UK COLLABORATIVE CENTRE FOR HOUSING EVIDENCE

Micro-economics of housing supply

Prof Chris Leishman (University of Adelaide), Prof Joe Frey (University of Glasgow), Prof Stanley McGreal (Ulster University)

7 September 2020

Economic and Social Research Council
Arts and Humanities Research Council
JRF JOSEPH ROWNTREE FOUNDATION

housingevidence.ac.uk

UK COLLABORATIVE CENTRE FOR HOUSING EVIDENCE

About the authors

Prof Chris Leishman works for the University of Adelaide, South Australia, where he has a particular interest in housing affordability and new housing supply, and he continues to play a full role in the UK Collaborative Centre for Housing Evidence (CaCHE), leading the 'markets' theme.

Professor Joe Frey is Knowledge Exchange Broker for the UK Collaborative Centre for Housing Evidence (CaCHE). Working closely with Professor Stanley McGreal, Joe is responsible for helping to provide a bridge between key policy and practice stakeholders in the housing sector in Northern Ireland and the UK's leading housing academics who came together to form CaCHE.

Professor Stanley McGreal is a Co-Investigator for the UK Collaborative Centre for Housing evidence (CacHE). Stanley was appointed Professor of Property Research in 1998 and was Director of the Built Environment Research Institute, Ulster University over the period 2006 – 2016.

Acknowledgements

The authors gratefully acknowledge the time and reflections of our anonymous housing development industry participants in Scotland and Northern Ireland, and for helpful suggestions made by Homes for Scotland.

Contents

1. Context to the study

Policy interventions designed to promote the affordability of housing or the supply of affordable housing in Anglophone countries since the start of the new millennium have emphasised the role of new housing supply. This became clearly apparent in the UK in the context of the Barker Review (Barker, 2004) and the subsequent reforms to the planning system. The Barker Review also marked a departure from a focus on short-run approaches to modelling the relationship between house price inflation and other variables, including supply shifters, such as the rate of household formation. The weak or statistically insignificant relationships between supply variables and house price change are well documented in the literature. Prior to the Barker Review, a number of studies had concluded that policy interventions to increase new housing supply are important within the housing system, but primarily exert influences other than on house prices. For example, planning policy may act to increase housing densities (Cheshire and Sheppard, 1989) while increasing land supply may facilitate sub-regional migration and household formation rather than lowering house prices (Bramley and Leishman, 2005; Leishman and Bramley, 2005).

More contemporary approaches to modelling the relationship between house price inflation and housing supply emphasise the importance of long-run rather than short-run flows of dwellings and is predicated on the awareness that annual housing supply is dominated by the second-hand market that is in turn a function of the size and composition of the overall housing stock. The development of this strand of work was led by Meen (2011), with supplementary contributions from, for example, Leishman et al (2008) and Rowley et al (2017).

However, despite significant reforms to the planning system, the expansion of new housing supply in England was disappointing and prompted a number of behavioural studies exploring the ways in which developers, land markets and planning systems operate in practice in order to throw light on this issue. Possible explanations put forward included market power/lack of competition (Callcutt, 2007) and developers working practices in the housing land market (Adams et al, 2009). Leishman (2015) emphasised that developers are confronted by downward sloping demand curves linked to the dominance of second-hand supply and excessive demand/ low supply in land markets and is closely related to the under-researched issue of land banking.

Much of the academic literature that emerged in the post Barker era focussed on developments in England. The disappointing response in terms of overall output by the housebuilding industry to the major reforms to the planning system in England has already been noted. However, it is also important to emphasise that this response varied regionally within England, while in Wales and Scotland more modest changes to the planning context resulted in commensurately more modest supply responses. In Northern Ireland, planning reforms have had an organisational focus, with land development and development management powers being largely transferred to 11 newly created local authorities in 2015. In Northern Ireland, too, the issue of increasing housing supply has been overshadowed by the particularly pronounced housing boom and bust cycle associated with the Global Financial Crisis (GFC). Indeed, the severity of the subsequent house price correction and slump in housing supply since the GFC in Northern Ireland may be regarded as a microcosm in which housing developer behaviour and supply outcomes can be studied in the context of a particularly adverse environment.

The Department for Communities (NI) created a Housing Symposium to address the issue of the limited evidence base in relation to understanding undersupply in Northern Ireland (DfCNI, 2018). It highlighted labour market and planning issues amongst others. It also exposed an evidence gap in relation to a more focused developer perspective and the multiple challenges faced in attempting to increase housing supply. This study aims to address this gap by adopting an essentially qualitative methodology to throw light on the issue through a series of in-depth interviews with developers focussing on challenges concerning land acquisition, planning, development finance and construction costs. The study includes comparable evidence from Scotland to facilitate inter-jurisdictional comparisons which it is hoped will add to the evidence base guiding future policy development in relation to housing supply and affordability throughout the UK. However, the study begins by reviewing a number of more recent contributions to the ongoing debates on housing affordability and supply. Greater emphasis is placed on studies and policy reviews that have occurred in recent years – particularly since the GFC – but reference is also made to relevant studies prior to this.

