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Laure CASANOVA ENAULT*, Martin BOCQUET, Guilhem BOULAY***

*Department of Geography and Planning, Avignon University, UMR CNRS 7300 ESPACE, Avignon, France;
** Department of Data analysis, CEREMA Hauts-de-France, Lille, France;

Abstract

This paper investigates the structure of French property ownership and shows how it is crucial input to understand the socio-spatial distribution of wealth and inequalities in cities. To date only partial information exists on this given that we are in a period of financial opacity. In this paper, we provide a theoretical framework to analyze the structure of property ownership. It is defined by four dimensions: the distribution of properties among different categories of owners, the spatial patterns of the properties held by these categories, their estimated financial value, and their concentration within the categories – the latter not studied here, for legal and confidentiality reasons. Drawing on unpublished cadastral data on property owners and property transaction prices, we carry out an empirical analysis which reveals the dominance of household and public ownership, contrasting with the marginal position of private investors. Despite the fact that the structure of ownership is fairly uniform throughout the urban hierarchy, some groups of owners do however hold strategically located properties. Our results show the embeddedness of the property ownership in different accumulation regimes, and relativize any consideration of financialization or neoliberalism as a global all-encompassing framework when analyzing real estate property.

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Introduction

Real estate property (in this work, urban vacant land and housing units[1]) has become central to the macro-economy and political economy in OECD countries (Schwartz & Seabrooke, 2008; Aalbers & Christophers, 2014), especially since prices overall have been rising for twenty years and central State policies have been promoting homeownership and asset-based welfare policies. Such issues have been massively studied by scholars in the context of their financial flows (e.g. Le Goix et al., 2019), focusing on large property investments (Christophers, 2022; Özogul et al., 2021) or real estate programs at the top end of global cities (Beswick et al., 2016; Fernandez et al., 2016a). However, we still lack comprehensive knowledge about property ownership: who owns what and where across urban space?

In this paper, we assume that the approaches focusing on big cities tend to overestimate the weight of corporate owners and therefore cannot see the wood for the trees. Massey and Catalano (1978), in their seminal works on the pattern of landownership in the UK, already considered this lack of knowledge about property ownership as a fundamental problem, and it remains the case nowadays, as recalled by Kadi et al. (2020). More generally, Piketty (2019) noted that "financial opacity" (p.755) was accompanying the concentration of private property in 21st century western societies. This means that to date, information is partial and only available for some specific groups of property owners (Ronald & Kadi, 2018; Christophers, 2018; Hochstenbach, 2022), for selected neighborhoods (McKenzie & Atkinson, 2020; Kadi et al., 2020; Paccoud, 2020; Deverteuil & Manley, 2017; De Moncan, 2002), or for the specific U.K. national context (Dixon, 2009; Massey & Catalano, 1978). This empirical literature on

[1] Housing units refers to apartments and houses. In France, an apartment designates a property of one or more rooms (for one person or an entire family), which is rented out or occupied by its owner, and which is part of a larger building. This category also includes multi-family residential. A house, which also could be rented or occupied by its owner, designates a single property located on a parcel plot, and corresponds to the Anglo-Saxon terminology of a single-family home.

the structure of property is moreover only just beginning to be fully appreciated. Yet it is all the more important to improve our knowledge given that property ownership has become more complex due to the emergence of a set of hybrid factors over several decades (Massey, 1980): the rise in the homeownership rate, the growing weight of public, corporate, and financial landlords, etc.

This complexification of property ownership is also partly linked to the ongoing neoliberalization and financialization[2] of property ownership. But if these are deep-set trends and transnational phenomena (Schwartz & Seabrooke, 2008; Fernandez & Aalbers, 2016b), the variegated nature of national residential capitalisms and the limited nature of financialization and neoliberalism have also been demonstrated (Peck & Tickell, 2002; Schwartz & Seabrooke, 2008; Christophers, 2015).

The situation therefore calls for empirical studies into property ownership. Our paper contributes to filling this gap at the scale of the French functional urban areas, by uncovering the structure of property ownership. Here we define this as the combination of four dimensions: the distribution of properties among different categories of owners, the spatial patterns of the properties held by these categories, their estimated financial value, and the concentration of properties within the categories – the latter not studied here, for legal and confidentiality reasons. We also assert that the increased complexity of property ownership calls for two methodological approaches. First, a property ownership structure does not exist as such (Massey & Catalano, 1978) and needs to be crafted out from the necessarily incomplete cadastral data, and then brought to light through a typology of different groups of owners. Second, and most importantly, the analysis of the owners cannot be carried out without

[2] There are many definitions of financialization (Christophers, 2015). In this paper, financialization mainly refers to two processes: an accumulation regime in which "financial sources and institutions have increased their share vis-à-vis nonfinancial sources and institutions" (*ibid.,* p.185) and "the increasing tendency to treat the land as a financial asset" (Harvey, 1982, as cited in Christophers, 2015).

examining the different categories of owners and territories as comprehensively as possible to avoid missing crucial patterns.

In the first section, we discuss how the housing financialization framework as well as the rise of the wealth middle-class have led to neglecting the overall range of property owners, even if research has provided some property owner typologies. We then describe the data and methods we used in identifying 6 groups of owners and estimating their property wealth. In the third section, we statistically and geographically analyze our empirical results, revealing the major significance of individual and household ownership, which contrasts with the marginal position of private investors. In the fourth section, we discuss the implications of such a property ownership structure for wealth distribution and urban development. Finally, the conclusion sums up the main results and points out issues related to methodology and international comparison.

1. The patchy knowledge of property ownership structure

A limited knowledge of property owners

In contrast with the massive literature on housing market flows and housing financialization (Dokko et al., 2011, Aalbers & Christophers, 2014, Fernandez & Aalbers, 2016b, Guironnet et al., 2016), there have been few analyses of property stock distribution, in particular in terms of portfolio compositions for each owner group, their (potential) financial value, and their location. Given this, Kadi et al. (2020) have recently called for more investigations into multiple property ownership in terms of the use of property (e.g. holiday rental, safe deposit properties, etc.) to better understand the housing stock. Consequently, a limited number of groups of property owners, corresponding to those involved in the previously described property financial flows, have received attention. Four of them have been studied especially closely.

