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When land is not enough: Drawing in private investment to increase social rental housing in Spain

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ABSTRACT

Since the 1990s, many governments have reduced direct funding for social housing. In Northwestern Europe, indirect subsidies and guarantees have allowed private providers to maintain and expand the social rental stock. In contrast, Spain's social rental sector has remained underdeveloped. Amid the current affordability crisis, attention to social housing is growing, emphasized by a new law prohibiting the sale of public land zoned for this purpose. Given public expenditure constraints, Public-Private Partnerships (PPPs) have emerged as an alternative to finance new construction. These partnerships involve leasing public land at reduced costs to private entities for social housing development. Despite land availability, financial challenges persist and tenders often fail to attract private sector interest. This paper examines constraints affecting social housing development by exploring a PPP by the Catalan Land Institute. The central research question is: How do institutional dynamics and financial constraints impact the provision of social rental housing in Spain? To answer this question, a mixed-methods approach integrates interviews with a sensitivity analysis of key parameters in a Discounted-Cash-Flow (DCF) model. The findings underscore high financing costs, weak renter protections, and misaligned fiscal policies as significant obstacles. The paper recommends further investigating public-backed guarantors, housing allowances, and fiscal incentives to address these challenges.

1. Introduction

Across Northwestern Europe, private and third-sector partners play central roles in maintaining and expanding social housing stocks. Since the 1990s, countries like the Netherlands and the United Kingdom have reduced their government's direct involvement in housing provision, opting for market mechanisms to sustain and develop the social housing stock (Elsinga et al., 2016; Whitehead, 1999). As a result, in England and the Netherlands, the proportion of the social housing stock provided by limited profit companies has risen to 62 % and 79 % respectively (OECD, 2022). To align housing supply below market rates with the financial viability of private operators, Northwestern European countries have adopted a variety of support measures, including grants, state guarantees, land designations, and subsidised loans (Whitehead, 2014). This has come not without critique as reliance on market mechanisms has brought Private-Public Partnerships (PPPs) under criticism due to a focus on profit over social purpose (Aalbers et al., 2017) (Wainwright & Manville, 2017).

A growing body of scholarly literature has examined the effects of various policy instruments on the financial viability of affordable rental housing. These can be broadly classified under supply-side, fiscal, social and planning policy instruments, see for example Lawson et al. (2010), Norris and Lawson (2022) or Peverini (2023). Recently, in the UK, overlapping policies have been conceptualised as a form polycentric regulation, requiring social housing corporations to comply with both direct regulatory bodies and financial requirements (Raco et al., 2023). Along these lines, recent research has highlighted the varying impact that sustainable finance regulations have on social housing providers across Europe, primarily due to their dependence on private investment (Fernández et al., 2023). This paper expands this body of literature by analysing the policies affecting social housing PPPs in Spain. Here, the term social housing is used to refer to Viviendas de Proteccion Oficial

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(VPO) or Habitatges de Protecció Oficial (HPO) in Catalan which target households with incomes below certain thresholds.[1]

Historically, homeownership was the main tenure of VPOs, ultimately enabling vast swathes of the Spanish population to access homeownership but neglecting the creation of a social rental housing stock (Pareja Eastaway & Varo, 2002). This historical weakness of the Spanish model calls for a broader approach to analysing social rental housing finance. In response, this article takes a comprehensive view of the financial, social, and fiscal policies impacting social housing provision in Spain. In doing so, it draws from a case study of a land-lease Public-Private Partnership (PPP) initiative by the Catalan Land Institute (INCASOL) to explore the question: How do institutional dynamics and financial constraints influence the provision of social rental housing in Spain? The main body of evidence comprises semi-structured interviews with public officials, private developers, and financiers. This qualitative approach is complemented by a Discounted Cash Flow (DCF) analysis, commonly used to assess financial viability in housing development. The DCF model illustrates the impact of key parameters such as interest rates, arrears, and taxes on financial viability.

Ultimately, this article makes a two-fold contribution to the literature on social rental housing. First, it enhances the understanding of the historical development of the Spanish social rental housing system, highlighting the institutional arrangements and financial mechanisms at play, as well as their shortcomings. It does so through a dialogue between both the experiences of key decision makers and the financial specifications of a particular project. A key element of the contribution resides in the mixed methods approach that provides insight into investors' rationale. Second, the paper situates a Southern European case study within the social rental housing finance literature, a field traditionally focused on Northwestern Europe. By doing so, it engages with recent empirical literature emphasizing the importance of financial regulations and social policy on housing development and maintenance.

The next section reviews academic literature on policies to strengthen social housing supply, followed by the methodology and analytical framework. The following one introduces the Spanish context and the justifies the main methodological choices. Then, a historical overview of social housing in Spain highlights key legislation and its socioeconomic context. The fourth section analyses qualitative and quantitative evidence from the case study. The final sections discuss the findings in relation to the literature and conclude.

2. Debates on social housing provision through PPPs

The rationale for PPPs leading to the growth in the private-led provision of social services throughout the 1990s and early 00s (Kappeler and Nemoz, 2010) was the modernisation of public services by incorporating market-led operators that would increase efficiency allowing for the thinning of state bureaucracies (Savas, 2000). The involvement of private finance has usually been led by constraints in public capital and public administrations' reduced capacity to operate and manage services (Akintoye, 2016). For example, in the paradigmatic case of the English social housing stock, large transfers were realised as a response to the need for investment to raise home standards (Barker, 2004) (Hodkinson, 2011). In Spain, the analysis of PPPs from a financial efficiency perspective offers a mixed picture. For instance, in 2015, the National Markets and Competition Authority (2015) highlighted that private sector partners overprice services by 25 % on average when hired by public administrations. While this study refers to general contracting of services by the administration and not only housing, Ramió Matas (2016) highlights this as part of broader trend in Spain resulting in privatised benefits and socialised costs.

When it comes to PPPs, land policies, reserving a proportion of this resource for social housing provision, are a relevant tool to improve the financial viability of affordable housing supply in many contexts (Lawson et al., 2022). For example, in England, developer contributions under S106 are instrumental in securing a relevant proportion of social housing in new developments (Whitehead, 2007). In Vienna, a public land bank coupled with direct subsidies, conditional on cost-based renting, have a dampening effect on land prices thus increasing the financial viability of social housing development (Lawson & Ruonavaara, 2020). Overall, access to land eases the financial requirements of housing provision by eliminating or reducing one of the main costs. However, as the current case depicts, land policy may not completely solve viability concerns in the development and exploitation phases.

Together with land reserves, the academic literature has also focused on an array of financial policies geared towards increasing social housing supply. First, social housing systems may be underpinned by reduced borrowing costs facilitated through public backing. In a number of European countries, in the 1990s, social housing provision was opened to private investment. In the UK, this took place through large stock transfers to third sector social housing organisations (SHOs) that received public grants to de-risk private investment (Whitehead, 1999). Other countries chose to follow a different path, for example the Netherlands implemented a state-guarantee to reduce the risk premium on SHOs' debt (Elsinga & Wassenberg, 2014). In contrast, France and Germany provide a series of subsidised loans for new social housing developments (Lévy-Vroelant et al., 2014) (Droste & Knorr-Siedow, 2014). This opening of social housing to private investment has elicited critiques for an excessive focus on financial performance. For example, Wainwright and Manville (2017) see the incorporation of bond-financing among English SHOs as driving an excessive focus on financial metrics at the expense of social objectives.

