

How Legacies Depend on Later Development: Evidence from Early Labor Mobilization

Abstract

Although recent research on legacies has focused on the mechanisms enabling their transmission, their relative importance compared to current factors is often overlooked. This article examines how early twentieth-century labor mobilization relates to contemporary voting patterns in Spain, and how this relationship varies across local contexts. Using original data on pre-Civil War organizations and traditional turnout measures, the article documents a robust long-term association between early organized labor and left-wing voting in the 1977 founding democratic elections. Importantly, this association is attenuated in more socioeconomically developed municipalities, where the contemporary relevance of early labor legacies is weaker, though not absent. Robustness checks using matching and instrumental variable strategies, intermediate periods, and spatial-autocorrelation corrections support the findings. The article thus contributes to a better understanding of both the historical bases of political mobilization and the conditions shaping historical transmission, shifting the focus from 'successful' legacies to the circumstances under which they persist, weaken, or fade over time.

Keywords: legacies, labor mobilization, leftist parties, transmission, voting behavior, Spain

A decade before the establishment of the Spanish Second Republic in 1931, the municipality of Villa del Campo had no registered labor organizations, while in neighboring Casas del Millán over 10 per cent of its inhabitants were members of the local farm laborers' society. Located 50 kilometers apart in western Spain's Caceres province, both towns experienced socioeconomic stagnation in the following half-century, each losing nearly one-third of its population. In Spain's 1977 first democratic elections after Franco's 40-year authoritarian rule, left-wing parties obtained 0.5 per cent of the total vote share in Villa del Campo and 48 per cent in Casas de Millan. These divergences in electoral outcomes illustrate how early labor mobilization can remain electorally relevant decades later.

However, the electoral legacies of early labor mobilization appear weaker in other contexts. In the Madrid metropolitan area, the populations of Leganes and Mostoles, once rural villages, increased more than thirty-fold between 1920 and 1975. In 1920, whereas Mostoles had no formally organized labor, around 6 per cent of Leganes's population belonged to the local agricultural section of the *Unión General de Trabajadores* (UGT), the oldest trade union in Spain. In this case, regardless of their different pre-Franco contexts, leftist parties in both cities secured over 50 per cent of the total vote in the 1977 elections.

As these two pairs of cities demonstrate, historical legacies are neither homogeneous nor fixed, but shaped by subsequent historical developments. While both early organized labor and long-term contextual dynamics offer plausible explanations for electoral outcomes in 1977, which factor should we expect to be more influential, and under what conditions? To evaluate this, I construct an original dataset combining political and socioeconomic information for over 7500 Spanish municipalities in 47 provinces. Using multiple empirical strategies, I document a strong and solid long-run association between labor mobilization during the 1875–1920 period and voting patterns in the 1977 elections. I further examine how the electoral relevance of these legacies varies according across local contexts, finding that early organized labor is more strongly associated with left-wing voting in socioeconomically stagnant municipalities. Conversely, this association is severely attenuated in places where later development generated alternative bases for political mobilization.

The evolution of the local context involves not only changes in social and economic structures, but also leads to the disruption of the dense networks and collective identities forged by early organized labor. In line with this interpretation, the legacies of early labor mobilization are associated with higher support for left-wing parties in socioeconomically stable places, where historically rooted identities and networks are less likely to be eroded by ensuing transformations. By situating legacies within the broader historical trajectories in which they are embedded, I propose a framework that illustrates how local socioeconomic trajectories condition the relative importance of historical legacies. Despite this being suggested in previous works (Charnysh and Peisakhin 2022; Voigtländer and Voth 2012), a systematic analysis of how socioeconomic development shapes historical transmission remains absent.

Spain makes a compelling case for analyzing legacy transmission due to its dramatic political and institutional transformations in recent history. From the late nineteenth century through 1977, the country was marked by a series of regime changes, a civil war, a 40-year dictatorship, and a democratic transition. Although these disruptions make Spain a particularly demanding case to analyze whether and under what conditions legacies persist, the long-term imprint of early organized labor remains visible in contemporary voting patterns.

This article thus makes two contributions to the burgeoning literature on historical legacies and persistence. First, I investigate how early exposure to organized labor, rather than to political regimes and institutions or episodes of violence, relates to local political behavior several decades later. While seminal research has investigated the impact of early labor mobilization on interwar political regimes (Luebbert 1987), the evolution of party systems (Bartolini and Mair 1990; Lipset and Rokkan 1967), and modern welfare states (Esping-Andersen 1990), the article documents a durable and robust association with local electoral outcomes. In doing so, it helps account for the long-standing electoral strength of left-wing parties in some regions and localities (for the Spanish case, see Domènech and Sánchez-Cuenca 2022; Rodon 2024; Villamil 2021), even long after the social and political decline of the labor movement. Because leftist victories tend to cluster in urban and industrial areas (Bartolini 2000; Rodden 2019), this work also sheds light on why left-wing parties continue to secure comparatively higher electoral support in some socioeconomically stagnant contexts, where many structural predictors of left support are weak or absent.

Second, by focusing on local socioeconomic trajectories, this work elaborates on the broader contextual conditions under which legacies exert a stronger or weaker influence on modern political behavior. While prior research has recognized that context matters for transmission (Charnysh and Peisakhin 2022), the role of long-term socioeconomic trajectories in conditioning the relative strength of historical legacies has not been systematically examined across local contexts. My findings show that early labor legacies are attenuated in more developed municipalities, where their contemporary importance is weaker. In this way, the article contributes to recent work on the non-monotonic effect of historical legacies (Dinas and Palaiologou 2024; Fouka and Voth 2023; Ochsner and Roesel 2024) and moves beyond the literature's current emphasis on past 'successful' legacies to investigate the conditions under which they persist, weaken, or evaporate.

Early labor mobilization

Emerging in late 19th and early twentieth centuries as a response to the grievances of industrialization, the labor movement left lasting legacies. Organized labor not only fought to improve labor conditions but also played a decisive role in the socialization, mobilization, and enfranchisement of the working classes. The creation of dense networks of sociability (e.g., trade unions, cooperatives, workers' clubs etc.) was central to this process, as they provided members with a collective identity and channels for

mobilization (Bartolini 2000).¹ In the face of early political repression, the labor movement created self-contained social environments to isolate their members from outside influences, namely states and religions (Bartolini 2000; Lipset and Rokkan 1967). This fostered a strong sense of solidarity and shared attitudes among its members (Bartolini 2000, p.22).

The political left tended to rely on these networks to build their party structures and mobilize their 'natural' electorate –the urban and industrial working classes (Amat et al 2020; Boix and Magyar 2023; Lipset and Rokkan 1967; Przeworski and Sprague 1986). Though mobilization in the economic sphere preceded overt political mobilization, the founders of national trade unions and social democratic parties were frequently the same individuals (Boix 2012; Hedström et al 2000). Political agitators also used existing associations to recruit new people (Bartolini 2000). Across Western Europe, this organizational strength propelled the rise of leftist electoral mobilization and ensured its long-term stability (Bartolini and Mair 1990).

Quantitative analyses investigating the early twentieth century have consistently confirmed this relationship. Using highly disaggregated data from Swedish local elections held between 1910 and 1918, Boix and Magyar (2023) confirm that trade unions and other civic associations were key in the electoral success of the Swedish Social Democratic Workers' Party. Similarly, Mor and Boix (2024) demonstrate that socialist parties nominated worker candidates in contexts of high unionization in England, Wales, Germany, and Norway before 1945. In pre-Civil War Spain, provinces with higher levels of labor associational density had higher levels of votes to leftist federal republicans (Arnabat Mata 2019, p.383), whereas the socialist party was able to advance electorally only in places where its own trade union –the UGT– was active (Boix 2012; Linz 1967).

I argue that such dynamics also produced enduring political legacies. Past experiences and memories can serve as templates for the present and tools for socialization, thus fostering sociopolitical mobilization and group identity (Anderson 1991; Halbwachs 1992; Putnam 1994; Ranger and Hobsbawm 1984). They might also influence how people interpret local conditions and the broader political landscape, increasing the likelihood of certain forms of collective action (Ternullo 2024). In Spain, left-wing parties capitalized on the socialization and mobilization of the working classes forged by early labor mobilization. I further contend that this legacy is heterogeneous as it depends on the long-term evolution or stagnation of the local context, with local socioeconomic development playing a crucial role. This article consequently advances the study of historical transmission by identifying the contextual conditions under which legacies exert the strongest influence on contemporary outcomes.

Historical legacies and transmission

Literature on historical legacies analyzes the historical roots of current political behavior (e.g., Acharya et al 2016b; Balcells 2012; Charnysh and Peisakhin 2022; Homola et al 2020; Lupu and Peisakhin 2017). Given the long intervals that often separate treatment and outcome variables, mechanisms of transmission are essential (Wittenberg 2015). They are especially relevant insofar as people and their descendants can move from exposed to unexposed areas –and vice versa–, potentially leading to post-treatment sorting bias (Marbach 2024). In short, past experiences are inevitably affected by later developments or "layers of history" (Wimmer 2023), which might not only condition the outcome but also the process of transmission.

Despite this, transmission mechanisms often remain under-specified. Most studies invoke inter-generational transmission through families, often without supporting empirical evidence (e.g., Guiso et al 2016; Putnam 1994; Rozenas et al 2017). In some cases, notions like 'path dependence' or 'outcome dependence' can suffice to explain transmission, but only when they are precisely defined

¹These often hinged upon both pre-existing political traditions (Thompson 1971; Tilly 2017) and informal networks like craft groups or neighborhood affinities (Gould 1993).

and supported by historical evidence (Cirone and Pepinsky 2022, p.147). On top of this, most works assume an average impact across all units, neglecting the role of the local social context (Villamil 2021). This is particularly striking given that legacies are documented even amid profound political upheavals and socioeconomic transformations.

Only a handful of works examine contextual factors. Some studies analyze the importance of local networks and organizations, such as local Catholic churches in communist Hungary (Wittenberg 2006) or underground left-leaning groups during Francoist Spain (Villamil 2021). Others focus on long-term socioeconomic and demographic dynamics: higher levels of immigration and economic growth have been linked to lower persistence of cultural attitudes (Voigtländer and Voth 2012), whereas ethnically similar communities appear to preserve political identities across generations (Charnysh and Peisakhin 2022). These works clearly presume that "major demographic disturbances or population movements weaken the transmission of historically rooted behavioral norms" (Charnysh and Peisakhin 2022, p.5) and that "local persistence partly reflects a lack of mobility" (Voigtländer and Voth 2012, p.1341).

Altogether, these studies suggest that local socioeconomic and demographic trajectories necessarily affect the conditions under which historical transmission takes place. Nonetheless, research on this topic has not systematically explored how these local-level, long-term trajectories condition the relative weight of historical legacies. To address this gap, I study how historical legacies are shaped by the evolution of local socioeconomic conditions.

When do legacies matter?

From an intuitive theoretical perspective, historical transmission is favored in contexts where change and mobility over time are less prevalent. For instance, Giuliano and Nunn (2021) hypothesize that climatic stability is associated with greater persistence of cultural traits because their practices are less likely to be refined. In a methodological contribution to legacy studies, Marbach (2024) notes that migration between treatment and outcome may obscure and bias long-term findings. Classical sociology also emphasized the stability of the local context as key to historical transmission by observing that, contrary to what occurs "[i]n towns of the provinces which have been sheltered from the great currents of economic life" (...), "in large modern cities, (...), it is increasingly difficult for 'society' to retain in its memory so many familial lines" (Halbwachs 1992, p.143). What all these works share is the assumption that the stability of the local context is conducive to historical transmission.

Beyond geographical and climatic characteristics, a pivotal factor shaping such stability is socioeconomic development. Nonetheless, literature on historical legacies and transmission has addressed its role only tangentially (Charnysh and Peisakhin 2022; Voigtländer and Voth 2012). This neglect is particularly surprising given that socioeconomic development affects the setting in which legacies operate, potentially altering both their transmission and contemporary importance.

I therefore theorize that socioeconomic development conditions historical transmission through two complementary mechanisms. First, it disrupts social and economic structures, altering both group composition and its shared norms and attitudes. Second, it weakens or supersedes the community networks and ties through which individuals were traditionally socialized.² In dynamic environments such as large cities and metropolitan areas, exposure to new influences can dilute or reshape ingrained practices and norms. By contrast, in stagnating settings, community networks and socialization processes remain comparatively stable across generations, allowing historical legacies to consolidate.

This framework speaks closely to labor legacies. Left-wing parties tend to achieve greater electoral success in urban environments (Bartolini 2000; Rodden 2019), as well as among working-class constituencies (Arndt and Rennwald 2016; Rennwald and Pontusson 2021). In such contexts,

²This resonates with classical sociology, with scholars like Tonnie, Durkheim, and Simmel identifying the erosion of local, proximate ties as a result of modernization.

where contemporary socioeconomic conditions (e.g., class composition) shape left-wing mobilization, legacies are likely to play a comparatively milder role. But where stagnation preserves the identities and networks forged by early organized labor, left-wing parties can hinge upon these legacies to sustain their electoral support. This constitutes an alternative pathway for leftist mobilization grounded in historical continuity rather than contemporary factors.

In sum, historical legacies do not operate in isolation but interact inevitably with later developments of history. Their impact thus depends on whether these possess sufficient transformative capacity to limit the relative importance of inherited patterns of behavior. This theoretical argument is summarized in Figure 1 and leads to two hypotheses to assess the main contention of this paper, that the ink of the past persists most strongly where contemporary forces fail to overwrite them:

H1: Municipalities with higher levels of early 20th-century labor mobilization show higher levels of support for left-wing parties in the long run.

H2: The association between early organized labor and left-wing support is stronger in municipalities with lower levels of socioeconomic development.