Scholars have massively focused on a first group of property owners that corresponds to those who make the biggest investments. Called “global corporate landlords” (Beswick et al., 2016,

p. 321), “wealth elite” (Fernandez et al., 2016a, p. 2443), “super-rich” (Paris, 2017, p.63), or “super-landlords” (Paccoud, 2020, p.101), they correspond to emblematic actors in the housing financialization process. Several recent studies have shown how these wealthy people tend to diversify their portfolios by placing a part of their wealth in valuable neighborhoods (characterized by luxury properties) located in the top end of global cities or tourist destinations (McKenzie & Atkinson, 2020; Deverteuil & Manley, 2017 ; Fernandez et al., 2016a; Rogers & Koh, 2017).

The standard market actors, often designated as “private corporate landlords” (Beswick et al., 2016, p.321) and “residential property institutional investors [defined as] pension funds, insurance companies, property investment companies, and asset management companies” (Montezuma, 2006, p.88), are partly included in this first group. They are characterized by a strategy of opportunistic investments in high-risk/high-return markets (Özogul & Tasan-Kok, 2020; Beswick et al., 2016). They have mainly been analyzed in the light of company strategy evolution over time, as for example for REITs (Aveline-Dubach, 2020) or, with a lower degree of financialization, for developers (Halpern & Pollard, 2017).

Developers are indeed often temporary landowners, but recent studies have also pointed out their wealth accumulation strategies (e.g. Paccoud and al., 2021b; Leffers & Wekerle, 2020). Negotiations with landowners, especially rural ones located in areas under urbanization pressure, have also received attention in the literature (e.g. Petrescu-Mag et al, 2021). Their crucial role in the land take process has been highlighted, in particular in the case of prime farmlands (Tóth, 2012). These landowners, embedded in the housing production chain, thus constitute a second group of owners that has been well documented in the academic literature.

Scholars have also addressed a third group of property owners, less wealthy than the first group and belonging to the wealth middle-class identified by Piketty (2013), whose behavior on the markets is becoming quite similar to that of property investors (Smith, 2008). In many OECD

countries, an increase in their investments in the private rental sector indicates a rise in small-scale landlordism (Hochstenbach, 2022; Ronald & Kadi, 2018; Soaita et al., 2017; Forrest & Hirayama, 2015). This trend has been explained as a result of the surge in land and housing prices since the 1990s and the favorable macroeconomic context for real estate investment (e.g. low prevailing interest rates, tax exemptions, etc.). Property nowadays represents "the single largest asset in people's everyday lives and one of the biggest financial assets in most economies" (Schwartz & Seabrooke, 2008, p.237). The decline in homeownership rates concurrent with the expansion of "multiple property owners" (Kadi et al. 2020, p.7) has been put forward by Ronald & Kadi (2018) as one main characteristic of the current "post-homeownership society" (p. 787).

Finally, a growing number of studies have addressed a fourth group of owners consisting of public bodies. Restricted by austerity measures over recent decades in different national contexts, several studies have shown how this trend has led public bodies owning properties to sell these assets off in order to obtain fresh revenue (Adisson & Artioli 2020; Christophers, 2018).

Thus, studies about property owners generally focus on the way that specific groups are joining the property markets rather than on the relative distribution of their properties. Moreover except for the first group of owners, mostly represented in the inner-(big)cities, the geographical dimension of property ownership has been under-investigated.

The existing property owner typologies

Two past lines of research have provided property owner typologies. The first, consisting of seminal works from the early 1970s, gives a classification of property owners to demonstrate the role of land rent in wealth accumulation within traditional capitalism. In that respect, Massey and Catalano (1978) painted a significant picture of property owners in Great Britain. The authors provided a typology of the major U.K. landowner groups at

the time (i.e. the landed aristocracy, industrial owners, and financial owners) “to analyze private landownership in its structural and historical context” (p.22). However, they did not investigate the spatial variations of landownership. Some empirical works followed this line, but paid more attention to the taxonomy of owners than to urban geography issues (De Moncan, 2002; Dixon, 2009). In order to link the existing theories about land and capital, Haila (1991) coined a theoretical four class typology based on two main dimensions: “the purpose of investment (use or exchange), and the time horizon of investment (present or future)” (p.348). Used as a heuristic, her typology provided generic types, which she then compared to the empirical case of Helsinki. This work drew up four main types of investors and investment characteristics, but did not empirically analyze the distribution of land assets among these categories of owners.

A second series of works, mainly from the 2000s onwards, has refined these classifications of property owners by taking into account the characteristics of their property portfolios. Thus Özogul & Tasan-Kok (2020) produced a “meta-categorization of investors” which “differentiates investors in terms of their (i) spatial scale of operation, (ii) size and social composition, (iii) investment object and finance, and (iv) investment and social behavior” (p. 476). Another recent contribution in this field has been provided by Kadi et al. (2020) through a theoretical “typology of multiple property ownership” where “the first type is buy-to-let properties […], the second is holiday rentals […], the third type of multiple property owner is intergenerational support properties […], the fourth type is the safe deposit box property” (pp.9-10). These two works both highlighted the increasingly complex nature of property ownership because of recent trends in the housing market (massive homeownership, housing price boom, private landlordism etc.). However, the typologies remain partial as they either consider a subset of owner groups (e.g. investors) or do not empirically estimate the weights of each group of owners (except

in the case of the descriptive statistics provided by De Moncan's work examining selected French cities, published in 2012, and by Dixon, in 2009 for the U.K.). On the basis of these theoretical contributions to the classification of property owners, this paper therefore gives a more comprehensive view of the structure of property ownership and its various dimensions.

A theoretical framework for analyzing the French structure of property ownership

The structure of property ownership is the result of the different ownership rationalities, partly inherited from different historical contexts, which define specific accumulation regimes, specific uses of land, and different spatial patterns of landownership resulting from the preferential locations of each group of owners (Table 1).

	Layer of inherited property ownership	**Prevailing accumulation regime**	**Prevailing housing policy**	**Emerging group(s) of owners**	**Preferential location**
6	'Nation of landlords and tenants' (From 2000 onwards)	Neoliberalism, 'Asset-based Welfare'[3]	Neoliberal housing policies	Private renters, Multiple property owners	Big cities
5	'Nation of homeowners' (1975-80 to 2000)	Post-Fordist regime	Homeownership support programs, development of access to mortgage loans	Wealth-middle class	Suburbs
4	Deconcentration of private property (1950 to 1975-80)	Fordist regime, Keynesianism	Self-provided housing, homeownership support programs, housing and land supply by public actors	Individuals and households, Social landlords, Family companies holding property[4], Private land developers	Cities
3	Deconcentration of private property (1914 to 1945-50)	Emerging welfare state[5]	Housing and affordable housing supply, public regulation of property markets	Social landlords, Private investors, Private land developers, Individuals and households	Cities

[3] See Benites-Gambirazio & Bonneval, 2022; Doling & Ronald, 2010

[4] For example, in the private sector new statuses for real estate companies (e.g. SCPI, SCI) were created and are still current (De Moncan, 2012).

