

**The Dual Land Registry:
Fiscal Revenue, Property Rights, and Unequal Formalisation in Spain,
1845–1932**

(Preliminary version, not for quotation)

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Abstract

This paper examines Spain's land registry from 1845 to 1932, arguing that fiscal objectives dominated its institutional design at the expense of formalising property rights. By analysing regulatory evolution, fiscal statistics, and the competing interests of the state, registrars, and landowners, we show that a fee-based, self-financing model systematically disadvantaged smallholders and regions with fragmented, low-value landholdings. The registry functioned simultaneously as a fiscal instrument, capturing transaction-based tax revenue when cadastral updating proved infeasible, and as a property-rights infrastructure, though access to the latter was highly unequal. Regional patterns confirm that registration growth was concentrated in high-value areas, reinforcing existing land market inequalities.

Keywords: Liberal revolutions, property rights, land markets, rural development, state capacity.

JEL Codes: N53, N54, K11, Q15.

1. Introduction

The Liberal revolutions that swept Continental Europe during the first half of the 19th century placed the reform of property rights at the centre of their economic programmes. Building on the legal foundations laid by the Napoleonic reforms, which had abolished feudal tenure, codified private ownership, and established the principle that property rights should be publicly registered and legally enforceable, successive liberal governments across Europe undertook to construct the institutional infrastructure that modern land and credit markets required (Rosenthal, 1992; Acemoglu et al., 2011). The land information systems that emerged from this process, cadastres designed to support taxation and registries designed to secure transactions, were central instruments of this transformation, and their design, financing, and distributional consequences varied substantially across countries (Kain & Baigent, 1992). Understanding how these institutions were built, who bore their costs, and whose property rights they effectively protected is not only a question of institutional history: it bears directly on long-run patterns of agricultural productivity, credit market development, and regional inequality (North, 1990; Deininger & Feder, 2009). This paper examines one important and hitherto neglected case: the Spanish land registry between 1845 and 1932, a period that encompasses the introduction of the fiscal cadastre, the establishment of the

property registry under the 1861 Mortgage Law, and the first sustained attempts to coordinate the two systems. We argue that fiscal objectives dominated the registry's institutional design at the expense of formalising property rights, with distributional consequences that reinforced existing inequalities in land and mortgage markets and that differed markedly from the outcomes liberal reformers had envisaged.

Two distinct types of land information systems emerged during this period. Cadastres were primarily intended to create reliable frameworks for taxation by documenting land parcels, their boundaries, and assessed values, a process Scott (1998) terms "legibility." The Napoleonic cadastre became the archetypal model, employing parcel-based geometric surveys to create equitable tax distribution (Clergeot, 2007; Kain & Baigent, 1992). Land registries, by contrast, were developed to enhance legal certainty in property transactions by providing comprehensive records of ownership rights, mortgages, easements, and other legal interests (Dale & McLaughlin, 1999). While cadastres supported taxation, registries facilitated market exchange by making property rights publicly verifiable and reducing transaction costs. The expansion of both systems across 19th-century Europe was uneven. Continental Europe generally adopted comprehensive cadastral mapping, though implementation varied significantly, and England notably resisted establishing a national cadastre throughout the period (Mayer & Pemberton, 2000). Once finalised, moreover, cadastral valuations quickly became outdated as land use and economic conditions changed, undermining their fiscal effectiveness (Kain & Baigent, 1992; Kain, 2023).

Spain provides an important case study in this context. The Spanish government introduced a fiscal cadastre known as *Amillaramientos* in 1845 and established an independent property registry in 1861, but this dual system lacked effective coordination throughout the period (García Cruz, 2018; Martínez Pérez, 2021). Unlike the Napoleonic cadastre, Spain relied on a decentralised tax assessment mechanism based on property owners' declarations rather than systematic state surveying, creating systematic vulnerability to underreporting and manipulation by local elites (Pérez Picazo, 1993; Pro Ruiz, 1993). Attempts at cadastral reform repeatedly failed due to political resistance from provincial elites who benefited from the opacity (Pérez Picazo, 1993). The registry itself operated through a distinctive institutional arrangement: decentralised, privately funded, and government-regulated, with semi-public agents, registrars and notaries, funded by user fees rather than general taxation. Registration was also linked to the collection of transaction taxes, as tax payments were required to register property transfers and mortgages. To sustain operations nationwide, fees fully covered costs, with registrars in high-volume districts effectively cross-subsidising those in low-volume areas (Pau Pedrón, 2000). This structure allowed Spain to avoid the sustainability problems observed in many contemporary developing countries (Deininger & Feder, 2009; Arruñada, 2017), but at a high distributional cost: registration costs were high and regressive, disproportionately excluding poor landowners and regions with lower-priced, fragmented plots from formal land and mortgage markets.

This study has four main objectives. First, we analyse the institutional framework of Spain's land registry from its pre-reform antecedents through the seven decades following the 1861 Mortgage Law. We show that the registry's design was shaped as much by fiscal constraint as by legal ambition. The saving option, the decision to finance the system entirely through user fees rather than public expenditure, transformed registrars into self-financing agents whose incentives systematically favoured wealthy urban districts over poor rural ones. The reform also embedded a structural tension between fiscal and juridical objectives: although reformers sought to subordinate tax collection to legal functions, the fiscal role ultimately became the institution's primary survival mechanism. A further set of anti-capture mechanisms, including centralised oversight, competitive recruitment, and mandatory rotation, succeeded in displacing old intermediaries but produced unintended costs, eroding local knowledge and potentially shifting rather than eliminating elite advantage. Together, these features produced an institutional trajectory characterised not by optimal design but by adaptive survival, a system repeatedly renegotiated in response to recurring crises whose distributional consequences reinforced existing inequalities in land and mortgage markets.

Second, we evaluate registration costs by analysing their evolution and components as reflected in decrees, regulations, and official documents from 1845 to 1932. Despite a brief period of progressive fees between 1861 and 1885, we show that fees generally increased significantly and remained largely regressive, disproportionately burdening small transactions.

Third, we demonstrate that the land registry served as a significant fiscal tool by linking registration to tax collection. Revenue from the direct land tax, based on cadastral data, was largely inelastic and failed to capture increases in land productivity, primarily due to difficulties in updating cadastral information (Pro Ruiz, 1993). In contrast, taxing land transactions through the registry captured productivity improvements more effectively. Our findings show that transaction tax revenue grew faster than direct land tax revenue, highlighting its increasing fiscal importance.

Fourth, we examine how formal land registration evolved across time and regions from 1861 to the Second Republic. We document overall growth nationwide while highlighting significant provincial variation. The dominance of fixed fees created unequal burdens, disproportionately affecting smallholders and provinces with small, fragmented estates. Consequently, rural land and mortgage markets developed in high-price areas while stagnating elsewhere, exacerbating regional inequality and hindering development in many regions.

Our analytical framework emphasises the dual nature of Spain's land registry: simultaneously a fiscal instrument that extracts state revenue and an infrastructure that supports private property rights. Fiscal objectives dominated institutional design, explaining the fee structure, regulatory changes, and uneven geographic adoption. This created a self-reinforcing dynamic: high fees excluded small landowners,

concentrating registration in wealthy regions, which further reduced political pressure for reform. The registry thus reinforced rather than reduced existing inequalities in land markets.

This paper makes three main contributions. First, this is the first study to analyse the development of land registries in a European country from an economic history perspective, combining institutional analysis of regulatory evolution with a quantitative examination of fiscal data and regional registration patterns. Second, we reveal the often-overlooked fiscal role of land registries. While the existing literature emphasises the role of registries in securing property rights, we show how Spain's registry enabled taxation with minimal information requirements, thereby capturing economic growth through transaction taxes when cadastral updates proved infeasible. Third, we document how fee-based financing created highly unequal access to formalisation, with implications for contemporary debates on land information systems in developing countries.

Related Literature

Our research connects to several literatures. We contribute to Spanish historiography on nineteenth-century property reforms. Congost (2000) argues that property reforms were more nuanced than conventional accounts suggest, with significant continuities from the Ancien Régime despite liberal rhetoric. Gómez Urdáñez (2002) examines the obstacles that hindered full property liberalisation between 1835 and 1855, while Congost and Orallo (2018) provide empirical evidence that legal reforms had more complex effects on land markets than reformers anticipated. We extend this work by analysing the registry's dual role as both a fiscal tool and a property-rights infrastructure.

Regarding cadastral development, Segura i Mas (1989) provides a foundational overview of Spain's land information systems from 1714 to 1906, while Pro Ruiz (1992) traces the relationship between state power and property measurement from 1715 to 1941. Pro Ruiz (1995) documents systematic underreporting of rural wealth between 1870 and 1936, revealing widespread resistance to fiscal transparency. Vallejo Pousada (2000, 2010) illuminates the fiscal dimensions of cadastral development. We complement these studies by focusing on the registry rather than the cadastre, revealing how transaction-based taxation partially compensated for cadastral deficiencies.

We also engage with the literature on the economic impacts of Napoleonic administrative reforms. Rosenthal (1992) showed how Revolutionary and Napoleonic reforms transformed French agricultural property rights, reducing transaction costs and enabling growth. Acemoglu et al. (2011) found that reforms such as civil codes and legal equality positively affected growth in occupied territories. Our analysis reveals Spain's hybrid approach: adopting French legal principles while maintaining distinctive institutional arrangements for land information.

Our work contributes to debates on the formalisation and development of property rights. Low-cost, flexible mechanisms are essential for bringing land to productive use, particularly in transforming rural economies (De Janvry, 2001; Deininger & Feder, 1999). While informal arrangements suit local markets, greater integration requires formal systems as transactions involve outsiders (Feder & Feeny, 1991; Arruñada, 2012; Hoffman et al., 2014). State-funded systems using general revenue motivate comprehensive coverage for taxation and administration, while privately funded systems encourage a focus on lucrative urban and high-value properties, creating fragmented national frameworks (D'Arcy et al., 2024). Our analysis confirms that Spain's fee-based system produced this inequality precisely, with registration concentrated in high-value areas.

Recent literature on cadastral development emphasises the challenges of achieving "legibility" (Scott, 1998; Lee & Zhang, 2016; Ferree et al., 2022). State-backed cadastres face sustainability challenges due to high procedural costs (Deininger & Feder, 2009; Arruñada, 2017), rural landowners resist disclosing wealth to minimise taxation (Deininger, 2002; D'Arcy et al., 2024; Sánchez-Talanquer, 2020), and outdated valuations threaten fiscal sustainability (Ali et al., 2014; Nistotskaya & D'Arcy, 2023), 2023). We show how Spain's transaction-based registry taxation partially circumvented these problems by taxing transfers rather than stocks, though at the cost of excluding small landowners.

