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Abstract

Spanish land reform, involving the break-up of the large southern estates, was a central issue during the first decades of the twentieth century. This paper uses new provincial data on landless workers, land prices and agrarian wages to consider if government intervention was needed because of the failure of the free action of markets to redistribute land. Our evidence shows that the relative number of landless workers decreased significantly from 1860 to 1930 before the approval of the 1932 Land Reform. This was due to two interrelated market forces: the falling ratio between land prices and rural wages, which made land cheaper for landless workers to rent and buy land plots, and structural change that drained rural population from the countryside. Given that rural markets did not restrict access to land, the government-initiated land redistribution had no clear-cut economic justification.

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Spanish Land Reform in the 1930s: Economic Necessity or Political Opportunism?

1. Introduction

Two views of land reform dominate the literature today.[2] On the one hand, advocates of a 'government-initiated' land redistribution argue that the free operations of land and tenancy markets in developing countries are not conducive for social equity or economic efficiency. Powerful landowners employ their capacity to coerce and distort markets to extract economic rents from tenants, peasants and labourers, and land sales simply exacerbate inequality and rural poverty by concentrating land in the hands of the wealthy few (Deininger 2003). According to this view, markets observed historically across countries have often failed to reduce the skewed land distribution, and a political reform is required to redistribute land to small farmers to increase both overall production and welfare (Binswanger et al., 1995). By contrast, an alternative literature is sceptical of this kind of redistributive intervention because it often worsens social conflicts or fails to improve efficiency and social equity (De Janvry et al. 2001; Otsuka 2007).[3] These policymakers and academics prefer instead 'market-oriented reforms', expecting that a well-functioning land market will generate a 'spontaneous' redistribution of land from inefficient to efficient producers.[4]

These two alternative views have contradictory views on the scope for land redistribution. The objective of those favouring government-initiated land reform is often the creation of a society of small family-owned farms which allows owners to be independent of labour markets. By contrast market-oriented reformers prefer workers to have access to land ownership or tenancy, but without necessarily abandoning labour markets. In particular, they consider that the allocation of time between self-cultivation and labour market participation is spontaneously and efficiently produced by the free action of rural factor markets, while the ownership of even a small plot of land benefits peasants because it can be used as credit collateral and act as insurance during downturns.

The Spanish historical experience is illuminating for the current and the historical debate because attempts were made to implement both types of reforms. The Spanish countryside experienced a classical

[2] Although writers as diverse as Arthur Young in the late eighteenth century and Lenin at the beginning of the twentieth century associated agrarian progress with large estates, many development economists today argue that the lower transaction costs associated with using labour make the family farm more competitive in most forms of agriculture (Allen and Lueck 2002).

[3] Empirical studies suggest that market-orientated land reforms have been more successful that government initiated land redistribution in several developing countries (Barham et al. 1995; Deininger et al. 2004; Deininger et al. 2009).

[4] Market-oriented reforms include the better definition of property rights, the elimination of restrictions to the free operation of factor markets, the development of credit markets for small peasants, etc.

market-oriented land reform during the last decades of the 18th century and the first half of the nineteenth century with the so-called Liberal land reforms. However, from the early decades of the twentieth century, there were political demands for a government-initiated reform to redistribute land from large landowners to poor, landless peasants, which culminated in legislation during the Second Republic (1931-9).[5]

This article considers to what extent agrarian markets were efficient in allocating land to landless workers in the decades prior to the Civil War, or whether a government-initiated redistributive reform that facilitate land ownership to landless workers was necessary. The Spanish debate has been hampered by the absence of information on access to land, and this paper is the first that provides quantitative evidence to explain long-run changes in the numbers and regional distribution of landless peasants.[6] It shows that the number of landless workers halved from about two million to less than one million between 1860 and 1930, while the numbers of farm tenants and owners increased from 1.6 to 2.2 million people over the same period.[7] Landless peasants declined in relative numbers from 56 to 30 per cent of agrarian workforce between 1860 and 1930.

This paper also shows that these substantial changes in the Spanish countryside were not driven by a government-initiated land redistribution program, but rather were the result of two interrelated market forces. On the one hand, many landless peasants got access to land ownership or tenancy. Changes in relative factor prices, namely the ratio between rural wages and land prices, were behind this 'genuine' process of land access. Several factors could account for the decrease of the relative land prices including a substantial expansion of farm land, the first globalization which led to an increasing competition in national and export agrarian markets, the action of the Engel's law (or the fact that, as income increases, the proportion spent on agrarian goods declines, even if actual expenditure on these goods continues to rise) and structural change, which increased the ratio between wages and land rents. On the other hand, structural change favouring industry and services, urban growth, and foreign and internal migrations drained the rural population and reduced the amount of landless workers. However, without the efficient and active land market created by the Liberal land reforms, none of all these forces could allow landless peasants to become tenants or land owners.[8]

The intensity and the causes of this dramatic transformation varied over time and space. The rate of growth in the number of owners and tenants slowed over the seventy years, even dipping marginally in the last two decades, while the drop in landless workers accelerated over the same period. Interestingly,

[5] The evolution of the Spanish agriculture during the period has been extensively studied (Clar and Pinilla 2008; Simpson 1995).

[6] For the region of Andalusia, there are two different estimates with slightly different methodology but similar results (Acosta Ramírez et al. 2009, 56; Grupo de Estudios Agrarios 2002, 86).

[7] Due to data constraints, Galicia, the Basque Country and the Canary Islands have been excluded, although they contained more landlords and tenants than other parts of Spain.

[8] Land sales and prices responded quickly to market stimulus and land prices were driven by fundamentals, suggesting that Spanish land markets were efficient and competitive (Carmona and Rosés 2012).

there were substantial differences between those provinces that would be affected by the Republican land reform in the early 1930s and those that were not.[9] In the land reform provinces the rate of growth in the number of tenants and landowners accelerated over the entire period, while the opposite holds true for the non-reform provinces. In the case of landless workers, the two groups of provinces also followed different paths: in the non-reform provinces, the numbers of landless workers decreased over the entire period, while they only began to fall significantly during the period from 1910 to 1930 in the land reform ones. Migration and structural change were much less important in the land reform provinces that in the rest of Spain. Finally, in several land reform provinces (mainly those situated in Western Andalusia and Estremadura), the large size of mean plots made access to land extremely difficult for landless peasantry.

The remainder of the paper is organized as following. The next section looks at the historical experience of land reform in Europe and Spain. Section 3 provides basic information about the evolution of the Spanish rural economy during the period and presents new evidence on the number of landowners, tenants and landless workers. The following section discusses the reasons for the fall in the total of landless workers employing evidence on relative factor prices and a novel decomposition method. Section 5 analyses why landless workers were so pervasive in Estremadura and western Andalusia. The last section concludes.

2. Access to land in Europe and Spain before the Second Spanish Republic

Western Europe experienced rapid economic growth and underwent profound structural change over the half century prior to the 1930s Depression. The switch from a traditional Malthusian economy, where a growing population led to rising food prices, higher farm rents and depressed wages to that of an industrial society which combined high wages (produced by economic growth and emigration) with cheap imports of foods and beverages, posed significant new challenges to the farm sector. In those economies which embraced free trade, land rents fell rapidly and landless workers either abandoned the sector entirely, or were able to gain access to land. In Southern and Eastern European countries, change was more limited, in part because industrialization was sometimes slower, but also because governments often protected landowners by rising tariffs, slowing their need to make adjustments.

The European experience during the last decades of the nineteenth and first of the twentieth centuries suggests that the free workings of land markets could improve significantly the position of landless peasants and generate a spontaneous 'market-orientated' land reform during industrialization. New legislation that favoured small farms was also important, but the main driving forces were growing rural wages and falling land prices leading to the decline in importance of large estates and fall in the share of hired workers in the active farm population in countries such as France, Germany and the Netherlands (Koning 1994, 81-3). In many regions of France and Belgium, with both limited mechanization and

[9] The list of provinces under the land reform is discussed in section 3.

population growth, large-scale farming based on wage work gradually gave way to small family farms (Van Zanden 1991, 216). Similarly, in Eastern Europe, the dismantling of large farms happened to a considerable extent spontaneously, and independently of any government land reform. In Russia and Poland, many of the large estates were broken up because of the economic difficulties of their owners, as happened, although at a slower tempo, on the Eastern German Junker estates (Dovring 1965, 122). However it was in Ireland and England where the relation between landlords, tenants, and labourers experienced the most spectacular changes. In England about a quarter of land changed hands between 1918 and 1921 alone, with most being transferred from landowner to their tenants, and producing 'nothing short of a revolution in landownership' (Beckett and Turner (2007); Thompson 1963; Thompson 2009). By contrast in Ireland, farm labour was reported to have 'disappeared' but the turn of the century (Guinnane 1997, 41), while for the family farm the Land Question became a major rallying point in the struggle for independence (Douglas 1976). The result was that if in the 1870s only three per cent of small farmers owned their land and 97 per cent were tenants, by 1929 the situation was completely reversed, with 97 per cent owners and only three per cent renting (Thornley 1974, 23).

The Spanish governments, as elsewhere in Europe, had a long history of intervention in land markets. In particular, the so called 'Liberal land reforms', stretching from the late eighteenth to the early twentieth centuries, can be considered as a prototypical market-oriented reform which aimed at defining better private property rights and eliminating restrictions to the free operation of product and factor markets (García Sanz 1985; Peset 1992). Feudal rights were abolished, together with restrictions on the grain trade, labour contracts and sale of land (strict family settlement). Many of the old forms of land tenancy that complicated the definition of property-rights were simply abolished and private property established. Furthermore, to alleviate budgetary problems and provide for military and infrastructure expenditure, successive governments auctioned off Church and municipal properties. In all, according to one estimate, between 1766 and 1924, some 18.4 million hectares of state, church and municipal lands, equivalent to 36 per cent of Spain's area, changed hands (Pan-Montojo 2009, 139; Rueda 1998, 636).