2. Evidence review

The UK housing development industry, and its interfaces to the planning system and wider housing market, have been centre stage in the policy debate about housing affordability for nearly 20 years. The issues have been the central focus of four major government reviews, and numerous academic studies. At the same time, there have been significant changes to the ways in which housing systems function – particularly since the GFC. More recently, there have been several important new developments pertinent to understanding housing markets. They can be summarised as follows:

I. The post GFC period has seen significant change in the products being developed by a subset of housebuilders in the UK, as evidenced by growth in Build to Rent and Mid-Market Rent.

II. There has been a shift in thinking in housing macroeconomics about the role of both the level of housing supply, and the price elasticity of supply, on the price and affordability of housing.

III. There has also been a surge in interest and understanding of the role played by competition in the market for newly constructed housing.

These issues are examined in more detail in this review of the evidence. In this respect, we build on an earlier CaCHE evidence review by Payne et al (2019), but deliberately steer clear of their central focus on the land assembly system. The main focus of the literature evidence is on the relationship between housing supply and housing affordability.

2.1 Housing affordability and supply – the macro viewpoints

For many years, stemming initially from the Barker Review (2004), there has been a near, but not complete, consensus among commentators that the UK's housing supply has been inadequate to meet demands and needs and that this has resulted in deteriorating housing affordability. A rapid evidence check funded by the National Housing and Planning Advice Unit (NHPAU) and published by Wallace and Jones (2009) argued quite strongly that the dominance of home ownership and the potential of that tenure to add to individuals' wealth are among the principal policy concerns about deteriorating housing affordability. They also cite growth in latent demand, suppression of household formation and polarisation of wealth as additional concerns. Muellbauer and Murphy (2008) point out that "increases in the average real price of housing change the distribution of welfare towards the old, who tend to be owners, and away from the young, who tend not to be owners…". Thus, there are important distributional effects that arise from the unaffordability of housing.

The pressures on housing affordability caused by inadequate housing supply have been seen to be particularly acute in England, and particularly so in London and the South East. There are various estimates of the shortfall, but the overall picture is that the numbers of additional dwellings required each year are very substantial indeed. For example, Bramley (2018) estimated that annual net additions of 380,000 are required in Great Britain (of which 340,000 for England) for a 15 year forward period in order to eliminate the backlog of unmet housing need. Department of Communities and Local Government (DCLG) (2017) strongly emphasise an inadequate volume of new housing completions and slow pace of development as the two principal reasons for the sustained deteriorating affordability of housing in England. They report a consensus requirement ranging between 225,000 and 275,000 dwellings per annum, drawing on Barker (2004), House of Lords (2016) and KPMG and Shelter (2015).

Meen's (2011) long-run model of housing supply and affordability is widely seen as one of the critical and most influential analytical tools used by the UK government in the post Barker Review period to guide debates about reforms to the planning system and the need for additional land for housebuilding. This model suggests that a 50% increase in housing starts (from a baseline of 180,000 per annum for England overall) leads to an improvement of 1.3 points over a 20 year period compared to a price to earnings ratio of 10.5 in the baseline year. Thus, the model strongly bears out the prevailing thinking of the time that a very substantial increase in construction would be required for a sustained period of time in order to have any real impact on housing affordability.

It is important to reflect on a common and persistent misconception that 'housing supply' is synonymous with the annual flow of newly constructed dwellings. In fact, the contemporary understanding (Meen, 2011) is that it is largely the size of the housing stock that matters, because the majority of housing supply is generated from that stock. This point is also made by Leishman and Bramley (2005) who point out that overall housing supply, net of demolitions, comprises several elements including household dissolutions, downsizing and new build.

Academic studies prior to the 2000s often sought, usually in vain, for a statistically significant connection between annual new-build housing supply and price levels or change. The prevailing view now, following Barker (2004) and the raft of DCLG funded work set out formally by Meen (2011), is that the effect of new-build supply on prices is indirect and slow because it works by adjusting the size of the housing stock. As the housing stock grows larger, its potential to generate annual supply grows also. This is the principal reason that estimates of the number of net annual additions required to improve housing affordability are so large, and for such a long forward time period.