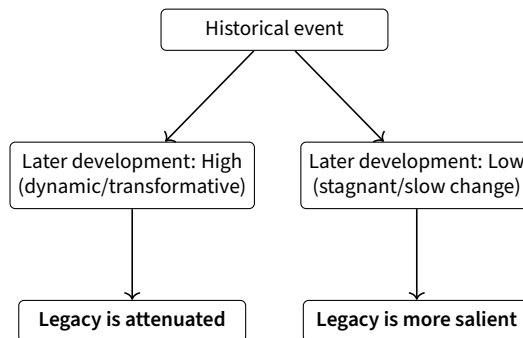


Figure 1. Historical legacies and later development

Historical background

Organized labor socialized the working classes and created dense networks of organizations, laying the foundations for enduring electoral legacies. Yet the period between the initial waves of labor mobilization and the 1977 elections was marked by sweeping political and socioeconomic disruptions, potentially overwriting them. As in other Western European countries, the development of the labor movement is crucial for understanding the evolution of the party system and cleavage structure (Bartolini and Mair 1990; Lipset and Rokkan 1967).

Over the course of the nineteenth and the first third of the twentieth centuries, the uneven arrival of industrialization resulted in sharp social tensions and regional imbalances, with Catalonia, Madrid, and the Basque Country leading this process (Motes 2014). In the countryside, poverty and dependence on large landowners were pervasive, especially in the southern regions of the Peninsula (Carr 2009; Tusell 2012). Like their comrades in France and Italy, the Spanish working classes, ideologically imbued by Marxism and revolutionary anarcho-syndicalism (Bartolini 2000, p.78), started to organize and pose serious challenges to political and social stability.

The 1887 Law of Associations led to the proliferation of unions, cooperatives, and workers' clubs, fueling the political awareness and mobilization of peasants and industrial workers (Amat et al 2020; Arnabat Mata 2019). These organizations often offered a range of services such as financial aid, mutual assistance, and cultural and leisure activities.³ Previously marginalized social groups were

³One example of the multi-functionality of local organizations in a Catalan village is described in Gavalda (1989). See also

thus endowed with shared values and durable ties, conferring upon them a collective identity to pursue common objectives. The founding of the Spanish Socialist Party in 1879, its affiliated union UGT in 1888, and the anarcho-syndicalist National Confederation of Labor (CNT in Spanish) in 1910 exemplify this foundational period.

The first major rupture came with Primo de Rivera's coup and ensuing dictatorship (1923–1930), who restricted the right to associate and outlawed most labor organizations, except for the UGT, which the regime sought to co-opt into the new corporatist state (Tusell 2012, p.458). Following the first free municipal elections held by a transitional government in April 1931, the fall of the monarchy led to the establishment of the Second Republic (1931–1936), a period characterized by ambitious reforms, widespread political mobilization, and escalating political violence.

A second, more destructive disruption came after General Francisco Franco led a military coup that quickly spiraled into a full-scale civil war in July 1936. This brought an end to the Second Republic and ushered in an authoritarian regime that would last until 1977, which persecuted and dismantled independent labor organizations and replaced them with the state-controlled *Sindicato Vertical*. This sought to destroy the entrenched sociopolitical dynamics and informal networks that had nurtured labor mobilization over the previous decades (Prieto 1993). Although some underground union activity persisted and contributed to labor unrest during the 1960s (Vaquero 2014), labor unions were legalized only shortly before the 1977 democratic elections. Because the independent labor movement and its associated organizations were dismantled and outlawed during the Franco dictatorship, any long-term association between early labor mobilization and post-Franco voting patterns cannot plausibly be driven by organizational continuity, but must instead operate through indirect channels of transmission.

As in much of Western Europe, the Spanish labor movement was central to the sociopolitical incorporation of the working classes, leaving a lasting influence on Spain's electoral patterns. Yet its contemporary relevance depends on subsequent socioeconomic trajectories: the influence of labor legacies remitted where development created new mobilization channels, but remained comparatively stronger where stagnation sustained past sociopolitical dynamics.

Data and variables

To evaluate the long-term relationship between historical labor mobilization, socioeconomic transformation, and left-wing voting, I analyze all Spanish municipalities with available data, accounting for boundary changes between 1920 and 1977. Since Spain experienced rapid modernization and several regime changes during this period, this analysis constitutes a hard case to explore historical persistence.

The main dependent variable is support for left-wing political parties in the 1977 first elections after Franco's 40-year authoritarian rule. It is measured as the vote share –ranging from 0 to 1– received by all nationalist and non-nationalist left-wing parties.⁴ Figure 2 maps the geographical distribution of left-wing support in 1977. Left-wing strongholds are predominantly concentrated in the southern half of the Peninsula, but important clusters also exist along the eastern coast, in the northern regions of Asturias and Aragon, and in Madrid.

Early labor mobilization is measured as logged members of labor organizations per 1000 inhabitants in 1920, due to its highly skewed distribution. This membership-based indicator, drawn from the *Instituto de Reformas Sociales* captures the depth of engagement in organized labor more directly than the classical measure of organizations per capita.⁵ As robustness checks, I replicate analyses using labor organizational density in 1916, calculated as the logged number of labor organizations per 1000

Guereña (2018).

⁴Table B2 includes a list of all the political parties included in the analyses.

⁵The Social Reforms Institute was established in 1903 and played a pivotal role in the development of the modern social security system (Tusell 2012). See Appendix A for more details.

inhabitants in 1916.⁶ Figures 3 and B1 map these two variables, with notable concentrations along the coast, in the northwest, and across the southern half of the Peninsula. Despite the censuses only include formally constituted organizations, they remain the standard source to study associational life in 20th-century Spain (see Arnabat Mata 2019; Guereña 2018; Mayayo 1995; Rubio 1988).

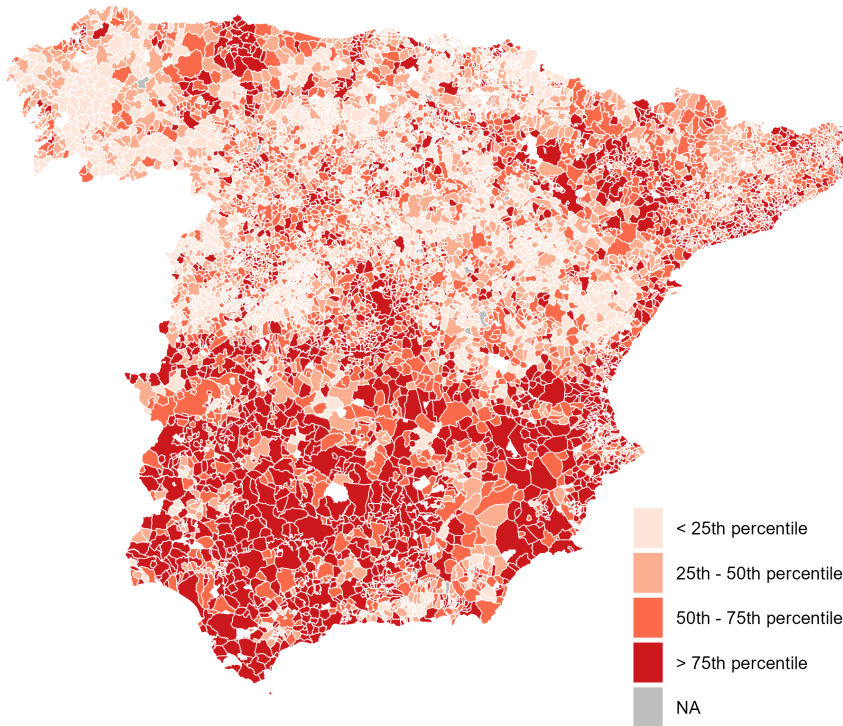


Figure 2. Spatial distribution of left-wing support in 1977.

Historically, industrialization and urbanization spurred labor mobilization by concentrating working-class populations, dividing labor, and expanding education (Bartolini 2000, p.32–3). To capture these factors, I use illiteracy rates, logged kilometers to the nearest railway halt or station, and logged population in 1900.⁷ Contemporary socioeconomic factors are captured by logged population in 1975, railroad density in 1979 (km/km^2), and logged population change between 1920 and 1975.⁸ To properly account for socioeconomic development, I employ logged municipal budget per capita in 1958. Finally, several geographic characteristics are included: elevation, ruggedness, and logged geodesic distance to the coast and to the provincial capital. These time-invariant attributes might have influenced both early labor mobilization and support for leftist parties. Table B1 in the

⁶Some organizations may appear in both censuses, but because they capture different dimensions of labor mobilization, the overlap is not empirically concerning.

⁷Results are consistent when employing 1860, 1900, and 1910 measures. As shown in Figure B2, the creation of labor organizations skyrocketed in the early years of the twentieth century.

⁸One could argue that Franco's dictatorship allocated railroad investment unevenly. However, railroad network peaked in 1958 (Esteban-Oliver and Martí-Henneberg 2024, p.165). Between 1900 and 1980, railroad density increased only in 16 municipalities (data available upon request).

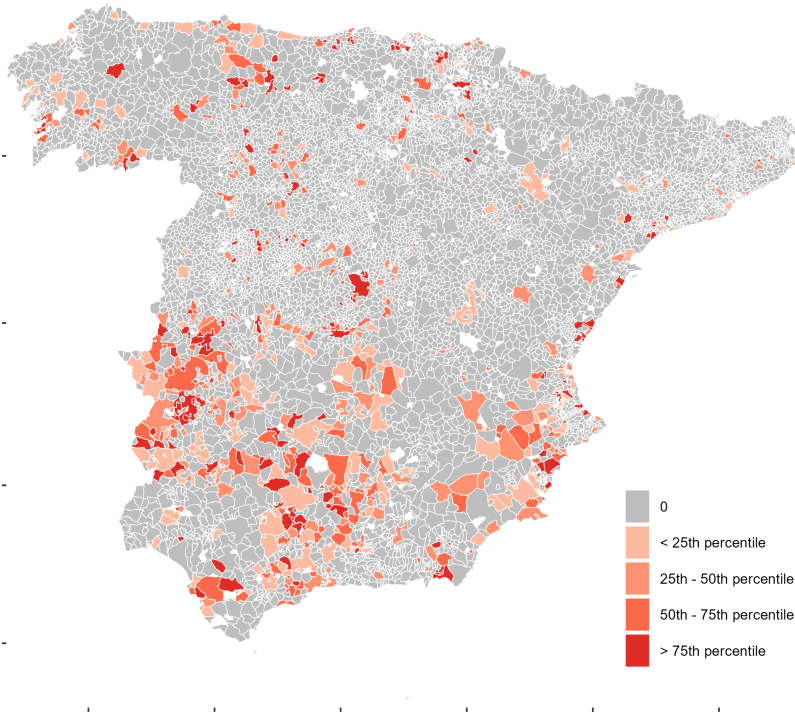


Figure 3. Members of labor organizations per capita in 1920.

Appendix summarizes the main variables included in the analyses.

Taken together, the inclusion of these indicators allow me to test the electoral legacies of early organized labor and under what conditions their relevance is stronger or weaker.

Empirical strategy

I first run linear regressions with province-level fixed effects to analyze the long-term relationship between early labor mobilization and leftist vote in 1977.⁹ To improve balance on observed covariates and make credible comparisons between municipalities with and without a labor heritage, I also use Propensity Score Matching (PSM) procedures (Austin 2011). To address potential endogeneity in early labor mobilization and mitigate measurement error, I instrument local labor presence with the share of industrial workers in 1887 at the district (*partido judicial*) level. This strategy exploits variation in early industrialization across districts, which is less likely to be driven by municipal characteristics (i.e., local elites and policy implementation).¹⁰ Lastly, I extend the analysis to post-1977 general elections (1979–2019), perform multiple robustness checks, rule out alternative channels, and test for spatial auto-correlation. Overall, findings confirm consistently the main hypotheses of this article.

⁹Geographic fixed effects are standard in persistence research when pre-treatment borders are exogenous (Homola et al 2024; Pepinsky et al 2024). I then use provinces, stable since 1833, rather than autonomous communities, established by the 1978 Spanish Constitution.

¹⁰This is conceptually similar to the shift-share instruments elaborated by Autor et al (2013).

Baseline findings

Baseline results for the association between labor organizations and 1977 left-wing electoral support are presented in Table 1. To evaluate coefficient stability, I report sequential covariate inclusion: model (1) starts only with labor mobilization and province fixed effects, model (2) adds geographical controls, model (3) includes historical pre-treatment covariates, and model (4) further incorporates contemporary controls. The positive association between pre-1920 local labor organizations and leftist voting holds across the four models, even after controlling for geographical, historical, and contemporary factors. Since the main independent variables are logged, coefficients are semi-elasticities: a 10 per cent increase in the membership-based indicator corresponds to a 0.07 percentage-point increase in left support (model 4), whereas a 10 per cent increase in labor associational density is associated with a 0.31 percentage-point gain (model 4 in Table C1 in the Appendix).

Substantively, moving from no members to the 95th percentile of membership density raises left support by about 2.7 percentage points, representing a 12 per cent growth relative to the mean (see Table B1 for summary statistics).¹¹ Similarly, moving from no labor organizations to the 90th percentile in organizational density is associated with an increase of about 2 points, equivalent to a 9 per cent growth relative to the mean.¹² Controls behave as expected: population size is positively correlated with left-wing support in the 1977 elections, while the opposite is true for right-wing voting (also shown in Table C2 in the Appendix), consistent with the tendency of older voters to support conservative parties (Sánchez-García et al 2025). These findings are robust to alternative specifications of the key independent variables and to controls for the impact of wartime violence (see Tables C3 and C4 in the Appendix).

I further examine the influence of unobserved confounders using the methodology proposed by Oster (2019) in Table C5 in the Appendix. I implement this both for models with only geographic and other pre-treatment controls and for models including potential contemporary covariates. In both cases, the long-run association between early labor mobilization and left-wing electoral support in 1977 remains positive, although smaller in magnitude. Even under sweeping socioeconomic transformations and political dislocations, early labor mobilizations leaves a positive imprint on contemporary voting patterns.

Table 1. Early labor mobilization and support for the Left in 1977

	(1)	(2)	(3)	(4)
Members of labor orgs. per capita (log)	0.020** (0.002)	0.017** (0.002)	0.008** (0.002)	0.007** (0.002)
Province FE	✓	✓	✓	✓
Geographical controls		✓	✓	✓
Historical controls			✓	✓
Contemporary controls				✓
Mean DV	0.224	0.223	0.225	0.225
N	7878	7829	7616	7615
R ²	0.03	0.10	0.16	0.21

Notes: ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

¹¹Since 90 per cent of municipalities report no members of labor organizations, I employ the 95th percentile.

