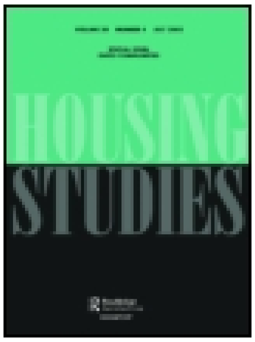

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Land and the housing affordability crisis: landowner and developer strategies in Luxembourg's facilitative planning context

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ABSTRACT

The issue of land and its ownership remains under-explored in relation to the housing affordability crisis. We argue that the concentrated ownership of residential land affects housing production in Luxembourg through the interplay of landowner and developer wealth accumulation strategies. Drawing on expert interviews, we first show that the country's growth-centred ecology has produced a negotiated planning regime that does little to manage the pace of residential development. Through an investigation of the development of 71 large-scale residential projects since 2007, we then identify the private land-based wealth accumulation strategies this facilitative planning regime enables. This analysis of land registry data identifies land hoarding, land banking and the strategic use of the planning system. The Luxembourg case – with its extremes of land concentration, low taxes and public disengagement from land – provides a glimpse at the influence of landowner and property developer strategies on housing affordability free of the usual mediating impact of the planning system.

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Land; housing; affordability; political economy; planning

Introduction

In many urban areas across Europe and North America, the house price boom has limited access to housing for lower- and middle-income households (Beer *et al.*, 2007; Bramley, 1994). This is paralleled by an increasing disconnect between the growth of households' housing-related expenditures and their incomes (Pittini, 2012; Wetzstein, 2017). Additionally, demographic changes and widening income inequalities contribute to growing housing unaffordability for vulnerable households (Bramley, 1994). The shortage of affordable units can be placed in a longer historical

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perspective: neoliberalization, the promotion of homeownership and the privatization of existing public housing reduced public support for housing, both on the supply and demand-sides in many Western countries (Beer *et al.*, 2007; Bramley, 1994; Marom & Carmon, 2015). Changes in tenure structure and the continuing decrease in the number of social rental housing has significantly reduced the amount and type of housing available to the poorest households (Pittini, 2012). In many Western countries, the financial crisis in 2007 led to a decrease in new constructions and entailed a rise in foreclosures and evictions (Marom & Carmon, 2015).

In this article, we position affordability as caused by low housing supply in a context of rising demand for housing. However, instead of pointing to the responsibility of planning and other regulatory apparatuses in this low supply (Monk & Whitehead, 1996; White & Allmendinger, 2003), the focus is on the multiplicative interplay of private individual landowner and property developer strategies. We argue that these strategies, which foreground land-based wealth accumulation over the production of housing, are a central mechanism through which housing becomes unaffordable. In a context of high housing demand, these strategies to restrict housing production feed into house price growth and deteriorate access to homeownership and rentals for an increasingly larger proportion of the population. This ability of private property interests to influence the quantity and timing of housing production must be inscribed within the broader framework conditions that make these actions possible. Drawing inspiration from Ley's (2021) discussion of Vancouver's property-centred 'growth ecology', it is crucial to investigate the '*ententes among political and economic elites, the accompanying deregulation, and opaque real estate practices and processes that together contribute to price inflation and lack of affordability*' (Ley, 2021, p. 15). We thus argue that what makes particular landowner and developer strategies possible is the broader institutional framework that subordinates the regulatory apparatus to the growth imperative, an imperative that turns planning into a facilitator of land-based wealth accumulation.

Investigating land and housing in Luxembourg

The paper draws on the case of Luxembourg, a small country with a rapidly growing population and economy and characterised by housing shortages and a growing affordability crisis. According to Eurostat, between the first quarter of 2007 and the first quarter of 2020, Luxembourg experienced the largest increase in house prices among all 27 European Union member states (and the United Kingdom), with a near doubling of house prices (+91.4%) over that period (Eurostat, 2020). Affordability issues for low and middle-income households have become endemic as house price increases feed into private sector rents. In particular, newcomers to the property market struggle to find affordable and decent accommodation close to their work place and are often forced into long-distance commuting (including from across the border in France, Belgium or Germany where property prices are still significantly lower[1]). An analysis of EU-SILC reveals that recent private sector tenants and recent mortgaged homebuyers faced average housing cost burdens of 39.2 and 43.6% respectively in 2018 (Observatoire de l'Habitat, 2020).