Yet despite the significance of these changes and a substantial secondary literature that documents them, there is little consensus among specialists as to their impact on the growth of agricultural production or, and what concerns us here, to land distribution.[10] According to Pascual Carrión, arguably the most influential reformer of the period, the absence of small and medium farms in southern Spain left peasants in the hands of landowners who charged higher rents due to their monopolistic power, leading to widespread land hunger (Carrión 1932). Furthermore, politicians believed that large landlords, particularly the members of the nobility, took advantage of the economic power which the ownership of large estates gave them, to coerce rural electors and rig parliamentary elections. In

[10] There is considerable debate about the economic and social effects of the sale of common lands (Beltran Tapia 2012, 2015). This absence of land redistribution was interpreted negatively by the literature (Carrión 1932, 75; Costa 1911-1912; Fontana 1985; Garrabou 1999; Nadal 1975; Pérez Picazo 1990, Robledo 1993; Ruíz Torres 1994; Villares 1997) but recently this view has been challenged (Carmona and Simpson 2003).

Spain, much of the literature has ignored the effects of market changes on the land market. Most contemporaries in the 1930s believed that land concentration had changed little over time, and demanded that the new Republican government confiscate the lands of the old aristocracy and break up the large estates in the south. For the south, just 0.6 per cent of holding accounted for 52 per cent of the total area, and 38 per cent of taxable income, while those of over 250 hectares represented 41 per cent of the total area and 28 per cent of taxable income (Carrión 1932, 1975; Malefakis 1970, 19). Reformists from the turn of the twentieth century started to demand government intervention to break up the *latifundios* (large estates) which they were regarded as obstacles not just to increasing farm output, but also for economic development. The poor statistical information available to the Republican governments in the 1930s made it difficult for them, as it has done for historians, to understand long-run changes in landownership. However, recent studies suggest that, as in other European countries, land ownership was becoming less concentrated over time, although the literature fails to identify between the relative importance of government legislation and movements in factor and commodity prices in explaining change. For example, the average size of *latifundios* in the province of Cordoba declined from about 2,000 hectares in the mid eighteenth century to 1,300 hectares a century later, and falling to 700 hectares by the 1930s (López Ontiveros and Olmo 1993, 45). At the other end of the scale there is also ample evidence that the numbers of small holders increased from the mid-nineteenth century (Acosta Ramírez et al. 2009; Bernal 1974; González de Molina 1991 and 2014).

During the first years of the Second Republic (1931-1933) several reforms affecting labour markets and land ownership were approved by parliament (Malefakis 1970; Robledo 1993, 1996). This legislation increased rural labour's bargaining power by providing for collective bargaining in the countryside and obliging farmers to hire a minimum number of workers, while tenants obtained rent reductions and could not be evicted unless they were in arrears with their payments. There was also a major attempt at land reform, which promised to settle large numbers of landless workers through compulsory land purchases by the state. The experiment failed, with only 4,309 families being settled on 24,203 hectares by the end of 1933, but the consequence of these and other measures seriously divided Spanish society (Malefakis 1970, 281). The reasons for land reform failure have been widely debated in the literature, but not the economic rationale for carrying out such a controversial measure in the first place. In particular the question of why market forces, which had been supposedly effective in breaking up large estates in other western European economies but not in southern Spain, has been totally ignored.

3. Evidence on agrarian land, labour and access to ownership and tenancy

Table 1 offers information on the amount of arable land, male workers (in full time equivalent – hereafter FTE) in agriculture, and land in hectares per FTE, to help understand long-run changes in the Spanish countryside.

[TABLE 1]

Both the area of cultivated land (from 11.4 to 22 million hectares) and the number of agrarian workers (from 2 to 4 million) practically doubled between 1800 and 1931. During the first half of the nineteenth century, the expansion of cultivated took place mainly on wasteland and forestry but from the 1860s it also began to replace pastures, which decreased from 8.8 million hectares to about 7 million by 1931. Both the area of olives and vines increased from the early nineteenth century, but while prosperity in viticulture peaked in the 1880s and the area cultivated then fell because of phylloxera, the extension of olives continued to increase until the 1930s. Interestingly, the ratio between cultivated land and agrarian workers was highest in both 1800 and 1931, and experienced a slow decline over the nineteenth century until the 1890s, followed by a relatively fast recovery. The combination of more land per worker and higher output per hectare led to labour productivity increasing by 51 per cent between 1890 and 1930 (Simpson 1995, 26).

What happened with land ownership during this period of dramatic changes in the Spanish countryside? As Spanish historical sources offer only limited information concerning changes in land ownership between 1860 and 1930, it has been necessary to calculate the number of landowners, tenants, and landless workers. The 1860 population census allows the possibility to compute directly the numbers of landowners and tenants in each province, but the remaining censuses (1890, 1910 and 1930), which only give the total numbers employed in agriculture (Prados de la Escosura and Rosés 2010).

However, information is available for the total number of landless workers for the year 1933 in the peasants survey (*Censo de campesinos*)[11] conducted by the Republican authorities. As the *Censo de campesinos* does not cover all judicial districts, the number of landless peasants in each province is calculated by extrapolating the village information that is available, to other villages in the same district where it is missing. This process allows an estimate for landless peasants for all provinces in 1933 except the Basque Country, Navarre, Galicia and the Canary Islands (which are excluded from the calculations). The number of owners and tenants in 1930 is then calculated by deducting our estimate for landless workers from the total agricultural workforce.

For 1890 and 1910 a more elaborated method is employed. Land tax records give us the quantity of taxpayers (owners and tenants) for the years 1855, 1890-91, 1907 and 1930.[12] However, given the characteristics of this historical source, a single land owner or tenant could be counted several times in the taxpayer statistics if they had plots in different municipalities, a problem which was especially acute in those provinces where land was heavily fragmented or where there was a high density of municipalities.[13]

[11] The *Censo de campesinos* recorded the number of landless workers, and was much more complete in southern Spain, where landless peasants were more numerous and, if anything, it exaggerates their numbers. The data published in (Espinoza Guerra et al. 2007).

[12] Taxpayers are found in Estadística de los presupuestos generales del Estado (1976-1982).

[13] The recorded number of land owners was strongly correlated with the number and size of municipalities in any given province. The regression of the relative numbers of taxpayers (taxpayers divided by agrarian male working

To correct for this bias, we divide the ratio between the number of owners and tenants and the (observed) number of taxpayers in the years 1860 and 1930. We interpolate linearly these two correction coefficients for 1890 and 1910. Then, we estimate the number of landowners and tenants for 1890 and 1910 by multiplying these correction coefficients for the number of taxpayers in 1890-91 and 1907 respectively. Finally, the number of landless workers is obtained as a residual by deleting from the agricultural workforce the estimated number of landowners and tenants.[14] The main results of our estimations are presented in table 2 and table 3 below.

[TABLE 2]

[TABLE 3]

The Republican land reform was not intended for the whole country, but rather for only fourteen of the forty-nine provinces. These included the three provinces of Western Spain – hereafter Estremadura (Badajoz, Caceres and Salamanca), the eight in Andalusia (Almeria, Cadiz, Cordoba, Granada, Huelva, Jaen, Malaga and Seville), and three in La Mancha (Albacete, Ciudad Real and Toledo). These regions are therefore considered separately and, to make the discussion simpler, the land reform provinces are grouped in four regions (Estremadura, Eastern and Western Andalusia, and La Mancha) and the non-land reform provinces in another four (Ebro Valley, Mediterranean, Northern and Central Castile).

According to our calculations, the number of Spanish agrarian workers with access to land (owners and tenants) increased by more than half million people from 1860 to 1930 (Table 2). From 1860 to 1890, the numbers increased in every region, suggesting that following the Liberal land reforms, many agrarian workers gained access to land. This trend continues in the next period (1890-1910), except in Estremadura, Northern and Central Castile, where the numbers of farm workers with land access fell slightly.[15] In the last period (1910-1930), the number of owners and tenants fell in all regions except in La Mancha, Eastern and Western Andalusia. Therefore the *absolute* numbers of owners and tenants before the Civil War peaked in 1910. In *relative* terms, the number of owners and tenants grew in all Spanish regions during every period, even those subject to the 1932 Republican land reform. To be more explicit, by 1930, 76.8 per cent of agrarian workers had access to land in non-reform provinces and 69.5 per cent in reform

population) on the average area of farm land by municipality gives a coefficient of -0.4 with an adjusted R^2 of 0.27 and F-test of 16.83. The number of taxpayers exceeded the number of rural families in provinces where the number of municipalities was exceptionally large. It is also interesting to note that this problem was relatively unimportant in the Southern affected by land reform, as most people lived in agro-towns which made it difficult for owner-cultivators to have land plots in more than one municipality.

[14] Many landless workers, as well as small land owners and tenants, were also employed in the industrial and service sectors during some months of the year (Prados de la Escosura and Rosés 2009). Moreover, a large proportion of landless labour was not attached to a particular farm but rather moved across provinces and regions, following job opportunities according to the agrarian calendar (Silvestre 2007).