[5] Marwick, 1974

2	Concentration of private property (1789 to 1913)	Liberal capitalism	Democratization of property rights	Bourgeoisie, Corporate owners, Small peasants	Cities, industrial belts, rural areas
1	Concentration of private property (Until 1789)	Pre-industrial society	"Trifunctional society" (clergy, nobility, Third Estate)	Landed aristocracy, small peasants	Rural areas

Table 1. The complexity of the current structure of residential ownership in France

Accumulation regimes, housing policies, and the dynamics of city developments combine to define each layer of property ownership history. The current one (number 6 in Table 1) is mainly characterized by the trends of financialization, an asset-based welfare regime (Benites-Gambirazio & Bonneval, 2022; Doling & Ronald, 2010; Conley and al. 2006; Kemeny, 2001), and the rise of a "Nation of landlords and tenants" (Ronald & Kadi, 2018, p.797). However, this phenomenon is limited in space. It combines with other persisting features (layers 1 to 5 in Table 1) to give a more nuanced view of property ownership. Peck and Tickell (2002) showed how neo-liberal regimes are always embedded within inherited, often national, institutions, while Schwartz and Seabrooke (2008) and Christophers (2015) emphasized the fact that homeownership exists in parallel with financialization, often considered as a global all-encompassing framework for the analysis of property. This point is in line with the conclusions of Theurillat and al. (2015), which called for integrative approaches because different "parties, players, and institutions" (p.1414) are involved in real estate markets depending on the territorial context.

Hence the need for empirical, large-scale, comprehensive approaches to obtain a better view of property ownership of the cities. Paradoxically, the current period of opening up public data in France has not been applied to property wealth data.

2. Data and methods

The use of fiscal data sources

Besides historical aggregated data provided by the official statistics institutes of the EU (Eurostat) and France (Institut national de la statistique et des études économiques [INSEE]),

describing land and housing stocks, land use, or dwelling occupational status, new data sources have been made available to scholars for the study of property markets. These data have the advantage of being provided at a disaggregated scale with geospatial references.

The first data source is the *Fichiers Fonciers* dataset (literally 'property files' in French) which is derived from the French cadaster, originally used just for property taxation purposes (Direction générale de l'aménagement, du logement et de la nature [DGALN] et al., 2017). This dataset gives an annually updated overview of property ownership, including land and housing. Since 2009, this information has been grouped, anonymized, and made suitable for geographical analysis by the CEREMA (Centre d'études et d'expertise sur les risques, la mobilité et l'aménagement [CEREMA]). The resulting *Fichiers Fonciers* dataset provides very accurate data at the land parcel scale nationwide. In particular, it provides sound information about i) the physical attributes (area, land use, type of dwelling, tenure status, etc.) and location (geographic coordinates) of each property, and ii) the identity of the owners, when they are legal persons. However, the *Fichiers Fonciers* data suffer from two flaws. First, data are partly protected by Privacy acts: natural persons are made anonymous. Second, data about legal persons are not anonymous but may be heterogeneously registered (for instance, for the Municipality of Paris we find 'Ville de Paris', 'Paris', 'VDP', 'V. de Paris', etc.).

The second data source is the *DV3F* dataset, which collects disaggregated data on property sales, especially the sale price. The *DV3F* dataset is a combination of information coming from two datasets (CEREMA, 2019): the *Demande de Valeurs Foncières* (*DVF*, literally 'Land value request' in French) dataset of the Central State Tax services that has been available in open access since 2019 (Casanova Enault et al., 2019), and some information from the *Fichiers Fonciers* dataset, previously described. It must be emphasized that the financial value of land assets owned by some groups may have been overestimated in this study, because

of the use of sale prices applied to building lands[6]. It should also be noted that some urban landowners want to keep their lands unbuilt.

The difficulty of generating geographical information from fiscal data

Our analysis of the structure of property ownership has had to deal with three main limitations.

First, while we can precisely know which type of owner (a natural or a legal person, and the latter's legal status) has this or that property, it remains impossible for scholars to obtain an exact count of single owners at a national scale. The number of owners per group can only be estimated, partly because data registration is not centralized (data are collected by numerous property tax services, which use different input standards). In the case of natural persons, this means that their unique identifier is only found for a specific tax service (the same person owning two properties in two tax districts will be identified by two different codes). For confidentiality reasons it is currently impossible to circumvent this problem. Take the example of a multiple property owner, whose properties are located in two different tax districts. It is possible to know from the data that these properties are individually owned, but we may count two landlords whereas there is only one single landlord. In the case of legal persons, the problem arises from the heterogeneity in the registration of the owners we mentioned above. This creates opacity for the national-level counting of owners. Therefore, the numbers of owners in Table 2 are estimations we consolidated using reliable public nation-wide databases[7]. We can however quantify the share of the total stock of dwellings and land owned by each group of owners. In fact, the problems preclude any fine-scale work on property asset-based inequalities among owners, but do not prevent such analyses among the categories of property owners.

[6] Complete nationwide information about zoning and planning regulations is lacking in France, preventing any direct comparisons between land ownership and land planning data.

[7] The information comes from databases about households and individuals (INSEE population census), enterprises, and corporate investors (SIREN), hospitals (FINESS), etc. and is all available in open data at https://www.data.gouv.fr/fr/.

The second data analysis limitation is derived from the previous one, and concerns the impossibility of making accurate diachronic analysis. While it is possible to compare property stocks owned by a group over time, at this point in the investigations we cannot know if the individuals within the group have changed or not.

The third limitation concerns the lack of socio-economic data about property owners, such as the revenues of a private investor or the occupational category of an individual owner, and this lack cannot be overcome. Nevertheless, it is possible to estimate the financial value of the property wealth of each group of owners with the *DV3F* dataset.