This situation has emerged from the country's status as a '*globalised micro-metropolis*' (Hesse, 2016), a highly connected hub for global services and financial flows, a status which has combined with significant municipal autonomy in planning to produce a negotiated regime permeable to private property interests. These interests have been historically catered to through relatively generous mortgage interest tax relief, other subsidies aimed at encouraging homeownership and rental investments, and one of the lowest recurrent property taxes in the EU, based on a 1941 evaluation of property values (Fatica & Prammer, 2018). The country's social housing stock is also among the very lowest in Europe, as much of the affordable housing produced was until very recently sold off directly rather than rented or made available through an emphyteutic lease (OECD, 2019). As will be detailed below, the vast majority of the land zoned as residential is in the hands of a small number of private individuals and companies (Observatoire de l'Habitat, 2019a). The Luxembourg case – with its extremes of land concentration, low taxes and public disengagement from land – thus provides a glimpse at the effects, at the national scale, of the influence of property interest strategies on housing affordability free of the usual mediating impact of the planning system.

Structure of the paper

In line with the 'growth ecology' framing, we draw on two levels of analysis. First, to show how Luxembourg's 'growth ecology' relies on a political system based on consensus and negotiation with private interests and a flexible planning system, we draw on 17 in-depth interviews with practitioners who provide the conceptual and regulatory expertise that officialises the transformation of land into property (e.g. zoning, development, contract design), as well as with public actors and NGOs involved in the production of affordable housing. The landowner and developer strategies that this facilitative infrastructure enable – Ley's (2021) 'opaque real estate practices and processes' – are then read through an analysis of the land transactions that made possible the 71 largest residential projects in the country since 2007. In the next section, we however first draw insights from work on the influence of property interests over the housing production process. We start with a discussion of two factors that make such an influence more likely and potent – concentrated landownership and permeable regulatory structures – before detailing what is already known about landowner and developer strategies in residential development.

The agency of property interests in the production of housing

Facilitating conditions: concentrated landownership and permeable regulatory structures

Work on the political economy of land focuses on the distribution of propertied assets and how this affects economic phenomena. In this field, concern with the structure of the ownership of land has come back to the fore, most notably through Christophers' (2018) study of the privatisation of public land since the neoliberal turn in the UK and Shrubsole's (2019) attempt to comprehensively map land holdings in England. In both cases, the focus is on the distribution of land ownership, be it between the public and private spheres or between a landed elite and the rest of the population. This was already a central concern in Haila's (2000) study of Hong Kong and Singapore as property states, in which she highlights the work by public authorities to acquire most of the surface of the city-states, including through extensive expropriation in the case of Singapore.

The strategic importance of land ownership for housing production is at the origins of the active land policy that was until recently practiced extensively in the Netherlands. In such a system, municipalities led the assembly process and were the main suppliers of building land to developers and other land users (Needham, 1997), which allowed them to bypass landownership patterns by constituting land reserves in advance of the finalisation of land use plans, facilitated by pre-emption and compulsory purchase rights (Louw, 2008). Dutch municipalities used active land policy to steer spatial development, enable cost recovery and capture some of the value created through land development (Buitelaar, 2010). Public land ownership and management is thus a powerful tool to limit the influence of property interests over urban development.

At the other extreme from public land ownership is the concentrated private ownership of land. Though access to information on land ownership tends to be complicated, there is emerging work on the prevalence of high landownership concentration. For example, Shrubsole (2019) found that half of the land surface in England is owned by less than 1% of the population. Scotland has also been identified as having an extremely concentrated landownership structure (Glass *et al.*, 2019). In Luxembourg, recent research has found high levels of private ownership concentration for residential land (Observatoire de l'Habitat, 2019a). While there are numerous discussions on the impact of the concentration in the ownership of other types of wealth (Arundel, 2017; Kadi *et al.*, 2020; Piketty, 2014), there has been little engagement with the issue of the concentrated ownership of land. A way forward in this regard can be found in recent discussions on the concept of class monopoly rents (Anderson, 2019; Ward & Aalbers, 2016), a notion first proposed by Harvey & Chatterjee (1974). The concept points to the ability of property owners to extract rent by collectively managing the supply of a resource. At high levels of concentrated ownership, the operation of class monopoly rents becomes more likely as outcomes depend on the actions of a minority of decision makers with potentially similar interests. For example, Anderson (2019) describes the consequences of the '*alignment of developers into a cartelistic monopoly*' (p. 1051) on housing affordability. Waldron (2019) speaks of a '*new oligopoly in the Dublin land market, whereby investors have speculatively hoarded land and controlled its gradual release to market to keep values and profits high*' (p. 701). These examples already point to particular strategies to advance property accumulation projects in concentrated contexts. Before moving to a more detailed discussion of these, however, we turn to the ways in which property interests are permeating regulatory frameworks.

