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Abstract
This paper looks at the causes of rural conflict in 1930s Spain. Rather than stressing bottom-up forces of mobilisation linked to poor harvests and rural unemployment or the inability of the state to enforce reformist legislation, this paper explores the role of state policy in sorting out the acute coordination and collective action problems of mobilising rural labourers. I do so by looking at the effects of intervention on rural labour markets in dry-farming areas of Spain (parts of Castile and of Andalusia). Given the difficulties of constructing a conclusive test of my hypothesis, I follow three indirect testing strategies. Firstly, I look at the qualitative evidence on the functioning of labour markets in dry-farming areas of Spain. Secondly, because my argument implies the existence of severe restrictions to the labour supply of rural labourers during the harvest in the early 1930s, I study the evolution of harvest-to-winter wage ratios before and after the passing of legislation. Thirdly, in order to show that alternative hypotheses to explain rural conflict are not consistent with the historical record, I study the diffusion of union offices and general strikes in the early 1930s in several dry-farming provinces of Spain.

Keywords: Agricultural labour markets, collective action, conflict, unions, wage differentials, migration, Spain
JEL Classification: N34, K31, J22, J31, J38, J43, J51, J52, J61

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ABSTRACT: This paper looks at the causes of rural conflict in 1930s Spain. Rather than stressing bottom-up forces of mobilisation linked to poor harvests and rural unemployment or the inability of the state to enforce reformist legislation, this paper explores the role of state policy in sorting out the acute coordination and collective action problems of mobilising rural labourers. I do so by looking at the effects of intervention on rural labour markets in dry-farming areas of Spain (parts of Castile and of Andalusia). Given the difficulties of constructing a conclusive test of my hypothesis, I follow three indirect testing strategies. Firstly, I look at the qualitative evidence on the functioning of labour markets in dry-farming areas of Spain. Secondly, because my argument implies the existence of severe restrictions to the labour supply of rural labourers during the harvest in the early 1930s, I study the evolution of harvest-to-winter wage ratios before and after the passing of legislation. Thirdly, in order to show that alternative hypotheses to explain rural conflict are not consistent with the historical record, I study the diffusion of union offices and general strikes in the early 1930s in several dry-farming provinces of Spain.

I

In the 1930s, Spain reached an unprecedented stage of social mobilisation and political participation. Male universal suffrage was passed in 1931, and women were given the right to vote for the first time in the 1933 general election. The Second Republic (1931-1936) was, however, besieged by a wave of social unrest that would put the Spanish experience on par in terms of union growth and strike intensity with that of such troubled societies as Germany, Austria or Italy after the First World War.¹ Although the historiography does not consider the war an inevitable outcome, it is generally accepted that the onset of the Civil War (1936-1939) was related to the instability and polarisation of the Second Republic.²

¹ For comparisons: Mann, “Sources”; Freeman, “Spurts.”
² Jackson, Republic, p. 480; Casanova, Republic, p. 2.
Perhaps the most novel phenomenon of this process of massive social change was the mobilisation of peasants and rural workers. Rural strikes had been important in some areas in the 1880s, the early 20th century or in 1918-1920, but the magnitude of mobilisation in the 1930s was unprecedented. Rural conflict did not stop with landless labourers, as sharecroppers also mobilised in the 1930s. However, this paper deals exclusively with the mobilisation of rural workers in cereal-growing areas of Spain, most of them landless labourers, and leaves for further study the mobilisation of sharecroppers.

There are two main hypotheses, which can be seen as related, put forward in the literature about the mobilisation of rural workers in 1930s Spain. Firstly, rural workers mobilised and protested because the Republic was too slow to implement the long-awaited land reform and pro-worker legislation and was unable to confront employers’ opposition to these laws. Secondly, abysmally low living standards, unemployment and poor harvests ignited the countryside. In both cases, it is claimed that a spontaneous, bottom-up process of mobilisation took place in the Spanish countryside.

Despite their intuitive appeal, explanations positing a bottom-up process of mobilisation can be attacked on several grounds. Firstly, “frustration-aggression” mechanisms for explaining movements of protest have been long discredited, especially because these explanations are naïve about the phenomenal co-ordination problems involved in the organisation of mass social movements. Secondly, no one

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3 Casanova, Republic, p. 37, pp. 47-48, p. 51; Shubert, History, pp. 100-103; Graham, Civil war, p. 14.
4 Preston, Civil war, p. 55, p. 57, p. 68; Graham, Republic, p. 41; Malefakis, Agrarian reform, chapter 11; Casanova, De la calle, p. 47. More qualified: Payne, Collapse, p. 61.
5 Among many others: Shorter and Tilly, Strikes, pp. 6-7; Béteille, Agrarian, p. 188.
doubts that life was brutal in early 20th century Spain for landless labourers, but there is no reason to suspect that living conditions were poorer in the 1930s than in previous periods of time. Protected behind high tariff walls and with stable wheat prices, agricultural incomes mostly depended on the size of the harvest. Poor wheat harvests in 1931 and 1933 alternated with exceptionally good harvests in 1932 and 1934, with no apparent correlation with the intensity of social conflict. As figure 1 shows, rural real wages increased in the 1930s.

Figure 1. Average real wage in agriculture, 1913-1935 (1913=100).

Rural conflict in 1930s Spain has also been linked to the slowing of previous structural change. With the collapse of the construction sector in the early 1930s, unskilled immigrants lost their jobs and returned to the agricultural sector. Return migration led to the overcrowding of rural labour markets and, therefore, to unemployment and falling wages. Conflict naturally followed.

But the link between return migration and conflict is doubtful. Research on internal migrations in Spain shows that high-conflict provinces of Western Andalusia, Extremadura and, to a lesser extent, South Castile were not well integrated into the Spanish labour market. In the first three decades of the 20th century, they showed low out-migration rates, despite being among the poorest regions of Spain. Historians of Spanish migrations have suggested that one explanation is that these areas were far

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7 Barciela et al., Sector agrario, p. 336.
8 Among others, for example, Graham, Republic, p. 35.
away from the main destination points of domestic migrations (Biscay, Catalan industrial cities, and Madrid), although factors like human capital or information must have played a role. Because conflict-prone provinces had few emigrants in the 1920s, it is difficult to accept return migration as a cause of rural conflict.

Rather than arguing that lack of reform triggered the explosion of rural unrest, this paper claims that, at least in the case of dry-farming areas, the impact of decisive labour market intervention on collective action caused the rise of rural militancy. Government intervention altered the costs and benefits of participating in rural unions, whilst it re-distributed bargaining power towards local workers and away from seasonal migrants. Rural mobilisation and strikes resulted mainly from top-down legal and institutional changes of vast magnitude and effects.