Finally, we contribute to the literature on notaries and registrars as state-sanctioned intermediaries. Alongside lawyers and surveyors, they are key stakeholders in modern registry systems (Soleiman, 1987; Shaw, 2006; Villacorta, 1983). Legislators sought equity through fixed-fee structures and monopolies, with larger transactions subsidising smaller ones (Shaw, 2006), but actual impacts on formalisation costs remain underexplored. Latin American studies suggest that professional influence creates costly processes that exclude the poor from property benefits (Webb et al., 2006). We provide systematic evidence on how fee structures and professional interests shaped access to formalisation in a European context.

Our analysis draws on three main sources. First, we systematically analyse regulatory documents, including decrees, laws, and official publications, from 1845 to 1932 to trace institutional evolution and changes in fee structures. Second, we examine fiscal statistics on transaction tax revenue, direct land tax revenue, and registration volumes from the Registry to assess the Registry's fiscal role. Third, we construct provincial-level data on land registration intensity, land prices, and agricultural characteristics to analyse geographic patterns in registry adoption. The combination of institutional analysis and quantitative examination allows us to connect regulatory design to distributional outcomes.

The paper proceeds as follows. Section 2 analyses the institutional framework. Section 3 traces the evolution of registration costs and fee structures. Section 4 demonstrates the registry's fiscal role through analysis of tax revenue. Section 5 examines geographic patterns in registry adoption and their determinants.

Section 6 concludes by discussing implications for understanding property rights formalisation and contemporary policy debates.

2. The Institutional Framework of the Spanish Land Registry

The Pre-Reform System and Its Limitations

In the 19th century, Spain established a dual land information system comprising a fiscal cadastral system introduced in 1845 and an independent property registry established in 1861. The fiscal cadastre (*Amillaramientos*) relied on property owners' declarations rather than comprehensive state surveys (Pérez Picazo, 1993; Pro Ruiz, 1993). Local authorities compiled tax rolls from self-reported information, creating systematic vulnerability to underreporting and manipulation by local elites who controlled the assessment process. Critically, this cadastre was not designed to protect property rights or support land transactions.

Prior to 1861, Spain's property documentation relied on notarial deeds supplemented by fragmented seigneurial, municipal, and ecclesiastical records, organised by date rather than by property. The establishment of the *Contaduría de Hipotecas* in 1768 attempted to centralise public documentation, but its scope was limited to mortgage liens, its procedures were unstandardised, and it provided no guaranteed legal priority based on date of inscription. The core problem was simple: the system lacked the publicity necessary to underpin secure credit markets (Martínez Neira, 2008). The disentailment programme of the 1830s to 1850s, which privatised extensive areas of church and municipal land, dramatically increased transaction volumes and exposed these limitations with new urgency (Fontana, 2011).

The 1861 Reform: Design Logic and Fiscal Constraints

The 1861 Mortgage Law responded to these pressures by establishing a nationwide property registry supervised by professional registrars and organised around the *folio real*, a property-centric ledger in which each parcel receives its own folio recording all transactions (Ley Hipotecaria, 1861, art. 8). This represented a fundamental informational rupture from the previous person-centric indexes, substantially reducing search costs for prospective acquirers. The 1869 revision reinforced publicity requirements and expanded the scope of mandatory registration of real rights, thereby strengthening the link between registration and credit markets (López Manzanares, 2014).

Yet the reform's design was equally shaped by what it could not afford. The 1861 Law explicitly minimised immediate public expenditure: no new buildings, no salaried officials, no comprehensive property surveys. Existing infrastructure from the *Contaduría de Hipotecas* was repurposed, and transition costs were shifted to registrars and property owners through gradual formalisation, a design we term the saving option (Pau Pedrón, 1994). The massive costs of initial property formalisation were further deferred through *decretos de posesión*, which permitted holders to register on the basis of testimonial evidence rather than complete title

chains, creating an open-entry pathway that postponed the resolution of documentary gaps (Ley Hipotecaria, 1861, arts. 397-403). As late as 1909, the government was still devising new pathways to incorporate unregistered properties, nearly fifty years after the initial legislation (Ley Hipotecaria, 1909).

The saving option had a further architectural consequence: the absence of a comprehensive cadastre meant that property descriptions remained largely literary, relying on boundary descriptions in deeds. Registrars frequently encountered the same parcel registered twice under different folios when transferring data from old books. The result was a system that offered legal certainty without physical certainty (Roca Sastre, 1954), a fundamental incompleteness that persisted throughout the period under study.

The Dual Professional Structure: Registrars and Notaries

Spain's land registry did not operate through a single professional group. The 1861 reform preserved a division of labour, with deep roots in Spanish legal tradition, between registrars and notaries. Notaries retained exclusive authority to draft and authenticate the underlying property deeds (*escrituras públicas*) that gave legal form to transactions; registrars, in turn, conferred public notice and established legal priority through the formal act of inscription. Neither professional could perform the other's function. The result was a sequential two-gate system in which transaction costs were cumulative: parties had to pay notarial fees for deed preparation, registrar fees for inscription, and transaction taxes before obtaining the legal protections the 1861 Law promised. Santos Guzmán (1903) documented that the combined burden of these three cost components remained prohibitive for small landholders throughout the late nineteenth and early twentieth centuries, and the fee reform of 1920 addressed registrar tariffs without fundamentally restructuring notarial fees (Bugallal, 1920).

Both professions operated under a self-financing model funded entirely by user fees rather than public salaries, and both were supervised by the *Dirección General de los Registros y del Notariado* (DGRN). Like registrars, notaries in prosperous urban districts earned substantially more than their counterparts in fragmented rural areas, where deed values were low and transaction volumes irregular. Crucially, the two-gate structure meant that the incentive problems of both professions compounded rather than offset each other in smallholder regions: failure at either gate was sufficient to exclude a transaction from formal legal protection. Notaries also performed a fiscal function as part of their professional role. Because transaction taxes were levied on values declared in notarial deeds, the deed itself became the primary fiscal document, creating a structural tension between faithful recording and the parties' incentives to underreport

transaction values to reduce their tax liability, a tension particularly acute where cadastral valuations were themselves systematically understated (Pro Ruiz, 1995).¹

Despite their differences, the two professional systems were functionally complementary and, together, contributed to the registry's long-run survival. When political upheaval temporarily suppressed the DGRN between 1866 and 1870, the notarial profession continued generating documented transactions that awaited registration once normal operations resumed. The backlog created by political discontinuity was thus recoverable in ways that a purely state-administered system might not have permitted (Pau Pedrón, 1994; Muro Romero, 1989).

Registrars as Self-Financing Agents: Incentives and Distributional Consequences

The saving option transformed registrars into residual claimants of their offices' productivity. After covering staff and operating costs, the surplus belonged to the registrar, creating strong incentives to process backlogs without public expenditure (Loscertales, 1970). This self-financing model, however, generated systematic distributional problems rooted in a classic principal-agent structure: the state (as principal) sought to maximise registration coverage across all territories and social groups, while registrars (as agents) rationally maximised fee income by prioritising high-value transactions in wealthy districts.

Fees pegged to property value incentivised registrars to favour urban properties and large estates over small rural plots. This explains the markedly uneven registration speeds observed across regions: rapid in Madrid and Andalusia, sluggish in Galicia and Asturias, where the costs of processing small, fragmented parcels outweighed fee revenue (Villares, 1982). The government attempted to address this disparity through an intertemporal compensation mechanism that allowed registrars to advance their careers by moving from rural postings to more lucrative districts.² But persistent vacancies in rural registries reveal that this incentive was insufficient (Pau Pedrón, 1994; Alonso Martínez, 1882). The original fee schedule established in 1861 proved ineffective within months, prompting an emergency graduated, value-based scale in 1863 (Real Decreto, 1863). Subsequent interventions, including social discounts in 1867 (Reducciones arancelarias, 1867), 1870 (Ley hipotecaria, 1870), and 1884 (Reducciones arancelarias, 1884), repeatedly prioritised coverage over viability, systematically widening the gap between workload and compensation in rural districts. Comprehensive reform required a five-year legislative lag (1882 to 1887)

¹ The use of notaries was also subject to indirect taxes, as deeds required the use of obligatory stamped paper, which generated stamp duty for the state (Ley del Notariado, 1862).

² The Notaries also had a compensation system. This was a mutual cross-subsidy mechanism known as the *congrua*, under which notaries serving high-volume urban offices contributed a per-folio levy to a collective fund administered by the Notarial Colleges, from which income supplements were distributed to those serving low-revenue offices (Reglamento del Notariado, 1874).

and was secured only after the Minister of Justice commissioned diagnostic statistical reports (RD *Memorias estadísticas*, 1886; RD *Nuevo arancel*, 1887). The fee system was not fundamentally replaced until 1920 (Bugallal, 1920), after 33 years during which total registration costs, combining registrar fees, notarial fees, and transaction taxes, remained prohibitive for small landholders (Santos Guzmán, 1903).

The self-financing model thus produced an institutional ratchet. The state established a cost-externalising agent in 1861 and immediately faced inadequate compensation for marginal districts. Each reform cycle temporarily stabilised the system, but inadequacies re-emerged as economic conditions changed, prompting the next cycle. System survival depended on the DGRN's data-gathering capacity, political will to legislate, and registrars' ability to articulate claims through formal channels rather than exit.

Anti-Capture Design and Its Unintended Costs

A central preoccupation of the 1861 reformers was preventing the new registry from falling into the hands of the local elites who had exploited the opacity of the old system. Several interlocking mechanisms were introduced to address this. The registry was placed under the Ministry of Justice rather than the Treasury, redefining the registrar's role as a legal authority rather than a tax collector (Pau Pedrón, 1994). Officials from the *Contaduría de Hipotecas* were explicitly excluded from the new system, sacrificing institutional memory and local knowledge in order to sever ties with existing power structures (Ley Hipotecaria, 1861). The DGRN functioned as a centralised supervisory body, with registrars answering to Madrid rather than local authorities. A national competitive examination system introduced in 1869 nationalised recruitment for both registrars and notaries, and a rotation system established in 1876 required registrars to move every two to four years, deliberately preventing the formation of local power networks (Pau Pedrón, 1994). These measures also raised the professional quality of both groups. The Ley del Notariado (1862) and the competitive examination system introduced for registrars in 1869 required candidates to hold formal legal qualifications, replacing the largely untrained *escribanos* (the name of the Notaries previous to the reform) and personnel of the *Contaduría*, while standardised procedures governing the drafting of instruments and the organisation of protocols improved both documentary quality and archival preservation (Pau Pedrón, 1994; Villacorta, 1983; Ley del Notariado, 1862, arts. 12, 17). These policies aimed to produce high-quality property evidence.

However, the anti-capture design's intended effect is less clear than the reformers assumed. The rotation system prevented registrars from developing deep local knowledge of property history, precisely the knowledge needed to resolve ambiguous or contested titles (Pau Pedrón, 2005). Notaries, subject to less systematic rotation (Ley del Notariado, 1862), retained greater territorial embeddedness, which was useful for accurate deed preparation but also left them more susceptible to sustained relationships with powerful local landowners. Meanwhile, local elites retained significant control over the *Amillaramientos* through

which cadastral values were assessed, and their political connections at the provincial level could shape the practical enforcement of registration requirements (Pro Ruiz, 1993). In other words, the reform succeeded in displacing the old intermediaries but may have simply shifted the terrain of elite advantage rather than eliminating it.