¹²These may represent lower bounds, given that labor organizations were generally underrepresented, as explained previously.

Robustness checks

I carry out a series of additional analyses to strengthen the validity of these findings. First, early organized labor is negatively correlated with right-wing voting in 1977 (Table C2 in the Appendix). Second, post-Civil War sorting derived from migration of left-leaning individuals to urban areas could be biasing the findings. Nevertheless, excluding municipalities under 1000 inhabitants and all provincial capitals, those most affected by internal migration between 1950 and 1980 (Gisbert et al 2015), does not affect the results (see Table C6).

Figure C1 in the Appendix tracks the evolution of this relationship across subsequent elections, showing that it decays markedly over time. The membership-based variable (triangles) exhibits a strong association with left-wing voting until the early post-transition elections but becomes substantially small and statistically indistinguishable from zero in later elections. By contrast, labor organizational density in 1916 (circles) predicts left voting through the 1990s and early 2000s before similarly converging toward zero. This temporal pattern is consistent with the interpretation that the founding democratic elections reactivated historically rooted political loyalties, during which expressive voting prevailed over instrumental considerations (Rodon 2024). The progressive decline of labor legacies suggests that these trajectories were reshaped by the emergence of new political cleavages and socioeconomic transformations.

Municipalities with a labor heritage were, on average, larger, more economically developed, and better connected already in 1900 (Figure C2 in the Appendix), reflecting the inclusion of both large industrial cities and highly isolated rural villages in the analyses. To address the influence of these pre-conditions, I therefore use Propensity Score Matching (PSM) through nearest-neighbor matching (caliper 0.1) based exclusively on pre-1920 covariates and subsequently estimate regressions with matched-pair fixed effects in Table C7. This restricts the comparison to each municipality with labor heritage and its closest historical counterfactual, which explains why the sample size shrinks considerably.

As shown in Table C7, early labor mobilization remains positive and statistically significant: conditional on baseline characteristics, municipalities with early organized labor have a left-wing vote share about 4–6 percentage points higher than their matched counterparts, corresponding to roughly 15–18 per cent of the mean left vote share in the matched sample.

To mitigate under-reporting in historical sources, especially in anarcho-syndicalist strongholds like Andalusia and Catalonia (Arenas and Lara 1970; Arnabat Mata 2019), I complement the baseline analyses with an instrumental-variable strategy. More precisely, I instrument municipal-level early labor mobilization, measured in 1920, with the district-level share of industrial and craft workers in 1887.¹³ This period predates the consolidation of labor organizations analyzed in this paper (see Figure B2) and thus captures pre-existing district-level industrial characteristics that shaped the emergence of labor organizations, rather than early organized labor itself.

The first stage denotes a relatively strong association between the district-share of industrial and craft workers and early labor mobilization, with a Kleibergen-Paap rk Wald F-statistic well above conventional thresholds for instrument strength (F-statistic equals 19.22 or 18.18 in Table 2). At the same time, the validity of this strategy relies on demanding identifying assumptions that merit careful consideration. The exclusion restriction would be violated if district-level industrialization in 1887 had any persistent effects on 1977 voting through channels other than labor organizations (Angrist and Krueger 2001). I therefore include a set of controls aimed at addressing some plausible alternative pathways.

First, I account for long-term economic development and population dynamics with population size in 1900 and 1975, and population growth between 1920 and 1975, capturing long-standing differences in urbanization and local economic trajectories. Second, I address potential connectivity advantages of early industrial centers by including distance to the nearest railroad in 1900 and

¹³This includes population aged 21–40 employed in manufacturing and mining industries and in arts and crafts.

railroad density in 1979. Third, I use illiteracy rates in 1900 to account for differences in educational attainment and political awareness that could independently shape electoral behavior in the long run. Combined with Spain's turbulent political history and major structural transformations since the late nineteenth century, these controls substantially narrow the set of plausible violations of the exclusion restriction by addressing observable and empirically tractable alternative pathways. Still, the controls cannot rule out more diffuse channels that are difficult to observe directly, such as unobserved elite strategies or the persistence and transmission of class identities within families or communities.

Columns 2 and 3 in Table 2 report the second-stage estimates. The coefficients are positive and statistically significant, and broadly consistent with the baseline findings. The estimated association between early organized labor and 1977 leftist voting is larger than in OLS specification, a pattern that is well understood in IV designs (Becker 2016, p.6) and commonly documented in the historical persistence literature (Acharya et al 2016b; Alesina et al 2013; Nunn and Wantchekon 2011). Given the strong assumptions required for causal interpretation, these findings should be read as complementary evidence in favor of the long-run association, rather than as causal effects. As can be seen in Table C8 in the Appendix, these findings remain consistent when a logged measure of labor organizational density is employed instead.

Table 2. Instrumental Variable estimates of labor mobilization on 1977 left vote

	1st stage	2nd stage	
	Members of labor orgs. per capita (log)	Leftist vote (1977)	
Share of industrial and craft workers 1887	0.020** (0.005)		
Members of labor orgs. per capita (log)		0.083** (0.030)	0.083** (0.028)
Geographical controls	✓	✓	✓
Historical controls	✓	✓	✓
Contemporary controls	✓	✓	✓
Province fixed effects	✓	✓	✓
SEs clustered by	Province	Province	District
Kleibergen–Paap rk Wald F		19.22	18.18
Mean DV		0.225	0.225
N	7474	7471	7471

Notes: Standard errors in parentheses. All specifications include the full set of geographical, historical, and contemporary controls. Kleibergen–Paap rk Wald F-statistics are cluster-robust.

* $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Another frequent concern in legacies studies is spatial dependence (Abad and Maurer 2021; Cirone and Pepinsky 2022). In the context of this article, such is a plausible explanation as individuals and organizations often engaged in activities and actions beyond their own municipalities (Arnabat Mata 2019) and leftist vote in Spain has proven to be highly persistent (Domènech and Sánchez-Cuenca 2022; Maravall 1982; Villamil 2021). Further, workplaces and community networks often connected individuals and facilitated the diffusion of labor traditions and collective identities across neighboring municipalities and beyond (Vega 2013; Ysàs 2008). This may therefore bias standard regression estimates, making spatial models necessary.

To diagnose this, I test for spatial autocorrelation using Moran's I statistics, the most widely used statistic to detect spatial autocorrelation (Kelly 2019). Based on a Queen contiguity matrix, Moran's I indicates a moderate spatial dependence in both labor organizations (0.20 for the log

membership-based indicator of labor organizations and 0.26 for the log density of labor organizations) and modern-day left vote (Moran's I statistic equals 0.49), with p-values below 0.001. OLS residual tests and Lagrange Multiplier diagnostics further evidence spatial dependence in the OLS models, especially in left-wing voting.

Table 3 accordingly reports results from spatial autoregressive (SAR) models to control for spillovers in the dependent variable, as well as from the more general spatial autoregressive combined (SAC) specification, which additionally accounts for spatially correlated errors. All specifications yield positive and significant coefficients for the membership-based indicator, including those with province fixed effects (columns 2 and 4). Results likewise hold when using labor organizational density (Table C9 in the Appendix).

Table 3. Spatial models on early labor mobilization and 1977 leftist support

	(1)	(2)	(3)	(4)
	SAR	SAR	SAC	SAC
Members of labor orgs. per capita (log)	0.007** (0.001)	0.006** (0.001)	0.002* (0.001)	0.006** (0.001)
Province FE		✓		✓
Geographic controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls	✓	✓	✓	✓
Mean DV	0.225	0.225	0.225	0.225
N	7610	7610	7610	7610

Notes: Geographical, historical, and contemporary controls not shown; asymptotic SEs. ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Complementary analyses

Another recurrent criticism made to legacy studies is the absence of intermediate evidence (Abad and Maurer 2021; Cirone and Pepinsky 2022). In Spain, this is especially important given the dramatic transformations occurring between 1920 and 1977. I thus analyze the 1936 general elections, held months before the outbreak of the Spanish Civil War, amid intense sociopolitical tensions. Table C10 show a positive association between early labor organizations (models 1-2) and Popular front support, while employers' organizations correlate negatively in columns 3 and 4.¹⁴ Overall, these results strengthen the long-term patterns discussed in previous sections.

Because sociopolitical mobilization during the Second Republic was nurtured in the previous decades (Arenas and Lara 1970; Prieto 1993), I follow Acharya et al (2016a)'s sequential g-estimation method, which helps determine whether baseline findings are mediated or canceled out by successive waves of mobilization. Panel A in Table C11 includes an indicator of labor mobilization during the Second Republic, measured by membership in the main socialist trade union at the time- the UGT.¹⁵ The coefficients on the two measures of early labor mobilization remain highly significant in columns 1 and 3 of Table C11, though reduced in magnitude. Given the potential for post-treatment bias, estimates from sequential g-estimation are reported in columns 2 and 4. As shown in these models, labor mobilization during the Second Republic has a negligible role in mediating the long-term association between pre-1920 labor mobilization and 1977 left vote.

Panel B of Table C11 turns to leftist electoral support in 1936, a well-established predictor of 1977 leftist vote (Balcells 2012; Maravall 1982; Rodon 2024). The results suggest that previous

¹⁴List of parties conforming the Popular Front in Table B3.

¹⁵I replicate the analysis for the period's principal anarchist trade union, the CNT, and results remain the same.

electoral support partly mediates the long-term relationship between pre-1920 labor mobilization and 1977 leftist voting. After accounting for 1936 leftist vote through sequential g-estimation, the membership-based measure of early organized labor becomes statistically insignificant (column 4, Panel B). Given the substantial reduction in sample size (from 7,005 to 5,232 observations) due to limited data availability on 1936 elections, it is unclear to what extent this null finding reflects genuine mediation versus reduced statistical power. Consequently, this non-significance should be interpreted with caution. Yet even if 1936 voting patterns mediate the long-term association analyzed in this paper, this would not undermine the broader argument regarding the contextual conditions under which this relationship persists until the democratic transition.

To test whether left parties could draw on other political traditions, I proceed in two steps. First, I conduct a series of regression analyses for both left-wing and right-wing parties, incorporating two measures of employers' associational density.¹⁶ Though employers' organizations were notably heterogeneous due to historical regional variation in land ownership structures (Beltrán Tapia et al 2021), they were more prevalent in areas where right-wing parties and the Catholic Church were organizationally stronger (Aguilar et al 2025). Figure C3 in the Appendix shows that employers' organizations behave as expected: they are positively associated with right-wing parties and negatively correlated with left-wing ones. Overall, left-wing parties seem to leverage the legacies of labor organizations, rather than drawing from a broader spectrum of associations.

Second, one could argue that municipalities with higher levels of labor mobilization might have had a predisposition towards sociability and collective organization. To assess this possibility, I incorporate two additional variables into the main models: the presence of patriotic liberal clubs during the 1820-1823 Liberal Triennium, and the existence of informal sociability spaces (e.g., theaters, circuses, bullrings, etc.) in 1862. Modeled after the political clubs of the French Revolution, patriotic clubs functioned as open forums for political discussions. Their primary objective was to consolidate the liberal regime by exercising the rights of assembly and association, thereby shaping the early stages of labor mobilization in Spain (Gil Novales 1975).¹⁷ Similarly, informal sociability spaces, such as cafes, theaters, and circuses, may represent an additional historical driver of leftist voting, as they were key in diffusing political ideas throughout the nineteenth century (Ridgwell 2025; Scott 1998). Results, presented in Table C12 in the Appendix, show that the inclusion of these two measures of alternative pre-labor sociability does not alter previous findings.¹⁸

How legacies vary

How are labor legacies shaped by later developments of history? I have argued that historical transmission can be severely affected by the stability or evolution of the local context, with socioeconomic development playing a central role. To investigate this, I digitized data from provincial yearbooks published by the Spanish Statistical Office since the late 1950s. They provide extensive information on provinces' territorial, demographic, cultural, and socioeconomic characteristics at the local level, though only for select years and Spanish provinces. For this reason, I am able to analyze municipalities in only 12 out of the total 50 Spanish provinces (see Figure D1 in the Appendix).

Within this subsample, I thus proxy local socioeconomic development with municipal budget per capita in 1958. This measure serves as an indicator of relative local fiscal capacity and broader socioeconomic conditions in the decades between early labor mobilization and the 1977 founding elections. Municipal budgets should not be interpreted as an exogenous measure of economic development, and one could argue that they were susceptible to political manipulation. Yet specialized literature

¹⁶Data come from the same censuses of associations compiled by the *Instituto de Reformas Sociales*.

¹⁷For instance, in September 1840, Barcelona's mutual aid society for weavers formally joined the city's patriotic society (Gil Novales 1975, p.8).

¹⁸The negative coefficient on patriotic clubs could be explained by the fact that they were mainly dominated by moderate liberal elites (Gil Novales 1975). Similarly, informal sociability sites may have served as leisure spaces in which social interaction remained detached from political issues.

emphasizes that the fiscal autonomy of local councils was highly limited under Franco's regime as it sought to prevent the emergence of autonomous centers of local power, considered a central source of instability during the Restoration regime and the Second Republic. As Cobo and Ortega (2005, p.5) and González Madrid (2010, p. 47) demonstrate, this objective was pursued primarily through the maintenance of uniformly constrained and centrally imposed budgets rather than through targeted political rewards or punishments. While this does not fully rule out the possibility that local variation in budget per capita was a product of political manipulation, it suggests that this variation is plausibly associated with differences in local socioeconomic context and administrative capacity.