Because it is impossible to find in the historical record conclusive evidence to defend my hypothesis, I structure its defense using three different layers of evidence. Firstly, I consider the qualitative evidence on the functioning of rural labour markets in dry-farming provinces before and after legal changes. Secondly, because my argument implies the existence of severe restrictions to the labour supply of rural labourers in the 1930s, I argue that the seasonal increase of labour demand associated with wheat harvests must have increased harvest wages in cereal-growing areas in comparison with harvest wages in the same area in a counterfactual situation with no restrictions to hiring and to labour mobility. In order to see whether this was indeed the case, I trace the evolution of the harvest-to-winter ratios before and after the passing of legislation. Thirdly, I analyse at the diffusion of union offices and rural

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10 A similar view which also emphasises the impact of Republican legislation in parts of Andalusia: Montañés, “Reformismo.”
general strikes in several dry-farming provinces. In particular, I explore the possibility that higher levels of conflict are found in areas in which it was easy for employers to organise collective action (because there were very few of them). Moreover, I also test the bottom-up hypothesis by looking at the effects of greater presence of potentially volatile landless labourers on the probability of organising rural unions and strikes.

II
Spain witnessed a rapid growth in union participation and conflict in 1931-1933, but most of this growth occurred in agriculture. Rural workers accounted for almost half of the explosive gains of the socialist General Workers’ Union (Unión General de Trabajadores, henceforth UGT) and membership was concentrated in the provinces of Córdoba, Jaén and Málaga in Andalusia, in Toledo and Ciudad Real in the centre of Spain and in Cáceres and Badajoz in Extremadura (South-West of Spain), linked to the growth of the National Federation of Agricultural Workers (Federación Nacional de Trabajadores de la Tierra, FNTT). In just two years, the FNTT jumped from about 47,000 members when it was created in June 1930 to around 450,000 in 1932. Membership of the anarcho-syndicalist union National Confederation of Labour (Confederación Nacional del Trabajo, CNT) exploded in 1931 (claiming more than 300,000 rural members in Andalusia alone) and declined thereafter, although membership numbers are fragmentary after 1931. The number of strikers also rose fast in the period: in 1932-1933, the number of rural strikers as a proportion of those employed in agriculture had multiplied by six with respect to the previous peak in 1918-1920.

11 Bizcarrondo, UGT, p. 200.
12 Maurice, Anarquismo, p. 28; Memoria CNT; Casanova, De la calle, pp. 28-29.
How can this process of large social change be explained? The starting point of my argument is the consideration of unions as institutions that aggregate the preferences of their members regarding working conditions and wages. Unions might have other objectives – more labour-friendly laws, a more democratic polity or a particular stance in foreign policy - but this does not alter the fact that the main task of unions is to bargain with employers and the state for better working conditions for their members.

Unions have a fundamental problem of collective action in that they bargain “public goods” like hours of work or higher wages. As no worker can be excluded from the public goods obtained by unions, it is rational for individuals to avoid the costs being in unions: paying union dues, foregoing earnings by taking part in strikes, or facing retaliation by employers or the state. Therefore, to guarantee a high level of individual involvement, the union relies on well-known mechanisms to penalise those who do not participate: violence against strikebreakers, social penalties against non-union members, or preventing non-union workers from finding work (the closed shop).

My argument builds upon this insight of collective action theory. Republican governments started intervening the labour market, giving all the power to decide who was hired to unions and taking this power from employers. With the legendary Socialist leader Francisco Largo Caballero appointed as Labour Minister, the government passed a series of decrees in the autumn of 1931. Firstly, there was a law

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13 Freeman and Madoff, Unions, pp. 9-10.
14 Olson, Logic, p. 69.
of employment (ley de ocupación obrera) that created local labour exchanges, which organised the hiring of workers. Secondly, the government decreed the creation of local and provincial boards of conciliation (jurados mixtos), which had the responsibility to draw up collective contracts and make sure they were enforced. Finally, the law of municipal boundaries (ley de términos municipales) established that migrants could not be hired in a town if there were unemployed local workers.\textsuperscript{15}

The main hypothesis of this paper is that these laws radically altered the costs and benefits of participating in unions and gave unions a greater ability to punish neutrals and strikebreakers in strikes. Until June 1934, rural unions enforced a closed shop aided by legislation that radically increased the costs of not participating in collective action. This legislation was reinforced by restrictions on the employment of temporary migrants, which reduced the need to reconcile the preferences of different types of workers. Given these institutional changes, an endogenous explosion of union participation and strikes was inevitable.

III

The first step in my analysis is to understand the working of rural labour markets in dry-farming areas of early 20\textsuperscript{th} century Spain. Perhaps for the lack of evidence, historians of the 1930s have not fully integrated the role of temporary migrations in the functioning of labour markets in the dry-farming regions of Spain (a large area comprising the centre and South-West of Spain).\textsuperscript{16} The main characteristic of labour markets in these regions was the very short working year. Without alternative crops, labour demand fluctuated wildly throughout the year, peaking during harvest time in

\textsuperscript{15} Casanova, Republic, pp. 43-44.  
\textsuperscript{16} The main exceptions are: Carmona and Simpson, Laberinto, chapter 3; Silvestre, “Temporary;” Florencio Puntas and López Martínez, “Trabajo.”
the summer and falling in the winter. As a result, the working year was about 180 to 200 days long and workers remained unemployed for several months. However, in the summer, the demand for labour was so high as to require the migration of temporary workers from other parts of the country who were attracted by the high wages.

Despite their importance, we know little about temporary migrations. It is difficult to trace migratory flows because they were rarely captured by the population censuses. What we know from the historical evidence is that there was a long-established pattern of migrations from neighbouring hilly areas to the fertile plains. Gangs of workers from the towns of Málaga descended to the plain around Jerez de la Frontera (Cádiz) in harvest time and peasants from Almería and Granada went to cereal-growing areas of Córdoba and Sevilla (all in Andalusia). Short-distance moves were also typical within the provinces of Córdoba, Seville and Cádiz (in Andalusia). In addition, there were several long-distance flows, the most famous one being the movement of Galician and Portuguese peasants to harvest wheat in Castile and Northern Andalusia. Furthermore, workers emigrated from the Levant to South Castile and the Ebro basin (see map 1).