[15] Northern Castile was the region that most suffered from the late nineteenth century grain invasion and at the same time the phylloxera epidemic severely damaged its vineyards (García Orallo 2008).

provinces. The region where the agrarian population had less access to land was Western Andalusia, but owners and tenants still represented 54.4 per cent of the farm population. In other words, our data shows that it was landowners and tenants rather than landless peasants that were the characteristic features of the Spanish countryside, especially in the 1930s.

The increase in the number of land owners and tenants contrasts with that of landless workers which, over the 70 years considered here, decreased from around two million to less than one million people (table 3). The numbers fell in each period, but the most significant drop took place during the last (1910-1930), when more than half million landless disappeared from the list.[16] This change is even more dramatic in relative terms, as the number of landless workers plummeted from 56 per cent of the total male agrarian workforce in 1860, to 30 percent in 1930. Overall, this new quantitative evidence suggests little justification for a nation-based land reform in the 1930s.

This national picture could mask important regional differences, especially in the timing of the fall in the number of landless workers. In the non-reform provinces, the decline was continuous over the seventy years, but in the land reform provinces a significant decline occurs only after 1910. Therefore, it is worth considering in more detail the situation of provinces subject to the 1932 land reform. In the La Mancha provinces of Albacete, Ciudad Real and Toledo, the number of owners and tenants increased significantly, from 70,000 people in 1860 to 180,000 by 1930, while the numbers of landless labours fell from 135,000 to 83,000 over the same period, and agricultural workers with access to land increased from 34 per cent of the total in 1860 to 68 per cent in 1930. A similar situation can be observed in Eastern Andalusia (Almeria, Granada, Jaen and Malaga), where 58 per cent of the agrarian workforce was formed by landless workers in 1860, but only 35 per cent seventy years later. On this indicator, the need for land reform is therefore perhaps difficult to justify in both La Mancha and Eastern Andalusia in 1930, as the market mechanism was producing a genuine increase in the number of self-cultivators and a simultaneous reduction in landless workers.

The situation in Estremadura (Badajoz, Caceres and Salamanca) and Western Andalusia (Cadiz, Cordova, Huelva and Seville) was less favourable for workers gaining access to land. In Estremadura, the numbers of owners and tenants decreased slightly between 1890 and 1930, but the proportion of landless never fell below 40 per cent, although in absolute terms numbers plummeted from 170,000 to 127,000 between 1910 and 1930. Western Andalusia was the region where the landless problem was greatest, reaching 45 per cent in 1930, and the province worse affected was Cadiz, with two-thirds of the agrarian population without land. However, and in contrast to Estremadura, the number of landless workers fell sharply from 1890 to 1910 but not between 1910 and 1930. Surprisingly, more than half of the provinces under the land reform law had experienced a substantial fall in the numbers of landless workers between 1860 and 1930, suggesting that the rural market was allowing farm workers access to land.

[16] Spain's population grew from 17.5 to 23.5 million between 1890 and 1930.

4. Explaining access to land in Spain

Before going further, it would be useful to have a simple analytical framework to understand how market forces and institutional reforms could have shaped access to land in Spain from the Liberal reforms to 1931. Previous research has shown the competitive nature of Spanish rural labour (Rosés and Sánchez-Alonso 2004) and land markets (Carmona and Rosés 2012) during the period considered here. Therefore, we will use a perfect competition model of rural labour markets rather than an imperfect competition model.

[FIGURE 1]

Figure 1 illustrates the effects of demand and supply shifts in Spanish agrarian labour markets: the x-axis presents the relative quantities (measured in hours or FTE male workers) of the owners and tenants, and landless (wage) workers ($\mathbf{Quantity_{OT}/Quantity_{LL}}$), while the y-axis shows the relative income of the two groups (**r/W**). Note that labour and land markets are connected by rents, with relative rent increases (decreases) being translated into land prices / wage ratios increases (decreases).[17]

In this analytical framework, relative supply shifts between owners-tenants and landless workers are directly linked to changes in the supply of land. The initial situation for the land market is before the Liberal reforms, when institutional constraints allowed only a part of the total available land to be traded, and hence for owners and tenants supply (**S**) was quasi-fixed and inelastic. In this situation, any demand shift would result in substantial price increases. For example, in the absence of the reforms, the important population growth of the first half of the nineteenth century (Pérez Moreda 1987) and the growing international demand for Spanish foodstuffs (Simpson 1995, Ch. 3), is likely to have shifted demand upwards (**D'**), resulting in large increases in remuneration for landowners with equilibrium at point **1**. However, the reforms increased significantly the amount of land that could be bought and sold, allowing supply to move to the right (**S'**), and facilitating the increase in the cultivated area, from 11.4 million hectares in 1800 to 16 million in 1860 (Table 1). Land became less inelastic since agrarian land expansion followed market forces (Carmona and Simpson 2003). For this reason, we hypothesize that agrarian demand shift did not resulted in large rents increases, but that these only increased slightly or maintained their values (equilibrium at point **2**), despite the fact that the agrarian workforce grew faster than land expansion (agrarian FTE male workers grew from about 2 million to 3.6 million). In the second half of the nineteenth century, particularly from the 1890s, land demand shifted downwards (**D"**) due to several concomitant factors including increasing foreign competition in agrarian markets (Gallego and Pinilla 2006; O'Rourke 1997; Simpson 1995, Ch. 9 and 10), rural out-migration (Sánchez-Alonso 1995; Silvestre

[17] Rent and land prices were fully integrated in Spain during the period. Therefore, it was a unitary elasticity between rents and land prices (Carmona and Rosés 2012).

2005), and the action of the Engel's law.[18] At the same time, the expansion of land under cultivation continued and land supply shifted to the right again (**S"**). In fact the area of cultivated land grew from 16 to 22 million hectares between 1890 in 1931 (table 1). Consequently, one can confidentially expect that the relative price of land to decrease substantially (equilibrium at point **3**).

According to this analytical framework, a substantial decrease in the ratio between land prices (rents) and wages during the first third of the twentieth century is likely to be observed.[19] The following figures 2 to 4 collects the evidence:

[FIGURE 2]

Figure 2 shows that relative land prices fell significantly over the period, both when access to land is measured by dividing land prices by male wages, and when divided by an estimated mean family income. With both measures, the minimum was reached in 1929, with ratios halving. This suggests that movements in factor prices were helping landless workers to rent and buy land across Spain over almost all the period.

[FIGURE 3]

[FIGURE 4]

Figures 3 and 4 give a more detailed picture of the evolution of the ratio between male agrarian wages and land prices, first in the non-reform provinces and then the land reform ones. The two figures share the same declining trend, but some regional differences merit further consideration. In the case of the non-reform regions, the case of Northern Castile is interesting as it was the region with the lowest ratio but did not experiment any improvement during the period. By contrast, both the Mediterranean region and Ebro Valley experienced substantial gains, with the ratio of the latter matching that of Northern Castile by the end of the period. The same declining trend is observable among the labour reform provinces, although the minimum ratios were reached earlier, in 1919, and then maintained during the remaining years of the series. In all cases the falling trends are impressive. For example, in Western Andalusia the average number of male work days required to buy the mean plot declined from 1503 in 1908 to 674 by 1919 (a two-thirds reduction in just a decade), and in Eastern Andalusia, the ratio falls from 998 days in 1908 to 384 days in 1919. Similar trends are observable in La Mancha and Estremadura.

[TABLE 4]

[18] The influence of Engel's law can be observed on the evolution of relative agrarian prices. For example, the ratio between the agriculture deflator and the GDP deflator grew from 1860 until 1885 and then decreased until the Second Republic. The calculations are available from the authors and based on national accounting data (Prados de la Escosura 2003).

[19] Unfortunately, data on land prices is of poorer quality or unavailable for earlier periods, and the analysis is restricted to the 30 years before the Second Republic.

Table 4 completes the information furnished in figures 3 and 4, and shows several alternative measures of land access for the two periods, 1908-1919 and 1920-1931. The first column displays the total number of male working days necessary to accumulate sufficient money to buy the average sized plot; the second to purchase a single hectare; and finally the amount of family working days required to buy a plot. At the extremes, in 1908-1919, more than 1,200 work days was needed for the average plot in Western Andalusia, against just 242 days in Northern Castile. However, as many small plots were sold in all regions, an alternative measure of land access is the number of working days required to purchase a single hectare of land. In this case the region where workers had to work most days was in the Mediterranean, while land per hectare was cheapest in La Mancha. Daily family income is computed by assuming that a family is formed by four persons (a couple and two children) and under the assumption that wives worked half the hours than males; and children one fourth. As before, Western Andalusia is the region where the cost of purchasing a plot was the highest, requiring close to 900 days, against 232 in Ebro Valley, and 163 in Northern Castile.

In the following period (1920-1931), the situation had improved everywhere. By 1931 a family needed to work only two-thirds of what it had done 1908 to buy land, and the fact that rural wages increased during the Second Republic while farm-gate prices were stagnant or fell, suggests that the downward trend continued after 1931 (Palafox 1991). However, Western Andalusia and Estremadura remained as the two regions were average land plots were most expensive (about 1,100 days of male work in Western Andalusia and more than 600 days in Estremadura).