Second, social housing supply has traditionally relied on a favourable tax treatment, or outright exemptions, to increase the financial viability of projects delivered by private and third-sector companies. For example, in Germany, tax relief in the form of a depreciation allowance was increased in 2019 to foster the development of affordable housing (Lerbs & Nobbe, 2021). The Low-Income Housing Tax Credit (LIHTC), in the US, is probably the best-known among these programmes. LIHTCs subsidise the development and rehabilitation of affordable housing through corporate tax reductions awarded by the Federal Government (Schwartz, 2021). Currently, most affordable homes in the US are delivered through this system of tax exemptions (Schwartz, 2021). In the last decades, the OECD has identified an increase in tax exemptions for affordable housing provision which have become a widespread tool for social housing financing in countries like Chile, France, Portugal and Colombia (OECD, 2022). This shift has been characterised both as a step towards the development of intermediate tenures but also as a commercialisation pressure (Wijburg, 2022).

Thirdly, demand-side subsidies in the form of direct housing allowances to households have become a key feature of the social safety net in many countries as brick-and-mortar subsidies for social housing

[1] Granath Hansson and Lundgren (2019), identify household targeting as the most consistent criterion across various definitions of social housing. In the Spanish context, the legislation uses the term *Vivienda de Protección Oficial* (VPO) to refer to dwellings provided for households below a certain income threshold, regardless of tenure. This article adopts the income threshold criterion to define social housing, but focuses specifically on social rental housing, which requires distinct management and financing approaches compared to homeownership. The term "affordable housing" is used as shorthand in the literature review and discussion sections to describe similar housing tenures in countries other than Spain. For example, in the U.S., affordable housing often refers to units developed through Low-Income Housing Tax Credits (LIHTC), while state-owned housing is referred to as public housing (Schwartz, 2021). In the UK, the National Planning Policy Framework (MHCLG, 2023) defines affordable housing as an umbrella term covering both rental and ownership units, similar to the Spanish case. Within rental housing, different formulas are used to set "social rents" and "affordable rents". Notably, in the UK, the terms "social housing" and "social rents" do not refer exclusively to publicly owned housing; both social and affordable rent units are provided by third-party and publicly owned operators (MHCLG, 2023).

development were rolled-back (Kemp, 2012). The popularity of housing allowances is linked to the US Experimental Housing Allowance Program. This program investigated housing consumption responses resulting from direct cash transfers to low-income households. Evidence from this experiment pointed to housing allowances inducing households to live in better quality housing (Mulford et al., 1980). While housing allowances are usually presented as an alternative to direct social housing provision, in practice, allowances also reduce arrears in the social sector (see also Kemp, 2007; Turner & Elsinga, 2005). This is the case particularly after the social housing stock started to be operated by third party actors. For example, in the UK, housing allowances make up a sizeable proportion of SHOs' finances and, by assuring revenue from vulnerable residents, are inextricably linked to development strategies (Stephens, 2005; Wilson & Barton, 2017).

As the literature shows, the long-term financial viability of social housing developments hinges on the definition of a financing framework usually achieved through a mix of social, financial and planning policy instruments. These changes in social housing provision, from fully state-led to the introduction of other actors, have resulted in complex governance frameworks. As a result, access to capital markets has improved and the voluntary sector has been professionalised arguably at the expense of tenant participation (Gibb, 2002) (Lunde & Whitehead, 2016). These developments also speak to a broader shift towards decentralised and multi-level governance across different levels of government and networks of public and private actors. Kersbergen and Waarden (2004) highlight how these arrangements are generating interdisciplinary research areas for social science. When it comes to social housing, Raco et al. (2023) propose the term polycentric regulation to address the multiple forces that push and pull English SHOs in the definition of their social and financial strategies. Peverini (2021) also postulates a similar framework to address the role of urban governance on housing affordability. Furthermore, the increasing impact of multiple layers of legislation on social housing provision is also highlighted in Fernández et al. (2023). This paper employs a comparative approach to explore how national social housing financing frameworks adapt to the EU legislation on green finance.

These studies underscore the impact multiple legislative poles have on the provision of social housing. This paper hones in on three specific dimensions within the Spanish context: supply measures, fiscal policy, and demand-side subsidies (Table 1). In practice, these instruments often become more nuanced post-implementation, for instance, in the US, the sale of LIHTC to financial operators results in this policy behaving akin to an up-front grant rather than a recurring fiscal benefit (Schwartz, 2021). Consequently, the classification of policies presented in Table 1 is employed as a heuristic instrument to structure evidence, rather than a rigid taxonomy of policy instruments. The subsequent empirical sub-questions ask: 1) How have legislative and socioeconomic developments shaped PPPs for social housing provision within the Spanish and Catalan contexts? 2) How do financial constraints, when considered in conjunction with fiscal and social policies, currently impact the viability of PPPs for social housing provision? These questions, answered in sections four and five respectively, ultimately align with the objectives of presenting a comprehensive overview of the current social housing financing structures in Catalonia and assessing the policies impinging on the financial viability of supply.

Table 1
Social housing financing policies.

Policy	Supply-side subsidies	Fiscal policy	Demand-side subsidies	Planning law
Target	Housing unit	Housing Unit	Household	Land
Examples	Grants — UK Subsidised loans — FR	LHITC — US	Housing allowances — UK	Land reserves — AUT

Source: Prepared by the authors with information from the literature review.

3. Context and methodology: a mixed-methods case study

Despite a long-standing policy focus on homeownership, stepping onto the housing ladder has become out of reach for many. In 2023, the average household needed 36 % of its income to access a mortgage, 6 % more than in 2020 (Observatorio de Vivienda y Suelo, 2023). Rising housing costs disproportionately affect lower-income households, with 47 % of private renters and 28 % of homeowners in the lowest income quintile spending over 40 % of their income on housing (OECD, 2022). While this rate is much lower in the social rented sector, 12 %, years of underinvestment from public authorities, coupled with policies centred around homeownership, have dwindled the proportion of socially rented housing stock to about 2.5 % (Observatorio de Vivienda y Suelo, 2022).

In 2023, in response to the affordability crisis, the Spanish Parliament enacted a new Law on the Right to Housing (12/2023), a pivotal piece of legislation introducing the option of rent controls in the private rental sector and also aimed to promote new social rental housing. Since the short-lived introduction of rent controls in Catalonia between 2020 and 2022, this policy has become a topic of fervent public debate eliciting diverse perspectives from economists (Kholodilin et al., 2022; Monras & Montalvo, 2023) (Jofre-Monseny et al., 2023) and legal experts alike (Simon, 2023). Conversely, the development of the social housing stock has remained relatively unattended in academic research despite some relevant contributions (Gifreu i Font, 2023; Burgués & de Molina, 2019).