[Insert MAP 1]

Given the lack of quantitative evidence, we know very little about the long-term trends for these flows. It seems plausible, however, that the increasing

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18 Silvestre, “Temporary,” is the best attempt to document these flows using the population censuses.
mechanisation of harvest work in the first decades of the 20th century reduced labour needs. In the centre and north of Spain mechanisation advanced significantly in the first three decades of the twentieth century, whereas in the South mechanisation was slow except in the province of Seville. However, it is well established mechanisation progressed slowly in Spain in comparison with more developed European economies and that temporary migrations remained important in the 1920s.  

In this context, collective action problems were severe: local rural workers faced the competition of temporary migrants ("forasteros"), who were generally willing to act as strikebreakers. Local, permanent workers with a very short working year had an interest in extending the harvesting season, and therefore, preferred to be paid time rates rather than piece rates and to work shorter hours. Temporary migrants, alternatively, preferred piece rates and work “de sol a sol” (from dawn to dusk), so as to shorten the harvest as much as possible and move on to the next town.

In the autumn of 1931, legislative changes radically altered the bargaining power held by each group of workers. Employers could not freely decide who was to be hired. Instead, workers accessed jobs following the turno (names were given to employers by local boards of conciliation according to their position in a list of eligible workers). In addition, especially after the law of municipal boundaries, local workers enjoyed a privileged position in labour markets: no temporary migrant could be hired if local workers remained unemployed. With restrictions to temporary migrations, local workers’ bargaining power was very high in the weeks before the harvest because strikers could cause large losses by refusing to harvest the ripe wheat.

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21 Simpson, Siesta, p. 162.
IV

Evidence of the functioning of rural labour markets before 1931 is not abundant and I have to rely on heterogeneous evidence. For example, from April 1924 to April 1925 *El Socialista* published several responses to the survey undertaken by the socialist politician Fernando de los Ríos on working and living conditions in rural areas. This evidence needs to be interpreted with caution as one inevitably suspects the presence of several biases in the evidence produced by unions and militants, but the accounts are consistent with the historical record of very weak union organisation until the 1930s, except for the period of 1918-1920.

From this evidence, however, a coherent picture appears. In the market for rural labourers, there were two traditional mechanisms through which workers were hired. In both cases, there was minimal union intervention and, therefore, no co-ordinated mechanism for settling wages and working conditions. Firstly, individual workers or gangs of workers offered their work directly to farms. Secondly, workers in large towns waited in the main square for foremen to choose them for a harvest season or particular tasks. 22 Carmona and Simpson (2003) assert that this strategy probably made sense: it was rational for workers to live in relatively large towns because they were hired by several employers for short periods of time and, in large towns, there was a greater availability of information. 23

Before the 1930s, 1918-1920 is the only period in which it is safe to say that unions controlled the labour market in some areas, especially the provinces of

22 *El Socialista*, 7th March 1924; *El Socialista*, 21st March 1924; *El Socialista*, 4th April 1924; *El Socialista*, 6th June 1924; *El Socialista*, 30th October 1925; Fraser, *In hiding*, pp. 106-107.
Córdoba and Ciudad Real. According to Juan Díaz del Moral, several local collective contracts were approved for the wheat harvests of 1918 and 1919.\(^{24}\) Andalusian unions were very effective at using boycott tactics against non-union workers, and especially temporary migrants.\(^{25}\) However, after the summer of 1919, martial law was declared in the region and unions quickly declined. Díaz del Moral cites several cases of local unions disappearing between 1920 and 1922.\(^{26}\) Employers managed to enforce individual contracting as a result.

Therefore, it was only in 1931 that labour markets experienced a fundamental break. The qualitative evidence points to substantial changes of labour recruiting practices. For example, the famous Castilian writer Miguel de Unamuno complained bitterly in 1932 about the enormous power wielded by those who made the lists of eligible workers.\(^{27}\) Local studies show that, in the early 1930s unions controlled and organized the hiring of workers in towns as far apart as Mijas (in the province of Málaga, in Andalusia), Los Olivos (in Huelva, Andalusia), La Solana (in Ciudad Real, South Castile) and Belmonte de los Caballeros (in Zaragoza, Aragon).\(^{28}\) Obviously, the incentives to join unions were now strong. In a most eloquent statement, Jerome Mintz mentioned the testimony of a worker in Casas Viejas (in Cádiz, Andalusia) arguing he joined the union because “they said if one didn’t sign with the sindicato, one could not get work.”\(^{29}\)

\(^{25}\) Díaz del Moral, Historia, pp. 337-338; IRS, Información, “Primer informe del Sr. delegado regional estadístico, Joaquín de Palacios Cárdenas.”
\(^{26}\) Díaz del Moral, Historia, p. 358.
\(^{27}\) El Sol, 5th June 1932: “(...) En el fondo, lucha de clasificación. Quién será bracero listado y quién será ojeador –trabajador de ojo, listero.” “A fight of classification. Who is going to be listed labourer and who is going to be the workers’ scout, the list-maker”. Emphasis added.
\(^{28}\) Fraser, In hiding, pp. 106-107; Fraser, Pueblo, p. 60; Lisón-Tolosana, Belmonte, p. 46; Collier, Socialists, p. 79, pp. 84-85; Del Rey, Paisanos, p. 346.
\(^{29}\) Mintz, Casas Viejas, p. 164, as well p. 167, p. 173.
Employers complained bitterly that they had lost the power to decide whom to hire and in fact saw the *turno* as an imposition by the unions. Yet, the Republican-Socialist coalition saw the *turno* as one of the main instruments for combating poverty and unemployment in the countryside. In a famous strike in the province of Salamanca (North Castile) in 1933, the union denounced employers who did not employ workers from the local lists and who therefore did not honour the *turno*. In an effort to enforce the *turno*, the state stepped in to disband the gangs of temporary migrants contracted by employers. A lock-out ensued in which rural employers insisted on free contracting. At this point, the UGT called for a general strike of rural workers. To avoid a larger social explosion, the government sponsored an agreement that established that the civil governor and the Ministry of Labour delegate of the province would draw the list of eligible workers.\(^{30}\)

The large institutional change put in place in 1931-33 was radically modified in 1934. In November 1933, a conservative coalition won the elections. Although the new government wanted to put limits to the actions of the boards of conciliation and to change the law of municipal boundaries, the government did not initially have a strong stance against collective bargaining. But with their grip on boards of conciliation and labour exchanges threatened, in June 1934, rural unions staged a general strike to demand higher wages and a reversal of the planned repeal of the law on municipal boundaries and the reform of the law of conciliation boards.\(^{31}\)

\(^{30}\) Cabrera, *Patronal*, pp. 156-158.