Method: an owner group-oriented typology, analyzed in terms of portfolio characteristics and the estimated financial value of properties

The 2019 *Fichiers Fonciers* and *DV3F* datasets were examined in order to locate and to count housing units (apartments and houses) and vacant land[8] parcels owned by different categories of owners. The owner typology separates six groups. Combining the theoretical framework for the analysis of property ownership structure (Table 1) and the information available in the *Fichier Fonciers* dataset, the typology of owners was based on four main dimensions: their legal status (natural persons, legal persons), their private or public status, their role in the urban built environment and their historical influence, and the use of their properties (cf. Table 2). The groups of owners that hold less than 0.1% of the total amount of each property segment (apartments, houses, and vacant land) were aggregated in the group called 'Other'. This typology partly crosschecks the groups of owners studied in the literature (and described in the previous section). It focuses on the entire range of owner groups, and not only on the investors, as it was done in the works by Haila (1991) or Özogul and Tasan-Kok (2020), for example. The typology also includes the main owner groups that have emerged throughout French history

[8] Vacant land refers to all the unbuilt lands located in the FUA perimeters. They can be fields, green spaces etc. The current planning regulations do not systematically make this land available for residential uses but given the urbanization pressure in these perimeters, they are likely to become zoned for construction.

(Table 1) and which differ from those identified in other national and historical contexts. A main difference is also the fact that the groups of owners are not defined by economic criteria (not available in the data). Thus, we cannot define for example a super rich group or a wealth middle class group. The typology nevertheless provides a comprehensive overview of the groups of owners represented in the French FUAs.

Owner group	**Main features of the owner group**	**Uses and rights associated with the properties owned**	**Estimated number of owners (France)**
I&H: Individuals and households	An individual or a grouping of individuals sharing property rights on a dwelling or on a land. This grouping often corresponds to a household.	Their properties may have either a use value or an exchange value.	17,000,000
Pub: Public and para-public owners	Different types of owners: Central State (central and decentralized services), Local governments ("Régions", "Departments" and the "Municipalities" and their groupings), public banks (mainly the BPI – Public Bank for Investments" in French – and the CDC – State public investor which notably finance social housing construction). This category includes also para-public owners such as environmental public authorities, education, sport, culture or health institutions.	Part of Central State properties are inalienable ("domaine public de l'Etat"). Another part ("domaine privé de l'Etat") can be sold to foster housing supply and/or obtain cash income. Local governments own properties to fulfill their missions, but can also rent them. The environment and agriculture authorities can profit from legal rights for taking lands 'off the market' (e.g. SAFER[9], ONF[10], CdL[11]).	60,000
SL: Social landlords	Public or para-public companies or cooperatives specialized in social housing.	They have full property rights on their property assets	500 - 600
PI: Private investors	Private land developers, institutional investors and private persons grouped in real estate companies (e.g. SCI, insurance companies, private banks).	Institutional and corporate investors own residential and commercial real estate and can have tax advantages. Generally, private land developers do not hold a property for a long time: they sell it once a real estate program is completed.	1,510,000
RL: Rural landowners	Farmland and forest owners	Owner farming has been falling sharply over the past decades (approx. 2/3 of agricultural land is now leased).	100,000

[9] Land Development and Rural Establishment Companies
[10] Forest National Organization
[11] Coastal Land Conservatory

Oth: Others	This category gathers all the owner groups holding less than 0.1% of the property stock.		

Table 2. Typology of owners

We then calculated the total surface or the total number of dwellings held by each group of owners across the 83 French functional urban areas (FUAs). After that, we used three property price estimations, previously calculated at the municipal scale, one for the land market and two for the housing market (one for apartments, one for houses), to estimate the financial value of the property wealth of each group of owners.

The analyses were produced for the 83 FUAs existing in France in 2019, in order to understand the property ownership structure patterns at all levels of the urban hierarchy. The FUA perimeter is an international standard perimeter created by both the OECD and the EC in 2011. Every FUA consists of the city and its commuting zone, with the former being defined as an 'urban center of at least 50 000 inhabitants' and the latter as the set of 'municipalities with at least 15% of their employed residents working in a city' (Eurostat, 2017). The 83 French FUAs account for about 65% of the total population of mainland France (i.e. approx. 42 million out of about 65 million people). The FUAs include very different cities, ranging from world cities (Paris) to small cities of less than 100,000 inhabitants.

3. Uncovering the three dimensions of property ownership structure

Dimension 1: The dominance of individuals and households

No matter which property segment (apartments, houses, or vacant land) is examined, the French urban property stock is overwhelmingly in the hands of individuals and households (I&H in Figure 1). I&H are always the leading group of owners, and in fact they hold between 60 and 92% of the total area of every property segment. The ratio between the amount owned by I&H and the amount held by the other groups of owners shows that houses are more concentrated in the hands of I&H than vacant land and apartments. While I&H hold 27.2 times more houses

than the second group of house owners (social landlords), they only hold 4.8 times more vacant land than the second group (public owners) and 2.2 times more apartments than social landlords. This ranking remains valid if we compute the ratio between I&H and the three other groups of owners: I&H own 12.8 times more houses, 2.8 times more vacant land and 1.6 times more apartments than the three following groups of owners.

This relegates most of the other categories of owners to the backburner: significantly, only two categories of owners (I&H and private investors) own at least 2% of every segment, remembering that I&H dominate compared to private investors. Social landlords and public owners own at least 2% of only two out of the three segments, while rural landlords own a significant portion of urban vacant land but a negligible part of houses and apartments.

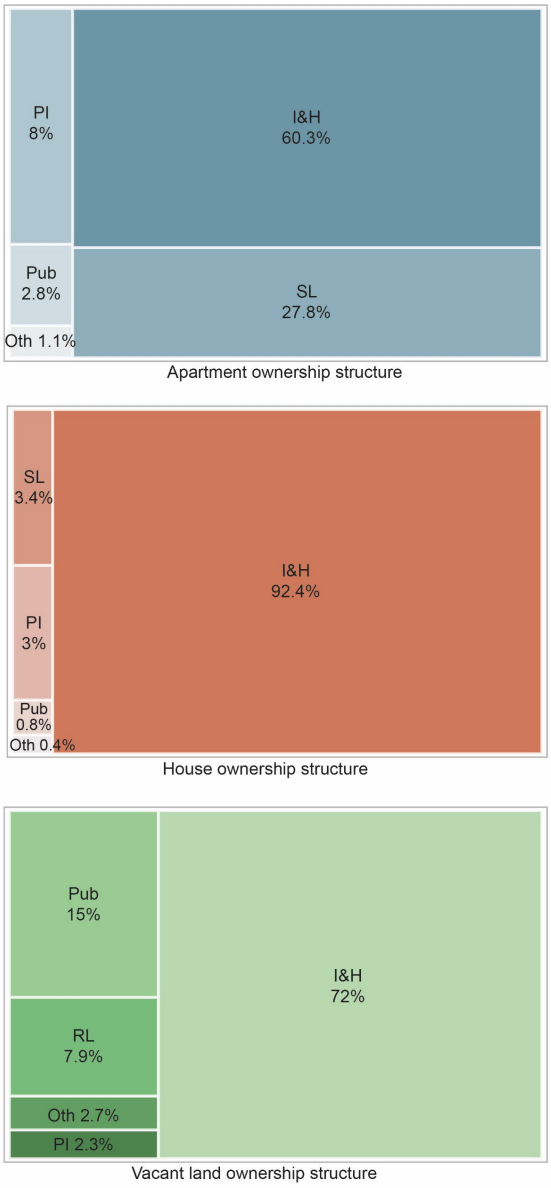

Figure 1. The property ownership structure of the 83 French FUAs

Dimension 2: A fairly consistent structure across cities

Given their prominence among property owners, we have mapped the spatial variations of the share of I&H owned properties across French FUAs[12] (Figure 2). Two points must be borne in