It is interesting to determine whether the decline in landless workers observed in tables 2 and 3 occurred because they moved up the farm ladder to become tenants or owner-occupiers, or whether by contrast farm labourers left agriculture altogether in search of employment in the industrial and service sectors in the cities or emigrated abroad. This former process requires either an expansion in the supply of new land for cultivation faster than the agrarian population (table 1 shows that this did happen from 1890 to 1931), or the sub-division of existing farms among several owners or tenants. This sub-division is not independent from the adoption of new products and new forms of agrarian production which were more labour intensive.[20]

A series of back-of-the-envelope calculations are made to disentangle the contribution of each of these two forces to explain the growth in net numbers of workers who made a transition from landless to owners and tenants. Under the assumption that the propensity to leave agriculture is identical with individuals regardless of whether they had access to land or not, the "net" reallocation of landless workers between T and T-1 ($N_{T,T-1}$) can be decomposed in:

$$(1)\quad N_{T,T-1} = E_{T,T-1} + \left[\theta_{T-1} QL_{,T,T-1}\right],$$

[20] For the greater use of subleasing and sharecropping with cereals in the 1920s in Andalusia (Naredo et al., 1977) and for Estremadura (Carmona and Simpson 2014).

where $\pi_{T-1} = QLL_{T-1}/QL_{T-1}$ is the proportion of people without access to land (QLL) over total agricultural employment (QL). The second term ($E_{T,T-1}$), which is obtained as residual, is equal to the 'genuine' reallocation from landless to owner or tenant (that is, the number of landless workers who become landowners or tenants) and the last term on the left is the expected change in the quantity of landless workers if the proportion of people with and without land does not vary from one period to the next (that is, the amount of increase (decrease) of landless workers due to demographic change and migrations). The calculations of this equation are collected in table 5 below:

[TABLE 5]

Table 5 shows interesting insights into the decline in the number of landless workers (the negative values). In each period considered (1860-90, 1890-1910, and 1910-30), the main explanation of the change in the number of landless workers was their 'genuine' reallocation to owners and tenants. In the last period, this change was also accompanied by a sizable move of landless workers out of agriculture. The results are consistent with the substantial literature that has underlined the absence of labour pull from cities and industry and services until the period 1910-1930 period (Rosés and Sánchez-Alonso 2004; Silvestre 2005). Our aggregate result also confirms that the Liberal land reform was efficient for allocating land to landless peasants.

As in previous tables, non-reform and land reform provinces are considered separately. In non-reform provinces during the first period (1860-1890) (Panel A), the substantial decline in the numbers of landless peasants can be almost fully attributed to their gaining access to land, as the role of migration and demographic change was very limited (in the two Castilian regions demographic change actually increased the number of landless peasants). The decline in the number of landless workers from 1890 to 1910 was also dominated by the 'genuine' reallocation, albeit demographic change and migration now played a more important role, except in the Mediterranean region, where it produced an increase in the numbers of landless workers. Finally, in the period 1910-1930, migration-demographics and 'genuine' reallocation played equal roles in the rapid decline in the numbers of landless.

In the regions that experienced the Republican land reform the situation is more nuanced (Panel B). In the first period (1860-90), the 'genuine' shift of landless workers to self-cultivators took place in all regions, but was significantly less important than in the non-reform ones, and was partly offset by demographic increases. For example, in La Mancha, the numbers of landless workers increased because of democratic growth, although some of the landless gained access to land. Similarly, in Estremadura and Western Andalusia, demographic growth was positive and reduced the net land reallocation. In the next period (1890-1910), the number of landless workers grew in all reform regions except in Western Andalusia, where genuine land reallocation exceeded demographic change. Even in land abundant Estremadura, the number of owners and tenants declined. The situation changed significantly in the last period (1910-1930), as all regions experienced a substantial reduction in the number of landless workers. Contrary to what happened in the previous periods and with the exception of Western Andalusia, the

increase in number of self-cultivators was accompanied by demographic decline. However, on a less optimistic note, this demographic contraction was less important than found in non-reform provinces.

5. Why did South-western Spain lagged behind in land access?

The previous sections have shown that the landless in South-western Spain (Estremadura and Western Andalusia) were less likely to gain access to land than those in the rest of Spain (tables 2 and 3). These regions were characterized by both a sluggish conversion of landless workers to tenants and landowners, and sometimes a positive demographic change, with farm labour growing and slow migration or movement out of the primary sector. However, figures 3 and 4 also showed that these regions shared the overall pattern of declining land price / wage ratios. Therefore, what explains the low levels of 'genuine' reallocation between landless peasants and farmers if relative land prices were falling? And why were landless workers less likely to migrate or switch into the industrial or service sectors?

Four factors help explain farm workers' limited access to land in the southwest. First, average plot was larger in this part of Spain than in the rest (see evidence collected in table 4) and larger exploitations were more efficient. In the absence of irrigation, natural resource endowments made large areas of the regions ideal for extensive cereals, and by the interwar year period technological change in the form of new labour-saving machinery had greatly increased the efficiently of the large estate.[21] This was accentuated by the fact that most of the population lived in 'agro-towns' rather than being dispersed across the countryside, which often made intensifying cultivation by using more labour difficult. In fact, the agronomists' reports on the farms that were confiscated and given to landless workers following the 1932 Land Reform show not only that most were already relatively efficiently cultivated given the factor and commodity prices of the period, but also made few suggestions for change (López Ontiveros and Mata 1993 and Carmona and Simpson in preparation).

Second, the long summer droughts made farming highly seasonal so that average annual employment opportunities were often less than 150 days, leaving workers dependent on finding part-time employment in other sectors, such as transportation, construction or mining.[22] Therefore, in these regions, yearly family income of landless peasants was below other parts, such as in northern Spain, where ample summer rainfall allowed full-time farm employment, or in the irrigated areas in the Mediterranean, where wage labourers could realistically work up to 300 days per year in farming.

[21] Indeed, labour syndicates centred their demands on changes in land ownership, not in the use of machinery.

[22] One estimate (Simpson 1992, 16) gives an annual average of 128 days of farm work for the provinces of Cadis, Cordoba, Jaen and Seville in 1926-35.

Third, over large areas of Estremadura and Andalusia there was no farm ladder. In traditional rural societies, most landless workers had few assets in their late teens, but opportunities existed for them to accumulate savings to rent a small plot and eventually become landowners in their own right (e.g., Alston and Ferrie 2005; Wright 1988). In Northern Castile and Galicia from the late nineteenth century, large numbers of workers emigrated for periods of a few years to earn money, which they used to purchase land and work animals, and establish themselves on the farm ladder (Villares 2014).

Finally, 'the classic response of Mediterranean agriculture' to land scarcity was to 'plant trees or vines on old or new assarts, thereby increasing the returns from agriculture by more intensive forms of land utilization' (Le Roy Ladurie 1976, 56-7). The vine and olive in particular thrived in dry areas on relatively poor quality land, and their planting and annual cultivation required very little capital but large amounts of labour, making them an ideal way for the landless to accumulate assets (Simpson 1995, 70-3). Conditions were ideal in parts of eastern Andalusia, and the important growth of olives helps explain the faster decline of landless in this region compared to the western half and Estremadura.[23]

The low migration and reallocation of agrarian workers in Western Andalusia and Estremadura has been widely discussed in the literature (Paluzie et al. 2009; Pons et al. 2007; Silvestre 2005; Sánchez-Alonso 1995, Ch.6 and 2000). In fact, in the decades before the 1920s, these two regions were attracting labour from other parts of Spain, some of which were employed in agriculture, especially during the harvest (Bernal 1985). Therefore, the inhabitants of these regions had not developed the necessary migration networks with other part of Spain and elsewhere. Furthermore, these regions did not industrialized and, hence, their demand for urban labour was comparatively limited (Rosés and Sánchez-Alonso 2004). By the 1920s and the 1930s, when agrarian labour demand had decreased, the main problem of these seven provinces was their relative distance to the main migrant destinations situated mainly in the Northwest, which increased the costs of migration and led to relatively high cost of insertion at the destination.[24] In conclusion, the absence of local demand for urban jobs and high migration costs could be blamed for the relative numbers of agrarian workers in Western Andalusia and Estremadura.

6. Conclusion: was land reform necessary in Spain in the 1930s?

Our main results can be summarized as follows. First, the number of landless workers fell dramatically, from about 2 million in 1860 to less than one million by 1930, while the share of male agricultural workers with access to land grew from about 44 to 69 percent. Second, the role of land markets was central role in this process although the reallocation of landless labour from agriculture to

[23] While the area of olives doubled in the east, they stagnated in western Andalusia between 1911-5 and 1931-5.

[24] Several studies have showed that the major urban centres attracted migrants from the neighbouring provinces. (Paluzie et al. 2009; Pons et al. 2007; Silvestre 2005)

industry and services was also important. Third, market forces helped farm workers acquire land, as the ratio between land prices and wages in Spain decreased by a 47 percent between 1908 and 1929. Fourth, when the question of access to land is considered as a regional rather than a national problem, the number of landless farm workers fell in all the land-reform regions between 1910 and 1930, and other evidence suggests that living standards also increased over the same period. Employment opportunities, although limited, appear not to have changed significantly in the half century prior to the Civil War and real wages showed a tendency to improve (Acosta Ramírez et al. 2009; Rosés and Sánchez-Alonso 2004; Simpson 1992). These results suggest that the Republican land reform was not necessary for transforming the structure of land ownership, even at the regional level or in the provinces affected by the 1932 Land Reform Act. Indeed, it could be argued that the fact that farm wages rose faster than both land rents and farm gate prices, the real agrarian problem over much of Spain was related to the problems associated with the small family farm, rather than the landless. Yet for most contemporaries, and subsequently by most historians, land reform was the burning issue in the 1930s. How can the apparent contradiction between these ideas and our results be reconciled?

In the first instance, land owners in the 1930s in the south were often reluctant to divide their estates into small plots for rental or sharecropping contracts, as transaction costs associated with dealing with large numbers of often illiterate tenants were high, and the landless were asset-poor and lacked access to capital markets. Unlike other regions of Spain, there are reasons to believe that in parts of western Andalusia the farm ladder simply did not exist. Furthermore, even if the land reform had been implemented, the lack of sufficient land would have made the creation of system of prosperous family farms difficult (Carmona and Simpson in preparation).

