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Introduction – Housing: A space–time good

Monsieur Alain Trannoy

Abstract

Housing is a crucial good for households, both as a consumer good via the flow of services it fosters, and as an essential component of a homeowner's wealth. It is also crucial because it accounts for more than a quarter of household's expenses, and an increase in rent or property prices instantly has a major impact on their living standards, choice of location, mobility, and savings options. Finally, housing is unique as an element of space-time, space and time that cannot be separated in this instance. These themes are examined in this special issue, with a variety of approaches and different perspectives, providing valuable information on a number of outstanding issues.

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Introduction

Housing: A space-time good

Alain Trannoy*

Abstract – Housing is a crucial good for households, both as a consumer good via the flow of services it fosters, and as an essential component of a homeowner’s wealth. It is also crucial because it accounts for more than a quarter of household’s expenses, and an increase in rent or property prices instantly has a major impact on their living standards, choice of location, mobility, and savings options. Finally, housing is unique as an element of space-time, space and time that cannot be separated in this instance. These themes are examined in this special issue, with a variety of approaches and different perspectives, providing valuable information on a number of outstanding issues.

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Reminder:

The opinions and analyses in this article are those of the author(s) and do not necessarily reflect their institution's or Insee's views.

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Why housing? Economists can propose a thousand reasons, among which the fact that it makes up the largest share of household budgets, the largest share of their wealth, a basic good that has an impact on poverty and inequality, a marker of segregation, a crucial catalyst in the 2008 financial crisis, and lastly because its price has been on the rise since the mid-1990s. Housing economics is becoming a field of study in its own right in France and this is a good thing. This is illustrated by the publication of this special issue of *Economie et Statistique/Economics and Statistics* as well as the recent issue of *Annals of Economics and Statistics*. These editorial initiatives are to be commended as they demonstrate a desire to bring scientific knowledge up to par with that of other developed countries, particularly the United States. It is significant, moreover, that *Economie et Statistique/Economics and Statistics* welcomes a number of contributions from European economists for the occasion. Naturally, the ten studies compiled could not adopt the same point of view. Before looking at the issue covered in each article, a crucial original conceptual feature of housing should be highlighted. Housing is an element of space-time, which cannot be separated in this instance.

Housing is the only good that can be defined purely by a location and a land-use, land which is a scarce factor. It necessarily requires land consumption. Housing is also a sustainable good that is defined by a consumption flow and a capital stock. Hence the dynamic dimension. Housing is an element of space-time, and these two elements cannot be disentangled. Microeconomic theory gives pride of place to dynamic analysis, and less to spatial theory despite its recognition in Von Thünen's remarkable analysis of 1826, which can be considered the first microeconomic analysis, coming even before that of Augustin Cournot. But to produce a comprehensive housing analysis there needs to be a link between a spatial analysis and a dynamic analysis, and that is what makes the analysis both difficult and exciting. These spatio-temporal back and forth are of importance.

Firstly, events, and therefore time, are stored in the price of land. One example is the crisis of 2007 which affected different territories in different ways. Deindustrialisation accelerated, devastating many territories and bringing down land and real estate prices where people, in addition to losing their jobs, saw some of the value of their wealth go down the drain. Yet, at the same time, people living in large metropolitan areas saw the price of their housing soar in favour of a post-industrial society where many Western countries (the United States, Great Britain and France) specialise in the design, marketing and commercialisation of products, leaving the production phase to developing economies and emerging countries. These design operations are mostly concentrated in cities so as to benefit from the agglomeration externalities in the form of the exchange of ideas inspired by dense and varied individual contacts.

Conversely, a scarcity or an abundance of land can have a long-term impact on the economic future of an urban region. For example in France, the Côte d'Azur, sandwiched between the sea and the Alps, lacks available land, which hinders its expansion, whereas a city like Nantes, one of the most vibrant in France, is fortunate to have a major land stock right near the city centre. This partly explains the results, somewhat surprising at first glance, obtained by **Dorothée Brécard, Rémy Le Boennec and Frédéric Salladarré** who find for this city, using a hedonic model, a relatively low valorization of environmental goods (proximity of public transport, air quality, etc.), even though the city is considered an example of environmental leadership. The fortune of having a stock of fairly affordable housing thanks to an ambitious social housing policy close to the centre with the

Île de Nantes, and the relative uniformity of the city, prevent a mechanism of differentiation in valorization.