In the planning field, there is a long-standing interest in the ways in which the practice of planning has been influenced by broader political economic shifts that foreground economic development and inter-urban competition (see Sager, 2011 for a review). From the early literature on this topic, we find McGuirk's (1994) framing of planning as increasingly 'facilitative' of private development interests to be particularly useful. She describes the mechanisms through which the Irish planning system was '*stripped of aspects of intervention which might curtail capital in its pursuit of profit*' (McGuirk, 1994, p. 303). This entails a move away from approaches that foreground planning power and conflict. This is the case with contemporary planning approaches that emphasise consensus-seeking and negotiation – at the risk of strengthening the hand of already powerful land-based interests by legitimising their place in the decision making process. For example, Allmendinger & Haughton (2012) show how the turn towards post-political spatial planning in the UK – in which speed of delivery and certainty of outcome was elevated over the resolution of deeper conflicts between competing interests – was seen as beneficial to a range of actors, including landowners. More recently, Raco & Savini (2019) have identified the rise of a '*new urban technocracy*' in which delivery-focused planning becomes reliant on an expanding set of private sector experts in the context of prolonged austerity. The influence of this new urban technocracy operates indirectly, through the infusion of market devices in planning practices, as Bradley (2021) shows in the case of the calculative practices English planning authorities must rely on to justify that they have made available enough building land.

The development sector has also been shown to play a direct role in the shift to more flexible regulatory frameworks. Waldron (2019) shows how the real estate development lobby in Ireland has played an influential role in strengthening the narrative that planning is the cause of low housing supply. This '*normalized the idea that planning must respond to market conditions affecting developers' profitability levels*' (Waldron, 2019, p. 702). Leffers & Wekerle (2020), drawing on the case of land use planning in the province of Ontario, Canada, draw out some of the channels – multiple and usually in the shadow of public accountability – through which developers and real estate industry associations are actively involved in shaping the regulatory system. In Australia, Gurran & Phibbs (2013) point to a progressive alignment between 2003 and 2012 in the explanations of housing affordability problems, and the policy responses needed, found in government and real estate industry documents. This increasingly shared diagnosis centres on the role of planning in restricting housing supply. These three cases show that private real estate actors themselves play a central role in shaping the regulatory frameworks in which real estate development occurs.

If planning and other regulatory apparatuses are becoming less coercive and more permeable to property interests, this means that it is increasingly important to refocus the debate on the particular actions and strategies through which property interests – and in particular residential landowners and property developers – have turned the housing production process into a mechanism to accumulate land-based wealth.

The practices of landowners and real estate developers in the land and housing markets

Little is known of the actions and strategies used by property interests to bypass regulatory frameworks or to draw on them to increase the extraction of value through the residential development process – especially throughout the different phases of this process. Studies have tended to focus either on the actions of landowners or of developers.

There is for example a long line of work on landowner behaviour. Massey & Catalano (1978) identified three main forms of landownership in England: former landed property (aristocracy and other large Estates), industrial landownership and financial landownership. By taking a broad scale and long-term view, they were able to draw out the different ways in which these owners approach the use and development of their land. Insights on landowner behaviour can also be found in Adams & May (1991) and Adams *et al.* (2001), which show that landowners are involved both in the local planning and development processes and that the strategies, interests and actions of landowners tend to play a significant, disrupting role in the development of brownfield sites. Haila (1991) takes a different approach and focuses on the types of investments that can have land as their focus, pointing to a secular trend of land becoming a pure financial asset. She proposes that this occurs through a process of land market capitalisation, whereby land moves from being invested with use values to becoming an asset that is traded to maximise capital gains.

On the developer side, Adams *et al.* (2009) provide the most detailed discussion, taking into account the relation between land supply and house building. In contexts in which the supply of residential land is limited, they situate the main locus of competition between developers in the land market. Low residential land availability means that if a developer secures land in a given area, it is likely not to face much competition from other developers in that area. To guarantee success in the land market, developers must however be ready to bid at higher than normal prices, and thus to envision larger value creation in the ensuing development process. This is a reasonable expectation given that they know they will face low competition on the house building side, allowing them to manage the sale of completed units in line with the price expectations underpinning their initial land bid.

Adams *et al.* (2009) link the limited supply of residential land essentially to planning restrictions. However, they do leave the door open to other reasons for which this supply may be limited – as will be shown below, in Luxembourg low residential land supply has more to do with landowner strategies than with restrictions coming from the planning apparatus. Developers can also draw on another strategy – land banking – to control the release of completed units in a given area. Murray (2020) argues that developers can de-emphasise the creation of value through the development process if the aggregate value of the company is increasing through land price appreciation. This entails that the shift from owning the land to developing it is made more unlikely in contexts with high property price growth, which '*can reduce the willingness to supply new housing at that time*' (Murray, 2020, p. 9). Cochrane *et al.* (2015) similarly point out that because of the value captured from increasing land values, '*the private ownership of land designated for housing does not, on its own, guarantee its development*' (p. 537).