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The strike met with staunch repression, the closing of union offices, and the arrest of socialist leaders. As a result, the whole institutional structure built up in 1931 changed accordingly. Consistent with my hypothesis, the new top-down changes radically reduced the incentives for joining independent unions. Although data on hiring practices and labour market outcomes in 1935 would be very useful to understand the impact of legislation, historical evidence for this year is scarce. Censorship was imposed after October 1934 and official statistics are poor for 1935. The general picture is that several unions and their leaders faced repression, and there was a very large drop in the number of strikes and membership.

Boards of conciliation and labour exchanges did not disappear but were now used to punish militant workers. For example, the UGT published several reports sent by rural union offices describing the situation in late 1934 and 1935. Although the evidence can be biased, most militants interestingly focused on the disruption of local exchanges and on the fact that now the socialists were now the ones excluded from the available jobs. For example, this was the case in Aliseda (Cáceres, Extremadura), in Valcabado (Zamora, North Castile), in Villamayor de Calatrava (Ciudad Real, South Castile). As a result, many workers left the socialist unions to join the catholic unions or simply to show allegiance to the owners of land. This suggests that when the socialists did not control the exchanges, there were far less powerful reasons to join unions. As a result, only the very militant stayed and union membership collapsed. Strike and membership levels were very low in 1935, only to soar explosively with the arrival of the Popular Front in 1936.

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32 Boletín UGT, number 64, April 1934, pp. 72-79.
33 Bizcarrondo, UGT, p. 219.
34 Bizcarrondo, UGT, p. 220.
35 Bizcarrondo, UGT, pp. 229.
36 Bizcarrondo, UGT, pp. 220-221, p. 225.
Evidence on the anarcho-syndicalists (the CNT) is certainly more mixed. Aggregate membership grew fast in 1931 in several traditional holds of anarcho-syndicalists in Córdoba, Cádiz, Málaga and Seville.\textsuperscript{37} Although the CNT did not accept state-sponsored labour exchanges, it certainly signed collective contracts that restricted the freedom to hire by imposing bans on temporary workers and demanding that the household heads be chosen first for harvest jobs.\textsuperscript{38} However, my emphasis on the importance of labour exchanges would also be consistent with the stagnation of the CNT in the countryside after 1931. Because they did not accept the existence of boards of conciliation and insisted on direct action, the anarcho-syndicalists were not able to benefit to the same extent from the state-enforced lists of workers and state protection of collective agreements reached by the local or provincial boards of conciliation. Several conflicts in 1931 can be interpreted as attempts by the CNT to limit the influence of UGT-dominated boards of conciliation, especially in the province of Córdoba.\textsuperscript{39} But most attempts to boycott agreements by the local or provincial boards of conciliation with general strikes generally met with state repression and, occasionally, the lack of support from the rank-and-file.\textsuperscript{40} Although anarcho-syndicalist unions had traditionally organised the countryside, especially in Andalusia, it was the UGT that benefited most from the new legislation.

Furthermore, unions’ control over local labour markets was helped by the disruption of temporary migrations. Temporary migrants, by their willingness to act as strikebreakers and their reluctance to join unions, had been a serious constraint on

\textsuperscript{37} For example, Fraser, \textit{In hiding}, p. XIV.  
\textsuperscript{38} Pérez Yruela, \textit{Conflictividad}, pp. 124-126.  
the stabilisation of unions. The mechanisation of harvest work in the first decades of
the 20th century must have slowed down migration.\footnote{Carmona and Simpson, \textit{Laberinto}, p. 109.} In the 1920s according to
contemporary sociologist and law professor Constancio Bernaldo de Quirós, there
was a sizeable decline in the number of emigrants from Galicia (in the North-West),
although his analysis is fully impressionistic.\footnote{\textit{El Socialista}, 26\textsuperscript{th} September 1924.} However, probably because
agricultural tasks did not mechanise as fast as in other European countries, qualitative
evidence shows temporary migrations were still an important phenomenon in the
1920s.\footnote{Simpson, \textit{Siesta}, p. 172.} For example, one respondent complained that “unemployment exists because
workers from different towns chase the same jobs.”\footnote{\textit{El Socialista}, 4\textsuperscript{th} April 1924.} Another from Alicante claimed
that “large numbers” migrated to olive-growing areas in the winter. Similar examples
are easy to find for Extremadura or Northern Andalusia.\footnote{\textit{El Socialista}, 9\textsuperscript{th} May 1924; \textit{El
Socialista}, 2\textsuperscript{nd} May 1924; \textit{El Socialista}, 20\textsuperscript{th} June 1924.}

The empirical question then is: to what extent were temporary migrations
disrupted as a result of institutional changes? State-sponsored collective contracts
established a clear preference for local workers, although this law was subject to some
ad hoc changes until it was finally derogated in May 1934. For example, a certain
degree of mobility was allowed in the province of Córdoba during the olive-picking
campaign in the winter of 1932 and in 1933 in Extremadura.\footnote{\textit{ABC}, 7th December 1932; Riesco, ‘Lucha,’ p. 132.} These changes suggest
legislation was flexible enough to respond to local shortages of labour during harvest
time. In any case, however, local workers always took precedence over temporary
migrants.\footnote{For example, in the case of Salamanca: González Rothvoss, \textit{Anuario}, p. 450.}
When determining if temporary migrations were disrupted, the population census is not useful. The 1930 census was taken before the law was passed, and the next census was taken in 1940, when the law had been abrogated and independent unions were not legal. Therefore, censuses would not capture any temporary (but fundamental) break in the 1930s. In order to uncover the behaviour of temporary migrations and rural unions in the 1930s, we have to turn to the qualitative evidence.

