Housing demand: Quo vadis?

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One of the major issues of political and social discussion in Catalonia and Spain in recent years has been the malfunctioning of the housing market. Using the case of Catalonia, I suggest that there are several explanations of demographic origin for this. First, there is a growing mismatch between the demographic demand for housing and the new supply available. I estimate that in the period 2014-2020 the Catalan household stock increased by 222 thousand units to 3.1 million, while only 50 thousand dwellings were completed. In 2019, the deficit of new housing, measured as the difference between net household growth and completed dwellings, was 35 thousand. Second, demographic demand is no longer stable but cyclical and uncertain. In 2013 some 9 thousand households were added to the stock and, in 2019, 45 thousand. Similar mismatches are happening in Spain as a whole.

In this issue of *Perspectives Demogràfiques*, I show how the distribution of the demographic components of demand has changed, tending to a greater weight of less stable factors like immigration, which accounted for 93% of net household growth in 2019, or the evolution of household structure, which explained more than 10 thousand additional households per year in the early 2000s. Next, I draw attention to the growing housing supply-demand mismatch. Finally, I suggest that one of the main challenges of applied demography is how to contribute towards new housing policies that consider the cyclical impact of conjunctures, non-linearity of trends, and uncertainty.

The new demographic foundation of housing demand

How is the new demographic base of housing demand developing? This base is constituted by growth in the number of households, a volatile figure. While 20-40,000 households are now being added annually, in the early

2000s the figure was almost 80,000 households. Four factors explain the variation in the number of households: the number of adults in relation with past natural increase, their age distribution, foreign immigration of mainly adults, and the dynamics of household formation (leaving home, divorce and stepfamilies, and residential autonomy of the elderly). The importance of each factor depends on the stage of demographic evolution.
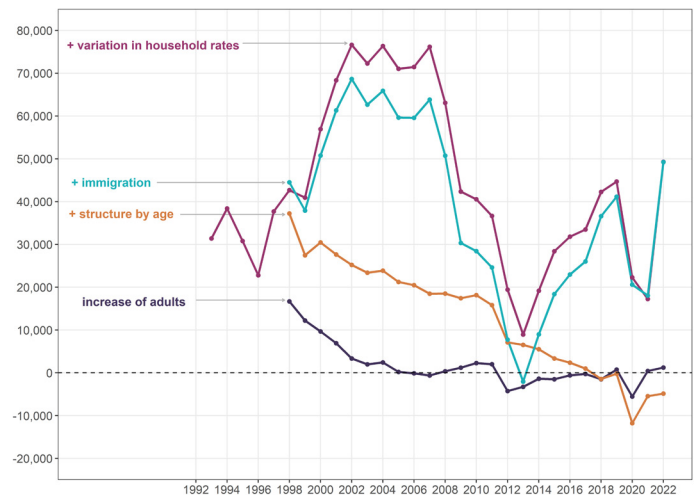

Figure 1. Breakdown of the recent change in new households into its main demographic components. Catalonia
Source: Author, using Estadística de Població and EPA. Variation in household rates / Immigration / Structure by age / Increase of adults.

During the Demographic Transition, fertility was the predominant factor driving changes in the number of households, as it determined the influx of adults reaching the age of household formation. It encompasses a stable and foreseeable element in shaping household dynamics, and was the main quantitative factor explaining housing needs. In post-transitional populations, particularly those with a significantly low fertility rate like ours, the influence of fertility as a driver of household variation diminishes, as the number of native adults tends to decline. Fertility reduction and ageing, however, caused in Catalonia a momentum of young adults that fed into household formation for a while. Subsequently, as members of empty cohorts joined the adult ages, the flow of new young households diminished and mortality related dissolutions increased as the full cohorts reached the oldest ages. As a result, the net balance of new households declined over a few decades. This evolution of the number and age structure of native adults was tendential and, therefore, easily predictable.

The data shown in figure 1 for Catalonia confirm this. This graph shows the accumulated breakdown of demographic factors: the lower line indicates the new households explained by the change in volume of adults and the remaining lines accumulate the new households explained by the rest of the factors. Until 2000, the main explanatory factors for the net positive flow of households were growth in the number of adults and the change in their age structure. The decline in fertility and progressive ageing in the last quarter of the 20th century foretold a reduction from 2005-2010 of the contribution of native adults to the demographic demand for housing. Households added by the dynamics of the native population have gone from around 30,000 in 2000 to below zero today.