Yet in the very recent past there have been some suggestions that the role of low housing supply in determining the unaffordability of housing may have been over-stated. MHCLG (2018) recently published a comment on determinants of house price change, basing their work on econometric results published by NHPAU (2007, 2008). They estimated that over the period 1991-2016, population growth in England accounted for a 32% real increase in house prices, of which 21% from net international migration. An increase in real household disposable income led to a 150% increase in house prices, and an increase in housing stock (supply) led to a 40% reduction in prices. The NHPAU models also included scenarios concerning interest rates. However, MHCLG (2018) noted that these models were calibrated on the period 1980 – Q1, 2007 – a period in which interest rates were almost always within the 5 to 15% range. They concluded that the model could not be reliably used to calculate the effect of interest rate change on house prices in the post 2007 period, which has seen interest rates far below this range.

Even more recently, Mulheirn (2019) published a detailed analysis of factors contributing to the unaffordability of housing, arguing that the role of undersupply has been overstated. By conceptualising the cost of housing in two ways – asset prices and occupation costs – he demonstrated that occupation costs have not grown as quickly as median incomes in the period since 2002. Growth in the number of young adults still living in the parental home is at least partly explained by the disproportionate impact that the GFC had on labour market outcomes for people in their twenties, and on the erosion of the social rented housing sector. Ultimately, he concludes that a significant increase in new-build housing supply would only lower prices by around 10% in real terms but would lead to a substantial rise in vacant dwellings.

Similarly, a recent Bank of England working paper by Miles and Monro (2019) demonstrates that almost all of the increase in housing asset prices over the past thirty years can be attributed to lower interest rates and higher real incomes. The authors also carried out a simulation exercise to test the impact on prices of the UK's low supply and high income elasticities compared to other G7 countries. In their model, they assumed a stock elasticity of 0.16 (instead of the baseline 0.08, income elasticity of 0.8 (instead of 1.3), a four percent point decline in gilt yields and a price elasticity of demand estimate of -0.6 (which was the same as their baseline assumption). They found that house price growth would have been 88% over 30 years, if the UK had a housing system which behaved more like other developed countries, compared to a baseline prediction of 173%. However, only a modest proportion of this difference is attributable to supply elasticity (around 10%).

It is also important to distinguish between interest rate effects on first-time as opposed to repeat buyers. For example, Meen's (2013) model shows that the share of mortgage lending to first time buyers falls during a boom as a natural consequence of lower user costs (through lower mortgage rates) for existing than first time buyers. Thus, to some (currently unquantified) extent, a period of low interest rates and rising house prices (and anticipation of future rises in house prices), naturally crowds out first-time buyers from owner occupied housing markets.

2.2 Housing supply and affordability – micro perspectives

In a recent CaCHE project, Payne et al (2019) noted that much of the evidence about the operation of the land assembly process, and the housing development industry itself, has become dated. The current debate about the speed of site delivery is an obvious exception, with the most recent prominent commentary on this issue probably being the Letwin Review. However, the roots of the recent debate go back much further – to strands of research work funded by DCLG in the post Barker Review era.

2.2.1 Competition and the behaviour of developers

The behaviour of housing developers, particularly in relation to matters such as the land acquisition process, competition between firms and the relationships between new and second-hand sectors of the owner-occupied housing market were recognised to be important by several researchers some time ago. After the Barker Review (2004) the main feature of UK (particularly English) housing and planning policy became the debate about how many more dwellings are needed each year – and in which parts of the country. Yet parts of UK government recognised the existence of other, yet related, issues. Given the enormous scale of increase to housebuilding output being contemplated at the time there were questions about how the industry would be able to scale up to deliver on these ambitions. There were also questions about levels of competition in the industry.

Meen (2011) argued that it may be "difficult or impossible to achieve affordability targets at sub-regional levels", noting that an increase in construction in a small number of areas that are close substitutes leads to strong population inflows which offset potential improvements in affordability. This argument was also advanced by Fingleton (2008) who showed that one consequence of higher housing supply is to encourage net migration of people which, in turn, raises market potential and can give rise to higher economic productivity and higher housing prices.

The issue of competition was raised soon after planning reforms began to result in a considerable increase in the amount of developable land (see discussion below – Callcutt, 2007 and OFT, 2007, occurred very soon after the 2004 Barker Review resulted in planning reforms in England in 2005 and 2006). One interpretation of this is that the housebuilding industry, which had long lobbied for looser planning restrictions and a higher supply of developable land, did not appear to be responding in the way hoped by government. Despite booming housing market conditions, the extra land did not seem to be giving way to higher levels of new housing completions on the scale hoped for (Leishman, 2015). In fact, Callcutt (2007) was the first government review to look carefully at the build-out rate. Around the same time, the then DCLG had funded a number of smaller studies to explore a wider housing supply research agenda than the 'main feature' item which was the relationship between net additions and housing affordability. Most of the attention of the policy makers and the research community at this point was directed to the question of just how many new dwellings should be built each year, and where.