The evidence available shows that temporary workers had a much harder time finding employment. In July 1931, an MP from Málaga (Andalusia) wrote a letter to the president of the Republic, complaining that there were about 40,000 unemployed workers in the province who could not find harvest jobs in Granada or Seville (both in Andalusia).\(^4^8\) In Extremadura, Sergio Riesco uncovered several protests in which mayors complained to the Ministry of the Interior that workers could not find work in other towns.\(^4^9\) In North Castile, a rural landowner claimed that in the harvest of 1933 (a year of a poor harvest) local workers did not look for employment in other towns, and that in 1934 (a year of an exceptionally good harvest) he was not confident that they could get temporary migrants to harvest the wheat quickly.\(^5^0\)

Despite the priority given to local workers, some temporary workers managed to be hired. As a result, conflicts between temporary *forasteros* and local workers were abundant in the early 1930s, especially in 1931, although the evidence points to local workers now having the upper hand in determining who was hired. This was for

\(^{48}\) *El Sol*, 15th July 1931.
example the case for strikes in Baena (Jaén) and Utrera (Seville) in July 1931,\textsuperscript{51} and local workers’ complaints to the prefect in La Rinconada (Seville).\textsuperscript{52} Cases of clashes in provinces like Toledo or Ávila were also typical.\textsuperscript{53}

Moreover, unions could rely on the state to enforce the preferential employment of local workers. In Carmona (Seville), when sugarbeet producers told the prefect they wanted to keep non-local workers, the prefect replied that he could not authorise the employment of non-locals if there were local unemployed workers.\textsuperscript{54} Similarly, the prefect of Córdoba manifested local workers had absolute priority and ordered the gangs of temporary workers to go back to their towns, often with the help of the Guardia Civil.\textsuperscript{55} It is easy to find other cases for the provinces of Jaén and Cádiz in Andalusia or Salamanca in North Castile.\textsuperscript{56}

V

Because I have relied so far on qualitative evidence covering a vast geographic area, some of the claims put forward in this article need hard evidence to be proven. How do we know if restrictions on temporary migrations were enforced in the 1930s? Were local workers often favoured by labour exchanges? This question is difficult to answer directly. Temporary migrations were not captured by the population census. Additionally, we cannot measure local union strength on the basis of local wages because wages in many cases were standardised at the provincial or regional level. Therefore, we need an indirect method.

\textsuperscript{51} El Sol, 11th July 1931; El Sol, 18th July 1931; La Vanguardia, 18th July 1931, 29th July 1931.
\textsuperscript{52} El Sol, 15th August 1931.
\textsuperscript{53} El Sol, 23rd June 1932; El Sol, 8th July 1932.
\textsuperscript{54} El Sol, 15th August 1931; La Vanguardia 23rd August 1931.
\textsuperscript{55} ABC, Seville edition, 7th June 1931.
\textsuperscript{56} El Sol, 3rd June 1932; La Vanguardia, 25th June 1932; El Sol, 20th May 1933; Cabrera, Patronal, pp. 156-158.
Following Sokoloff and Dollar (1997) seminal article on seasonal labour demand fluctuations in English agriculture before the Industrial Revolution, a potential test for this hypothesis involves looking at the ratio of harvest wages to winter wages at different periods of time. According to Sokoloff and Dollar, the harvest-to-winter wage ratio is higher where the proportion of agricultural land devoted to cereals is higher. In highly specialised cereal-growing regions, there is little to do in the winter and the opportunity cost of winter work is very low. As a result, the ratio of harvest wages to wages paid for winter tasks should be higher in regions specialised in cereal production as compared with less cereal-intensive regions.

The argument for my test proceeds as follows. Many dry-farming areas of Spain were specialised in cereal production. Consequently, one should observe large seasonal gaps in those regions. However, the mobility of temporary migrants during harvest, by increasing the supply of available workers, reduced the ratio of harvest-to-winter wages. If Republican governments re-distributed rents towards the local workers and away from the temporary migrants, one should observe a substantial widening of the harvest-to-winter ratio in the 1930s.

High quality information on rural wages is scarce, especially for the 1920s. Ideally, one should gather information of harvest-to-winter ratios in the late 1920s or in 1930 and then compare that with the same information in 1932 and 1933. However, to my knowledge, high quality data on seasonal rural wages in the 1920s does not

57 Sokoloff and Dollar, “Seasonality.”
exist. To sort this out, I rely first on information on rural wages in different seasons of the year in 1914 at the level of the province (similar to the English county) published in the 1915 Spanish statistical yearbook, but probably collected in an unknown period between 1909 and 1914.

The Spanish Statistical Yearbook of 1915 gives maximum, average and minimum daily wages for adult males. Money wages were adjusted upwards to take into account the part of wages paid in kind. Average wages for adult males were calculated as an average of all summer adult male wages, which included also tasks outside the harvest. Harvest wages were higher than winter wages, but not the highest wages paid in the summer. Therefore, because my focus is on the harvest-to-winter ratio in 1914 and in the 1930s, my preferred comparison uses average wages in 1914. However, I also calculate the summer-to-winter ratio using maximum wages to check the robustness of my results.

For the 1920s, I collect wage data using the El Socialista survey of 1924-1925. Occasionally, unions gave detailed information on the types of agricultural jobs and the hours, days of work and wages assigned to each task. Data however are not abundant as unions were generally in disarray after 1920. Using this source, I was only able to gather local information on harvest-to-winter ratios for several towns in eight provinces.

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58 This is confirmed by the most authoritative study of factor prices, and wages in particular, in Spanish agriculture: Bringas, Productividad, pp. 91-94; as well, Simpson, “Wages.”
59 AE 1915, pp. 244-245. On the collection of data: IRS, Preparación 1914, p. 212.
60 IRS, Preparación 1914, p. 225.
61 IRS, Preparación 1914, p. 225.
62 IRS, Preparación 1908, pp. 227-230.
Finally, for the 1930s, I exploit the rich information contained in the agrarian collective contracts published by Mariano González-Rothvoss in 1935. Some of these collective contracts cover entire provinces or large regions within a province. Therefore, they can be used to calculate provincial averages. In a significant number of cases, however, I am forced to take the wages listed in local collective contracts as an estimate of the provincial average.

Moreover, there is a legitimate concern that these collective contracts were not fully enforced. However, since these collective contracts were revised and approved by the Ministry of Labour, there was an easy recourse to strikes voicing the breaking of a legally sanctioned collective contract. In many cases, prefects levied fines for employers who did not comply with collective contracts. Moreover, workers could use labour courts to denounce recalcitrant employers disregarding legal working conditions, which in most cases favoured workers.

Even if we accept collective contracts as a valid source for wages, calculating the ratio of harvest-to-winter wages is not obvious. For example, one needs to take into account whether the worker was fed or lodged by the employer. This is relatively easy to do as collective contracts generally established very clearly when part of the wages was paid in kind. Because seasonal wages are not given, I took as harvest wages the wages of harvesters who used scythe or sickle (workers on mechanical harvesters earned higher wages but also provided more capital). For winter, I calculated the average daily wage for tasks like hoeing, digging, sowing or weeding.

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64 Cabrera, *Patronal*, p. 158.
65 Wages were generally stipulated “*a secas*”, that is, contracts did not include meals.
Because my argument is about the re-distribution of rents towards local workers and because an unknown share of temporary migrations happened within some provinces, using provincial wages might not be suitable for the task at hand. Provincial averages potentially mix the wages of workers in areas receiving immigrants and in areas expelling emigrants in the same province. Yet, in most cases, wages aggregated at the level of the province are the only option. Wages published in 1915 are the averages of wages of towns in the same province that responded to the survey sent by the Instituto de Reformas Sociales. Furthermore, several collective contracts in the 1930s standardized wages at the level of the province or at the level of a large region within a province.

