,873	241,309	293,988
1933	163,516	227,647	312,610	191,349	245,611	303,910

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Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	113,535	111,393	211,391	107,965	110,413	140,370
1902	148,858	111,149	216,206	108,296	134,923	136,694
1903	146,844	112,395	213,491	106,983	134,059	133,895
1904	149,865	111,397	206,190	109,017	137,497	144,945
1905	149,178	111,515	187,225	108,044	126,206	146,473
1906	152,560	112,331	196,976	108,371	145,165	147,262
1907	146,996	109,549	183,259	106,794	140,303	147,410
1908	133,028	105,054	178,057	102,983	135,063	151,756
1909	128,146	102,761	164,212	103,777	139,492	155,469
1910	125,296	101,546	163,097	103,436	136,414	155,245
1911	120,397	101,382	141,890	103,191	139,715	156,138
1912	119,430	101,848	147,001	103,955	139,767	153,230
1913	106,755	100,411	114,263	100,691	138,835	153,795
1914	105,039	103,364	101,990	99,828	143,268	150,948
1915	110,057	101,575	104,741	100,060	131,395	152,713
1916	107,191	103,418	91,831	99,782	132,706	150,261
1917	103,421	102,445	111,954	99,181	140,162	150,286
1918	103,320	102,281	103,805	99,494	145,183	153,142
1919	100,329	98,381	95,018	103,651	166,334	153,142
1920	106,525	100,861	105,949	97,875	156,094	152,239
1921	109,392	103,716	107,634	100,392	141,771	159,632
1922	110,106	100,485	116,494	105,739	144,818	158,735
1923	121,382	110,024	137,532	115,634	133,062	191,070
1924	136,433	111,198	159,234	120,974	164,338	178,469
1925	139,463	122,135	152,494	123,031	159,980	179,156
1926	144,278	125,534	172,861	129,069	165,257	184,345
1927	150,953	129,741	180,097	133,330	188,577	181,030
1928	154,824	133,697	200,873	141,232	250,851	196,544
1929	164,347	151,719	207,059	144,523	211,002	202,182
1930	168,892	159,960	216,931	150,469	198,238	205,887
1931	168,534	162,102	229,922	155,722	203,068	215,357
1932	168,083	169,770	245,326	160,338	209,921	213,431
1933	173,704	172,017	263,425	167,532	215,398	219,825
1934	180,352	176,728	272,807	172,464	216,946	209,787

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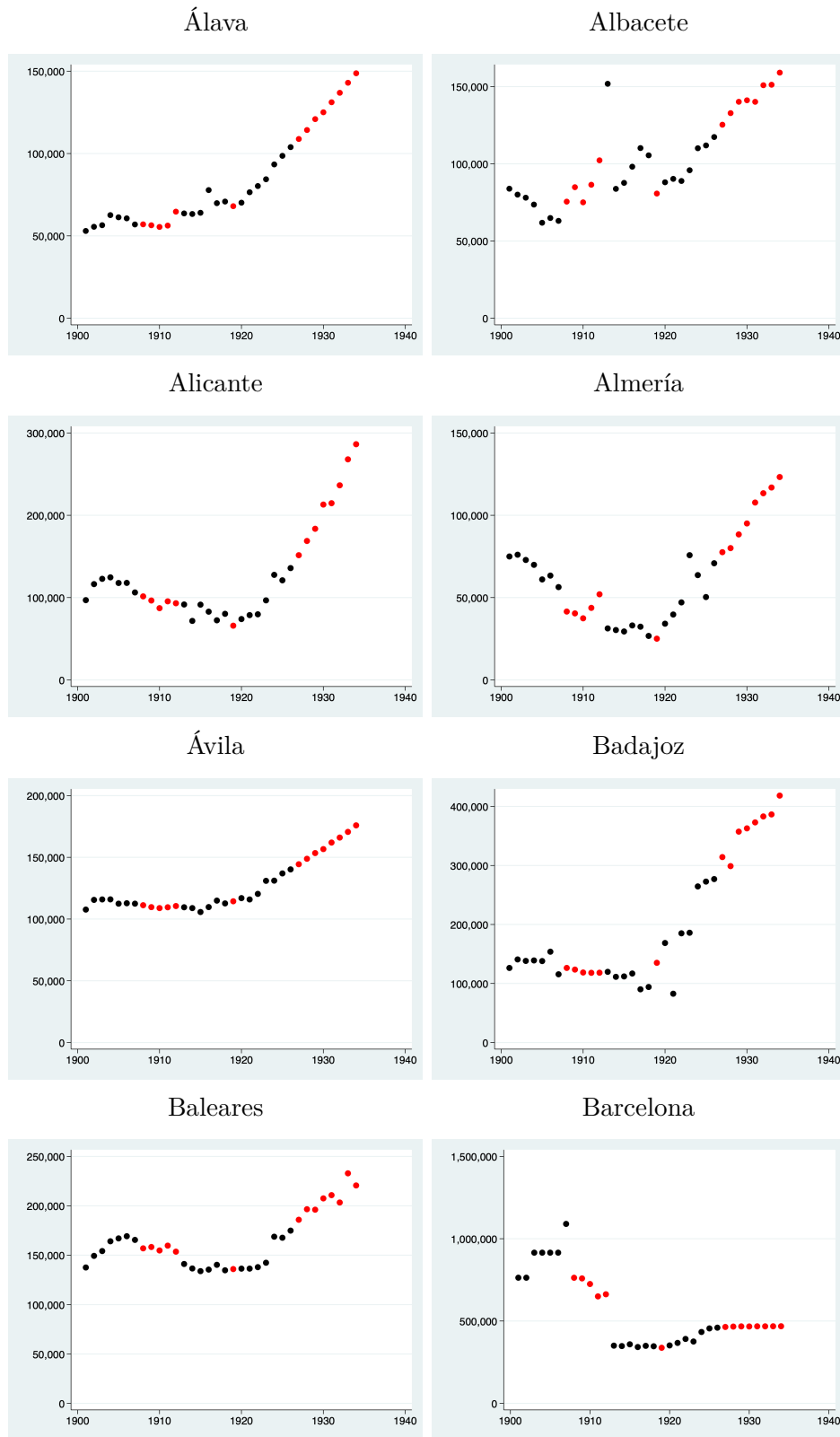
Table A6: Cédulas Personales Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	96,461	301,201	135,936	225,519	191,807	164,619
1902	112,992	320,838	158,818	220,974	190,302	161,430
1903	116,470	325,458	148,715	223,784	187,291	181,978
1904	115,252	325,052	154,038	231,413	183,800	226,791
1905	107,843	326,316	153,587	225,028	177,499	217,259
1906	114,986	352,096	158,905	230,264	188,274	215,393
1907	110,662	348,023	157,156	198,663	182,939	196,697
1908	136,968	280,982	123,464	211,128	178,652	200,938
1909	151,066	261,904	124,063	205,311	179,847	199,307
1910	160,527	247,748	117,477	203,850	180,316	196,752
1911	164,962	238,019	119,281	206,429	177,293	196,617
1912	173,080	228,675	123,921	225,921	169,418	191,459
1913	196,098	203,403	117,866	235,769	161,879	184,866
1914	188,065	186,834	116,297	237,032	158,876	149,561
1915	194,378	171,129	116,737	239,371	159,628	151,955
1916	194,123	183,963	118,086	251,264	159,485	146,440
1917	197,162	176,433	120,166	258,198	160,187	154,081
1918	199,029	176,440	121,156	275,295	157,718	163,984
1919	181,458	184,872	106,158	243,769	163,627	164,242
1920	198,561	187,889	116,501	277,741	157,777	164,629
1921	206,796	250,171	120,846	296,922	156,755	189,756
1922	183,214	273,383	122,575	326,202	158,450	213,155
1923	226,863	355,785	127,688	348,726	162,168	194,419
1924	261,852	378,811	144,799	399,342	186,310	229,615
1925	273,768	390,980	158,142	459,772	164,075	231,914
1926	269,115	445,840	163,853	461,508	179,393	243,187
1927	295,275	459,847	173,454	466,283	179,243	256,415
1928	299,374	465,365	180,804	467,628	189,972	267,319
1929	339,560	466,877	196,737	468,363	188,515	281,296
1930	326,296	467,221	202,934	468,455	193,169	284,210
1931	328,318	468,224	211,682	468,575	199,953	299,180
1932	358,388	468,321	222,139	468,613	201,181	311,972
1933	361,457	468,567	227,926	468,862	207,634	325,269
1934	387,593	468,554	241,888	468,903	209,316	332,508

Sources: See Chapter 2.

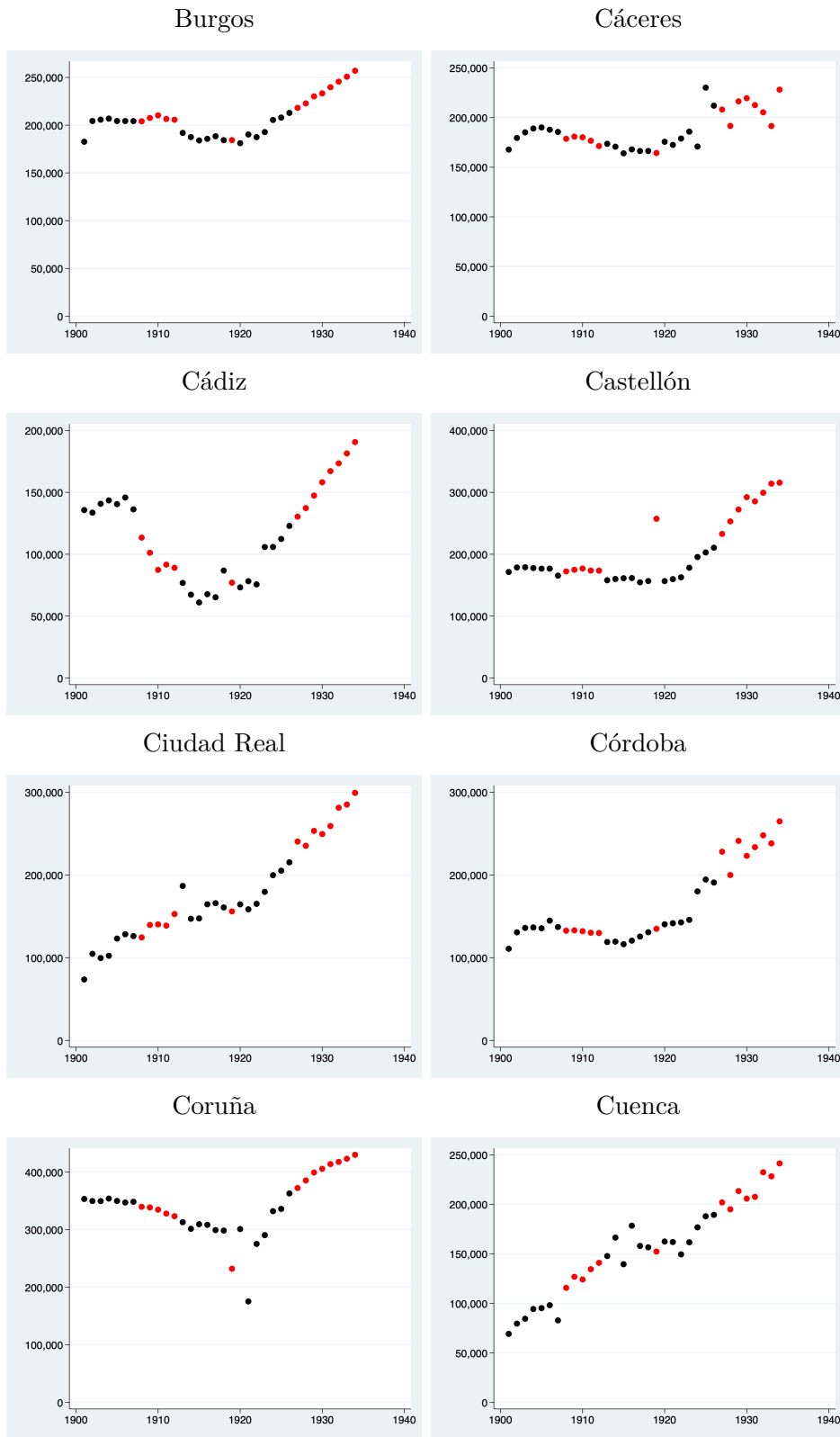
Notes: All data are in nominal values. I corrected for outliers in Guadalajara, Guipúzcoa, Lérida and Teruel in 1919; and in Pontevedra in 1920.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



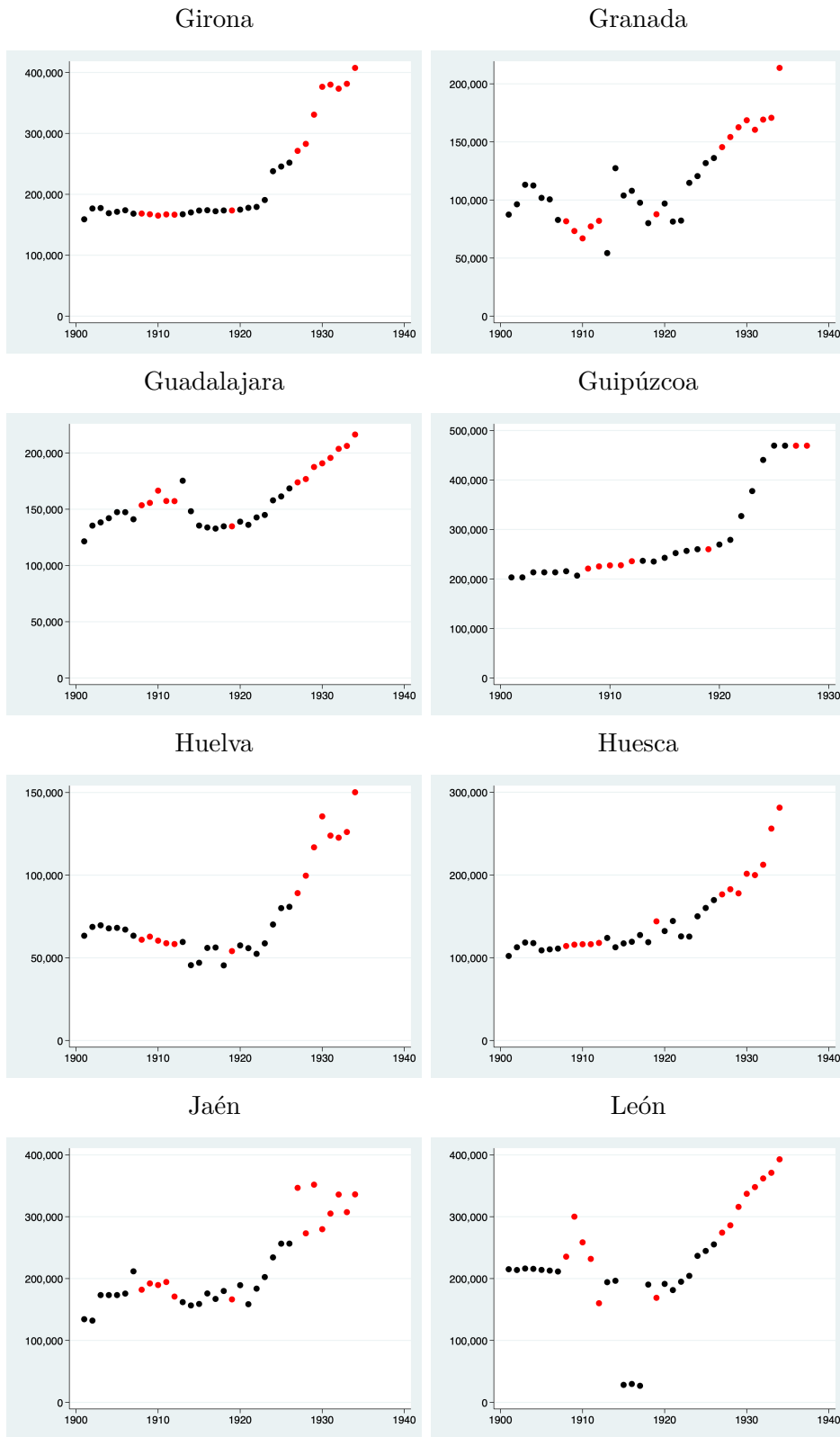
Notes: The original data points are in black; the imputed data points are in red.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



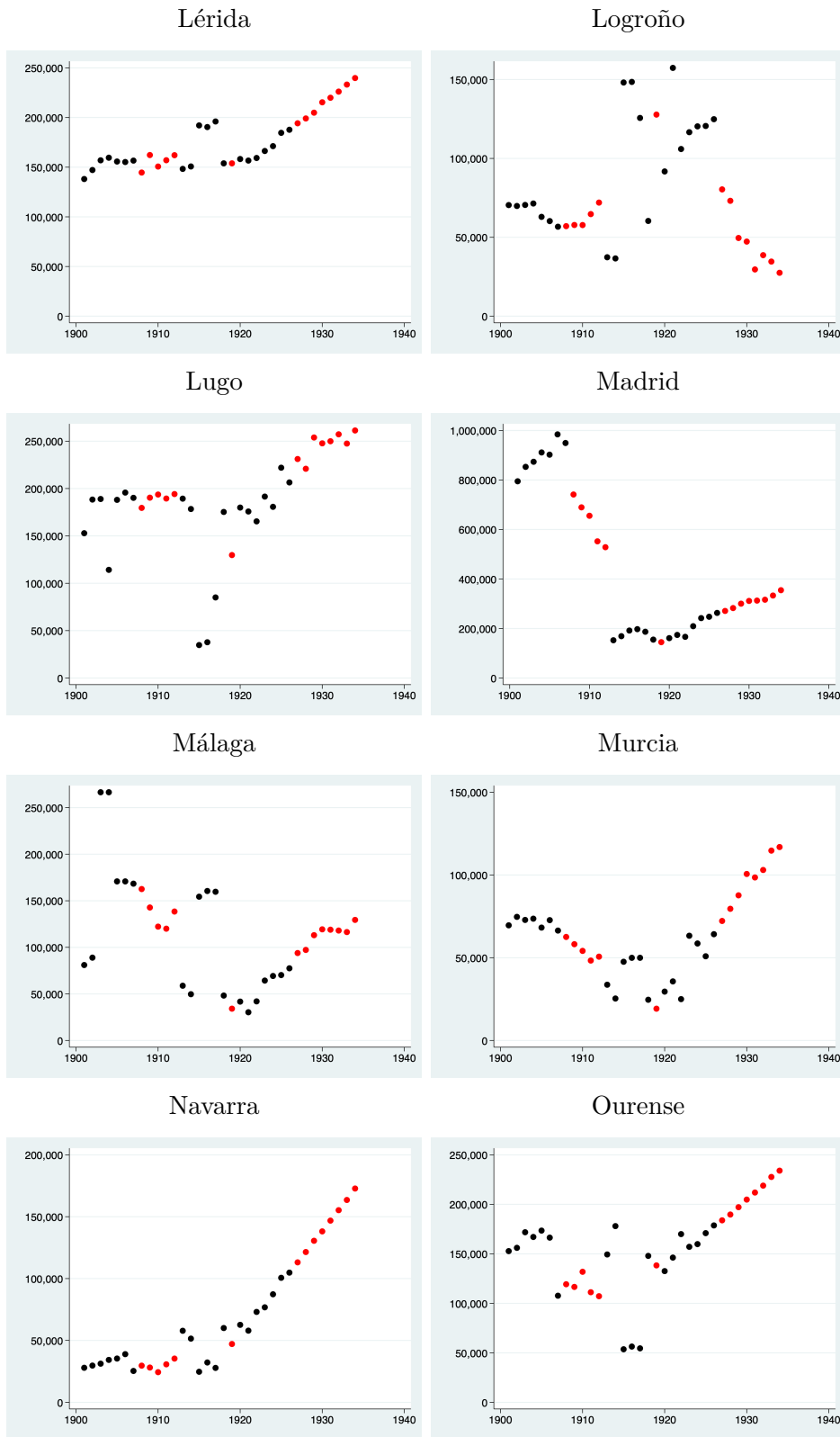
Notes: The original data points are in black; the imputed data points are in red.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



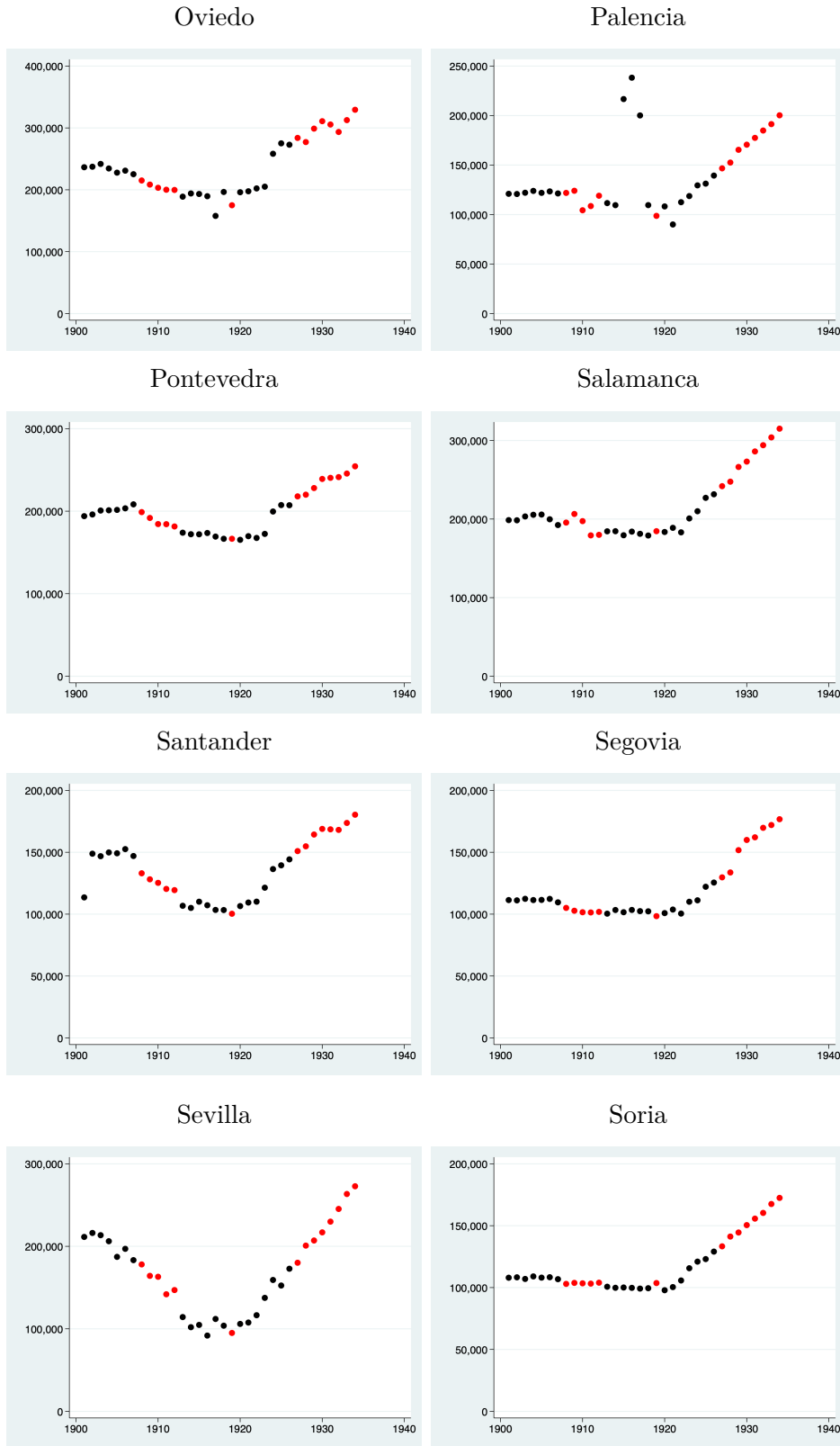
Notes: The original data points are in black; the imputed data points are in red.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



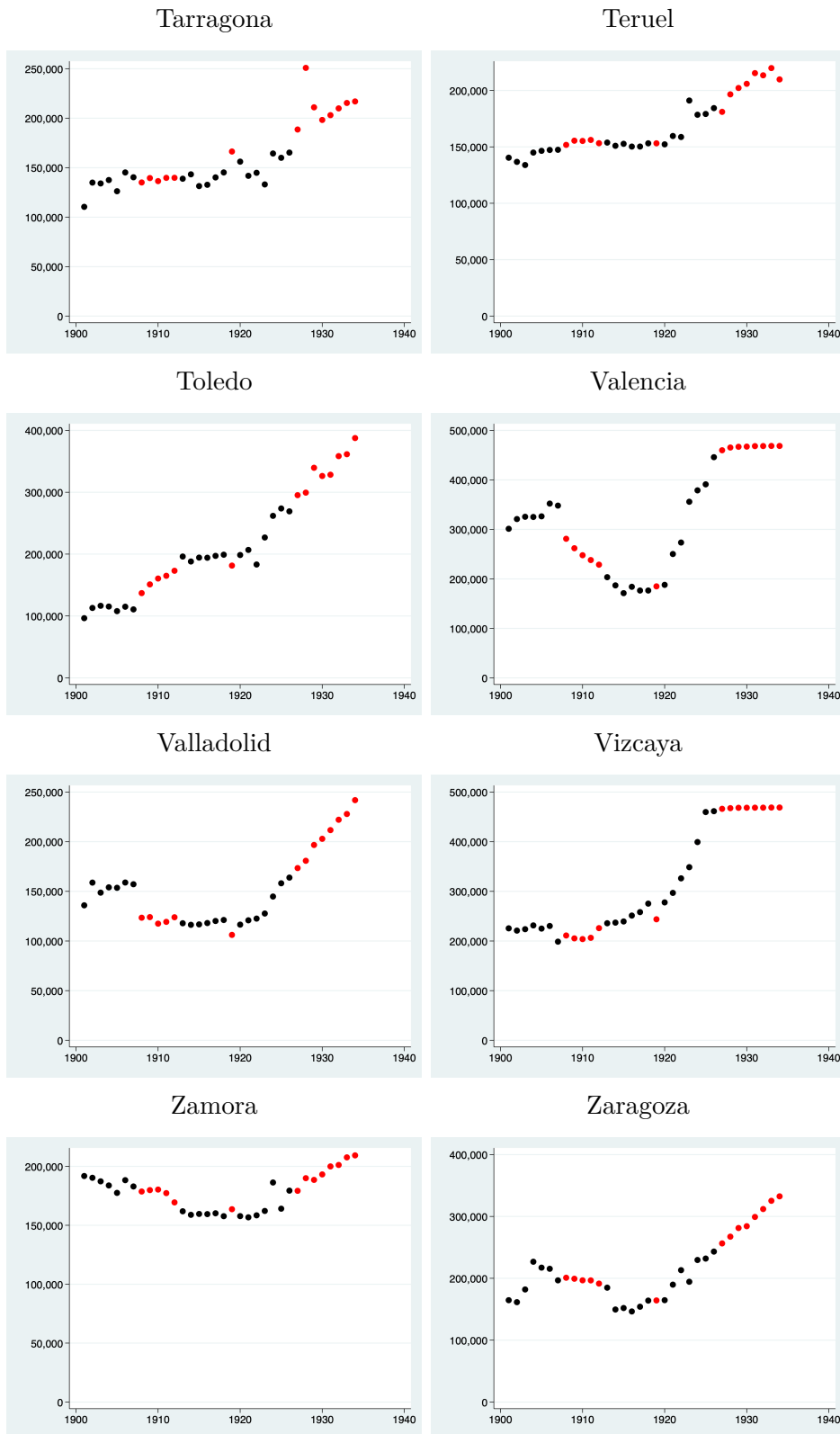
Notes: The original data points are in black; the imputed data points are in red.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A6: Cédulas Personales Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.7 Customs

Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	-	3,815,105	695,309	-	112,638
1902	-	-	4,134,358	555,540	-	112,275
1903	-	-	3,434,056	1,017,391	-	139,085
1904	-	-	2,623,155	395,936	-	129,541
1905	-	-	3,313,701	752,847	-	173,480
1906	-	-	4,485,700	742,396	-	152,565
1907	-	-	3,416,239	669,364	-	119,939
1908	-	-	4,586,726	1,261,063	-	145,578
1909	-	-	6,054,687	1,577,573	-	293,172
1910	-	-	5,640,624	1,489,065	-	303,911
1911	-	-	5,274,707	1,524,927	-	166,037
1912	-	-	5,724,017	1,682,608	-	167,458
1913	-	-	6,829,883	1,684,412	-	230,873
1914	-	-	5,947,746	1,432,557	-	679,848
1915	-	-	5,671,725	555,738	-	836,316
1916	-	-	5,892,126	538,750	-	608,018
1917	-	-	4,163,622	643,963	-	839,221
1918	-	-	3,335,670	417,585	-	1,620,237
1919	-	-	4,918,928	523,333	-	1,197,486
1920	-	-	6,511,475	1,015,263	-	1,600,283
1921	-	-	12,362,868	1,134,039	-	1,693,930
1922	-	-	15,665,946	2,307,305	-	756,700
1923	-	-	16,392,089	2,048,416	-	890,768
1924	-	-	25,492,352	2,443,527	-	1,144,777
1925	-	-	16,518,921	2,801,587	-	879,753
1926	-	-	13,557,624	1,981,793	-	862,930
1927	-	-	12,737,438	2,114,290	-	551,278
1928	-	-	14,177,312	2,240,069	-	518,706
1929	-	-	14,803,218	2,786,582	-	564,211
1930	-	-	10,496,658	2,663,354	-	641,153
1931	-	-	9,902,336	1,849,456	-	400,734
1932	-	-	11,610,000	1,568,000	-	413,000
1933	-	-	16,762,000	1,111,000	-	469,000
1934	-	-	9,261,078	2,317,731	-	304,494

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Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	584,674	38,504,301	-	1,320,521	3,685,733	37,900
1902	487,012	31,474,919	-	847,486	2,386,559	30,297
1903	588,928	33,049,490	-	1,183,738	1,982,947	46,126
1904	751,571	34,472,037	-	1,289,682	2,095,478	168,622
1905	180,374	42,088,365	-	1,331,078	3,064,106	98,066
1906	619,295	49,610,211	-	1,222,758	2,859,268	129,365
1907	645,934	40,534,098	-	1,245,129	2,414,450	15,873
1908	541,132	41,428,997	-	1,320,070	2,537,366	234,618
1909	699,405	44,405,018	-	1,422,679	2,576,585	194,963
1910	667,164	43,972,153	-	1,476,249	2,584,103	196,842
1911	774,762	45,979,117	-	1,014,733	3,248,748	214,921
1912	990,098	45,127,511	-	1,249,993	3,330,808	264,653
1913	1,135,893	66,670,572	-	1,109,811	3,788,132	149,564
1914	840,846	65,205,561	-	1,377,122	3,256,359	288,172
1915	674,311	45,779,641	-	1,221,737	2,595,765	25,151
1916	493,098	48,720,015	-	1,908,232	3,997,389	153,967
1917	521,420	45,170,308	-	2,323,754	5,059,427	60,442
1918	449,908	41,205,821	-	4,321,096	4,558,816	94,377
1919	699,910	65,590,621	-	1,884,790	6,519,103	86,680
1920	738,273	97,039,888	-	1,456,585	10,052,223	653,374
1921	1,113,046	116,479,830	-	1,269,655	10,660,663	458,913
1922	1,744,142	171,511,465	-	773,045	13,984,096	518,231
1923	2,207,211	154,759,924	-	1,990,703	11,388,748	457,253
1924	3,867,742	181,671,981	-	2,044,678	10,794,845	659,018
1925	5,692,055	167,282,310	-	806,862	10,903,136	799,425
1926	6,985,026	164,839,741	-	718,584	9,501,457	807,078
1927	6,698,748	166,397,808	-	389,852	11,288,951	802,370
1928	2,885,015	187,721,402	-	297,020	11,501,179	1,013,892
1929	2,203,259	195,430,374	-	279,095	11,497,655	905,138
1930	3,275,851	179,340,807	-	240,266	12,325,175	1,201,407
1931	4,001,609	163,864,921	-	196,055	9,742,801	1,157,596
1932	4,704,000	179,490,000	-	320,000	10,677,000	1,301,000
1933	3,760,000	166,934,000	-	198,000	10,611,000	979,000
1934	6,067,349	177,656,015	-	208,806	10,909,678	933,256

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Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	-	-	2,247,685	-	11,323,833	83,102
1902	-	-	1,681,847	-	11,118,719	54,542
1903	-	-	1,656,524	-	12,917,595	34,395
1904	-	-	1,594,653	-	10,595,049	53,467
1905	-	-	2,030,453	-	10,982,793	88,903
1906	-	-	2,096,879	-	11,807,310	37,329
1907	-	-	1,890,135	-	11,924,915	49,800
1908	-	-	2,108,404	-	14,618,965	75,274
1909	-	-	1,738,331	-	17,016,476	91,268
1910	-	-	1,864,214	-	19,907,810	92,722
1911	-	-	3,783,387	-	16,935,714	128,355
1912	-	-	4,595,224	-	16,694,028	37,861
1913	-	-	4,979,416	-	20,058,468	67,286
1914	-	-	3,818,062	-	12,249,791	44,427
1915	-	-	2,399,050	-	7,557,576	15,176
1916	-	-	2,196,296	-	11,423,361	8,940
1917	-	-	1,750,845	-	9,929,195	9,791
1918	-	-	792,731	-	6,788,532	12,197
1919	-	-	1,753,586	-	7,791,518	11,643
1920	-	-	3,401,369	-	15,717,204	48,540
1921	-	-	5,824,564	-	18,853,604	71,054
1922	-	-	8,348,297	-	30,814,266	360,595
1923	-	-	8,646,183	-	37,923,430	141,023
1924	-	-	10,702,924	-	47,056,657	145,599
1925	-	-	7,883,432	-	56,388,938	135,661
1926	-	-	7,544,512	-	58,933,864	112,747
1927	-	-	9,100,139	-	57,927,752	238,972
1928	-	-	8,024,023	-	64,960,957	265,793
1929	-	-	8,906,447	-	67,202,854	713,052
1930	-	-	7,722,301	-	55,484,814	506,598
1931	-	-	7,365,394	-	36,271,785	865,911
1932	-	-	7,753,000	-	34,080,000	666,000
1933	-	-	6,197,000	-	34,719,000	198,000
1934	-	-	8,828,866	-		821,238

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Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	-	16,137,814	2,369,520	106,393	-	-
1902	-	15,873,127	1,758,460	135,621	-	-
1903	-	16,668,544	1,807,045	188,589	-	-
1904	-	14,926,441	2,037,138	200,206	-	-
1905	-	14,175,857	3,468,543	175,301	-	-
1906	-	16,776,877	3,089,836	96,714	-	-
1907	-	16,250,973	3,074,981	64,567	-	-
1908	-	16,717,058	4,159,512	105,435	-	-
1909	-	16,908,318	6,727,980	86,878	-	-
1910	-	17,152,421	5,894,400	76,149	-	-
1911	-	22,090,224	6,724,469	72,844	-	-
1912	-	22,710,937	6,319,486	62,534	-	-
1913	-	24,735,904	7,043,376	106,394	-	-
1914	-	18,943,422	5,801,329	34,498	-	-
1915	-	11,128,069	3,875,157	16,156	-	-
1916	-	15,361,258	4,044,573	29,641	-	-
1917	-	12,875,596	3,129,247	26,492	-	-
1918	-	17,140,251	1,628,861	14,003	-	-
1919	-	12,587,166	2,002,246	47,389	-	-
1920	-	28,025,975	4,219,037	156,337	-	-
1921	-	35,645,725	6,913,947	233,994	-	-
1922	-	47,939,483	9,285,677	184,718	-	-
1923	-	59,005,073	10,384,284	182,063	-	-
1924	-	71,189,856	12,463,127	279,246	-	-
1925	-	75,413,373	12,381,376	413,953	-	-
1926	-	81,284,160	10,921,319	1,023,730	-	-
1927	-	83,109,080	12,090,450	878,837	-	-
1928	-	95,182,993	12,866,262	694,380	-	-
1929	-	95,296,500	15,382,955	1,165,891	-	-
1930	-	79,600,234	17,616,806	2,165,622	-	-
1931	-	60,031,132	11,562,946	2,647,956	-	-
1932	-	56,017,000	8,070,000	1,481,000	-	-
1933	-	59,262,000	7,106,000	1,284,000	-	-
1934	-	76,627,693	15,102,470	1,297,974	-	-

Continued on Next Page.

Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	71,719	-	2,065	43,651	6,232,941	2,895,265
1902	130,196	-	3,356	59,557	4,556,362	2,435,635
1903	175,829	-	20,667	46,641	4,788,905	2,243,743
1904	111,511	-	2,827	40,956	4,865,387	1,965,892
1905	126,683	-	3,443	72,195	7,463,385	2,995,142
1906	105,963	-	3,085	53,450	6,435,941	2,839,338
1907	79,018	-	11,600	169,539	4,406,803	2,179,537
1908	126,196	-	-	97,377	5,525,157	3,414,445
1909	103,505	-	-	118,204	5,081,342	3,233,552
1910	117,255	-	-	126,651	4,292,346	3,094,517
1911	140,662	-	144,993	81,067	4,875,689	3,888,493
1912	117,753	-	204,833	60,284	5,377,625	4,568,363
1913	128,791	-	211,923	111,582	5,390,725	4,628,697
1914	73,844	-	169,976	52,680	6,003,593	3,465,803
1915	41,333	-	18,001	224,391	3,281,653	1,831,983
1916	29,900	-	37,442	99,479	3,086,813	1,730,514
1917	27,514	-	29,500	81,152	2,720,702	1,685,571
1918	22,023	-	36,723	60,761	4,345,866	831,448
1919	61,916	-	20,867	88,328	12,747,370	1,294,249
1920	89,757	-	103,014	120,669	10,321,842	2,899,701
1921	135,827	-	123,739	239,822	12,477,826	4,306,608
1922	258,051	-	74,531	288,888	13,740,079	6,571,081
1923	383,215	-	93,695	296,496	12,245,362	7,515,430
1924	312,065	-	124,381	312,809	15,088,982	8,178,925
1925	335,307	-	112,887	346,085	14,333,832	8,023,192
1926	339,289	-	118,772	231,785	13,392,482	6,438,952
1927	470,553	-	148,397	375,803	13,757,273	7,758,778
1928	357,139	-	152,810	252,555	15,545,399	8,912,039
1929	505,556	-	130,302	2,906,957	14,064,330	7,196,496
1930	309,036	-	142,025	3,434,444	8,109,230	6,993,471
1931	239,369	-	95,298	333,854	12,295,316	6,939,519
1932	179,000	-	64,000	298,000	14,146,000	6,707,000
1933	120,000	-	46,000	427,000	12,779,000	4,671,000
1934	231,317	-	122,153	-	14,091,899	8,744,084

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Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	27,590	415	4,367,012	-	2,207,328	133,965
1902	28,002	442	3,616,595	-	1,812,576	64,532
1903	17,055	1,632	3,020,286	-	2,215,343	96,144
1904	14,977	1,597	3,144,378	-	1,588,778	85,672
1905	15,729	1,747	3,468,000	-	2,028,366	112,977
1906	30,066	2,618	4,358,397	-	2,355,991	88,164
1907	15,806	1,331	3,224,367	-	2,688,325	101,700
1908	21,507	3,664	4,199,384	-	2,279,118	481,604
1909	22,053	5,408	4,915,814	-	2,757,967	628,317
1910	22,120	7,095	5,432,093	-	3,373,967	543,793
1911	27,800	3,151	4,809,635	-	3,201,634	141,625
1912	25,917	2,393	4,578,110	-	5,136,245	127,848
1913	27,978	7,704	6,073,624	-	6,036,076	218,185
1914	16,937	15,855	4,820,750	-	3,655,672	807,730
1915	12,703	7,850	3,571,922	-	2,521,372	526,736
1916	24,311	7,631	4,582,176	-	2,517,522	231,656
1917	2,671	8,924	4,615,947	-	2,241,639	134,991
1918	5,332	12,274	2,013,088	-	1,333,648	158,101
1919	27,442	19,914	3,418,666	-	2,315,892	148,060
1920	82,230	27,964	5,775,455	-	7,851,932	142,567
1921	180,220	45,987	8,998,249	-	8,912,327	273,943
1922	135,075	205,982	13,655,919	-	11,973,800	494,916
1923	185,862	117,616	12,307,285	-	12,754,586	593,277
1924	112,312	56,650	17,594,817	-	14,617,543	586,553
1925	97,832	269,087	15,288,719	-	12,828,445	862,962
1926	203,909	333,969	14,732,831	-	11,233,513	1,125,895
1927	119,263	78,956	18,941,459	-	14,385,677	379,107
1928	101,726	14,336	18,584,745	-	12,472,369	291,114
1929	57,290	10,011	19,822,885	-	12,296,145	316,647
1930	40,284	9,086	19,861,268	-	11,385,735	274,265
1931	20,133	7,767	21,155,477	-	10,921,588	256,937
1932	10,000	7,000	29,259,000	-	12,102,000	295,000
1933	17,000	10,000	19,940,000	-	9,009,000	370,000
1934	55,298		26,971,590	-	12,099,108	422,889

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Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	11,692,934	-	5,163,127	-	2,014,852	-
1902	8,361,386	-	5,712,575	-	1,452,899	-
1903	8,437,080	-	5,637,925	-	1,749,054	-
1904	7,640,908	-	5,512,108	-	2,700,787	-
1905	8,081,779	-	6,656,724	-	3,878,786	-
1906	10,221,253	-	7,142,981	-	4,523,374	-
1907	8,267,815	-	6,680,443	-	3,737,394	-
1908	10,889,654	-	6,724,680	-	3,691,166	-
1909	11,666,997	-	8,372,092	-	3,918,480	-
1910	11,748,370	-	8,171,081	-	3,654,894	-
1911	12,265,315	-	8,849,662	-	2,862,006	-
1912	11,818,819	-	10,053,637	-	1,811,865	-
1913	12,881,256	-	11,805,069	-	4,033,838	-
1914	11,663,274	-	9,131,323	-	4,497,509	-
1915	9,014,920	-	7,967,505	-	1,656,266	-
1916	10,684,647	-	8,972,816	-	1,410,142	-
1917	11,702,857	-	8,471,315	-	762,327	-
1918	7,328,137	-	6,787,500	-	1,289,663	-
1919	9,929,762	-	11,977,955	-	6,567,878	-
1920	15,782,750	-	15,487,129	-	5,798,973	-
1921	28,422,585	-	18,738,964	-	2,785,662	-
1922	34,569,823	-	29,886,458	-	3,920,930	-
1923	32,909,490	-	29,582,939	-	4,400,317	-
1924	33,617,676	-	43,362,520	-	4,352,019	-
1925	30,098,519	-	41,641,207	-	3,921,680	-
1926	26,579,184	-	39,096,158	-	3,203,949	-
1927	29,702,608	-	36,948,395	-	4,065,416	-
1928	26,958,632	-	33,272,464	-	4,858,543	-
1929	28,998,960	-	33,074,699	-	5,648,039	-
1930	26,408,750	-	27,250,124	-	4,014,681	-
1931	27,503,833	-	23,304,071	-	3,840,846	-
1932	24,896,000	-	24,597,000	-	6,303,000	-
1933	22,830,000	-	21,920,000	-	4,589,000	-
1934	27,076,842	-	32,128,264	-	4,518,207	-

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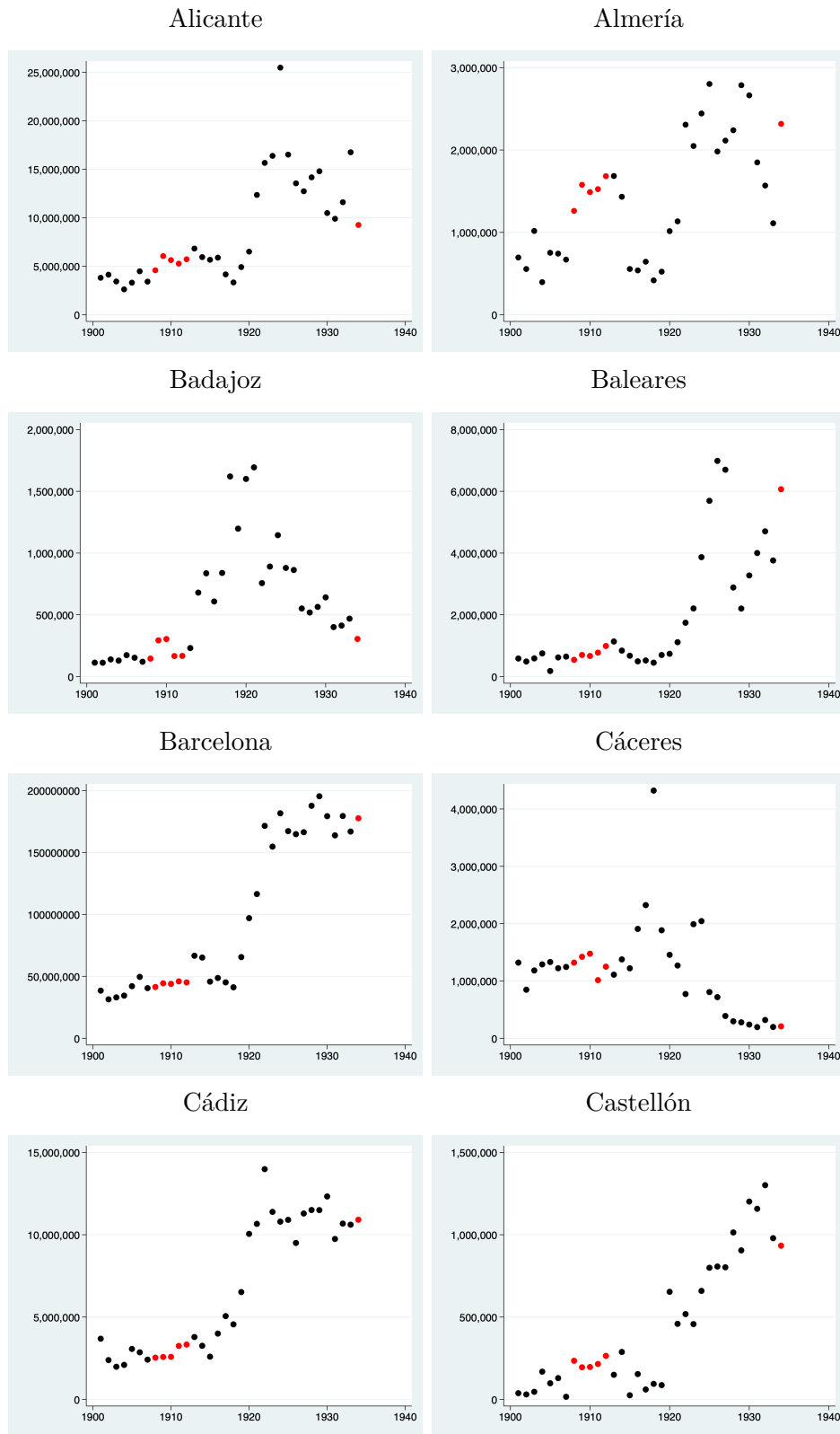
Table A7: Aduanas Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	-	5,145,253	-	14,728,011	1,643	-
1902	-	4,798,463	-	11,617,392	1,011	-
1903	-	5,908,313	-	10,678,374	3,400	-
1904	-	5,962,668	-	10,698,186	2,278	-
1905	-	6,303,147	-	12,123,748	2,898	-
1906	-	8,710,986	-	13,138,357	2,804	-
1907	-	7,280,792	-	13,121,020	1,398	-
1908	-	11,094,965	-	16,780,004	5,917	-
1909	-	11,382,003	-	18,711,745	5,356	-
1910	-	10,580,669	-	19,480,666	5,207	-
1911	-	11,601,349	-	16,375,090	5,300	-
1912	-	10,825,850	-	19,947,377	3,015	-
1913	-	12,291,993	-	22,141,878	13,225	-
1914	-	14,114,163	-	18,762,458	34,867	-
1915	-	7,124,167	-	13,666,501	44,563	-
1916	-	7,742,829	-	14,339,970	13,834	-
1917	-	5,650,893	-	12,220,010	19,099	-
1918	-	3,764,386	-	9,371,803	28,446	-
1919	-	6,168,310	-	20,614,823	14,524	-
1920	-	23,566,933	-	32,759,875	15,861	-
1921	-	19,326,299	-	44,365,548	17,017	-
1922	-	26,476,024	-	58,567,481	53,121	-
1923	-	27,393,017	-	58,661,528	31,868	-
1924	-	31,157,154	-	66,425,545	22,468	-
1925	-	33,453,539	-	65,567,312	385,733	-
1926	-	31,686,444	-	58,210,639	307,991	-
1927	-	35,781,549	-	70,053,011	88,943	-
1928	-	38,254,807	-	74,174,619	1,964	-
1929	-	46,365,329	-	75,865,115	3,093	-
1930	-	34,875,233	-	63,809,225	3,222	-
1931	-	35,602,166	-	52,614,506	3,065	-
1932	-	38,706,000	-	52,236,000	3,000	-
1933	-	39,554,000	-	52,906,000	9,000	-
1934	-	43,833,486	-	63,638,300		-

Sources: See Chapter 2.

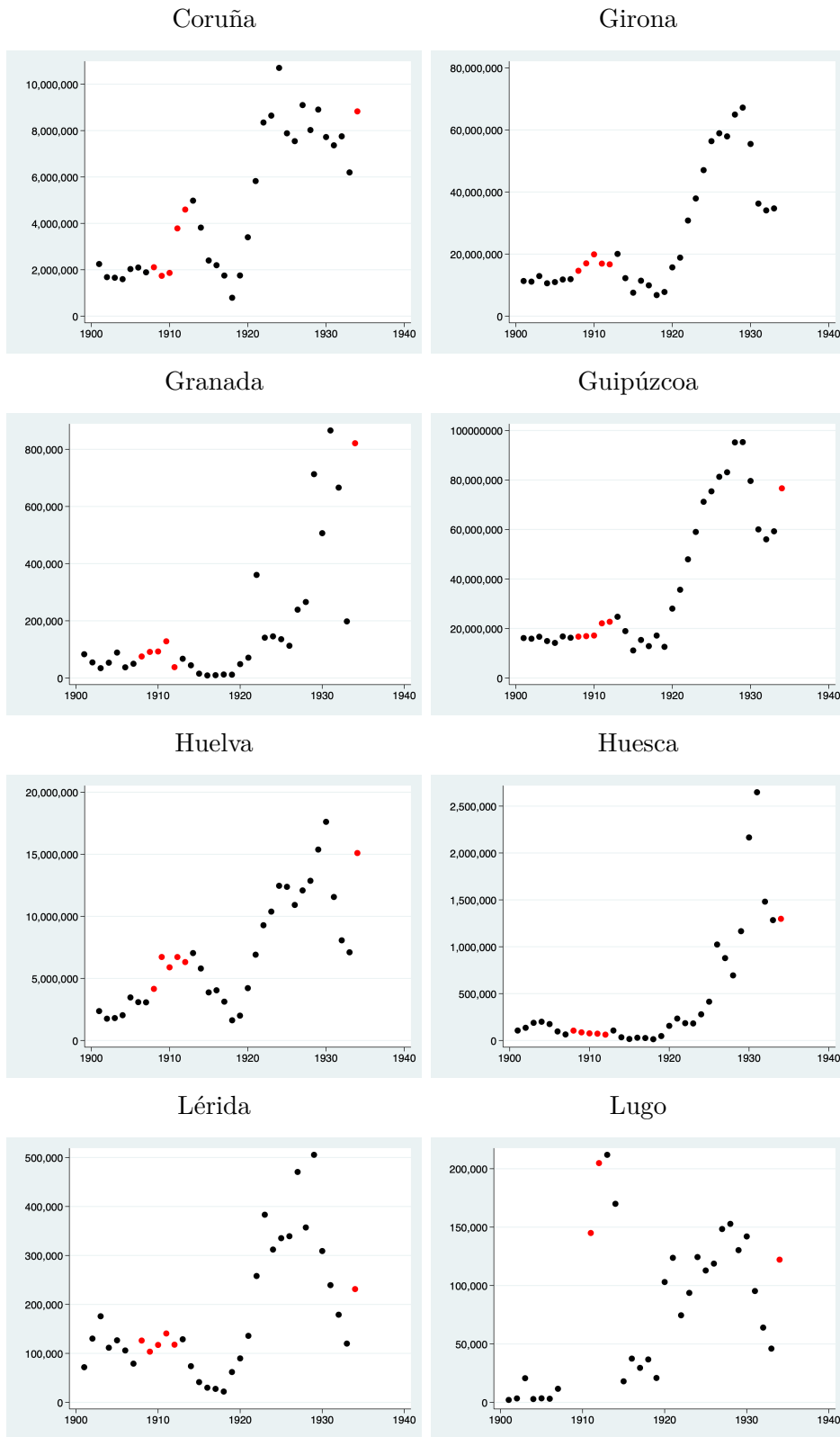
Notes: All data are in nominal values. I corrected for an outlier in Girona in 1934.

Figure A7: Aduanas Revenues by Provinces, 1901–1934.



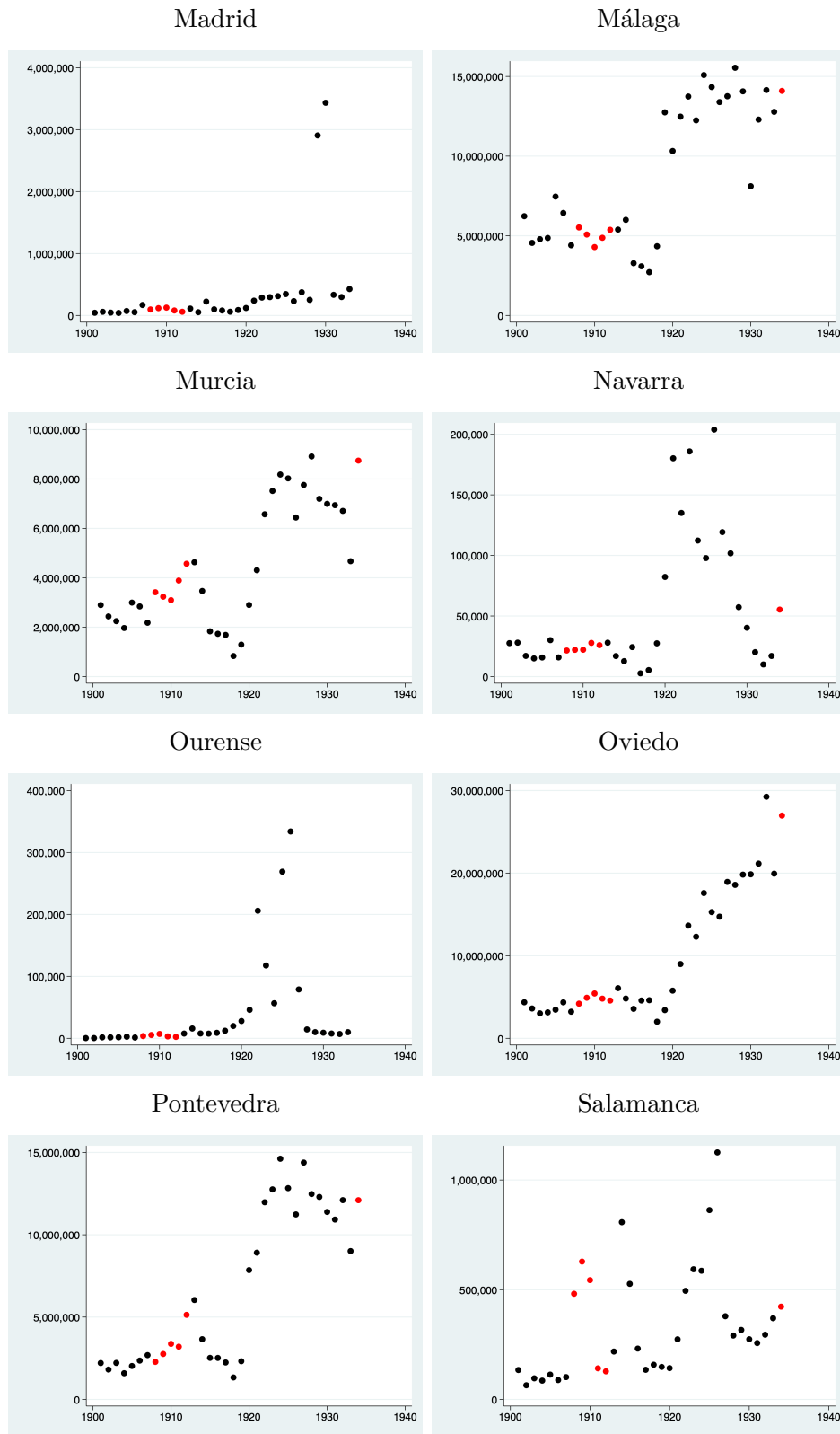
Notes: The original data points are in black; the imputed data points are in red.

Figure A7: Aduanas Revenues by Provinces, 1901–1934.



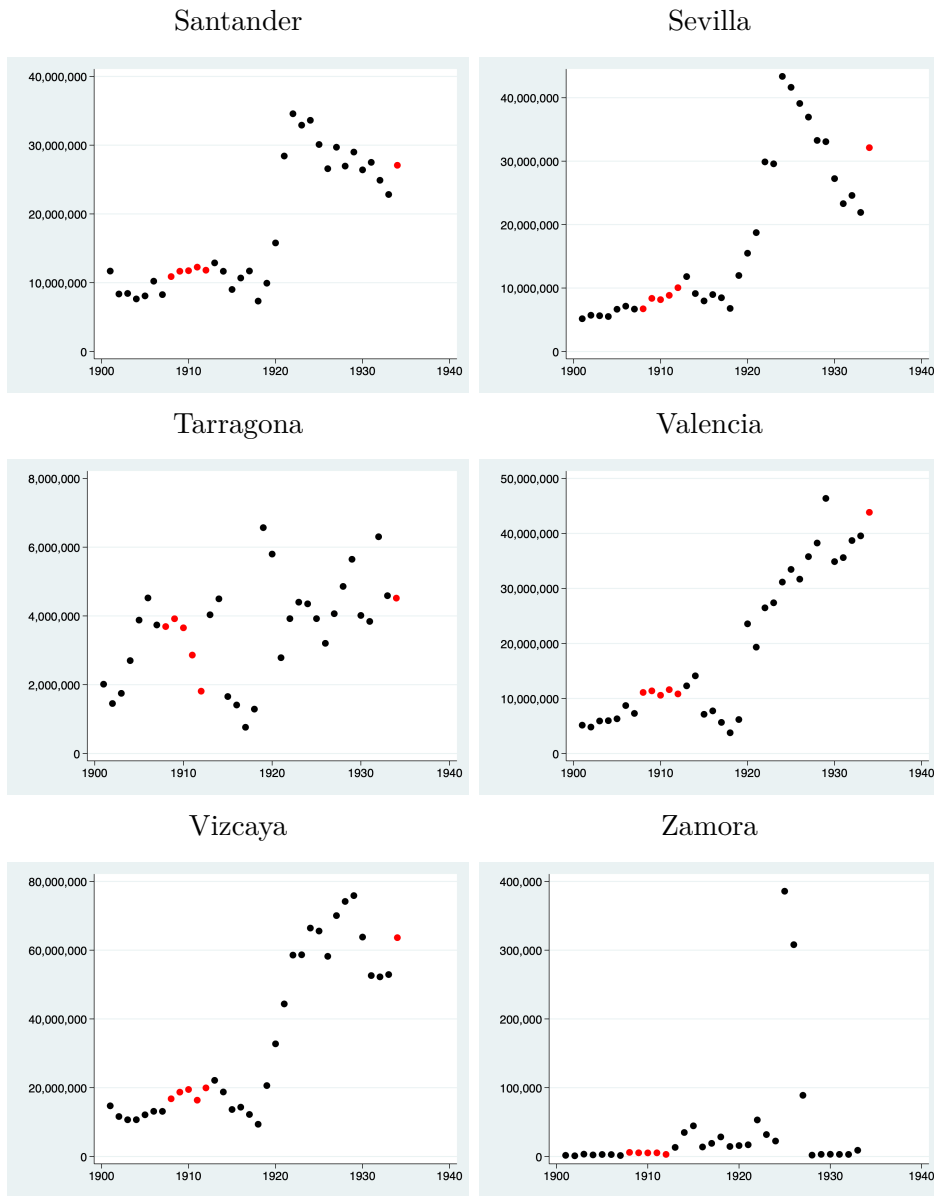
Notes: The original data points are in black; the imputed data points are in red.

Figure A7: Aduanas Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A7: Aduanas Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.8 Timbre

Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	251,722	406,199	1,185,373	716,303	336,653	916,375
1902	245,712	424,649	1,231,011	701,988	345,200	997,382
1903	261,653	449,750	1,271,410	747,169	329,569	988,985
1904	275,839	447,193	1,323,208	676,627	331,104	1,040,270
1905	355,725	419,234	1,282,773	716,249	331,939	983,284
1906	331,102	420,883	1,285,228	792,179	333,326	990,697
1907	348,684	437,444	1,318,249	860,534	343,121	1,010,229
1908	396,629	450,864	1,363,480	801,964	373,759	1,059,129
1909	423,779	511,780	1,387,426	838,356	380,555	1,120,145
1910	461,845	498,478	1,407,014	795,475	415,285	1,115,750
1911	482,682	518,099	1,441,578	823,983	403,313	1,111,204
1912	472,483	550,574	1,476,427	848,089	386,928	1,144,083
1913	477,865	567,809	1,509,939	883,714	392,958	1,175,559
1914	472,859	593,045	1,482,161	814,875	394,457	1,184,103
1915	496,525	613,570	1,429,789	720,443	390,969	1,170,850
1916	552,548	635,142	1,525,803	768,971	390,301	1,200,287
1917	552,607	684,674	1,618,525	733,316	416,883	1,262,404
1918	658,624	727,526	1,724,931	742,887	428,793	1,337,258
1919	788,742	1,018,702	2,135,230	823,653	498,666	1,567,980
1920	1,254,910	1,409,083	3,057,822	1,094,979	598,921	1,907,533
1921	1,318,466	1,467,902	3,196,074	1,163,341	673,202	2,225,271
1922	1,436,779	1,651,703	3,440,916	1,213,148	730,843	2,262,020
1923	1,386,067	1,636,829	3,834,361	1,278,251	805,791	2,401,097
1924	1,468,695	1,755,681	4,149,375	1,410,754	885,520	2,665,085
1925	1,464,742	1,641,236	4,182,719	1,466,129	914,709	2,719,014
1926	1,739,883	1,825,996	4,564,373	1,561,247	1,119,684	3,117,465
1927	1,934,171	1,929,871	4,648,572	1,503,420	984,107	3,081,133
1928	2,192,506	1,935,474	4,884,696	1,564,762	1,096,394	3,447,682
1929	2,213,840	2,121,165	5,025,638	1,651,289	1,161,555	3,547,025
1930	2,321,198	2,183,574	5,380,738	1,706,476	1,084,880	3,450,193
1931	2,296,002	2,144,181	5,291,931	1,740,629	1,116,549	3,694,926
1932	1,365,500	2,030,100	5,409,200	1,676,900	1,120,100	3,709,800
1933	2,243,222	2,309,005	5,774,008	1,875,404	1,374,977	4,169,840
1934	2,183,849	2,334,803	5,835,401	1,899,409	1,385,994	4,268,027

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	779,464	9,530,898	688,694	541,537	1,706,572	478,048
1902	820,427	10,052,270	696,242	558,026	1,737,055	518,581
1903	853,322	10,356,502	708,900	569,824	1,709,249	508,082
1904	935,370	10,554,057	742,796	595,528	1,696,996	536,331
1905	893,033	10,316,193	742,490	567,607	1,502,949	510,631
1906	874,390	11,058,794	765,842	573,504	1,403,911	511,627
1907	893,615	10,466,569	786,634	604,112	1,396,334	501,514
1908	933,708	11,134,485	808,687	633,057	1,552,629	545,787
1909	1,006,938	11,364,126	787,669	680,045	1,519,029	546,258
1910	1,014,229	11,681,885	855,893	708,379	1,520,616	569,494
1911	1,094,907	12,308,660	867,920	708,332	1,573,369	600,550
1912	1,091,055	13,055,682	878,214	740,409	1,536,378	601,483
1913	1,104,248	14,188,551	856,643	715,826	1,771,939	617,215
1914	1,021,906	14,126,296	878,490	698,886	1,521,661	605,023
1915	1,051,839	13,755,922	873,523	703,869	1,467,694	594,714
1916	1,192,309	14,781,316	881,405	681,998	1,557,695	643,021
1917	1,231,056	16,711,801	928,481	707,343	1,583,358	663,157
1918	1,304,037	20,008,271	964,017	733,679	1,704,386	696,733
1919	1,608,821	23,221,361	1,015,266	833,349	2,046,590	867,950
1920	1,940,424	32,246,606	1,337,994	974,597	2,354,309	1,066,011
1921	2,237,211	32,330,782	1,481,753	1,154,173	2,530,410	1,158,485
1922	2,621,126	33,801,298	1,578,156	1,209,822	2,669,089	1,281,897
1923	2,754,688	35,547,166	1,736,259	1,371,433	3,148,144	1,341,190
1924	2,863,778	39,325,425	1,783,789	1,538,369	3,058,095	1,616,481
1925	2,973,711	43,198,858	1,833,059	1,249,679	3,158,625	1,758,492
1926	3,187,364	52,594,992	1,913,519	1,862,472	4,189,686	1,885,584
1927	3,105,773	51,551,092	1,911,277	1,779,487	3,948,149	1,782,437
1928	3,272,074	55,695,491	2,094,914	1,942,769	4,584,213	1,929,905
1929	3,394,401	67,360,912	2,092,200	1,981,021	4,240,907	1,973,466
1930	3,620,793	64,225,616	2,069,195	1,935,194	4,794,738	2,037,333
1931	3,540,467	60,369,971	2,225,171	1,990,758	4,593,477	2,111,092
1932	3,781,800	49,294,700	2,202,001	2,064,900	4,124,000	2,157,500
1933	3,982,614	67,202,845	2,417,184	2,172,170	4,985,724	2,182,073
1934	4,278,334	70,837,338	2,422,705	2,400,733	5,208,323	2,001,721

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	751,757	1,036,219	1,618,520	271,663	1,008,735	1,236,431
1902	772,955	1,046,103	1,625,911	287,915	990,412	1,219,357
1903	778,228	1,077,557	1,602,993	288,127	1,052,063	1,214,578
1904	817,270	1,182,795	1,703,693	303,131	1,056,888	1,224,147
1905	789,700	1,137,408	1,612,982	296,281	1,046,767	1,226,700
1906	796,346	1,104,157	1,560,397	290,579	1,031,015	1,171,051
1907	816,619	1,109,165	1,621,841	315,525	1,027,164	1,215,031
1908	844,205	1,147,349	1,671,004	329,033	1,046,964	1,260,479
1909	852,761	1,233,176	1,700,901	338,341	1,088,582	1,323,848
1910	852,939	1,268,631	1,651,882	342,508	1,083,148	1,297,782
1911	832,923	1,305,971	1,671,822	360,183	1,126,479	1,373,761
1912	863,399	1,353,067	1,680,009	347,410	1,147,203	1,407,196
1913	860,058	1,428,893	1,729,534	346,839	1,202,205	1,377,291
1914	877,329	1,408,249	1,683,483	349,354	1,177,913	1,344,748
1915	899,869	1,467,016	1,649,095	354,781	1,185,271	1,287,020
1916	950,797	1,542,576	1,662,039	379,044	1,215,386	1,436,032
1917	1,005,901	1,520,211	1,630,620	397,453	1,298,745	1,495,054
1918	1,048,741	1,874,383	1,795,898	406,220	1,465,056	1,546,697
1919	1,522,169	1,802,460	1,995,483	430,860	1,558,781	1,656,449
1920	1,524,834	2,480,737	2,504,302	548,896	2,078,696	2,327,654
1921	1,895,689	2,702,255	2,812,124	627,881	2,063,741	2,359,985
1922	1,922,847	2,803,048	2,884,095	660,982	2,211,557	2,532,541
1923	1,987,371	3,201,941	3,220,064	748,107	2,445,374	2,771,213
1924	2,203,880	3,388,178	3,368,521	864,280	2,553,255	3,239,112
1925	2,157,540	3,562,940	3,744,696	862,167	2,644,343	3,434,722
1926	2,380,155	3,937,811	3,825,135	917,187	2,986,468	3,469,248
1927	2,267,957	3,727,280	3,657,745	917,950	2,586,009	3,329,963
1928	2,617,557	4,372,881	4,219,645	1,030,883	3,088,304	3,667,316
1929	2,765,690	4,671,107	4,076,845	998,849	3,178,657	3,720,117
1930	2,771,408	4,319,499	4,139,574	972,481	3,272,944	3,918,707
1931	2,824,550	4,339,583	4,161,407	994,821	3,095,078	3,927,724
1932	2,788,500	3,782,400	4,043,600	1,015,400	3,013,700	3,455,500
1933	3,114,105	4,902,517	4,767,607	1,474,759	3,258,709	4,137,409
1934	3,184,771	5,057,701	4,838,135	1,144,502	3,398,073	4,519,830