A second factor was that agriculture, especially in the South, was still the employer of last resort and the 1930s' economic depression, by reducing employment possibilities in urban areas and mining, led to workers suddenly being much more dependent once again on the sector for their livelihood. At the same time as these short-term cyclical problems were increasing the numbers of workers looking for farm work, mechanization was offering farmers the possibilities of reducing their demand. Contemporary politicians and agronomists often berated the under-cultivation and backwardness of the large estates, but recent evidence suggests precisely the opposite: crop rotations could not in most cases be intensified significantly given the technological constraints and factor and commodity prices of the period, while one historian claims that many of the big cereal farms in Jerez in southern Spain were already fully mechanized by the 1930s (Cabral Chamorro 2000). Consequently the landless found themselves competing in a labour market with greater numbers of workers, but fewer jobs.[25]

Finally even though economic growth and structural change might have made land reform theoretically unnecessary as argued in this paper, it remained essentially a political issue everywhere. The political gains for backing some kind of agrarian reform were potentially very great, especially when the

[25] Simpson and Carmona (in preparation).

farm population represented between a third and a half of the total electorate. In Spain, the creation of democracy and the relative absence of political parties provided farm lobbies with major opportunities after 1931. In particular, Left wing parties and trade unions used land reform, together with the new labour legislation that increased day wages at a time when the international depression produced stagnant or falling farm gate prices, to significantly increase their political influence, a tactic which was inevitably opposed by many farmers and landowners. In conclusion, it was the growing unemployment and political opportunism of the Left that helped make land reform 'necessary' in the 1930s.

References

Allen, D. and D. Lueck, 2002. *The Nature of the Farm. Contracts, Risk, and Organization in Agriculture*. MIT Press: Harvard.

Acosta Ramírez, F., S. Cruz Artacho, and M. González de Molina Navarro, 2009. *Socialismo y democracia en el campo (1880-1930). Los orígenes de la FNTT*. Madrid: MAPA.

Alston, L. J., and J. P. Ferrie, 2005. 'Time on the Ladder: Career Mobility in Agriculture, 1890-1938'. *Journal of Economic History*, 65(4): 1058-1081.

Barham, B., M.R. Carter, and W. Sigelko, 1995. 'Agro-Export Production and Peasant Land Access: Examining the Dynamic between Adoption and Accumulation'. *Journal of Development Economics*, 46 (1): 85-107.

Beckett, J., and M.E. Turner, 2007. 'End of the Old Order? F.M.L.Thompson, the Land Question, and the burden of ownership in England, c1880-c1925', *Agricultural History Review*, 55(2): 269-288.

Beltran Tapia, F.J., 2012. 'Commons, Social Capital and the Emergence of Agricultural Cooperatives in Early twentieth Century Spain', *European Review of Economic History* 16: 511-528.

Beltran Tapia, F.J., 2015. 'Social and Environmental Filters to Market Incentives: The Persistence of Common Land in Nineteenth-Century Spain', *Journal of Agrarian Change*, 15: 239–260.

Bernal, A. M., 1974. *La propiedad de la tierra y las luchas agrarias andaluzas*. Barcelona: Ariel.

Binswanger, H., Deininger, K., Feder, G., 1995. 'Power, Distortion, Revolts, and Reform in Agricultural Land Relations'. In: Chenery H., Srinivasan, T.N. (Eds.), *Handbook of Development Economics*, vol. 3, Amsterdam: Elsevier, pp. 2659-2772.

Cabral Chamorro, A., 2000. *Renovación tecnológica y mecanización de la agricultura en Cádiz (1850-1932)*. Cádiz: Universidad de Cádiz.

Carmona, J, and J.R.Rosés, 2012. 'Land markets and agrarian backwardness (Spain, 1904-1934)', *European Review of Economic History*, vol. 16(1), pages 74-96.

Carmona, J. and J. Simpson, 2003. *El laberinto de la agricultura española*, Prensas Universitarias de Zaragoza, Zaragoza.

Carmona, J. and J. Simpson, 2006. Economies of scale and obstacles to land reform, Andalusia 1931-36. Paper presented to the Sixth European Social Science History Conference, 22 - 25 March 2006.

Carmona,J, and J. Simpson, 2014. 'Los contratos de cesión de tierra en Extremadura en el primer tercio del siglo xx', *Historia Agraria*, 63: 183-213.

Carmona,J, and J. Simpson, in preparation. 'Too many workers or not enough land? Why land reform fails in Spain during the 1930s'.

Clar, E., V. Pinilla, V., 2008. 'The contribution of agriculture to Spanish Economic Development, 1870-1973'. In: Lains, P., Pinilla, V. (Eds.), *Agriculture and Economic Development in Europe since 1870*, Londo: Routledge, pp. 311-332.

Costa, J., 1911-1912. *La fórmula de la agricultura española*. Madrid: Fortanet.

De Janvry, A., Platteau, J.P., Gordillo, G., Sadoulet E., 2001. 'Access to land and Land Policy Reform'. In: De Janvry, A., Platteau, J.P., Gordillo, G., Sadoulet E. (Eds.), *Access to Land, Rural Poverty, and Public Action*, Oxford: Oxford University Press, pp.1-26.

Deininger, K., 2003. 'Land Markets in Developing and Transition Economies: Impact of Liberalization and Implications for Future Reform'. *American Journal of Agricultural Economics* 85(5), 1217-1222.

Deininger, K., Castagnini, R., Gonzalez, M., 2004. 'Comparing Land Reform and Land Markets in Colombia: Impacts on Equity and Efficiency'. World Bank Policy Research Working Papers 3258.

Deininger, K., S.Jin, and H. Nagarajan, 2009. 'Determinants and Consequences of Land Sales Market Participation: Panel Evidence from India'. *World Development Volume* 37, 2: 410–421

Dirección General del Instituto Geográfico y Estadístico, Anuario estadístico de España. Madrid (ad annum).

Douglas, R., 1976. *Land, People and Politics. A History of the Land Question in the United Kingdom, 1878-1952*. London: Allison & Busby.

Dovring, F., 1965. *Land and Labor in Europe in the Twentieth Century*. The Hague: Martinus Nijhoff.

Espinoza Guerra, L. E., Robledo Hernández, R., Brel Cachón, M. P., Villar Castro, J., 2007. 'Estructura social del campo español: el censo de campesinos (1932-1936): Primeros resultados'. In:, *¿Interés privado, bienestar público?: Grandes patrimonios y reformas agrarias*. Robledo, R., López, S. (Eds.) Zaragoza: Prensas Universitarias de Zaragoza, pp. 309-242.

Estadística de los presupuestos generales del Estado y de los resultados que ha ofrecido su liquidación, 1976-1982, 3 vols. Madrid: Instituto de Estudios Fiscales.

Fontana, J., 1985. 'La Desamortización de Mendizábal y sus antecedentes'. In Ángel García Sanz, A., Garrabou, R. (Eds.), *Historia Agraria de la España Contemporánea: 1. Cambio Social y Nuevas Formas de Propiedad (1800-1850)*. Barcelona: Crítica, pp. 219-244.

Gallego, D. and V. Pinilla, 1996. 'Del librecambio matizado al proteccionismo selectivo: el comercio exterior de productos agrarios y alimentos en España entre 1849 y 1935'. *Revista de Historia Económica*, 14 (02): 371-420.

Sanz, A., 1985. 'Introducción: Crisis de la Agricultura Tradicional y revolución Liberal'. In: *Historia Agraria de la España Contemporánea: 1. Cambio Social y Nuevas Formas de Propiedad (1800-1850)*, Barcelona: Crítica, pp. 7-99.

García Orallo, R., 2008. 'La Hacienda pública española y la crisis agraria de finales del siglo XIX: la recaudación tributaria como síntoma'. In: Vallejo Pousada, R., Furió Diego, A. (Eds.), *Los tributos de la tierra: fiscalidad y agricultura en España: Siglos XII-XX*, Valencia: Universitat de Valencia, pp. 571-596.

Garrabou, R. and J. Sanz, 1985. 'La agricultura española durante el siglo XIX: ¿inmovilismo o cambio?', in R. Garrabou and J. Sanz, eds., *Historia agraria de la España* contemporánea. Vol. II. Expansión y crisis (1850-1900). Barcelona: Crítica: 7-191.

Garrabou, R., 1999. 'Derechos de propiedad y crecimiento agrario en la España contemporánea'. In: Ricardo Robledo, R., Torijano Pérez, E., de Dios, S., Infante Miguel-Motta, J (Eds.), *Historia de la propiedad en España: siglos XV-X: encuentro interdisciplinar*, Madrid: Centro de Estudios Registrales, pp. 351-370.

GEHR, 1989. 'El sector agrario hasta 1935', in Albert Carreras, ed., *Estadísticas Históricas de España*. Madrid: Fundación Banco Exterior.

González de Molina, M., 1991. 'Minifundismo y gran propiedad: estabilidad y cambio en la Alta Andalucía'. In P. Saavedra & R. Villares (Eds.), *Señores y campesinos en la Península Ibérica, ss. XVIII-XX* (Vol. 2). Madrid: MAPA.

González de Molina, M., 2014. 'La tierra y la cuestión agraria entre 1812 y 1931: latifundismo versus campesinización'. In González de Molina (Ed.), *La cuestión agraria en la historia de Andalucía*. Sevilla: Centro de Estudios Andaluces, pp.23-59.