Provincial averages were probably calculated with wage observations from a selected sample of towns that replied to the government survey. This probably biases the sample used to calculate summer wages to observations from towns with a harvest labour market. Moreover, 1930s collective agreements on harvest wages, which I take as provincial averages, are in fact either the average of local harvest wages or the standardised harvest wage of the towns that specialised in growing cereals.

Changes in seasonal ratios could be affected by changes in the relative price of wheat. Most European governments protected domestic cereal producers with high tariffs and Spain was no exception. However, it is unlikely that wheat prices had much of a distorting effect on wage ratios: rather stable since 1925, wheat prices

66 IRS, Preparación 1914, p. 212.
67 González Rothvoss, Anuario, p. 420, p. 419, p. 426
increased less than the cost-of-living from 1913 to 1935 (wheat prices increased by 45 per cent and the cost-of-living by 65 per cent). Given the relative evolution of the domestic price of wheat, it looks unlikely that wheat producers were more protected in the 1930s than before.

Furthermore, the evolution of seasonal wage ratios could be affected by mechanisation. As I have said above, mechanical harvesters spread slowly in South Castile and Andalusia and a bit faster in North Castile. However, because I only look at the wages of manual harvesters, my ratios are not contaminated by the (slow) spread of mechanical harvesters between 1914 and 1931.

Finally, one needs to take into account changes in maximum hours of work. The Republican government extended the existing mandatory eight-hour ceiling to workers in agriculture. In fact, most collective contracts established a maximum working day of 8 hours for the harvest, and in some cases of seven or six hours, including several restrictions to overtime hours. Therefore, our estimates of daily wages for 1932-1933 are no longer for the traditional “dawn to dusk” schedule (“de sol a sol”), but for an eight-hour day. Maximum hour ceilings only had some bite in the summer, when sunlight allowed for longer working hours. Hours in the winter were always short because there are fewer hours of sunlight in the winter (generally allowing an 8-hour day). Therefore, before 1931, part of the seasonal wage gap reflected that hours of work were longer in the summer. However, the seasonal gap in the 1930s was mitigated by the fact that standard hours of work in the summer were

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69 I would like to thank one of the referees for insisting that I clarify this important point.
not much longer than winter hours. In other words, looking at seasonal gaps in daily wages underestimates the true seasonal gap.

In order to establish the credibility of my test using seasonal gaps, I replicate the analysis of Sokoloff and Dollar (1997) and look at the correlations between the harvest-to-winter wage ratios and the level of cereal specialisation in each province. I have constructed two estimates of the harvest-to-winter ratio: the first considers the difference between the average male rural wage in the summer with the average male rural wage in the winter, the second the maximum wage in the summer relative to the average wage in the winter. It makes sense to look at the two because the correlation coefficient between the two ratios is about 0.4. I have replicated the same exercise with evidence on wage ratios from the early 1930s.

Figures 2, 3 and 4 show the correlation between wage ratios and the proportion of agricultural land dedicated to cereals. The graphs show clearly how in all cases seasonal wage ratios were positively related to the specialisation in cereal production. In the case of the 1930s, ratios should be considered comparable to ratios calculated with average summer and winter wages in 1914. The relationship between the wage ratios and cereal specialisation is always statistically significant.

**Figure 2. Harvest-to-winter wage ratios in 1914 and cereal specialisation (using average summer and winter wages)**

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71 The proportion excludes land left fallow, but results do not change if fallow land is included. I have used the Statistical Yearbook of Spain for 1922-1923 because previous yearbooks did not break down the uses of agricultural land for each province.
Figure 3. Harvest-to-winter wage ratios in 1914 and cereal specialisation (using maximum summer and winter wages)

Figure 4. Harvest-to-winter wage ratios in the 1930s and cereal specialisation.

Were ratios before the 1930s exceptional with respect to other historical cases? The unweighted average of the average wage ratio of the top ten cereal-growing areas in 1914 was 182, which is below the ratios calculated by Sokoloff and Dollar (also unweighted averages of several scattered observations) for counties specialising in cereals in England in the mid 19th century (220) and above the gaps calculated for the North East and Massachusetts in the US (142 and approximately 170), which were areas not heavily specialised in growing cereals. The Spanish case seems to lie between these two experiences.

For my purposes, what matters is whether harvest-to-winter wage ratios increased as a result of institutional restrictions on the entry of temporary migrants into local labour markets in harvest time. As I have said, since I basically have 1914 as a benchmark for the situation before 1931, this comparison is audacious. Moreover, because the official workday in the 1930s was shorter in the summer but left winter hours mostly unaltered, the comparisons underestimate the true evolution of the change in the ratios. With this caveats in mind, table 1 presents the estimates of the seasonal ratios in three different points of time.

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Table 1 shows that harvest-to-winter ratios increased in the 1930s with respect to 1914 wages. The average went up 20 per cent using my preferred comparison with average wages in 1914 and 13 per cent when I use maximum wages. In both cases, the difference in the means of 1914 ratios and the 1930s ratio is statistically significant. Although I am in no position to know winter and summer hours in 1914 in each province, I can derive harvest-to-winter wages for hourly wages assuming reasonable eight-hour working days in the winter and a eleven-hour working days in the summer for 1914 and an eight-hour working days in the winter and in the summer after 1931. This goes some way in adjusting daily wages for working time, but also I should take into account for how long workers stayed employed in each season. When the necessary adjustments are done for hours of work, the size of the change is very large, I estimate an increase in the harvest-to-winter ratios of approximately 66 per cent for ratios calculated with average wages and 60 per cent for ratios calculated with maximum wages.

In the case of the comparison with 1924-1925 ratios, the sample size is much smaller but in several cases, with the exception of Badajoz, the ratios also increased in the 1930s with respect to the mid 1920s or stayed the same. Although sample size is restricted to only six matched observations, the change in the ratio is close to 20 per cent (using daily wages and not adjusting for hours of work). As in the case of the 1914-1930s comparison, taking into account hours of work would increase the estimated increase in wage ratios.
Summing up, although the evidence is sparse and in some cases difficult to interpret, the evolution of harvest-to-winter wage ratios between 1914 and the 1930 suggest summer wages increased with respect to winter wages. I have argued that this evolution cannot be explained by changes in wheat prices or by mechanisation. The evidence on the evolution of wage ratios is consistent with the hypothesis of a re-distribution of rents towards local workers, whereas it is difficult to square with “bottom-up” arguments of peasant mobilization.