The registrar's quasi-judicial function, filtering defective titles before they entered the public record and providing positive protection to good-faith third parties (Ley Hipotecaria, 1861, arts. 18, 34), was in principle a powerful mechanism for legal certainty. In practice, however, its effectiveness was constrained by the absence of cadastral maps, the literary nature of property descriptions, and the incentives created by the fee structure. The system's qualitative superiority in legal terms coexisted with persistent physical uncertainty.

The Fiscal-Legal Tension and Its Resolution

The reform's stated ambition was to subordinate fiscal functions to juridical functions, but economic realities led to a different outcome. In provincial capitals, tax payments were transferred to the Treasury's offices, with registrars performing only legal inscription (Ley Hipotecaria, 1861, art. 277). But the Spanish state in 1861 lacked the administrative capacity to maintain separate tax offices across all 472 judicial districts (Otero Varela, 2025), and in smaller districts, registrars performed both legal and fiscal functions simultaneously. This fusion produced three structural consequences. First, the fiscal system acted as a funnel directing documents into the registry: every taxed transaction was a registration event, effectively subsidising the juridical objective. Second, the dual role created perverse incentives in property assessments, since a registrar who also collected taxes had a financial interest in accepting documents, creating structural tension with rigorous legal filtering. Third, it produced dual institutional loyalty between the Ministry of Justice and the Treasury that proved resistant to doctrinal resolution. A reform of October 1900 sought to consolidate the primacy of the legal function but proved difficult to implement in small districts, where economic survival depended on tax revenues (RD función liquidadora, 1900; Pau Pedrón, 1994).

Paradoxically, this fiscal anchoring proved to be the registry's most important survival mechanism. The DGRN was even temporarily suppressed between 1866 and 1870, revealing the precariousness of central oversight. Yet the registry itself survived political upheavals, civil war, and budget crises that destroyed other institutions precisely because it was economically autonomous and fiscally useful. The fiscal objective that legal reformers sought to contain ultimately sustained the juridical project long enough for it to mature. As Section 4 demonstrates, transaction tax revenues grew faster than direct land tax revenues over the period, confirming the registry's increasing fiscal importance and explaining why the state tolerated, and indeed depended upon, the distributional costs imposed by the fee-based model.

Three Tensions, One Trajectory

The 1861 reform embodied three interconnected tensions that structured the registry's evolution over the next seven decades. The tension between continuity and discontinuity produced a legal rupture implemented through institutional grafting: radical new legal principles built on inherited infrastructure, by personnel who excluded old intermediaries but lacked their local knowledge, without the cadastral foundation the system required. The tension between self-financing and universalism externalised costs onto registrars, notaries, property owners, and subsequent generations, creating a system that worked well where least needed, in wealthy urban districts, and poorly where most needed, in poor rural areas. The tension between fiscal and juridical objectives, which legal reformers tried to resolve in favour of the latter, was ultimately adjudicated by economic reality in favour of the former.

These tensions were managed rather than resolved through recurring cycles of institutional renegotiation. Each fee reform (1863, 1887, 1920) followed a similar pattern: inadequate design, prolonged dysfunction, crisis-driven reform, and renewed inadequacy as conditions changed. The fusion of fiscal and registral functions exhibited the same dynamic: doctrinal attempts at separation were repeatedly undermined by the economic dependencies the saving option had created.

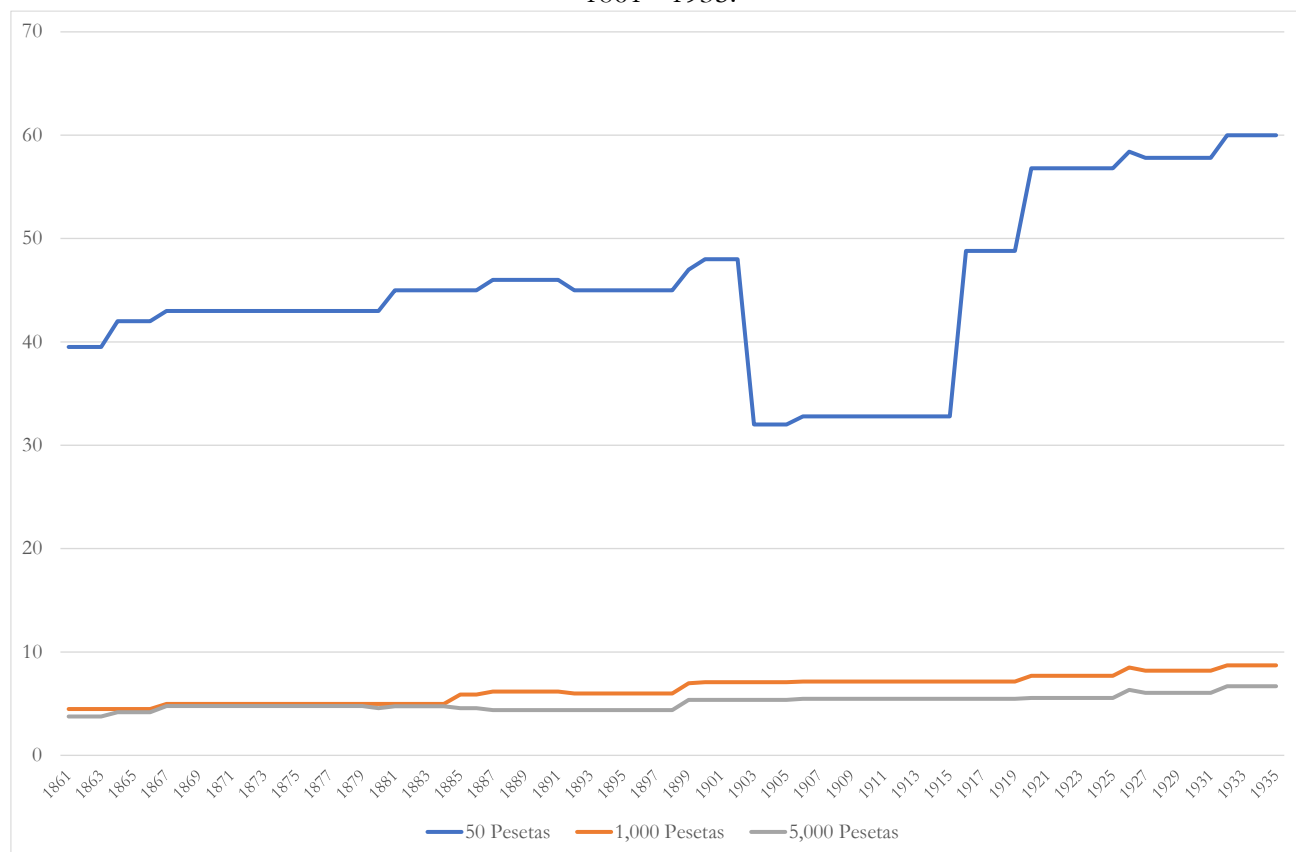
What this trajectory reveals, more broadly, is that institutional success under severe fiscal constraints cannot be measured simply by fidelity to original goals. Spain's land registry survived and gradually matured not because it was optimally designed, but because it was adaptive: capable of generating sufficient revenue to weather political crises and of being repeatedly renegotiated as external conditions evolved. The saving option, in constraining the reform's ambitions, paradoxically protected its survival.

3. Registration costs and fee structures

The fee-based financing model embedded in the 1861 Mortgage Law had immediate and lasting consequences for the affordability of formalisation. Registration costs were not simply a technical matter of tariff design: they determined who could access the legal protections the registry offered, and, by extension, who could participate in formal land and mortgage markets. This section traces the evolution of those costs from 1861 to the eve of the Second Republic, analysing how the combined burden of registrar fees, notarial charges, and transaction taxes changed over time and varied across property values. We show that despite successive reform cycles, the fee structure remained persistently regressive throughout the period, systematically imposing heavier proportional burdens on small transactions, and that no single reform succeeded in restructuring all three cost components simultaneously.

Figure 1 shows the combined burden of registration fees and transaction taxes as a percentage of land sale value across three price tiers: 50, 1,000, and 5,000 pesetas. This data spans from the establishment of the property registry in 1861 up until the eve of the Second Republic. Two main patterns emerge from the figure: first, there is a consistent and significant inverse relationship between plot values and the proportional cost of formalisation; second, there is a long-term trend indicating that overall fee burdens tend to increase rather than decrease, particularly for the smallest transactions.

Figure 1. Taxes and fees as a percentage of the total value of land sold at 3 different prices, 1861 - 1935.



Sources: see Appendix 1.

The most notable aspect is the widening divergence among the three series over time. The most striking aspect of this analysis is the dramatic and widening gap between the three series as time progresses. For transactions valued at 50 pesetas, the burden of fees and taxes was considerable from the very beginning, consuming about 40 per cent of the transaction value in the early 1860s. Over the decades, this burden did not merely increase gradually; it surged significantly, surpassing 60 per cent by the tumultuous 1930s.

This persistent upward trend, however, was punctuated by distinct episodes of reform that offered fleeting glimpses of hope. The social discount measures enacted in 1867 and 1870 provided brief periods of relief, resulting in temporary reductions in the transaction-cost burden. The sweeping fee reform of 1887 was

particularly noteworthy, as it succeeded in dramatically reducing the burden to around 30 per cent for a brief period before it sharply rebounded, illustrating the challenges of sustainable reform.

Moreover, the Bugallal decree of 1920 introduced yet another decline in costs, but in the following decade, fees escalated once more, ending the period at its highest recorded levels. The persistent regressivity observed at the start of this timeline was not just an enduring issue; it was a self-reinforcing cycle. Each reform cycle seemed to provide only temporary relief, while the fundamental structural problems continued unabated.

In stark contrast, the burdens for larger tiers—the 1,000-peseta and 5,000-peseta transactions—remained relatively modest and stable throughout the period, hovering around 5–10 per cent. This stability highlights the system's distributional logic, which favoured larger urban transactions over smaller ones. In summary, these findings suggest that the cumulative weight of transaction costs was a significant deterrent to formalisation for small landowners for most of the period. Additionally, the series of reforms implemented failed to tackle the structural challenges that perpetuated their exclusion from the formal economic system. For transactions valued at 50 pesetas, fees and taxes initially took up a substantial share of the transaction value—approximately 40 per cent in the early 1860s. This burden increased markedly over the period, exceeding 60 per cent by the 1930s. However, this upward trend was not uniform; it was interrupted by specific episodes of reform. The social discount measures of 1867 and 1870 resulted in brief decreases, while the comprehensive fee reform of 1887 led to a more pronounced temporary reduction, lowering the burden for 50-peseta transactions to around 30 per cent before it spiked again. The Bugallal decree of 1920 caused another decline, but costs rose again in the following decade, ending at their highest recorded levels. The regressivity observed at the outset was not only persistent but also self-reinforcing: each reform cycle offered only temporary relief, and the underlying structural issues consistently returned. For the 1,000-peseta and 5,000-peseta tiers, the proportional burden remained comparatively modest and stable throughout, hovering around 5–10 per cent. This confirms that the system's distributional logic strongly favoured larger, urban transactions. Collectively, these observations suggest that the cumulative weight of transaction costs deterred formalisation among small landowners for most of the period, and that successive reforms failed to address the structural causes of their exclusion.