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	365,835	941,783	645,575	433,151	913,919	521,788
1902	388,213	1,008,764	702,316	469,076	961,187	555,791
1903	398,058	1,083,138	752,429	504,842	968,393	564,734
1904	361,962	1,091,082	884,590	518,698	1,040,182	567,619
1905	347,454	1,098,400	793,037	479,965	984,846	554,826
1906	353,873	1,113,958	742,491	487,684	966,372	593,722
1907	344,079	1,160,435	796,648	473,258	996,717	596,495
1908	367,006	1,206,846	841,374	491,163	1,065,564	611,659
1909	374,276	1,231,417	937,909	524,972	1,084,905	646,774
1910	395,755	1,203,434	909,745	509,188	1,108,303	633,161
1911	373,527	1,272,240	1,214,959	547,732	1,137,855	669,460
1912	407,776	1,348,426	1,042,223	552,831	1,114,535	693,570
1913	393,754	1,410,421	1,026,080	542,615	1,178,612	700,190
1914	392,730	1,439,897	980,322	549,700	1,170,341	694,453
1915	385,162	1,381,937	963,070	546,113	1,120,740	678,194
1916	381,466	1,437,919	1,015,124	556,141	1,151,170	728,721
1917	406,167	1,478,093	1,046,282	589,103	1,201,125	820,306
1918	401,392	1,745,289	1,397,116	639,051	1,306,539	902,712
1919	426,356	1,872,047	1,191,710	692,762	1,538,174	1,020,177
1920	523,417	2,763,724	1,789,204	882,609	1,868,864	1,218,845
1921	605,962	2,840,577	1,643,678	1,072,877	2,165,598	1,376,819
1922	673,090	3,238,286	1,586,834	1,103,199	2,102,986	1,509,774
1923	798,405	3,975,821	1,692,352	1,126,072	2,452,107	1,662,593
1924	804,495	4,154,791	2,325,477	1,188,923	2,831,244	1,843,717
1925	830,841	3,775,676	1,926,909	1,234,880	3,020,999	1,896,438
1926	926,618	4,560,561	2,089,136	1,334,118	2,514,588	1,657,868
1927	988,025	5,135,809	2,313,234	1,446,564	3,187,815	2,192,125
1928	995,629	6,767,886	2,261,730	1,517,292	3,850,180	2,183,002
1929	990,680	6,975,292	2,337,714	1,612,628	3,847,725	2,248,809
1930	942,694	6,725,828	2,474,376	1,565,199	3,817,758	2,343,202
1931	955,308	6,848,882	2,331,014	1,703,813	3,722,545	2,564,813
1932	1,010,400	4,837,008	2,197,400	1,766,100	3,524,400	2,766,000
1933	1,812,747	6,337,238	2,757,805	1,348,426	4,127,659	2,867,709
1934	840,271	6,623,960	2,573,666	1,121,927	4,297,666	2,901,832

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	494,665	522,071	455,913	14,096,674	1,786,489	1,442,727
1902	526,450	525,426	499,749	18,272,887	1,952,370	1,463,273
1903	527,351	546,526	512,564	17,845,630	2,023,965	1,513,415
1904	571,623	558,270	522,518	16,954,444	2,062,395	1,575,976
1905	552,032	536,969	516,230	19,604,729	1,977,169	1,481,443
1906	549,866	541,759	511,668	21,656,559	1,869,463	1,445,802
1907	559,825	549,999	521,894	22,926,451	1,811,176	1,462,226
1908	602,514	555,122	547,231	23,435,254	1,847,716	1,511,587
1909	599,653	544,296	565,878	24,974,366	1,997,344	1,498,136
1910	631,041	559,542	548,661	26,496,481	2,041,824	1,478,505
1911	683,707	584,189	574,749	26,816,000	2,115,112	1,540,582
1912	685,943	597,788	584,891	27,638,649	2,159,266	1,551,897
1913	759,947	631,638	602,097	32,712,966	2,199,299	1,559,366
1914	743,735	634,408	580,716	30,656,837	2,159,620	1,506,756
1915	726,444	638,833	550,810	29,947,485	2,050,659	1,492,144
1916	745,242	679,272	561,722	30,562,615	2,156,922	1,577,427
1917	781,348	682,639	599,359	34,523,850	2,248,701	1,694,545
1918	858,970	743,913	581,661	37,785,927	2,359,416	1,701,288
1919	901,695	864,577	689,883	49,684,035	2,694,907	1,960,724
1920	1,163,248	1,100,547	914,865	63,401,240	3,821,438	2,798,121
1921	1,269,015	1,196,554	1,019,720	68,993,386	4,444,489	2,973,874
1922	1,340,007	1,341,981	1,045,768	60,696,422	4,697,727	3,078,289
1923	1,407,132	1,463,982	1,113,785	68,327,640	3,994,810	3,492,551
1924	1,499,355	1,618,925	1,228,407	78,479,859	4,582,446	3,801,094
1925	1,551,022	1,645,773	1,240,625	73,021,437	4,331,611	3,623,485
1926	1,413,306	1,453,443	1,129,661	69,503,749	4,410,217	3,393,859
1927	1,786,676	1,764,374	1,308,747	82,595,484	-	4,101,308
1928	2,060,015	2,077,533	1,333,654	111,413,954	6,204,195	4,679,059
1929	2,136,282	2,217,255	1,376,978	120,618,538	7,795,542	4,739,441
1930	2,146,994	1,896,365	1,371,384	117,352,976	7,661,286	4,742,864
1931	2,201,193	2,129,208	1,414,088	119,226,158	7,752,767	4,603,250
1932	2,068,000	2,131,700	1,511,900	85,426,100	6,286,500	4,482,000
1933	2,140,826	2,363,116	1,529,053	96,200,629	-	5,238,981
1934	2,159,699	2,453,962	1,550,883	96,254,740	-	5,305,418

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	505,578	352,840	1,957,790	440,852	896,244	717,700
1902	548,120	381,471	2,098,302	454,972	1,014,041	755,382
1903	553,952	382,098	1,939,289	464,404	1,035,588	753,409
1904	562,449	380,160	1,893,723	475,307	1,019,649	847,411
1905	519,713	384,535	1,841,084	450,460	1,024,373	800,696
1906	481,120	389,614	1,955,763	471,729	1,053,389	788,799
1907	501,184	399,219	1,898,988	464,747	1,103,458	825,994
1908	522,506	420,714	1,974,745	476,922	1,206,072	842,825
1909	545,593	438,133	1,958,903	455,460	1,146,178	772,162
1910	553,051	428,434	2,020,258	515,862	1,141,803	913,754
1911	577,458	454,916	2,009,734	502,534	1,224,672	919,499
1912	599,747	472,074	2,014,029	538,692	1,245,813	909,348
1913	616,602	486,150	2,202,872	555,370	1,248,222	970,292
1914	620,613	455,315	2,209,478	547,617	1,212,489	981,281
1915	666,191	444,916	2,216,295	525,974	1,199,197	955,965
1916	690,796	456,511	2,184,218	577,724	1,216,984	966,584
1917	717,992	464,827	2,357,522	572,614	1,314,264	1,037,259
1918	770,618	467,426	2,695,695	587,785	1,300,021	1,016,848
1919	859,383	558,122	3,178,997	645,872	1,589,946	1,208,690
1920	1,066,796	695,766	4,866,411	850,094	2,221,819	1,445,282
1921	1,231,577	837,763	4,834,580	915,517	2,236,133	1,563,368
1922	1,379,258	851,066	4,526,296	969,371	2,353,006	1,661,463
1923	1,391,387	929,558	4,700,783	1,121,131	2,690,596	1,925,764
1924	1,493,342	1,076,619	5,671,589	1,226,264	2,873,255	2,088,713
1925	1,516,896	1,099,587	5,564,581	1,264,908	2,835,793	2,129,628
1926	1,402,492	958,919	5,059,566	1,099,438	2,597,757	1,873,787
1927	1,849,282	1,095,892	5,266,231	1,099,438	2,854,740	2,264,552
1928	1,807,617	1,225,900	6,793,546	1,364,213	3,284,864	2,388,115
1929	1,828,006	1,261,832	6,786,465	1,424,763	3,267,789	2,376,591
1930	1,781,560	1,264,904	6,927,123	1,382,172	3,288,478	2,357,361
1931	1,845,999	1,306,785	6,647,266	1,464,319	3,388,525	2,425,404
1932	1,972,200	1,395,600	6,542,800	1,531,400	3,280,900	2,510,400
1933	2,206,373	1,627,591	7,663,255	1,531,400	3,586,592	2,670,800
1934	2,131,431	1,663,819	7,684,323	1,531,400	3,677,259	2,690,739

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Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	1,523,625	311,254	2,346,645	266,389	890,141	281,205
1902	1,353,487	351,864	2,469,234	268,973	958,596	313,841
1903	1,369,522	333,984	2,468,171	272,938	972,624	343,738
1904	1,384,642	360,322	2,539,756	266,316	1,019,343	332,102
1905	1,295,675	332,251	2,456,860	260,278	962,257	329,818
1906	1,279,534	340,780	2,227,453	258,107	927,052	344,117
1907	1,279,475	334,757	2,344,206	261,325	973,380	326,790
1908	1,284,350	356,909	2,519,981	272,888	998,324	337,773
1909	1,309,172	336,079	2,501,093	319,722	1,038,384	415,074
1910	1,338,425	362,961	2,576,908	299,641	1,102,216	383,261
1911	1,412,352	357,624	2,642,943	331,962	1,130,643	370,261
1912	1,424,265	373,361	2,723,738	326,685	1,121,234	386,904
1913	1,507,004	376,156	2,740,113	327,595	1,154,820	387,256
1914	1,412,059	412,002	2,693,301	328,744	1,142,905	394,498
1915	1,453,369	426,353	2,765,217	306,674	1,155,111	398,689
1916	1,523,875	384,505	3,014,063	303,568	1,193,975	430,097
1917	1,703,514	412,147	3,263,146	308,781	1,220,601	445,366
1918	1,818,140	406,722	3,700,598	334,077	1,335,390	489,766
1919	2,273,983	434,709	4,432,254	345,579	1,663,120	606,341
1920	2,927,783	530,415	5,580,127	448,502	2,093,956	582,561
1921	3,021,281	582,399	5,501,417	484,659	2,389,698	681,800
1922	3,025,587	588,133	5,980,414	516,877	2,402,274	738,695
1923	3,456,803	733,977	6,594,870	586,071	2,659,928	840,425
1924	3,767,674	823,064	6,977,663	621,105	2,738,230	942,902
1925	4,010,578	858,998	7,342,216	589,305	2,797,981	901,014
1926	3,456,385	717,314	6,479,316	559,604	2,597,622	820,967
1927	3,852,751	717,314	8,993,359	-	2,819,399	951,412
1928	4,333,220	973,854	9,103,003	755,670	3,118,837	1,082,427
1929	4,536,330	992,069	9,947,253	763,235	3,335,406	1,095,815
1930	4,579,385	950,822	10,110,058	765,433	3,314,121	1,136,657
1931	4,511,874	969,151	9,623,734	791,857	3,407,996	1,201,050
1932	4,097,200	1,021,600	8,337,500	757,900	3,551,500	1,155,300
1933	4,711,834	1,021,600	8,842,179	-	3,650,136	1,299,061
1934	4,847,259	1,021,600	10,207,001	-	3,694,715	1,007,644

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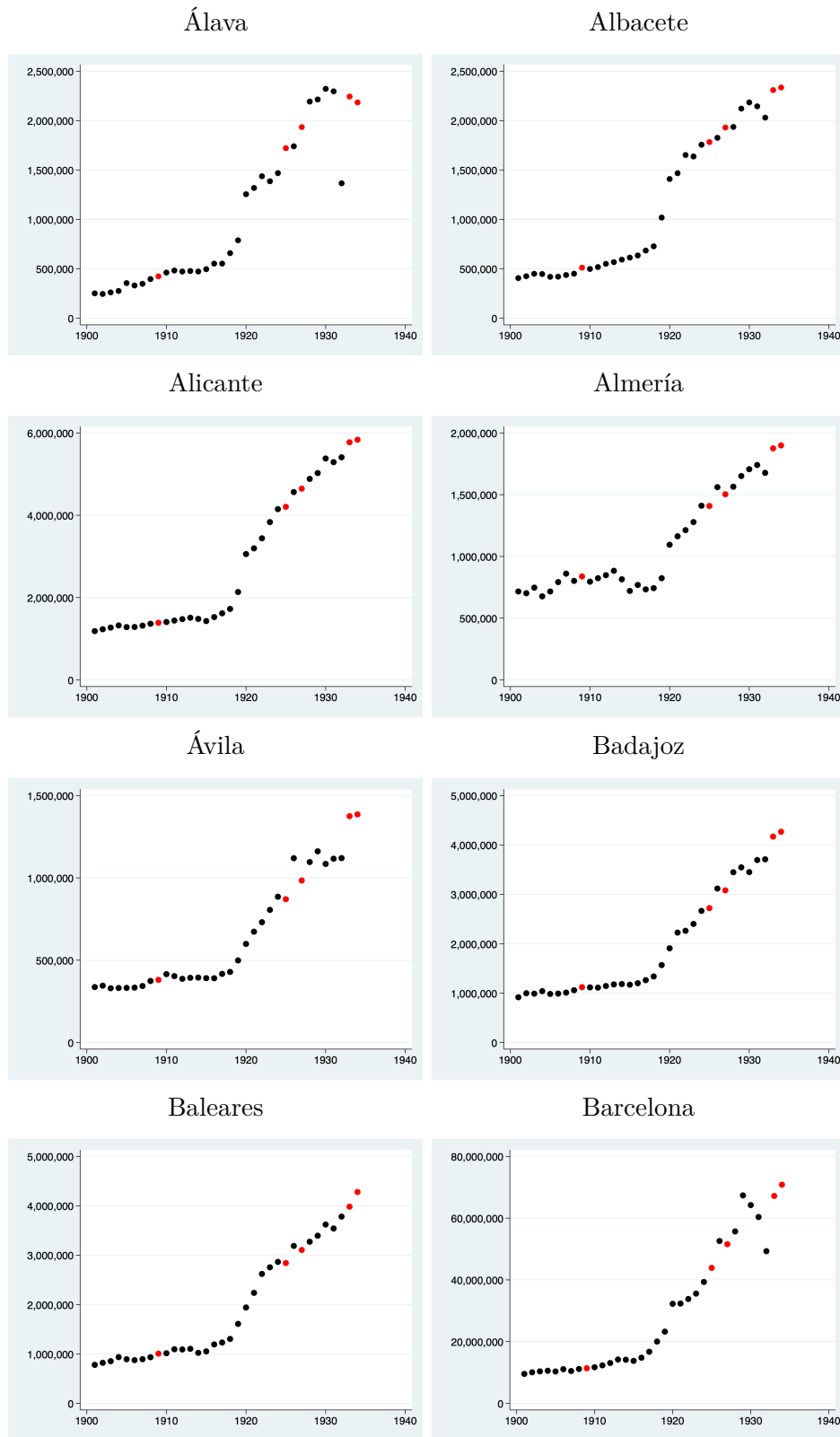
Table A8: Timbre Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	571,631	2,817,276	1,393,448	2,036,961	386,866	1,694,316
1902	617,037	2,970,225	1,403,034	2,641,955	400,675	1,738,757
1903	644,691	2,973,860	1,418,192	2,145,291	437,998	1,767,726
1904	653,068	3,068,817	1,423,081	2,119,684	441,377	1,842,157
1905	640,392	2,970,290	1,332,672	2,199,950	384,649	1,701,517
1906	639,605	2,944,769	1,323,339	2,085,586	404,858	1,740,933
1907	665,442	3,086,872	1,338,493	2,282,718	402,924	1,708,518
1908	671,608	3,166,849	1,328,832	2,354,578	425,258	1,866,037
1909	723,308	3,294,474	1,345,553	2,190,283	425,269	1,867,080
1910	735,423	3,320,254	1,339,448	2,480,968	440,879	1,886,487
1911	740,661	3,501,294	1,384,809	2,558,449	439,959	2,028,836
1912	795,888	3,595,203	1,458,883	2,679,845	453,477	1,968,560
1913	806,856	3,822,889	1,413,847	2,786,345	469,556	2,022,427
1914	791,320	3,643,316	1,381,514	2,598,251	436,148	1,991,873
1915	806,835	3,645,891	1,416,220	2,691,120	438,711	2,121,943
1916	824,486	3,868,933	1,463,272	3,097,307	448,691	2,165,765
1917	832,260	3,996,593	1,508,944	3,894,364	488,326	2,419,970
1918	873,094	4,165,189	1,606,394	4,556,977	478,694	2,598,298
1919	1,029,120	4,880,465	1,827,515	5,288,623	543,164	2,824,543
1920	1,181,533	6,652,149	2,154,087	6,088,494	711,915	3,734,359
1921	1,377,350	7,162,411	2,485,948	8,035,378	780,737	4,083,062
1922	1,484,677	7,502,543	2,431,337	6,249,957	813,452	4,282,330
1923	1,616,820	8,024,903	2,727,192	7,119,353	952,075	4,796,192
1924	1,845,555	8,881,264	2,747,068	8,107,289	1,009,476	4,843,072
1925	1,840,043	9,228,670	3,017,348	5,354,884	1,086,254	5,615,187
1926	1,632,889	8,159,958	2,681,779	6,973,372	928,399	4,723,969
1927	1,921,433	10,252,160	3,621,430	11,414,123	-	5,688,254
1928	2,277,440	11,710,833	2,987,464	17,141,995	1,195,429	7,008,170
1929	2,346,602	12,715,102	3,155,215	16,945,356	1,204,501	7,167,963
1930	2,352,744	12,704,947	3,119,604	15,890,768	1,235,555	7,163,395
1931	2,469,693	12,547,604	3,280,306	15,712,686	1,206,693	7,118,152
1932	2,501,200	12,189,200	3,077,200	7,041,500	1,321,600	6,846,600
1933	2,797,369	12,803,610	4,309,259	15,906,553	-	7,900,534
1934	2,826,123	13,001,165	3,740,167	16,563,826	-	8,248,352

Sources: See Chapter 2.

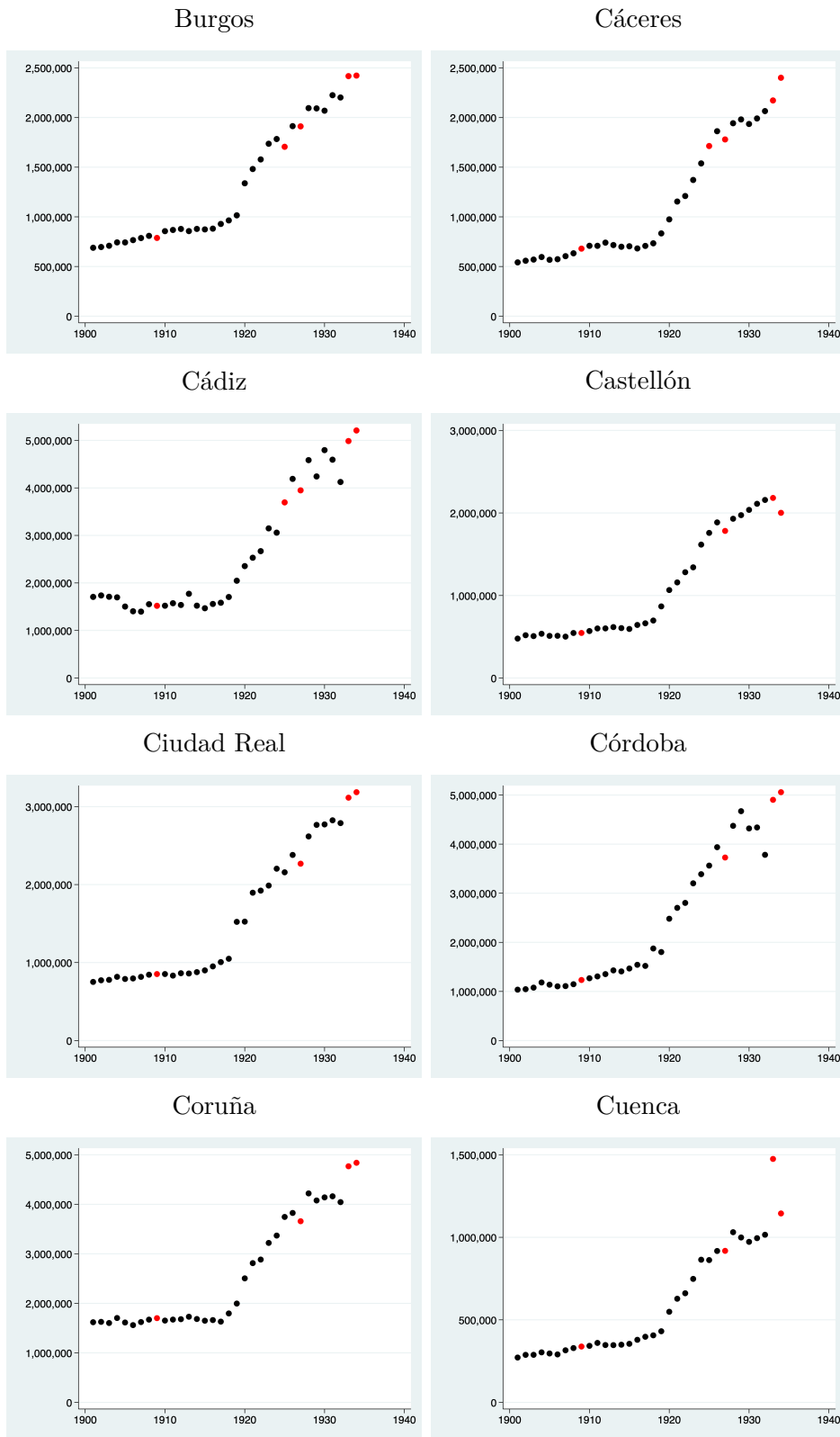
Notes: All data are in nominal values.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



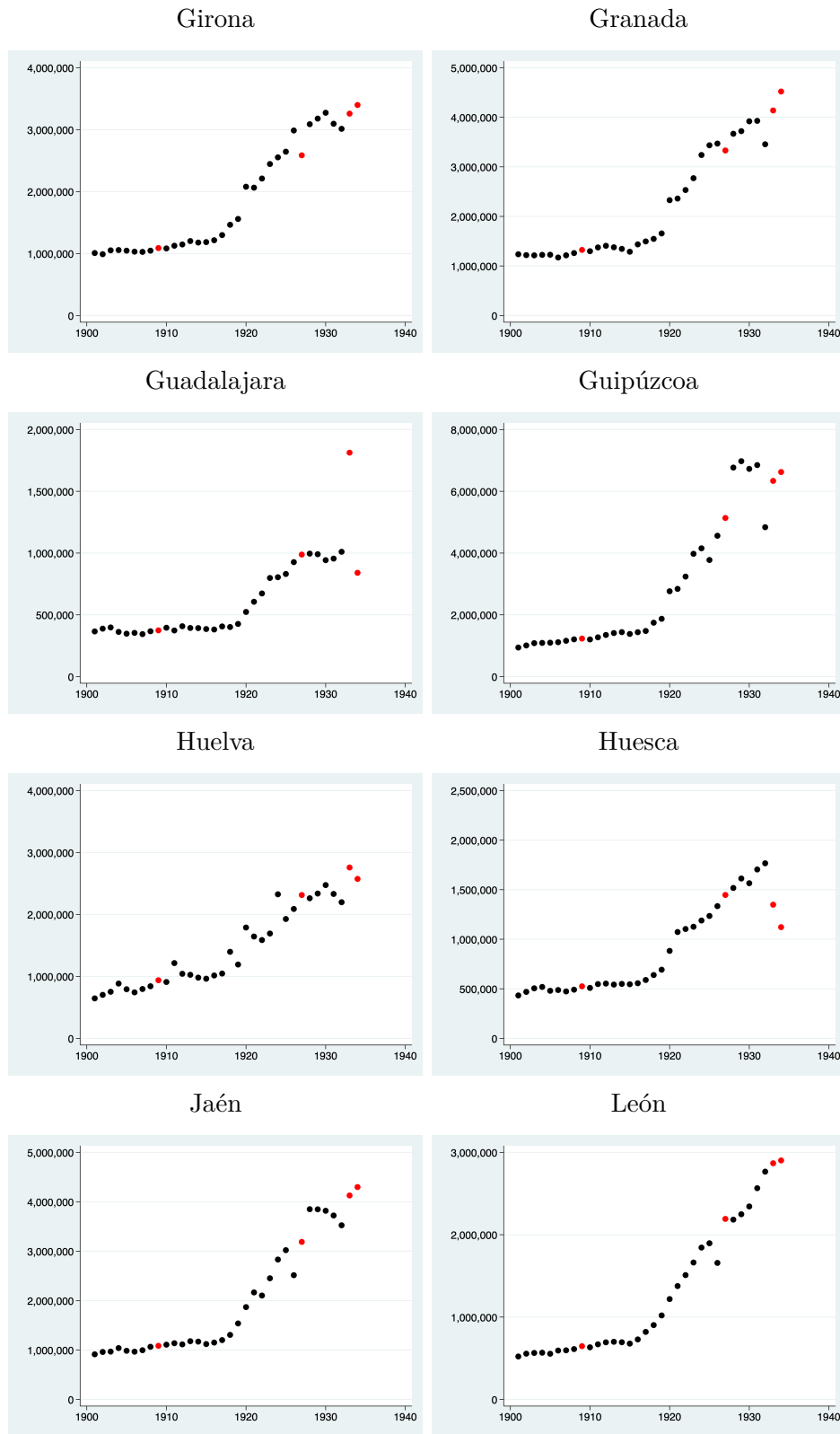
Notes: The original data points are in black; the imputed data points are in red.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



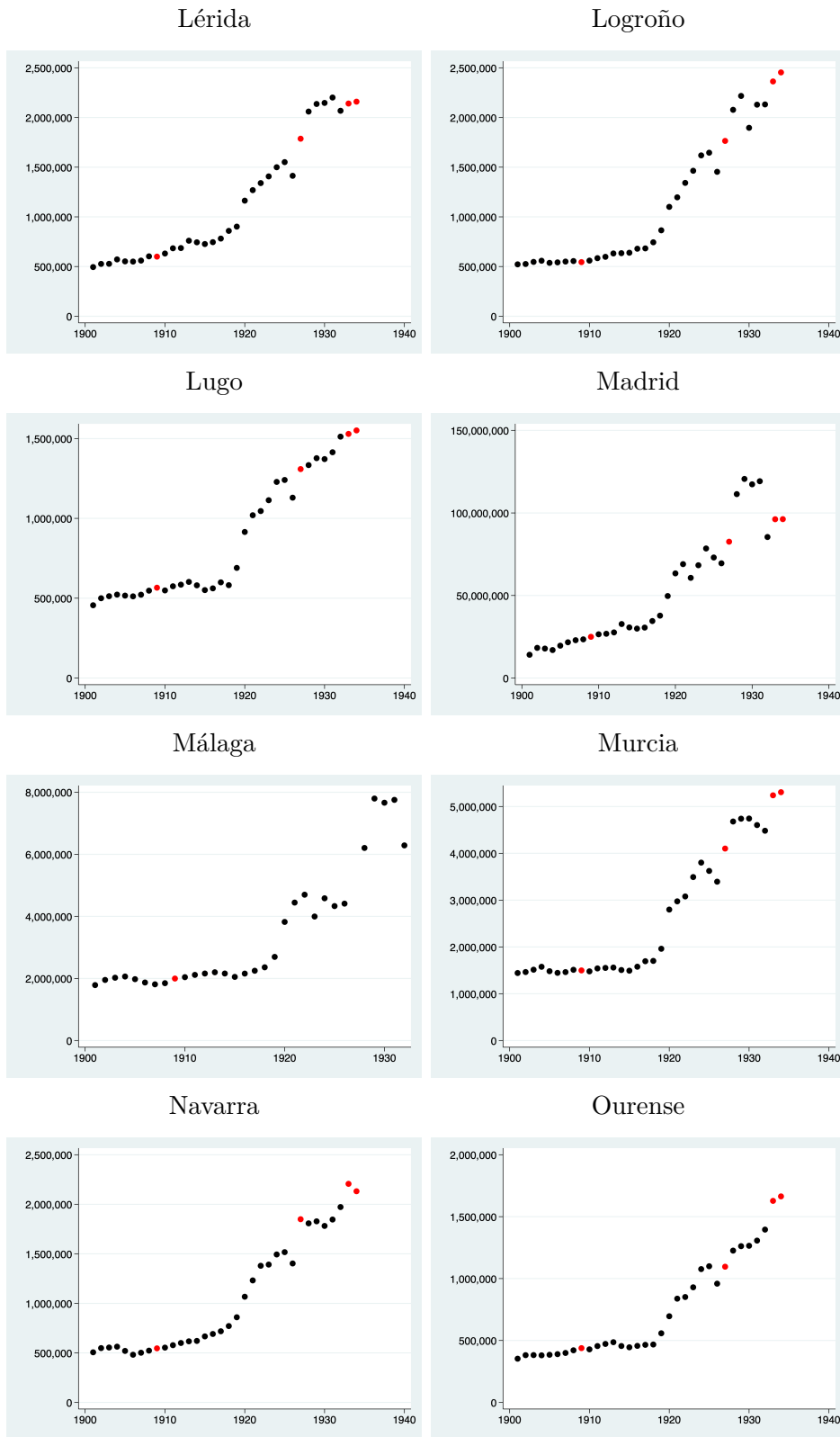
Notes: The original data points are in black; the imputed data points are in red.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



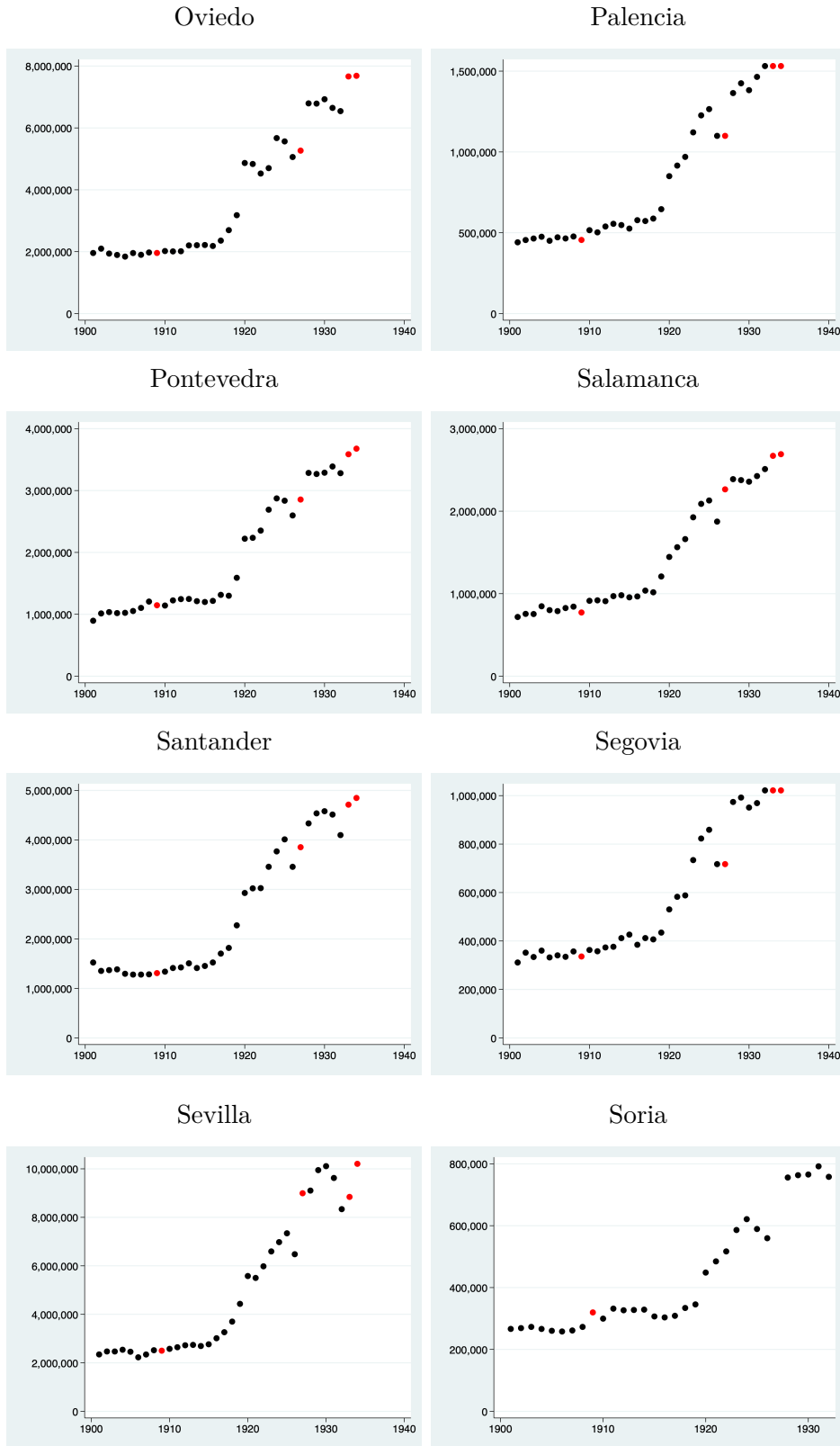
Notes: The original data points are in black; the imputed data points are in red.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