VII
Quantitative data on strikes and union implementation are also not consistent with bottom-up narratives of rural mobilisation. I look firstly at the grievances put forward in rural strikes and the number of strikes won, and show that they are not consistent with bottom-up explanations. In addition, I exploit a new data set of strikes and union implementation matched with local data on patterns of landownership and the proportion of landless workers in the overall peasant population. I use these variables to refute bottom-up arguments. Firstly, I study the correlations between rural militancy and the concentration of land ownership in each town, which proxies the ability of landowners to organise collectively. Secondly, in order to measure the impact of poverty and unemployment on conflict, I look at the correlations between mobilisation and the proportion of more vulnerable landless labourers.

Official strike data have several shortcomings, especially because they underestimate the number of strikes organised by anarcho-syndicalist unions and lack information on a large number of strikes. However, they convey a powerful insight: explanations of rural conflict based on a frustration-aggression response by workers or on a decline in living standards must be challenged by the fact that agricultural
workers won a large amount of strikes until June 1934. At the same time, most of these strikes asked for a pay rise or a new collective contract and only very few were caused by unemployment or the need to enforce previously agreed working conditions. For example, in 1932-1933, 70 per cent of agricultural strikes with known motivations presented more than one demand to employers. According to the tabulated tables in the Spanish statistical yearbooks, a third of strikes were organised to change the “organisation of work,” which most probably meant new collective contracts.\(^73\) In 1931, rural workers obtained a concession from employers in 85 per cent of strikes, although they organized a fairly low number of them.\(^74\) Strikes multiplied by two in 1932 and workers were still able to win 70 per cent of strikes (meaning they at least won a concession from employers).\(^75\) In 1933, a year with a poor harvest, 80 per cent of strikes were won, despite an almost three-fold increase in the number of strikes with respect to 1931.\(^76\) No frustration-aggression response can explain these overwhelming ratios of won strikes.

My second attempt to refute the alternative hypothesis of bottom-up mobilisation involves the analysis of the diffusion of union offices and rural general strikes. Because union offices and strikes are underestimated for the provinces in which the anarcho-syndicalists were important, when approximating the pattern of union implementation and of strikes, I concentrate on provinces in which socialist unions were dominant. Information from the 1932 FNTT Congress includes data on

\(^{73}\) *AE* 1932-1933, p. 647.
\(^{74}\) *AE* 1931, p. 580, the figure only takes into account the strikes for which the outcome was known (about 28 % of strikes had missing information on the outcome).
\(^{75}\) *AE* 1932-33, p. 650, the figure only takes into account the strikes for which the outcome was known (about 40 % of strikes had missing information on the outcome).
\(^{76}\) *AE* 1934, p. 756, only 11 per cent of registered strikes have missing information on outcome.
strikes at the local level (the unit here being a general strike of rural workers in a town) or whether the town had a union local in 1932.\textsuperscript{77}

It is fair to say that data extracted from union sources have potential biases. The most plausible bias is that the UGT could increase artificially the number of affiliates to look more powerful than they actually were. And the same could happen with the number of operative union locals or of strikes.

However, there are grounds for thinking unions did not distort their numbers significantly. The main federations did not report spectacular membership levels. At around 25\%, union densities in Spain in the 1930s remained below union density levels of more industrialised economies. When for example one looks at the penetration of the UGT in several provinces, one sees immediately that a large proportion of towns did not have a union local or did not stage a strike in 1932. Union sources recognised several towns were not covered by collective contracts. Unions, moreover, did not abstain from reporting losses in membership. Although unions might have had incentives to over-report membership levels, union records do not seem to have obvious biases.

Local information on union offices and general strikes is, firstly, matched to a census of peasants collected in 1933, which breaks down the composition of peasants in each judicial district (which in turn had several towns) into landless labourers, sharecroppers, and small owners.\textsuperscript{78} Secondly, it is matched to Pascual Carrión’s

\textsuperscript{77} FNTT, Memoria.
\textsuperscript{78} Espinoza et al., “Estructura.”
estimates of local land ownership inequality, proxied by the proportion of agricultural land concentrated in estates of more than 250 hectares (around 340 football pitches).

I use the proportion of agricultural land in each town taken by large estates as a proxy for the ability of landowners to organise collectively. If land ownership was concentrated, fewer landowners could coordinate more easily the resistance against labour legislation and the new collective contracts. Therefore, I expect the fraction of local land occupied by large estates to be positively correlated with conflict. Furthermore, the proportion of landless labourers captures the presence of potentially volatile landless workers who would have been severely hurt by unemployment and poor harvests. I also expect a positive coefficient for this variable. Moreover, in order to control for other factors like access to information or externalities coming from other unionised sectors, or to control for potential biases in the reporting of strikes, strike and union data are matched to the size of the towns, using information from the 1930 Population census. I evaluate the probability of observing strikes and finding a union office in 390 towns in the provinces of Badajoz and Cáceres (in Extremadura), in Ciudad Real (in South Castile) and in Jaén (Andalusia), all dry-farming areas in which the UGT was the dominant union. I estimate the following equations for 390 towns in Badajoz, Cáceres, Jaén and Ciudad Real:

\[
\Pr (\text{strike } = 1) = \alpha_1 + \beta_1 \ln (\text{population}) + \chi_1 \ln (\% \text{ landless}) + \delta_1 \ln (\% \text{ estates } > 250 \text{ hec}) + \epsilon_1. 
\]

\[
\Pr (\text{union local } = 1) = \alpha_2 + \beta_2 \ln (\text{population}) + \chi_2 \ln (\% \text{ landless}) + \delta_2 \ln (\% \text{ estates } > 250 \text{ hec}) + \epsilon_2,
\]

\[79\text{ Carrión, }\text{Latifundios, several pages.}\]
Table 2 gives the basic correlations between the explanatory variables. Table 3 reports the marginal effects from the set of probit regressions on the determinants of strikes in 1932 and the determinants of union presence. I check the robustness by including/excluding some of the three variables and analysing the stability of coefficients when I take into account a sub-sample of the data (for example only looking at towns with less than 10’000 inhabitants). The table shows marginal effects when the sample is restricted to towns with less than 10’000 inhabitants, but results are very similar when only towns with less than 5’000 inhabitants are taken into account.