To increase the social stock, the Law on the Right to Housing (12/2023) together with previous regional housing laws (Gifreu i Font, 2023), placed specific emphasis on fostering PPPs through land leases. Under this model, publicly owned land is leased to a private partner for the construction and management of social housing. So far, this approach has yielded mixed outcomes. Subnational governments, such as the Metropolitan Government of Barcelona[2] and the Region of Madrid (Orden 951/2021, Orden 1270/2021), have, only at times, successfully engaged private partners to execute part of their housing initiatives. On other occasions, these same institutions together with the Generalitat Valenciana have failed to secure any private developers' bid for their social housing plans.[3]

This paper approaches the questions presented above through a case study of INCASOL's land-lease PPPs. As the land management authority in Catalonia, INCASOL both directly provides housing and organises land development. Recently, INCASOL has released three plots zoned for social rental housing in an open bid to be developed and managed by a third party organisation. Reliance on a private partner operating in a financially constrained manner makes this a particularly compelling case to investigate social housing delivery. To do so, this paper develops a mixed methods approach, following a design that starts with qualitative input and is then expanded through quantitative modelling. In the first phase, 21 in-depth interviews with professionals served both to understand first the institutional context together with the motivations of public and private stakeholders. In the second phase, the encoded responses informed the selection of particular parameters for further exploration through a sensitivity analysis in a Discounted-Cash-Flow (DCF) model assessing the developments' viability. The objective is to demonstrate the broader relevance of the concerns raised by the interviewees and illustrate their financial viability implications through a sensitivity analysis of key parameters. This approach aligns with the

[2] https://ajuntament.barcelona.cat/lescorts/es/noticia/nace-el-primer-operador-de-vivienda-publicoprivat-del-estado_1117294.

[3] https://www.elconfidencial.com/empresas/2021-12-02/generalitat-vivienda-alquiler-plan-estrella_3334537/.

logic of a primarily qualitative method, supplemented by quantitative elements (Morgan, 2014).

While the nucleus of the research focuses on INCASOL and Catalonia, the set of interviewees encompasses other Spanish regions to make any broader extrapolation of results more robust. Participant selection included an array of actors involved in the formulation, financing and oversight of land PPPs. That is, first, public partners leasing land; second, private developers and managers of social housing and; third, private and public financial institutions financing these projects (see Table 2 for detail). The actors selected are similar to those interviewed in the study of social housing financing in other contexts, see for example, Raco et al. (2023) and Fernández et al. (2023). Recruitment took place through professional networks attending to criteria of prior experience, decision-making capacity and technical expertise. Interviews were conducted both in person and online throughout 2023. The semi-structured interview[4] protocols were designed to delve into three topics 1) the rationale for land-lease PPPs, 2) the minimum requirements for investment, and 3) the long-term implications of this form of housing provision. Subsequently, the answers were coded in Atlas.ti attending to the incidence of specific narratives regarding borrowing costs, fiscality and social policy (Appendix A).

Secondly, building on the interview responses, a sensitivity analysis of key parameters in a Discounted-Cash-Flow (DCF) is used to quantitatively illustrate financial viability issues. This responds to a call by Poovey (2015) for engagement with financial decision-making tools in housing research. This paper quantitatively presents policy impacts on the financial assessments conducted to determine the viability of a specific social housing project. DCF models constitute a widely employed tool among real estate investors and public authorities for assessing rental housing appraisals and valuations (Ling & Archer, 2021). This valuation model relies on predicting cash flows and future value and then discounting them to appraise a current investment opportunity (Ling & Archer, 2021).

The Internal Rate of Return (IRR) is a key concept in financial analysis, particularly in the evaluation of investment returns. According to Ling and Archer (2021), the IRR is the discount rate at which the Net Present Value (NPV) of a project's cash flows equals zero. In other words, it is the rate of return at which the present value of the project's cash inflows matches the present value of its outflows. See the formula below, where: C_t = net cash inflow during the period t; C_0 = total initial investment costs; IRR = the internal rate of return; and t = the number of time periods.

$$0 = \mathrm{NPV} = \sum_{t=1}^{T} \frac{C_t}{(1+\mathrm{IRR})^t} - C_0 \quad (1)$$

The IRR summarises the return of an investment opportunity. In investment decisions, if the IRR exceeds the project's required rate of return or cost of capital, the project is generally considered acceptable. Conversely, if the IRR is lower than the cost of capital, the project is not deemed viable. One of the limitations of DCF models is their highly deterministic nature drawing from a series of imputed parameters (see Appendix B for detail). In this case, the scrutiny of quantitative determinants is used to assess the interplay between affordability for the consumer and financial viability for the investor. Hence, the results presented acquire more relevance as the parameters modelled illustrate the concerns highlighted by the interviewees.

Table 2
Interview selection. Prepared by the authors.

Actor	Count
Private partner: (not) for-profit SHO	5
Case study: INCASOL	6
Other public partners: regional and local governments	5
Financing institutions: public and private banks, rating agencies	5
	21

4. The changing role of social housing: legislative and socioeconomic developments in Spain and Catalonia

According 2021 data, Spain displays an imbalanced tenure breakdown with a high homeowner proportion, 75.2 % of households (INE, 2023). Among the total households, 38.1 % own their home outright and 26.4 % have a mortgage. In contrast, only 15.9 % of households are renters in the private market and just 2.8 % are social renters (INE, 2023). Although the percentage of private renters grew by 2.4 % between 2011 and in 2021, (INE, 2023), reversing a historical trend in the increase of homeownership, Spain continues to rank firmly among the European nations with the highest percentages of homeowners (OECD, 2022). However, this was not always the case. In 1950, over half of Spanish households rented, but by 1995 this figure has dropped to 14 % (Pareja Eastaway & Varo, 2002). Conversely, the proportion of owner occupiers grew from 46 % to 81 % in the same period (Pareja Eastaway & Varo, 2002). The centrality of homeownership in Spain is the result of a series of policy decisions that privatised the public housing stock while subsidising mortgages, a process that started in the 1960s and fully unfolded in the 1990s.

Despite the historical emphasis on homeownership, the roots of the current PPPs and social housing system can be traced back to legislation prior to the new housing law. After the Civil War in 1939, the Dictatorship's first housing law (BOE-A-1939-6523) established the National Housing Institute to promote social housing, particularly through for-profit companies. This law provided tax exemptions and interest-free loans for properties built under specific rent thresholds. Subsequent legislation raised the maximum rents eligible for subsidisation to incorporate "middle classes" and stimulate economic growth through construction (BOE-A-1944-10964). Carbajal (2003) notes that, despite legislative efforts, the post-war focus on PPPs failed to meet objectives due to limited access to building materials, capital, and an inefficient subsidy system. Consequently, private development concentrated on mid-segment housing, while properties with the strictest rent ceilings were mainly developed by the National Housing Institute.