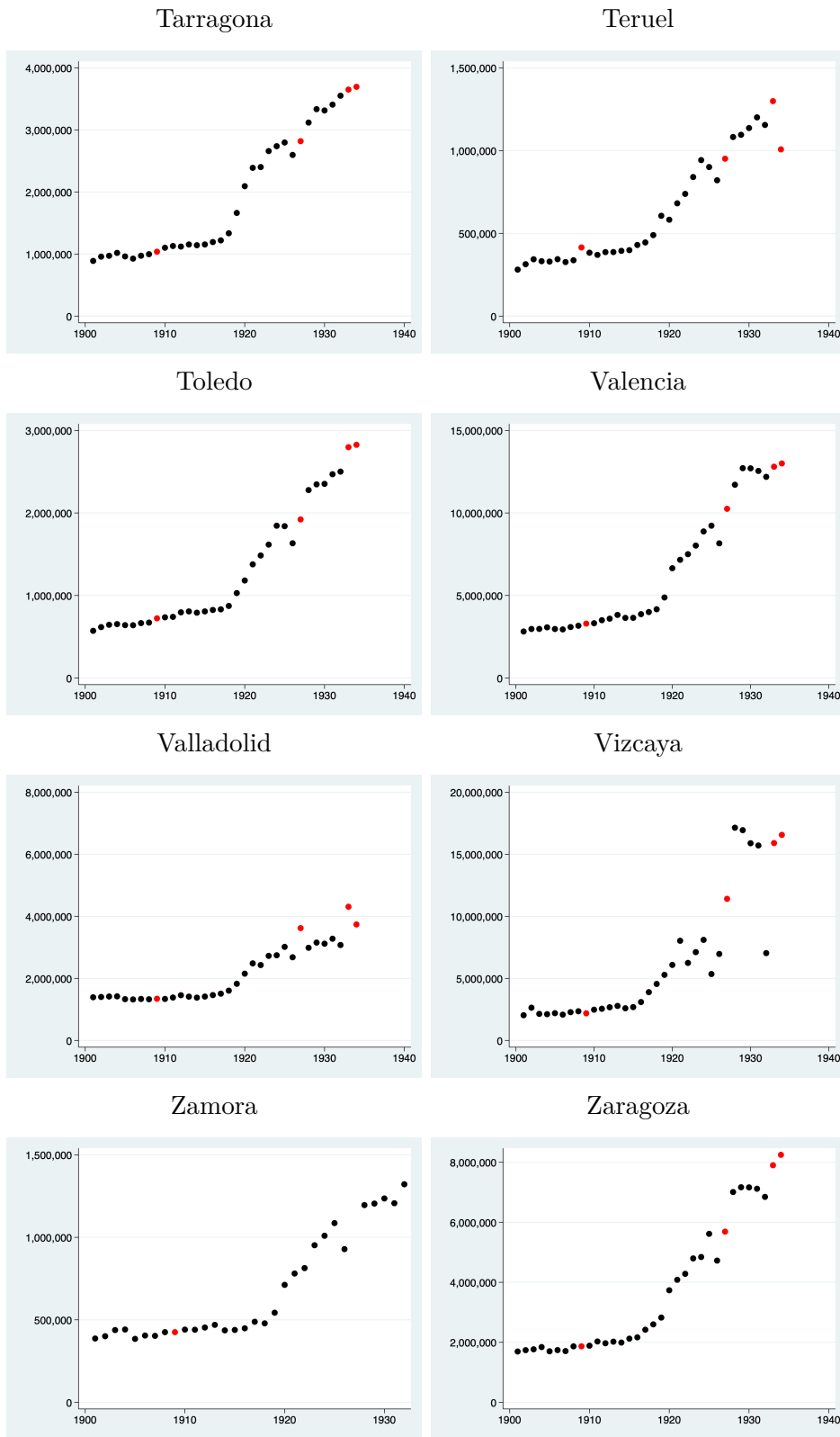
Notes: The original data points are in black; the imputed data points are in red.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A8: Timbre Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.9 Consumos

Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	847,002	1,866,064	1,008,081	685,988	2,225,869
1902	-	843,881	1,951,512	984,821	798,398	2,123,782
1903	-	809,718	1,993,943	946,908	798,174	2,091,326
1904	-	812,670	1,970,921	1,055,158	820,643	2,078,385
1905	-	654,349	1,357,968	789,379	722,107	1,566,808
1906	-	650,860	1,377,924	780,125	766,817	1,796,458
1907	-	626,837	1,406,407	781,486	752,085	1,864,470
1908	-	686,673	1,181,357	702,349	723,294	1,675,279
1909	-	741,141	1,015,540	604,601	753,363	1,808,311
1910	-	663,833	773,766	522,583	712,054	1,803,928
1911	-	694,870	1,091,728	726,396	703,133	1,738,410
1912	-	640,781	973,609	869,364	693,945	1,674,579
1913	-	560,641	809,053	835,426	694,253	1,636,315
1914	-	537,958	678,813	933,903	671,281	1,604,364
1915	-	713,895	787,660	758,439	656,898	1,490,600
1916	-	712,585	813,219	286,885	716,914	1,708,992
1917	-	790,953	741,539	274,432	658,836	1,527,688
1918	-	645,759	672,725	208,088	638,414	1,455,708
1919	-	621,814	672,725	208,088	638,414	1,431,988
1920	-	233,348	672,725	208,088	638,414	1,338,907
1921	-	589,431	556,384	173,274	547,086	1,190,124
1922	-	697,570	199,399	135,692	328,830	992,745
1923	-	447,040	515,205	134,022	88,930	681,608
1924	-	364,129	621,575	149,888	84,638	612,309
1925	-	95,219	210,922	124,993	74,452	165,418
1926	-	27,383	10,347	63,222	61,125	32,356
1927	-	788	91,271	29,306	27,605	14,967
1928	-	-	488,030	45,627	20,831	19,964
1929	-	-	468,201	14,683	33,903	21,525
1930	-	-	1,374,476	668	32,083	25,834
1931	-	48,855	954,620	-	21,722	7,574
1932	-	-	1,348,701	-	14,898	7,680
1933	-	26,329	1,490,134	-	21,137	28,883
1934	-	-	1,483,443	-	17,652	-

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	1,698,433	10,355,391	1,461,955	1,378,549	3,399,652	1,409,277
1902	1,526,148	8,962,986	1,568,472	1,413,409	2,646,493	1,351,702
1903	1,540,340	8,933,790	1,590,782	1,388,538	2,721,467	1,345,961
1904	1,562,084	9,002,456	1,638,359	1,414,994	2,677,164	1,331,378
1905	1,309,045	8,337,282	1,535,415	1,225,948	2,077,944	1,126,781
1906	1,329,922	8,525,016	1,552,782	1,307,060	2,121,075	1,259,555
1907	1,277,126	8,458,389	1,613,696	1,312,354	2,125,868	1,262,976
1908	1,191,201	8,099,997	1,812,447	1,134,066	2,103,238	1,459,496
1909	1,106,133	7,900,809	1,951,669	1,269,123	2,049,949	1,505,982
1910	1,052,830	7,769,659	2,004,010	1,278,535	1,974,073	1,565,310
1911	952,285	7,209,211	1,845,669	1,164,317	1,824,354	1,416,345
1912	928,221	7,196,785	1,732,051	973,224	1,738,319	1,386,726
1913	875,477	6,668,493	1,607,335	1,046,945	1,591,658	1,233,779
1914	846,280	6,125,330	1,430,000	971,876	1,436,743	1,193,222
1915	777,470	5,374,562	1,287,286	930,051	1,297,890	1,041,260
1916	763,042	5,081,092	966,619	972,299	1,082,200	856,704
1917	597,717	4,843,966	959,427	951,886	968,107	696,609
1918	588,025	4,745,662	948,950	844,625	1,025,313	692,258
1919	588,025	4,745,662	404,179	752,310	1,115,732	692,258
1920	588,025	4,745,662	491,884	709,481	1,169,057	692,258
1921	533,953	1,560,433	408,654	578,148	1,007,893	612,068
1922	522,235	1,297,198	275,565	457,270	1,012,589	484,951
1923	361,657	1,180,747	149,878	298,569	1,062,050	427,035
1924	205,143	585,474	159,699	309,490	1,168,312	243,527
1925	172,631	210,629	65,968	32,214	959,005	22,459
1926	138,675	150,601	75,131	32,214	502,220	51,414
1927	8,317	5,613	21,797	15,665	722,903	31,015
1928	2,359	-	16,854	15,699	700,339	59,407
1929	69,391	-	16,535	13,454	645,028	98,756
1930	4,550	-	16,720	14,411	557,706	180,885
1931	16,979	-	13,138	13,962	516,610	19,135
1932	322,124	-	9,269	10,028	506,181	28,490
1933	-	-	11,678	8,864	486,930	18,977
1934	229,532	-	11,155	-	439,305	4,280

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	1,621,026	1,993,090	2,724,337	623,769	1,208,789	1,653,149
1902	1,388,932	1,729,460	2,350,739	593,355	1,118,276	1,546,044
1903	1,410,959	1,818,017	2,358,960	625,649	1,099,249	1,712,326
1904	1,397,892	2,105,664	2,429,509	577,752	1,114,430	1,722,530
1905	1,087,619	1,488,014	2,178,982	428,794	983,519	1,246,795
1906	1,174,569	1,648,583	2,284,834	506,911	987,153	1,239,568
1907	1,204,409	1,569,714	2,296,239	534,511	974,365	1,357,146
1908	1,109,401	1,565,142	2,133,276	527,382	963,646	1,265,703
1909	1,121,980	1,626,029	2,072,452	537,168	963,640	1,234,156
1910	1,103,551	1,547,895	2,018,771	529,296	987,798	1,186,328
1911	1,043,302	1,505,337	1,928,542	531,672	911,659	1,071,067
1912	1,078,602	1,346,966	1,871,698	544,024	924,620	1,005,258
1913	1,092,138	1,387,742	1,780,851	532,435	867,363	906,258
1914	1,034,158	1,237,383	1,692,807	539,577	801,552	819,053
1915	1,001,151	1,178,957	1,609,137	545,015	711,635	738,066
1916	1,038,247	1,096,154	1,457,306	585,876	684,987	544,730
1917	864,641	1,062,734	1,461,934	524,081	669,571	621,460
1918	851,709	1,046,804	1,413,087	581,776	625,521	541,085
1919	607,924	1,203,509	1,216,947	517,804	625,521	541,085
1920	552,342	1,150,742	1,168,272	510,669	625,521	541,085
1921	537,639	957,297	1,046,191	439,055	629,040	608,902
1922	575,391	1,036,505	863,394	247,881	596,180	498,958
1923	466,604	823,158	623,712	130,536	365,731	560,471
1924	398,176	713,463	716,885	135,089	183,982	752,875
1925	181,260	148,787	446,691	106,057	62,539	319,250
1926	83,828	63,563	311,667	-4,263	7,330	258,040
1927	20,071	48,277	172,772	22,397	53,161	199,126
1928	35,835	140,112	69,291	9,979	55,793	144,299
1929	14,344	33,306	40,220	10,943	37,972	123,119
1930	20,303	52,549	27,564	9,020	42,796	109,200
1931	17,477	45,240	20,201	7,418	28,485	109,354
1932	9,989	33,714	15,557	9,971	40,414	95,195
1933	10,540	71,487	14,542	6,813	29,204	144,106
1934	9,343	38,465	16,193	9,688	29,189	74,032

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	683,286	-	1,102,264	408,668	2,145,047	1,319,554
1902	687,807	-	1,190,446	441,665	2,018,965	1,205,496
1903	683,344	-	1,210,078	713,468	2,101,478	1,190,102
1904	700,902	-	1,198,562	650,462	2,198,143	1,196,875
1905	628,205	-	1,042,716	440,115	1,741,698	1,053,572
1906	639,047	-	1,099,430	461,667	1,734,510	1,088,600
1907	633,401	-	1,056,736	460,463	1,779,504	1,092,178
1908	702,173	-	1,015,888	503,147	1,736,288	1,060,361
1909	691,189	-	1,024,708	516,106	1,731,349	1,047,952
1910	844,053	-	995,057	510,165	1,692,897	1,032,411
1911	715,781	-	973,446	495,563	1,626,466	993,016
1912	721,742	-	957,437	511,234	1,476,905	966,055
1913	757,195	-	942,637	492,173	1,440,378	935,580
1914	741,838	-	900,573	500,876	1,335,565	902,664
1915	638,926	-	861,076	500,063	1,278,367	872,392
1916	452,031	-	852,618	556,686	1,131,019	808,315
1917	444,789	-	858,342	574,720	1,141,288	826,747
1918	406,948	-	811,316	412,717	1,156,701	784,718
1919	406,948	-	853,869	380,435	1,142,265	784,718
1920	406,948	-	780,323	388,806	1,087,701	784,718
1921	356,775	-	683,012	290,368	835,017	768,056
1922	190,902	-	579,878	195,744	806,528	429,472
1923	70,920	-	478,410	94,138	775,176	140,407
1924	56,448	-	327,429	91,741	674,536	121,798
1925	18,677	-	216,569	15,512	348,020	100,291
1926	18,677	-	95,291	1,319	146,831	67,884
1927	26,195	-	4,200	2,396	263,958	38,860
1928	13,108	-	1,917	3,567	108,330	30,252
1929	38,941	-	69	-	80,197	47,546
1930	30,173	-	13,339	-	101,259	73,507
1931	22,555	-	-	-	55,111	43,934
1932	49,489	-	-	-	32,007	41,711
1933	20,002	-	-	-	91,641	27,589
1934	73,861	-	-	-	53,805	33,274

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	951,777	780,840	1,434,877	10,758,390	1,803,435	1,903,991
1902	1,007,003	714,841	1,112,045	8,922,702	1,732,789	1,834,293
1903	1,021,625	702,614	1,118,006	8,985,384	1,679,645	1,872,603
1904	1,054,605	739,404	1,163,851	9,030,995	1,678,940	1,884,937
1905	838,977	568,544	1,023,073	7,193,704	1,302,922	1,454,664
1906	846,410	589,184	1,130,431	7,187,344	1,378,164	1,504,296
1907	857,804	606,835	1,118,096	7,198,661	1,342,356	1,466,890
1908	977,931	611,769	1,022,243	6,285,560	1,331,618	1,085,798
1909	862,188	633,369	999,350	5,769,497	1,409,429	959,222
1910	951,778	624,382	968,385	5,514,724	1,577,896	859,930
1911	882,089	552,544	996,944	4,782,597	1,270,861	807,231
1912	872,211	558,754	1,029,898	4,626,986	999,344	655,999
1913	830,774	504,706	903,518	3,613,324	820,291	622,580
1914	853,865	462,738	880,060	2,935,975	640,764	435,009
1915	806,011	426,959	799,912	1,817,819	548,682	393,989
1916	830,102	470,821	716,657	1,118,977	252,192	221,414
1917	763,231	481,178	718,233	883,870	245,311	191,184
1918	704,632	378,039	691,232	822,109	212,835	228,317
1919	-	378,039	691,232	783,070	242,338	228,317
1920	-	378,039	691,232	772,987	250,016	228,317
1921	490,814	356,813	449,918	661,666	159,444	119,168
1922	-	373,695	365,832	616,227	190,124	27,795
1923	52,307	144,630	177,302	561,332	183,020	124,766
1924	110,315	166,768	84,366	543,419	386,750	268,181
1925	14,111	143,347	27,221	336,190	214,946	226,296
1926	322	12,465	-	265,102	185,455	113,149
1927	-	92,378	-	207,521	289,719	211,911
1928	-	53,162	-	140,937	273,710	290,447
1929	-	93,353	-	97,717	326,200	350,679
1930	-	66,908	-	80,977	332,832	671,679
1931	-	120,684	-	73,051	286,103	195,363
1932	-	23,896	-	74,112	260,873	144,980
1933	-	20,024	-	77,355	274,427	442,192
1934	-	25,650	-	63,162	288,968	227,318

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	1,258,072	2,461,230	802,454	1,697,134	1,287,955
1902	-	1,171,611	2,433,942	775,385	1,543,745	1,360,203
1903	-	1,154,548	2,567,496	725,738	1,564,466	1,422,800
1904	-	1,185,712	2,554,792	777,023	1,645,643	1,424,711
1905	-	1,025,456	2,260,952	696,733	1,462,045	1,273,293
1906	-	1,045,327	2,312,157	722,535	1,496,803	1,279,677
1907	-	1,085,951	2,328,770	734,878	1,503,298	1,254,058
1908	-	949,221	2,070,425	862,214	1,395,612	1,320,292
1909	-	894,557	1,935,127	955,168	1,319,573	1,596,633
1910	-	817,892	1,844,634	936,906	1,254,559	1,444,696
1911	-	821,287	1,762,572	858,557	1,208,042	1,014,308
1912	-	829,246	1,721,393	771,310	1,155,641	982,808
1913	-	796,743	1,625,740	714,295	1,104,301	1,211,385
1914	-	825,830	1,512,866	608,942	1,015,760	875,403
1915	-	809,585	1,449,965	640,611	982,217	979,494
1916	-	819,750	1,368,132	491,645	912,028	814,164
1917	-	786,789	1,322,206	452,460	902,283	780,062
1918	-	736,319	1,358,036	446,614	841,899	848,963
1919	-	-	1,547,978	446,614	675,637	650,902
1920	-	-	1,534,110	446,614	596,814	873,624
1921	-	673,436	1,382,749	406,374	483,098	643,389
1922	-	-	1,217,132	250,652	396,382	398,063
1923	-	139,088	1,112,583	85,899	355,214	136,518
1924	-	122,399	821,664	103,355	166,768	126,724
1925	-	-	670,250	48,705	55,645	70,186
1926	-	-	348,681	26,238	8,781	72,441
1927	-	-	177,207	12,418	5,156	47,096
1928	-	-	46,294	10,489	4,577	38,277
1929	-	-	19,210	11,680	3,482	45,642
1930	-	-	12,850	10,635	5,148	40,674
1931	-	-	9,092	8,492	3,919	40,320
1932	-	-	8,570	9,274	3,440	38,733
1933	-	-	19,464	10,352	-	34,648
1934	-	-	30,274	14,469	-	38,131

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Table A9: Consumos Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	1,190,223	622,172	4,685,150	507,928	817,066	810,508
1902	1,265,691	646,061	4,194,297	525,056	899,814	813,829
1903	1,265,207	651,041	4,145,153	661,124	868,372	923,465
1904	1,312,496	684,518	4,154,735	647,260	907,063	916,344
1905	1,166,418	625,878	2,951,867	605,860	730,185	836,612
1906	1,205,339	653,255	2,748,943	621,841	729,888	873,953
1907	1,222,784	663,219	2,658,866	623,964	689,922	895,254
1908	1,057,581	555,521	2,669,156	723,984	814,543	719,480
1909	1,000,095	522,646	3,355,506	868,326	641,593	548,957
1910	967,019	495,774	3,128,231	836,151	769,716	645,756
1911	910,727	496,201	3,508,548	832,116	581,690	530,212
1912	879,698	501,169	2,494,804	801,452	611,290	746,367
1913	830,068	504,375	2,459,049	759,673	427,663	740,023
1914	782,416	506,350	1,890,657	687,887	651,048	803,249
1915	739,241	510,983	1,577,120	482,909	823,605	771,155
1916	650,219	511,521	1,050,206	539,449	586,447	753,556
1917	647,210	492,843	1,079,753	527,983	486,561	665,768
1918	655,326	500,512	1,061,376	535,699	373,805	605,286
1919	755,719	-	1,022,629	393,072	166,590	-
1920	723,525	-	978,849	506,163	267,119	-
1921	633,019	374,982	792,468	449,263	275,934	409,242
1922	504,417	-	690,706	337,586	197,758	-
1923	355,219	-	616,953	201,288	127,847	-
1924	360,972	-	567,763	231,712	235,147	1,852
1925	211,566	13,097	418,659	171,384	67,519	-
1926	140,070	5,064	164,835	115,640	-	-
1927	42,919	-	215,504	81,033	93,658	-
1928	17,573	-	39,363	22,403	444,718	-
1929	10,546	-	44,991	24,536	116,034	-
1930	8,265	-	18,939	12,972	42,032	-
1931	8,047	-	13,339	9,992	38,817	-
1932	8,497	-	10,327	9,342	38,792	-
1933	12,651	-	11,623	7,926	36,209	-
1934	8,954	-	13,553	8,261	34,054	-

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Table A9: Consumos Revenues by Provinces, 1901–1934.

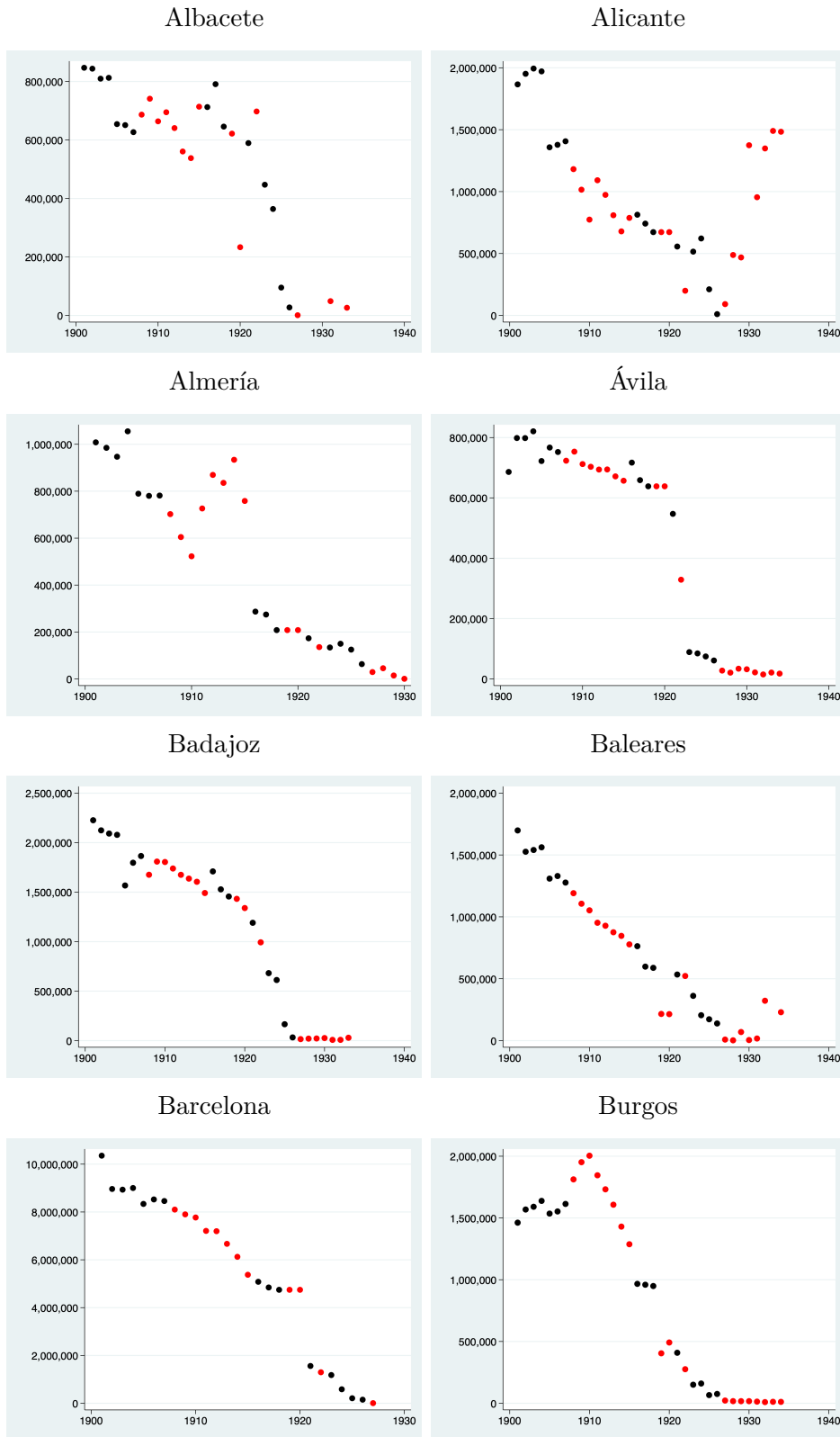
Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	1,558,891	4,041,526	1,627,174	702	1,047,360	1,739,334
1902	1,328,240	3,520,796	1,475,084	-	1,070,551	1,809,976
1903	1,312,174	3,562,930	1,413,572	-	1,058,477	1,790,705
1904	1,294,286	3,685,090	1,423,939	287	1,081,362	1,835,985
1905	1,058,128	3,142,247	1,291,977	756	938,459	1,507,016
1906	1,127,079	3,332,318	1,327,174	758	973,918	1,498,890
1907	1,110,591	3,301,827	1,315,078	639	1,031,131	1,431,823
1908	1,102,944	2,835,735	1,333,495	3,799	985,544	1,356,800
1909	1,093,902	2,587,559	1,762,398	6,611	956,682	1,315,823
1910	1,081,857	2,352,225	1,804,121	7,869	924,635	1,265,875
1911	1,062,562	2,297,348	1,667,788	10,247	898,713	1,216,664
1912	1,057,151	2,014,925	1,584,733	10,660	939,933	1,112,357
1913	1,038,383	1,876,076	1,438,611	12,770	922,604	896,284
1914	1,021,035	1,770,896	1,061,317	15,226	895,429	740,068
1915	1,013,962	1,656,826	1,294,919	17,961	875,074	583,394
1916	1,103,502	1,079,218	749,669	19,502	753,970	599,060
1917	972,039	1,090,953	676,969	22,021	816,268	238,235
1918	890,708	1,008,021	598,727	21,885	750,437	502,391
1919	890,708	1,335,271	635,458	13,898	-	549,221
1920	890,708	1,322,468	554,512	14,809	-	578,765
1921	826,815	1,061,159	540,295	15,646	699,735	320,301
1922	542,688	877,079	487,943	16,044	-	216,203
1923	366,788	694,009	442,203	-	123,416	134,058
1924	399,150	673,660	279,443	17,467	95,910	154,529
1925	109,936	397,161	186,599	20,553	16,943	527
1926	43,046	197,572	153,478	20,518	16,938	2,335
1927	16,374	91,599	54,384	21,074	-	5,583
1928	13,307	23,842	16,369	21,786	-	4,953
1929	12,581	13,262	5,076	22,699	-	4,500
1930	14,222	10,865	4,211	22,770	-	4,863
1931	6,402	8,104	4,274	23,268	-	3,442
1932	11,764	12,268	5,123	23,955	-	7,149
1933	30,465	18,282	5,739	25,043	-	2,095
1934	-	-	11,543	26,187	-	15,243

Sources: See Chapter 2.

Notes: All data are in nominal values.

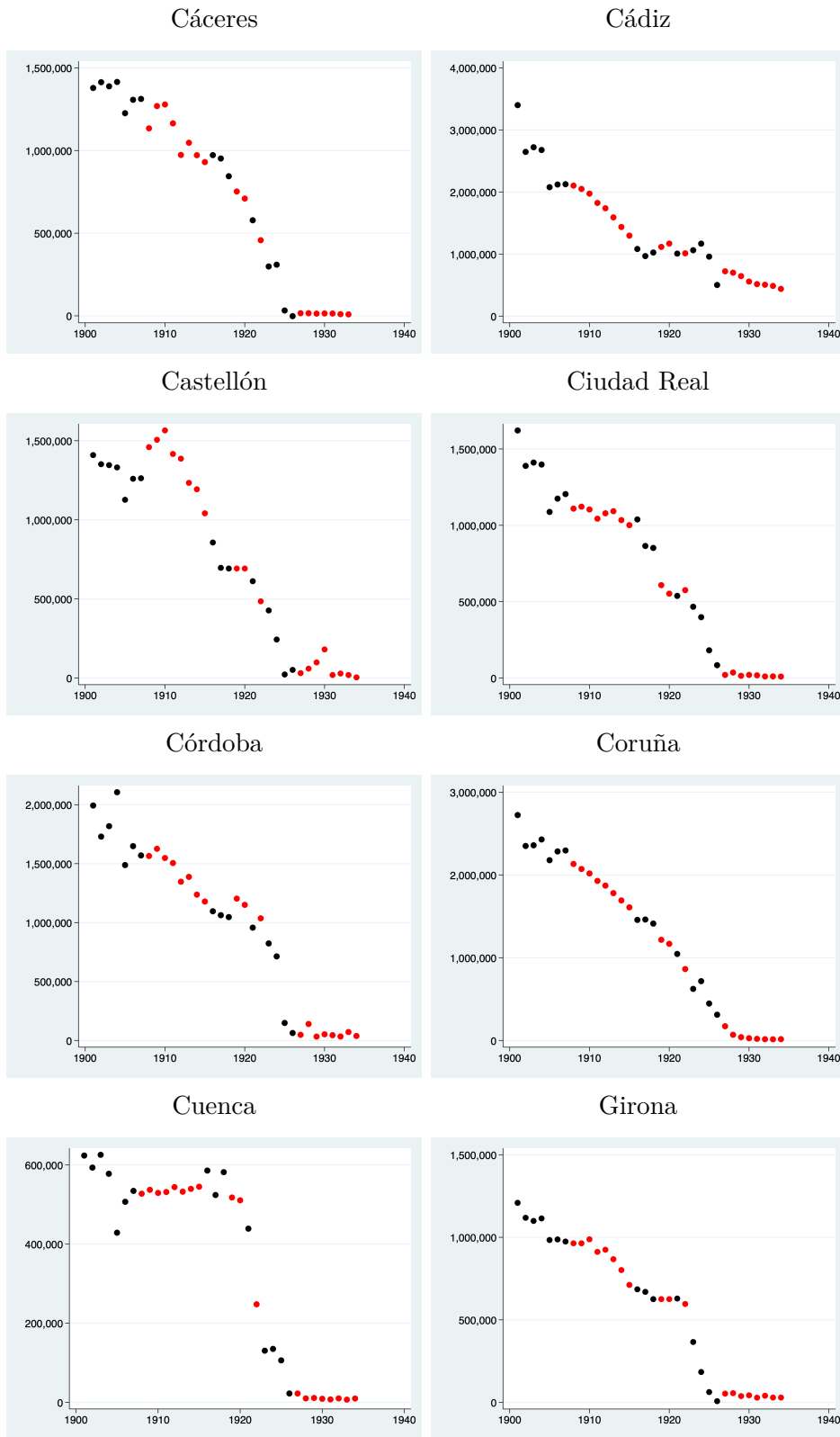
I corrected for outliers in 1919 and 1920 in Alicante, Almería, Ávila, Baleares, Barcelona, Castellón, Ciudad Real, Girona, Granada, Guadalajara, León, Logroño, Lugo, Murcia, Palencia and Toledo; and in 1926 for Cáceres, Cuenca and Guadalajara.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



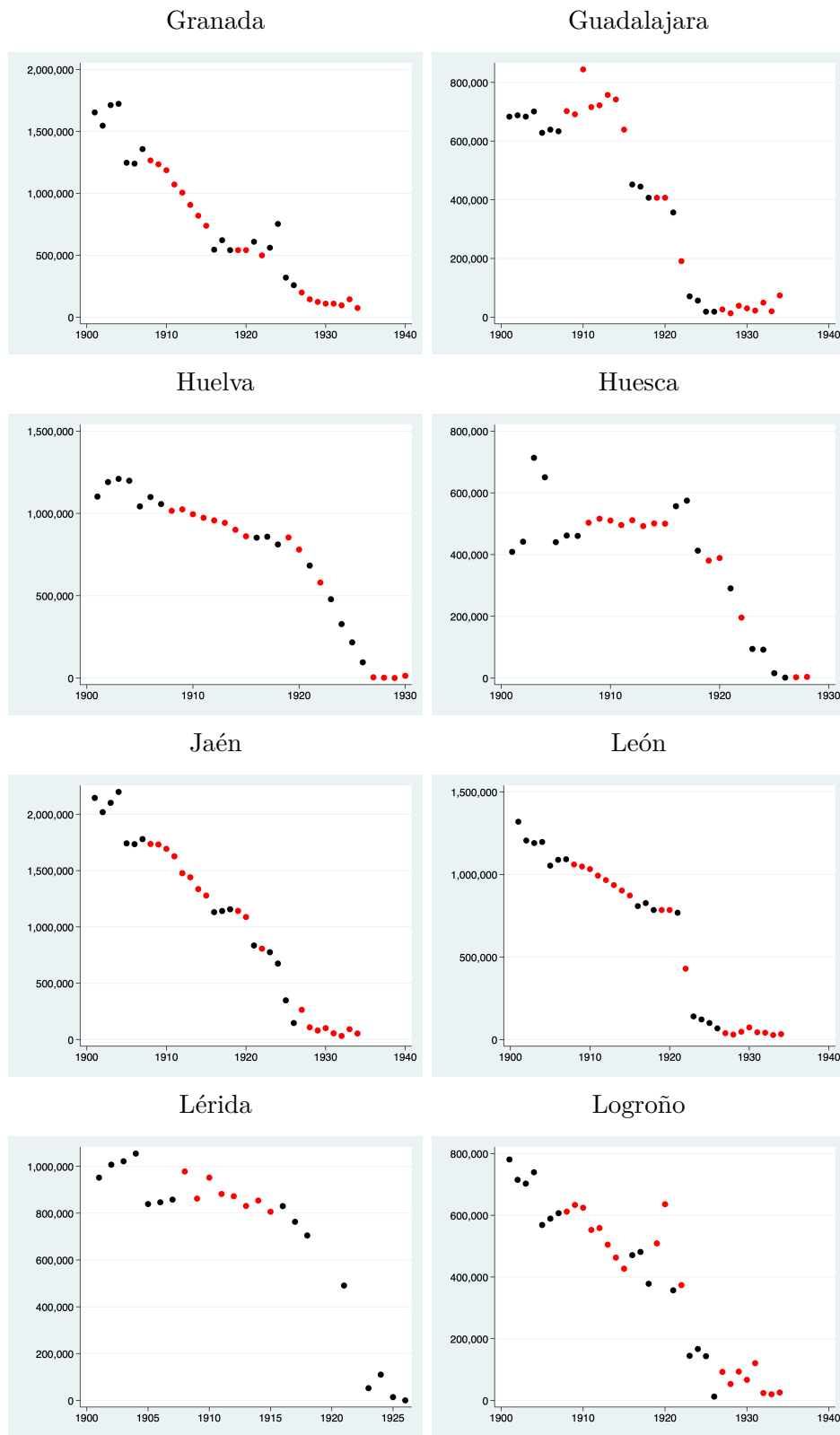
Notes: The original data points are in black; the imputed data points are in red.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