Figure 2. Taxes and fees as a percentage of the total value of mortgages at three different prices, 1861 - 1935.

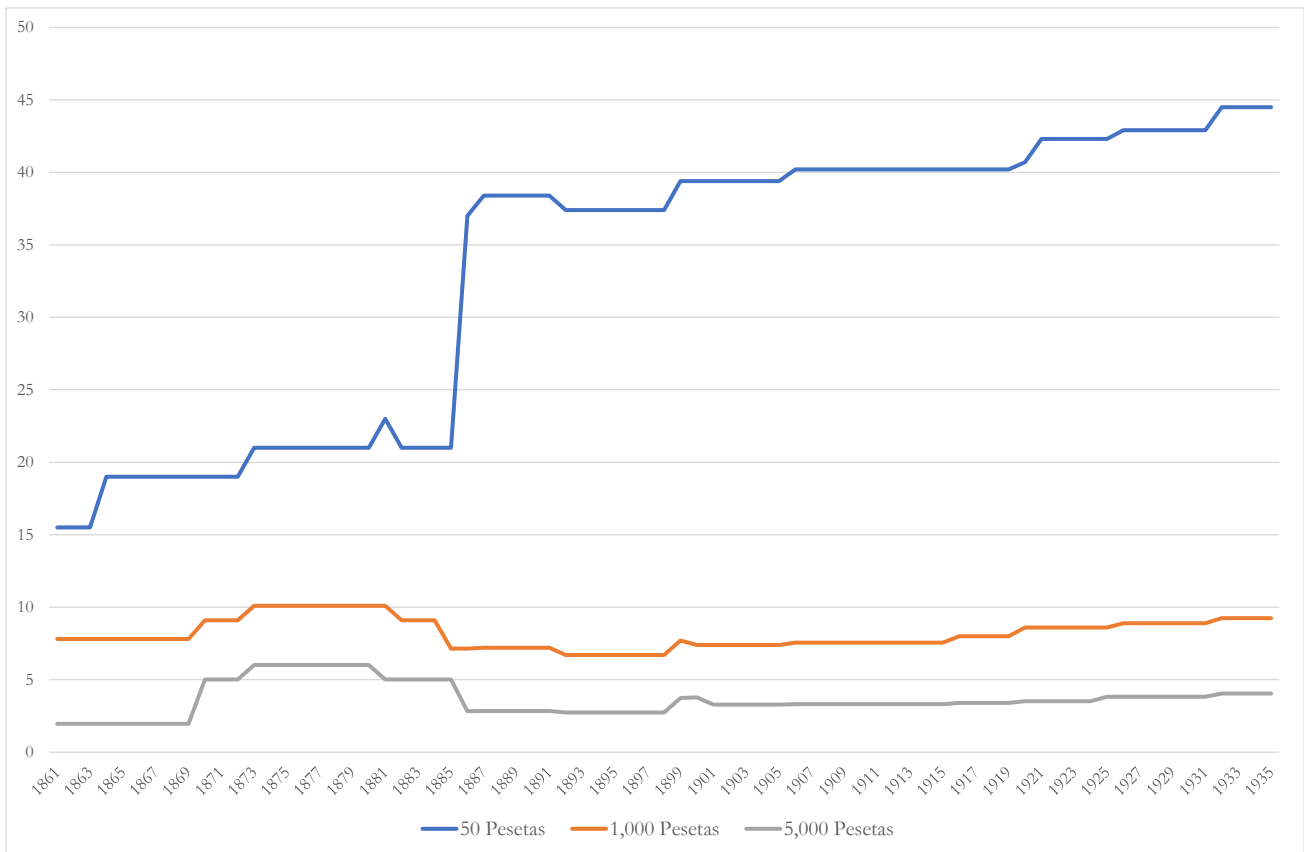


Figure 2 provides a detailed analysis of mortgage transactions, specifically illustrating the cumulative impact of registration fees and taxes as a percentage of the total mortgage value across three distinct price tiers over a set period. While the overall trend aligns closely with that depicted in Figure 1, this analysis reveals significant differences in levels and trends across mortgage tiers.

In examining the 50-peseta mortgage tier, we observe that the initial burden—defined as the combined percentage of fees and taxes—rises to approximately 15–20 per cent. This figure is notably lower in proportional terms than the burden associated with land sales of equivalent value. However, as time progresses, the financial burden for these smaller mortgages escalates sharply and consistently, eventually surpassing the 40 per cent threshold by the end of the observed period. This significant rise indicates the growing financial strain placed on borrowers within this tier.

In contrast, the mortgage burdens for the 1,000-peseta and 5,000-peseta tiers remain comparatively lighter, consistently hovering within a more manageable 5–10 per cent range throughout the analysis. This difference suggests that larger mortgage amounts are subject to a smaller proportional burden, providing some relief for borrowers in these tiers. Additionally, the gap between the smallest tier (50-peseta) and the larger tiers expands noticeably over time, highlighting the disproportionate pressure faced by those borrowing smaller amounts.

The reforms noted in Figure 1, particularly the 1887 legislation and the subsequent 1920 Bugallal decree, are also visible in this data. The 1887 reform resulted in a short-term reduction in the overall burden, followed by a further decrease due to the measures introduced by the Bugallal decree in 1920. Despite these temporary improvements, neither reform reverses the persistent, long-term upward trend in the financial burden for borrowers in the smallest mortgage tier.

The consistently higher absolute burden experienced by the 50-peseta mortgage tier, compared to equivalent sales transactions, can largely be attributed to the additional procedural complexities of mortgage registration. These complexities include vital steps such as recording creditor rights, establishing priority rankings among lenders, and cancelling liens, each of which incurs distinct fees. Such procedural demands further add to the financial burden experienced by smaller borrowers. This situation effectively illustrates why formal mortgage markets remained underdeveloped in regions characterised by small property sizes throughout this period. As a result, this lack of robust mortgage infrastructure has had lasting impacts on the potential for agricultural investment and broader access to rural credit, ultimately hindering economic development in these areas.

Figure 3 breaks down the composite burden shown in Figure 1 into its three components: taxes (including stamp duty), notarial fees, and registry fees. Each component is illustrated in separate panels for the three tiers of plot values. This breakdown is crucial for understanding the structural sources of regressivity and the varying impacts of successive reforms. Each component has evolved under different legal and administrative frameworks and has responded to distinct political pressures. The three panels together illustrate that the ongoing high costs associated with small transactions were not due to a single policy failure. Instead, they resulted from the accumulation of three separately managed cost structures, none of which was ever reformed simultaneously with the others.

Panel a, which covers plots valued at 50 pesetas, illustrates the system's distributional consequences most starkly. Throughout the entire period, taxes, including stamp duty, constitute the dominant component, consistently absorbing the largest share of the total burden. This dominance highlights the structural role of the fiscal system as the primary driver of costs for small transactions. Because taxes included implicit minimum thresholds that did not decrease in proportion to transaction value, their impact was most severe for the lowest plot values.

Notarial fees represent a secondary but consistently substantial layer of costs, while registry fees, the component most directly subject to reform by the Ministry of Justice, are the smallest of the three throughout the period. The volatility seen in the earlier decades, roughly from the 1860s to the mid-1880s, reflects the frequent introduction and subsequent erosion of emergency measures and social discount interventions. Key moments include the 1863 revision, the discount measures of 1867 and 1870, and

further reductions in 1884, each of which produced brief downward movements in individual components. However, these effects were short-lived, and the total burden consistently rebounded.

The comprehensive reform of 1887 stands out as the most significant single intervention during this period. It resulted in a clear and more sustained reduction in the registry fee component, which had been the primary focus of the five-year legislative process that preceded it. However, the notarial and tax components remained largely stable throughout this reform since they fell under the jurisdiction of the Notarial Colleges and the Treasury, neither of which was subject to the same reform impulse. Consequently, the total cost reduction achieved in 1887 was considerably smaller than what the reduction in registry fees alone might suggest.

The 1920 Bugallal decree further reduced registry fees, but notarial charges remained largely unchanged. Most importantly, both the tax and notarial components trended upward over the period, meaning that the gains from registry fee reform were gradually offset by rising costs in the other two areas. By the 1930s, the total burden on a 50-peseta transaction reached its highest levels of the entire period, primarily driven by the tax component. This trajectory confirms that for the smallest landowners, the system became more costly over time, despite repeated reform efforts aimed at its most visible element.

Panel B, which focuses on the 1,000-peseta tier representing the approximate national average plot value, presents a different composition and a somewhat more favourable long-term trajectory. However, the regressivity compared to the highest-value tier remains pronounced throughout. At this level, the transaction tax, levied as a percentage of declared deed value, is even more prominent than at the 50-peseta level. This is because the *ad valorem* nature of the tax is more effective at average values, where fixed minimum thresholds are less distorting. As a result, the proportional burden at the 1,000-peseta level is more sensitive to changes in tax rates than to adjustments in the fixed-fee components of registrar and notarial schedules. Conversely, reforms to registrar fees, which are the primary tool of the Justice Ministry's intervention, have a smaller relative impact on total costs than the lower-tier fees.

The 1887 reform is clear as a reduction in the registry fee component, and the 1920 Bugallal decree leads to another decrease in that area. However, the trajectory of the tax component is smoother and more resistant to reform, reflecting the greater political challenges associated with restructuring Treasury-controlled levies. Notarial fees at this tier remain broadly stable, with a modest upward trend in the later period, contributing to a gentle overall increase in total costs during the final decades.

Overall, the trend across the entire period shows moderate fluctuations around a generally stable level, with total costs slightly lower at the end than at the beginning. This decline is primarily driven by the cumulative effects of the 1887 and 1920 registrar fee reforms. This more favourable outcome, compared to the 50-peseta tier, is due to the lesser impact of fixed minimum charges at average transaction values.

However, the absolute cost level remained significant, and the gap between what middling and large landowners faced persisted throughout the period.