Table 4. Early labor movement on 1977 leftist support conditioned by 1958 socioeconomic development

	(1)	(2)	(3)
Members of labor orgs. (log)	0.010** (0.003)	0.010** (0.003)	0.082** (0.026)
Municipal budget per capita 1958 (log)		-0.001 (0.010)	0.009 (0.011)
Members of labor orgs x budget per capita			-0.014* (0.005)
Province FE	✓	✓	✓
Geographical controls	✓	✓	✓
Historical controls	✓	✓	✓
Contemporary controls	✓	✓	✓
Mean DV	0.245	0.245	0.245
N	1808	1808	1808
R^2	0.22	0.22	0.22

Notes: ⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{**} $p < 0.01$. OLS regressions. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table 4 accordingly examines whether the strength of the association between early organized labor and left-wing voting differs across levels of socioeconomic development. Column (1) reports the baseline estimates in this subsample of 12 provinces, showing that early labor mobilization remains positively and statistically significant. In column (3), this association varies with local development by interacting labor mobilization with logged municipal budget per capita in 1958. While the main coefficient remains positive, the interaction term becomes negative and statistically significant, indicating that the weight of labor legacies declines as municipalities become more developed. Figure 4 visualizes this heterogeneity. The long-term association is substantially stronger in municipalities with lower levels of municipal budget per capita and weaker in more developed places. Although the relationship remains positive across most levels of the local socioeconomic indicator, it is clearly attenuated at higher levels of development. These findings are also robust to using labor organizational density (Table D1 and Figure D2) and to the inclusion of province subdivisions (*comarcas*) fixed-effects (Figure D3).

In the Appendix, I conduct several robustness checks. First, I confirm these long-term voting patterns showing that development also conditions the relationship between early labor mobilization and right-wing voting (Figure D4 in the Appendix). In this case, the negative association likewise attenuates in wealthier municipalities. Second, to examine whether these patterns extend beyond the subsample, I leverage the full sample by employing logged population change from 1920 to 1975 as an imperfect proxy for local socioeconomic development.¹⁹ While these results are less conclusive, they generally point in the same direction (see Table D2 and Figure D5).

¹⁹Results remain consistent when using different time periods: 1910–1975, 1910–1980, and 1920–1980

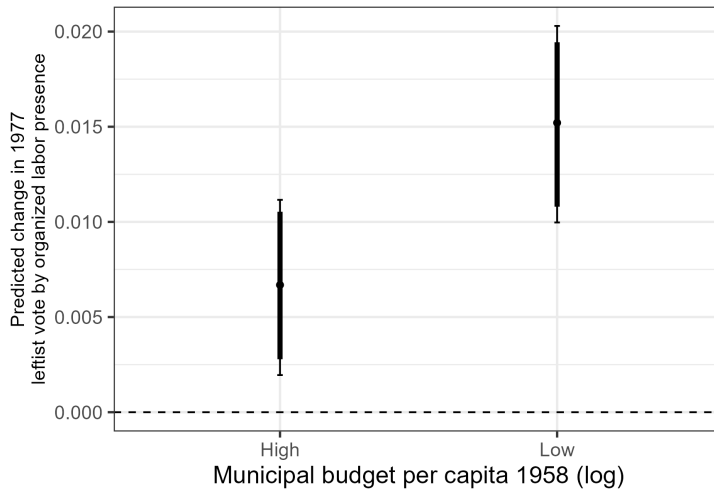


Figure 4. Early labor mobilization and left-wing support in 1977 conditional on municipal budget.

Note: Estimates report model-implied conditional marginal effects of early mobilization based on Table 4. Low represents the 25th percentile, while High corresponds to the 75th percentile of municipal budget per capita. Confidence intervals are obtained via coefficient simulation.

Taken together, the evidence suggests that later socioeconomic development weakens the legacies of early labor mobilization on contemporary voting. While such developments do not eliminate labor legacies altogether, more dynamic local contexts appear to soften their influence. This is fully compatible with the argument that historical persistence is contingent on local socioeconomic stability and on the durability of traditional socialization networks operating at the local level.

Qualitative evidence on inter-generational transmission

Legacies are stronger *where* the local context remains relatively stable over time. Yet the question of *how* they were passed down remains underexplored. This section draws on both secondary sources and original qualitative evidence to illustrate how labor identities were primarily transmitted through family- and community-based socialization during the Franco regime. It also sheds light on the role of memory institutionalization and patrimonialization following the closure of operating mines and steel companies.

In the absence of organizational continuity and amid systematic repression, labor identities survived through family transmission, class-based solidarity, and neighborhood networks. The effectiveness of these channels, however, was not uniform but contingent on broader contextual conditions (Pérez 2001, pp. 188–191; Vega 2008, p. 192). In places like the metropolitan areas of Madrid and Barcelona, large-scale migration and social heterogeneity diluted established community networks and weakened transmission.²⁰ Conversely, this labor heritage proved stronger in several regions across Asturias, the Basque Country, and southern Andalusia, where strong pre-Civil War labor traditions coincided with relatively stable local contexts. In these settings, families were embedded within homogeneous communities with shared identities, thereby reinforcing the transmission of leftist political orientations. This mirrors Charnysh and Peisakhin (2022), who demonstrate that political identities are most likely to persist when families are surrounded by like-minded communities.

In the mining valleys of Asturias, Vega (2014) finds that prewar class-based memories and identities were transmitted through shared values and practices that required little formal organization, with

²⁰Political traditions also persisted in urban areas, especially where migrants from similar geographical backgrounds settled together (Domènech 2012; Vega 2008).

families and informal networks among co-workers and neighbors as central venues of memory-sharing and mutual support. In Bilbao's industrial towns, Pérez (2005) notes that multi-generational socialist families played a key role in preserving ideological continuity, whereas factories and bars facilitated the interaction between older militants and younger leaders. On top of the formative impact of prewar memories, Domènech (2012) emphasizes the transfer of practical knowledge and political traditions across neighborhoods and factory floors, which a new generation of workers could draw upon to confront new struggles.

Overall, Francoism failed to eradicate class identities in areas with both strong labor traditions and stable contexts. At the same time, these studies leave both the democratic era and more institutionalized mechanisms largely overlooked. To trace this process into the democratic era, I focus on the Nalon Valley in Asturias, where these favorable conditions for persistence converged.

Beginning in the late 18th century, the rise of the steel and coal mining industries engendered a working-class that became rapidly imbued by socialist and anarcho-syndicalist ideologies (Shubert 1987, p. 108; Vega 2014, p. 228), culminating in the region's central role during the 1934 October Revolution (Shubert 1987, p.5). Despite harsh Francoist repression and a 97 per cent decline in coal employment since 1990 (MITyC 2020), leftist electoral support across the five valley municipalities remained 10 per cent higher (46,35 per cent) than the national average (36,73 per cent) between 1977 and 2019. Notably, even in the context of a Just Transition Agreement (JTA), mining communities continued to support the Spanish Socialist Party in the 2019 general elections (Bolet et al 2024). This contrasts with other cases where coal phase-out has been related to reduced voting intention and political interest in former UK mining communities (Abreu and Jones 2021), increased Republican vote in the US (Egli et al 2022), and declining electoral support for the SPD in Germany (Stutzmann 2025).

This mining past is preserved through institutionalization in museums, monuments, and local cultural expressions. In the Nalon Valley alone, three museums are devoted to interpreting its more recent history: the Samuño Valley Mining Ecomuseum, located in the parish of Ciaño within the municipality of Langreo; the Steelworks Museum (MUSI), situated in La Felguera, also in Langreo; and the Mining Museum (MUMI), located in San Martín del Rey Aurelio. All house original mining equipment and offer access to underground galleries, where visitors experience the environment that shaped miners' identity and consciousness. Consistent with historical evidence documenting their key role in fostering protest (Vega 2014, p.234), the tours at both the Mining Museum and the Ecomuseum include visits to the bath houses, where workers not only prepared for their shifts but also organized collective action. Through school programs and guided visits, these institutions facilitate first-hand knowledge of local history and its transmission to younger generations.

Local monuments serve as another channel for the transmission of memory (Ochsner and Roesel 2024). In Langreo, a monument with a commemorative plaque dedicated to mining workers stands prominently in a public park (Figure E1 in the Appendix). Across the Nalon valley, in Mieres, two monuments reinforce this legacy, embedding this mining heritage in everyday life. The first statue, the "Monument to the Retired Miner", depicts an older miner handing his lamp to a younger successor, symbolizing intergenerational transfer of identity. The second, the "International Monument to the Miner", erected to commemorate all miners who lost their lives underground, was inaugurated following a mining tragedy in 1995 in the same municipality (Figures E2 and E3, respectively).

Cultural traditions further reinforce this legacy. Each year on December 4th, the feast day of Santa Barbara, patron saint of miners, the International Monument to the Miner becomes the centerpiece of a gathering organized by a local miners' association, attracting major trade unions and political representatives.²¹ Similarly, the Mine Timbering Competition, held annually since the 1940s in Sama de Langreo and supported by public funding, continue to sustain this legacy (El Comercio

²¹ In 2024, the regional socialist president, himself a native of the Nalon Valley, attended and publicly reaffirmed the mining identity of Asturias. See: actualidad.asturias.es/...

2024). Comparable practices exist both in Spain (Ahora León 2025) and internationally, including the Durham Miners' Gala in northeast England (Tomaney 2020), or the Miners' Parade in Saxony, formally recognized as Germany's intangible cultural heritage (German Commission for UNESCO 2016).

The qualitative evidence from the Nalon Valley illuminates how the past becomes embedded in local memory and identity through the interaction of informal socialization mechanisms and institutionalized forms of collective memory. Families and dense local networks operated as the primary channels through which political identities were transmitted, while institutional practices and cultural expressions, such as the conversion of old mines into museums, commemorative monuments, and annual traditions, publicly consolidated and reinforced this heritage (Halbwachs 1992). These "sites of memory" (Nora 1989) not only materialize the past, but also reproduce deep-seated political orientations. Far from functioning as a mere repository of history, heritage is a way for communities to assert and articulate their attitudes, identities, and values in the present (Smith 2006).

In sum, the legacies of early labor mobilization are more likely to persist in settings where intergenerational transmission through families and communities is facilitated by stable local contexts and the institutionalization of heritage. Whereas the quantitative findings delineate the structural or contextual conditions under which legacies are most likely to persist, the qualitative evidence elucidates how they have been actively sustained over time.

Conclusions

Organized labor constituted a defining feature of political life throughout much of the twentieth century. The long shadow of late-19th and early-20th century labor mobilization on most Western European political regimes and party systems is a well-established finding (Bartolini and Mair 1990; Bartolini 2000; Lipset and Rokkan 1967). Using newly assembled municipal-level data on early labor mobilization, this article also documents a robust association between pre-1920 organized labor and electoral behavior at the local level in Spain, persisting even through profound regime changes, organizational rupture, and socioeconomic transformations. In municipalities where the labor movement had a foothold in the early twentieth century, the political left remained stronger in 1977. Although this relationship remains meaningful several decades later, it weakens over time—a finding that, according to Abad and Maurer (2021, p.49), contributes to the credibility of persistence studies. Importantly, early labor mobilization is negatively associated with right-wing electoral support, whereas alternative forms of local organizations appear to have no influence on leftist support.

Labor organizations were not only central to the enfranchisement and sociopolitical mobilization of the working classes, but also became central agents of socialization and value transmission. At the same time, their long-term imprint varies across local contexts: in more socioeconomically developed municipalities, the relationship between early labor mobilization and leftist vote is certainly attenuated, but not fully overwritten. These findings thus indicate that the relative importance of legacies is heterogeneous and contingent upon long-term socioeconomic trajectories. This helps explain why leftist parties in Spain and elsewhere maintain their electoral strength in contexts marked by socioeconomic and demographic stagnation.

By clarifying the contextual conditions under which legacies exert a stronger or weaker influence on the present, the results of this study directly speak to ongoing debates on persistence. Legacies are neither uniform nor homogeneously persistent. Instead, they are fundamentally contingent, relative to later developments that could neutralize, preserve, or amplify them. In this way, the article engages with what Abad and Maurer (2021) describe as "anti-persistence" and aligns with recent work highlighting the non-monotone effect of the past (Dinas and Palaiologou 2024; Fouka and Voth 2023; Ochsner and Roesel 2024). More broadly, this article offers a framework for identifying the conditions under which historical legacies matter more or less for contemporary politics that can

be useful beyond the Spanish case, particularly in contexts characterized by political repression and sweeping long-term transformations.

Methodologically, this article combines large-N quantitative analyses with historical accounts of intergenerational transmission through families and communities, as well as through the institution-ization of heritage. While the aggregate analyses cannot directly test these micro-level transmission mechanisms, the qualitative evidence illustrates their operation in practice. Taken together, the findings provide a more nuanced understanding of the conditions under which persistence is most likely. Future work should systematically investigate this interplay between both micro- and macro-processes of transmission, paying closer attention to the relative weight of the past compared to more recent developments and to comparable cases beyond Spain.

Overall, historical persistence should be conceived not as static transmission, but as a dynamic process in which historical factors interact with contemporary forces to produce different degrees of persistence and change.

Competing Interests. The author declares no competing interests.

Ethical Standards. The research meets all ethical guidelines, including adherence to the legal requirements of the study country.

Artificial Intelligence Assistance. AI tools were used for language editing and for assistance with coding and debugging during the research and writing process. All substantive arguments, methodological choices, empirical analyses, and interpretations are the sole responsibility of the author.