The fact that residential development only occurs when it is the most profitable course of action for the property interests in control of the supply of residential land is clearly shown in Paccoud (2020). Taking a long run view, the author shows that the largest residential development schemes in the city of Dudelange, Luxembourg, have been driven by small set of tightly interconnected landowners and property developers who balance land hoarding and land development in view of maximising family-level property wealth accumulation. These findings point to the need to combine the study of landowner and developer strategies in order to better grasp the mechanisms through which housing is produced. The empirical material that follows will draw out the ways in which the multiplicative interplay of landowner and developer strategies restricts housing supply in Luxembourg, a context in which land – and especially residential land – is the subject of intense competition. In keeping with the multiple levels of analysis of Ley's (2021) growth ecology, the analysis moves in two broad steps. Drawing on interviews with stakeholders, we first highlight how consensual policy making and a facilitative planning apparatus provide ample space for private land-based wealth accumulation. In the second step, we draw on Land Registry data to identify the landowner and developer strategies pursued in this context that are major contributors to the country's affordability crisis.

The role of land in the housing affordability crisis: the case of Luxembourg

From negotiated, growth-centred governance to facilitative planning

The aim of our field exploration was to explore the ways in which a variety of actors involved in housing production see the role of land and landownership in this process and in the affordability of the housing produced. Inspired by institutional approaches, we sought to isolate the practices that underlie market transactions and prices (see e.g. Guy & Henneberry 2002; Moore 2015). We conducted, recorded, transcribed and analysed 17 semi-structured interviews (lasting between 40 and 90 minutes). Interviewees included state and municipal agents in charge of housing, independent planners involved in preparatory studies for land use planning at the municipal level, real estate agents and lawyers who mediate land sales, a public housing developer, NGOs working in the housing field, and municipal architects. In the interviews, we elicited general perceptions about the existence of a housing crisis in Luxembourg, before getting into the details of (public and private) development and planning practice.

The interviews occurred in the wake of the first-ever study of the distribution of residential landownership in the country (Observatoire de l'Habitat, 2019a). It found that residential land is overwhelmingly in the hands of private individuals (72.5% of the surface), followed by private companies (14.9%) and public bodies (11%). It identified astronomical levels of landownership concentration: barely 0.1% of the country's population owned half of the total value of residential land in the hands of private individuals; 75 companies (the top 10% by the value of their holdings) owned 80.8% of the value of all residential land in company hands. Not surprisingly, the insufficient availability of land zoned for residential use in public hands was thus found by the interviewees in charge of affordable housing production to be a key constraint on their activity. A municipal officer in charge of housing argued that this problem is clearly linked to the lack of a national land strategy:

> […] in the 1970s, the State sold various sites at public auctions. […] Now, if the State and the municipalities do not have more residential land, what do you want to do? [Municipal officer, interviewed on 22.01.2020]

As a consequence, public actors are no longer able to compete with private ones on the land market:

> Our limits with respect to the price we are willing to pay for land, they are clearly well below what private developers are willing to pay. Either the landowners are willing to sell at that [our] price, or we have to withdraw. […] We don't buy land for 100,000 Euros [per are].[2] [Public developer, interviewed on 06.01.2020]

The continued dominance of private owners over land is made possible by the fact that the country has a negligible property tax and no inheritance tax on transfers in direct line. This has facilitated the transmission of land and housing wealth across generations in a context of rapid house and land price increases over the last decades (Observatoire de l'Habitat, 2019b; OECD, 2019). House and land price growth derives from the country's economic and demographic dynamism, linked to its shift towards financial and corporate services that came in the wake of the crisis that hit its dominant steel industry in the 1970s. Since the 1980s, residential population has increased by roughly 50 per cent and the country's GDP has increased more than sevenfold. Today, Luxembourg is the commuting centre of the Greater Region, accommodating every day some 200,000 cross-border commuters. This has put land at the heart of the country's broader 'growth ecology' (Ley, 2021). Indeed, there is intense competition over land to accommodate in Luxembourg all of the activities and residents created by the de facto globalised region, leading some to characterise land and house price growth as potentially unsustainable:

> The whole economy seems to depend on real estate and construction; at least the biggest part. If this gets out of hand, there will be a second steel crisis. [Government official, interviewed on 18.06.2019]

Economic growth and development are thus capitalised into land prices, thus encouraging a speculative approach to property in the context of high landownership concentration.