Panel c, which covers plots valued at 5,000 pesetas—approximately the average in the highest-value province of Cádiz—displays the most favourable cost profile, with a balanced distribution among the three cost components. At this value level, the ad valorem nature of all three cost elements is fully realised: fixed minimum charges become relatively insignificant, and taxes, notarial fees, and registry fees each contribute comparably to the total costs. This even distribution is noteworthy because it shows that the regressivity observed in Panels a and b was not due to the fee system as a whole, but rather to the fixed minimum elements, which became increasingly burdensome as transaction values decreased. Reform-driven reductions in registry fees are evident in Panel c at expected inflexion points—1887 and 1920—but their effect on total costs is proportionally smaller than in the lower-value panels. This is because the registry fee component is not dominant, and its reduction does not lead to a significant increase in other costs to the same extent.

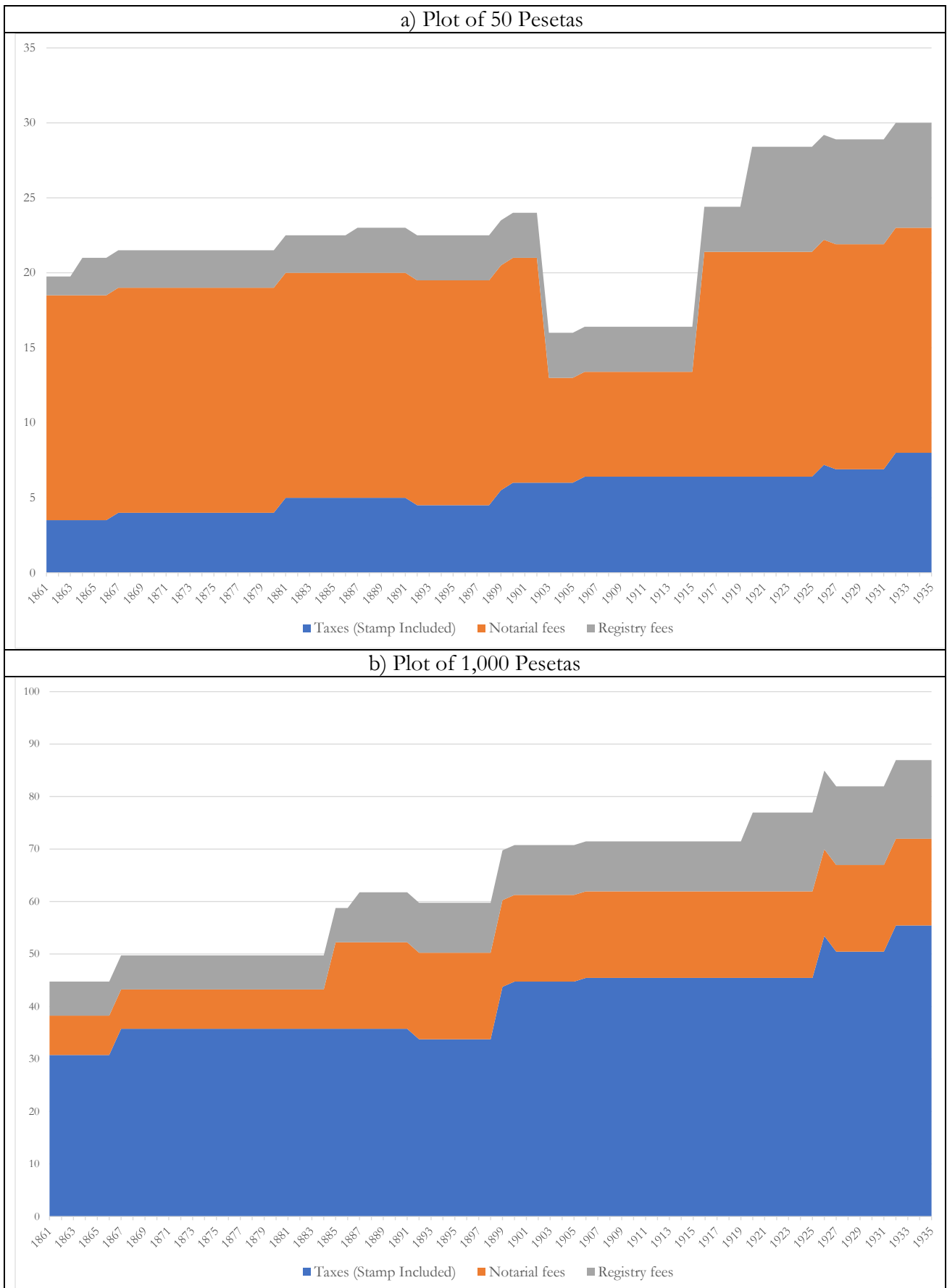
The tax component at this level generally remains stable, with some upward movement in the later period, while notarial fees gradually increase over the long term. Throughout the timeframe, the overall level of total costs in Panel c is significantly lower than in the other two panels, and the long-term trend is roughly flat, in sharp contrast to the rising trend at the 50-peseta level.

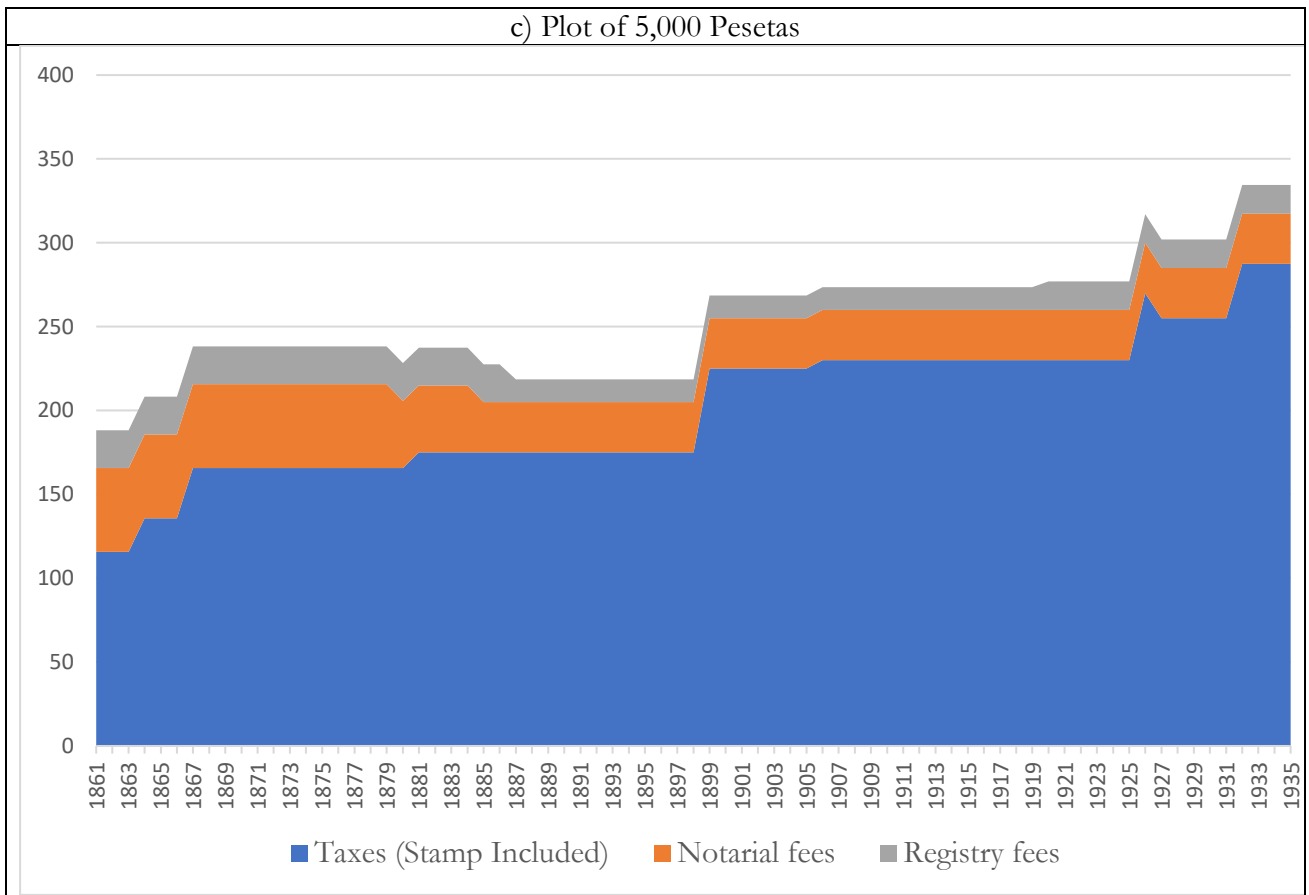
Figure 3 provides three key analytical insights that go beyond the overall picture presented in Figure 1. Firstly, it shows that the persistence and worsening of costs for the smallest transactions were primarily driven by the tax component rather than by registry or notarial fees. This suggests that the reform discussions during this period, which mainly focused on registrar tariffs, were addressing a secondary issue of regressivity while leaving the main problem unaddressed.

Secondly, the analysis reveals that the three cost components were subject to entirely different reform logics. Registry fees were influenced by Justice Ministry decrees that responded to the advocacy of registrars and reports from the DGRN; notarial fees were regulated by Notarial Colleges, which had their own internal political dynamics; and transaction taxes were managed by the Treasury, which had strong incentives to maintain, rather than reduce, these taxes, as will be further explored in Section 4. The fragmentation of these components meant that no single reform initiative could effectively tackle the overall cost burden; improvements in one area were often negated by stability or deterioration in others.

Lastly, Figure 3 illustrates that the institutional structure governing the registry's cost framework was a source of path dependency. As long as three separate administrative domains controlled the three distinct cost components, comprehensive reform was structurally hindered. This separation reinforced the distributional impacts of the fee-based model.

Figure 3. The fees and taxes on plots sold at three different prices, 1861 to 1935.





The recurring pattern of reform is characterised by modest relief, gradual erosion, and renewed inadequacy. This pattern reflects the fragmentation of the cost structure across three separate administrative domains, each with its own political economy and approach to reform. The cumulative burden outlined in this section reveals the micro-level mechanisms that connect the institutional analysis from Section 2 to the regional patterns discussed in Section 5. In areas where plots of land are small and their values are low, the costs associated with entering the formal system are simply too high to justify. This situation leads to predictable consequences for the development of the land market and access to rural credit.