References

- Abad LA and Maurer N (2021) History Never Really Says Goodbye: A Critical Review of the Persistence Literature. *Journal of Historical Political Economy* 1(1), 31–68.
- Abreu M and Jones C (2021) The Shadow of the Pithead: Understanding Social and Political Attitudes in Former Coal Mining Communities in the UK. *Applied Geography* 131, 102448.
- Acharya A, Blackwell M and Sen M (2016a) Explaining Causal Findings without Bias: Detecting and Assessing Direct Effects. *American Political Science Review* 110(3), 512–529.
- Acharya A, Blackwell M and Sen M (2016b) The Political Legacy of American Slavery. *The Journal of Politics* 78(3), 621–641.
- Aguiar P, Cuesta F de la, Sanchez-Cuenca I and Villamil F (2025) Mobilization Capacity and Violence against Local Leaders: Anticlerical Violence during the Spanish Civil War. *Comparative Political Studies* 58(7), 1319–1351.
- Ahora León (2025) *Villablino Celebra sus Fiestas de San Roque con el Tradicional Concurso de Entibadores Mineros*. Accessed July 18, 2025.
- Alesina A, Giuliano P and Nunn N (2013) On the origins of gender roles: Women and the plough. *The quarterly journal of economics* 128(2), 469–530.
- Amat F, Boix C, Muñoz J and Rodon T (2020) From Political Mobilization to Electoral Participation: Turnout in Barcelona in the 1930s. *The Journal of Politics* 82(4), 1559–1575.
- Anderson B (1991) *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.
- Angrist JD and Krueger AB (2001) Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments. *Journal of Economic Perspectives* 15(4), 69–85.
- Arenas MN de and Lara MT de (1970) *Historia del Movimiento Obrero Español*. Barcelona: Editorial Nova Terra.
- Arnabat Mata R (2019) *Asocios y Seréis Fuertes: Sociabilidades, Modernizaciones y Ciudadanías en España, 1860–1930*. Zaragoza: Prensas de la Universidad de Zaragoza.
- Arndt C and Rennwald L (2016) Union Members at the Polls in Diverse Trade Union Landscapes. *European Journal of Political Research* 55(4), 702–722.
- Austin PC (2011) An Introduction to Propensity Score Methods for Reducing the Effects of Confounding in Observational Studies. *Multivariate Behavioral Research* 46(3), 399–424.
- Autor DH, Dorn D and Hanson GH (2013) The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review* 103(6), 2121–2168.
- Balcells L (2012) The Consequences of Victimization on Political Identities: Evidence from Spain. *Politics & Society* 40(3), 311–347.

- Bartolini S and Mair P** (1990) *Identity, Competition and Electoral Availability: The Stabilisation of European Electorates 1885–1985*. Cambridge: Cambridge University Press. ISBN: 9780521382922.
- Bartolini S** (2000) *The Political Mobilization of the European Left, 1860–1980: The Class Cleavage*. Cambridge: Cambridge University Press.
- Becker SO** (2016) Using instrumental variables to establish causality. *IZA World of Labor*.
- Beltrán Tapia FJ, Díez Minguela A, Martínez-Galarraga J and Tirado-Fabregat DA** (2021) The Roots of Land Inequality in Spain. *IFGS Working Papers in Economic History* (WH).
- Boix C** (2012) El Auge de la Socialdemocracia. In *Democracia y Socialdemocracia: Homenaje a José María Maravall*. Madrid: Centro de Estudios Políticos y Constitucionales, 195–240.
- Boix C and Magyar Z** (2023) The Rise of Swedish Social Democracy. *British Journal of Political Science* 53(1), 281–296.
- Bolet D, Green F and Gonzalez-Eguino M** (2024) How to Get Coal Country to Vote for Climate Policy: The Effect of a “Just Transition Agreement” on Spanish Election Results. *American Political Science Review* 118(3), 1344–1359.
- Carr R** (2009) *España 1808–2008*. Barcelona: Ariel. ISBN: 9788434434929.
- Charnysh V and Peisakhin L** (2022) The Role of Communities in the Transmission of Political Values: Evidence from Forced Population Transfers. *British Journal of Political Science* 52(1), 238–258.
- Cirone A and Pepinsky TB** (2022) Historical Persistence. *Annual Review of Political Science* 25, 241–259.
- Cobo F and Ortega TM** (2005) Los poderes locales franquistas y la construcción de un nuevo consenso social: el caso de la Andalucía Oriental, 1936–1950. In *Memoria e historia del franquismo: V Encuentro de investigadores del franquismo*. Ediciones de la Universidad de Castilla-La Mancha, 269.
- Dinas E and Palaiologou E** (2024) Interrupted Continuities: Local History and Support for the Radical Right. *Journal of Historical Political Economy* 4(3), 391–428.
- Domènech J and Sánchez-Cuenca I** (2022) The Long Shadow of Agrarian Conflict: Agrarian Inequality and Voting in Spain. *British Journal of Political Science* 52(4), 1668–1688.
- Domènech X** (2012) La Clase Obrera bajo el Franquismo: Aproximación a sus Elementos Formativos. *Ayer* 85(1), 201–225.
- Egli F, Schmid N and Schmidt TS** (2022) Backlash to Fossil Fuel Phase-Outs: The Case of Coal Mining in US Presidential Elections. *Environmental Research Letters* 17(9), 094002.
- El Comercio** (2024) *Sama Recupera el Concurso de Entibadores Mineros que Dejó de Celebrarse en 2019*. Accessed July 18, 2025.
- Esping-Andersen G** (1990) *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
- Esteban-Oliver G and Martí-Henneberg J** (2024) The Spanish railway network, 1848–2023. *Revista de Historia Económica—Journal of Iberian and Latin American Economic History* 42(1), 153–169.
- Fouka V and Voth HJ** (2023) Collective Remembrance and Private Choice: German–Greek Conflict and Behavior in Times of Crisis. *American Political Science Review* 117(3), 851–870.
- Gavaldà A** (1989) *L'Associacionisme Agrari a Catalunya: El Model de la Societat Agrícola de Valls, 1888–1988*. Valls: Institut d'Estudis Vallencs.
- German Commission for UNESCO** (2016) National Inventory Report. Miners' Parades and Processions in Saxony. Part of the nationwide inventory of intangible cultural heritage in Germany. Bonn, Germany: German Commission for UNESCO.
- Gil Novales A** (1975) *Las sociedades patrióticas (1820–1823): las libertades de expresión y de reunión en el origen de los partidos políticos*. Madrid: Tecnos.
- Gisbert FJG, Rodríguez FR, Rodríguez PC and Pérez CA** (2015) *Cambios en la Estructura y Localización de la Población: Una Visión de Largo Plazo (1842–2011)*. Bilbao: Fundación BBVA.
- Giuliano P and Nunn N** (2021) Understanding Cultural Persistence and Change. *The Review of Economic Studies* 88(4), 1541–1581.
- González Madrid D** (2010) De los bienes de propios al principio del beneficio. Las bases tributarias de la hacienda municipal franquista, 1939–1958. *Historia del Presente* (15), 47–63.
- Gould RV** (1993) Trade Cohesion, Class Unity, and Urban Insurrection: Artisanal Activism in the Paris Commune. *American Journal of Sociology* 98(4), 721–754.
- Guereña JL** (ed) (2018) *Cultura, Ocio, Identidades: Espacios y Formas de Sociabilidad en la España de los Siglos XIX y XX*. Madrid: Biblioteca Nueva.
- Guiso L, Sapienza P and Zingales L** (2016) Long-Term Persistence. *Journal of the European Economic Association* 14(6), 1401–1436.
- Halbwachs M** (1992) *On Collective Memory*. Chicago: University of Chicago Press.
- Hedström P, Sandell R and Stern C** (2000) Mesolevel Networks and the Diffusion of Social Movements: The Case of the Swedish Social Democratic Party. *American Journal of Sociology* 106(1), 145–172.
- Homola J, Pereira MM and Tavits M** (2020) Legacies of the Third Reich: Concentration Camps and Out-Group Intolerance. *American Political Science Review* 114(2), 573–590.
- Homola J, Pereira MM and Tavits M** (2024) Fixed Effects and Post-Treatment Bias in Legacy Studies. *American Political Science Review* 118(1), 537–544.
- Kelly M** (2019) Discussion Paper. The Standard Errors of Persistence. DP13783. Centre for Economic Policy Research.
- Linz JJ** (1967) *The Party System of Spain: Past and Future*. New York: Free Press.
- Lipset SM and Rokkan S** (1967) *Cleavage Structures, Party Systems, and Voter Alignments: An Introduction*. New York: Free Press.

- Luebbert GM (1987) Social Foundations of Political Order in Interwar Europe. *World Politics* 39(4), 449–478.
- Lupu N and Peisakhin L (2017) The Legacy of Political Violence across Generations. *American Journal of Political Science* 61(4), 836–851.
- Maravall JM (1982) *The Transition to Democracy in Spain*. New York: St. Martin's Press.
- Marbach M (2024) Causal Effects, Migration, and Legacy Studies. *American Journal of Political Science* 68(4), 1447–1459.
- Marín Á (2014) El Instituto de Reformas Sociales: Origen, Evolución y Funcionamiento. *Revista Crítica de la Historia de las Relaciones Laborales y de la Política Social* (8), 7.
- Mayayo A (1995) *De Pagesos a Ciutadans: Cent Anys de Sindicalisme i Cooperativisme Agraris a Catalunya, 1893–1994*. Valencia: Editorial Afers.
- MITyC (2020) *Series de Estadísticas Mineras Anuales*. Ministerio de Industria, Turismo y Comercio.
- Mor M and Boix C (2024) Social Democracy and the Birth of Working-Class Representation in Europe. *World Politics* 76(3), 499–542.
- Motes JM de (2014) *La Economía Española en Perspectiva Histórica*. Barcelona: Pasado & Presente.
- Nora P (1989) Between Memory and History: Les Lieux de Mémoire. *Representations* (26), 7–24.
- Nunn N and Wantchekon L (2011) The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review* 101(7), 3221–3252.
- Ochsner C and Roesel F (2024) Activated History: The Case of the Turkish Sieges of Vienna. *American Economic Journal: Applied Economics* 16(3), 76–112.
- Oster E (2019) Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics* 37(2), 187–204.
- Pepinsky TB, Goodman SW and Ziller C (2024) Modeling Spatial Heterogeneity and Historical Persistence: Nazi Concentration Camps and Contemporary Intolerance. *American Political Science Review* 118(1), 519–528.
- Pérez JA (2001) *Los Años del Acero: La Transformación del Mundo Laboral en el Área Industrial del Gran Bilbao (1958–1977)*. *Trabajadores, Convenios y Conflictos*. Madrid: Biblioteca Nueva. ISBN: 9788470309694.
- Pérez JA (2005) Continuidades y Rupturas del Obrero Socialista de la Margen Izquierda Vizcaína bajo el Franquismo, 1937–1962. In *Memoria e Historia del Franquismo: V Encuentro de Investigadores del Franquismo*. Ediciones de la Universidad de Castilla-La Mancha.
- Prieto LF (1993) Represión Franquista y Desarticulación Social en Galicia: La Destrucción de la Organización Societaria Campesina, 1936–1942. *Historia Social* (15), 49–65.
- Przeworski A and Sprague J (1986) *Paper Stones: A History of Electoral Socialism*. History of Electoral Socialism. Chicago: University of Chicago Press. ISBN: 9780226684970.
- Putnam RD (1994) *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Ranger T and Hobsbawm E (1984) *The Invention of Tradition*. Cambridge: Cambridge University Press.
- Rennwald L and Pontusson J (2021) Paper Stones Revisited: Class Voting, Unionization and the Electoral Decline of the Mainstream Left. *Perspectives on Politics* 19(1), 36–54.
- Ridgwell S (2025) Radical Vic: Politics and Performance on the Popular London Stage, ca. 1820–50. *Journal of British Studies* 64, 1–22.
- Rodden JA (2019) *Why Cities Lose: The Deep Roots of the Urban-Rural Political Divide*. New York: Basic Books.
- Rodon T (2024) The Scars of Violence and Repression on Founding Elections: Evidence from Spain. *Conflict Management and Peace Science* 41(1), 47–71.
- Rozenas A, Schutte S and Zhukov Y (2017) The Political Legacy of Violence: The Long-Term Impact of Stalin's Repression in Ukraine. *The Journal of Politics* 79(4), 1147–1161.
- Rubio F (1988) Las Juntas de Reformas Sociales y el Reformismo Social en la Restauración (1900–1924). *Espacio Tiempo y Forma. Serie V, Historia Contemporánea* 1.
- Sánchez-García Á, Rodon T and Delgado-García M (2025) Where has everyone gone? Depopulation and voting behaviour in Spain. *European Journal of Political Research* 64(1), 296–319.
- Scott W (1998) *The World of the Paris Café: Sociability among the French Working Class, 1789–1914*. Baltimore: Johns Hopkins University Press.
- Shubert A (1987) *The Road to Revolution in Spain: The Coal Miners of Asturias, 1860–1934*. Urbana: University of Illinois Press.
- Smith L (2006) *Uses of Heritage*. New York: Routledge.
- Stutzmann S (2025) Asymmetric Backlash against Structural Economic Change: The Electoral Consequences of the Coal Phase-Out in Germany. *European Journal of Political Research*.
- Ternullo S (2024) Place-Based Partisanship: How Place (Re)Produces Americans' Partisan Attachments. *American Journal of Sociology* 130(2), 293–343.
- Thompson EP (1971) The Moral Economy of the English Crowd in the Eighteenth Century. *Past & Present* 50(1), 76–136.
- Tilly C (2017) From Mobilization to Revolution. In *Collective Violence, Contentious Politics, and Social Change*. New York: Routledge.
- Tomaney J (2020) After Coal: Meanings of the Durham Miners' Gala. *Frontiers in Sociology* 5(32), 1–13.
- Tusell J (2012) *Historia de España en el Siglo XX-1: Del 98 a la Proclamación de la República*. Madrid: Taurus.
- Vaquero FG (2014) Evolución de la Conflictividad Laboral Colectiva en el Franquismo y la Transición según los Datos del Ministerio de Trabajo. *Tiempo y Sociedad* (17), 53–153.

- Vega R (2008) Entre la Derrota y la Renovación Generacional: Continuidad y Ruptura en la Protesta Social. In *La España de los Cincuenta*, Mateos López A (ed). Madrid: Eneida. ISBN: 978-84-92491-04-9.
- Vega R (2013) *El Movimiento Obrero en Asturias durante el Franquismo, 1937-1977*. Oviedo: Fundación Juan Muñiz Zapico.
- Vega R (2014) Instinto de Clase y Resistencias Obreras en Asturias bajo la Dictadura Franquista. *Revista Mundos do Trabalho* 6(11), 225-252.
- Villamil F (2021) Mobilizing Memories: The Social Conditions of the Long-Term Impact of Victimization. *Journal of Peace Research* 58(3), 399-416.
- Voigtländer N and Voth HJ (2012) Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany. *The Quarterly Journal of Economics* 127(3), 1339-1392.
- Wimmer A (2023) Layered Legacies: How Multiple Histories Shaped the Attitudes of Contemporary Europeans. *Sociological Science* 10, 1-46.
- Wittenberg J (2006) *Crucibles of Political Loyalty: Church Institutions and Electoral Continuity in Hungary*. Cambridge University Press.
- Wittenberg J (2015) Conceptualizing Historical Legacies. *East European Politics and Societies* 29(2), 366-378.
- Ysàs P (2008) El Movimiento Obrero durante el Franquismo: De la Resistencia a la Movilización (1940-1975). *Cuadernos de Historia Contemporánea* 30, 165-184.