Grupo de Estudios Agrarios., 2002. 'Propiedad y explotación en la historia agraria de Andalucía'. González de Molina (Ed.), *La Historia de Andalucía. 2. El Campo Andaluz*. Granada: Anthropos.

Guinnane, T. W., 1997. *The vanishing Irish: households, migration, and the rural economy in Ireland, 1850-1914* Princeton University Press.

Koning, N., 1994. *The failure of agrarian capitalism: agrarian politics in the UK, Germany, the Netherlands and the USA, 1846-1919*. London: Routledge.

Le Roy Ladurie, E., 1976. *The peasants of Languedoc*. Urbana: University of Illinois Press.

López Ontiveros, A., and R.M. Olmo, 1993. *Propiedad de la Tierra y Reforma Agraria en Córdoba (1932-1936)*. Córdoba: Universidad de Córdoba.

Malefakis, E., 1970. *Agrarian Reform and Peasant Revolution in Spain*. New Haven: Yale University Press.

Mata Olmo, R., 1987. *Pequeña y gran propiedad agrarias en la Depresión del Guadalquivir, siglos XVIII-XX*. Madrid: MAPA.

Nadal, J., 1975. *El Fracaso de la Revolución Industrial en España, 1814-1913*. Barcelona: Ariel.

Naredo, J.M., J. Ruiz Maya and J.M. Sumpsi, 1977. 'La crisis de las aparcerías de secano en la postguerra',A*gricultura y Sociedad*, 3: 9-68.

O'Rourke, K.H., 1997. "The European Grain Invasion, 1870-1913", *Journal of Economic History*, 57 (4): 775-801.

Otsuka, K., 2007. 'Efficiency and equity effects of land markets'. In: Robert E. Evenson, R.E., Pingali, P. (Eds). *Handbook of Agricultural Economics*, vol.3. Elsevier, 2671-2702.

Palafox, J., 1991. *Atraso económico y democracia. La Segunda República y la economía española, 1892-1936*. Barcelona: Crítica.

Paluzie, E. & Jordi Pons & Javier Silvestre & Daniel Tirado, 2009. "Migrants and market potential in Spain over the twentieth century: a test of the new economic geography," *Spanish Economic Review*, Springer, vol. 11(4), pages 243-265.

Pan-Montojo, J. L., 2009. 'Los Liberalismos y la Agricultura Española en el Siglo XIX'. In S. Calatayud, J. Millán and M. Cruz Romero (Eds.), *Estado y Periferias en la España del Siglo XIX. Nuevos Enfoques*. Valencia: Universitat de València: 131-58.

Pérez Moreda, V., 1987. 'Spain's Demographic Modernization, 1800-1930'. In N. Sanchez-Albornoz (ed.), *The Economic Modernization of Spain, 1830-1930*, New York, New York University Press: 13-41.

Pérez Picazo, M.T., 1990. *El Mayorazgo en la Historia Económica de la Región Murciana: Expansión, Crisis y Abolición (S. XVII-XIX)*. Madrid: Ministerio de Agricultura, Pesca y Alimentación.

Peset, M., 1992. *Dos Ensayos sobre la Historia de la Propiedad de la Tierra*. Madrid: Editorial de Derecho privado.

Pons, J., E. Paluzie, J. Silvestre and D.A. Tirado, 2007. 'Testing The New Economic Geography: Migrations And Industrial Agglomerations in Spain', *Journal of Regional Science*, 47(2): 289-313.

Prados de la Escosura, L., 2003. *El progreso de España, 1850-2000*. Madrid: Fundación BBVA.

Prados de la Escosura, L. and J.R. Rosés, 2009. 'The Sources of Long-Run Growth in Spain, 1850-2000', *The Journal of Economic History*, vol. 69(04): 1063-1091.

Prados de la Escosura, L.and J.R.Rosés, 2010. 'Human Capital and Economic Growth in Spain, 1850-2000', *Explorations in Economic History* 47 (4): 520-532.

Robledo, R., 1993. *Economistas y reformadores españoles: La cuestión agraria (1760-1935)*. Madrid: MAPA.

Robledo, R., 1996. 'Política y Reforma Agraria: de la Restauración a la IIª República (1869/74-1939)'. In: García Sanz, Á. and J. Sanz Fernández (Eds.), *Reformas y políticas agrarias en la Historia de España*, Madrid: MAPA, pp. 247-349.

Rosés, J.R., and B. Sánchez-Alonso, 2004. Regional wage convergence in Spain 1850-1930. *Explorations in Economic History* 41(4), 404-425.

Ruíz Torres, P., 1994. 'Del Antiguo al Nuevo Régimen: carácter de la transformación.' In: *Antiguo Régimen y liberalismo: homenaje a Miguel Artola*, vol. 1, Madrid: Universidad Autónoma de Madrid, pp. 159-192.

Rueda, G. 1998. 'La sociedad rural y la desamortización'. In A. Morales Moya (Ed.), *Las bases políticas, económicas y sociales de un régimen en transformación*. Madrid: Espasa Calpe.

Silvestre, J., 2005. 'Internal migrations in Spain, 1877-1930', *European Review of Economic History* 9(2), 233-265.

Silvestre, J., 2007. 'Temporary Internal Migrations in Spain, 1860-1930'. *Social Science History* 31, 539-574

Sánchez-Alonso, B., 1995. *Las causas de la emigración española, 1880-1930*. Madrid: Alianza.

Sánchez-Alonso, Blanca, 2000. 'Those Who Left and Those Who Stayed Behind: Explaining Emigration from the Regions of Spain, 1880–1914,' *The Journal of Economic History*, 60(03), pages 730-755.

Simpson,J., 1992. 'Technical change, labor absorption and living standards in rural Andalucía, 1886-1936'. *Agricultural History*, 66(1), 1-24.

Simpson, J., 1995. *Spanish Agriculture. The Long Siesta, 1765–1965*. Cambridge: Cambridge University Press.

Simpson, J., and J. Carmona, In preparation. *The Agrarian Origins of the Spanish Civil War*.

Spain. (1933). *Anuario Estadístico de España* 1931. 17.

Thompson, F. M. L., 1963. *English Landed Society in the Nineteenth Century*. London: Routledge.

Thompson, M., 2009. 'The land market, 1880-1925: A reappraisal reappraised'. *Agricultural History Review*, 55(2), 289-300.

Van Zanden, J.,L. 1991. 'The First Green Revolution. The Growth of Production and Productivity in European Agriculture'. *Economic History Review* 44 (1): 215–239.

Villares, R. 1997. 'Agricultura'. In: Menéndez Pidal, R. (Ed.), *Historia de España. Los fundamentos de la España liberal (1834-1900). La sociedad, la economía y las formas de vida*, vol. 33, Madrid: Espasa-Calpe, pp. 238-308.

Villares, R. 2014. *Historia de Galicia*, Vigo: Galaxia.

Wright, G., 1988. 'American agriculture and the labor market: what happened to Proletarianization?' *Agricultural History*, 62(3): 182-209.

Table 1. Evolution of cultivated land and agrarian workers in Spain, 1800-1931

	Arable Land (1)	Vines and tree Crops (2)	Cultivated Land (3)	Pastures (4)	Total Land (5)	Full-time Equivalent Workers (6)	Total Land per FTE (7)	Cultivated land per FTE (8)
1800			11,450			1,996.5		5.74
1820			12,520					
1834			12,920					
1860	13,912	2,100	16,012	8,839	24,851	3,568.2	6.96	4.49
1890	12,939	2,890	15,829	8,274	24,103	3,871.6	6.23	4.09
1900	14,889	2,933	17,822	8,073	25,895	4,022.3	6.44	4.43
1910	15,793	3,091	18,884	7,683	26,567	4,112.1	6.46	4.59
1922	16,887	3,390	20,277	7,458	27,735	4,095.5	6.77	4.95
1931	18,015	3,949	21,964	6,963	28,927	3,826.5	7.56	5.74

Notes: All data on land in thousands hectares and data on labour in thousand FTE male workers. Tree crops include vineyards, olive trees and fruit trees. Pasture assumed to represent 29.5 percent of 'prados, dehesas y montes' (meadows, pastures and mountains) in Spanish land censuses. This percentage was obtained for 1973 by Simpson (1995) and has been applied to throughout the considered period. Cultivated land is the sum of arable land and tree crops.

Sources:

Land: 1800-1834: crude estimates that include tree crops, by Garrabou and Sanz (1985), appendix 4. B, 191. 1860: Garrabou and Sanz (1985), Tab. 16 and 19. 1890-1931: GEHR (1989), 107.

Labour: Prados de la Escosura (2003), background calculations.