In the 1950s, two key features were introduced. On the one hand, the 1954 Law on the Construction of Limited Rent Housing (BOE-A-1954-10883) expanded the previous system of subsidies and fiscal exemptions. Also, from 1957 onwards, a newly created Ministry for Housing would become instrumental in the formulation and implementation of Housing Plans. A key element of these housing plans was the provision of social housing on a flexible tenure basis which eventually resulted in the privatization of the social housing stock.[5] On the other hand, the 1956 Land Law (BOE-A-1956-135) established a system of development levies "cesion obligatoria" which required developers to cover public infrastructure costs in new developments. Furthermore, this law foresaw the possibility of transferring public land to private companies for the

[4] Consent was sought in written form for all interviewees. A public disclosure provision was included in the consent form when referring to employees at INCASOL where ensuring anonymity was impossible.

[5] Article 26 of the 1954 law established that the housing units could be let for free, rented, sold outright or in instalments. The regulation that developed this law also determined that after 20 years, the dwelling would lose its "social" qualification. As a result, it would be free for trading in the open market and renters would become owners.

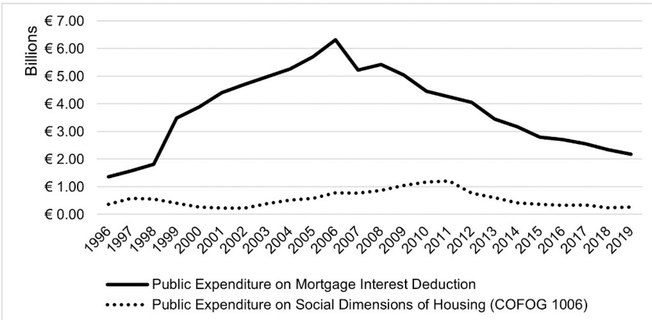

Fig. 1. Public expenditure on mortgage interest deduction and social dimensions of housing.
Sources: OECD, 2024 and Ministerio de Hacienda, 2021. Prepared by the authors.

development of social housing.

Throughout the 1950s, the economic circumstances progressively changed compared to those of 1939. In 1953, the Pact of Madrid[6] ended Franco's regime international isolation opening access to development aid and international investment. In the 1960s, in the midst of unprecedented economic growth, public investment in social housing and for-profit private initiatives would lead to the development of vast swathes of urban peripheries into social housing. In fact, most of the Spanish housing stock was built during two boom periods during 1962 to 1967 and 1968 to 1974 (Taltavull, 2001). At this time, a number of private for profit SHOs with a focus on social housing provision were created:

> Spain has traditionally had lax fiscal regimes for housing provision, particularly with total fiscal exemption for social housing provision. Our company was created [in 1968] under this fiscal regime. One of the advantages was not paying taxes and this would compensate for the limited rents. This was before there were any land reserves for social housing.
>
> CEO, For Profit SHO

Public land reserves where only establish in the 1975 Land Law (BOE-A-1975-9250), which built on the previous 1956 law and increased the developer contributions to public infrastructure and 10 % of the value of the total development to local authorities. As a result, municipalities increased their land assets (Picazo-Ruiz, 2021). However, in many cases public institutions lacked the financial resources and administrative capacity to maintain or develop any social housing stock and land was sold back to developers. "Before [2020], the public administration could sell the land received as in-kind contributions by developers so far as the proceedings were reinvested in housing policy objectives". (Meritxell Jane Pla, Architect-Development Team, INCASOL).

In the 1980s, following the end of the dictatorship and the start of decentralization, housing policy became the responsibility of regional authorities. Many regions established land institutes to manage land and housing assets transferred from the central government. After the dictatorship, housing policy continued to focus on homeownership as mortgage markets were liberalised and macroprudential policies were made more lax (Palomera, 2014). In Catalonia, the Law 4/1980 created INCASOL, which continued the low-cost homeownership policy throughout the next decades. As Fig. 2 shows, decentralization did not

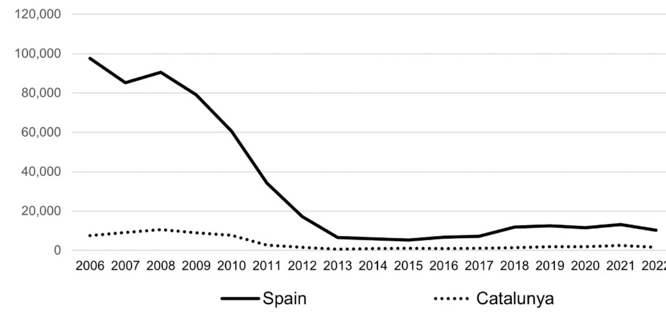

Fig. 2. Total social housing starts.
Source: Ministerio de Transportes, Movilidad y Agenda Urbana. (2024). Prepared by the authors.

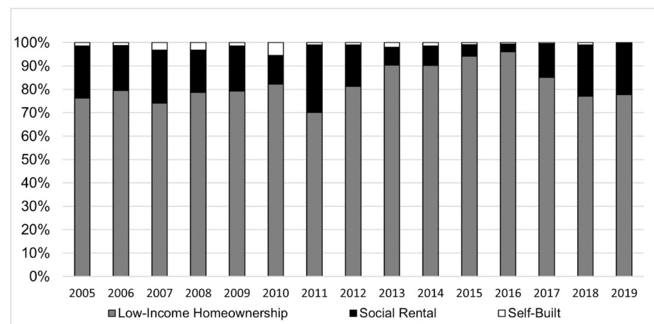

Fig. 3. Total social housing starts by tenure in Spain.
Source: Ministerio de Transportes, Movilidad y Agenda Urbana. (2024). Prepared by the authors.

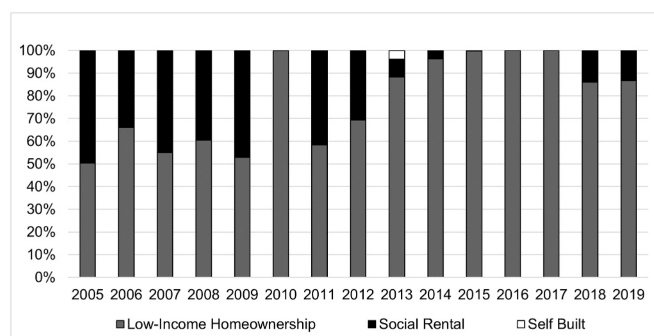

Fig. 4. Total social housing starts by tenure in Catalonia.
Source: Ministerio de Ministerio de Transportes, Movilidad y Agenda Urbana. (2024). Prepared by the authors.

result in structural changes in housing provision between Catalonia and Spain, particularly in recent decades, most social housing provision has taken the form of low-cost homeownership in both contexts. The flagship housing policy by public expenditure standards was Mortgage Interest Deduction (MID), which dwarfed the proportion spent on social housing provision (see Fig. 1). Even at the peak of social housing starts in 2008, public expenditure on social housing was markedly less than that on MID. Social housing provision remained centred on homeownership, contingent on land sales and fluctuating following real estate cycles, as Figs. 2 and 3 show. Also, despite the existence of zoning laws and social housing companies, homeownership remained the preferred tenure in social housing developments, Figs. 3 and 4.

The 2008 crisis put an end to this era of social housing provision. In the midst of austerity and recession, the land market contracted and the

[6] The Pact of Madrid was a bilateral agreement signed in 1953 by General Franco, the dictator of Spain, and US President Eisenhower. The agreement allowed the US to use strategic military bases in Spain in exchange for economic aid to the Spanish regime. The pact marked the end of the international isolation that Franco's regime had faced since the end of WWII and contributed to its survival until 1978.