Appendix

A The *Instituto de Reformas Sociales* and its data

By the end of the nineteenth and beginning of the twentieth centuries, initial steps were taken towards creating a legal body to draft labor legislation and regulate the capital-labor conflict in Spain. First came the Social Reforms Commission, established in 1883 and operating until 1903, when the Social Reforms Institute was founded by Royal Decree. Its aim was to establish a neutral collegiate body working both as a meeting point and mediator for social conflicts between employers and workers through legislative proposals to various governments. It also undertook the inspection of workplaces and labor relations, where the Social Reform Boards played a crucial role (Marín 2014; Rubio 1988).

These Boards were established in 1900 to ensure compliance with emerging social legislation (i.e., concerning child and women work) and gained significant influence and participation from workers after a 1904 royal order clarified their constitution and norms (Rubio 1988). They were constituted in all municipalities with industry or any exploitation involving both employers and workers, and where they were requested by either party (Marín 2014). The boards comprised employers and worker representatives (usually six each with respective alternates), the local mayor as president, the parish priest, and the municipal doctor. Typically, it was the workers who requested their formation and to a lesser extent, employers and mayors sometimes promoted their creation. Finally, the Institute could also urge their establishment in industrial areas lacking them.

Eligibility for board membership required registration in any worker or employer society within the board's territorial scope. In areas without these organizations, employers and workers were convened by local authorities to elect the representative members. Elections were often manipulated or fraudulent, leading the disadvantaged party (frequently the workers) to appeal to the respective provincial governments. Common complaints included failure to notify parties in advance, exclusion of particular organizations, or inclusion of inappropriate societies, such as an employer-influenced worker organization (Rubio 1988). Disagreements over what defined a worker association were frequent, and the 'workerist' thesis eventually prevailed, hence leaving aside organizations (i.e., catholic circles and mixed societies) whose working-class character was questioned. Through their participation in these boards, both groups sought to consolidate their class and syndical hegemony within its area of operation. Elections engaged thousands of individuals, involving assemblies, candidate proposals, and negotiation between associations to secure representation (Marín 2014). Overall, they were effective to the extent that the most relevant employer and workers organizations were present, signaling their strong grip on the world of labor (Marín 2014).

Another crucial task carried out by the Institute and the local boards was the organization and

publication of labor and other social statistics: strikes, cost of living, labor market reports, industrial courts' reports, and censuses of organizations. From 1904 to 1920, the Associations section published four statistics on the local presence of organizations: the 1904 Statistics on Saving, Cooperation, and Prevision Institutions, the 1904 workers' association Statistics, the 1916 Census of Professional Associations, and the 1920 Social Electoral Census. Except the first one, the remaining three have been digitized for the first time for this article.

1904 Workers' Association Statistics

This Statistic was the first of its kind as it was the first time that public and state agencies gathered information on this issue. The procedure for the elaboration of the census was the following: a first communication was addressed to the provincial governors, asking them for a list of associations registered provided for by the 1887 Law of Associations. After this initial step, a selection process was initiated targeting associations constituted by workers, as well as those formed by members of other classes but purporting objectives of savings and cooperation. A pre-prepared questionnaire was then addressed to their respective directors, soliciting information on various details such as the name of the association, date of establishment, purpose, address, and number of members.

This census appears to be an incomplete picture of the organized labor movement at the time (Arnabat Mata 2019). Besides this, the registry maintained by regional governments lacked compulsory registration of dissolution. As a consequence of these limitations, the institute itself acknowledged that only an estimated 64 per cent of the total associations were likely obtained, and those with the highest density tended to respond less.

Table A1. Subcategories of labor organizations (1904)

	Associations	Members
Working-conditions	1150 (61.6%)	189537 (51.68%)
Mutual aid societies	310 (16.6%)	84992 (23.17%)
Cooperatives	93 (4.98%)	18333 (4.99%)
Political societies	86 (4.61%)	12193 (3.32%)
Musical and choral societies	83 (4.45%)	7340 (2.01%)
Education-recreational societies	78 (4.18%)	22278 (6.07%)
Catholic action	67 (3.59%)	32057 (8.74%)
Total	1867	366730

In any case, the criteria for the inclusion of associations as workers' societies were based on the social class of their members and the purpose of the organization. The categories of workers' associations considered are shown in Table A1, where organizations aimed at improving working conditions stand out as the most prevalent ones.

1916 Census of Professional Associations

The 1916 census was published for the renewal of the elective part of the Institute and the Social Reform Boards, capturing the number of registered associations up to June 30, 1916. On this occasion, it does not include number of members per association and data were collected directly by assistants and statistical delegates of the Institute and the general registers of the provincial governments to comply with the 1887 Law of Associations. The preamble to the census notes that it is possible that many non-professional institutions established under a different regime may have been left out of the census. Still, according to Arnabat Mata (2019), this seems to be the most complete

statistic of the time, with more than 19000 registered associations divided in different categories. By formally registering in this census, organizations were secured voting rights in the elections for the formation of the Local Boards of Social Reforms. Table A5 shows the broad types of associations whose information was gathered in 1916.

Table A2. Types of organizations (1916)

	Count	%
Workers societies	7032	36.87
Employers societies	6583	34.51
Saving, cooperation, and prevision institutions	4759	24.95
Mixed societies	548	2.87
Unclassified	151	.79
Total	19073	100

Table A3. Types of labor organizations (1916)

	Count	%
Professional trade unions	4743	67.45
Mutual aid societies	960	13.65
Cooperatives	502	7.14
Political societies	351	4.99
Education-recreational societies	335	4.76
Federations of societies	118	1.68
Savings banks	23	0.33
Total	7032	100

Table A4. Types of employer associations (1916)

	Count	%
Agricultural and rural credit unions	2537	38.54
Other agricultural and livestock societies	1645	24.99
Guilds, industrial and derived societies	1384	21.02
Irrigation communities	497	7.55
Chambers of commerce, industry, and navigation	125	1.90
Agricultural chambers	115	1.75
Mercantile and industrial circles	107	1.63
Farmers' communities	102	1.55
Economic societies of friends of the country	51	0.77
Seamen's councils	20	0.30
Total	6583	100

1920 Social Electoral List

This list is a record of employers' and workers' entities, which includes members per association, existing in October 30, 1919. These entities applied for inclusion to be granted the right to vote in the elections for representatives of employers and workers who were to form part of the Institute of Social Reforms. These elections, nevertheless, were not held until 1923. Moreover, the document includes a Regulation of the electoral system for representatives and alternates of the Social Reforms Institute.

Table A5. Associations by type (1920)

	Associations	Members
Employers' entities	2392 (54.05%)	623544 (53.01%)
Workers' entities	2033 (45.94%)	552557 (46.98%)
Total	4425	1176101

Organizations were divided into workers' and employers' entities, each of which were in turn subdivided into the same 7 broad groups: 1) mining, salt mines, quarries, and groundwater, and iron and steel factories and metallurgy; 2) metalworking; 3) textile, clothing, hat-making industries, and luxury industries; 4) transportation industries together with production and transmission of psychical forces; 5) construction industries, woodworking, and furniture manufacturing; 6) general agriculture, livestock farming, and forestry and agricultural industries; 7) food industries, and 8) chemical, electrical, and industries related to literature, sciences, and arts (together with industries not included in the previous groups). As shown in Table A6, workers' entities are more distributed across the different types compared to employers' associations, in which almost 80 per cent of organizations and members belong to agriculture-oriented groups.

Table A6. Labor organizations by type (1920)

	Organizations	Members
Unclassified	396 (19.48%)	113176 (20.48%)
Agriculture in general	325 (15.99%)	86640 (15.68%)
Commerce	164 (8.07%)	69140 (12.51%)
Construction industries	208 (10.23%)	48770 (8.83%)
Transportation industries	162 (7.97%)	50267 (9.09%)
Clothing and hat-making industries	172 (8.46%)	34499 (6.24%)
Mining, salt mines, quarries, and ground-water	149 (7.33%)	60682 (10.98%)
Food industries	94 (4.62%)	19178 (3.47%)
Woodworking	91 (4.48%)	14041 (2.54%)
Metalworking	75 (3.69%)	17450 (3.16%)
Industries related to literature, arts, and sciences	65 (3.20%)	10223 (1.85%)
Textile industries	31 (1.52%)	3521 (0.64%)
Furniture manufacturing	26 (1.28%)	6381 (1.15%)
Production and transmission of physical forces	19 (0.93%)	4280 (0.77%)
Forestry and agricultural industries	18 (0.89%)	9136 (1.65%)
Chemical industries	17 (0.84%)	1643 (0.30%)
Electrical industries	7 (0.34%)	791 (0.14%)
Luxury, watchmaking, and toyshop	7 (0.34%)	2282 (0.41%)
Livestock	7 (0.34%)	458 (0.08%)
Total	2033	552557

B Description of main variables

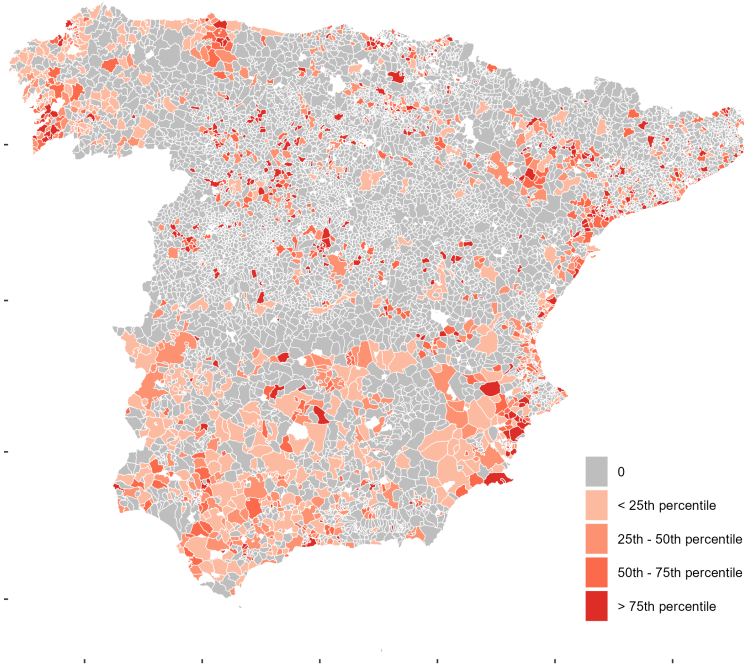


Figure B1. Labor organizations per capita in 1916.

Table B1. Municipal-level summary statistics

	Obs	Mean	Std. Dev.	Min	Max
Leftist vote 1977	7882	0.22	0.14	0.00	0.78
Population 1900 (log)	7911	7.02	1.06	4.34	13.26
Illiteracy rate 1900	7894	61.28	16.57	7.26	97.35
Distance to railroad 1900 (log)	7675	9.20	1.29	2.96	11.57
Labor orgs. per capita	7911	0.13	0.40	0.00	9.17
Labor orgs. per capita (log)	7911	0.09	0.23	0.00	2.32
Members of labor orgs. per capita	7911	6.30	28.99	0.00	787.77
Members of labor orgs. per capita (log)	7911	0.34	1.13	0.00	6.67
Municipal budget per capita 1957 (log)	1829	4.96	0.46	2.95	7.08
Distance to the coast (log)	7888	4.34	1.30	-1.02	5.88
Distance to provincial capital (log)	7879	3.67	0.67	-0.73	5.42
Roughness (log)	7856	-0.61	1.02	-6.17	2.15
Mean elevation (log)	7881	1.67	0.89	-4.61	3.18
Population 1975 (log)	7893	6.75	1.53	2.40	14.99
Population change 1920-1975 (log)	7893	-0.36	0.70	-3.56	4.93
Railroad density 1979	7890	0.05	0.13	0.00	1.82

Table B2. List of left-wing parties running in the 1977 general elections

Abbreviation	Name (English)	Name (Spanish / Catalan / Basque / Galician)
PSOE	Spanish Socialist Workers' Party	Partido Socialista Obrero Español
PCE	Communist Party of Spain	Partido Comunista de España
PSP-US	Popular Socialist Party – Socialist Unity	Partido Socialista Popular – Unidad Socialista
EC-FED	Left of Catalonia – Democratic Electoral Front	Esquerra de Catalunya – Front Electoral Democràtic
FDI	Democratic Left Front	Frente Democrático de Izquierdas
ASDCI	Democratic Socialist Alliance	Alianza Socialista Democrática
AET	Workers' Electoral Group	Agrupación Electoral de Trabajadores
EE	Basque Country Left	Euskadiko Ezkerra
FUT	Front for Workers' Unity	Frente para la Unidad de los Trabajadores
ESB	Basque Socialist Party	Euskal Sozialistak Batasuna
PSG	Galician Socialist Party	Partido Socialista Galego
BNPG	Galician National-Popular Bloc	Bloque Nacional-Popular Galego
PSOE-H	Spanish Socialist Workers' Party – Historical	Partido Socialista Obrero Español (Histórico)
CUPS	Popular Unity for Socialism Candidacy	Candidatura de Unidad Popular Socialista
CCIA	Centre Independent Aragonese Candidacy	Candidatura Aragonesa Independiente de Centro

Table B3. List of political parties running with the Popular Front alliance in the 1936 elections

Abbreviation	Name (English)	Name (Spanish / Catalan / Galician / Basque)
PSOE	Spanish Socialist Workers' Party	Partido Socialista Obrero Español
PCE	Communist Party of Spain	Partido Comunista de España
POUM	Workers' Party of Marxist Unification	Partido Obrero de Unificación Marxista
PS	Syndicalist Party	Partido Sindicalista
IR	Republican Left	Izquierda Republicana
UR	Republican Union	Unión Republicana
ERC	Republican Left of Catalonia	Esquerra Republicana de Catalunya
PG	Galicianist Party	Partido Galeguista
ANV	Basque Nationalist Action	Acción Nacionalista Vasca

Source: Aguilar et al (2025).