4. The fiscal role of the land registry

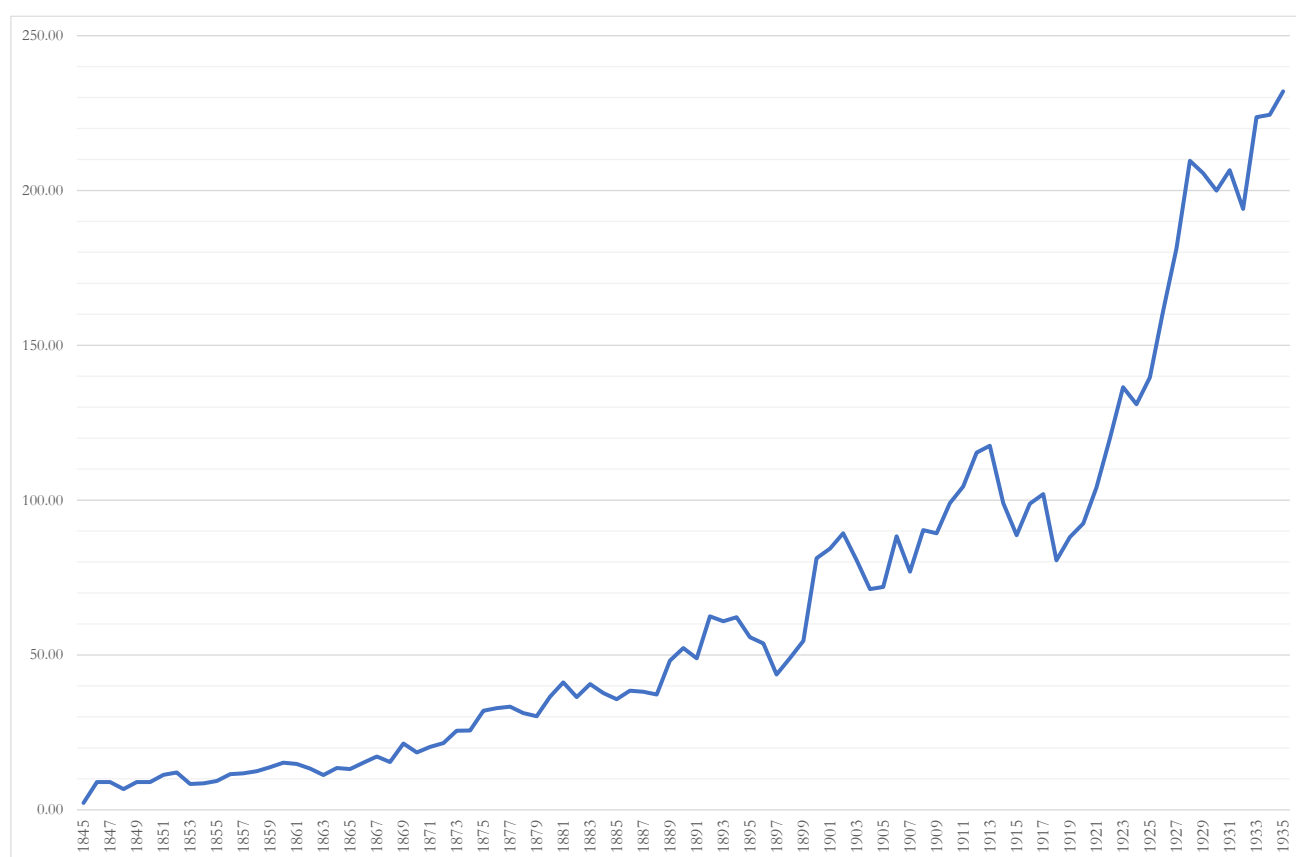
The land registry's institutional design, as demonstrated in Section 2, created an inherent tension between fiscal and legal objectives from the beginning. While reformers aimed to prioritise legal functions over tax collection, the registry's economic sustainability relied on its ability to generate revenue. This section directly examines the fiscal aspect of that dependency, using three figures that together illustrate the registry's increasing significance as a source of state income from 1845 to 1935.

The evidence presented here serves as a macro-level counterpart to the cost analysis in Section 3. While that section explained how registration fees and transaction taxes discouraged small landowners from

entering the formal system, this section highlights what the state gained from maintaining a system structured in that manner. The central finding is that transaction tax revenue grew significantly, both in absolute terms and relative to other property taxes over this period. This confirms the paper's argument that the registry functioned as an increasingly vital fiscal instrument, one that the state had strong incentives to preserve, even at the expense of the distributional consequences discussed in other sections.

Figure 4 illustrates the evolution of transmission tax income in real terms (measured in million of 1935 pesetas) from 1845 to 1935, showcasing a remarkable and sustained long-term expansion. In the pre-registration period before 1861, revenue was minimal, starting at almost zero and only gradually increasing through the late 1840s and 1850s as the newly established *Contaduría de Hipotecas* system began to yield modest returns from mortgage documentation.

Figure 4. The evolution of transmission tax income, 1845 to 1935 (in million 1935 pesetas).



The introduction of the property registry in 1861 and its gradual consolidation in the 1860s and 1870s coincided with a steady increase in revenue. However, the growth rate during these early decades remained modest, constrained by the registry's incomplete coverage and the political instability of the time. This instability included the temporary suspension of the DGRN between 1866 and 1870, which periodically disrupted normal operations.

The trajectory of revenue growth changes significantly from the late 1870s through the 1880s. By the mid-1880s, revenue accelerates noticeably, reaching approximately 50 million pesetas in real terms. However, the 1890s were more volatile due to the agricultural depression and broader economic disruptions following the loss of Cuba and the Philippines in 1898. This is illustrated by a pronounced dip in revenue around the turn of the century, which aligns with a sharp contraction in land market activity caused by the fiscal and monetary crisis of those years.

From the early 1900s onward, a recovery is evident, with revenue climbing back to the 80–100 million peseta range by the first decade of the twentieth century. The most dramatic aspect of Figure 4 is the sharp and sustained acceleration that begins around 1915 and continues through the mid-1920s. During this decade, real transmission tax income roughly doubles, increasing from about 100 million pesetas to peak values exceeding 200 million by the late 1920s. This surge is attributed to rising land values during the First World War and the subsequent economic expansion of the Primo de Rivera years, both of which generated substantial volumes of high-value transactions and, consequently, large tax receipts.

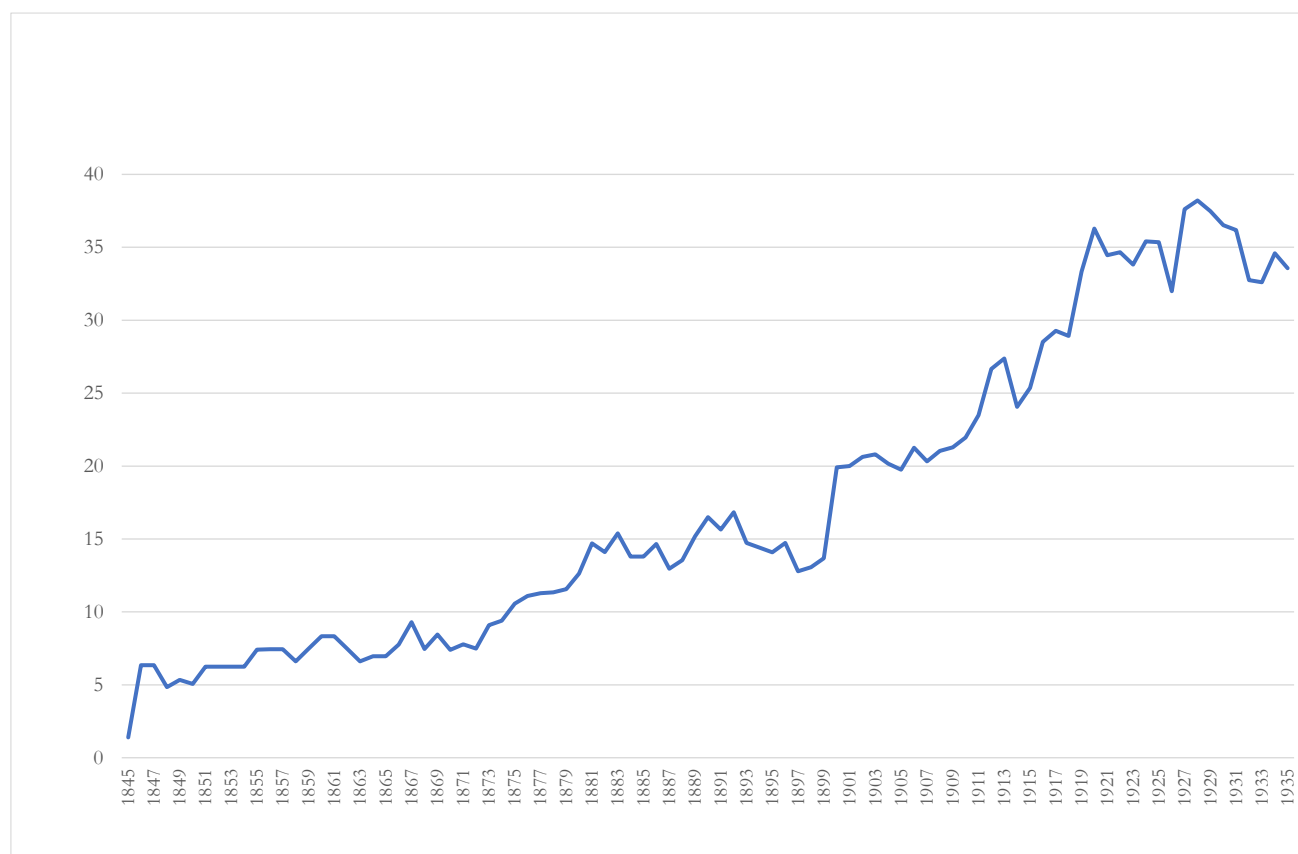
The final years of the series show a decline as the Great Depression reduces transaction volumes starting in the early 1930s. Nevertheless, revenue during this period remained historically elevated compared to the pre-war baseline. Overall, Figure 4 confirms that transmission tax revenue was not a static or marginal fiscal resource; rather, it was a dynamically growing one. Crucially, it increased precisely because it was levied on transactions rather than on assessed stock values, enabling it to capture rising land productivity and price appreciation in ways that the direct land tax could not.

Figure 5 puts this revenue growth into comparative perspective by illustrating the transmission tax's share of total property tax revenue from 1845 to 1935. The figure highlights a significant long-term increase, clearly demonstrating the dynamics between the two main instruments of property taxation: the direct land tax based on cadastral valuations and the transaction-based transmission tax. In the mid-1840s, transmission taxes accounted for only about 5 per cent of total property tax revenue, reflecting both the early stage of the registry system and the prevalence of the direct land tax as the main method of property-related tax collection. This ratio remained relatively stable through the early post-reform decades, with only slight increases observed during the 1860s and 1870s as the registry gradually expanded its coverage.

The upward trend in transmission tax shares becomes more noticeable from the late 1870s onward, reflecting the revenue growth shown in Figure 4. By the mid-1880s, the transmission tax accounted for approximately 15 per cent of total property taxation. In the 1890s, there were fluctuations that mirrored the cyclical disruptions also seen in Figure 4. However, from the early 1900s onward, the underlying trend reasserted itself, progressively increasing the share through the first two decades of the twentieth century. The most significant rise occurred in the 1920s, when the share peaked at nearly 40 per cent, indicating

that by then transaction-based taxation accounted for almost two-fifths of all property tax revenue collected by the Spanish state. Although there was a modest decline in the early 1930s, the share stabilised at around 33 to 35 per cent, a level that would have been unimaginable at the system's establishment in 1861.

Figure 5. The participation (%) of transmission taxes in overall property taxes, 1845 to 1935.