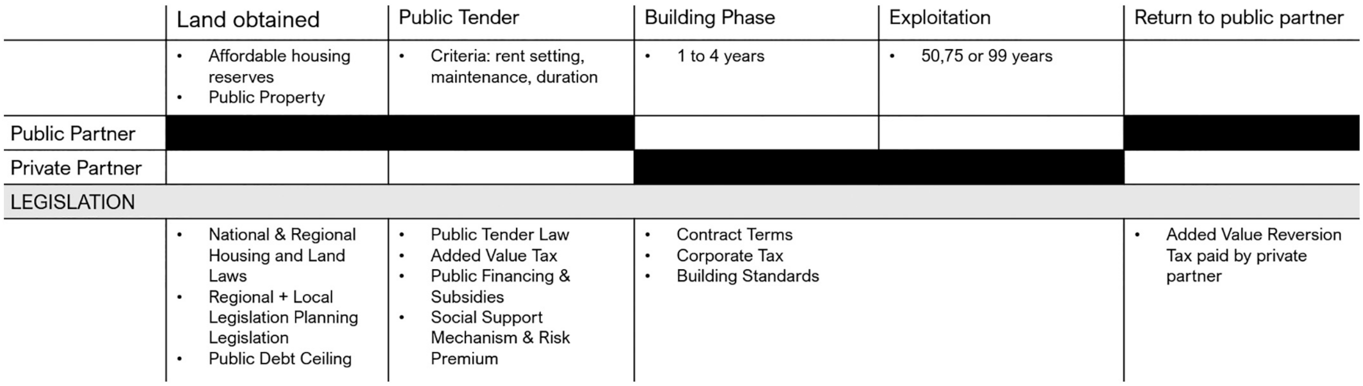

Fig. 5. Actors, processes, concerns and legislation in land-lease PPPs. In this case, land obtained through developer contributions is being tendered for lease to build affordable housing. The selection criteria for private partners in this particular tender include lowering rents below the threshold set in the legislation, returning the building to public ownership before the 75-year limit set, and exceeding minimum maintenance requirements. The winning bidder will gain the rights to develop and manage the social housing units on the released plots for the agreed term, after which both the land and building will revert to public stewardship.
Source: Prepared by the Authors.

Spanish administration lost one of its main revenue resources (see Fig. 2). Also, in the context of ballooning public debt, a cross-party coalition introduced legal limits to public expenditure through a budget stability law BOE-A-2012-5730. This law capped public deficit by all levels of government limiting countercyclical investments (Bellod, 2011). When it comes to housing, these debt ceilings still nowadays curtail the capacity of regional authorities to issue debt and directly fund housing provision.

> In this moment, for us to be able to build we would need to raise debt. This is particularly limited to the regional government. As a result, we won't be able to develop land directly because we do not have the financial resources. Thus, the only option for us to enlarge the public rental stock is through leveraging private investment.
>
> Director of Asset Management, Regional Land Institute

In the aftermath of the 2008 crisis, alongside the retrenchment of public provision, a series of fiscal incentives were introduced to attract private investment from abroad through Real Estate Investment Trusts (REITs). In Spain, REITs owned by foreign investment funds are not only exempt from corporate tax but also from taxes on dividends paid to shareholders outside the country (BOE-A-2009-17000). Consequently, the number of REITs has grown exponentially while the administration broadly retreated from social housing development and management (Gil García & Martínez López, 2023) (Janoschka et al., 2020).

Together with these financial limitations, three legislative changes complete the current PPPs' framework. First, the 2007 Spanish Land Law (BOE-A-2007-10,701) expanded social housing reserves and mandated that a minimum of 10 % of any new development be allocated to social housing. Second, the 2010 Catalan urbanism law improved over this minimum and raised the social housing proportion to 30 % (Picazo-Ruiz, 2021). This change enabled local authorities or INCASOL, depending on the case, to secure a greater proportion of land value for social housing through development contributions. Third, in response to affordability challenges and the low provision of social housing (see Fig. 4), the Catalan Parliament passed the current Law on the Right to Housing in 2019 (BOE-A-2020-2509). This law aimed to increase the percentage of social housing in Catalonia from 2 % to 5 %. To improve housing affordability for tenants, the law introduced rent controls, which were later deemed unconstitutional and removed. However, it also prohibited the sale of public land zoned for social housing and increased the housing proportion reserved for social housing in developments to 50 % in certain municipalities facing affordability pressures. Ultimately, the national Law on the Right to Housing (12/2023) incorporated both rent controls and the prohibition on selling public land into national legislation. As a result, public administrations across Spain are now required to maintain land zoned for social housing in public ownership and to develop a significant portion of it as rental housing. Land-lease PPPs have emerged as a response to financial constraints in achieving these social housing goals. These PPPs rely on public land zoned for social housing, which is developed by third parties and eventually returned to public ownership.

> First, land-leases allow public institutions to maintain land as public property. This is an economic and fiscal reason as the asset ultimately returns to public stewardship after the end of the contract. Second, the public administration is reassured that the land will be used for its intended purpose, providing social housing. Thirdly, over the longer run, the state aims to have an impact on market prices.
>
> Lawyer, Legal Advisor to Public Partners in PPPs

In summary, the emergence of land-lease Public-Private Partnerships (PPPs) for social housing provision in Spain can be attributed to three core factors. First, there has been a longstanding reliance on private partners, including for-profit entities, to address the capital shortfalls in social housing provision. Second, the historical underinvestment in public infrastructure for the direct management and construction of social rental housing has been exacerbated by recent constraints on public expenditure following the Global Financial Crisis (GFC). Finally, recent legal reforms have restricted the alienation of public land designated for social housing development, thereby necessitating the involvement of private actors to mobilize capital and provide management expertise, as illustrated in Fig. 5.

5. The influence of fiscal and social policies on the current viability of social housing PPPs

As result of the aforementioned legal changes, INCASOL has also become unable to sell public land zoned for social housing. "Our social housing provision model relied on very strong capital gains resulting from land operations. This surplus was then invested in public social housing." (Jordi Serrano-Codina, Finance Coordinator, INCASOL). Historically, INCASOL relied on land sales to finance housing development. This approach led to a sharp decline in housing provision following the 2008 crisis, mirroring the broader downturn in Spain and Catalonia (Fig. 6). According to the same interviewee, the reduction in land sales prompted INCASOL to tap into rental deposits for housing development. Residential and commercial renters in Catalonia are required to place their deposits with INCASOL, providing the agency with a pool of capital at a 0 % interest rate, as these deposits are returned at their nominal value.