> Speculation – You don't really want to talk about it, but you can't hush it up. That's the problem. [Independent planner, interviewed on 11.02.2019]

The concentrated private ownership of land operates as the 'elephant in the room' of many housing debates. When asked whether they thought that the country's particular landownership structure might affect the amount and type(s) of housing supplied, the interviewees involved in spatial planning were aware of the occurrence of ownership concentration, economic interests and related strategic behaviour. Yet none of them stated that this occurrence would be a determinant of their practice in the sense that, a), this circumstance would be acknowledged as having an impact on the supply of housing and, b), that it would thus be the object of clear guidelines and procedures to minimise its impact. This type of response aligns with the country's culture and practice of consensus-seeking: politically sensitive issues should be managed by the politico-administrative system through negotiation and institutional proximity – be it between the state and the municipalities or between private and public actors. This leads to a situation in which housing policies brush the political economy of land under the carpet, and thus continue to give full rein to private landowners and developers. This requires a constant minimisation of the problems on the housing front: by avoiding a framing of these problems as a 'crisis', it is possible to deligitimise more radical policy measures. By avoiding the underlying issues (landownership concentration, low property taxes, fiscal advantages for ownership and rental investments), current policy discussions have no impact on constantly deteriorating affordability.

> The housing crisis is a NON-topic; real politics aim at deepening the problem rather than solving it [Government official, interviewed on 18.06.2019]

This culture of consensus and negotiation – that can be likened to Ley's (2021) growth-based consensus – feeds directly into its planning system, which we characterise as being facilitative of land-based wealth accumulation. Indeed, paralleling Ley's (2021) focus on the deregulation of housing production in Vancouver, the planning apparatus in Luxembourg devolves an unusual extent of power and sovereignty to private interests. For example, as will be detailed in the following section, in contrast to most other comparable countries, private individuals are authorized to prepare a binding land-use plan on their own property and to manage the sale of serviced plots or housing units. Property owners are also fully entitled to keep property unused or to develop extensive projects gradually, that is over a large span of time, without being effectively subject to increased taxation, not to speak of expropriation. The degree to which the planning system accommodates private land-based wealth accumulation seems to derive from the way in which private property is considered in the country:

> The other fact is that private property is sacrosanct in Luxembourg. There are laws that are very different in our neighbouring countries. If we look at Germany, for example, there are quite a few instruments developed by the State to put more pressure on landowners to mobilize their land, to build it up. [NGO, interviewed on 16.01.2020]

Planning's facilitative nature in Luxembourg also emerges from the fact that land use planning mainly consists of urban planning at the local level, as planning sovereignty lies with the municipalities, while the state provides financial and strategic resources. Inter-municipal spatial planning was only institutionalised by law in 1999. Effective, formally binding plans at the supra-local level simply did not exist until very recently and they are politically controversial and contested. Difficulties in achieving some form of oversight of local planning are compounded by the fact that roughly a third of the members of national parliament are at the same time local decision-makers. This means that they are part of a discrete political negotiation system that permanently oscillates between local and national interests. This makes forceful municipal action towards property interests a rare occurrence.

However, it is precisely at this level of government that existing laws could in theory be used to influence the level of housing supply:

> The municipalities have a great deal of autonomy and they have a lot of power of decision regarding the development or planning of their territories. They define land use, the density coefficients. [NGO, interviewed on 16.01.2020]

However, this opportunity is rarely used in practice, since in a legal legerdemain, any restriction on private property rights is framed as expropriation. This undermines the feasibility of using a variety of means available in the municipal planning and fiscal toolbox that could have binding effects: changes in the regulation of land use and ownership (such as targeting vacant land or dwellings), using their right of first purchase when land plots are transacted between private parties, bolstering the local land tax, etc. At the local level, reluctance to act forcefully is explained by unclear legal frameworks, as can be seen in the justification offered by a municipal officer in charge of housing for not making use of an instrument that allows municipalities to levy a special tax on vacant dwellings:

> […] the law is not really suitable for municipalities to do something with vacant dwellings. […] Well, there is a law that exists but I think it is not clear enough for the municipality to do something so that vacant houses and apartments can be freed or at least punished, using taxes or whatever. […] The law is there but it is really so vague that it is still a risk for a municipality, in my opinion, to make this choice. [Municipal officer, interviewed on 07.01.2020]

Alternatively, it could be that at the municipal scale, decision-makers might see no harm in low housing production – on the contrary, they may welcome increasing house prices and the social upscaling this brings. At the national scale, this however generates significant social inequalities – such as the inability of some households to continue to live in the country they work in. Planning in Luxembourg thus poses few limits to the influence of private landowner and developer strategies over the production of housing. In contrast, it plays a facilitative role for private land-based wealth accumulation strategies, a leading cause of the country's affordability crisis.