[12] Knowing that all the aggregated data about other groups of owners are available online (https://api.nakala.fr/data).

mind to understand the fact that the class breaks highlight interesting variations behind the apparent ownership structure uniformity among cities.

First, the overall share of property stock owned by I&H shows little variation between cities compared to the variations in the share of properties owned by the other owner groups[13]. The variations shown by the maps are thus explained by the focus on the variation among cities for the group of I&H alone, and, moreover, by the choice of quantile method for the class break[14]. Second, the difference between the average values of the share of property stock owned by I&H in Figure 1 and Figure 2 is explained by the difference in the level of data aggregation use for the calculation[15].

That being said, we notice that at the inter-urban scale, the maps for apartments and houses show a clear contrast between the northern part of the country (region of Lille) and the more demographically dynamic regions (south of the line from Bordeaux to Lyon, and in Brittany – northwest of Nantes). The northern French FUAs are marked by a low share of I&H housing ownership, offset by considerable social landlord ownership, while I&H owners are over-represented in southern and western French FUAs. It is worth noting that, maybe counter-intuitively, the rank of an FUA in the urban hierarchy has no influence on this pattern. In contrast, regional effects are obvious. Northern FUAs with a low rate of I&H owners concern cities with either over 1 million inhabitants (Lille) or less than 200 000 inhabitants (Boulogne-

[13] As shown by the coefficient of variation (CV), calculated as the standard deviation divided by the average * 100. As a dimensionless number, the CV makes it possible to compare the dispersion of statistical series with different parameters (the closer to 0 meaning the lower the statistical dispersion). The CVs of the share of properties owned by I&H in the French FUAs range from 0.1 (houses) to 0.3 (apartments), while the CVs for other groups of owners vary from 0.4 (private investors, apartments) to 1.2 (social landlords, houses). This means that I&H form the bulk of the structure of real estate property ownership in the very large majority of cities. It should be noted that this leadership of I&H is followed by private investors, whose CVs are systematically lower than those of other categories.

[14] In order to make comparing the three maps easier, the class breaks have been defined by the quantile method. Due to the low variation in the share of I&H owning houses among FUAs, the values of the class breaks are very close for Map 2.

[15] Figure 1 provides data at an aggregated level (average value calculated with all the properties of I&H *of the FUAs*, which is affected by the weight of the big cities which concentrate I&H) whereas the maps provide data at a disaggregated level (average value calculated with all the properties of I&H *for each FUA*, where small FUAs are quite numerous).

sur-Mer, for instance). Conversely, the same applies in the regions with high rates of I&H owning apartments or houses. It applies even for cases that one could think would be special, like the core city of the Paris FUA in which the respective shares of apartment ownership for I&H, social landlords, and private investors are 57%, 30%, and 9%, thus very similar to the national average values (60%, 28%, and 8%).

Compared to housing, the picture for vacant land is less straightforward. As was the case for housing, there is a regional effect (I&H being under-represented land owners in the eastern part of France) and no systematic urban hierarchy effect. The under-representation of I&H owners in eastern cities and some big FUA core cities is compensated by a higher share of private investors (in big agglomerations and most of the Mediterranean coastal cities), or public owners (in eastern industrial cities and some Mediterranean coastal cities). It is also important to note the role of rural landowners in reducing the share of I&H in some FUAs where agriculture is a major activity (like in Bordeaux and Reims (Champagne) for viticulture, or in the cereal-growing area around Paris). At an intra-urban scale, we notice a higher complexity regarding the structure of urban vacant land ownership compared to that of housing, more in conformity with the structure of a core-periphery gradient (with the share of I&H owners increasing as one moves away from the center).