Despite INCASOL's relatively easy access to capital, the expansion of

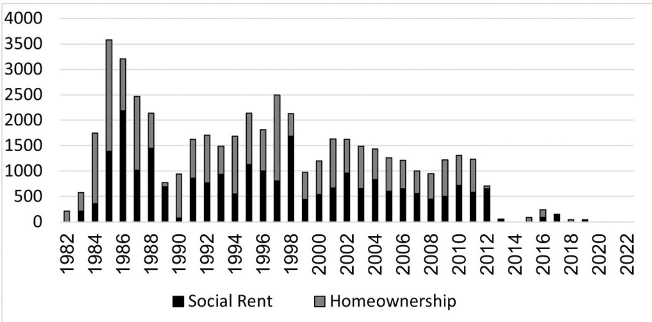

Fig. 6. Social housing built by INCASOL.
Source: INCASOL. Prepared by the authors.

the housing stock to meet the regional housing plan targets is putting a serious strain on its finances and management capacity. "We can mobilise 90% of the deposits, but we are buttoning up against this limit" (Jordi Serrano-Codina, Finance Coordinator INCASOL), and also "project management and human resources constitute relevant bottlenecks for the development of social housing at scale" (Pere Picorelli, INCASOL). Land-lease PPPs have emerged as a response to develop land which otherwise would sit vacant due to limited public resources. In this case, the leased land is located in Municipality of Esplugues de Llobregat, within the metropolitan area of Barcelona. Further details of the particular case are included in Appendix B (EXA 664/2023). Through a competitive process, INCASOL releases this plot that is to be built and administered by a third party and once the concession period is over will return to public management.

> The public tender defines three economic variables to competitively assess the tenders. The first one is social, lowering rents which benefits the residents. Second, returning the building to public management before the predefined period, which would benefit the administration. Finally, improving maintenance investments.
> Pere Picorelli, Housing Programmes and Regeneration Coordinator, INCASOL

The private partner will need to incorporate these three elements in its financial assessment while keeping the project viable, that is deliver its required IRR — defined in the methodology section. In this regard, one of the key elements jeopardising viability is the balance between borrowing costs and rental affordability. The current high interest rates hinder social housing development through traditional bank loans since rents are capped and are usually indexed to a more stable index than consumer prices or updated by regional governments on an ad hoc basis. As Fig. 7 shows, borrowing costs have a strong impact on the IRR. Borrowing costs reflect the risk of these operations but are also constrained by the pool of investors an SHO has access to. In Catalonia, public grants through the EU Next Generation funding stream subsidise two interest points in the loans offered by the Institut Catala de Finanzas (ICF).[7] While the funds available through this line of credit are limited, they are critical when it comes to not-for-profit providers' capacity to bid for these projects.

> ICF has various lines of credit that subsidise social housing up to two full interest points. (…). As a consequence of the rising interest rates, development became very difficult. Before we used to have private entities such as Triodos or Fiare. However, this is not viable anymore since EURIBOR is at 4% and the differential raises it to 5%.
> Finance Coordinator, Not-for profit SHO

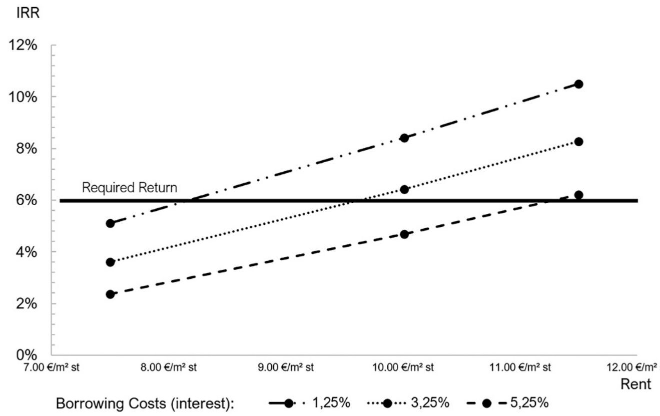

Fig. 7. Sensitivity analysis of capital costs and rent per sqm on IRR.
Source: Prepared by the authors.

Ultimately, project viability relies on grant funding which is available following European subsidies and not on a systematic basis. As opposed to third sector organisation, for-profit operators are not that dependent on grant funding, as they are usually larger and have access to more diverse pools of debt, combining grants with bond instruments and equity. However, financing needs among for-profit operators have historically remained too low to access capital markets directly through own-name bond issuance. One of the largest for-profit operators mentioned its intention to release a green bond, as it is the case in other European countries (Fernandez et al. 2023).

> There's two requirements for issuing bonds with social and green labels. On the one hand, you need projects that are adapted to the technical criteria, the Next Generation Funds [European subsidies] help with this. On the other hand, you also need volume to generate a large enough ticket that makes emitting a bond feasible.
> CEO, Large for-profit SHO

This relatively large company is receiving a direct grant from the EU's Next Generation Funds for a similar land-lease PPP in a different region, in exchange for meeting higher environmental standards and reducing rents. The viability of such projects depends on grant funding and on the project being large enough to access capital markets directly. While green bonds can potentially lower borrowing costs (Fernández et al., 2023), the associated administrative expenses make them feasible only for large-scale projects. This underpins the need for financial aggregators to pool the needs of various providers. Moreover, smaller operators, particularly non-profits, report that the combined burden of meeting environmental standards and reducing rents compromises the viability of certain projects. As illustrated in Fig. 7, the rent level required by the Next Generation Funds (7.5 EUR per square meter) significantly lowers the project's internal rate of return (IRR).

Borrowing costs are also related to resident eligibility and arrears through risk assessments. Due to the rent levels required for financial viability, PPP projects tend to have higher income criteria for resident eligibility compared to publicly managed housing. This often leads to a form of cream-skimming, where private operators house residents with higher incomes. "Our clients are couples, young families with income between four and five and a half times the IPREM,[8] which is the majority of Spanish society" (CEO, Large For profit SHO). In contrast, projects directly managed by public agencies have lower eligibility requirements and often operate at a loss, with the Agencia Habitatge de Catalunya (AHC) covering the costs of non-paying tenants, as highlighted in

[7] More detail at: https://www.icf.cat/ca/productes-financers/prestecs/icf-habitatge-social.

[8] Indicador Público de Renta de Efectos Múltiples IPREM is a public indicator of income. The ceiling to access social housing is 5.5 times the IPREM.

interviews. Therefore, the viability of these land-lease PPPs depends heavily on the negotiation of eligibility criteria between the administration and the private operator.

As shown in Fig. 8, arrear allowances affect the viability of social housing developments, though they are less impactful than borrowing costs. Arrears significantly influence risk perceptions among lenders, which can lead to higher interest rates. Although local authorities often have ad-hoc agreements to cover the losses in social housing projects, there is no regional or national housing allowance scheme in place. "With [arrears], local authorities collaborate with us to find a suitable resolution. (…) However, from a financial point of view, we cannot describe this as a norm, is it not a model." (Director of Development, Not for profit Provider).

Next to the challenges put forward on viability and borrowing costs, fiscality also hinders the development of social housing in land-lease PPPs. This is a consequence of the VAT exemption of rent which precludes passing on the construction VAT to the residents and increases the upfront costs of the provider. While the administration is prevented from selling land, contradictorily, the fiscal framework penalises rental housing developments.