The interplay of landowner and developer strategies in the housing production process

The facilitative planning system described above gives private property interests plenty of space to develop land-based wealth accumulation strategies. While these private interests often decry the lack of residential land, municipal land use maps have allocated land for at least 10 years' worth of house building on current trends. The analysis that follows shows that low housing supply – and the attached affordability issues in a context of strong demographic growth – is the result of the multiplicative interplay of private individual landowner and developer strategies. In what follows, the term 'strategy' refers to particular sequences of land transactions that occur frequently and draw on the possibilities offered by the country's facilitative planning infrastructure. To move from a sequence of transactions to the idea of a strategy, we draw on insights from the expert interviews conducted, as well as on the collective expertise of the authors concerning Luxembourg's housing situation (including through work developed as part of the Observatoire de l'Habitat, a collaboration with the Luxembourg Housing Ministry). The strategies we identify (land hoarding, land banking and development by private individuals) are phenomena that are discussed in the national media, but whose magnitude and interplay remain opaque.

The focus of this section is to provide the first systematic overview of these strategies, drawing on an 'objective' data source: the trail of land transactions, drawn from the Land Registry, which made 71 large residential projects (over 1 hectare in size) possible in Luxembourg since 2007. Taken together, these projects represent close to 240 hectares, spread over 50 of the country's 102 municipalities. In terms of built form, 46 of these projects are solely single-family units (with an average of 55 units per project) and 25 include multi-family units (with an average of 195 units per project)[3]. Single-family units thus represent roughly 34.2% of the total units built in these projects. This is in line with the overall composition of Luxembourg's recent housing stock: 36.6% of housing units built after 2001 are single-family units (STATEC 2020).

The data includes a unique anonymous code for every successive owner of the land plots – with a different root for individuals, companies and public actors – which makes it possible to identify their type and position within the residential land wealth distribution. To analyse the development process, we distinguish between the functions of landowner and property developer by looking at the shape and size of land plots at different time points. The landowner is the actor which owned the land when it was still shaped for uses other than residential ownership (be it houses or apartment buildings). For example, agricultural land in Luxembourg is typically arranged in long, narrow strips unsuitable for housing development. By contrast, a property developer is the actor that owns the land plots shaped for residential production (relatively small and rectangular).

Table 1 below presents the headline results of this investigation into the actors involved in the production of housing in Luxembourg. In the landownership phase (rows in Table 1), private individuals owned the land in 35 out of the 71 projects, private companies in 29 and public actors in only seven – confirming that private control over residential land is the defining characteristic of the housing production process in Luxembourg (Observatoire de l'Habitat, 2019a). In the development phase (columns in Table 1), private companies become, as expected, the main owners of land plots (46 out of the 71 projects). Public actors maintain a residual role (7

Table 1. Actor types in the landownership and development stages.

		Actor type in development stage				Total for landowner stage (rows)
		Private Individual	Private Company	Public actor	Public-Private Partnership	
Actor type in landownership stage	Private individual	15	20	–	–	**35**
	Private Company	–	26	–	3	**29**
	Public actor	–	–	7	–	**7**
Total for developer stage (columns)		**15**	**46**	**7**	**3**	**71**

projects), while a Public Private Partnership developed three projects. A first strategy can be seen here in the fact that in the remaining 15 projects, the original private individual landowners have held on to the land throughout the various stages of the development process. As highlighted above, in Luxembourg private individuals can prepare their own land use plans on their land and manage the sale of serviced land plots – a strategy that draws on the planning apparatus to maximise land value extraction.

By comparing the type of actor involved as landowner and property developer in each of the 71 projects, we were able to retrace the trajectories through which housing production occurred in Luxembourg since 2007. One fact stands out here. Since 2007, only 20 out of the 71 largest residential developments involved the transfer of land from private individuals to developers. In all the other developments, it is the same type of actor that took on landowner and developer roles (diagonal in Table 1 above): private companies played both roles in 26 projects, private individuals in 15, public actors in 7, with the last three following a similar logic since the private company landowner is now part of the Public Private Partnership developing the sites.