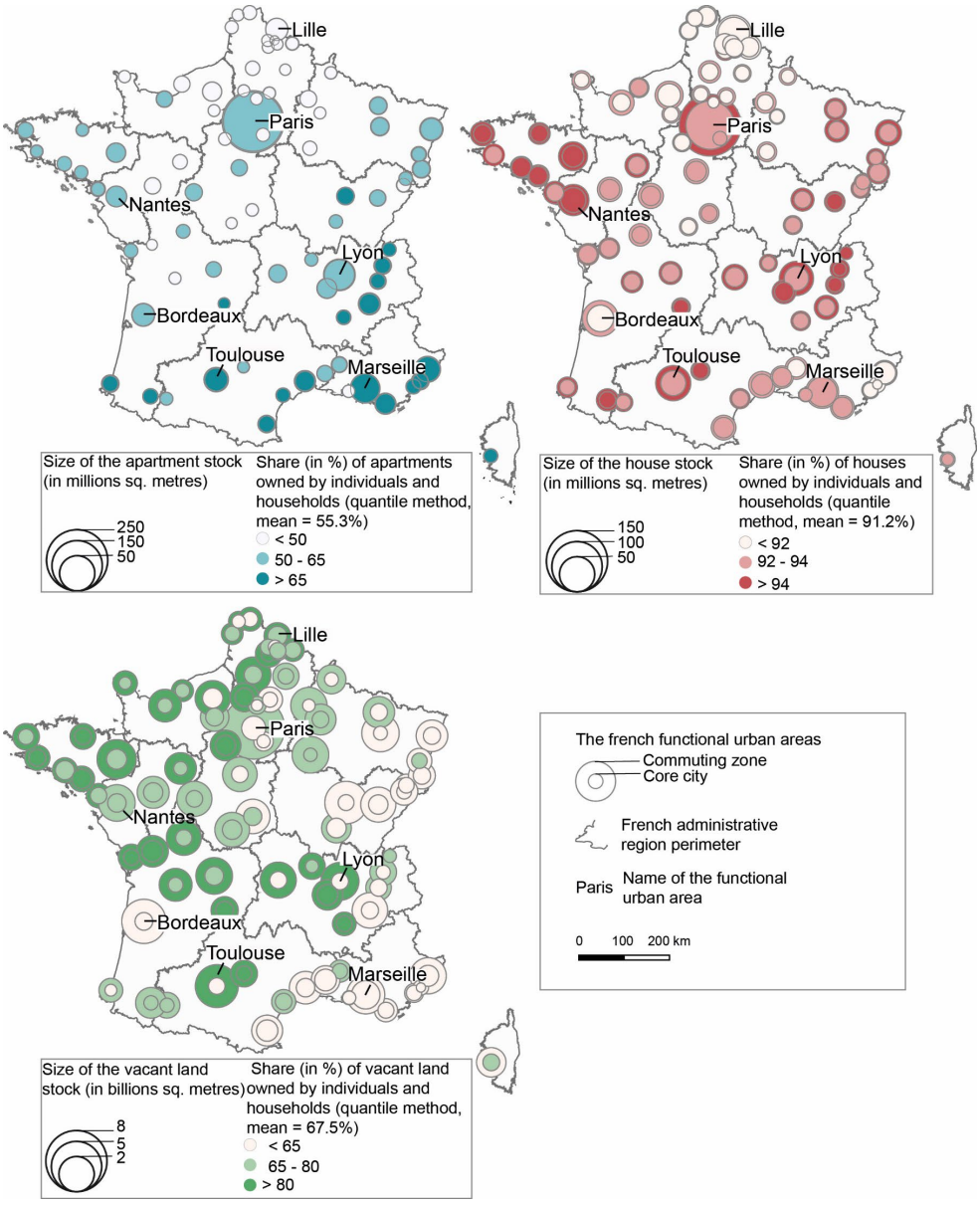

Figure 2. Shares of property stock owned by individuals and households in the 83 French FUAs

Dimension 3: The uneven values of different owner groups' properties

The properties held by the different groups of owners are preferentially located in certain municipalities, and their ranking in the property price range varies markedly. At the municipal scale, real estate sq m. prices vary by a factor of 60 (apartments and houses) to 100 (vacant land), which is fertile ground for property wealth disparities. Figure 3 gives the distribution of

the different owner groups' property wealth (colored curves) depending on their location in this municipal price hierarchy, compared to the overall distribution (dotted grey curve).

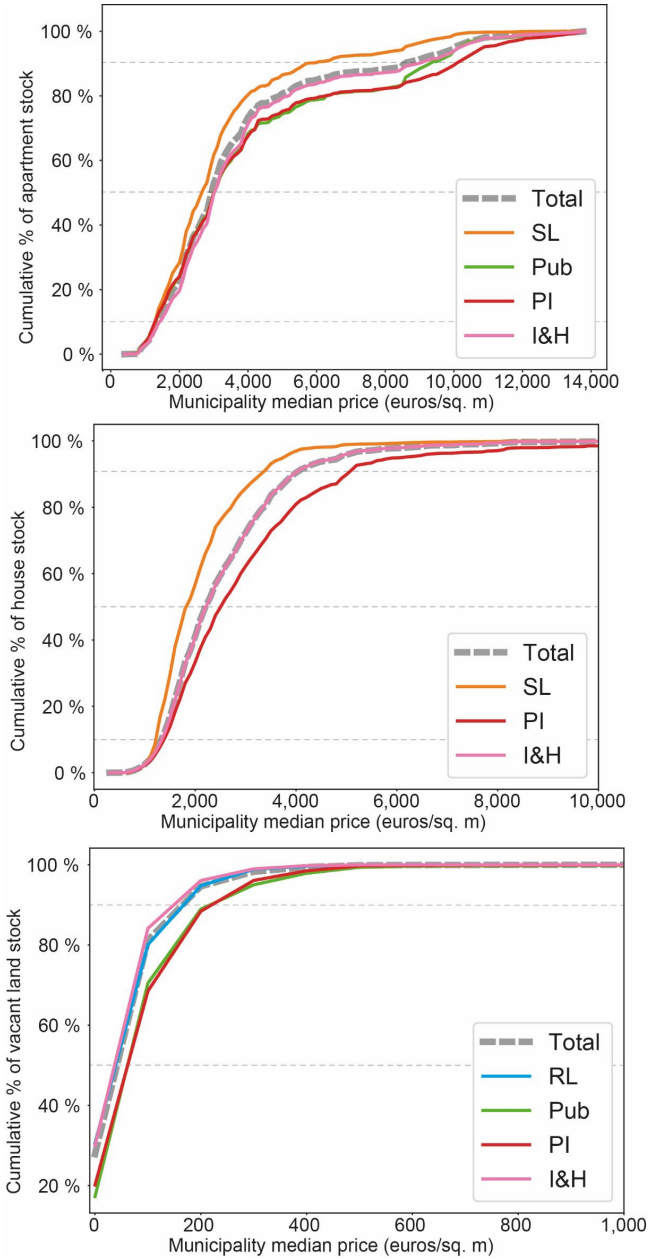

Figure 3. Cumulative frequency of property wealth percentage per owner group depending on the municipality price level. **Abscissa axis is expressed in logarithm and the equivalent values are given in euros/ m² (only the main owner groups are displayed on the different real estate segment figures)*

In all the charts, the distribution of property wealth has a steep slope in the left part corresponding to municipalities with low property price. But the shape of the distribution is quite different from one property segment to another. In particular, the slope is less steep for the distribution of apartments. While the minima and maxima for houses and apartments are similar (approximatively 300 and 20 000 €/sq. m.), the median (the middle dotted line on the figures) of the houses' overall distributions (approx. 2 000 €/sq. m.) is significantly inferior to the figure for apartments (approx. 3 750 €/sq. m). D9 (the top dotted line on the figures) for houses is 4 000 €/sq. m., compared to more than 10 000 €/sq. m. for apartments. These general differences are largely due to the location of houses and apartments compared to the price gradient, since 87% of the apartments are located in the city zone of the FUAs, compared to 49% of the houses.