Since 2000 the most volatile factors, changes in household behaviour and, especially, intense immigration, have taken centre stage. To begin with household behaviour, this is an underrated factor. In the first decade of the 2000s, this component alone (measured by change of the age structure of headship rates) favoured the addition of about 10,000 more households each year. The contribution is now zero or negative. There are two sub-vectors to be considered. The first, which is very positive, is the survival of additional older households as a result of both their greater residential autonomy and life expectancy. The second is characterised by fluctuations in the ages of leaving home and household formation, plus the dynamics of households due to divorce and the reconstitution of couples. Despite the delayed leaving home pattern, during the bubble, there was a slight advance that facilitated earlier household formation, plus an increase in reconstituted households. At present, there is again a delay in the leaving home calendar which translates into no new households, or a negative contribution thereof.

As for foreign immigration, its contribution accounted for half of the 80,000 households created each year around 2005. It is now the main source of the change in the stock of households and is therefore the key demographic factor to be considered when estimating future construction needs. Its impact directly and immediately depends on the magnitude of immigration flows and is sensitive to so-called high-migration events, such as the one prior to Covid-19 (41,000 additional households explained by immigration in 2019).

In short, the main components at issue nowadays, migration and household formation, do not evolve in a linear fashion, but oscillate and respond to economic circumstances and sudden events such as epidemics (COVID-19) or war (Ukraine). Their future quantitative contribution is thus uncertain, both for demographers and for the private and public actors concerned with managing housing supply and demand.

Cycles and uncertainty in housing demand and supply

The new demographic basis of housing demand generates two levels of uncertainty: 1) for the groups directly concerned, such as households and developers/builders in relation to the divergence between supply and demand, and 2) for researchers in charge of projecting the future and of generating knowledge, who use methods that are not designed for the new demographic scenario and who are supposed to support public policies and politicians. In short, both demand and supply, as well as management tools, are uncertain.

With regard to the first level of uncertainty, for many years, growth in demand was roughly matched by growth in housing construction. Figure 2 shows a time relation in Catalonia between annual housing units completed (including second homes, but not with housing starts) and the increase in the stock of households. This relationship is not so strong on the metropolitan Barcelona scale, as there has been a certain construction deficit since the bubble years. However, the overall correlation broke down from 2007 onwards, after the real estate bubble burst. In fact, a double bubble had developed, the real-estate bubble (widely known) and a demographic bubble (Fernández Córdón, 2011) which burst at the same time and with mutual impacts. As a result, from 2007 onwards, demographic stimuli for housing construction disappeared and, in 2012, both housing construction and household formation reached their lowest point, close to zero.

The recovery that started in 2014 saw housing construction and household formation diverge sharply for the first time in recent decades. New household additions picked up again due to the reactivation of migration flows, but housing construction did not follow. Housing starts recovered slightly, but not sufficiently. Part of the net demand would probably be covered by the conversion of second homes or by use of former vacant housing, but the inventory is small (according to INE estimates, there were some 79,000 unsold homes in Catalonia in 2021, approximately 2 per cent of the total) and is not located in the areas with the highest demand. New studies are beginning to warn about this mismatch between

demand and supply. In a report for CaixaBank Research, Montoriol (2023) identifies a growing gap between demand and supply in Spain and points to metropolitan Barcelona as one of the areas most affected by the shortage of supply. She mentions structural, economic, and bureaucratic factors that hinder supply from matching demand in several Western countries. Myers et al. (2021) also identify a deficit of new construction in the United States that limits stock turnover (especially rental), housing demand and geographic mobility.

Figure 2. Evolution of housing construction and household stock change. Catalonia
Source: Author, using Estadística de Població and EPA. Housing starts / Housing completed / Homes variation.

The data confirm that supply and demand (Figure 2) are currently decoupled. Aggregate demographic demand seems to fluctuate systematically according to economic and migratory cycles as the endogenous net demand is negligible or negative. Furthermore, it is structurally constrained due to the high age of leaving home. This cyclical configuration is uncertain. And, this is the main point, it does not seem to stimulate construction, which does not follow the same cyclical pattern as demand. Figure 2 shows a pattern of new supply that matches demand only at its cyclical low-points. Might it be that change in the demographic foundations of housing demand has impacted the demographic stimuli for developers and builders, both public and private? Is it the case that a demand system based on immigration does not influence supply in the same way as one based on endogenous demand among the young? These are questions that merit further study.

The Covid-19 pandemic sparked the crisis that followed in the demand side of this new system after the GFC. The subsequent recovery again widened the gap between demand and supply. If this divergence-convergence cyclical pattern settles, housing deficits will accumulate and overall unmet housing needs will emerge for the first time in 50 years.

Availability would join affordability as a pressing housing concern. The mismatch between insufficient supply and unmet demand will have to be resolved either by a downward adjustment in demand (reduced immigration, further delay in leaving home calendars), or by the emergence of housing arrangements outside formal or traditional channels. Ideally, public initiatives could ensure a planned and sustainable increase in new construction for achieving a necessary rebalancing.