This fact points to an extreme fixity in the residential land market, which derives from the low number of land sales by private individuals. Indeed, the total surface of residential land sold or developed by private individual landowners in the 35 projects they were involved in – around 100 hectares – is insignificant compared to the more than 2,100 hectares of this type of land they still owned in 2016 (Observatoire de l'Habitat, 2019a). We see this as representing significant land hoarding in the face of increasing land values rather than vertical integration (in which private individual landowners would hold on to the land until ready to develop it themselves). Indeed, we find that 14 out of the 15 projects developed by private individual landowners on their land involve the sale of prepared land plots or of single-family units. Only one of these projects includes some development of multi-family housing. Nearly all of the developments that produced large numbers of housing units occurred through sales from landowners to property developers. This points to an important role for property developers in managing housing production in areas zoned for high density residential, and thus suggests that landowners who own land in such zones are land hoarding rather than waiting for right moment to develop themselves. Paccoud (2020) also identifies land hoarding as an important private individual landowner strategy in the city of Dudelange.

This fixity of the structure of landownership lends weight to the process described in Adams *et al.* (2009): given the very limited number of land sales, the main competition between property developers in Luxembourg seems to be in the residential land market. The house-builders able to secure residential land are thus in a privileged position to manage the supply (and jointly the price) of housing they produce. While the data used in this study does not make it possible to view the next step in Adams *et al.* (2009) – the piece meal sale of developed units – it does seem to point to a degree of land banking by developers. Indeed, two pieces of evidence point to companies likely drawing on this strategy to capitalise on rapidly increasing land values (Cochrane *et al.*, 2015; Murray, 2020):

- Private companies have owned since at least 2007 the land needed for 26 of the 71 projects – projects that were spread out over the last 13 years.
- Private companies still owned in 2016 three times the residential land surface they consumed in the 46 projects they were involved in since 2007 – approximately 150 hectares of land were developed in these projects, as compared to the 442 hectares of residential land owned by companies in 2016 (Observatoire de l'Habitat, 2019a).

It is possible to go one step deeper in the analysis of these strategies by turning to the location of the actors involved in these 71 large residential projects in the 2016 residential land wealth distribution (reported in Observatoire de l'Habitat, 2019a). Excluding the projects developed by public actors, there were 27 unique private companies and 31 different private individuals involved as landowners and/or developers. Of the 27 companies, 19 are among the top 5% by the estimated value of land holdings in 2016 (out of 746 companies who owned residential land in 2016). However, the top four companies dominate the property development landscape:

- They owned 31.9% of all the residential land owned by companies in 2016;
- They were involved in 21 of the 46 projects led by companies;
- They realised nine out of the 20 transactions in which land was transferred from individuals to companies.

This configuration echoes Anderson's (2019) analysis in Vancouver, which draws on the concept of class monopoly rents to point to the housing sub-markets that are '*carefully cultivated, spatially managed, and branded with unique characteristics by a subset of developers that have been granted entry*' (p. 1052). While the projects of these large developers are relatively spread out geographically, further research is required to identify whether they could still form a distinct submarket based on other characteristics (such as quality or intra-municipal location). In any case, what it clear is that this extreme level of concentration in the house-building market reinforces the mechanism described in Adams *et al.* (2009): when land is (rarely) transferred from private individuals to developers, it tends to be captured by a very small set of companies who then face little competition in the house building market.

Out of the 31 individuals involved in residential projects since 2007, there were 19 who still had over 3 million Euros' worth of residential land in 2016 – including 7 within the top 1% of landowners by value in 2016 (a group with 35 million Euros of residential land on average). Interestingly, the propensity to take on a developer role is lowest at the very top and at the bottom of the distribution. At the top, this might be because of a privileged negotiating position vis-à-vis developers, which decreases the need to prepare a planning application in order to maximise sales value. At the bottom, it could be caused by a limited financial capacity to draw on the planning apparatus. The possibility that some smaller landowners are pushed into a quick sale for considerations other than financial calculation (unexpected events, family feuds over what to do with the land plots, etc.) can also not be discounted. More work is needed here to relate landowner decisions to their position in the residential land distribution (as well as to other characteristics, such as their profession, or whether they acquired or inherited the land).

In summary, the analyses reported above point to the interlocking of two separate distributions of residential land: that within individuals and that within private companies. This points to the role of the interplay of landowner and developer land-based wealth accumulation strategies in Luxembourg's housing affordability crisis. Given their dominant control over residential land reserves, housing development depends on the decisions of private individual landowners. The figures presented here seem to point to a high attunement on their part to the maximization of the return on their land – their strategies included: land hoarding, and drawing on the facilitative planning apparatus to bypass property developers. Once land arrives on the market, it ends up in the hands of a very small set of large property developers who then face little competition in the housing market. The marginal position of public actors as landowners and their reluctance to purchase land from private actors at current prices provide little scope for intervention in this process.