Given the fact that I&H represent the vast majority of housing owners and landowners, these overall distributions are strongly influenced by this group of owners (to the extent that, on the house figure, the I&H and the Total curves overlap perfectly). While I&H (and rural landlords for vacant land) hold properties whose value is in line with the average, the other groups of owners hold property stocks located in more or less valuable municipalities. The lands held by private investors and public actors are around 1.5 times more valuable than the average (median ≈ 75 €/sq. m. and D9 ≈ 260 €/sq. m compared to approx. 50 and 180 €/sq. m.). They also hold more valuable housing, whether this is at any point of the distribution (the private investors' house median and D9 are both superior to the general pattern) or in the right part of the distribution (for apartments, private investor and public owner medians are similar to the overall median, but their D9 is clearly higher). In contrast, social landlords hold less valuable properties than the average owner.

To assess the aggregate effect of these phenomena, we can compute the ratio between the share of value and the share of area held by a category of owners. If this ratio is above 1, then it means

that the average value of the properties held by a group of owners is higher than the national average value of a property. Conversely, if this ratio is below 1, then it means that this group of owners' properties are less valuable than the national average property. Concerning apartments and houses, the ratios are systematically equal (houses owned by I&H and public owners) or superior to 1. The only exception is for social landlords, for which apartment and house ratios are extremely low (respectively 0.85 and 0.83). On the other hand, private investors are characterized by fairly high ratios (1.12 and 1.20) while apartment ratios for I&H and public owners are lower (respectively 1.04 and 1.09) but still above 1. Concerning vacant land, I&H and rural landowners have slightly negative ratios (respectively 0.92 and 0.98) while private investors and publics owners have very positive ones (1.29 and 1.32).

4. Discussing the three dimensions of the structure of property ownership

Dimension 1: A French property stock predominantly owned by private individuals

Although the figures are difficult to compare due to different statistical categories and different methodology choices, the overwhelming prominence of I&H in the French structure of property ownership is consistent with what is known from other countries. In the UK, Massey (1980) stated that "ownership by private individuals [was] a major form of landholding in every [estate] size category" (p. 265). More recently Paccoud et al. (2021a) showed that natural persons hold more than 55% of Luxembourg building land (p.5), while Cuenet et al.'s works (2002, as cited in Theurillat et al., 2015) indicated that "most of the rental housing stock belongs to private individuals (57.4%)" (p. 1418). Moreover, the French housing stock is mostly owned by occupiers (68% in 2019), which is once again in line with international information (72% in the UK in 2006 according to Dixon, 2009, p. S48).

That being said, France stands out for the significant place of I&H compared to other Western Europe countries. This is all the more true given that, as Massey had already pointed out, "many private individuals are classified as trusts or companies" (1980, p. 265). For fiscal purposes

mainly, some French I&H set up companies (often family businesses) holding housing (e.g. SCI: société civile immobilière) or land (e.g. EARL: exploitation agricole à responsabilité limitée), which are here respectively classified as private investors and rural landowners. By contrast, Paccoud et al. included in their natural persons category the natural persons operating through companies (2021a, p. 5, our translation), which suggests that the gap between France and Luxembourg is even greater than our figures indicate.

This significant share of I&H property owners drastically reduces the shares of other owner types. In particular, the structure of property ownership in France is marked by a clear under-representation of private investors. Keeping in mind the differences in statistical categories between countries and academic works, the investors hold about 22% of the Swiss rental housing stock (Cuennet et al., 2002, as cited in Theurillat et al., 2015, p. 1418) and Luxembourg 'private companies' (our translation) almost 21% of the land zoned for development (Paccoud et al., 2021a, p.5), while French private investors hold no more than a few percent of these different segments.

These special features are largely due to the stacking of the different historical layers shown in Table 1. Many of them have fostered the development of I&H property ownership in different ways: the spread of small-scale peasant landowners after the French Revolution and under Napoléon, the bourgeois wealth accumulation under 19th century liberal capitalism, the development of the ideology of homeownership after WW2[16] and, more recently, the development of small-scale landlordism (Hochstenbach, 2022, Ronald & Kadi, 2018; Soaita et al., 2017; Forrest & Hirayama, 2015) among the wealth middle-class identified by Piketty (2013). This prominence of I&H in property ownership, mainly at the expense of institutional and corporate investors, echoes Schwartz and Seabrooke's works about the "varieties of residential capitalism" (2008, p.237). They pointed out the "statist-developmentalist" nature of

[16] "homeownership rates increased from 35 per cent in 1954 up to 58 per cent in 2018" (Le Goix et al., 2020, p.2)

French residential capitalism, exactly the opposite of "liberal-market" Anglo-Saxon countries (p. 244). Compared to other OECD countries, this situation goes along with low prices (Fernandez & Aalbers, 2016b), a low degree of housing financialization, and the persistence of the regulation of the property market by the Central State despite on-going neoliberalization (*ibid*., Le Goix et al., 2020). Let us remember, however, the multifaceted nature of I&H. In our study, this category encompasses for example both homeowners ("for whom land never *can* be only a financial asset" – Christophers, 2015, p. 195) and multiple property owners: it is therefore theoretically impossible to consider I&H as a cohesive whole.

Dimension 2: Regional variations behind the apparent uniformity of the property ownership structure among cities

As shown in the previous section, there are few variations in the structure of property ownership across French cities. But behind this picture, three issues (respectively methodological, empirical and theoretical) must be remembered. First, it is obvious that the rank of a city in urban hierarchy plays no role in the structure of property ownership. This means that there is no justification for working on big cities only. Our hypothesis that the approaches (Beswick et al., 2016, Fernandez et al., 2016a) focusing on big cities tend to overestimate the weight of corporate owners and therefore cannot see the wood for the trees was correct. Of course, this conclusion applies at the FUA scale, and further research is needed to investigate the spatial variations in the structure of property ownership at a finer scale.

Second, the main spatial effect of the structure of property ownership is therefore a regional one. This point is not as minor as it may seem, because it shows that the structure of property ownership depends primarily on different accumulation regimes that are deeply rooted in specific regions. This is clearly visible on the maps in Figure 2: while the declining industrial coalfields of Northern France are marked by a very low share of I&H among the owners, the attractive Mediterranean and Atlantic coastal regions exhibit higher rates. The opposite

situation prevails for the social housing sector. These regional effects are totally in line with the stacking of historical layers of property ownership displayed in Table 1. The Northern rustbelt is still very marked by the legacy of paternalistic companies who provided welfare housing for their employees in the 19th Century before being nationalized in the 20th Century (which led to the transfer of their housing stocks to the social landlords). On the contrary, Mediterranean and Atlantic sunbelts are benefiting from recent amenity migrations and the post-productivist transition: the shares of I&H and social landlords among owners reflects both the lack of dominant industrial traditions and a rather unexpected, uncontrolled influx of people during the post-Fordist, neoliberal era which has made these property markets very tight (Grandclement & Boulay, 2021).