**TABLE 2 AND TABLE 3 HERE**

All in all, neither the greater presence of landless peasants nor the inequality of land ownership increased the likelihood of general strikes or of finding a union local. These results also hold when I remove the town population variable. All of this lends little support to bottom-up arguments. The main determinant of union presence or of strikes is the size of the town, and this result holds even if we restrict the sample to towns with less than 10’000 inhabitants or with less than 5’000. Although it routinely appears in quantitative analyses of social conflict, the interpretation of the marginal effect of population is not obvious. Externalities from well-organised artisanal sectors in the more diversified larger towns could be an explanation.\(^{80}\) One could argue as well that large towns had greater access to information.\(^{81}\)

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81 Markoff, “Geography.”
This paper studies the impact of state intervention in rural labour markets in the rapid increase in mobilisation and conflict in the dry-farming areas of Spain. I refute the view that poor harvests or the expectations generated by land reform caused the explosive mobilisation of the period. In a largely agrarian country with an underdeveloped mass education system, collective action problems were generally so severe as to require top-down, state intervention to mobilise rural workers.

This paper has concentrated on two types of legal changes. Firstly, hiring practices in areas with a large rural labour market (especially during the harvest) went through drastic changes. Qualitative information on dry-farming labour markets strongly suggests unions controlled who was hired during the harvest, in a context of short working years with acute competition for scarce harvest jobs. Moreover, qualitative evidence on rural conflict in the period and quantitative information on the evolution of seasonal gaps are both consistent with a sharp reduction of temporary migrations after 1931. Union control over the local labour market and the collapse of competition from strikebreakers greatly facilitated collective action taking the form of rising union participation and a greater number of strikes.

The Spanish case confirms the view that conflict and militancy are not necessarily related to drastic changes in living standards. Often, institutional change and policy shifts are the causes of polarisation and popular mobilisation. The Spanish experience of the 1930s points at the role of non-ideological motivations behind the growth of militant social movements. In many developing economies, access to scarce jobs or relatively straightforward survival strategies can be important causes of rural militancy.
Abbreviations:

AE: Anuario Estadística de España, Spanish statistical yearbook.
CNT: Confederación Nacional del Trabajo, National Confederation of Labour.
FNTT: Federación Nacional de Trabajadores de la Tierra, National Federation of Agricultural Workers.
IRS: Instituto de Reformas Sociales, Institute of Social Reforms.
UGT: Unión General de Trabajadores, General Workers’ Union.

Sources:

Anuario Estadístico de España (AE), various years.
González Rothvoss, Mariano, Anuario español de política social (Madrid, 1935).
IRS (Instituto de Reformas Sociales), Preparación para las bases de un proyecto de ley de accidentes del trabajo en la agricultura (Madrid, 1908)
Instituto de Reformas Sociales, Preparación de las bases para un proyecto de ley de accidentes del trabajo en la agricultura (Madrid, 1914).
Instituto de Reformas Sociales, Información sobre el problema agrario en la provincia de Córdoba (Madrid, 1919).
El Sol, La Vanguardia, ABC
El Socialista
Boletín de la UGT.
FNTT (Federación Nacional de Trabajadores de la Tierra), Memoria que presenta el Comité Nacional de este organismo al examen y discusión del Congreso ordinario que ha de celebrarse en Madrid durante los días 17 y siguientes del mes de septiembre de 1932 (Jaén, 2000).
Memoria del 3er congreso de la CNT celebrado en Madrid del 11 al 16 de junio de 1931.

Spain’s Population Census of 1930

Bibliography:


Bringas, Miguel Ángel, La productividad de los factores en la agricultura española (1725-1935) (Madrid, 2000).

Carmona, Juan and James Simpson, El laberinto de la agricultura española. Instituciones, contratos y organización entre 1850 y 1936 (Zaragoza, 2003).

Carrión, Pascual, Los latifundios en España (Barcelona, 1975 [1932]).

Casanova, Julián, De la calle al frente. El anarcosindicalismo en España (Barcelona, 1997)


Díaz del Moral, Juan, *Historia de las agitaciones campesinas andaluzas (Antecedentes para una reforma agraria)* (Madrid, 1973 [1929]).


Estadella, José, *El fracaso de los Jurados Mixtos: hacia una profunda reforma de los organismos de política social* (Madrid, 1936).


Graham, Helen, The Spanish Republic at War, 1936-1939 (Cambridge, UK, 2002).


Mintz, Jerome R., The Anarchists of Casas Viejas (Bloomington, IN, 1994).


Map 1. Regions and provinces mentioned in this study.
Source: http://soymapas.com/category/mapa-mudos/page/5, name of provinces and regions added using Gimp 2.6.
# Table 1. Comparison of harvest-to-winter wage ratios, 1914, 1924-25 and the 1930s.

<table>
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<th>Province</th>
<th>1914 average</th>
<th>1914 max</th>
<th>1924-1925</th>
<th>1930s</th>
<th>Type of collective contract 1930s</th>
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| Strictly comparable samples UNWEIGHTED AVERAGE | 165.2 | 174.15 | 198.2 | t-test differences in means: The null hypothesis is that the means are equal: average ratio 1914 vs. ratio 1930 t =-4.18*** maximum ratio 1914 vs. ratio 1930 t=-2.69*** |
| Standard Deviation | 34.98 | 28.96 | 34.26 | |

Table 2. Correlations between the explanatory variables

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<th>Ln (%) landless</th>
</tr>
</thead>
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<td>Ln (%) landless</td>
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<td></td>
</tr>
<tr>
<td>Ln (%) large estates</td>
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<td>-0.15</td>
</tr>
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</table>

Notes: own calculations.

Table 3. Probit regressions, determinants of strike and union local. Marginal effects reported.

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<th>Strike=1 Mean=0.6</th>
<th>Union local =1</th>
<th>Strike=1 Mean=0.6</th>
<th>Subsample pop&lt;10000</th>
<th>Subsample pop&lt;10000</th>
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Notes: Standard errors in parentheses. * means statistically significant at the 1 per cent level, ** at the 5 per cent level, * at the 10 per cent level.
Figure 1. Agricultural real wages, 1913-1935 (1913=100).

Figure 2. Harvest-to-winter wage in 1914 and cereal specialisation (using average summer and winter wages)

Figure 3. Harvest-to-winter wage ratio in 1914 and cereal specialisation (using maximum summer and winter wages)

Sources: AE 1915, pp. 244-245; AE 1922-23, pp. 58-59.
Figure 4. Harvest-to-winter wage ratios and cereal specialisation, the 1930s.

Source: González Rothvoss, Anuario; AE 1932-1933, pp. 126-127.