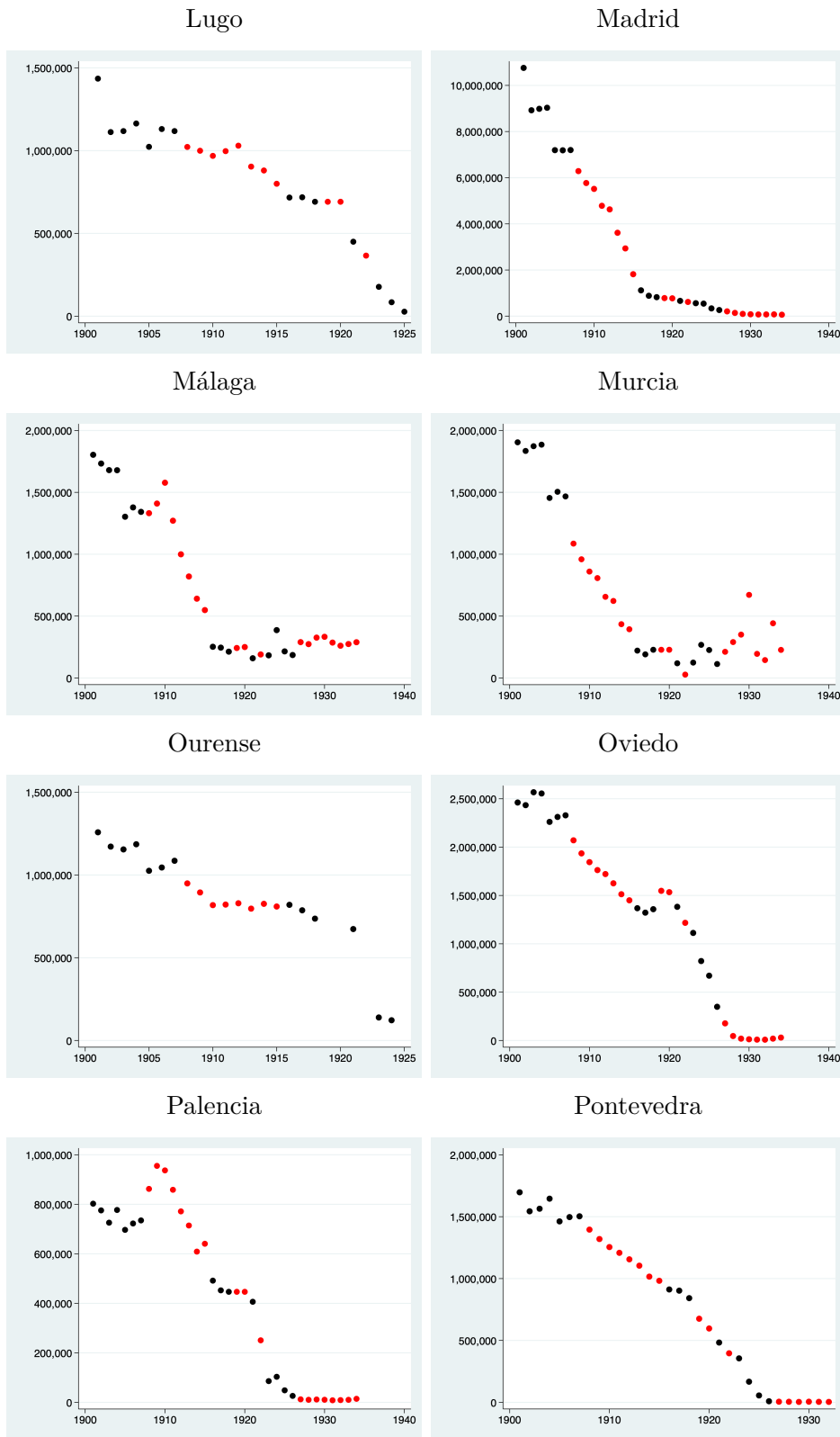
Notes: The original data points are in black; the imputed data points are in red.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



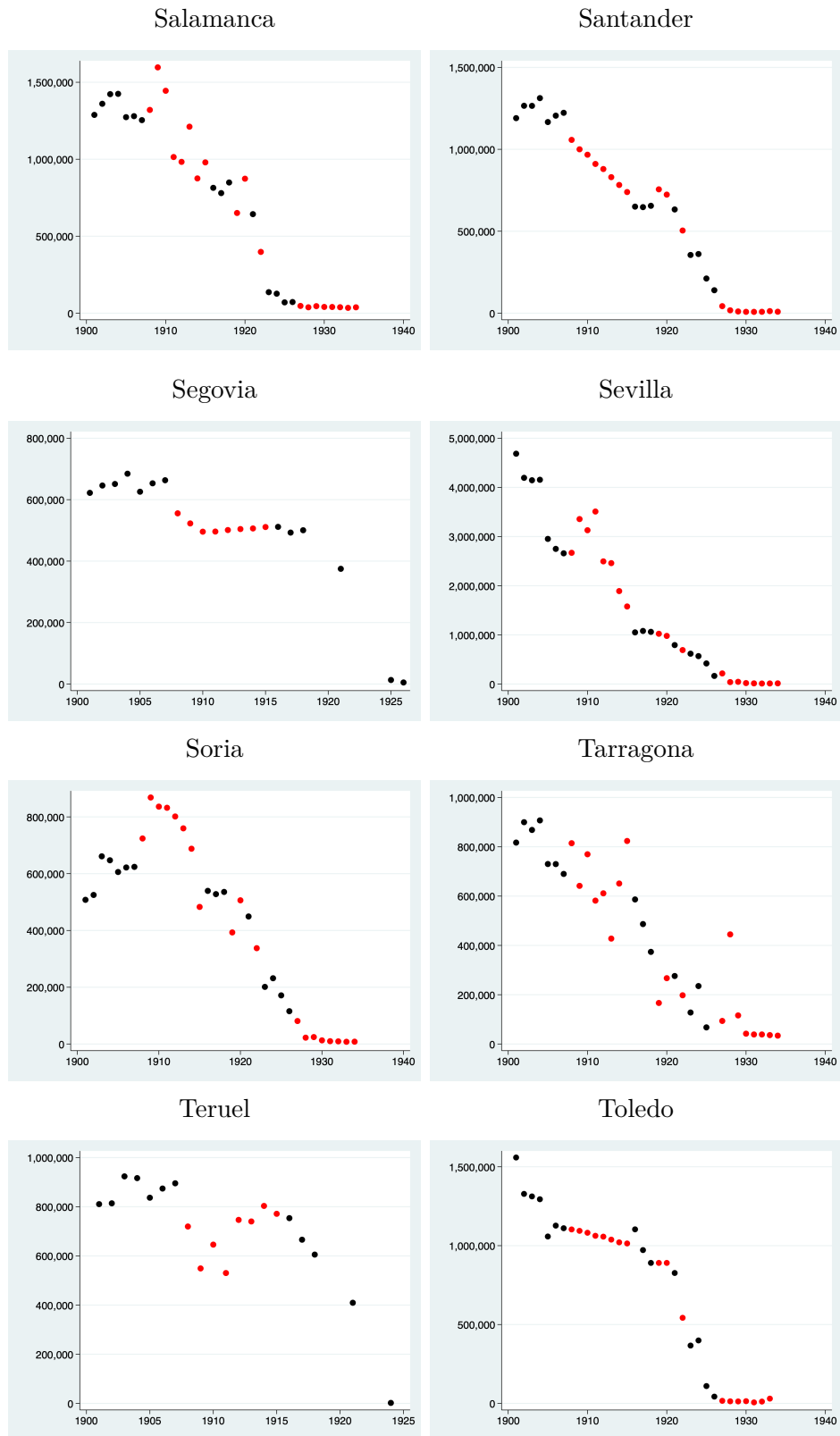
Notes: The original data points are in black; the imputed data points are in red.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



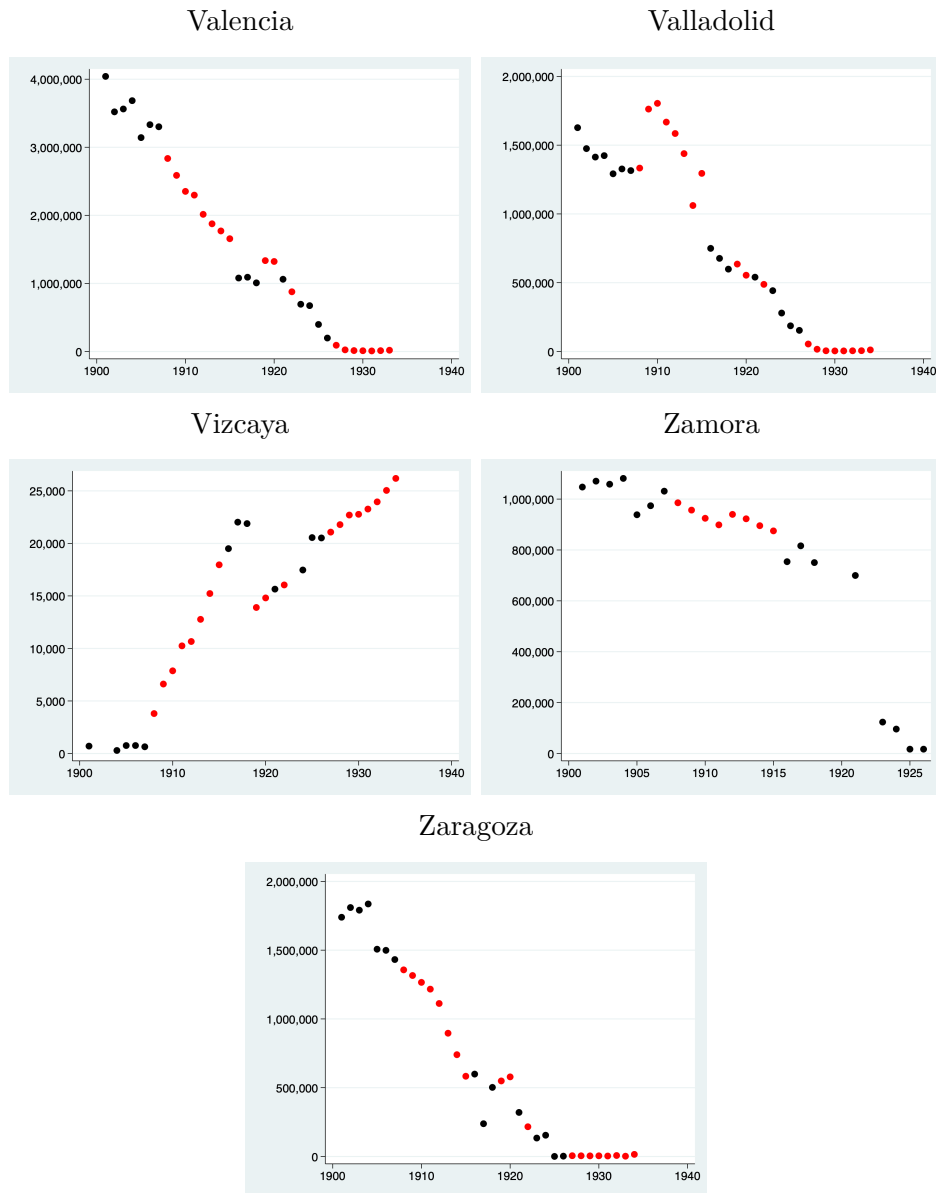
Notes: The original data points are in black; the imputed data points are in red.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A9: Consumos Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.10 Alcoholes

Table A10: Alcoholes Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	16,869	23,833	30,565	879	9,745
1902	-	19,718	24,037	61,816	800	8,840
1903	-	43,519	21,313	56,306	836	27,716
1904	6,314	251,425	33,733	60,952	837	28,771
1905	110,940	1,459,027	297,479	82,315	9,882	133,243
1906	137,895	697,668	134,254	84,703	3,841	120,056
1907	120,027	603,737	147,014	66,407	6,233	112,021
1908	164,424	740,063	356,497	66,144	13,547	119,972
1909	184,861	625,122	381,348	55,073	14,354	232,887
1910	192,537	634,396	403,861	51,413	19,095	269,288
1911	180,987	484,917	273,348	77,305	19,376	229,317
1912	60,380	941,016	355,554	89,116	21,718	203,611
1913	61,057	1,301,868	330,846	84,672	21,817	197,522
1914	61,357	1,469,907	489,244	87,694	24,586	197,169
1915	26,949	613,168	389,973	60,693	25,238	155,440
1916	26,949	84,748	111,672	5,390	28,159	47,178
1917	28,936	464,190	278,337	6,216	22,723	212,910
1918	27,904	781,858	724,496	5,691	28,897	456,353
1919	46,829	938,789	197,205	18,967	86,595	208,215
1920	44,799	2,323,612	223,398	18,784	91,932	228,992
1921	47,907	926,651	758,862	13,109	85,370	406,506
1922	60,202	364,147	916,358	11,710	89,239	406,306
1923	74,247	1,032,268	618,583	12,365	79,940	380,923
1924	77,457	1,235,267	703,252	17,968	94,541	309,977
1925	62,849	1,964,643	998,003	12,558	156,570	507,372
1926	58,791	2,413,422	1,242,227	13,213	124,876	592,080
1927	70,680	2,706,205	1,080,949	11,715	163,906	569,363
1928	89,181	3,519,936	870,662	13,889	154,428	723,779
1929	78,043	4,005,547	949,538	13,788	213,043	722,654
1930	85,929	3,523,552	491,534	12,960	220,374	760,733
1931	87,064	1,636,255	719,378	10,098	214,845	862,087
1932	92,059	3,027,552	563,262	7,676	219,289	906,446
1933	92,912	1,714,390	801,091	9,277	199,857	1,019,180
1934	98,265	2,447,180	884,918	8,796	219,955	1,032,582

Continued on Next Page.

Table A10: Alcohóles Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	6,868	184,760	3,613	367	6,964	32,040
1902	1,224	312,639	5,162	421	15,846	14,492
1903	34,863	1,940,050	4,603	239	21,312	6,567
1904	28,748	2,185,912	12,868	236	129,513	37,036
1905	359,389	1,330,209	32,213	401	497,623	189,430
1906	354,068	2,146,241	64,772	1,548	673,077	145,899
1907	310,293	1,965,465	107,173	9,767	773,773	228,550
1908	203,188	1,930,238	68,299	2,649	853,073	217,317
1909	165,263	2,033,019	71,535	17,673	1,138,076	185,723
1910	163,177	2,041,374	102,102	21,926	1,420,454	184,617
1911	151,569	2,201,934	76,849	15,493	896,583	154,739
1912	145,424	1,699,399	70,032	3,304	831,564	211,191
1913	137,945	1,860,459	47,753	10,006	484,329	181,240
1914	222,834	2,128,465	54,797	6,219	398,501	258,847
1915	220,626	2,540,714	36,808	5,210	219,469	231,783
1916	92,059	2,985,502	20,181	7,380	28,617	368,989
1917	78,637	2,300,833	26,556	7,007	18,638	276,654
1918	117,718	1,309,972	34,274	9,133	216,201	77,326
1919	16,112	4,803,900	45,149	10,347	156,875	133,445
1920	18,431	-	8,411	11,136	91,858	262,352
1921	250,953	7,781,857	46,093	12,365	158,637	187,930
1922	334,093	6,736,214	73,452	9,918	293,886	174,301
1923	261,288	7,598,881	90,316	8,278	626,236	157,919
1924	320,386	4,751,448	100,489	9,510	708,909	191,173
1925	369,195	5,186,324	77,642	11,282	1,313,333	150,946
1926	489,339	5,614,349	98,268	13,456	1,478,303	133,488
1927	458,008	3,801,703	106,924	10,811	1,638,585	185,560
1928	433,925	3,169,882	143,032	9,428	1,666,202	227,663
1929	780,969	1,602,384	117,497	10,704	1,994,335	264,394
1930	653,566	1,024,491	144,730	10,653	2,339,635	308,536
1931	894,078	5,262,531	149,801	9,818	2,540,895	194,594
1932	1,346,744	7,507,188	142,926	9,095	2,644,702	201,370
1933	863,336	7,280,666	171,121	7,938	2,783,193	211,374
1934	1,514,819	6,583,219	167,250	9,753	3,139,775	146,602

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Table A10: Alcoholes Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	55,311	639	526	2,635	8,628	812,428
1902	148,260	698	1,041	4,321	7,891	1,193,093
1903	104,107	477	559	2,334	9,465	1,470,312
1904	117,032	15,883	717	47,183	9,385	711,026
1905	620,773	219,275	291,580	517,751	134,944	522,764
1906	512,330	254,661	542,829	179,807	207,430	731,703
1907	728,200	329,712	415,396	205,945	237,598	1,122,007
1908	534,555	137,956	-	303,925	362,917	1,365,275
1909	1,010,992	286,926	-	309,874	536,212	1,884,799
1910	963,135	196,100	-	344,410	740,503	2,043,003
1911	793,030	272,904	-	257,303	516,955	1,604,033
1912	1,396,155	109,469	-	300,277	612,398	1,614,171
1913	1,901,054	237,812	-	345,431	459,169	1,093,736
1914	1,729,925	111,220	-	305,635	286,067	704,068
1915	1,739,469	121,361	-	311,389	97,606	636,679
1916	717,576	80,780	6,572	41,098	36,742	1,775,178
1917	1,749,174	95,497	6,903	94,567	34,552	1,159,947
1918	3,652,693	90,910	67,662	262,078	38,633	1,525,269
1919	2,632,031	314,549	16,842	378,128	137,461	723,009
1920	2,969,910	316,748	19,175	372,461	133,870	792,279
1921	3,298,579	276,365	23,477	369,486	89,561	1,500,928
1922	2,585,036	279,483	34,254	303,542	110,201	1,877,285
1923	2,876,456	327,850	47,610	262,718	147,030	2,000,577
1924	3,173,753	306,267	48,602	244,320	133,130	2,399,842
1925	4,398,003	319,541	55,892	186,843	176,722	2,403,611
1926	5,711,904	277,435	65,353	265,673	220,493	2,998,734
1927	5,895,543	340,454	74,829	179,469	215,685	3,304,070
1928	5,580,572	271,511	87,734	150,063	233,096	3,657,889
1929	6,322,207	322,850	95,145	131,111	286,868	4,032,184
1930	5,961,733	284,362	96,922	109,768	336,514	4,178,281
1931	6,208,398	282,895	103,963	91,171	342,433	4,845,036
1932	6,886,826	285,948	115,133	76,355	335,852	5,213,288
1933	6,732,562	246,724	126,448	62,139	340,284	5,728,728
1934	7,027,297	272,750	133,945	54,140	378,670	5,522,048

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Table A10: Alcoholes Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	1,657	16,268	8,650	9,881	1,196	137
1902	1,725	18,160	7,470	8,395	1,134	122
1903	2,452	12,925	8,749	4,310	783	117
1904	1,916	142,937	32,154	7,608	2,727	462
1905	5,272	266,155	463,454	51,765	21,057	37,611
1906	3,445	336,348	430,355	50,581	17,912	15,402
1907	14,528	258,809	346,582	39,531	40,677	15,363
1908	6,505	191,337	325,370	28,896	22,816	25,474
1909	14,664	182,640	385,731	27,843	30,645	41,859
1910	1,765	133,018	355,289	25,969	29,849	34,933
1911	7,516	191,736	309,813	21,177	32,977	31,037
1912	4,753	77,693	327,898	21,667	18,222	19,632
1913	977	76,675	319,638	23,107	22,817	26,187
1914	749	83,974	318,601	21,032	18,087	16,075
1915	3,297	102,218	336,979	21,048	20,114	24,751
1916	8,878	26,346	69,241	11,678	16,032	11,102
1917	11,137	26,400	68,202	9,905	20,236	12,406
1918	21,209	39,655	445,845	5,880	24,422	33,697
1919	17,294	133,018	-	8,053	12,564	15,100
1920	17,003	183,176	-	10,036	8,610	91,873
1921	13,917	10,947	260,606	14,454	54,588	24,064
1922	22,901	105,906	915,326	18,695	130,583	21,157
1923	19,800	132,047	394,930	20,845	68,182	25,542
1924	25,204	94,521	570,016	22,050	58,951	74,892
1925	39,341	102,536	366,094	13,731	7,945	146,283
1926	6,749	11,536	1,159,461	11,803	94,633	131,333
1927	21,881	113,217	851,998	13,069	3,446	171,445
1928	30,951	133,855	122,352	13,051	171,458	179,864
1929	22,050	141,816	-	18,423	4,378	281,770
1930	27,126	134,354	-	11,127	263,873	351,485
1931	30,893	217,588	16,161	14,625	236,410	353,200
1932	26,831	360,302	765,188	11,514	180,571	375,125
1933	36,830	439,263	1,631,457	1,552	391,230	365,211
1934	30,309	481,649	3,097	686	352,824	424,352

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Table A10: Alcoholes Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	13,909	5,653	-	28,707	462,683	7,073
1902	12,506	4,251	241	13,997	467,564	7,973
1903	4,450	4,447	284	4,584	308,730	23,485
1904	4,340	3,924	551	8,146	259,354	45,791
1905	77,009	49,405	3,461	229,754	647,236	456,433
1906	78,055	163,634	8,145	346,636	923,776	221,020
1907	65,828	132,876	5,081	447,873	798,943	229,181
1908	36,559	124,632	8,050	277,246	624,786	222,661
1909	63,314	133,091	9,446	317,959	768,208	244,816
1910	42,558	151,269	10,987	326,161	1,036,635	254,217
1911	43,438	150,904	10,004	297,384	718,973	251,054
1912	45,346	109,699	8,797	251,209	505,957	249,490
1913	52,187	121,066	7,505	293,873	413,259	275,240
1914	41,488	112,977	6,274	279,286	332,367	243,590
1915	47,712	111,368	5,511	342,385	333,245	268,056
1916	23,708	21,851	1,555	141,290	64,002	111,948
1917	36,052	34,020	2,738	185,946	217,255	266,837
1918	70,177	47,790	4,837	327,141	246,044	385,071
1919	70,177	30,336	-	264,104	2,044,532	68,924
1920	66,613	29,297	1,388	401,516	2,117,837	125,223
1921	107,909	99,213	3,345	328,536	208,133	492,784
1922	127,471	127,158	2,774	347,140	6,556	637,661
1923	165,532	193,104	8,576	413,810	460,532	365,047
1924	219,432	235,838	16,772	556,203	826,503	497,871
1925	192,555	253,532	32,595	629,636	-	730,450
1926	203,736	330,779	56,740	559,640	109,347	1,054,319
1927	240,200	341,734	55,110	500,898	2,239,531	962,254
1928	272,256	385,517	86,099	463,580	1,024,600	989,245
1929	298,141	414,305	79,949	470,470	2,807,095	1,024,275
1930	296,636	445,908	108,080	582,985	3,060,678	732,569
1931	328,576	472,666	128,102	437,475	815,397	1,477,638
1932	348,828	534,938	141,921	319,713	-	1,670,556
1933	368,366	576,811	173,005	310,824	-	1,384,566
1934	390,296	614,642	183,302	348,748	-	1,826,448

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Table A10: Alcoholes Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	58	16,694	644	1,151	491
1902	-	-	55,619	716	2,718	620
1903	-	18	290,123	635	582	510
1904	675	535	135,422	1,350	2,616	670
1905	2,542	5,192	123,299	12,095	118,138	10,131
1906	243	5,034	121,883	13,881	210,443	22,946
1907	630	7,581	457,038	17,168	163,884	28,001
1908	-	12,661	355,352	12,747	185,721	31,229
1909	-	15,386	524,624	12,181	112,264	34,976
1910	-	16,658	643,651	18,429	78,442	42,296
1911	-	18,297	499,432	16,802	81,129	41,347
1912	-	19,177	406,659	17,576	82,731	36,531
1913	-	17,891	416,276	15,379	86,507	27,796
1914	-	20,465	442,738	16,080	69,366	25,707
1915	-	20,352	422,642	8,325	75,060	18,979
1916	-	19,389	36,963	4,237	185,136	11,857
1917	4,550	24,046	35,498	3,989	26,693	9,102
1918	209,449	19,004	91,354	10,446	35,784	12,334
1919	3,644,607	11,530	126,002	3,039	6,461	23,362
1920	3,527,459	12,490	126,491	1,225	11,037	25,446
1921	3,251,601	24,534	117,792	7,960	34,003	19,634
1922	3,233,778	23,344	126,991	12,805	62,468	24,936
1923	2,308,473	29,569	138,103	17,260	122,268	27,407
1924	2,129,198	46,154	141,833	24,101	142,499	38,876
1925	1,624,574	64,942	124,192	22,349	97,563	55,309
1926	1,858,788	126,303	121,704	38,290	234,315	42,754
1927	1,217,433	126,112	130,238	41,369	235,526	56,194
1928	920,174	150,832	132,204	49,024	312,379	58,012
1929	653,157	176,209	132,678	47,498	356,722	73,976
1930	481,820	197,406	132,248	52,132	354,353	76,611
1931	283,141	222,908	133,614	59,168	438,705	86,038
1932	173,887	248,245	134,578	64,593	523,894	89,950
1933	106,131	277,689	135,684	73,453	592,816	95,986
1934	89,267	304,289	136,939	77,425	630,171	103,797

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Table A10: Alcohols Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	3,918	630	410	99	23,031	1,739
1902	4,879	662	2,167	130	28,154	1,535
1903	4,653	644	7,657	115	144,452	1,385
1904	5,433	549	45,296	173	162,938	1,016
1905	66,827	9,573	365,474	1,587	275,320	13,310
1906	65,910	15,364	491,796	1,907	490,725	4,141
1907	104,559	17,618	532,049	1,078	681,104	2,261
1908	66,265	20,409	331,698	1,320	187,034	7,187
1909	73,237	31,917	390,739	2,071	1,092,426	9,206
1910	72,498	23,513	369,135	2,070	356,476	8,285
1911	73,497	27,677	433,816	1,819	1,143,978	8,526
1912	71,480	27,393	317,641	1,615	776,040	8,606
1913	74,156	28,970	323,779	1,391	776,040	8,100
1914	70,435	14,780	277,644	1,272	177,685	8,609
1915	72,215	16,847	267,896	9,765	86,152	8,177
1916	33,958	10,700	144,576	5,140	135,671	3,307
1917	44,583	14,816	148,530	5,433	165,787	6,782
1918	90,291	18,278	281,076	5,615	686,319	4,708
1919	130,237	17,039	348,210	14,650	-	17,926
1920	126,963	10,184	363,261	13,843	-	5,506
1921	126,968	20,185	415,771	12,696	418,925	8,229
1922	112,791	31,396	452,221	14,310	-	13,163
1923	96,022	53,854	432,783	15,364	-	27,880
1924	98,608	35,099	546,347	15,555	627,349	6,548
1925	94,768	34,369	520,920	19,261	-	3,425
1926	88,678	33,102	557,290	9,300	-	10,946
1927	78,108	40,430	543,736	13,354	-	4,084
1928	70,931	46,505	682,218	14,726	-	10,588
1929	64,182	10,620	627,721	13,741	-	11,613
1930	59,601	8,011	687,778	13,957	-	10,256
1931	52,105	11,421	722,528	13,880	-	14,694
1932	46,365	10,213	787,769	13,430	-	9,859
1933	42,099	14,500	878,957	14,543	-	11,490
1934	38,500	16,970	868,188	14,516	-	5,658

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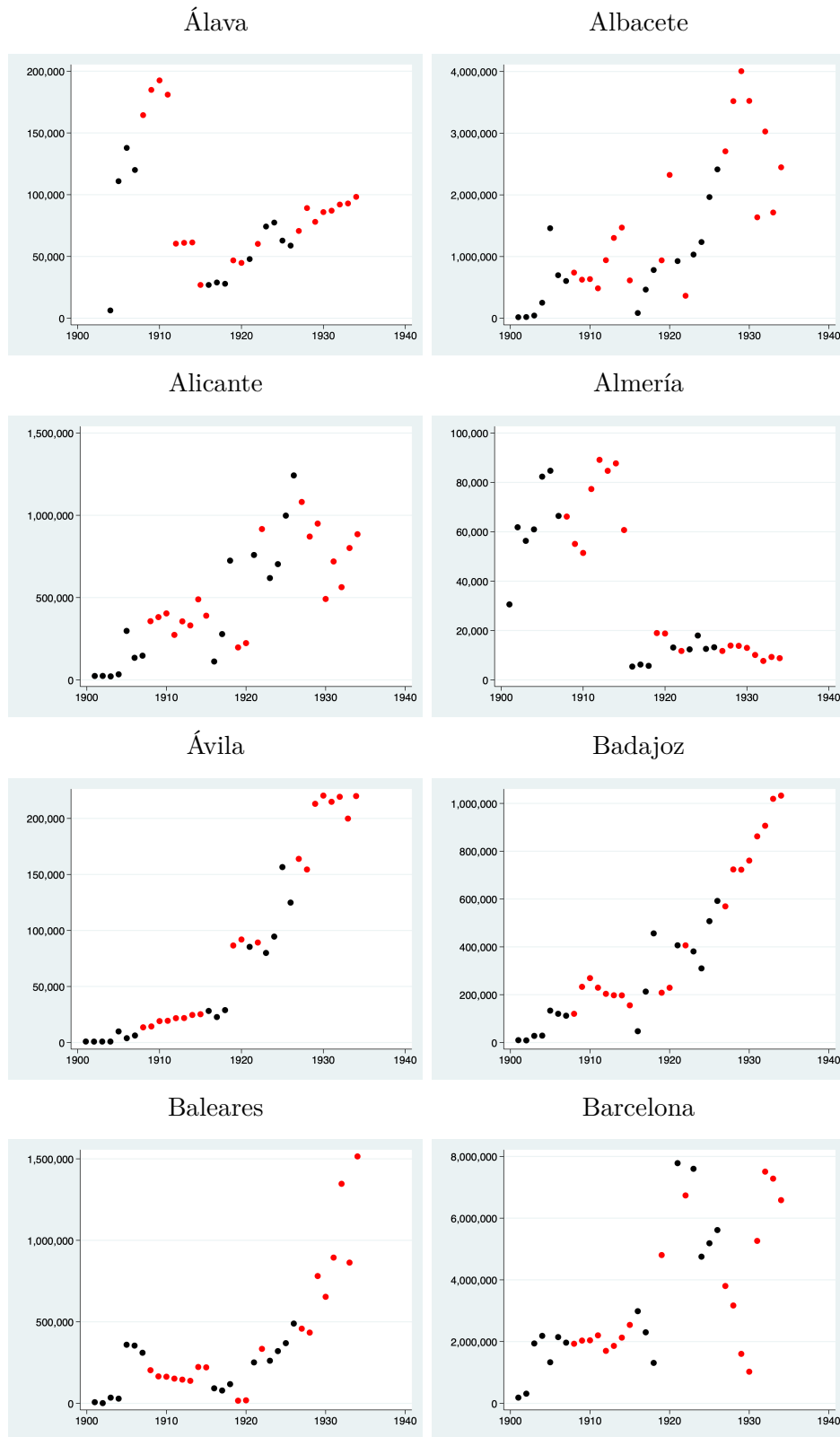
Table A10: Alcohols Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	7,307	86,809	72,222	3,644	31,989	153,821
1902	13,222	319,719	260,477	4,545	6,581	573,021
1903	10,330	1,263,166	853,028	4,974	5,476	947,822
1904	10,641	1,966,935	1,207,010	7,747	5,699	1,139,926
1905	260,418	3,249,139	398,800	229,638	69,488	732,285
1906	154,275	2,364,041	103,166	344,334	59,988	1,102,174
1907	194,128	3,290,401	123,356	1,015,941	61,274	1,201,211
1908	180,865	2,145,298	109,526	-	45,926	1,096,241
1909	189,465	2,031,289	134,231	-	47,357	1,137,624
1910	186,916	1,833,865	174,268	-	46,196	1,124,328
1911	193,140	1,829,966	134,796	-	44,310	1,106,188
1912	216,827	1,651,543	134,535	-	47,388	1,188,161
1913	250,201	1,535,483	119,905	-	45,444	1,252,987
1914	248,376	1,496,886	126,967	-	44,071	1,299,948
1915	249,044	1,488,540	130,365	-	44,700	1,375,847
1916	172,110	513,158	53,176	3,170,270	25,208	1,740,918
1917	219,005	398,612	42,640	2,738,608	33,958	1,706,787
1918	452,745	1,263,035	108,299	1,698,616	48,975	740,892
1919	126,028	1,898,938	341,341	4,507,611	33,332	1,039,031
1920	127,513	2,233,398	323,958	5,104,237	102,487	1,212,215
1921	414,009	1,039,236	436,933	3,703,388	69,554	1,172,392
1922	628,483	886,828	363,656	4,512,954	98,665	1,245,551
1923	760,332	822,610	334,783	6,552,027	112,972	1,386,208
1924	805,015	1,313,062	327,014	5,406,203	146,717	1,561,205
1925	963,165	1,196,622	261,867	5,641,727	186,775	1,585,741
1926	1,246,976	49,986	641,981	4,103,653	128,764	1,880,279
1927	1,366,223	760,192	473,139	4,473,045	195,720	1,921,038
1928	1,598,088	724,210	505,832	4,039,899	148,268	2,061,804
1929	1,654,376	818,405	521,987	3,918,512	214,994	2,173,366
1930	1,869,021	847,742	529,971	3,772,324	214,048	2,345,104
1931	2,121,264	336,270	557,518	3,551,686	205,150	2,430,183
1932	2,226,719	301,975	579,431	3,609,418	235,178	2,531,489
1933	2,480,176	305,650	627,876	3,634,522	231,105	2,659,810
1934	2,613,849	324,537	647,942	3,715,383	263,830	2,877,487

Sources: See Chapter 2.