This spatio-temporal perspective is central to the approach of the article by **Jean-Sauveur Ay, Mohamed Hilal, Julie Le Gallo and Jean Cavailhès** which offers a remarkable insight into the understanding of the process behind changes in development land prices. Land represents on average 30% of the total cost of the construction of a detached house and the floor area represents on average 15% of the plot. In line with the findings of another study in this issue, by **Thomas Balcone and Anne Laferrère**, which will be discussed later, it seems that in recent past, the price of developed land has risen faster than that of structures for new constructions. The fact is also documented in a recent paper by Knoll, Schularick and Steger (2017) that real estate inflation is governed by the rise in land value in most developed countries. This could suggest that a more generous building permit policy would likely curb the rise in development land prices and that some of the real estate increase is simply maintained by a Malthusian policy when it comes to issuing building permits. But this is not exactly the avenue of thought taken by J.-S. Ay and his co-authors. The four authors estimate a structural model in which the price of developed land depends on construction measured at the same time in terms of the number of residences allowed, the floor area allowed and the plot sizes allowed. The construction variable is instrumented by variables related to the type of land, its topography, the agricultural opportunity cost and the presence of industrial wasteland. The choice of the first variable and in particular the proportion of clay land is rightly of interest. Indeed, clay land is more unstable and pushes up construction costs, with no possibility of reverse causality: an increase in developed land prices cannot increase the share of clay land. These four variables are supply variables and it is known that to identify the slope of a demand curve, an attempt must be made to detect the exogenous supply variations in order to be able to “slide along a demand curve”. The authors then obtain a household housing demand that is very elastic to land prices. The elasticity of inverse demand for land is 0.3 (in absolute terms), and therefore demand elasticity is greater than 3. This confirms the fact that the total deregulation of development land supply, certainly a solution to be avoided for environmental reasons, would help ensure that the rise in residential demand flattens out without a rise in prices. On the contrary, the article by **Thomas Balcone and Anne Laferrère** documents a housing demand that does not “settle” easily, and also adopts a spatio-temporal analysis.

France has a policy of significant government intervention in the housing sector as regards regulation, financing and taxation, and these various types of intervention are full of mechanisms whose efficacy would be worth assessing. The constant changes in public policy in France are in this respect an opportunity for carrying out impact studies, taking advantage of spatial differentiation or the specific features of local housing markets. The article by **Guillaume Bérard and Alain Trannoy** uses a new database made available to researchers by the CGEDD, the *MEDOC* database along with the *Fidji* database, to measure the impact of the 2014 increase in real estate transfer taxes (RETT) paid by the buyer of a real estate asset. As of the first of January 2014, the *départements* have been able to increase the departmental share of these rates by more than 0.7% of the transaction amount (from 3.8 to 4.5%). As they have not all done so and especially not all at the same time, this sets the stage for a natural experiment. The authors obtain a significant sales anticipation effect the month prior to the tax hike, more than compensated for by a drop in the number of transactions in the three subsequent months. However, the net effect is fairly low,

estimated at around 15,000 transactions “lost” due to the tax rise at national level, in other words, 1.5% of the total annual transactions. This confirms that housing demand is fairly resilient, estimated this time on the second-hand housing market. Overall, this low elasticity to price is rather normal for a basic good, one that is considered essential, but more importantly one that influences well-being in a crucial way. Households are without doubt more prepared to sacrifice food or clothing in the event of financial difficulties rather than cut back on their real estate aspirations.