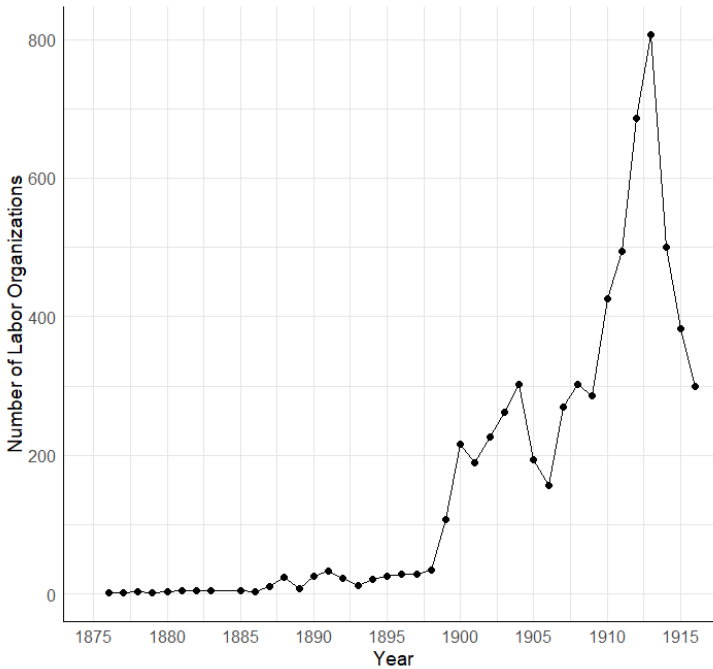


Figure B2. Creation of labor organizations per year

C Baseline results

Table C1. Early labor mobilization and support for the Left in 1977

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.094** (0.010)	0.073** (0.009)	0.043** (0.007)	0.031** (0.006)
Province FE	✓	✓	✓	✓
Geographical controls		✓	✓	✓
Historical controls			✓	✓
Contemporary controls				✓
Mean DV	0.224	0.223	0.225	0.225
N	7878	7829	7616	7615
R ²	0.03	0.09	0.16	0.21

Notes: ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table C2. Early labor mobilization and support for right-wing parties in 1977

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	-0.027** (0.006)		-0.020** (0.006)	
Members of labor orgs. per capita (log)		-0.006** (0.002)		-0.005** (0.002)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls			✓	✓
Mean DV	0.398	0.398	0.398	0.398
N	7616	7615	7616	7615
R ²	0.08	0.11	0.08	0.11

Notes: ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table C3. Early labor mobilization and support for the Left in 1977

	(1)	(2)	(3)	(4)
Labor organization (binary)	0.029** (0.005)		0.021** (0.005)	
Member of labor organization (binary)		0.028** (0.008)		0.023** (0.007)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls			✓	✓
Mean DV	0.225	0.225	0.225	0.225
N	7616	7616	7615	7615
R ²	0.16	0.15	0.21	0.21

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table C4. Early labor mobilization and support for the Left in 1977 controlling for Civil War violence

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.041** (0.007)		0.030** (0.006)	
Members of labor orgs. per capita (log)		0.008** (0.002)		0.007** (0.002)
Population change 1930-1940	0.083** (0.013)	0.083** (0.013)	-0.004 (0.015)	-0.006 (0.016)
Widowhood rate 1940	0.002 (0.001)	0.002 (0.001)	0.004** (0.001)	0.004** (0.001)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls			✓	✓
Mean DV	0.225	0.225	0.225	0.225
N	7616	7616	7615	7615
R ²	0.16	0.16	0.21	0.21

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table C5. Selection on observables and unobservables: Oster (2019)

	(1)	(2) Controlled		(3) Bounded (Oster)	
	Uncontrolled	(2a)	(2b)	(3a)	(3b)
Members of labor organizations (log)	0.020** (0.002) [0.032]	0.008** (0.002) [0.155]	0.007** (0.002) [0.208]	0.003	0.002
Labor organizational density (log)	0.094** (0.010) [0.029]	0.043** (0.007) [0.156]	0.031** (0.006) [0.207]	0.024	0.010
Geographical controls		✓	✓	✓	✓
Historical controls		✓	✓	✓	✓
Contemporary controls			✓		✓

Notes: Column (1) reports the reduced form relationship in models (1) of Tables 1 and C1. Column (2a) includes only geographic and other pre-treatment controls, whereas column (2b) additionally incorporates potential post-treatment covariates. Columns (3a) and (3b) report the corresponding bounds based on the adjustment strategy proposed by Oster (2019), obtained by setting $R_{\max} = 1.3 \times R^2$ of the controlled model and $\delta = 1$. SEs reported in parentheses. Within- R^2 is reported in square brackets. * $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Table C6. Early labor mobilization and support for the Left in 1977

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.063** (0.014)		0.048** (0.012)	
Members of labor orgs. per capita (log)		0.010** (0.002)		0.007** (0.002)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls			✓	✓
Mean DV	0.294	0.294	0.294	0.294
N	3085	3085	3085	3085
R^2	0.12	0.11	0.17	0.17

Notes: * $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province). Provincial capitals and municipalities with less than 1000 inhabitants are excluded.

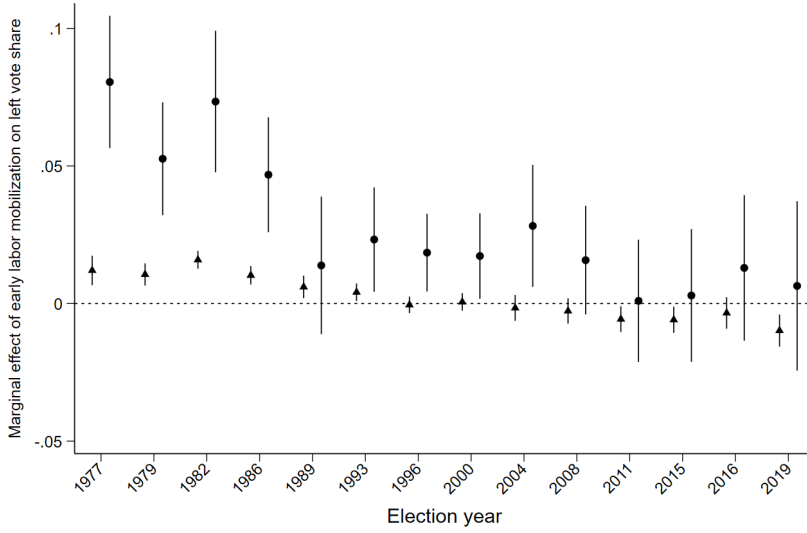


Figure C1. The attenuation of early labor mobilization’s electoral legacy.

The figure displays marginal effects (slopes) of logged early labor mobilization measures on left vote share across Spanish general elections (1977–2019). Point estimates and 95 per cent confidence intervals are from pooled regressions interacting historical labor measures with election-year indicators and including province fixed effects, geographic controls, and pre-treatment covariates; SEs are clustered at the province level. Circles represent logged labor organizations per capita in 1916 and triangles logged members of labor organizations per capita in 1920.

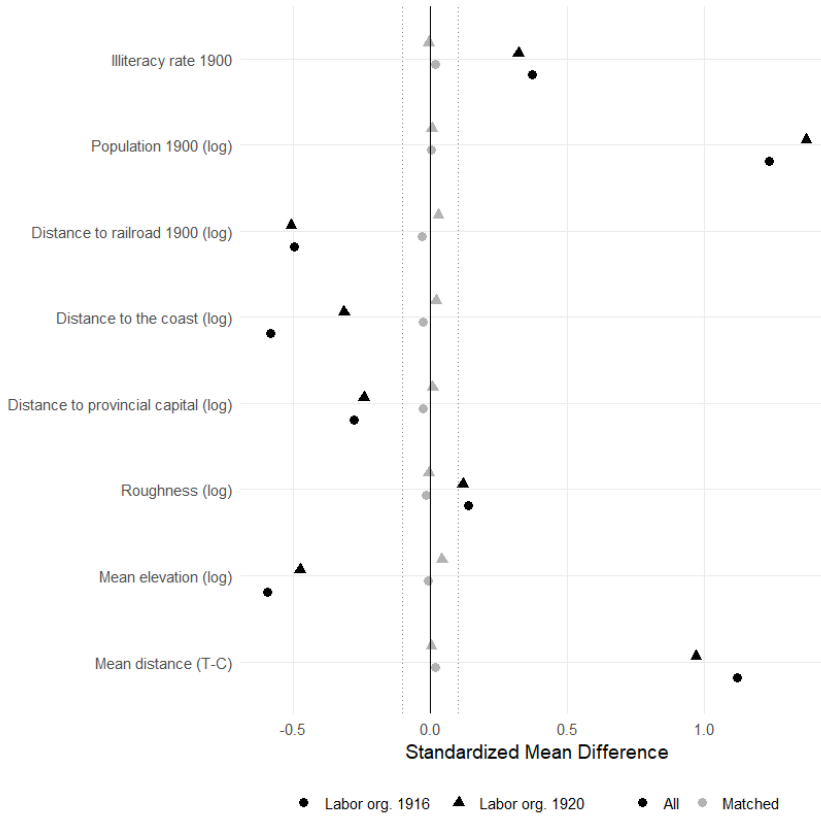


Figure C2. Balance Comparison: before and after matching. Nearest neighbor matching with a GLM for the distance measure.

Table C7. Propensity Score Matching estimates of early labor mobilization on support for the Left in 1977

	(1)	(2)	(3)	(4)
Labor orgs. (binary, 1916)	0.046** (0.008)		0.041** (0.007)	
Members of labor orgs. (binary, 1920)		0.056** (0.011)		0.054** (0.011)
Matched-pair FE	✓	✓	✓	✓
Geographical controls			✓	✓
Historical controls			✓	✓
Contemporary controls			✓	✓
N	2176	1164	2176	1164
Mean DV	0.276	0.31	0.276	0.31
Adjusted R ²	0.09	0.13	0.28	0.32

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. All models estimated on matched samples. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

Table C8. Instrumental Variable estimates of labor mobilization on 1977 left vote

	1st stage	2nd stage	
	Labor orgs. per capita (log)	Leftist vote (1977)	
Share of industrial and craft workers 1887	0.004** (0.001)		
Labor orgs. per capita (log)		0.453* (0.191)	0.453** (0.171)
Geographical controls	✓	✓	✓
Historical controls	✓	✓	✓
Contemporary controls	✓	✓	✓
Province fixed effects	✓	✓	✓
Clustering SEs	Province	Province	District
Kleibergen–Paap rk Wald F		13.69	15.49
Mean DV		0.225	0.225
N	7474	7471	7471

Notes: Standard errors in parentheses. All specifications include the full set of geographical, historical, and contemporary controls. Kleibergen–Paap rk Wald F-statistics are cluster-robust. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Table C9. Spatial models on early labor mobilization and 1977 leftist support

	(1)	(2)	(3)	(4)
	SAR	SAR	SAC	SAC
Labor orgs. per capita (log)	0.029** (0.005)	0.024** (0.005)	0.017** (0.003)	0.024** (0.006)
Province FE		✓		✓
Geographic controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls	✓	✓	✓	✓
Mean DV	0.225	0.225	0.225	0.225
N	7610	7610	7610	7610

Notes: Geographical, historical, and contemporary controls not shown; asymptotic SEs. ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Table C10. Linear models on leftist electoral support in the 1936 elections

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.061** (0.015)			
Members of labor orgs. per capita (log)		0.014** (0.003)		
Employer orgs. per capita(log)			-0.003 (0.005)	
Members of employer orgs. per capita(log)				-0.006** (0.002)
Political competition 1936	0.289** (0.068)	0.291** (0.068)	0.291** (0.068)	0.291** (0.068)
Illiteracy rate 1930	-0.005 (0.037)	-0.007 (0.037)	-0.015 (0.037)	-0.017 (0.037)
Population 1930	0.076** (0.021)	0.077** (0.021)	0.083** (0.022)	0.083** (0.022)
Population change 1920-1930	-0.036 (0.037)	-0.032 (0.037)	-0.037 (0.036)	-0.037 (0.036)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Mean DV	0.237	0.237	0.237	0.237
N	5221	5221	5221	5221
R ²	0.19	0.19	0.19	0.19

Notes: † $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS regressions. Geographical and historical controls not shown; clustered SEs (province).