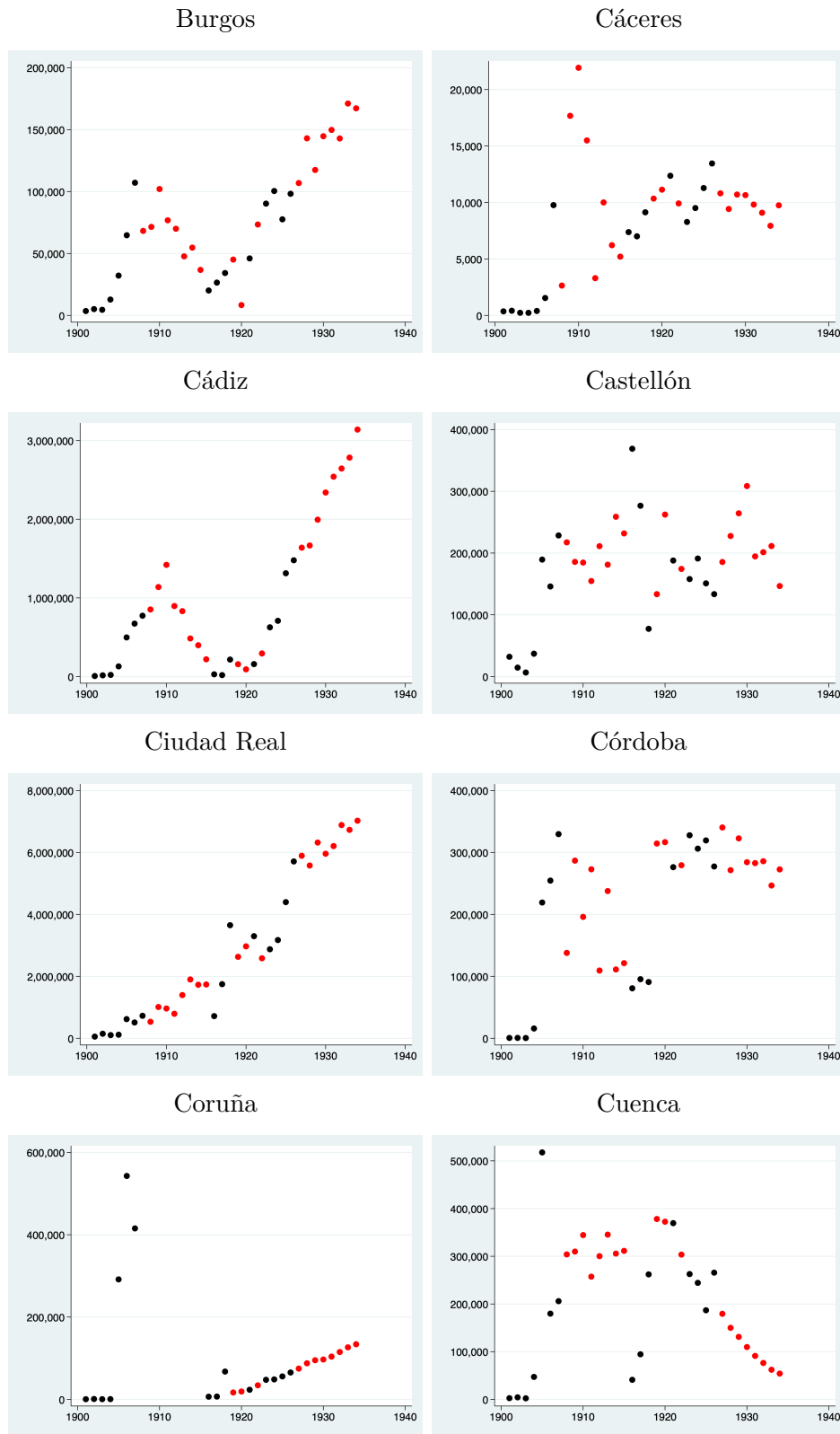
Notes: All data are in nominal values. I corrected for outliers in Lérida in 1919; and in Tarragona in 1913.

Figure A10: Alcohols Revenues by Provinces, 1901–1934.



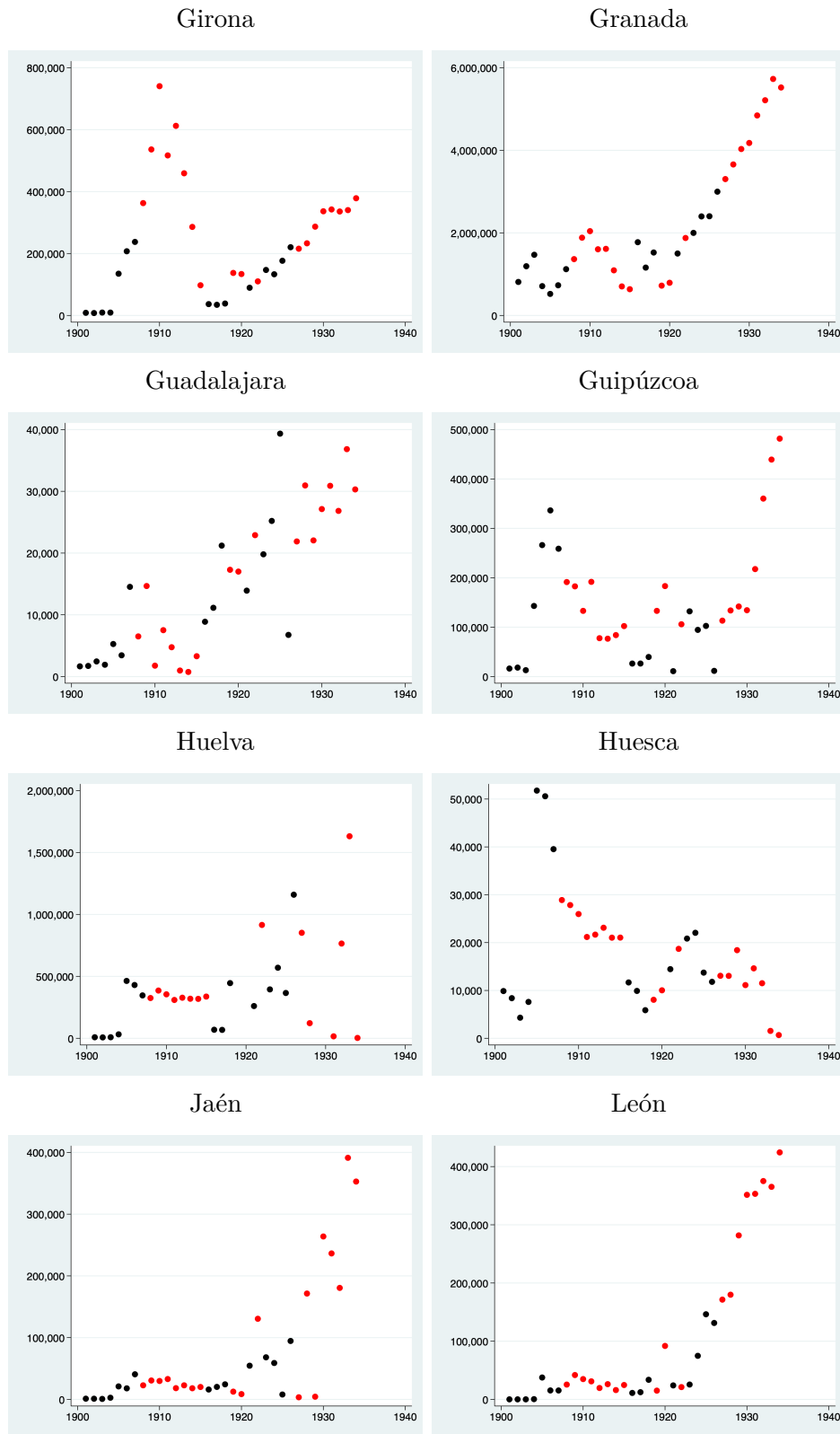
Notes: The original data points are in black; the imputed data points are in red.

Figure A10: Alchoholes Revenues by Provinces, 1901–1934.



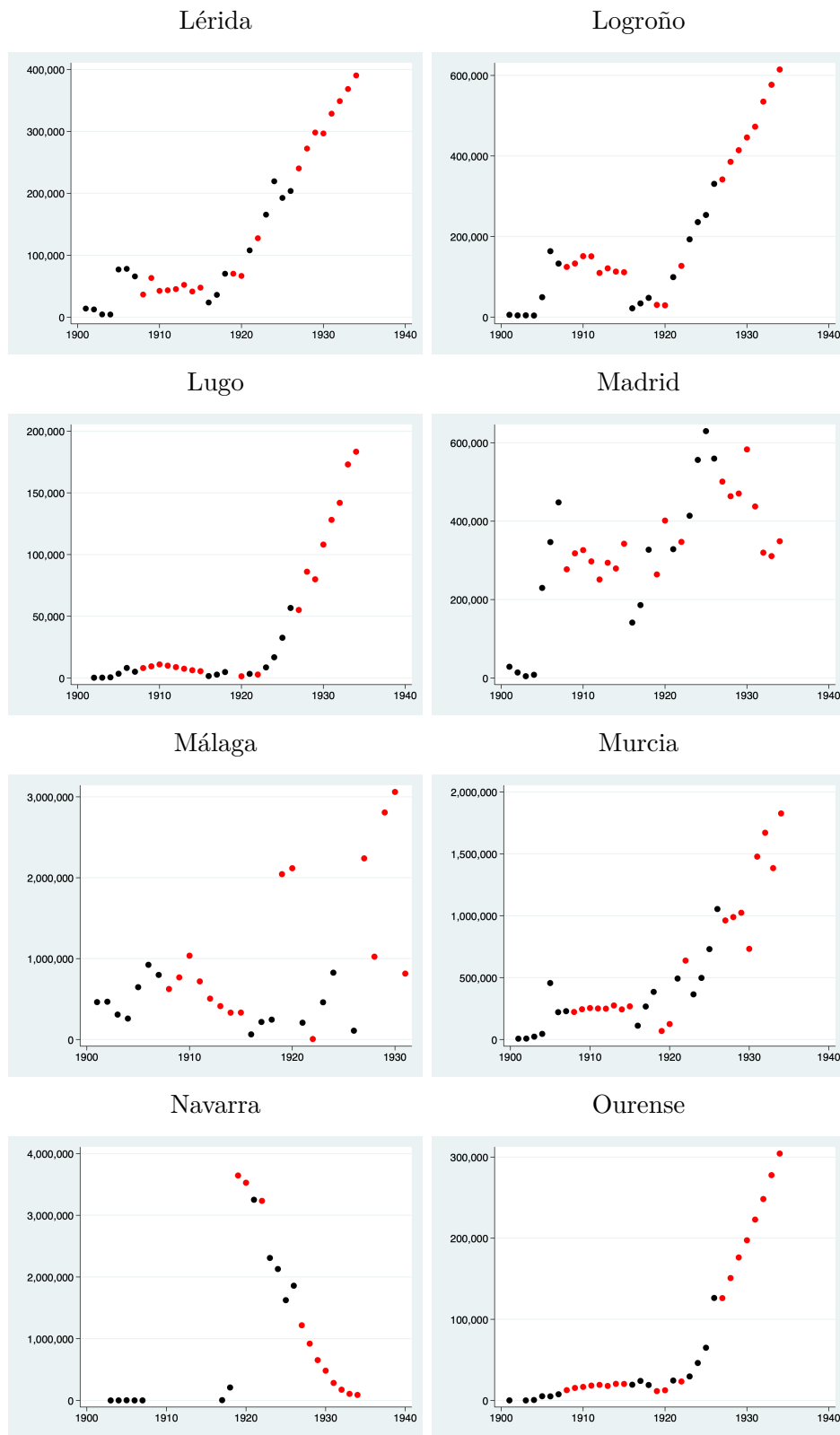
Notes: The original data points are in black; the imputed data points are in red.

Figure A10: Alcohols Revenues by Provinces, 1901–1934.



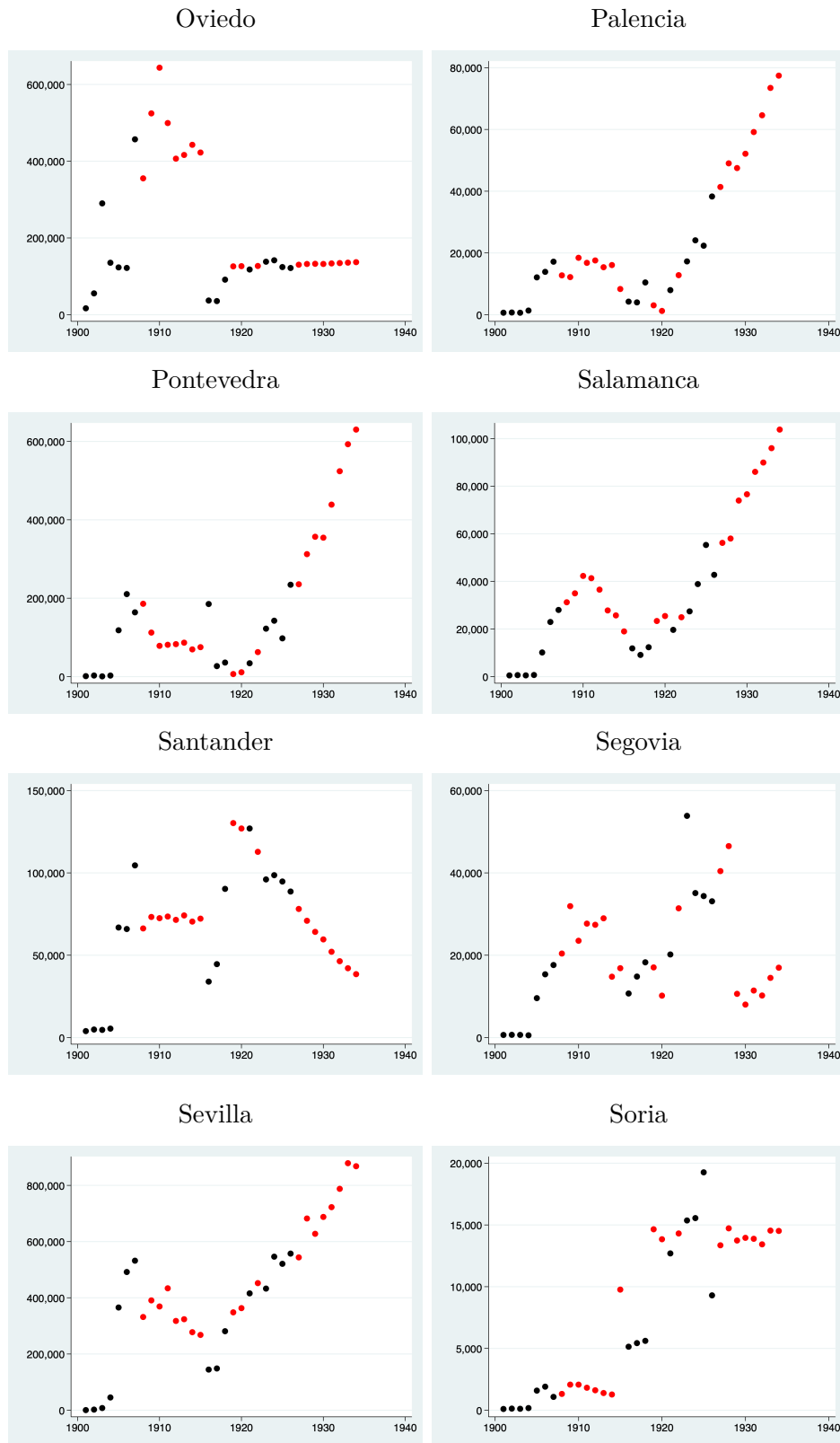
Notes: The original data points are in black; the imputed data points are in red.

Figure A10: Alchoholes Revenues by Provinces, 1901–1934.



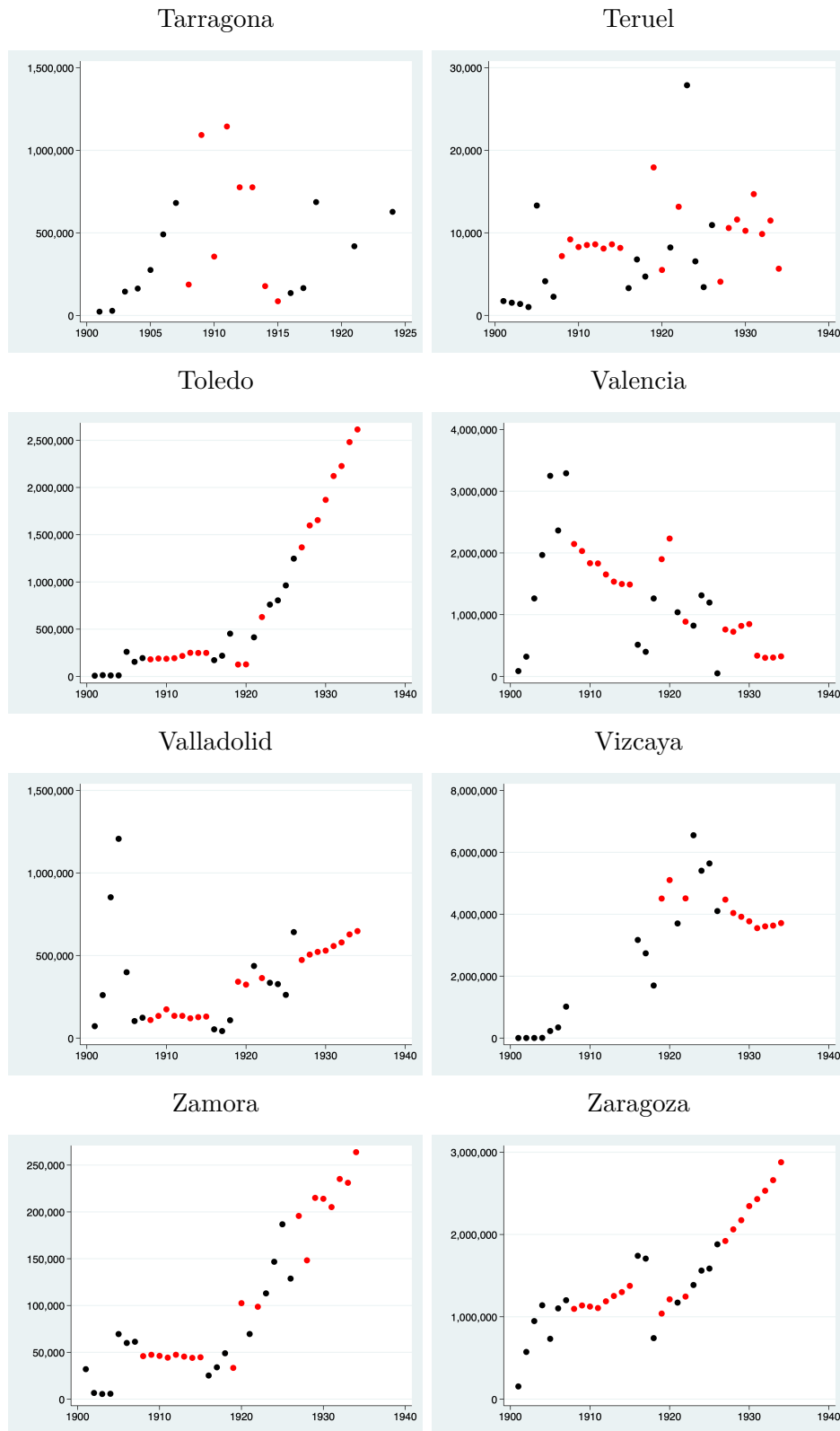
Notes: The original data points are in black; the imputed data points are in red.

Figure A10: Alchoholes Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A10: Alcohols Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.11 Alumbrado

Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	-	11,243	53,251	19,391	9,873	39,426
1902	-	16,692	53,450	21,452	13,628	41,128
1903	-	19,988	66,089	21,671	15,282	52,484
1904	-	21,125	70,647	24,429	16,347	50,409
1905	-	24,277	75,506	30,720	17,637	48,297
1906	-	24,004	76,234	35,201	20,313	57,326
1907	-	38,104	85,001	44,766	20,714	51,876
1908	-	42,126	104,442	47,064	33,052	74,874
1909	-	50,072	114,105	58,021	28,891	102,050
1910	-	50,487	112,776	56,632	37,775	108,088
1911	-	56,845	144,024	38,412	38,608	110,986
1912	-	62,241	146,856	33,156	43,533	118,867
1913	-	66,327	145,973	30,698	43,653	126,061
1914	-	71,287	148,192	29,491	49,171	135,181
1915	-	82,159	165,805	40,468	52,060	132,961
1916	-	88,831	168,858	89,908	47,272	101,665
1917	-	95,931	176,997	89,122	49,406	207,768
1918	-	97,701	205,988	87,681	59,831	190,228
1919	-	154,528	229,832	96,698	58,960	242,937
1920	-	179,371	223,732	113,396	60,059	270,871
1921	-	170,364	310,484	139,459	71,412	367,948
1922	-	177,236	382,565	144,603	76,604	452,726
1923	-	203,991	449,648	142,947	84,316	488,670
1924	-	224,258	444,139	158,264	97,761	555,997
1925	-	251,424	531,114	165,774	100,055	498,888
1926	-	257,288	550,543	181,400	120,155	633,599
1927	-	281,528	601,214	189,796	122,722	673,886
1928	-	309,509	637,926	193,995	133,992	798,478
1929	-	329,119	681,081	205,686	141,970	821,444
1930	-	330,330	627,018	216,087	148,385	861,489
1931	-	321,978	734,181	232,512	158,606	953,422
1932	-	355,915	735,779	245,915	167,148	1,012,843
1933	-	353,915	712,850	252,553	179,858	1,108,723
1934	-	381,340	750,978	263,476	189,157	1,142,904

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	45,709	823,581	27,422	13,825	160,022	19,959
1902	54,110	831,721	31,767	19,229	163,180	28,084
1903	66,460	842,547	36,183	21,218	155,649	34,956
1904	77,054	1,146,153	34,906	25,120	153,228	40,879
1905	73,673	1,202,752	36,181	28,136	170,977	43,111
1906	74,469	1,295,138	37,944	31,866	171,594	53,646
1907	87,077	1,408,614	42,088	32,272	177,578	50,464
1908	90,148	1,480,104	14,467	58,158	181,671	31,678
1909	90,927	1,592,162	9,689	35,792	186,449	23,743
1910	95,481	1,652,615	9,775	33,440	188,575	19,113
1911	89,604	1,915,216	11,243	49,008	219,347	23,072
1912	102,204	1,954,584	21,122	85,406	252,749	38,604
1913	109,467	2,199,217	27,797	71,872	284,455	46,465
1914	122,282	2,486,009	51,898	84,592	315,584	62,339
1915	125,872	2,840,468	61,735	90,237	348,995	71,241
1916	141,168	3,061,505	97,705	80,303	394,274	105,067
1917	131,454	3,184,476	100,849	108,688	429,377	93,257
1918	120,717	3,144,901	100,842	94,150	432,276	102,276
1919	120,717	3,375,279	152,705	49,067	503,100	102,276
1920	120,717	2,856,331	131,227	71,429	475,177	143,824
1921	291,601	3,974,145	168,361	118,076	512,920	148,473
1922	375,629	4,663,790	183,679	128,598	549,320	170,626
1923	354,722	5,316,148	219,677	145,780	579,315	194,433
1924	404,735	5,888,889	202,323	189,341	714,294	218,625
1925	471,601	6,304,010	236,118	283,642	761,343	243,848
1926	571,491	6,640,920	288,002	306,787	751,792	254,577
1927	576,262	6,633,910	286,087	319,343	834,982	294,882
1928	583,204	6,637,142	319,255	324,875	870,552	329,503
1929	847,014	6,638,067	328,662	390,020	931,776	362,688
1930	773,982	6,636,934	352,603	413,448	1,001,320	397,155
1931	965,303	6,637,534	371,235	431,517	1,049,493	393,636
1932	1,303,811	6,636,596	384,160	450,369	1,090,701	419,711
1933	992,668	6,629,027	414,901	460,084	1,131,510	446,416
1934	1,470,738	6,637,681	431,822	545,731	1,192,228	455,156

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	24,241	57,172	41,738	5,601	43,555	38,080
1902	30,865	60,771	50,418	6,829	45,846	44,535
1903	37,448	73,265	66,432	9,393	46,297	58,691
1904	36,017	82,733	81,821	9,698	48,929	71,307
1905	43,572	88,945	98,441	10,619	51,031	70,209
1906	40,681	93,530	88,197	15,073	55,958	80,037
1907	50,230	105,347	94,502	16,891	58,269	88,520
1908	62,733	134,078	134,871	25,965	67,035	109,750
1909	107,833	130,234	174,264	31,287	65,736	128,015
1910	108,187	146,568	176,652	33,271	54,916	136,589
1911	107,062	153,093	167,678	36,904	78,912	141,698
1912	145,059	201,478	172,797	40,106	76,046	156,822
1913	189,141	197,444	184,512	41,454	99,405	161,696
1914	180,801	233,626	213,670	44,974	133,319	169,489
1915	188,018	252,133	235,110	48,018	181,717	183,124
1916	161,585	289,653	245,542	53,793	223,956	229,612
1917	182,216	280,972	238,631	53,606	185,276	219,707
1918	200,781	317,759	311,546	59,069	226,537	235,686
1919	241,776	386,544	239,175	95,551	395,040	235,686
1920	252,731	401,796	279,342	100,069	386,029	235,686
1921	272,011	416,185	289,596	110,254	320,168	323,417
1922	289,413	451,856	387,678	114,632	333,839	391,252
1923	312,633	520,338	498,444	121,994	381,488	361,350
1924	344,596	578,990	572,415	137,609	393,274	403,983
1925	368,115	630,724	650,381	149,680	554,177	406,889
1926	395,096	638,882	593,018	157,293	486,980	534,046
1927	426,765	749,051	724,568	169,823	555,745	579,727
1928	443,536	725,680	754,961	176,204	590,542	641,730
1929	473,795	829,859	836,697	190,302	703,539	711,359
1930	479,234	802,027	895,729	192,567	806,545	732,096
1931	505,108	851,168	981,674	201,819	820,487	918,216
1932	538,583	907,714	1,026,377	218,087	805,047	983,996
1933	561,665	919,641	1,072,102	225,493	815,125	1,105,137
1934	591,032	1,000,510	1,162,348	238,549	895,519	937,448

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	16,106	23	14,772	12,897	39,946	17,492
1902	17,326	28	20,067	13,350	51,885	12,620
1903	17,215	86	29,705	12,528	66,047	13,865
1904	19,221	24	34,251	12,927	83,008	13,129
1905	19,453	17	34,745	18,317	73,750	15,888
1906	19,835	27	35,037	20,574	70,117	17,124
1907	20,019	11	41,767	16,447	100,161	15,753
1908	15,409	-	80,711	42,888	117,519	17,989
1909	17,859	-	81,905	56,371	135,831	15,269
1910	9,925	-	94,219	71,072	142,792	20,681
1911	12,033	-	99,109	74,175	158,114	25,482
1912	14,163	-	110,680	86,136	168,336	38,859
1913	13,445	-	117,651	112,549	187,246	40,833
1914	15,708	-	137,391	118,336	200,943	52,800
1915	24,756	-	156,407	136,561	218,787	52,889
1916	56,544	-	158,259	158,423	237,936	76,170
1917	57,313	-	174,276	191,315	266,105	66,020
1918	60,317	-	179,715	122,105	260,102	61,674
1919	60,317	-	240,800	191,078	291,072	62,535
1920	71,938	-	253,101	174,338	318,170	65,367
1921	80,352	-	240,329	164,470	350,770	96,957
1922	88,341	-	269,521	154,410	343,112	119,163
1923	101,845	-	291,529	150,822	420,687	131,568
1924	110,409	-	363,397	192,682	424,950	181,598
1925	131,183	-	311,955	228,056	547,323	176,108
1926	139,782	-	337,270	265,513	582,939	201,838
1927	153,424	-	368,733	275,509	737,140	225,759
1928	161,312	-	390,981	293,174	625,389	250,069
1929	181,420	-	420,970	280,294	785,489	264,282
1930	188,737	-	474,676	339,363	658,503	272,095
1931	199,323	-	444,408	335,942	723,029	297,484
1932	215,541	-	458,714	370,308	798,699	320,296
1933	222,294	-	478,115	483,058	765,826	347,980
1934	241,565	-	514,326	549,941	838,767	367,727

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	14,537	30,888	9,234	721,190	61,017	64,077
1902	16,215	36,429	11,930	764,223	68,613	81,800
1903	20,192	42,917	13,475	839,310	71,930	105,449
1904	20,560	42,514	13,439	964,594	96,037	111,917
1905	24,766	43,079	13,364	900,267	101,206	109,206
1906	23,200	41,553	14,693	965,929	118,718	109,104
1907	26,181	45,865	15,477	1,064,719	136,721	113,488
1908	36,943	36,791	22,250	1,128,448	135,834	145,597
1909	33,785	35,150	26,486	1,204,905	145,706	163,270
1910	41,950	32,695	29,759	1,233,717	152,385	175,329
1911	45,832	41,974	24,088	1,306,132	176,521	185,365
1912	55,014	52,747	22,367	1,365,343	203,979	192,729
1913	62,061	63,546	34,551	1,484,404	229,920	205,558
1914	72,566	73,474	36,280	1,568,967	254,948	209,496
1915	79,437	84,133	44,617	1,697,920	280,804	222,306
1916	105,816	99,387	46,011	1,891,119	319,835	238,912
1917	94,844	93,388	64,312	1,826,730	341,461	245,958
1918	91,042	120,751	53,034	1,844,891	337,802	250,257
1919	91,042	125,618	53,034	2,275,147	376,782	250,257
1920	202,839	143,178	53,034	2,472,404	394,639	250,257
1921	153,099	145,670	56,153	2,671,928	403,722	384,892
1922	194,787	170,598	51,099	3,056,931	451,356	457,226
1923	189,611	185,097	57,680	3,384,514	513,918	470,798
1924	257,700	195,798	93,604	4,504,727	553,031	375,922
1925	271,688	240,401	75,341	4,283,342	595,696	570,907
1926	297,453	231,107	124,908	4,807,841	616,103	612,357
1927	329,507	270,443	97,076	5,174,857	688,596	621,047
1928	345,618	291,252	147,633	5,528,254	720,294	644,503
1929	368,079	318,392	112,246	5,826,274	783,099	668,572
1930	422,261	332,824	155,768	5,939,517	810,113	590,046
1931	435,528	360,681	181,174	5,980,626	830,903	817,523
1932	463,988	373,007	191,841	5,995,464	852,412	885,399
1933	495,975	395,643	242,926	6,103,753	870,856	823,294
1934	524,953	420,337	245,429	6,263,123	929,856	959,535

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	7,540	61,930	9,859	26,156	37,244
1902	-	7,830	66,397	10,906	27,108	36,330
1903	-	11,912	82,173	15,369	37,310	37,538
1904	-	11,019	84,173	13,528	45,179	37,283
1905	-	11,436	85,692	16,525	51,334	35,312
1906	-	12,183	134,813	21,352	52,492	35,104
1907	-	10,132	105,075	21,249	55,491	36,309
1908	-	27,641	141,450	6,957	64,747	20,520
1909	-	34,247	157,677	4,346	76,439	7,863
1910	-	38,043	166,853	5,280	86,109	11,363
1911	-	39,230	181,323	7,363	89,558	37,862
1912	-	41,452	200,766	15,840	97,121	47,211
1913	-	40,247	216,888	22,128	103,096	34,900
1914	-	43,741	231,439	34,599	114,917	64,551
1915	-	43,888	249,979	31,108	118,673	63,049
1916	-	45,403	272,448	53,788	115,865	78,241
1917	-	49,041	282,390	52,884	129,538	79,712
1918	-	45,162	308,776	56,036	139,348	96,290
1919	-	76,882	277,040	61,233	172,868	91,100
1920	-	76,924	329,230	88,356	189,951	58,548
1921	-	84,341	417,731	81,495	212,073	91,256
1922	-	88,960	515,879	88,761	231,513	127,516
1923	-	95,671	603,528	97,811	246,050	173,220
1924	-	99,672	693,009	141,662	284,043	182,724
1925	-	110,398	704,984	195,815	296,432	196,891
1926	-	116,779	807,702	196,053	317,991	218,793
1927	-	123,098	908,088	215,937	341,212	251,611
1928	-	130,046	1,016,622	231,255	362,648	285,859
1929	-	136,226	1,091,106	304,270	384,957	294,219
1930	-	140,896	1,149,673	314,930	401,529	315,837
1931	-	146,963	1,257,431	334,395	422,795	335,646
1932	-	152,786	1,372,402	363,880	443,961	364,865
1933	-	157,884	1,453,808	374,234	466,368	392,548
1934	-	164,640	1,538,458	416,498	489,951	417,322

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Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	56,698	12,931	145,410	3,556	47,419	4,244
1902	61,720	16,641	160,353	2,756	49,320	6,406
1903	64,871	17,222	180,038	4,443	53,950	9,251
1904	71,292	19,387	182,803	9,177	61,232	8,360
1905	91,347	23,109	192,921	10,039	53,700	13,630
1906	90,015	24,950	195,878	10,645	54,597	9,891
1907	94,017	22,563	199,208	12,714	59,121	17,411
1908	111,317	42,500	233,409	12,723	62,419	99,296
1909	124,588	49,068	250,835	22,217	51,908	240,160
1910	136,451	57,980	262,620	19,218	60,986	208,217
1911	147,299	55,664	301,299	19,002	69,954	261,181
1912	176,592	55,679	345,716	17,487	93,661	128,502
1913	190,224	54,756	388,059	15,870	103,231	119,465
1914	211,537	57,600	430,395	13,739	139,662	71,455
1915	231,942	56,920	475,648	27,241	173,124	81,297
1916	250,853	54,656	522,969	18,755	183,308	77,921
1917	281,052	55,624	535,962	19,721	200,809	85,468
1918	328,647	65,443	638,168	46,390	201,841	108,507
1919	361,054	61,331	866,035	42,200	195,872	108,507
1920	378,631	55,663	898,326	36,948	195,872	108,507
1921	403,432	77,133	978,624	40,895	306,983	118,323
1922	463,494	90,252	1,089,501	47,000	326,932	125,981
1923	539,103	99,288	1,157,789	54,923	478,480	148,149
1924	559,742	128,046	1,316,710	56,584	480,000	144,467
1925	576,892	127,440	1,328,132	66,629	500,058	172,780
1926	625,972	140,999	1,405,610	69,576	516,078	221,724
1927	679,693	156,837	1,478,337	77,465	516,078	224,862
1928	726,922	171,779	1,659,112	81,437	516,078	237,952
1929	771,498	167,448	1,680,211	89,227	516,078	257,410
1930	794,203	172,644	1,756,668	93,353	594,112	274,579
1931	844,328	190,338	1,852,630	99,381	645,643	290,528
1932	894,281	199,919	1,975,086	105,837	662,833	311,425
1933	943,547	218,237	2,120,315	110,671	711,166	330,278
1934	993,209	232,890	2,183,019	117,109	800,738	356,595

Sources: See Chapter 2.

