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Tackling the UK housing crisis: is supply the answer?

Peer review comments

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In his paper, [Tackling the UK housing crisis: is supply the answer?](#), Ian Mulheirn makes a strong case, which might be summarised along the following lines:

1. The data appear to suggest that housing supply has grown at a faster rate than the number of households.
2. Rents (as a measure of the imbalance between the demand for and supply of housing services) have grown at a slower rate than incomes and much more slowly than the rate of house price appreciation.
3. But the difference between the two growth rates can be reconciled by a fall in the nominal interest rate in a discounting model where house prices represent the discounted stream of rental payments. Therefore, the rise in house prices is related to increased investment demand because of the low yields on alternative financial assets. This may further have been affected by changes in credit market conditions.
4. Policies designed to increase housing supply have little effect on affordability given the estimated responsiveness of house prices to changes in supply.
5. The fall in owner occupation rates represents (i) a change in the income distribution away from younger cohorts and (ii) the effects of credit market conditions that adversely affect aspiring first-time buyers.
6. Rather policies designed to raise home ownership need to concentrate more on credit conditions and the income distribution.

Many of these arguments have merit and, indeed, I have argued the case for some of them for many years and so they are not new, but there is a danger of going too far. In particular, I would suggest that supply and demand policies are not alternatives but can, in principle, be complementary. It is perfectly possible for there to be both an absolute shortage of homes and a distribution problem. It is helpful to look at the arguments above in a little more detail. There are many important issues and I concentrate on just a few.

A first point relates to the nature of the underlying theoretical model – house prices are equal to the discounted present value of the rental stream. This assumption is often used in theoretical housing models and derives from financial asset pricing models. But it is not clear that relationships derived from finance can be applied to housing without modification. This is difficult to test directly in the UK given shortages of information on rents but, even in the US, which has a longer history of freely-operating private rental markets, the relationship does not appear to hold exactly¹. Nevertheless, most empirical models of house prices in the UK (which do not rely on the discounting formula) would certainly agree that changes in interest rates have a strong effect on house prices. Therefore, as I have long argued, the use of house price to income ratios as a measure of affordability is heavily flawed because increases reflect falls in interest rates. At least over the short term – and this can last many years – we certainly expect house prices to rise faster than rents.

But there is a question whether this can represent a long-run phenomenon. Interest rates cannot fall forever and the housing cost of capital (which can be considered as the appropriate discount rate) has over the long run been approximately stationary – that is, it has no long-run trend. Therefore, it cannot explain the long-run increase in the ratio of house prices relative to incomes. For this, perhaps surprisingly, we have to turn to the demand for and supply of housing services. This is not to say that the investment market is unimportant – indeed, it is extremely important,

¹ See Duca, J., Muellbauer, J., and A. Murphy (2011), 'House Prices and Credit Constraints: Making Sense of the US Experience', *Economic Journal*, 121(552): 533-551.

particularly in terms of explaining housing market volatility- but by itself it cannot explain the long-run trend.

My own empirical work on house prices summarises the key influences on the rise in the long-run house price to income ratio². These are:

1. The growth in the real household disposable income relative to the growth in the housing stock.
2. The income elasticity of housing demand relative to the price elasticity of demand.

The first of these is fairly conventional – income growth (and its distribution) reflects demand, whereas the housing stock reflects supply and is affected by conditions and policy in land markets. Notice that it is not population nor the number of households that affects demand; rather this has to be backed up by income through effective demand to influence house prices. Over the long run, income has grown faster than the housing stock and so we expect affordability to deteriorate. Less well appreciated is that, under the second condition, the higher is the income elasticity of demand relative to the price elasticity, the faster affordability will worsen. In the UK, the evidence is that the income elasticity is greater than one, but the price elasticity is less than one. Early research in the UK (and internationally) paid particular attention to these demand elasticities but this research has rather gone out of fashion in recent years as more attention has been paid to the supply side of the market. For me the key issue for long-run policy, is why the income elasticity of demand is so high. A number of stories can be told, but that is for another occasion. The point to make here is that simply comparing the number of dwellings with the number of households is inadequate as a measure of excess demand/supply (and the difference cannot necessarily be taken as a measure of vacancies) since it fails to take account of increasing demand, not just from newly forming households, but also existing households as incomes rise. As a result, over time in a growing economy, we might expect the gap between the number of dwellings and households to increase.

The second issue is that the Mulheirn paper generally discusses the growth rate in rents and not the level. The distinction is important since the former may simply represent the adjustment process to the latter. For example, if the level of rents is high and above the equilibrium in a base time period, then the growth rate in subsequent time periods is likely to be modest or even negative, whatever is happening to house prices. Therefore, two questions arise: (i) what is the level of rents (relative to incomes?) (ii) What factors affect the rate of adjustment? As Mulheirn notes, there are a number of possible sources of information on rents, but here we choose the VOA data.

Across England as a whole, for those households not in receipt of housing benefit, the median rent was £675 per month in the year to September 2017, which equated to approximately 28 per cent of gross median earnings; but median rents in the South East of England for the same period were £875 (33 per cent of earnings) and £1,433 (50 per cent) in London. At the lowest quartile, the respective values for the South East and London were £695 (37 per cent) and £1,175 (57 per cent). The point is that even if the growth rate in rents is no more than the general rate of inflation, the level will still be considered unaffordable by large parts of the population unless they are in receipt of housing benefit.