> If a developer sells the property to the final occupier, the developer can pass on VAT to the final occupier. In this transmission, the developer compensates for the VAT charged on the first transmission, that is the public administration and reduces costs. SHOs do not sell so they cannot pass on the 21% or the 10% construction VAT.
>
> Consultant for Private Partners in PPPs

As illustrated in Fig. 9, fiscal costs significantly affect the financial viability of social housing projects. Although VAT has a lesser impact than borrowing costs, it occurs during the construction phase, thereby increasing up-front expenses. Recent changes in corporate taxation have also led to higher corporate taxes for commercial social housing landlords. However, Spain retains a 0 % tax on REITs' dividends for investors based abroad (Gil García & Martínez López, 2023). Contradictorily, investment in social rental property by for-profit companies with an interest in maintaining a social housing stock is fiscally penalised while the extraction of dividends by foreign companies remains untaxed.

> Before we used to have an 85% reduction on corporate tax, where instead of 25% you used to pay 3.75%. If you paid dividends, the receiver had to pay 50%, that is an additional 12.5%, resulting in an effective rate of 15%. In 2022, the fiscal code reduced the 85% reduction to 40%, this resulted in an effective rate of 15%. Once you add the 12.5% on dividends, this results in more than 25%.
>
> CEO, Large for-profit SHO

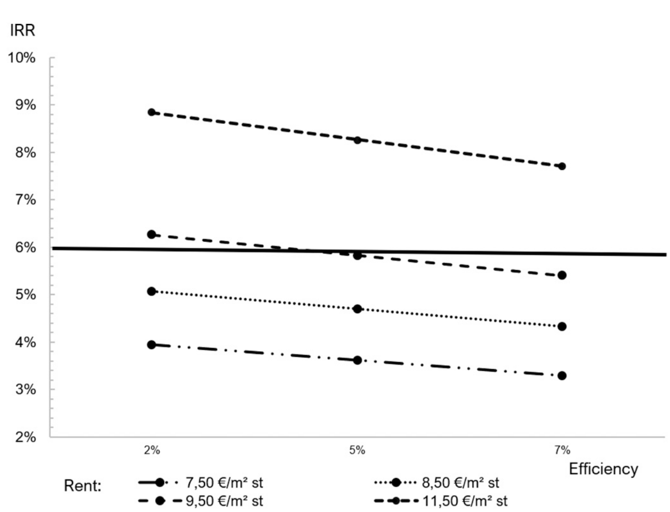

Fig. 8. Sensitivity analysis of efficiency (arrears + vacancy), and rent on IRR.
Source: Prepared by the authors.

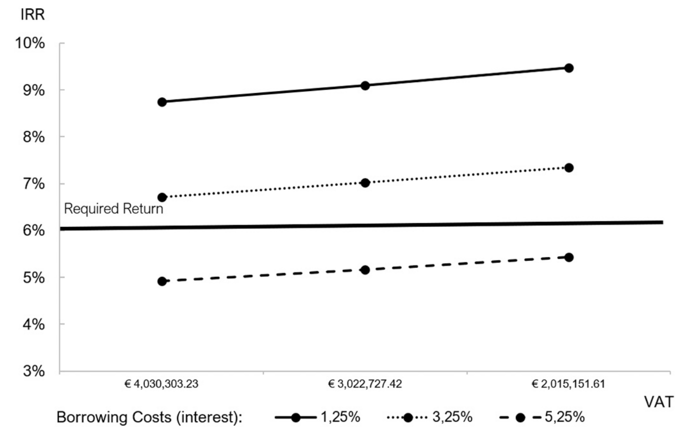

Fig. 9. Sensitivity analysis VAT & capital costs on IRR.
Source: Prepared by the authors.

Fig. 10 shows how not all parameters produce the same impact over viability. While rent levels and borrowing costs have a very noticeable impact over the IRR, arrears and VAT have less influence. However, the parameters presented in Fig. 10 are not exogenous; for example resident arrears produce a strong impact on risk premiums and hence on borrowing costs. Furthermore, there are structural factors that go beyond the project analysis reflected in the DCF model such as corporate taxation. Also, the small number of specialized organisations in the development and management of social housing, as well as the high leverage of the existing ones, produce inefficiencies that preclude the sector's development.

> They [developers] assume the developer risk and once the building is there they want an 18% return. If the Spanish developer does not have access to capital they go to a fund, probably from London. A value add fund would front the capital and ask for a similar return. The fund and the developer put together a joint venture and the first stays as a manager that takes 6 to 8%.
>
> Legal and Economics Consultant, Private Partners in PPPs

The lack of vertical integration – meaning the consolidation of financing, development, and operation of social housing under one organisation – as seen in the large specialized social housing organisations (SHOs) in Northern Europe discussed in the literature, also leads to reduced competition among bidders.

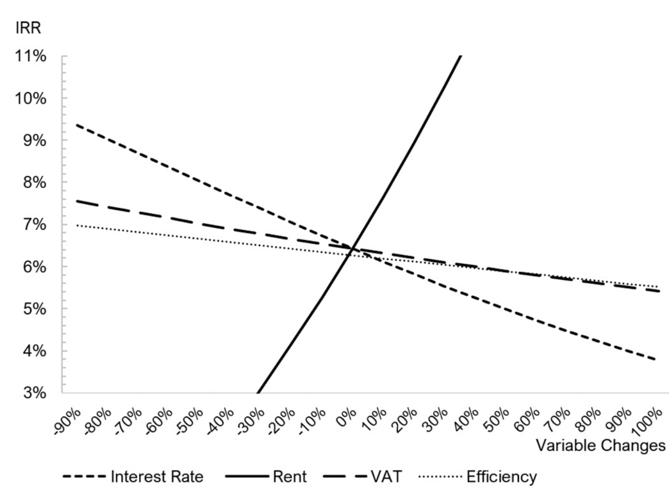

Fig. 10. Sensitivity analysis IRR key parameters.
Source: Prepared by the authors.

6. Discussion and policy implications: an unfinished paradigm

This paper has examined the regulatory framework governing social housing development through land-lease PPPs in Spain. These partnerships rely on planning legislation to obtain public land which is subsequently developed by a third party operating under market conditions. Our research shows that while land has become available for new social housing developments, the lack of an adequate social housing financing model continues to hinder provision.

The literature frequently critiques PPPs for facilitating corporate capture of public funds and profits, particularly in the years leading up to the Global Financial Crisis (GFC) and during the subsequent expansion of REITs (Wijburg et al., 2018). In contrast, Spanish PPPs date back to the 1950s, well before the post-1990s privatisation of housing stock seen in Northwestern Europe. Contemporary land-lease PPPs in Spain differ significantly from the privatisation-driven models described in Janoschka et al. (2020). Spain's new housing legislation prioritizes preserving public land and increasing social housing supply, with rent caps during the leasing period and the eventual return of assets to public control, further distinguishing these PPPs from corporate-led privatisation models, such as those that provide fiscal benefits to REITs (Gil García & Martínez López, 2023).