Table 2. The number of Owners and Tenants in Spain, 1860-1930 (in 000)

A: Non-Reform Provinces	**1860**		**1890**		**1910**		**1930**	
Ebro Valley	180.0	(42.5%)	238.7	(59.9%)	263.132	(71.0%)	231.1	(75.5%)
Mediterranean	386.5	(44.4%)	476.0	(55.3%)	567.700	(61.9%)	526.7	(73.8%)
Northern Castile	415.1	(51.4%)	494.9	(56.8%)	488.220	(66.9%)	420.5	(80.7%)
Central Castile	139.8	(63.5%)	167.9	(72.7%)	159.054	(74.0%)	103.9	(80.9%)
Non Reform	**1,121.4**	**(48.3%)**	**1,377.7**	**(58.3%)**	**1,478.106**	**(66.2%)**	**1,282.3**	**(76.8%)**
B: Reform Provinces								
La Mancha	69.8	(34.0%)	78.9	(34.3%)	108.7	(40.3%)	179.6	(68.4%)
Estremadura	148.3	(45.5%)	208.0	(56.8%)	206.5	(54.8%)	185.4	(59.4%)
Eastern Andalusia	184.9	(41.7%)	202.5	(45.7%)	235.6	(46.5%)	309.5	(64.8%)
Western Andalusia	96.6	(25.9%)	126.9	(32.3%)	187.7	(47.5%)	227.9	(54.4%)
Reform	**499.7**	**(37.1%)**	**616.4**	**(43.1%)**	**738.5**	**(47.7%)**	**902.4**	**(61.3%)**
Spain	**1,621.1**	**(44.2%)**	**1,994.0**	**(52.6%)**	**2.216.6**	**(58.6%)**	**2.184.7**	**(69.5%)**

Notes: Subject to rounding errors. We only consider male agrarian workers and our figures differ from those of table 1 since we do not adjust to Full time equivalent workers. We have grouped the provinces as follows. Non-Reform - Ebro Valley (Lerida, Logroño, Huesca, Saragossa, and Teruel); Mediterranean (Gerona, Barcelona, Tarragona, Castellon, Valencia, Alicante and Murcia); Northern Castile (Asturias, Santander, Zamora, Leon, Valladolid, Palencia, Burgos, Soria, Segovia); and Central Castile (Cuenca, Guadalajara and Madrid). Reform – La Mancha (Albacete, Ciudad Real and Toledo); Estremadura (Badajoz, Caceres, and Salamanca); Eastern Andalusia (Almeria, Granada, Jaén, and Málaga); Eastern Andalusia (Cadiz, Cordoba, Huelva and Sevilla). The Canary Islands, Galicia and the Basque Country have been excluded in the calculations due to data problems.
Sources: see text.

Table 3. The number of Landless workers in Spain, 1860-1930 (in 000)

A: Non Reform Provinces	**1860**		**1890**		**1910**		**1930**	
Ebro Valley	243.9	(57.5%)	159.9	(40.1%)	107.6	(29.0%)	75.2	(24.5%)
Mediterranean	483.5	(55.6%)	385.4	(44.7%)	349.1	(38.1%)	187.4	(26.2%)
Northern Castile	392.5	(48.6%)	376.1	(43.2%)	241.6	(33.1%)	100.6	(19.3%)
Central Castile	80.3	(36.5%)	63.2	(27.3%)	55.8	(26.0%)	24.6	(19.1%)
Non Reform	**1,200.2**	**(51.7%)**	**984.7**	**(41.7%)**	**754.1**	**(33.8%)**	**387.8**	**(23.2%)**
B: Reform Provinces								
La Mancha	135.7	(66.0%)	150.9	(65.7%)	161.0	(59.7%)	82.8	(31.6%)
Estremadura	177.9	(54.5%)	158.0	(43.2%)	170.1	(45.2%)	126.7	(40.6%)
Eastern Andalusia	258.9	(58.3%)	240.7	(54.3%)	270.6	(53.5%)	168.2	(35.2%)
Western Andalusia	276.4	(74.1%)	265.7	(67.7%)	207.5	(52.5%)	191.2	(45.6%)
Reform	**849.0**	**(62.9%)**	**815.3**	**(56.9%)**	**809.2**	**(52.3%)**	**568.9**	**(38.7%)**
Spain	**2,049.2**	**(55.8%)**	**1,800.0**	**(47.4%)**	**1,563.3**	**(41.4%)**	**956,7**	**(30.5%)**

Notes and sources: see table 2.

Table 4. The Access to Land in Spain: Regional Differences, 1908-1931

	1908-1919			1920-1931		
A: Non reform	(1)	(2)	(3)	(1)	(2)	(3)
Ebro Valley	391	265	257	243	191	169
Mediterranean	708	404	498	401	224	290
Northern Castile	242	401	154	246	373	159
Central Castile	421	234	270	322	169	220
Overall	435	356	293	302	269	208
	1908-1919			**1920-1931**		
B: Reform	(1)	(2)	(3)	(1)	(2)	(3)
La Mancha	696	113	480	483	78	325
Estremadura	706	132	439	642	135	448
Eastern Andalusia	689	212	457	527	157	389
Western Andalusia	1,259	175	873	1,104	152	798
Overall	**857**	**163**	**577**	**707**	**134**	**505**
Spain	**582**	**289**	**392**	**444**	**222**	**312**

Notes: (1) Average days of male work to buy the mean plot. (2) Average days of male work to buy one hectare. (3) Average days of family work (under the assumption than females and children work half hours than males) to buy the mean plot. See table 2.

Sources: See Figure 2.

Table 5. The Determinants of the evolution of the number of Landless Workers, 1860-1930 (in 000)

	1860-1890			1890-1910			1910-1930		
A: Non Reform	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Ebro Valley	-14.8	-69.4	-83.9	-11.2	-41.1	-52.4	-18.7	-13.7	-32.4
Mediterranean	-4.7	-93.4	-98.1	24.7	-61.0	-36.3	-77.2	-84.5	-161.7
Northern Castile	30.8	-47.2	-16.4	-61.0	-73.6	-134.5	-69.0	-71.9	-141.0
Central Castile	4.0	-21.1	-17.1	-4.4	-3.0	-7.4	-22.4	-8.8	-31.2
Non Reform	**15.6**	**-231.1**	**-215.5**	**-51.9**	**-178.7**	**-230.6**	**-187.4**	**-178.9**	**-366.3**
B: Reform									
La Mancha	16.0	-0.8	15.2	26.2	-16.1	10.1	-4.4	-73.8	-78.2
Estremadura	21.7	-41.6	-19.8	4.5	7.5	12.0	-29.1	-14.3	-43.4
Eastern Andalusia	-0.4	-17.8	-18.3	34.2	-4.3	29.9	-15.2	-87.1	-102.3
Western Andalusia	14.5	-25.2	-10.8	1.7	-59.9	-58.2	12.6	-28.9	-16.3
Reform	**51.8**	**-85.5**	**-33.7**	**66.7**	**-72.8**	**-6.0**	**-36.2**	**-204.1**	**-240.3**
Spain	**67.5**	**-316.7**	**-249.2**	**14.8**	**-251.5**	**-236.7**	**-223.5**	**-383.0**	**-606.5**

Notes: (1) Demographic change and workers reallocation between sectors and/or provinces; (2) Reallocation from landless workers to owners/tenants (a positive value indicates the contrary); (3) Total change in the number of landless workers. See table 2.

Sources: see Table 2.

Figure 1. Demand and Supply Shifts in Spanish Rural Labour Markets, c. 1850 - 1931

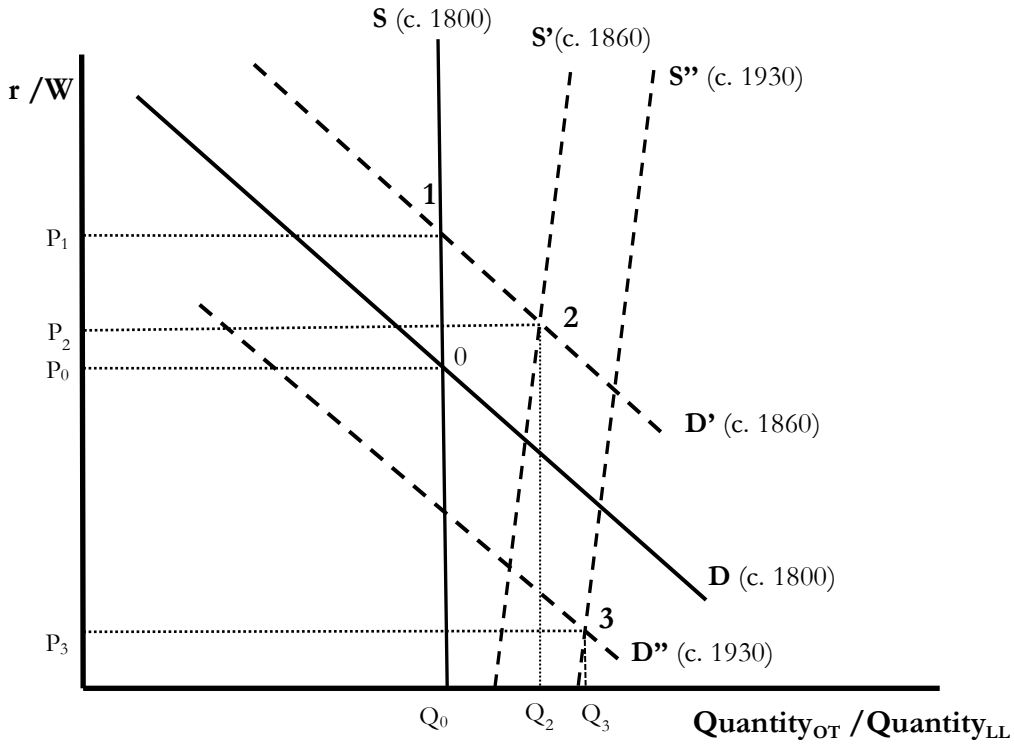
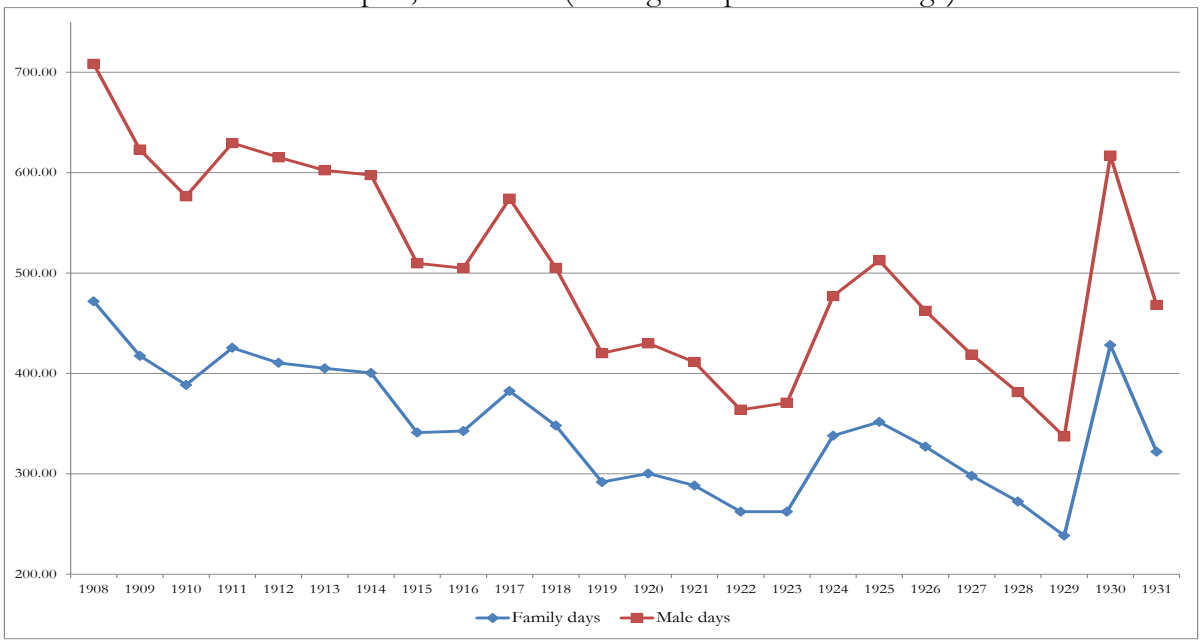