Housing, along with heating and lighting, is by far the biggest share of household budgets at more than 26%, twice that of food¹. As such, an increase in housing prices or rent has a major impact on living standards. In addition, there is a qualitative factor. Housing is a primary good, a basic good recognised as such in the Universal Declaration of Human Rights, and the Charter of Fundamental Rights of the European Union. In its decision of 19 January 1995, the French Constitutional Council considered “the possibility of having decent housing a state obligation”. This compulsory right to housing (known as the *Droit au logement opposable*, DALO) is enshrined in Besson’s law (*loi Besson*). The issue of inequality and poverty is therefore correlatively associated with a person’s occupation of a residence or lack of residence, for example, for homeless people. The work presented here by **Carole Bonnet, Bertrand Garbinti and Sébastien Grobon** goes into this theme of inequality from the perspective of unequal access to home ownership. The rate of property owners among young, low-income households aged 25 to 44 years old dropped by 50% between 1973 and 2013 (16% compared with 32%). The contribution of the analysis is to demonstrate that many factors contributed to this decline, and especially a certain number of structural changes such as the fact that these low-income households now live increasingly in large cities where the price of land is a barrier, whereas 40 years earlier, many of them lived in the country and owned their home. This decline in small rural home ownership is a major factor that is often glossed over. While the desire to become a property owner is almost unanimously widespread and perfectly legitimate, property hampers mobility compounded by high transaction costs. In a changing economy, encouraging low-income households to become homeowners might be a poisoned chalice. However, ensuring that the housing budget is not too onerous for the lowest budgets is a policy that does not hinder their mobility. The mobility of young households is also examined in the study by **Kees Dol and Harry van der Heijden** on the Netherlands, where they document increasing mobility, particularly among young homeowners prior to the 2008 crisis. This increased mobility was stopped short by the crisis, and particularly affected highly indebted households.

There is a sense that different societies react differently to this quandary of how to intervene in the housing market, perhaps in line with their politico-philosophical systems. Esping-Andersen’s famous distinction (1990) between liberal systems (English-speaking countries), social democratic systems (Nordic countries and the Netherlands) and corporatist systems (Germany, France) is well known. In the first, social welfare cover is just a safety net and, beyond that, individual responsibility mostly prevails. The second type of system uses universal transfers, and the third focuses more on solidarity within certain circles, such as the family, employees, the agricultural community, etc. Clearly, it is an interesting perspective, but within a country, several sources of inspiration may coexist. For example, the rationale behind the social housing movement in France is undeniably universalist, whereas

1. 2015 data, source Eurostat.

the rationale behind the “1% logement” employee home-loan scheme is inspired by a corporatist model. It is therefore possible that the perspective is different or simply more complex for housing. Kemeny (1995) offered a more simple perspective in which he compares dualist rental markets – in which the poor are relegated to social housing reserved for them – and unitary rental markets – in which the private and social housing stock compete and comply with the same regulations. In fact, the traditional contrast between society’s liberal or social democratic approaches comes back into play. As regards housing, France historically belongs among the second group of countries, and the social housing movement is closely linked with this approach. The study by **Christophe André and Thomas Chalaux** seeks to establish a new typology across all OECD countries, which are still fairly disparate in terms of living standards, based on a new database created by the OECD for this purpose. The *Affordable Housing Database (AHD)* will in any case be extremely useful to social science researchers. One lesson learnt from this database is that the social democratic countries of Northern Europe, the Netherlands, Denmark, Sweden, Iceland and Norway, are countries where property owners (including homeowners) are now the majority at between 50% and 70%. Moreover, homeowner households are, in terms of tenure, the dominant category and account for about 40% of the population. Socio-political repercussions or correlations can be expected, as property owner status engenders more conservative values which lay behind for example the abolished inheritance tax in Sweden in 2005, the abolished wealth tax in Denmark in 1997, and a rise in inequalities in both countries.