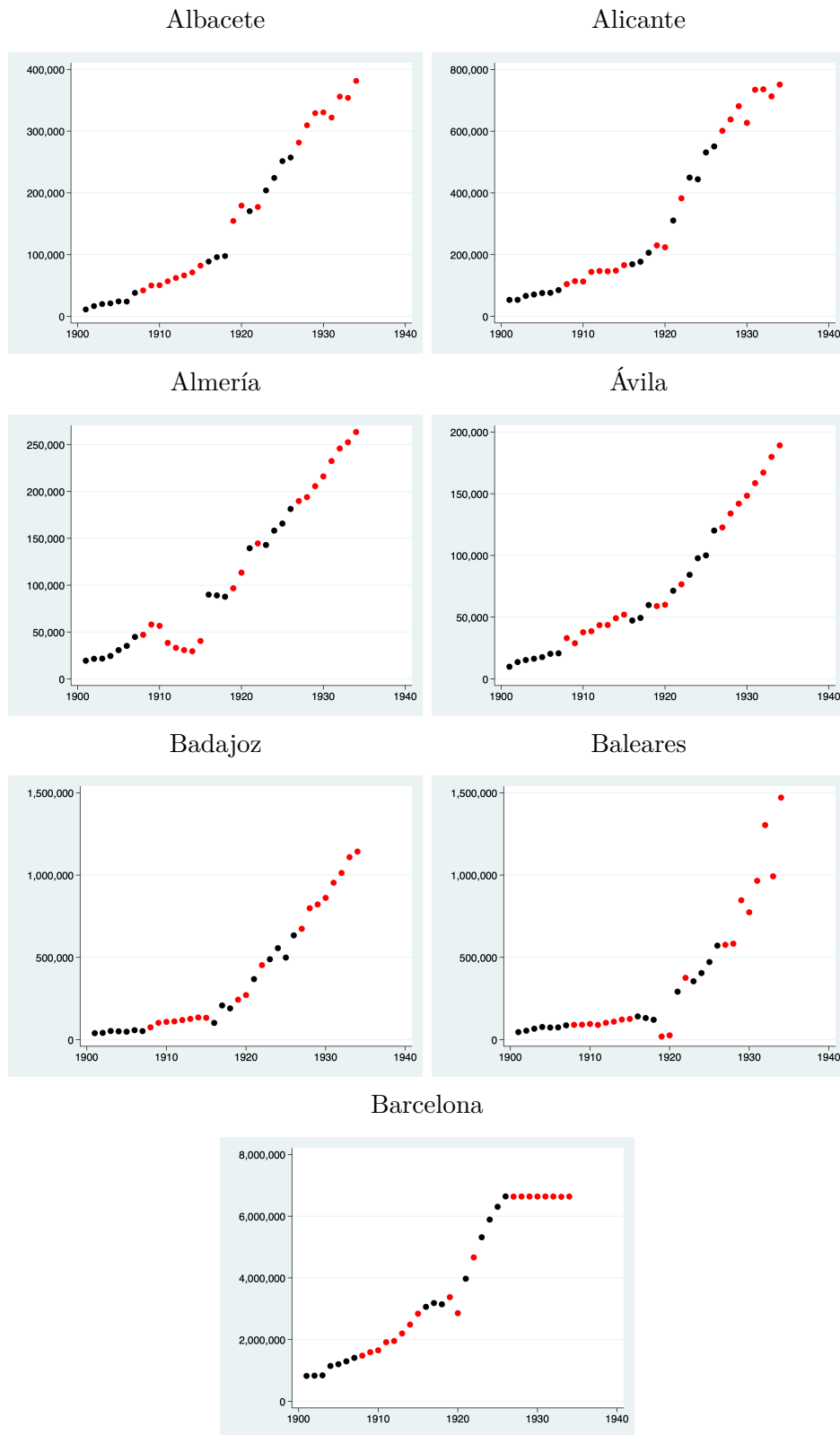
Notes: All data are in nominal values. I corrected for outliers in Baleares, Castellón Granada, Guadalajara, Lérida Murcia and Teruel in 1919; in Baleares, Granada, Murcia and Teruel in 1920; and in Tarragona in 1927 and 1928.

Table A11: Alumbrado Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	19,527	220,213	59,659	-	13,696	69,558
1902	16,575	244,838	55,790	-	14,069	72,626
1903	21,549	254,934	69,277	-	13,476	77,763
1904	28,608	292,640	84,227	-	14,722	82,682
1905	35,216	301,306	86,773	-	19,918	100,071
1906	37,877	312,613	91,766	-	20,830	94,558
1907	44,090	318,592	96,170	-	19,900	101,344
1908	68,859	369,872	37,895	-	22,229	150,564
1909	85,762	408,102	22,233	-	26,992	173,990
1910	96,397	437,894	21,858	-	31,104	189,089
1911	104,707	442,052	22,697	-	36,092	222,170
1912	115,379	488,572	29,092	-	34,810	260,970
1913	121,251	505,232	35,099	-	38,586	299,521
1914	132,958	517,505	72,941	-	43,642	337,120
1915	146,587	535,117	53,240	-	48,548	376,738
1916	150,845	585,637	19,311	-	57,674	409,215
1917	156,279	644,145	192,208	-	58,462	462,374
1918	184,888	619,316	184,208	-	75,230	480,046
1919	221,120	1,001,908	208,763	-	78,304	484,142
1920	250,493	1,014,312	221,530	-	80,136	443,673
1921	261,642	1,033,532	241,415	-	84,672	623,336
1922	281,157	1,176,591	277,431	-	106,155	704,475
1923	315,606	1,280,808	315,771	-	125,906	750,921
1924	379,702	1,450,071	365,608	-	146,817	772,745
1925	409,761	1,437,618	415,812	-	159,031	828,112
1926	427,456	1,358,066	426,621	-	159,427	817,634
1927	468,894	1,542,567	479,198	-	187,324	911,041
1928	492,512	1,620,936	516,024	-	195,570	951,925
1929	550,510	1,700,651	566,191	-	218,224	1,020,340
1930	547,676	1,725,764	592,236	-	228,513	975,795
1931	569,286	1,831,217	631,514	-	241,635	1,064,087
1932	619,164	1,915,044	673,614	-	259,578	1,139,621
1933	642,212	2,010,944	708,858	-	273,560	1,199,071
1934	688,690	2,106,439	757,056	-	292,242	1,184,067

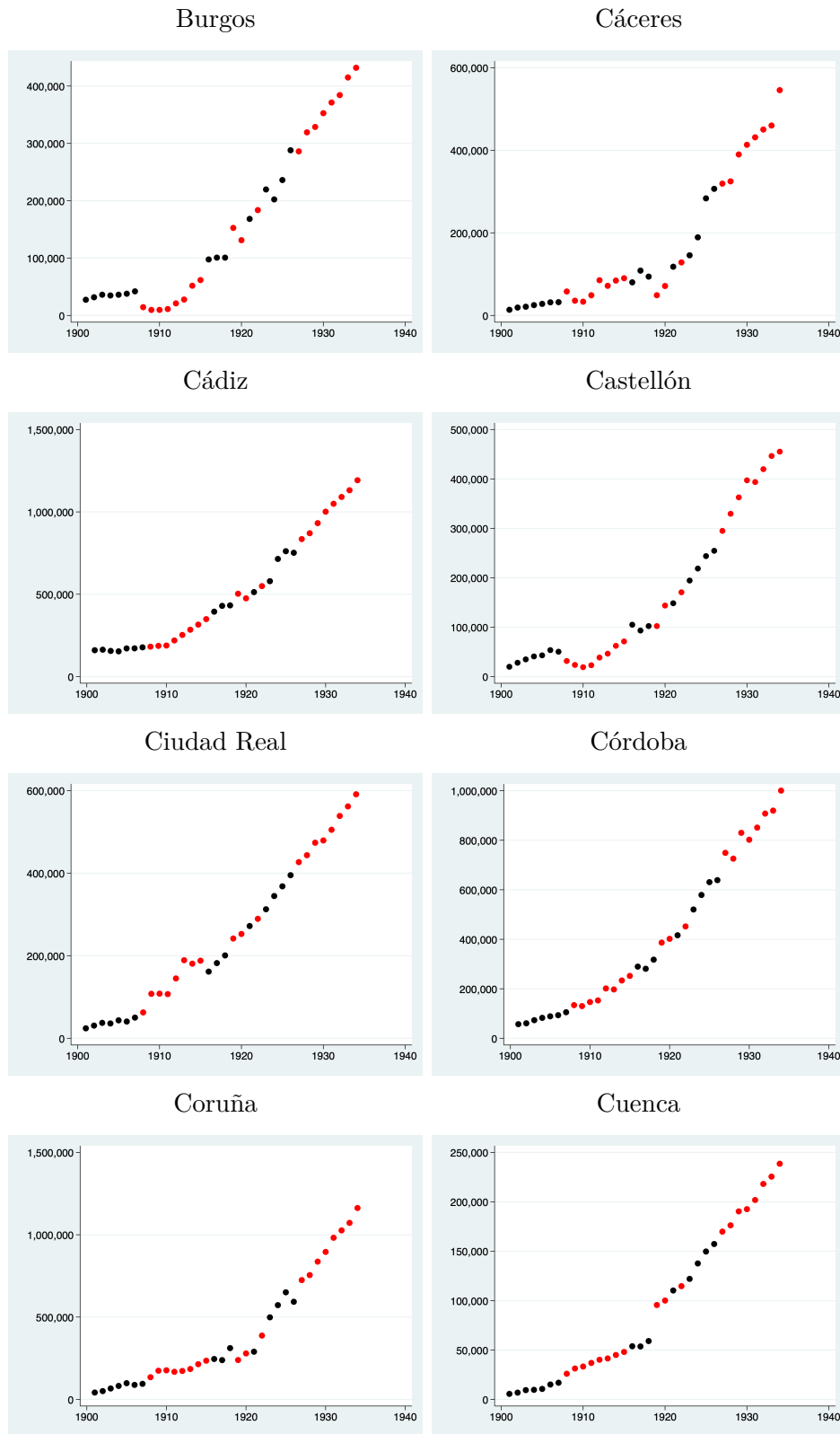
Notes:

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



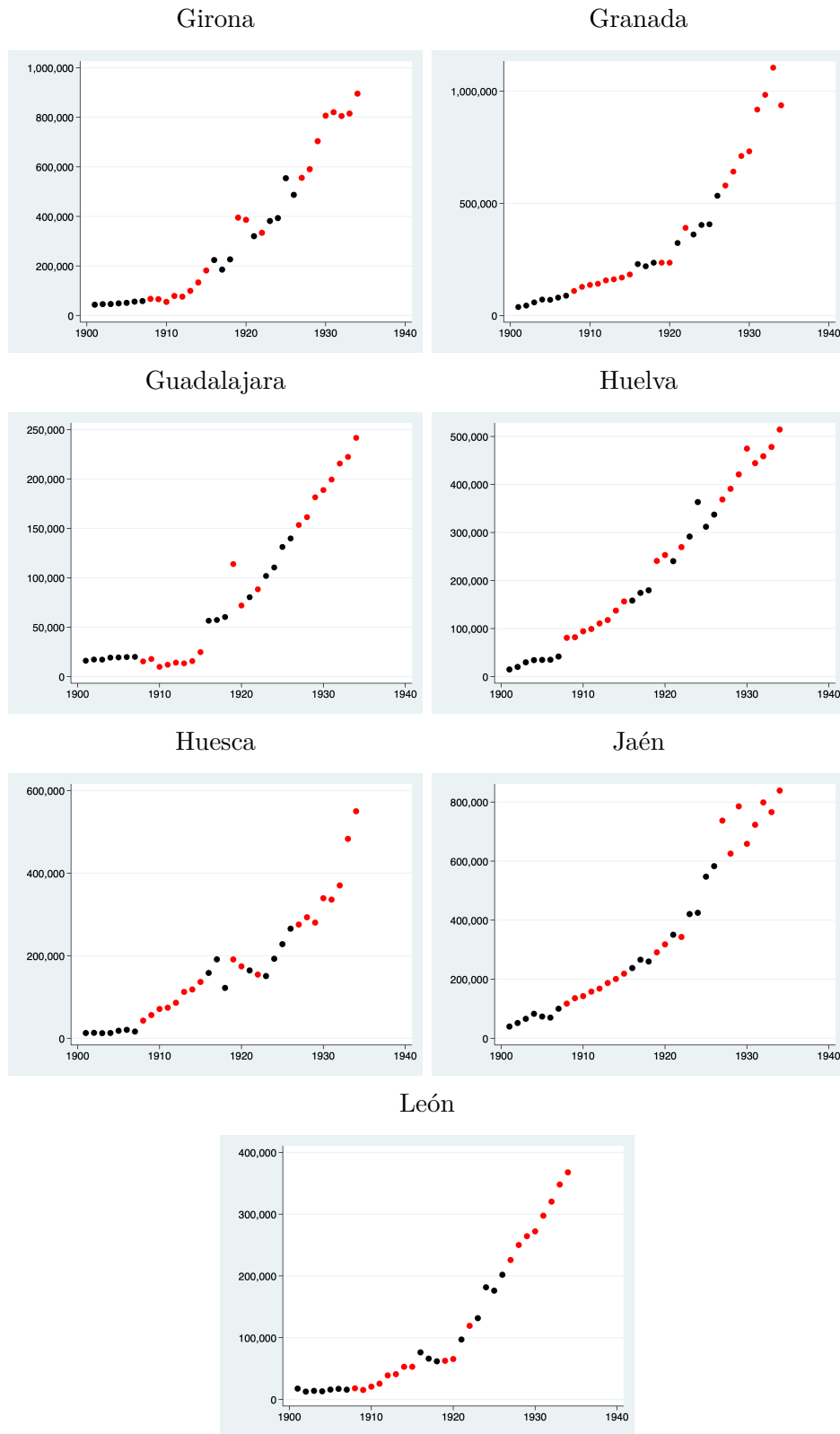
Notes: The original data points are in black; the imputed data points are in red.

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



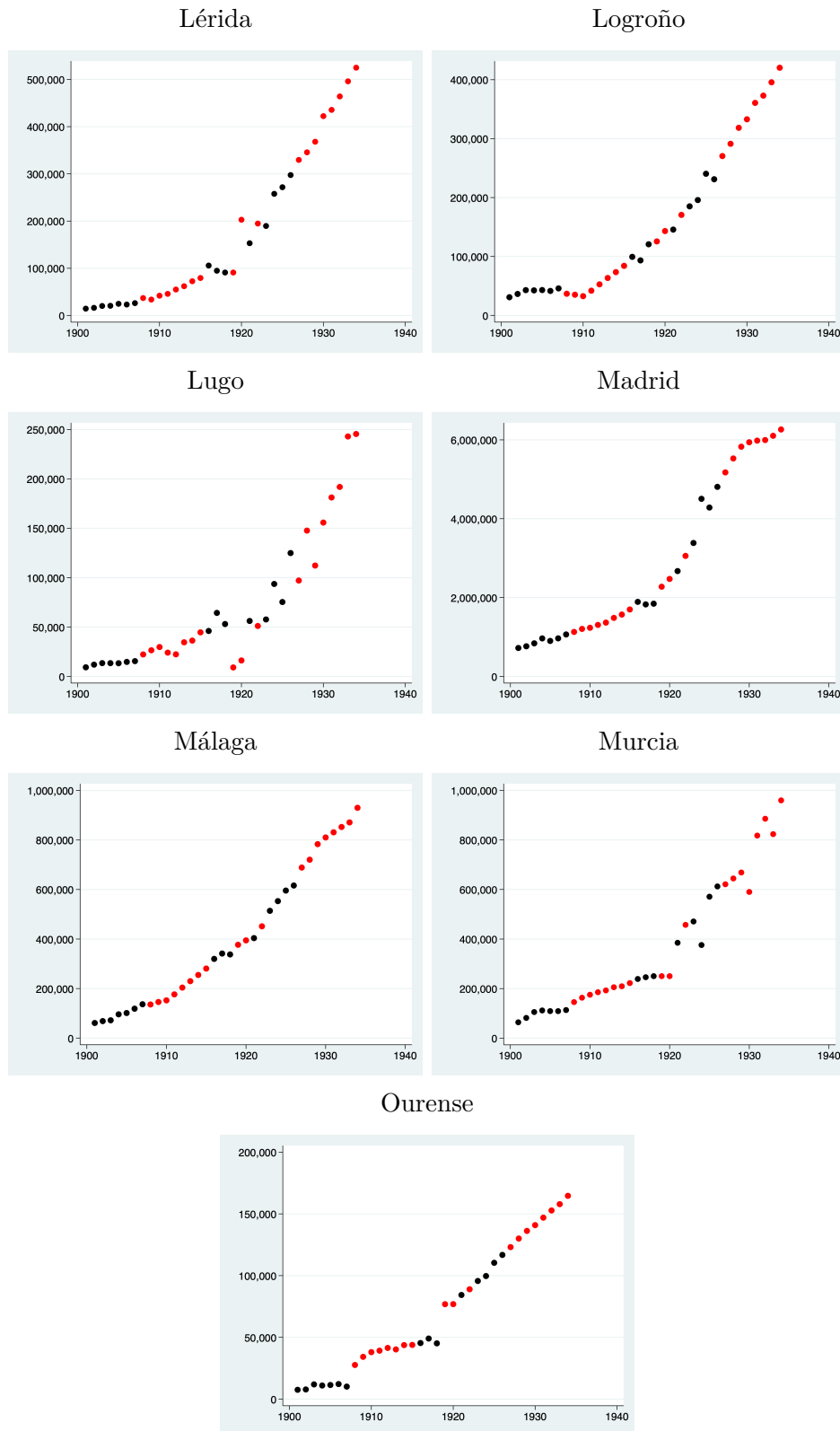
Notes: The original data points are in black; the imputed data points are in red.

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



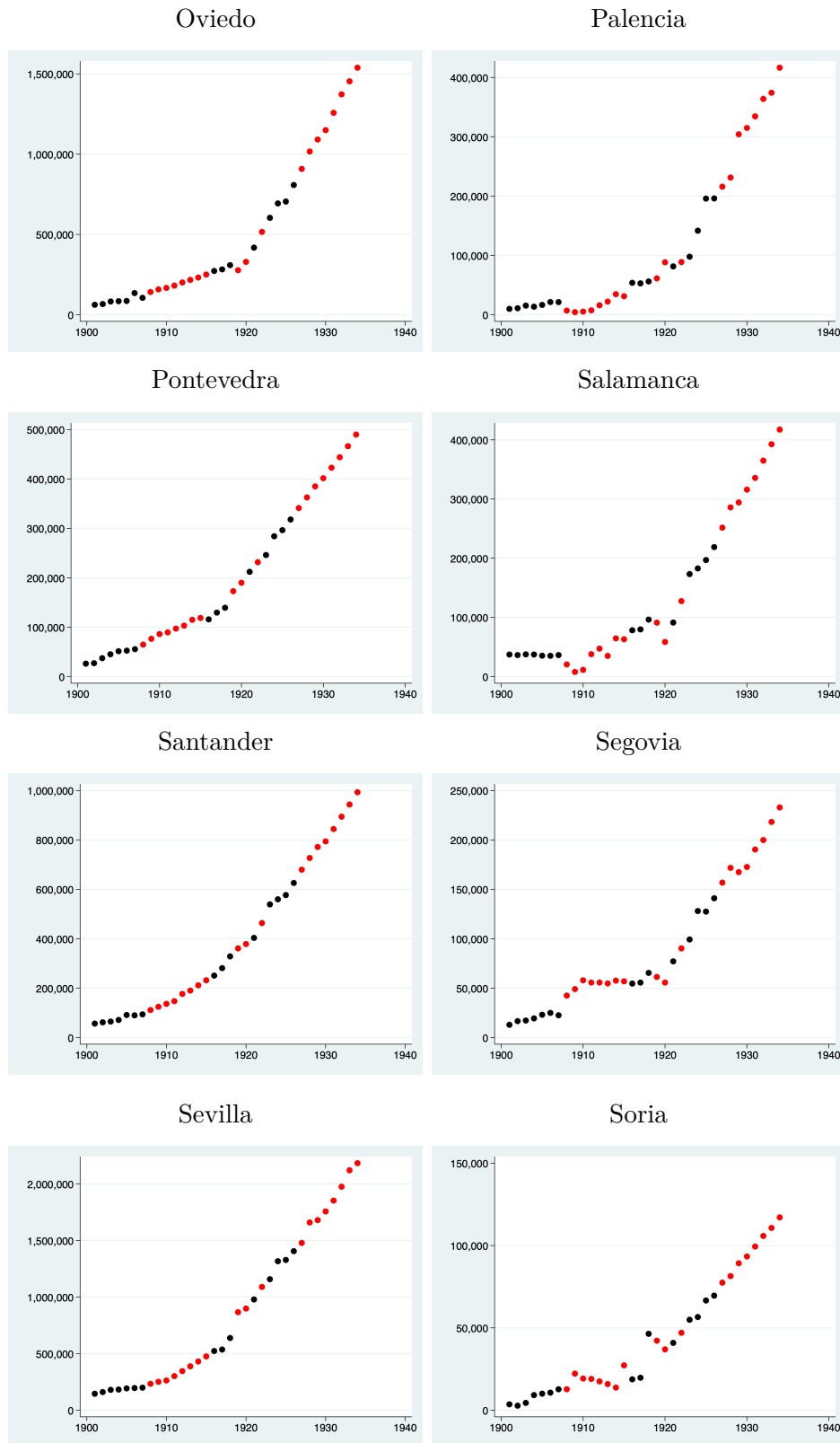
Notes: The original data points are in black; the imputed data points are in red.

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



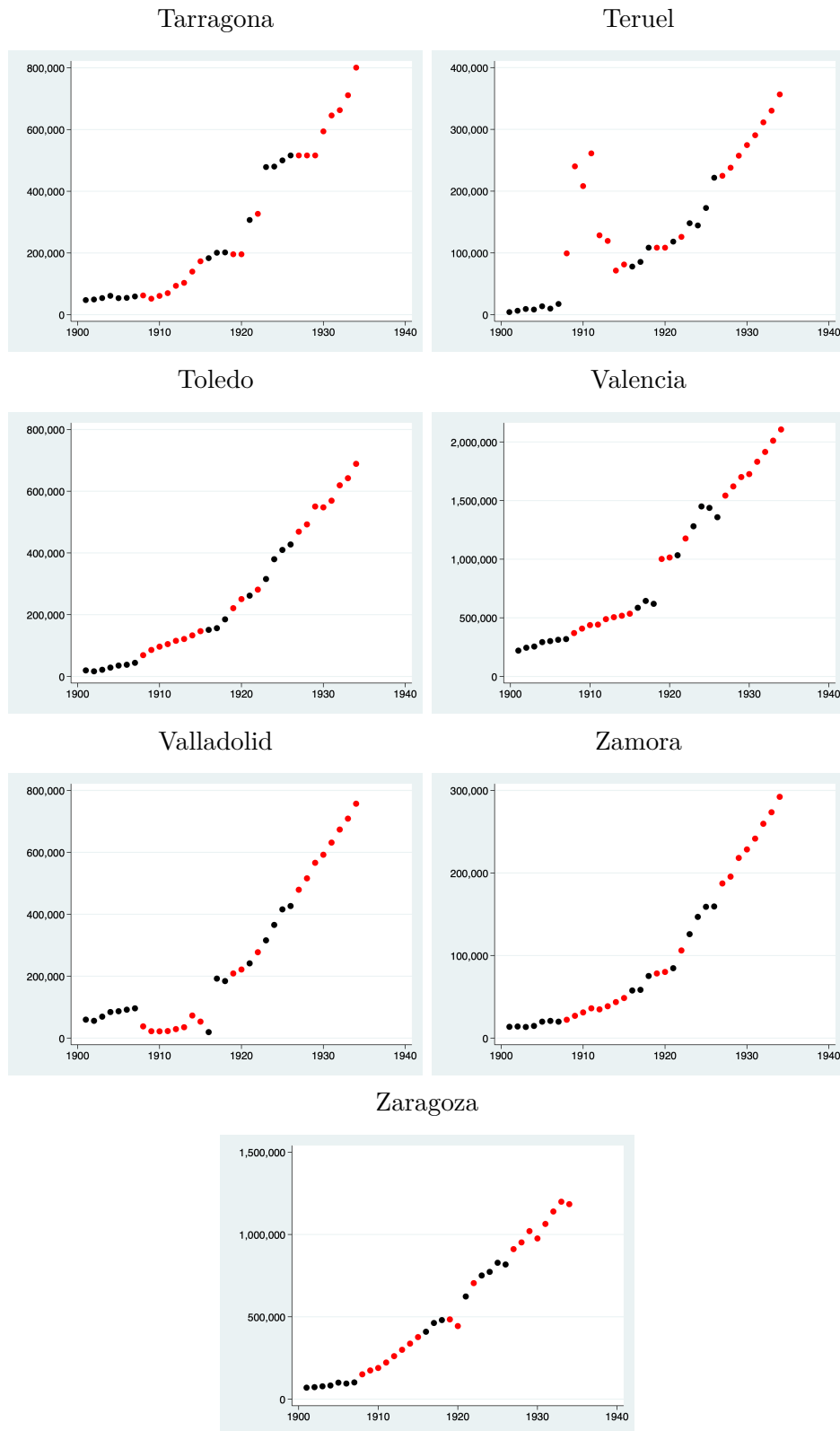
Notes: The original data points are in black; the imputed data points are in red.

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A11: Alumbrado Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

A.12 Transportes

Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Álava	Albacete	Alicante	Almería	Ávila	Badajoz
1901	8,434	2,996	24,204	5,782	4,481	2,879
1902	8,221	4,291	16,274	2,325	5,220	2,506
1903	11,931	3,718	3,935	1,650	6,641	4,850
1904	14,194	2,916	4,211	1,775	7,634	10,108
1905	10,982	1,788	18,181	1,215	8,324	4,355
1906	11,307	3,646	11,413	1,545	8,883	7,159
1907	11,989	2,956	6,485	405	7,787	4,588
1908	-	5,012	15,606	-	8,248	7,788
1909	-	7,128	19,928	-	10,245	13,930
1910	-	5,789	21,028	-	8,895	14,475
1911	-	7,191	14,050	-	8,687	13,994
1912	-	7,774	17,779	-	8,416	13,236
1913	-	7,487	18,828	-	8,200	13,591
1914	-	7,867	23,582	-	7,638	13,751
1915	-	11,457	20,020	403,442	5,799	14,442
1916	-	10,248	18,440	457,206	6,853	14,155
1917	-	14,379	22,625	-	6,764	14,553
1918	-	17,933	22,367	21,103	10,207	19,422
1919	-	19,279	25,756	23,133	10,898	18,728
1920	-	29,023	50,833	77,644	13,295	54,011
1921	-	12,509	39,178	44,013	30,121	30,130
1922	-	32,023	64,164	43,675	19,912	57,008
1923	-	47,584	35,893	70,825	23,671	66,264
1924	-	35,330	57,516	99,497	47,191	94,309
1925	-	64,894	105,089	101,933	35,731	151,335
1926	-	94,268	108,111	151,278	31,454	167,248
1927	-	73,478	94,423	249,315	36,000	222,641
1928	-	68,807	101,930	296,961	20,550	114,925
1929	-	49,863	103,314	221,256	32,806	185,352
1930	-	41,432	100,202	204,007	18,329	167,602
1931	-	46,301	108,166	131,691	20,793	114,057
1932	-	90,280	248,046	191,540	97,720	254,109
1933	-	174,943	238,181	206,422	112,448	230,522
1934	-	124,161	228,063	246,209	95,173	249,733

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Baleares	Barcelona	Burgos	Cáceres	Cádiz	Castellón
1901	26,158	589,531	9,200	2,437	12,444	4,852
1902	29,953	656,508	10,617	2,641	18,702	9,207
1903	32,628	716,653	11,051	5,938	15,719	6,834
1904	32,808	722,987	11,328	6,827	22,899	5,746
1905	32,482	653,764	11,005	7,923	14,391	6,575
1906	32,236	702,173	11,835	6,293	22,749	6,146
1907	32,867	713,285	10,199	6,527	19,650	6,030
1908	43,447	760,127	4,928	6,401	28,944	5,224
1909	58,324	780,849	3,412	4,506	34,336	3,723
1910	61,390	796,789	2,952	3,933	38,923	3,009
1911	84,786	829,259	4,075	4,501	38,670	3,335
1912	76,829	950,569	6,803	6,062	45,555	5,664
1913	72,911	993,761	8,374	5,145	48,206	6,033
1914	60,243	1,033,986	12,536	5,547	53,789	8,385
1915	59,531	1,070,851	14,507	5,375	69,149	11,253
1916	70,271	1,142,316	14,119	5,257	62,655	8,945
1917	94,657	1,207,421	20,960	5,577	63,396	10,221
1918	104,348	1,345,327	25,070	5,016	68,216	10,860
1919	130,755	1,912,666	23,863	7,359	40,126	12,339
1920	125,369	3,334,848	50,138	22,504	103,346	12,339
1921	146,784	2,501,995	32,573	15,760	77,588	11,886
1922	153,986	2,446,972	45,466	40,438	128,717	28,369
1923	196,075	3,069,383	58,560	16,467	151,278	26,665
1924	194,687	3,252,328	76,115	36,063	131,201	31,349
1925	201,537	4,063,901	83,481	68,899	181,389	186,272
1926	205,798	4,202,214	110,954	91,966	240,828	42,480
1927	190,377	3,904,120	116,432	71,634	235,706	128,349
1928	179,577	3,492,589	94,338	53,601	92,937	118,231
1929	183,373	2,364,261	92,061	46,973	83,513	113,701
1930	224,831	2,259,601	80,394	41,719	70,260	137,885
1931	198,107	2,128,911	67,063	36,888	69,433	122,137
1932	314,122	2,262,609	149,511	121,588	143,027	258,377
1933	371,557	2,445,199	154,730	132,390	408,120	247,159
1934	306,980	2,684,682	146,652	117,556	225,207	223,312

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Ciudad Real	Córdoba	Coruña	Cuenca	Girona	Granada
1901	35,110	57,865	24,960	3,994	74,201	2,049
1902	34,447	54,861	22,647	6,502	78,538	2,255
1903	42,478	61,917	19,137	4,087	87,358	1,575
1904	49,963	64,356	16,693	5,139	92,687	940
1905	31,384	60,210	21,132	2,338	86,108	5,276
1906	33,181	74,207	24,200	3,098	86,310	4,168
1907	31,669	100,496	24,797	2,731	77,834	5,566
1908	29,787	82,317	21,364	4,671	54,723	4,288
1909	34,115	99,922	21,434	5,292	39,563	-
1910	32,596	95,482	21,405	5,093	25,793	-
1911	28,120	103,580	21,000	5,556	32,774	3,777
1912	33,470	97,591	21,884	6,068	28,946	5,246
1913	37,844	116,521	21,710	5,746	34,621	35,486
1914	32,876	110,493	21,685	6,227	44,951	185,239
1915	32,902	148,868	19,587	7,159	49,661	266,863
1916	31,088	149,638	21,368	7,684	59,418	65,154
1917	22,034	129,911	21,986	7,335	64,462	191,073
1918	15,684	97,451	23,572	7,737	84,152	76,611
1919	5,144	12,975	22,994	9,630	105,440	52,401
1920	9,620	44,593	54,205	9,630	210,280	26,424
1921	8,008	12,643	35,874	15,235	214,104	56,494
1922	9,244	23,397	62,969	14,980	195,750	56,307
1923	7,637	28,381	57,866	37,013	224,173	47,210
1924	10,354	33,402	103,606	53,548	215,087	93,310
1925	17,475	66,058	117,078	74,170	167,064	33,619
1926	25,697	65,580	156,817	94,275	233,275	45,108
1927	53,830	136,848	132,563	82,010	252,978	101,496
1928	46,597	248,844	101,972	93,914	230,342	159,166
1929	32,938	277,383	132,879	98,553	245,481	127,270
1930	26,971	137,552	136,670	81,138	228,501	136,656
1931	30,047	64,375	79,754	66,388	119,912	158,541
1932	77,038	149,599	384,830	103,444	370,427	208,806
1933	76,378	102,061	456,226	118,007	399,676	203,940
1934	73,237	235,510	375,452	129,858	288,971	178,792