This paper highlights three primary barriers to social housing provision in this model: high borrowing costs, a misaligned fiscal regime, and the lack of systematic resident support. Borrowing costs constitute the main hurdle in social housing initiatives and highlight the need for a financial mechanism to deliver capital at scale. Although limits to public expenditure have been engrained in national legislation by many European countries, Off-Budget Agencies (OBAs) excluded from these ceilings have also become increasingly common. In the Netherlands, a guarantee fund, WSW, ultimately backed by the government, allows SHOs to access debt at sovereign rates substantially reducing borrowing costs (Elsinga & Wassenberg, 2014). OBAs have also become increasingly common in Germany to deliver, for example, on climate transformation objectives (Deutsche Bundesbank, 2023). Secondly, the deterring impact of Value Added Tax (VAT) and corporate fiscality on social housing runs counter to current international experiences by other OECD countries. Relying solely on temporary tax exemptions for social housing delivery has yielded limited results (Wijburg et al., 2018). However, in the Spanish context, these exemptions could potentially enhance social housing development, with the added benefit that such projects would eventually return to public stewardship, thereby reducing commercialization pressures. Finally, addressing arrears and providing support to residents requires the establishment of a robust social safety net. In this context, the English housing allowance system emerges as a compelling option, as it fully covers the housing costs of social housing residents facing financial difficulties (Wilson & Barton, 2017). However, as Priemus and Haffner (2017) highlight for the Dutch case, consideration must be given to the implications for public expenditure. For example, the UK currently spends 1.4 % of its GDP on this policy—the highest proportion among OECD countries (OECD, 2022).

Drawing from these international experiences and the sensitivity analysis (Fig. 10), this paper offers three policy recommendations to be explored in future research: the establishment of financial intermediaries with public backing, the introduction of a housing allowance, and comprehensive fiscal reforms. While it is possible to point out how these measures would work in theory, further empirical analyses are needed to show how these measures would fit and benefit social housing policies in the Spanish case. Also, in the face of public debt limitations, establishing adequate Off-Budget Agencies to de-risk the debt profile of private partners could be a precondition to surmount the sector's capacity constraints —see for example the German case (Deutsche Bundesbank, 2023). Ultimately, building a social rental housing stock relying primarily on private investment presents significant challenges particularly if the premise is providing housing to lower income households. Northwestern European countries built their social housing stock between the 1940s and 1970s through substantial public spending. Reproducing this model in Spain without a similar increase in public expenditure is a manifestly difficult task.

When it comes to limitations, this study draws heavily from a specific land-lease PPP, which constitutes a significant constraint. Although the interviewee sample includes relevant actors beyond Catalonia and the issues identified are acknowledged across stakeholders, additional comparative research on social housing projects in Spain is necessary for more robust conclusions. Furthermore, while the financial model adds value through illustrating policy impacts on housing development viability, there are two significant limitations. First, the variables considered are not endogenous, meaning for example that arrears significantly affect lending risks and hence borrowing costs. This relationship is not incorporated in the model as the variables are imputed separately. Second, the parameters used are highly deterministic and could benefit from refinement through probabilistic methods like Monte Carlo simulations. As a result, further analysis into the determinants of social housing supply remains a pressing need.

7. Conclusion

Spain has historically relied on private partners for housing provision due to financial constraints. In the second half of the 20th century, Spain's urban development was characterised by substantial private investment and the strengthening of state intervention through development levies being progressively embedded in national legislation. However, Spain diverged from other European countries by emphasizing homeownership particularly early-on. Recent legislative initiatives have departed from this historical trajectory by reorienting housing policy towards the expansion of social rental housing. However, these efforts grapple with resource constraints and often resort to public-private partnerships (PPPs) reminiscent of legislation introduced in the 1950s.

Our research shows that the recent provisions aimed at preserving public land lack accompanying financial mechanisms to ensure social housing delivery. Public incentives are limited and a comprehensive government scheme that guarantees and pools financial needs for the sector is yet to be established. This results in high borrowing costs that rely on irregular government subsidies and hinder financial viability. Furthermore, the absence of a social safety net to support tenants leads to stringent eligibility criteria resulting in cream-skimming outcomes. The most well-off tenants are housed by for-profits operators while public ones deal with those on lower incomes. Thirdly, the fiscal framework is misaligned with social objectives, as VAT cannot be deducted for new construction, and for-profit operators face heavier corporate taxation than free-market REITs lacking any social objective.

All in all, the Spanish model presents a relevant advantage with respect to other countries, namely that after the concession period both land and housing revert into public stewardship. Eventually, this should contribute to enlarging the social rental stock. This stands in stark contrast to, for example, the German model where once the subsidised loan is repaid, rent and allocation limitations are lifted leading to privatisation and the reduction of the socially rented stock (Droste & Knorr-Siedow, 2014). Ultimately, this paper contends that private investment can lever limited public sources and does not entail the foregoing of social objectives. However, together with financial incentives, policies must incorporate safeguards to prevent privatisation and be financially sustainable, ensuring that public assets, including land and capital, continue to serve the public interest.

Finally, as a methodological takeaway, this paper shows how broadening the scope of housing policy analysis to explicitly integrate insights from financial models can offer valuable insight for policymaking. By combining these models with institutional research on the underpinnings of social housing provision systems, the field can gain empirical depth through particular case studies. Future research on the Spanish context would benefit from exploring the interlock of critical theoretical paradigms with further refined quantitative evidence. As gaining a deeper understanding of the dynamic housing landscape is key to identifying opportunities for reform.

Disclosure

During the preparation of this work the authors used ChatGPT4.0 to correct spelling and improve readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

CRediT authorship contribution statement

Alejandro Fernández: Writing – original draft, Visualization, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Marietta Haffner:** Writing – review & editing, Supervision, Project administration, Methodology, Funding acquisition, Conceptualization. **Marja Elsinga:** Writing – review & editing, Validation, Supervision, Project administration, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Grant Agreement No. 956082.

Appendix A. Table research questions, interview protocols, codes. Source: Prepared by the authors

Research questions	Interview protocols	Codes
How did legislative and socioeconomic developments shape land-driven PPPs for social housing provision in the Spanish and Catalan Contexts?	• Private business model • Public business model	• Origin land • Rationale • Public debt • Fiscality
How do current fiscal and social policies influence the financial viability of PPPs for social housing provision at INCASOL?	• Private business model • Public business model • Financial and environmental risks	• Next generation — renovation • Financing — subsidies • Rent & increases • Public competition • Fiscality • Financing risk • Oversight

Appendix B. Parameters DCF. Prepared by the authors with input from interviews and INCASOL's internal data

Parameter	
Number of units	300
Total surface	40.603 m^2st
Residential space	28.297 m^2st
Cost sqm	1.104 €/m^2
VAT	4.030.303 €
Maintenance (every five years)	928.943 €
Management costs	148.075 €/year
Land costs (Year 1–30	213.572 €/year
Land costs (Year 30–75)	12.746 €/year
Debt proportion	80 %
Interest rate	3.25 %
Commercial space income	69.149 €/year
Rental income	2.549.297 €/year
Parking income	343.063 €/year
Efficiency (arrears & vacancy)	5 %
Total years	75
Construction time	2

Data availability

Interview data can be requested at: https://doi.org/10.4121/a4a29e8f-f18b-4288-9668-78f9e68f2584.

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