Consequently, since rents reflect demand as well as supply, it is not entirely surprising that the growth rate has been modest, but there are additional factors. Because of asymmetric information, the landlord does not know whether a new tenant will be “good”, but if the tenant turns out subsequently to be reliable, the landlord has a strong incentive not to raise the rent too far for fear of losing the tenant. The evidence suggests that in 2018³ for the most recent tenancy renewal, 70 per cent of landlords kept the rent the same, but rents were increased more frequently for new tenants. Therefore, imperfect information reduces the rate of rent increase.

² See Meen, G., and C. Whitehead (2020, forthcoming), *Understanding Affordability: The Economics of Housing Markets*. Bristol University Press.

³ English Private Landlord Survey (2018).

A final issue concerns why rents as a percentage of income are so high; shortages are, of course, a possibility, but an unexplored speculative possibility relates to the stress tests that Buy to Let landlords are now required to undertake. We can see the nature of the problem in a simple demand/supply framework. We are probably more used to talking about the effects of rent regulation and we can see (Figure 1) that under controlled rents there will typically be an excess demand for homes. Rents are prevented from rising to clear the market. But what about the opposite case where there is a reservation rent below which rents cannot fall? In this case, supply will be greater than demand. But what prevents rents from declining; the introduction of stress tests for Buy to Let investors provides one explanation.

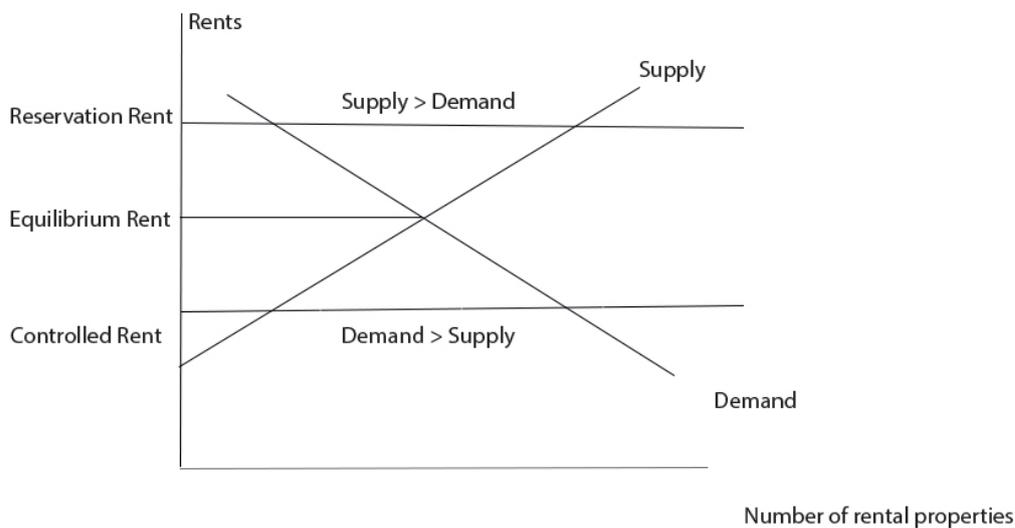


Figure 1. Reservation Rents

In Britain since the Global Financial Crisis, the stress tests that aspiring mortgage borrowers have to pass have become more stringent. But what has been less appreciated is the impact of stress tests that Buy to Let investors have to pass and how they can squeeze out low and middle income households from renting as well as ownership. The stress tests give rise to a form of Reservation Rent below which rents cannot fall at the time the loan is granted. As an illustration, we can construct an artificial simulation using information from the 2015/16 English Housing Survey and house price data from the Land Registry.

Suppose an investor wanted to buy a property in the South East in 2015/16 at the lower quartile house price of £193,000; suppose that the investor wants to take out a 50% loan and provides the other 50% through its own equity, requiring a 3% yield. Stress tests have to be calculated at an interest rate of 5.5% and an interest cover ratio (ICR) of 125%; loans are generally interest only. On these assumptions, the reservation rent would be about £800 per month; if households did not wish to spend more than 30% of gross household income on rent, income would need to be well above the median renter income to meet the reservation rent. In other words, large proportions of households would be excluded.

If the landlord purchased the property without a loan (and so no stress tests were required) the median income household would be able to afford the (lower) reservation rent. Therefore, stress tests may lead to higher rents. Since the stress test is a one off, it is no longer binding on an individual property in subsequent time periods, but given the initial level, it would be unsurprising to find rents in subsequent time periods growing at below the rate of earnings particularly if the landlord wants to keep good tenants and minimise voids.

The key point is that slowly growing rents do not necessarily represent an excess supply of properties but also reflect the regulatory environment. Consequently, the increased emphasis on stabilisation is not distributionally neutral but affects low income renters disproportionately. It would be extremely unfortunate if slowly growing rents were taken as a sign that no new housing was required, particularly for low income groups.

Thirdly, the finding that increases in housing supply only have a modest impact on affordability has been known since the original results of the Barker Review; but the conclusions, in my view, to be drawn from this are (i) increases in supply have to be large and long-lasting to have a significant impact – temporary expansions have little effect and (ii) supply policies need to be conducted in conjunction with demand policies - they are not alternatives. But demand policies are likely to involve taxation changes, which, for good reasons, are politically unpopular and are likely to affect negatively existing home owners. The political importance of a property-owning democracy was first recognised in the 1920s and this is unlikely to change. Therefore, for me, the key issue is how can demand policies be better integrated with supply policies – not that we should throw away the latter.

Finally, I would strongly agree that the fall in owner occupation is related to changes in the income distribution – it is important that we recognise this, even though housing policy can do little about it. I also agree that credit conditions are an important part of the story – as above, macro stabilisation policies have distributional consequences, although we cannot divorce macro stabilisation from changes in house prices.