Third, from a more theoretical point of view, these results show that far from being explainable by one single all-encompassing factor, the structure of property ownership is deeply hybrid. In that respect, a parallel may be drawn with the notion of "actually existing neoliberalism" theorized by Brenner and Theodore (2002, p. 351) and which refers to the fact that "[a]n understanding of actually existing neoliberalism [should] (…) explore the path-dependent, contextually specific interactions between inherited regulatory landscapes and emergent neoliberal, market-oriented restructuring projects at a broad range of geographical scales" (*ibid.*, p.351). As with neoliberalism, the structure of property ownership cannot be fully explained by the current stage of neoliberalization, marked by the combination of a "Nation of landlords and tenants" (Ronald & Kadi, 2018, p.797) with asset-based welfare policies and the increase in big landlords' real estate investments in big cities. As shown by many authors in different contexts, property use value is continuing to co-exist with property exchange value driven by pure investors (see particularly Schwartz & Seabrooke, 2008; Christophers, 2015). As Theurillat et al. (2015) put it, this combination of different rationalities is geographically reflected in the emergence of distinct "areas of the real estate market" (*ibid.*, p.1426). This is

borne out by our results showing the variations in the structure of property ownership at both an inter- and an intra-urban scale.

Dimension 3: The distribution of property wealth among categories of owners

The estimated value of property portfolios is both very virtual and very concrete. It is virtual in that it corresponds to the potential price that a property could have if it was for sale on the property market, but properties for sale represent a tiny fraction of the whole property stock (around 3% per year in France, for example). In contrast, property estimated value is also becoming increasingly concrete given the fact that properties are increasingly considered as potentially liquid, financial assets (Forrest & Hirayama, 2015, Fernandez et al., 2016a, Christophers, 2019, Aveline-Dubach, 2020). This blurring of the boundaries between use and exchange values is all the more important since it no longer solely concerns private investors but also extends to new categories of owners, like I&H and public actors, who were historically more use-value driven (Smith, 2008). This ongoing process is inseparable from the launching of (property) asset-based policies by the Central State, in France as in many other countries (Peck & Tickell, 2002, Benites-Gambi & Bonneval, 2022). Specifically, the Central State uses the increase in value of real estate properties in France over the last 20 years as a political argument to justify its withdrawal from three sectors: the welfare system, the social housing sector, and the public local sector.

First, concerning I&H and the welfare system, different measures have encouraged homeownership and investment in the property market, with financial counterparts in terms of credit support and tax benefits (Le Goix et al., 2019). This phenomenon of asset-based welfare is also spreading in many other OECD countries (Kemeny, 2001, Conley et al. 2006, Doling & Ronald 2010, Kadi et al., 2020, Benites-Gambirazio & Bonneval, 2022). It has been reinforced in France by the recent rise of the post-homeownership society already observed in Britain (Ronald & Kadi, 2018, Soaita et al. 2017), which is characterized by the development of

property investments in addition to homeownership. A recent empirical study in France, based on non-available-to-scholar data, demonstrated clearly the importance of multiple property owners in wealth accumulation and inequalities across different French cities (INSEE, 2021).

Second, social landlords and the social housing sector are currently affected by neoliberalist reforms facilitating the Right to Buy. According to this political argument, French social landlords allegedly hold a hidden treasure (their dwellings) which should help them self-finance their investments with reduced public subsidies. Nonetheless, our results clearly show that social landlords' dwellings are of limited exchange value: social landlord share of value to share of area ratios are the worst of all ratios. Despite their very central location[17], social landlords' dwellings are in fact located in fairly inexpensive municipalities. This makes it all the more difficult to earn enough money to launch new affordable housing programs, since social landlords hold very little land and therefore need to buy land plots from other landowners.

Third and finally, concerning public owners, one could imagine that social landlords could benefit from the massive, valuable public vacant land areas to launch these new housing programs. But austerity also affects the public sector, opening the door to new property asset management (Adisson & Artioli, 2020) not conducive to land subsidies in kind. Public bodies actually hold very valuable vacant land: their share of value to share of area ratio is indeed the highest of all the ratios (1.32), which can provide a significant source of revenues for them and could generate a strong trend towards privatization, as was the case in the UK (Christophers, 2018). However, further research is still needed to identify this potential privatization of publicly owned properties and to know whether it is directly linked to austerity or not.

[17] 86% of social landlords' dwellings are located in the city zone of the FUAs.

5. Conclusion

At the end of the day, who owns France? Answering this question requires the four dimensions of the still-opaque structure of property ownership to be uncovered. It also relates to empirical, methodological, and political issues.

First, France is predominantly owned by individuals and households. While the literature focuses on private investors, this paper has demonstrated that they hold no more than a few percent of the housing and land stocks. Yet private investors are active in all market segments (apartments, houses, vacant land). Some other actors (social landlords, public bodies, etc.) are sometimes more visible but on specific segments only. From an empirical standpoint, such a comprehensive view of property ownership at a national scale is rather unprecedented.

Second, we have shown that the structure of property ownership is relatively uniform across French cities, despite significant variations in absolute value. Behind the almost ubiquitous prominence of I&H among owners, some variations do pop up. These are primarily due to the combination of different historical layers of accumulation regimes, which explains why the structure of ownership varies depending on the regions and not to the urban hierarchy. From a methodological standpoint, this means that there are no reasons for limiting studies about property ownership to big cities.

Third, the property wealth owned by different categories of property owners is highly differentiated. While some categories, notably private investors and public bodies, globally own properties whose value is largely above the national average value, some other categories, notably social landlords, own properties whose value is largely below that national average value. From a political standpoint, this means that their property portfolios give the different

categories of owners more (or less) leeway to raise revenue and influence the making of the city.

Regrettably, it is not yet possible to study the fourth dimension of the structure of property ownership: the concentration of ownership at an individual scale. This would imply working at a disaggregated, non-anonymous scale, which is not legally possible today for researchers. Nevertheless, a recent study carried out by the French National Statistics Institute, based on non-available-to-scholar data, clearly demonstrated the importance of multiple property owners in wealth accumulation and inequalities across different French cities (INSEE, 2021). More generally, further research is needed at a disaggregated scale to investigate the strategies of the different categories of owners towards wealth accumulation. Additionally, longitudinal data is still not available to deepen the analysis of property wealth accumulation and concentration. Finally, it would also be desirable to launch methodological works at an international scale to produce comparable categories and data in order to delve into the analysis of property wealth in different urban political economy contexts.

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