Housing is also the primary form of saving for French people, as two-thirds of the value of their wealth is made up of housing, and housing loans account for 85% of consumer credit. As such, a drop in the value of property assets, in a downturn in the real estate market, has immediate macro-economic repercussions, as shown by the subprime crisis in the United States, and the Irish and Spanish real estate crises. One of the major channels in the contemporary link between finance and macroeconomics is housing, and it’s fortunate that one of the articles in this special edition, by **Valérie Chauvin and John Muellbauer**, contributes to its better understanding in the case of France, showing that the financial accelerator was weaker in our country than in the United States and the United Kingdom during the real estate price boom (1996-2008). The effects of financial wealth on consumption are comparable to those seen in the United States and the United Kingdom. However, the effects of real estate wealth are weaker in France than in these two countries, taking into account the absence of loans on the value of real estate assets (home equity withdrawals). One of the specifics of real estate is in fact that it is an asset that can be acquired with money that one does not have. In the new-build market, there is nothing wrong with borrowing to invest, because building individual wealth boosts gross fixed capital formation. In the second-hand housing market, it is more questionable as it is simply an exchange of assets between two households. Stock market margin calls, requesting additional payment in the event of depreciation, financially ruined and wiped out small investors during the 1929 crash and have, since, been stringently regulated. They were based at that time on a system of borrowing to buy stock (with low cover) similar to a real estate loan in the second-hand housing market. The hybrid status of housing as both a consumer good and a basic good, and the many frictions in this market, make the monetary authorities less strict when it comes to real estate loans, when clearly debt leverage can bring about a boom cycle and leave many households vulnerable in the event of an economic downturn, not to mention certain financial institutions. Debt in the second-hand housing market introduces a long-ignored macroeconomic risk factor and one that only a stringent macroprudential policy

can mitigate. It is fortunate in this respect that the article by **Thomas Balcone and Anne Laferrère** compares trends in real estate prices in both the resale and the new homes market sectors. In line with the understanding of the role of credit, the old housing market is more volatile than the new homes market. It passes on fluctuations in credit policy more drastically, and in this case the credit crunch of 2009. This article also fosters reflection on price indexes which are the thermometers of the housing market. Progress in the precision and accuracy of the thermometer is essential so as not to misinterpret changes in the housing market. This is all the more true for France due to the significant gap between rents and prices in the country since the end of the 1990s, a specific puzzle, perfect to arouse the curiosity of economists.

Before going any further to understand it, it is crucial to ensure that it is not the result of an artefact. In this respect, valuable information can be found in the study by **Robert J. Hill, Michael Scholz, Chihiro Shimizu, and Miriam Steurer**, who compare the theoretical properties of several hedonic methods and other methods used in various European Union countries, and test them on price data from two large non-European cities, Sydney and Tokyo. In addition to recommending the use of hedonic methods, over that of appraisals, the method developed by Insee and used as a calculation in the Notaires-Insee index is recommended because it is simple to use and gives more stable results for smaller samples. Beyond the legitimate pride of having a method created by the Insee teams validated, this result is important for two reasons. Firstly, for showing that the gap between prices and rents is not a statistical illusion in our country. Secondly, because this index can be used to assess changes in prices in local markets. Yet, real estate markets are local markets, and small-town France is composed of many distinct markets with few annual transactions.

The hedonic method is also the theme chosen by **Amélie Mauroux**. Rosen's theoretical model (1974) assumes perfect information concerning the various characteristics that are important for the existence of an equilibrium price for each of the differentiated properties that makes up each residence. The author tests this theory for an environmental risk, in this instance, the risk of flooding. The implementation of a regulatory provision, known as the "information des acquéreurs et locataires" (IAL), or obligation to inform buyers and tenants, introduced in France in 2006, offers the opportunity to conduct a natural quasi-experiment. Only properties on ground floor are affected by this informational shock, but they are affected considerably. The properties in question are subject to a 9% drop in value. This type of study, could be extended by a cost-benefit analysis of the advantages of public investments to limit the risk of flooding (see for example a cost-benefit analysis based on hedonic estimations in Gravel *et al.*, 2006).

This special issue provides great insight from a number of perspectives and no doubt will help inform policy deciders and stimulate the interest of researchers and students in this field, which is at the crossroads of so many different economic approaches.

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