Figure 2. Access to land: Average family and male days of work necessary for buying the mean plot, 1908-1931 (unweighted provincial average).



Notes: see text.

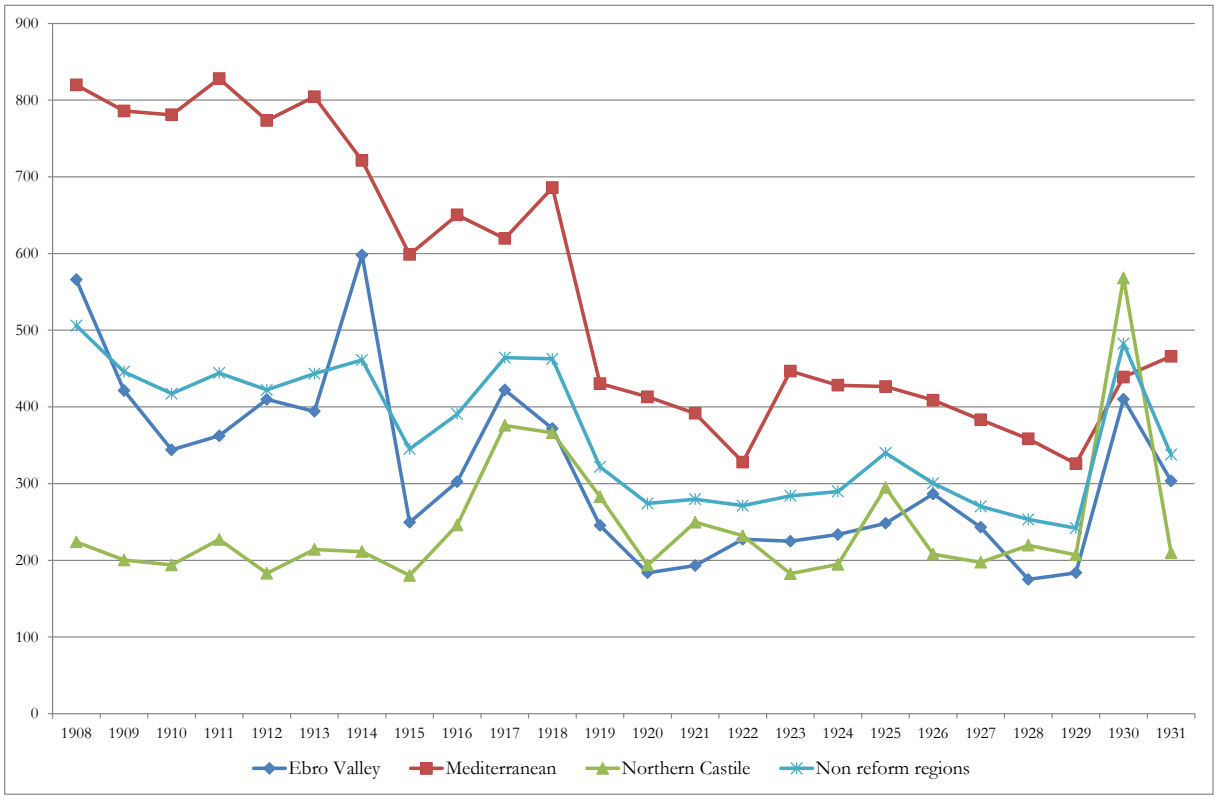
Sources:

Land Price data: Annual data is provided by the property register yearbooks (*Anuario de la Dirección General*) from 1904, the year that regular publication began, to 1934 when the series is interrupted (until the mid-1940s). Information is grouped by provinces (49), and includes the number and total value of farms registered by reason of sale, inheritance, gift, mortgage and first registration, and allows us to estimate the nominal average price of plots in each province. These nominal prices are converted into real (base 1910) prices using the rural provincial deflator (Carmona and Rosés 2012).

Real Wages: Wage data are drawn from Spanish Yearbooks (*Anuario estadístico de España*) for the corresponding years (Rosés and Sánchez-Alonso 2004). Nominal wages are converted into real wages using the rural provincial deflator (base 1910).

Rural provincial deflator: The rural cost-of-living deflator is constructed using price data from the Instituto de Reformas Sociales (Carmona and Rosés 2012).

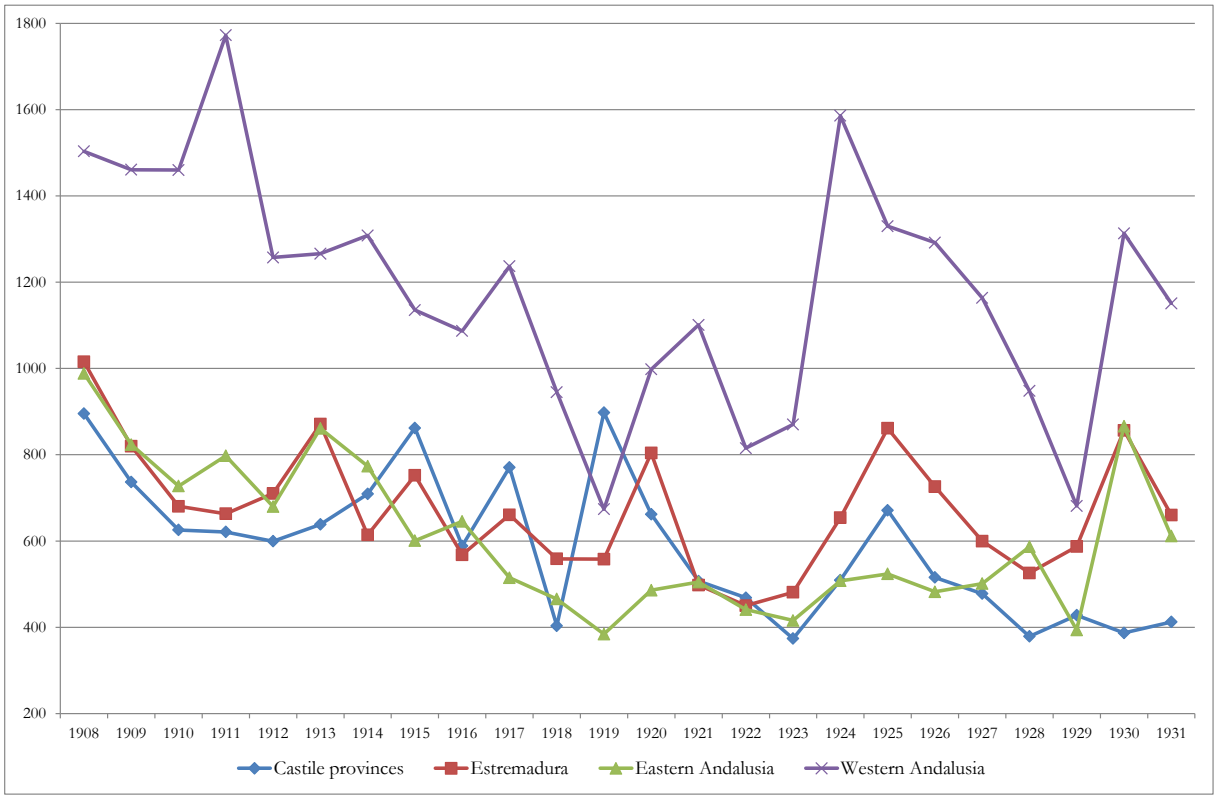
Figure 3. Access to land (Non reform provinces): Average male days of work necessary for buying the mean plot, 1908-1931 (unweighted provincial average).



Notes: see text.

Sources: see Figure 2.

Figure 4. Access to land (Land Reform Provinces): Average male days of work necessary for buying the mean plot, 1908-1931 (unweighted provincial average).



Notes: see text.

Sources: see Figure 3.

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