Discussion and conclusions: wider implications and consequences for Luxembourg

This paper argued that Luxembourg's housing affordability crisis derives in no small measure from the interplay of land-based wealth accumulation strategies pursued by private property interests in the context of an extreme concentration in the ownership of land and of a facilitative planning infrastructure. Residential land is squarely in private hands and is subject to two interlocking, and multiplicative, processes of ownership concentration. Private individuals own the bulk of residential land and release it for housing production in a strategic way, and often by drawing on the planning apparatus to maximise land values. A small set of land-rich property developers capture the majority of the residential land that these private individuals decide to sell. As public actors are marginal to the house building process, this small set of developers faces very limited competition in the housing market. This allows them to balance land banking and development to maximise company values (Murray, 2020), and as postulated in Adams *et al.* (2009) to jointly set the price and volume of housing produced – thus contributing to spiralling property prices. Our expert interviews revealed the inability of a growth-centred, negotiated policy and planning regime to confront these mechanisms through which the concentrated ownership of land affects the production of housing.

The Luxembourg case thus shows how affordability issues can emerge in a context in which the planning system places very few limits on land supply. The issue is not the amount of land zoned as residential in municipal land use maps but the mobilisation of this land for residential development in a context in which housing production serves private land-based wealth accumulation strategies. Housing supply issues are thus not caused by the planning system. In Luxembourg's 'growth ecology', the source of the problem is at a higher level: the broader political treatment of property and its reflection in its insignificant land tax and fiscal advantages to homeownership and property investment. The problem is that landownership concentration becomes more difficult to tackle through pure market mechanisms the longer it remains unchecked, and especially when it is used strategically to cultivate an artificial land scarcity. The interviews indeed made it clear that land prices are now so high that public actors are reluctant to intervene, with public land purchases simply seen to be adding fuel to an existing fire. Outside of the market framework, regulatory actions would have to hit hard to be effective and are thus considered to be too costly from a political perspective. The links between housing affordability and land-based wealth accumulation strategies thus make clear that planning is not the only regulatory apparatus that can affect residential construction: it is also crucial to look at the fiscal treatment of land and property.

More theoretically, the figure of the land hoarding private individual landowner described in the preceding section poses some problems to existent conceptualisations of landownership. Paccoud (2020) highlights that landowners in Dudelange tend to have farming backgrounds, and that land has in many cases been passed down from one generation to the next. This should position them within the ranks of Massey & Catalano's (1978) industrial landowners, who value land for what it allows them to produce. However, these landowners could also share traits with their other two categories: with financial landowners, a focus on the maximisation of returns on their land through residential production; with the former landed gentry, an attunement to the legacy of past generations who have invested in the land. These landowners also fall in between Haila's (1991) types of investment: while the often inherited nature their ownership likens them to the serendipitous actors, they also share traits with the speculator: they draw on the planning apparatus to increase the value of their land, engage in piecemeal sales and wait for favourable conditions to sell. The relation of the landowners to capital accumulation also merits further exploration. Instead of obstructing accumulation (Fine, 2019), the fact that landowners limit the supply of land simply directs the production of housing towards more affluent buyers and investors in a context of strong economic and population growth. High land prices might also be used as a cover for high developer margins, at least for those who did not have to purchase the land in question (either recently or at all).

What could be done in the Luxembourg context? Changing the framework conditions of accelerated economic growth – and the growth ecology that nurtures it – is difficult. However, the land-driven housing affordability crisis calls for: 1. National fiscal reform; 2. Municipal land strategies; 3. Collaborations beyond the national territory. A genuinely public politics of land would have to start at the national level, such as through an effective taxation of residential land that is kept undeveloped to capitalise on increasing land values. This could occur through the levelling up of recurrent property taxes to match rates practiced in neighbouring countries. A second cornerstone would be the systematic development of municipal land strategies, drawing on the existing legislation that grants municipalities first purchase rights in land sales and introducing mechanisms that enable the public capture of land value increases (such as a flat rate for residential land purchases). Third, Luxembourg's housing market does not end at the national border: it is shaped by everyday cross-border commuting patterns as much as by the cross-national residential mobility of those unable to keep up with rising property prices. This calls for open dialogue with policy makers in neighbouring France, Belgium and

Germany to develop a common housing strategy, based on a full recognition of the multifunctional surrounding border regions.

Notes

1. Diop (2011) and Mathä et al. (2018) find a 2:1 relation in house prices and net wealth (respectively) between Luxembourg and its neighbouring regions.
2. The Observatoire de l'Habitat (2019b) reports that for the 2010–2017 period, the median price per are of residential land in Luxembourg was 58,312 euros.
3. The average number of units is calculated based on the 28 projects (13 of which include solely single-family housing) for which planning applications were available.

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