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Guadalajara	Guipúzcoa	Huelva	Huesca	Jaén	León
1901	8,124	-	353,750	17,269	13,697	2,950
1902	9,533	-	363,947	10,490	8,322	3,325
1903	7,400	-	396,149	12,343	8,863	5,179
1904	6,925	-	379,191	11,908	8,570	2,858
1905	5,815	-	403,681	11,383	8,423	3,236
1906	6,900	-	468,094	10,140	6,943	3,085
1907	7,121	555	537,754	7,874	7,903	3,720
1908	25,374	-	449,979	13,657	17,003	2,968
1909	36,074	-	544,779	15,304	18,610	2,619
1910	29,562	-	502,807	16,274	21,703	2,813
1911	24,965	-	489,667	16,341	22,805	2,803
1912	24,505	-	482,441	17,761	44,990	3,281
1913	22,836	-	480,793	18,342	47,487	3,111
1914	23,953	-	421,361	19,338	59,606	3,495
1915	25,145	15,237	314,253	23,460	73,751	3,903
1916	13,543	40,926	388,330	15,765	83,342	3,318
1917	40,635	-	414,964	21,972	73,185	3,678
1918	91,161	12,354	353,351	26,137	76,067	2,692
1919	122,956	12,649	376,803	29,730	416	31,910
1920	62,754	176,718	429,651	47,773	138,240	33,216
1921	32,685	158,873	574,908	27,552	144,868	53,771
1922	10,809	109,962	379,058	41,967	143,219	55,104
1923	42,433	107,623	453,667	55,658	164,305	54,068
1924	57,853	115,241	465,438	58,353	229,137	75,318
1925	60,274	167,329	452,360	85,620	266,415	56,981
1926	52,454	150,455	478,031	95,685	272,212	52,558
1927	56,512	122,561	480,103	94,322	246,571	67,869
1928	50,849	120,877	588,606	63,022	86,618	44,483
1929	45,790	138,963	581,676	63,825	170,094	48,448
1930	36,872	-	556,274	55,364	163,608	46,394
1931	23,600	98,045	446,933	61,916	135,710	47,459
1932	77,738	19,058	534,578	145,733	187,282	92,270
1933	89,946	43,648	612,546	180,449	216,102	74,119
1934	79,406	62,456	583,163	193,486	196,239	68,659

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Lérida	Logroño	Lugo	Madrid	Málaga	Murcia
1901	5,001	5,427	12,956	18,374,203	154,499	73,326
1902	5,532	5,082	17,444	19,084,808	170,780	59,601
1903	7,393	4,973	16,506	19,470,980	188,934	60,765
1904	6,102	3,900	11,293	19,153,050	187,980	58,983
1905	4,974	4,350	13,705	15,858,323	164,851	65,601
1906	13,383	4,765	13,306	16,158,583	166,658	87,706
1907	11,214	3,083	15,206	16,509,084	165,936	83,069
1908	12,147	4,177	12,110	17,080,966	158,165	63,703
1909	13,209	4,055	12,092	17,032,482	162,314	72,720
1910	14,778	4,165	11,761	17,028,528	170,884	77,651
1911	17,230	4,908	11,778	18,357,326	145,288	87,251
1912	21,736	4,996	12,301	22,573,984	124,277	79,277
1913	25,972	5,799	11,076	22,140,416	108,451	91,863
1914	29,976	6,304	10,712	23,896,881	91,780	78,929
1915	31,724	7,353	7,934	23,385,595	52,162	69,349
1916	30,968	6,895	6,736	25,828,849	68,343	83,724
1917	42,825	6,984	9,869	28,410,067	48,893	92,009
1918	54,384	6,101	11,581	32,242,294	57,909	130,967
1919	64,739	4,101	10,329	43,114,379	71,745	217,206
1920	64,739	5,212	35,886	49,352,781	99,995	157,681
1921	82,991	11,033	22,440	47,477,355	71,745	111,596
1922	92,929	11,070	34,684	49,347,422	71,991	157,309
1923	97,532	26,860	45,907	54,215,464	160,358	167,372
1924	162,841	50,660	81,926	52,240,227	202,245	184,426
1925	145,494	49,713	60,539	54,047,344	187,245	129,876
1926	126,865	39,070	115,566	55,112,821	234,501	103,968
1927	115,537	38,448	109,373	55,650,883	245,215	65,032
1928	98,419	24,928	67,530	56,086,624	216,499	73,307
1929	108,992	21,216	64,812	58,176,781	229,631	86,398
1930	98,623	22,341	61,753	56,829,688	208,208	85,801
1931	85,461	22,062	66,162	51,512,200	180,648	69,225
1932	254,264	62,589	104,711	50,010,162	233,771	189,098
1933	299,245	59,397	123,150	49,032,001	283,819	210,094
1934	206,853	49,736	114,408	51,354,333	281,051	105,031

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Navarra	Ourense	Oviedo	Palencia	Pontevedra	Salamanca
1901	-	9,621	81,746	9,408	100,811	112,048
1902	-	13,995	75,543	8,145	111,688	121,601
1903	-	13,678	96,193	7,245	114,583	126,520
1904	-	14,673	103,499	7,467	119,256	130,578
1905	-	14,039	131,399	6,068	110,393	108,263
1906	-	13,924	151,098	5,387	112,335	115,111
1907	-	16,673	164,882	4,570	115,893	119,985
1908	-	15,063	140,713	6,159	118,398	84,814
1909	-	14,558	132,465	6,925	128,743	73,342
1910	-	11,679	124,602	5,910	138,607	64,670
1911	-	13,311	141,220	5,520	137,372	75,288
1912	-	14,359	173,293	4,951	142,092	88,477
1913	-	11,618	182,628	4,921	144,417	98,400
1914	-	15,429	185,517	4,090	155,262	109,694
1915	-	15,987	197,335	5,146	157,033	114,268
1916	-	11,940	226,518	4,267	157,294	107,976
1917	-	17,162	269,396	4,484	150,779	144,588
1918	-	9,390	336,903	4,659	156,587	180,259
1919	-	14,379	431,627	4,668	244,869	195,433
1920	-	29,999	526,885	14,607	351,375	133,613
1921	-	20,217	561,459	4,088	303,483	192,543
1922	-	24,401	520,398	7,335	290,852	195,410
1923	-	26,880	516,347	28,010	297,199	302,689
1924	-	48,713	641,340	62,662	331,653	347,622
1925	-	53,581	783,259	63,314	409,048	361,846
1926	-	67,565	659,428	148,307	401,727	361,854
1927	-	84,295	605,806	141,441	282,585	397,441
1928	-	45,675	503,058	101,925	65,647	340,342
1929	-	50,140	493,072	96,224	40,017	101,856
1930	-	42,682	489,467	89,917	38,166	64,363
1931	-	48,127	464,915	110,353	49,653	55,651
1932	-	229,271	711,005	138,980	90,230	154,462
1933	-	239,297	760,734	144,417	104,092	153,797
1934	-	243,524	626,539	170,128	66,063	138,565

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Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Santander	Segovia	Sevilla	Soria	Tarragona	Teruel
1901	94,511	2,741	38,621	40,310	5,561	4,050
1902	112,895	3,083	39,886	44,238	6,448	3,320
1903	115,681	2,846	41,473	41,119	6,553	3,479
1904	115,124	2,991	40,521	40,431	7,159	3,557
1905	146,888	3,391	37,078	34,686	6,036	3,843
1906	172,955	3,359	67,296	36,981	6,135	3,275
1907	169,856	3,164	96,038	37,785	5,428	3,300
1908	146,851	4,302	62,791	22,526	7,222	8,450
1909	151,013	4,778	102,390	12,817	3,878	11,118
1910	154,505	5,112	98,369	12,855	6,389	11,842
1911	154,176	5,001	137,993	13,809	4,035	11,730
1912	167,925	5,045	115,101	17,623	5,771	10,289
1913	171,423	5,034	136,601	22,443	3,453	9,792
1914	177,350	4,996	135,075	29,658	9,029	8,775
1915	163,763	5,042	153,484	48,451	13,858	10,322
1916	179,045	3,973	160,462	48,343	8,945	8,254
1917	200,640	4,949	169,235	45,787	9,134	7,651
1918	245,081	6,339	174,111	59,202	9,725	9,516
1919	333,169	5,050	163,985	80,119	16,185	11,741
1920	399,141	16,409	225,366	88,452	19,554	11,741
1921	389,264	31,133	232,184	80,119	25,934	9,479
1922	407,027	48,384	258,580	78,096	36,854	14,284
1923	418,096	66,710	289,709	100,951	45,615	18,563
1924	455,161	88,741	321,594	113,966	50,385	33,827
1925	463,889	74,817	314,398	126,981	74,258	58,016
1926	465,202	79,168	357,616	124,372	68,164	71,635
1927	472,177	94,575	313,217	144,180	63,158	100,056
1928	426,272	87,395	324,687	152,475	38,019	74,588
1929	460,894	78,210	323,960	123,527	37,139	88,098
1930	422,441	71,583	303,885	100,679	49,308	73,992
1931	414,472	72,012	275,630	82,566	52,815	65,381
1932	471,253	151,002	491,486	114,871	119,254	220,004
1933	436,417	132,825	358,853	135,074	94,820	192,802
1934	445,423	139,064	405,339	132,507	98,236	288,813

Sources: See Chapter 2.

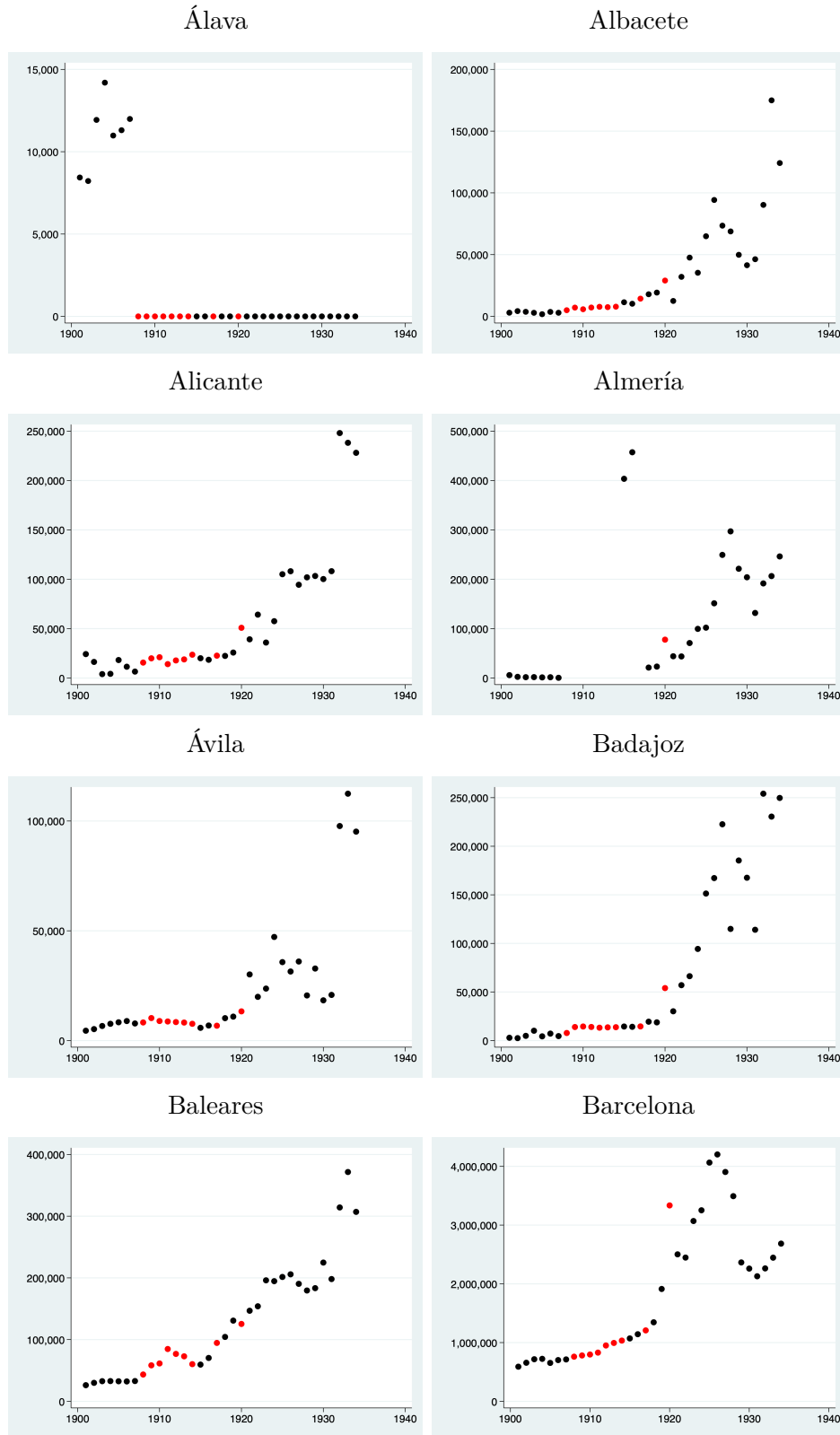
Notes: All data are in nominal values. I corrected for outliers in Castellón in 1919; in Castellón, Lérida and Teruel in 1920; and in Cuenca in 1926.

Table A12: Transportes Revenues by Provinces, 1901–1934.

Year	Toledo	Valencia	Valladolid	Vizcaya	Zamora	Zaragoza
1901	3,523	236,630	2,773	283,382	4,295	17,851
1902	3,365	353,758	2,805	281,430	4,598	19,202
1903	3,915	391,109	4,072	294,046	5,752	17,660
1904	3,889	345,751	6,007	295,231	7,465	25,497
1905	4,409	340,621	5,951	307,332	6,414	34,190
1906	4,705	323,222	4,690	309,148	5,662	32,704
1907	5,091	349,200	4,827	288,872	5,862	32,405
1908	8,982	354,427	11,204	252,529	6,874	37,504
1909	10,555	374,556	12,733	236,585	6,016	40,733
1910	11,694	398,906	13,914	227,623	5,221	42,639
1911	11,514	390,910	12,946	207,536	5,397	47,315
1912	12,995	435,767	12,626	198,483	8,221	52,353
1913	13,037	444,655	11,710	179,433	8,812	56,409
1914	14,356	446,965	11,274	159,196	8,922	60,834
1915	9,011	465,774	13,881	112,488	9,832	60,852
1916	9,591	499,357	14,391	111,707	6,123	71,159
1917	21,299	521,218	9,233	103,245	9,321	75,324
1918	32,513	564,941	10,686	111,833	6,668	83,520
1919	41,756	750,940	10,782	89,039	5,994	96,828
1920	41,756	997,307	10,631	157,103	7,584	126,967
1921	50,472	1,022,216	14,323	144,950	4,062	126,557
1922	53,442	1,142,212	21,046	98,190	4,943	126,413
1923	46,267	1,118,510	31,422	122,333	17,332	153,609
1924	59,189	1,295,448	40,844	145,548	13,987	197,945
1925	101,303	1,439,284	29,802	160,100	15,173	239,070
1926	117,862	1,432,776	59,124	132,768	16,094	222,097
1927	142,561	1,442,969	57,672	45,490	21,450	351,976
1928	106,686	1,495,469	38,554	36,389	22,409	369,574
1929	116,428	1,429,317	47,093	36,389	21,202	363,805
1930	90,162	1,324,968	43,576	47,503	20,423	348,775
1931	92,993	1,312,548	32,987	9,373	29,834	328,081
1932	270,832	1,502,679	94,141	5,638	70,925	402,988
1933	557,280	1,653,783	93,553	4,716	95,463	358,019
1934	416,004	1,678,348	82,650	5,214	79,428	451,004

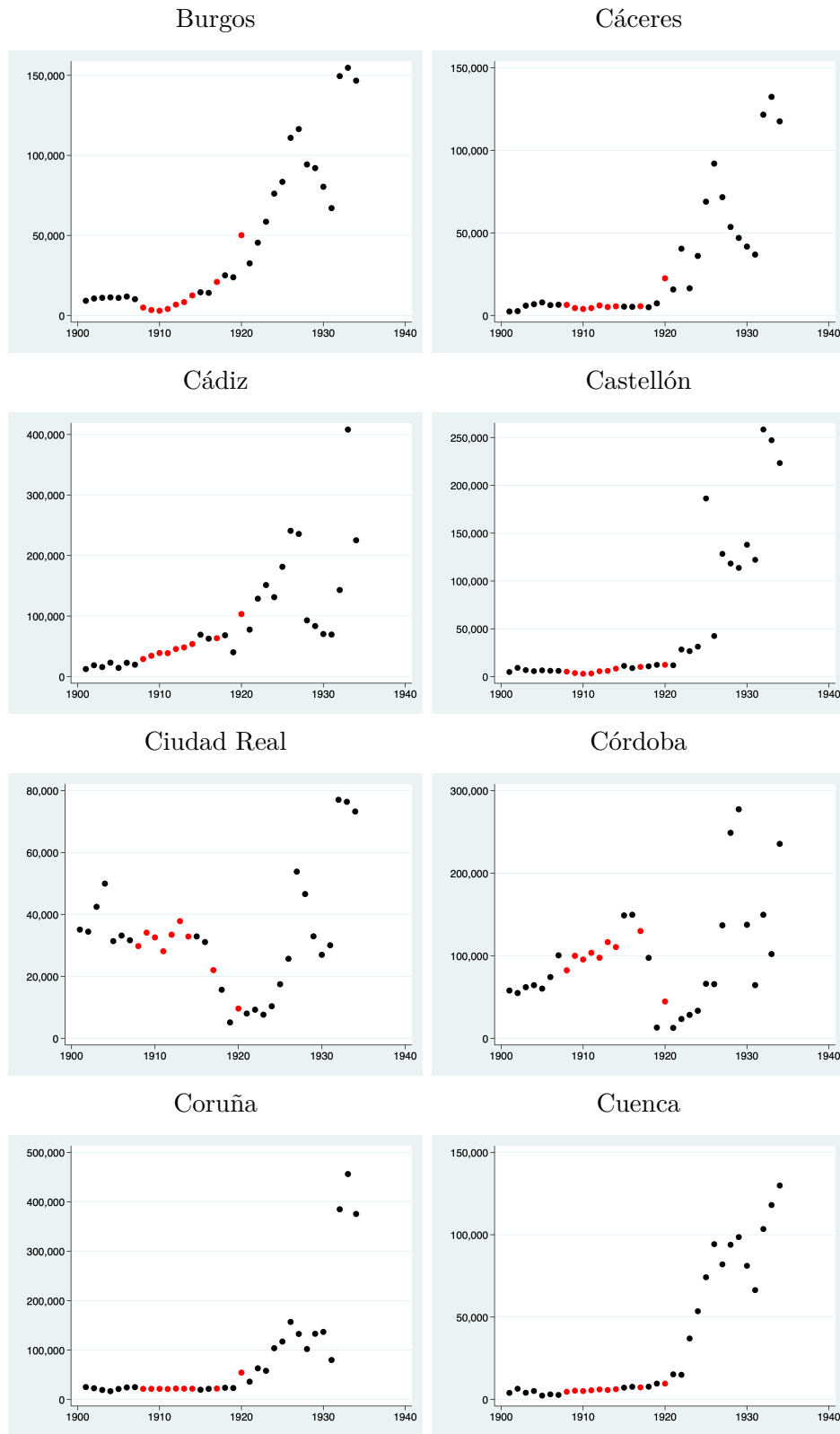
Notes:

Figure A12: Transportes Revenues by Provinces, 1901–1934.



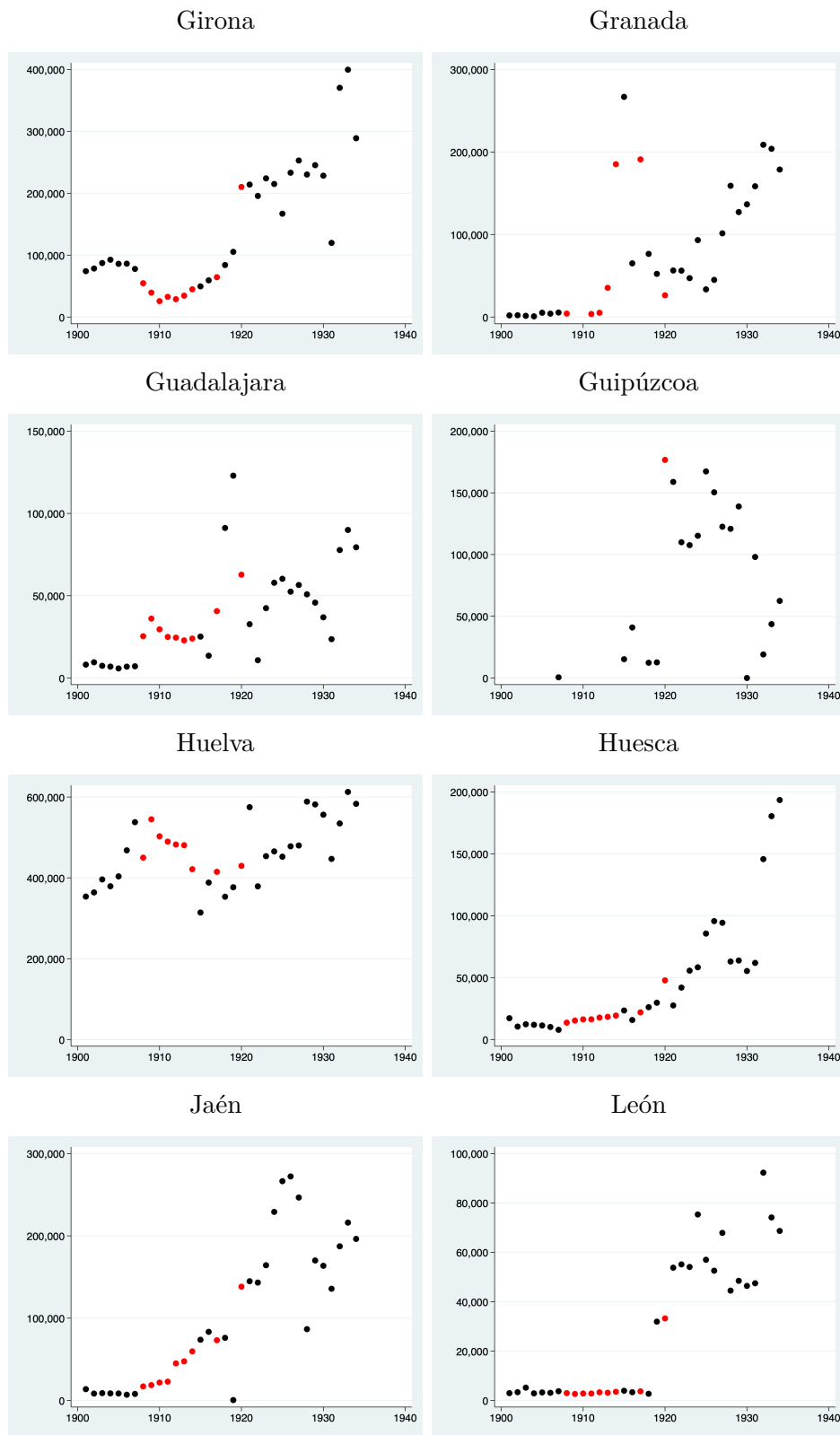
Notes: The original data points are in black; the imputed data points are in red.

Figure A12: Transportes Revenues by Provinces, 1901–1934.



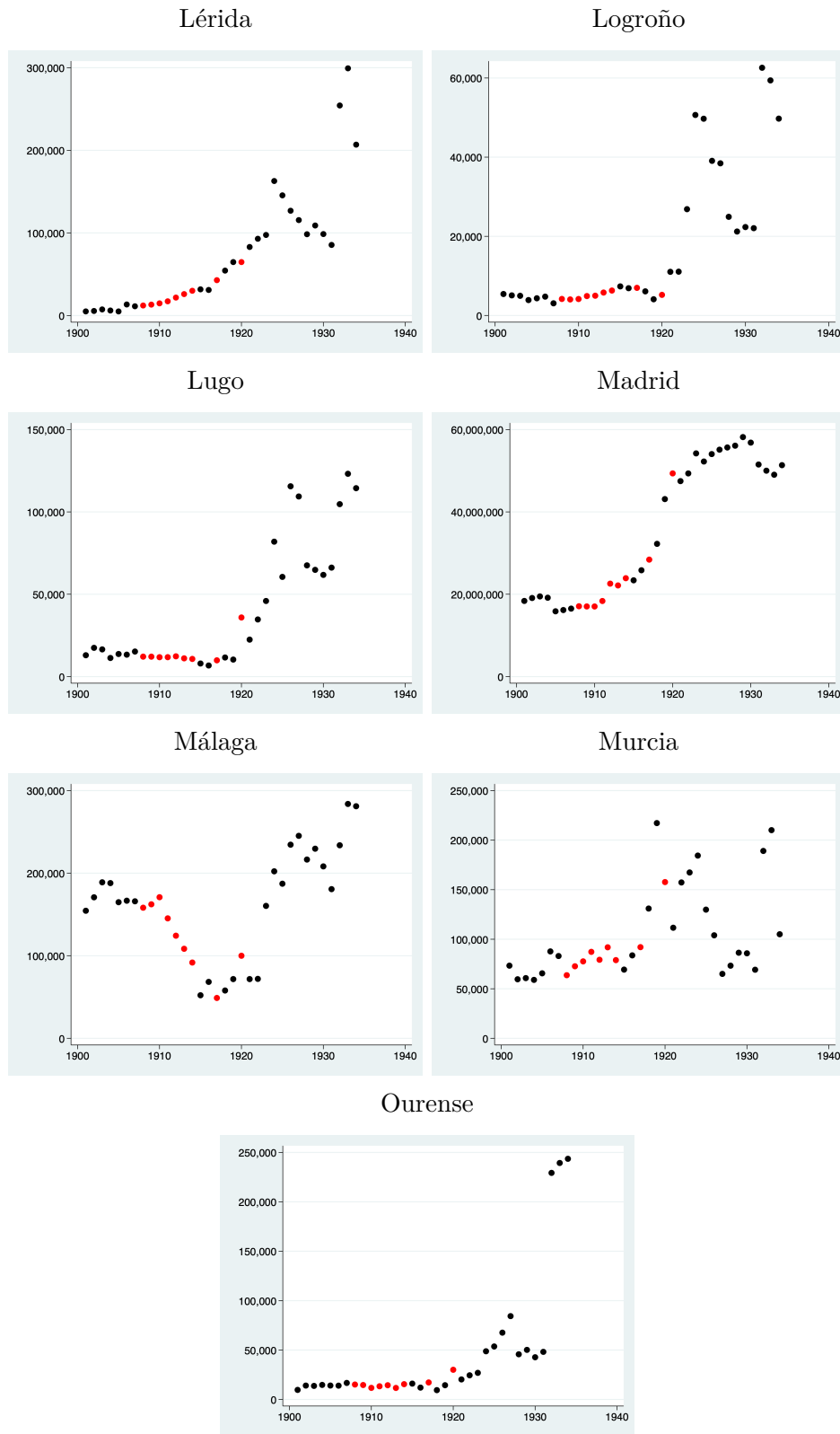
Notes: The original data points are in black; the imputed data points are in red.

Figure A12: Transportes Revenues by Provinces, 1901–1934.



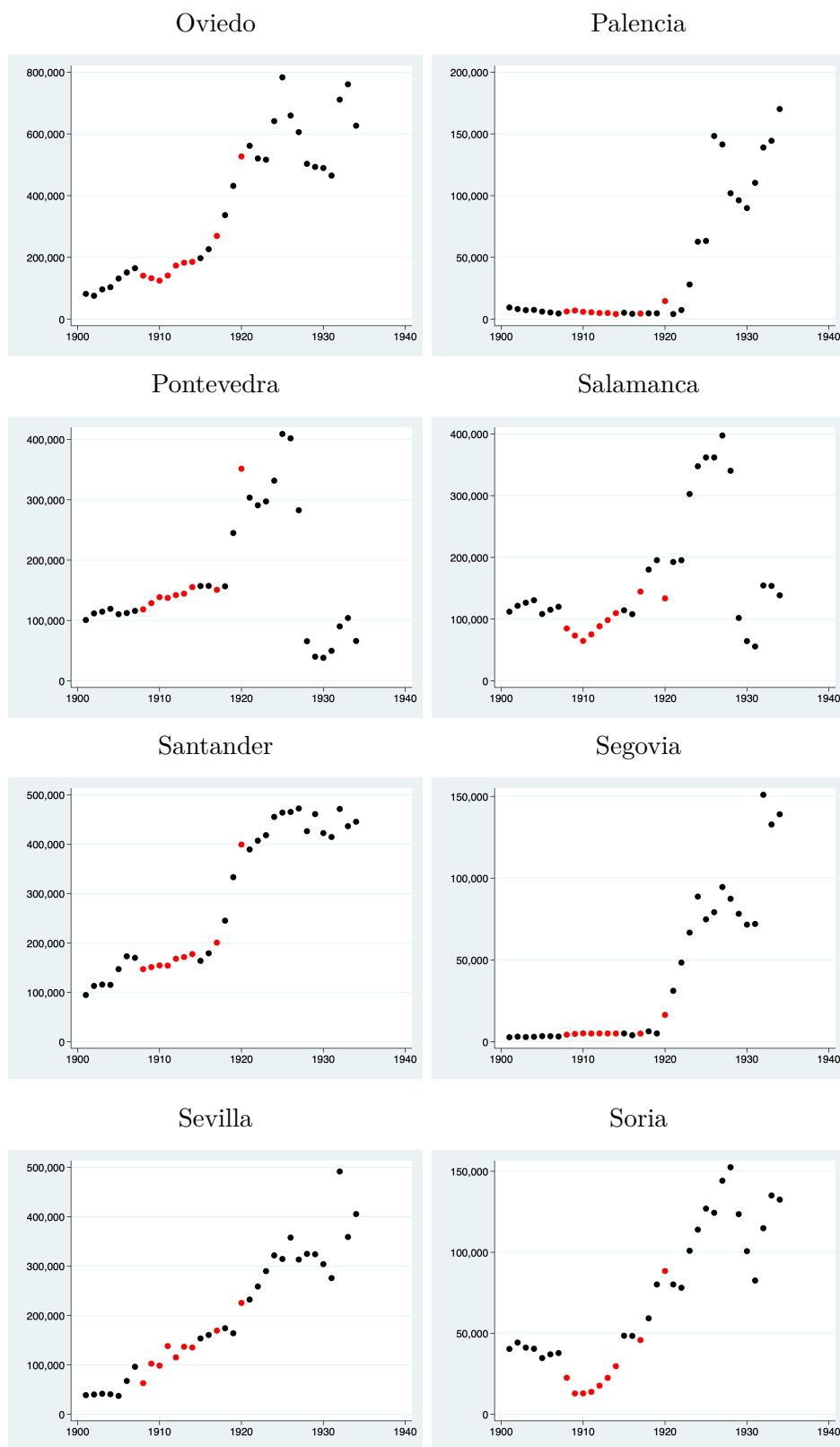
Notes: The original data points are in black; the imputed data points are in red.

Figure A12: Transportes Revenues by Provinces, 1901–1934.



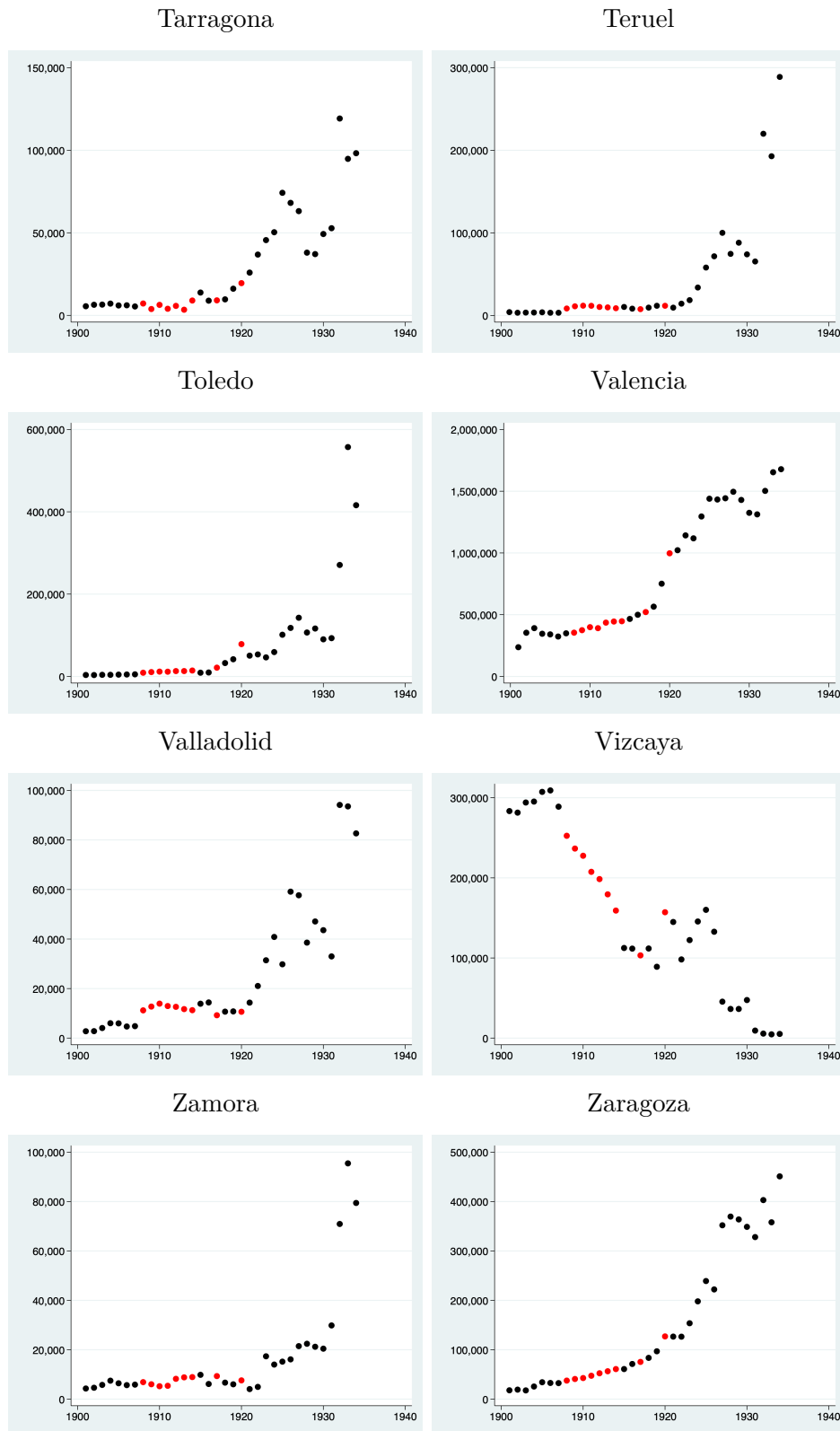
Notes: The original data points are in black; the imputed data points are in red.

Figure A12: Transportes Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.

Figure A12: Transportes Revenues by Provinces, 1901–1934.



Notes: The original data points are in black; the imputed data points are in red.