Table C11. Early labor movement and leftist support, mediated by Second Republic labor mobilization and leftist vote

Panel A: Second Republic labor mobilization				
	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.025** (0.006)	0.026** (0.006)		
Members of labor orgs. per capita (log)			0.006** (0.002)	0.006** (0.002)
UGT members per capita (log)	0.006** (0.001)		0.006** (0.001)	
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls	✓	✓	✓	✓
Mean DV	0.217	0.217	0.217	0.217
Bootstrapped SEs		✓		✓
Model	OLS	Seq. g-est.	OLS	Seq. g-est
Mean DV	0.225	0.217	0.225	0.217
N	7005	7005	7005	7005
R ²	0.22		0.22	
Panel B: Second Republic leftist vote				
Labor orgs. per capita (log)	0.012+ (0.007)	0.012+ (0.007)		
Members of labor orgs. per capita (log)			0.003+ (0.001)	0.003 (0.002)
1936 leftist vote	0.22** (0.018)		0.22** (0.018)	
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls	✓	✓	✓	✓
Bootstrapped SEs		✓		✓
Model	OLS	Seq. g-est.	OLS	Seq. g-est
Mean DV	0.154	0.154	0.154	0.154
N	5232	5232	5232	5232
R ²	0.41		0.41	

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

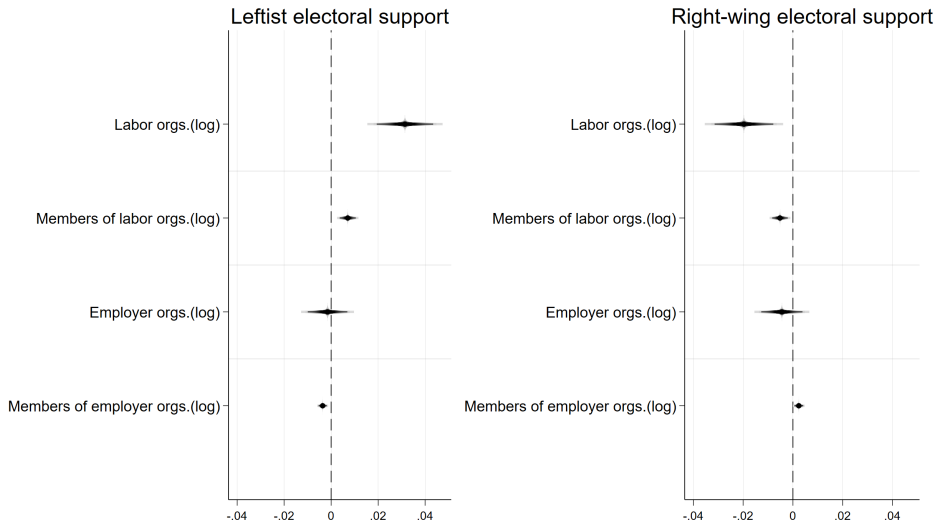


Figure C3. Voting patterns in 1977 by type of organization.

95 per cent coefficient estimates refer to province FE models with historical and contemporary controls.

Table C12. Early labor mobilization and support for the Left in 1977 with pre-treatment sociability

	(1)	(2)	(3)	(4)
Labor orgs. per capita (log)	0.045** (0.007)		0.034** (0.006)	
Members of labor orgs. per capita (log)		0.009** (0.002)		0.008** (0.002)
Informal sociability buildings 1862	-0.022* (0.009)	-0.025** (0.009)	-0.029** (0.008)	-0.031** (0.008)
Patriotic liberal clubs 1820-1823	-0.038** (0.012)	-0.040** (0.012)	-0.038** (0.011)	-0.040** (0.011)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
Contemporary controls			✓	✓
Mean DV	0.225	0.225	0.225	0.225
N	7616	7616	7615	7615

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS models. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

D Heterogeneous legacies

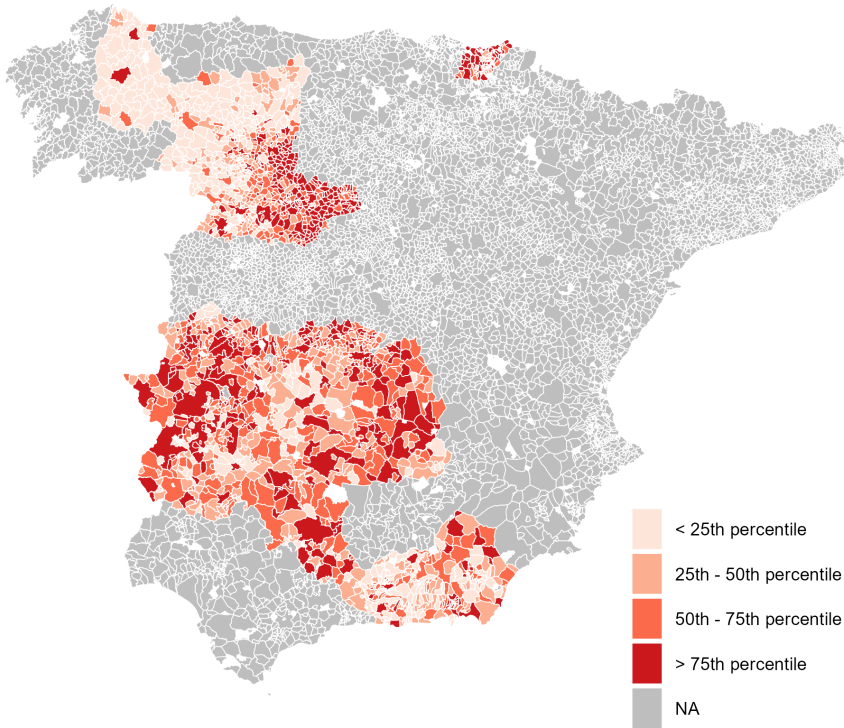


Figure D1. Distribution of municipal budget per capita in 1958.

Table D1. Early labor movement on 1977 leftist support conditioned by 1958 socioeconomic development

	(1)	(2)	(3)
Labor orgs. (log)	0.035*	0.034*	0.412*
	(0.012)	(0.012)	(0.140)
Municipal budget per capita 1958 (log)		0.001	0.007
		(0.010)	(0.010)
Labor orgs. x budget per capita			-0.074*
			(0.029)
Province FE	✓	✓	✓
Geographical controls	✓	✓	✓
Historical controls	✓	✓	✓
Contemporary controls	✓	✓	✓
Mean DV	0.245	0.245	0.245
N	1808	1808	1808
R ²	0.21	0.21	0.21

Notes: * $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS regressions. Geographical, historical, and contemporary controls not shown; clustered SEs (province).

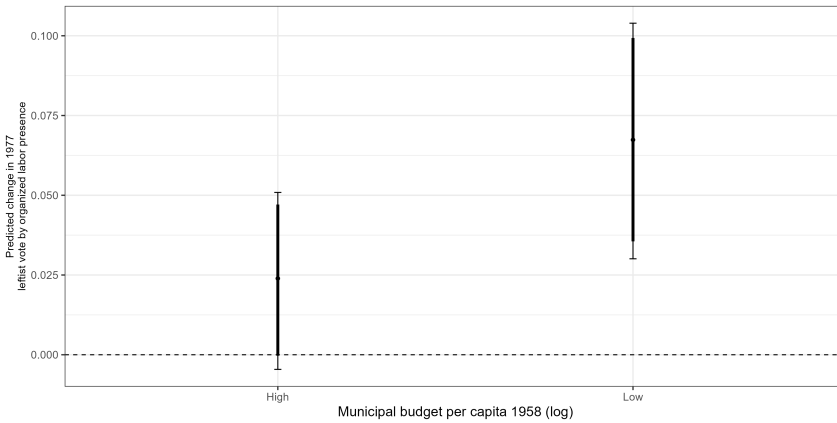


Figure D2. Early labor organizational density and left-wing support in 1977 conditional on municipal budget. Low for 25th percentile and High for 75th percentile.

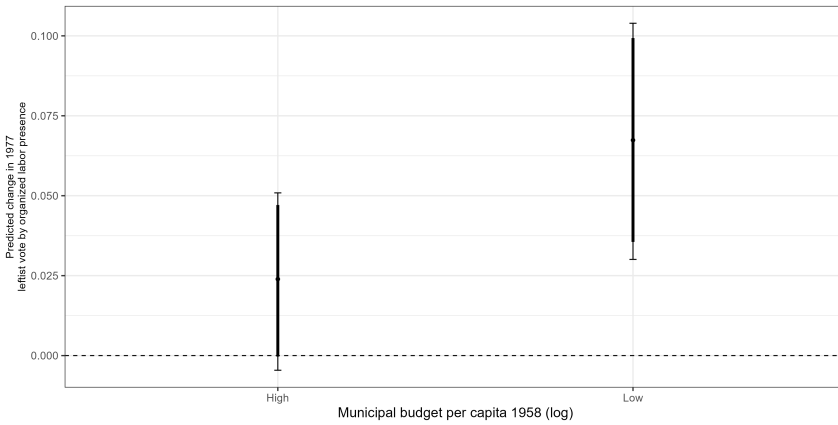


Figure D3. Early labor mobilization and left-wing support in 1977 conditional on municipal budget. "Low" for 25th percentile and "High" for 75th percentile. FE at the *comarca* level.

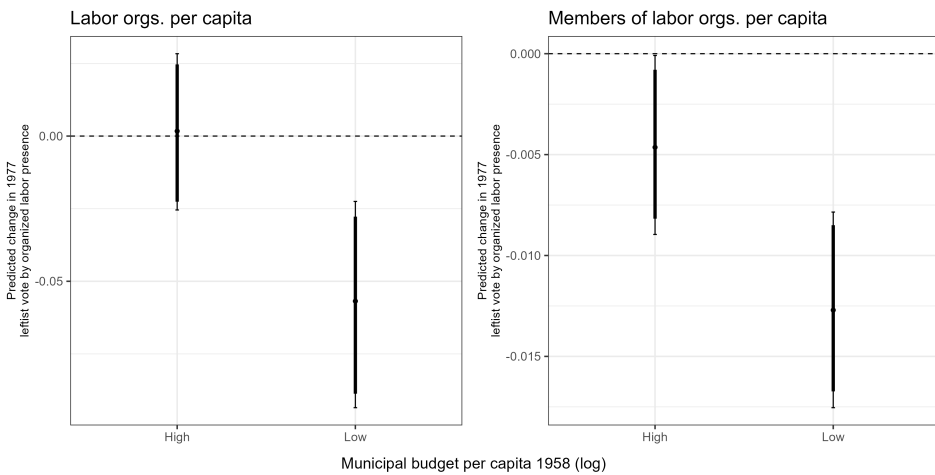


Figure D4. Early labor mobilization and right-wing support in 1977 conditional on municipal budget per capita. Low for 25th percentile and High for 75th percentile.

Table D2. Long-term transmission of early labor movement on 1977 leftist support

	(1)	(2)	(3)	(4)
Labor orgs. (log)	0.029** (0.006)		0.037** (0.007)	
Members of labor orgs. (log)		0.008** (0.002)		0.010** (0.002)
Pop. change 1920-1975 (log)	-0.021 (0.016)	0.055** (0.004)	-0.022 (0.016)	0.052** (0.004)
Railroad density 1979	0.028 (0.019)	0.034+ (0.019)	0.041+ (0.021)	0.045* (0.020)
Labor orgs. x Pop.change	-0.016+ (0.008)			
Members of labor orgs. x Pop.change		-0.008** (0.002)		
Labor orgs. x Railroad density			-0.077* (0.036)	
Members of labor orgs. x Railroad density				-0.022** (0.008)
Province FE	✓	✓	✓	✓
Geographical controls	✓	✓	✓	✓
Historical controls	✓	✓	✓	✓
N	7616	7616	7616	7616
R ²	0.21	0.21	0.21	0.20

Notes: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. OLS regressions. Logged population in 1975, geographical, and historical controls not shown; clustered SEs (province).

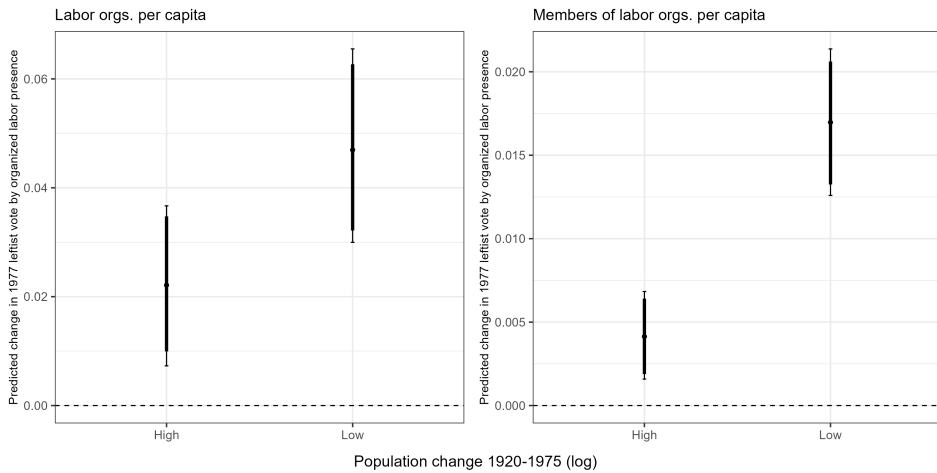


Figure D5. Early labor mobilization and leftist support in 1977 conditional on population change.
 Note: Estimates report model-implied conditional marginal effects of early mobilization based on Table D2. Low represents the 25th percentile, while High corresponds to the 75th percentile. Confidence intervals are obtained via coefficient simulation.

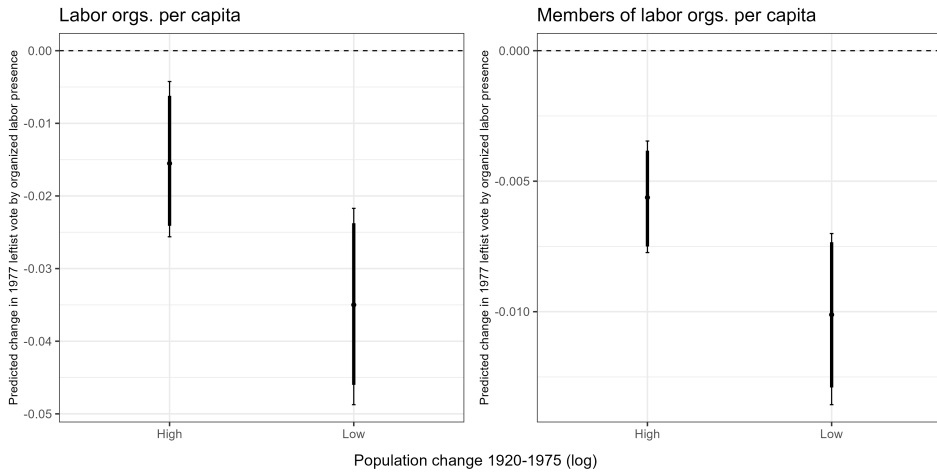


Figure D6. Early labor mobilization and right-wing support in 1977 conditional on population change. Low represents the 25th percentile, while High corresponds to the 75th percentile.

D Public commemoration of miners



Figure E1. Monument to the miner. Langreo, Asturias.



Figure E2. Monument to the Retired Miner. San Francisco de Turón, Mieres, Asturias.



Figure E3. International Monument to the Miner. Mieres, Asturias.