The interpretation of this trajectory is central to the paper's argument. The increasing share of transmission taxes within total property taxation was not primarily due to intentional policy decisions but rather to a structural divergence between the two fiscal mechanisms. The direct land tax, which was mainly based on the *Amillaramientos* cadastral valuations discussed in Section 2, was largely inelastic in relation to improvements in land productivity and rising land prices. Since cadastral assessments relied on property owners' self-reported declarations, which were systematically understated, a pattern well-documented for the period from 1870 to 1936 (Pro Ruiz, 1995), and because provincial elites resisted efforts to update these assessments, direct land tax revenues grew only slowly in nominal terms and stagnated or declined in real terms over the long run (Cuenda García, 2023). Conversely, transaction taxes were imposed on the declared values at the time of property transfer, capturing each cycle of increasing land prices as it occurred. This led to a systematic, self-reinforcing divergence: as land values rose, transaction taxes consistently

outperformed direct land taxes, making the state more reliant on the registry infrastructure that enabled transaction taxation.

Figure 6. The contribution of transmission and land taxes (%) to the Spanish budget, 1850-1934

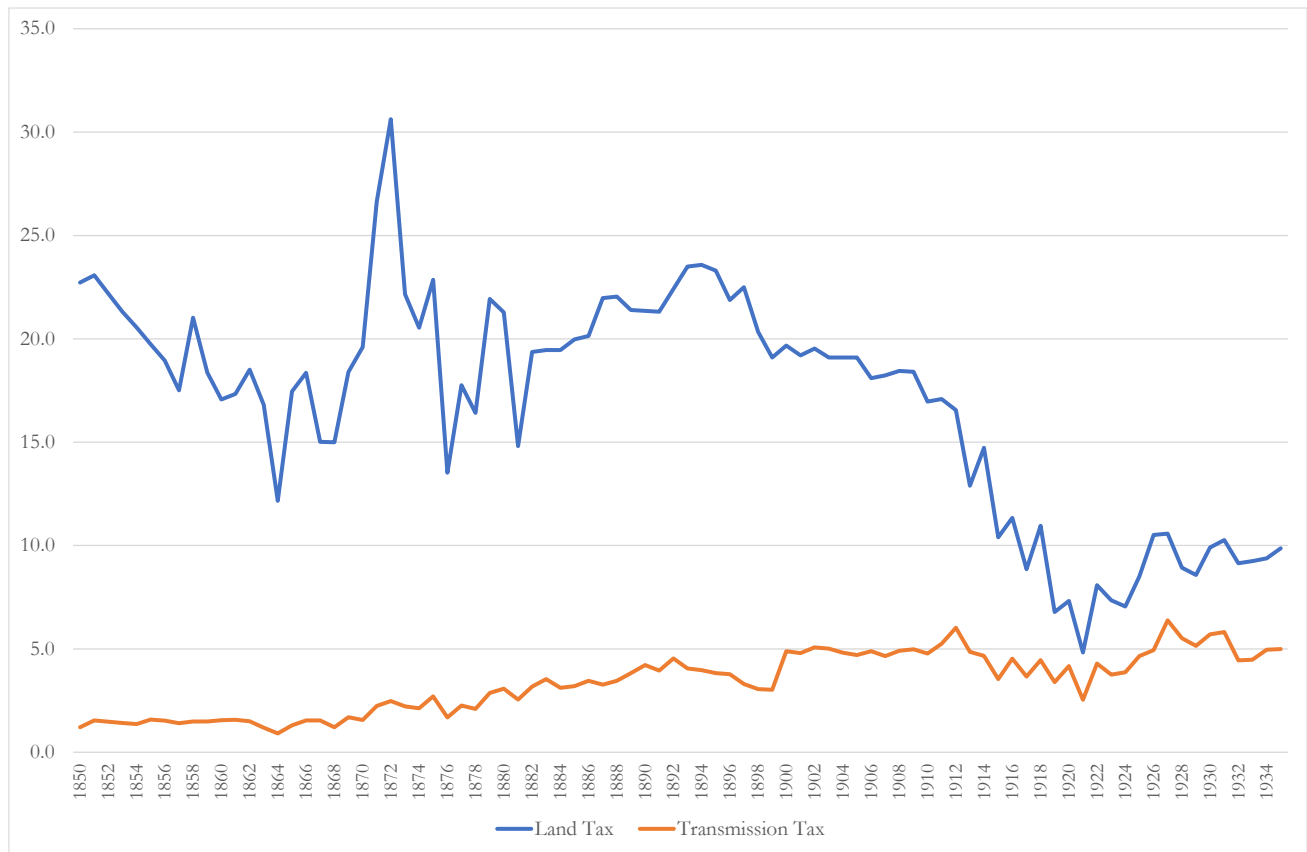


Figure 6 provides a more nuanced view by illustrating the contributions of both the land tax and the transmission tax to the overall Spanish budget from 1850 to 1934. This is where the paper’s fiscal argument becomes particularly compelling. The figure reveals two distinct trajectories. The land tax accounted for approximately 20-22 per cent of total budget revenue at the beginning of the period, reflecting its historical role as the primary method of direct taxation within the liberal fiscal framework established in the mid-nineteenth century. Throughout the latter half of the nineteenth century, their shares experienced significant volatility, marked by notable spikes and troughs due to political upheaval and budgetary reorganisation. However, the overall trend was clearly downward. By the early twentieth century, the land tax’s share of total budget revenue had decreased to about 15 per cent, and during the 1910s, the decline accelerated sharply. The percentage fell below 10 per cent and continued to drop, approaching 5 per cent by the end of the period.

The Villaverde fiscal reform of 1899–1900 represents a pivotal moment in Spain's financial history, as illustrated in Figure 6. Raimundo Fernández Villaverde, appointed Finance Minister following the

aftermath of the 1898 disaster, initiated a comprehensive fiscal consolidation aimed at restoring budgetary balance after the significant costs incurred from the colonial wars and the loss of revenue from former colonies that had partially supported Spanish public finance throughout the 1890s (Comín, 1996). The fiscal crisis caused by the disaster was severe: Spain abruptly lost tariff revenues, remittances, and captive markets in Cuba and the Philippines, while also taking on the substantial war debts accumulated from 1895 to 1898 (Martín Aceña, 2000). Villaverde's response was one of the most significant fiscal interventions in Restoration Spain. His reforms aimed to eliminate the budget deficit through a combination of expenditure cuts and revenue restructuring. This included consolidating public debt, improving tax administration, and shifting the fiscal burden toward consumption and indirect taxation (Comín, 1996; Cuenda García, 2023).

The reform redefined the relationship between direct and indirect taxation. It introduced new consumption taxes and sought to broaden the tax base beyond traditional agricultural levies, implicitly acknowledging that the existing direct land tax (Amillaramientos-based) had reached its productive limits as a fiscal tool (Vallejo Pousada, 2008; Cuenda García, 2023). One consequence of this restructuring was a significant reduction in the relative importance of the direct land tax within the national budget, as new revenue sources emerged and the fiscal focus shifted away from agricultural property. The figure reveals a marked decline in the land tax series around this period, from which it never fully rebounded. The post-Villaverde land tax series stabilised at a consistently lower percentage of total revenue, confirming that the reform represented a structural rather than merely cyclical realignment of Spanish public finance.

The transmission tax series illustrated in Figure 6 presents a contrasting narrative. Initially, during the period in question, it accounted for nearly zero per cent of total budget revenue. However, it gradually increased throughout the latter half of the nineteenth century, closely following the trends shown in Figures 4 and 5. Paradoxically, the Villaverde reform enhanced the importance of the transmission tax. By reducing the share of the direct land tax in the overall budget without fundamentally overhauling transaction-based taxation, the reform effectively increased the registry's fiscal significance within the broader system.

From the early 1900s onward, the transmission tax steadily rose, reaching about 5 per cent of total budget revenue by the 1910s and continuing to increase throughout the Primo de Rivera period. The relationship between these two tax series, in which the land tax declines and the transmission tax rises, is illustrated in the paper's main fiscal argument. It highlights a partial but significant transformation in Spain's fiscal system over the nine decades studied, shifting from stock-based to flow-based property taxation, facilitated by the registry infrastructure established in 1861. The post-Villaverde decades saw further attempts at fiscal modernisation that also bear on the trajectory visible in Figure 6. The tax reforms of the early 1900s,

including the restructuring of the *contribución territorial* (direct tax on land) and successive efforts to introduce income-based taxation, were repeatedly frustrated by the same political economy that had blocked cadastral reform: provincial elites resisted more transparent and comprehensive assessment, and the administrative capacity required for systematic valuation remained beyond the reach of the Spanish state (Vallejo Pousada, 2008; Comín, 1996; Cuenda García, 2023). The result was that the transmission tax's growing fiscal importance was less a product of deliberate design than of the state's inability to modernise its direct tax instruments, a fiscal path dependency that the registry's own institutional design had helped to create and sustain.

Figures 4, 5, and 6 collectively highlight three important findings. First, the registry was not just a legal institution that produced fiscal revenue incidentally; by the early twentieth century, it had become a structurally essential element of Spanish public finance. It provided a growing revenue stream precisely when cadastral-based taxation was stagnating. Second, the state's reliance on transmission tax revenue created strong incentives to uphold the fee-based, transaction-linked registry model, despite the rising distributional costs for small landowners. The more the Treasury depended on the revenue from the registry, the less inclined it was to pursue fundamental reforms that could have reduced transaction costs and improved access while risking a decrease in the tax base. Third, although the Villaverde reform marked a significant moment of fiscal modernisation, it ultimately reinforced, rather than resolved, the inherent tension between the registry's legal and fiscal functions. By consolidating the importance of the transmission tax within the overall fiscal framework without addressing the cadastral system that made direct land taxation inelastic, the reform exacerbated the state's dependence on the very mechanism that has been shown to be most regressive for small landowners. In this respect, the registry's fiscal success was coupled with its distributional failure, representing two sides of the same institutional coin.

5. The unequal regional impact of the land registry (incomplete)

The preceding sections have demonstrated that Spain's land registry was shaped by fiscal imperatives that systematically disadvantaged smallholders and fragmented rural regions. This section examines whether those institutional features produced measurable geographic variation in the intensity of land market formalisation. Using provincial-level data on registered sales, we construct an index of formalisation intensity that captures the extent to which each province participated in the formal land market relative to its share of the national plot stock. The analysis covers three subperiods (1864–1878, 1894–1913, and 1914–1934) chosen to bracket the principal episodes of fee reform and broader economic change while minimising the distorting effects of short-run local shocks. The baseline for the plot distribution is the

1962 national agricultural census (Junta Nacional y Provincial de Censo Agrario, 1962), the first year for which reliable and comprehensive parcel-level data are available at the provincial scale.