Forecasting and managing an uncertain and cyclical demand

Housing policy, along with applied demography, faces the challenge of incorporating uncertainty and demographic cycles into the analysis and management of the relationship between housing supply and demand (Paris, Frey, 2018). Ensuring the supply of housing in the long term is essential, in accordance with the net growth of households and the ageing of the existing housing stock.

In the future, changes and fluctuations of different intensities and speeds will continue to shape developments, with immigration playing a crucial role. Figure 3 illustrates the recent cyclical evolution of the variation in the number of households as an expression of residential demand, also depicting imagined demand cycles in the future, and contrasting both with the horizontal and inertial evolution of household growth projected in recent years by public statistics offices.

Irregular and unpredictable cycles, as evidenced by the outbreak of the Ukrainian war during the recovery from the Covid-19 crisis, may become the prevailing pattern. If housing supply does not promptly respond to increased demand triggered by a major immigration event, public intervention must ensure swift alignment of new supply with demand, potentially compensating for cyclical fluctuations. To address this, public housing policies need a decisive renewal, enabling collaboration with the private sector in line with public interests or through public development initiatives. The details of how to achieve this are beyond the scope of this paper, as are the most appropriate tenancy typologies. However, it can be said that public action will require improved data and more accurate forecasting. And this is a task for demographers.

To date, demand forecasts based on official household projections have predominantly relied on linear and trend
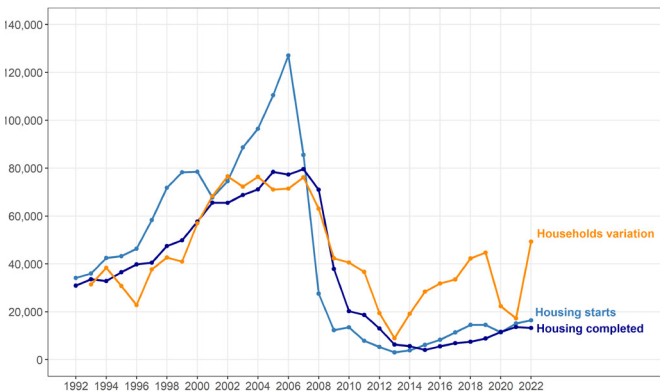
scenarios, often reflecting the conditions prevailing at the time of their creation, as depicted in Figure 3. These methodologies need to incorporate cyclical scenarios and demonstrate adaptability to disruptive events that result in high or low immigration, enabling the provision of appropriate input for

decisive policy responses. Traditional planning instruments, including those designed for housing, which propose long-term measures to correct trends, may no longer be adequate for the current demand scenario, where timely action is imperative.
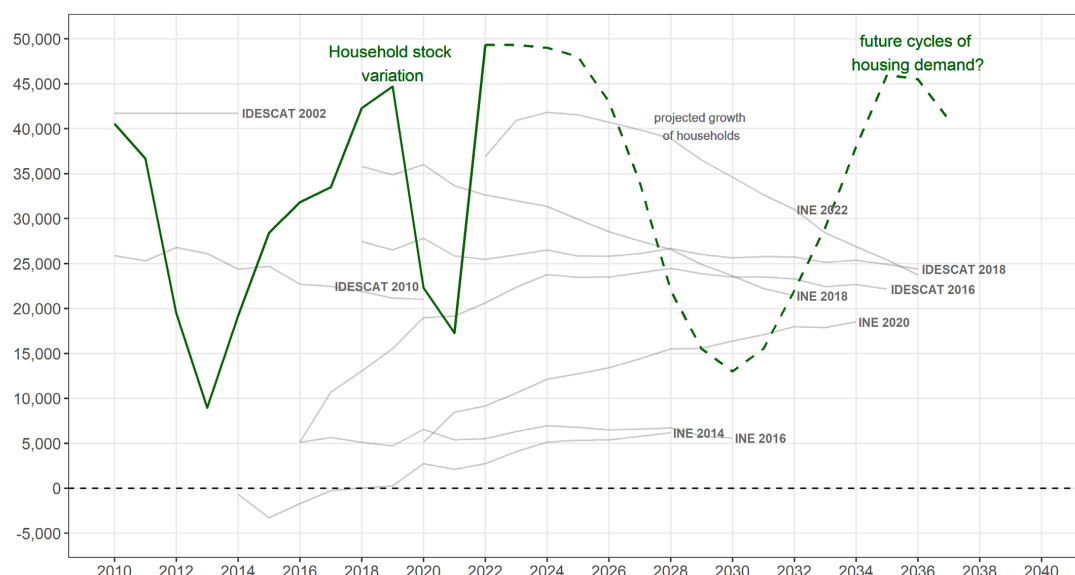
Figure 3. A possible scenario of housing demand cycles compared with actual household growth forecasting
Source: Author, using Natural Population Movement and the Population Census.

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