New evidence on differences in regional registration rates is captured by the following formula:

$$\text{Intensity of formalisation}_{it} = \text{Relative Sales}_{it} / \text{Relative plots}_{i,1962}$$

Where:

$$\text{Relative Sales}_{it} = \text{Sales}_{it} / \text{National Sales}_{it}$$

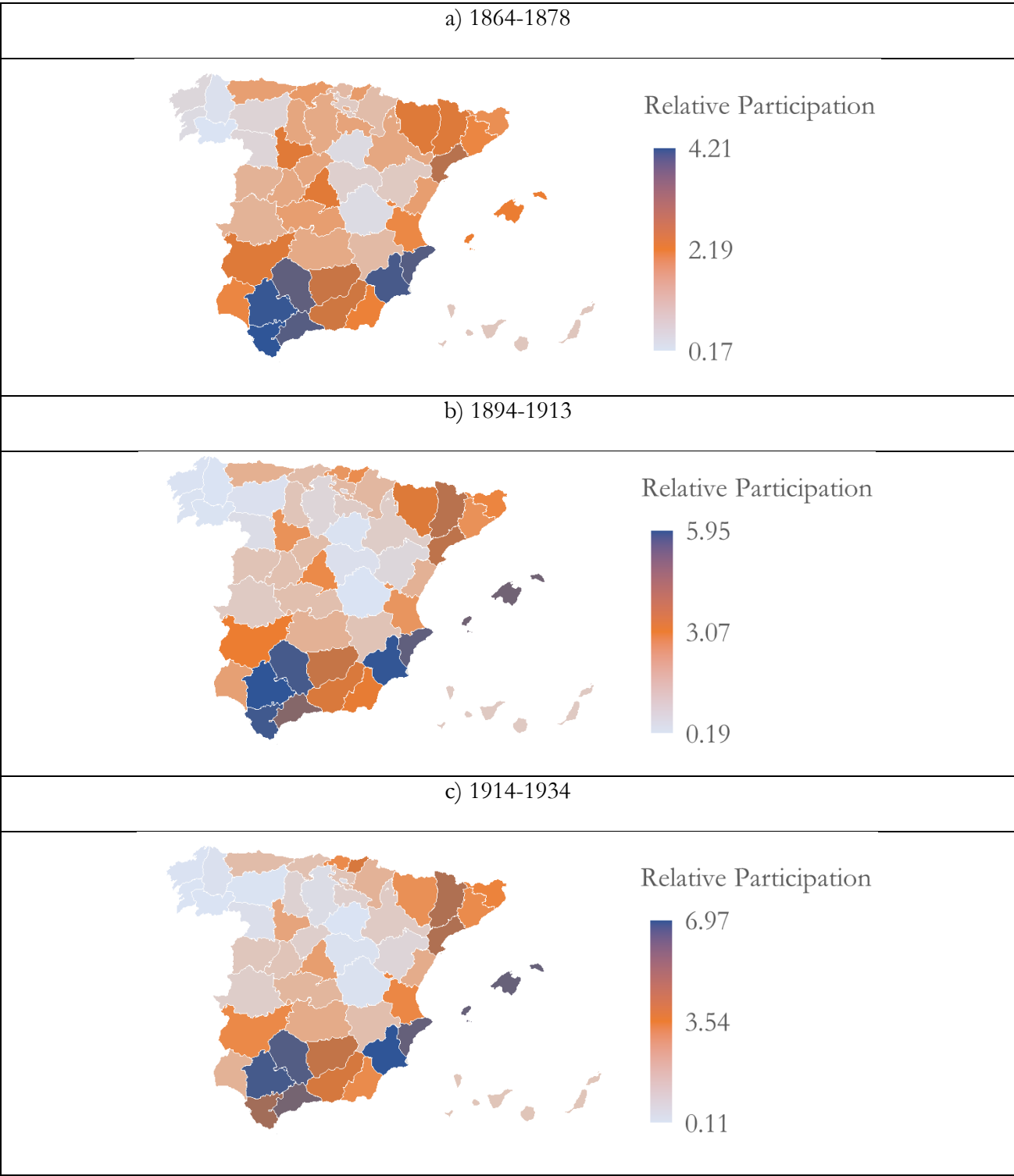
$$\text{Relative plots}_{i,1962} = \text{Number of plots}_{i,1962} / \text{National plots}_{i,1962}$$

This equation is calculated over the three subperiods described above. The use of long periods aims to minimise the impact of fee changes and local shocks.

The year 1962 is considered the baseline year because it was the first time reliable data from the national agricultural census (Junta Nacional y Provincial de Censo Agrario, 1962) became available. It is believed that the total number of plots in Spain did not change significantly until 1962 due to the difficulties and expenses associated with the plot consolidation process (Crecente et al., 2002; Miranda et al., 2006). Most of the concentration took place in a few localities in the North of Castile (Valladolid, Palencia, Burgos, Zamora, Salamanca, Soria, and Guadalajara). Therefore, in these provinces, the intensity of formalisation could be partly understated. Following the implementation of the consolidation law in 1952, only about 580,000 hectares were consolidated in the decade leading up to 1962. It was the 1962 law revision and the subsequent establishment of the *Instituto Nacional de Reforma y Desarrollo Agrario* (IRYDA) in 1971 that truly propelled the consolidation process forward, resulting in nearly 2.9 million hectares consolidated between 1963 and 1971 (King & Burton, 1982).

Figure 6 illustrates the intensity of land market formalization across Spanish provinces for the three subperiods, standardized so that a value of 1 represents the national average. The maps demonstrate a consistent and widening geographic divide that remained largely stable throughout the studied period.

Figure 6. Intensity of land markets formalisation, 1850-1934 (Spain average = 1)



During the earliest subperiod from 1864 to 1878, the level of formalisation was highly inconsistent across regions. The provinces with the highest participation were primarily located in Andalusia and the Mediterranean provinces, where large-scale commercial agriculture and active land markets led to substantial transaction volumes. Sevilla and Cordoba, along with their neighbouring areas, consistently

emerged as high-intensity provinces. This was due to a combination of high land values, active latifundio markets, and relatively consolidated land ownership, which made the fixed costs of registration more manageable.

In contrast, the northern and northwestern periphery, particularly Galicia, Asturias, and Cantabria, showed a consistently low level of formalisation intensity. In these regions, extreme plot fragmentation, low individual parcel values, and the high fixed costs associated with the two-gate system made registration economically impractical for most transactions. This pattern aligns with the mechanism described in Section 3: where land plots were small and values low, the cumulative burden of taxes, notarial fees, and registry charges took up a prohibitive share of the transaction value, effectively excluding smallholders from the formal system.

The second subperiod (1894–1913) shows a deepening of these contrasts rather than any convergence. The fee reform of 1887, despite its ambition, did not redistribute formalisation activity toward the peripheral north. High-intensity provinces in Andalusia and the Mediterranean coast maintained or extended their lead, while Galicia, Asturias, Most of Northern Castile, and the Basque Country remained at the bottom of the distribution. The range of values also widened: the maximum relative participation score rises from 4.21 in the first subperiod to 5.95 in the second, indicating that leading provinces were pulling further ahead. This period coincides with the post-1898 land market contraction and recovery discussed in Section 4, but the geographic hierarchy of formalisation remained largely unaffected by these aggregate fluctuations, suggesting that the underlying structural drivers, plot size, land values, and the regressive fee structure, were more powerful than short-run cyclical shocks.

The third subperiod (1914–1934) confirms the long-run stability of the pattern. The maximum intensity score rises further to 6.97, reflecting the surge in high-value transactions during the land market boom of the 1910s and 1920s. The provinces that had been most active since the 1860s continued to dominate, while the fragmented regions of the north and northwest remained peripheral. This persistence across seventy years of institutional evolution and multiple fee reforms is itself a significant finding: it suggests that the distributional consequences of the registry's design were deeply entrenched, not easily reversed by marginal adjustments to tariff schedules. The reforms documented in Section 3 addressed individual components of the cost structure without confronting the structural regressivity arising from the simultaneous interaction of all three components.

Taken together, the three maps document a self-reinforcing dynamic. High-value, low-fragmentation provinces accumulated registration experience and developed deeper sales markets. Low-value, high-fragmentation provinces remained outside the formal system, unable to leverage land as collateral and deprived of the productivity gains that secure property rights could have enabled. The geographic pattern

of formalisation thus mirrors, and indeed amplifies, the broader regional inequalities in agricultural development that characterised Spain throughout the liberal era until the Civil War.

6. Conclusion (Provisional)

This paper has examined Spain's land registry between 1845 and 1932, arguing that fiscal imperatives dominated its institutional design at the expense of universal formalisation, with distributional consequences that reinforced rather than reduced existing inequalities in land and mortgage markets. Three findings stand out. First, the decision to finance the registry entirely through user fees — what we term the *saving option*, transformed registrars into residual claimants of their offices' productivity, systematically incentivising them to prioritise high-value urban transactions over the small rural plots that most required formal protection. Second, the combined burden of registrar fees, notarial charges, and transaction taxes remained persistently and increasingly regressive throughout the period, rising to over 60 per cent of transaction value for a 50-peseta plot by the 1930s, while remaining stable at 5–10 per cent for large transactions. Successive reform cycles — 1863, 1887, 1920 — offered temporary relief for individual cost components but left the structural sources of regressivity intact, because each component was governed by a separate administrative domain with its own political economy and reform logic.

Second, the registry's fiscal role grew steadily throughout the period, ultimately accounting for nearly two-fifths of all property tax revenue by the 1920s. This outcome was less a product of deliberate design than of the state's inability to modernise its direct land tax, which relied on self-reported *Amillaramientos* valuations systematically understated by provincial elites. Transaction taxes, levied on declared values at each transfer, captured rising land productivity in ways the stagnant cadastre could not, making the state increasingly reliant on the very mechanism that was most regressive for small landowners. The Villaverde fiscal reform of 1899–1900, rather than resolving this tension, reinforced it by reducing the relative importance of the direct land tax without overhauling transaction-based taxation. The result was a fiscal path dependency: the more the Treasury depended on transmission tax revenue, the less incentive it had to pursue the structural reforms that could have improved access and reduced distributional costs.

Third, the regional evidence confirms that these institutional features produced durable geographic inequalities in formalisation that persisted across all three subperiods examined. Provinces characterised by large holdings and high land values — principally in Andalusia and parts of the Mediterranean coast — maintained systematically high formalisation intensity throughout the period, while the fragmented smallholder regions of Galicia, Asturias, and the north consistently remained at the margin of the formal system. This geographic divide was not narrowed by the fee reforms of 1887 or 1920, nor by broader economic recovery after 1900: it reflected structural features of plot size and land value that no tariff

adjustment could overcome while the underlying cost architecture remained intact. Spain's land registry thus illustrates a broader principle with implications for contemporary debates on land formalisation: when the costs of entering a formal system are high and regressive, and when the state derives fiscal benefit from maintaining that system, the political economy of reform will systematically favour the already formalised at the expense of those most in need of legal protection. Institutional survival, in this case, came at the price of institutional equity.

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