The GFC arrived hot on the heels of the Callcutt Review, and towards the end of a market study by the Office of Fair Trading (OFT) (2008) which investigated the idea that UK housebuilders do not compete with each other sufficiently, but nevertheless largely ruled out the idea that insufficient competition is to blame for high housing prices. However, recent evidence is more mixed. In a study of housebuilder behaviour in the post GFC recovery phase, Payne (2020) found that housebuilders were attracted to low-risk, low rise development opportunities, and expressed reservation about increasing output levels too quickly despite the political pressures. She found that developers were motivated to rebuild their financial viability and operating margins and made greater use of strategic land holdings than in previous cycles. Specifically, some developers saw the delivery of low-risk sites under option as a way of trading excess land for cashflow reasons, while delivering more immediate and predictable on-site activity. Meanwhile, Archer and Cole (2016) pointed out that the market share of the top ten UK housebuilders has continued to increase and stood at 47% in 2015. They also noted that revenues and profit levels of the top housebuilders increased much more significantly than output levels. Thus, it seems that the question about levels of competition between housebuilders, and the potential effects on affordability, have not altogether gone away.

2.2.2 The importance of build-out rates

Adams et al (2009) reported the results from a series of small studies funded by DCLG, as noted above. This first study looked into the question of why housing developers appear to build-out their sites so slowly in the UK. The authors found that the principal reason relates to the intensely competitive conditions found in UK residential land markets. With up to 20 developers bidding to acquire a single site, successful bidders were found to have based their offers on anticipated higher levels of housing prices (see also, Leishman, 2000). Having won the site, developers were then forced to build out slowly to allow rising prices to deliver on their assumptions.

Adams et al (2009) also found that housebuilders have very limited ability to vary planned build-out rates as a consequence of the way that construction activities are organised on site. In fact, housebuilders use advertised housing sale prices as a means of controlling the rate of sale, ensuring that this matches the planned/rigid build-out rate. Other commentators have made a similar point. For example, Payne (2020) noted that housebuilders control work in progress on site as a means of minimising capital expenditure and enhancing return on capital employed. KPMG and Shelter (2015) emphasise that competition occurs at the wrong stage in the housing development process, i.e. during the land acquisition process rather than at the point of house sales. The result is that firms are driven to minimise build costs and maximise sales prices by building slowly. Payne (2013) and Payne et al (2019) note that UK housing developers tend to use options and conditional contracts to acquire land for development but use the land use planning process to target their options on land that has a higher likelihood of being released. The high costs associated with planning and other forms of regulatory compliance have been noted by Ball (2013) and House of Lords (2016).

A second study by the same researchers is set out by Adams et al (2012). This demonstrated that UK housebuilders work hard to minimise direct open market competition when sourcing development land. Instead, they rely on informal networks and relationships built on experience and trust. Such contacts deliver opportunities to acquire land at open market value prices, and there are expectations of reciprocal arrangements.

2.2.3 Downward sloping demand curves for new-build housing

However, perhaps the most important finding to flow from this piece of research by Adams et al, (2012) is that housebuilders view the ability of local housing markets to absorb newly constructed housing (of a type, brand, design or price range) as finite within a set time period. Indeed, the DCLG funded study on which the research was based focused explicitly on the question of why housebuilders trade land between each other. This is seemingly a paradoxical question given that scarcity of developable land which is of such concern to the industry. This study found that housebuilders can build and sell more if they split up large sites and trade or swap parcels with other housebuilders (or land agents). This implies that the rate at which local housing markets can absorb new housing completions is limited (the theory is set out more fully by Leishman, 2015).

The Letwin Review (Letwin, 2018a) observed that residential developments are typically designed, planned, phased and financed to "fit the rate at which it is believed that the new homes can be absorbed by the local market without contradicting the pricing assumptions built into the house builder's business model…". Letwin (2018a) examined and ruled out as significant determinants of low build-out rates, a number of factors or arguments over and above valuation, site size and product differentiation. These were:

- Lack of transport infrastructure
- Difficulties in land remediation
- Delayed installations by utility companies
- Constrained site logistics

- Limited availability of capital
- Limited supplies of building materials

The Review did note that the house building industry is over-exposed to an inadequate supply of skilled bricklayers, while not currently being in a position to accelerate the adoption of modern methods of construction. Letwin (2018b) concluded overall that "the homogeneity of the types and tenures of the homes on offer… and the limits on the rate at which the market will absorb… are the fundamental drivers of the slow rate of build out."

2.2.4 Diversity of housing supply

The Lyons Review (2014) pointed to the scarcity of developable land and the lack of diversity (specifically, small and medium sized housing developers) in the industry as principal drivers of inadequate housing supply. Indeed, there is a growing awareness that diversity is an important aspect of housing supply in the UK and internationally, but it also seems apparent that the distinctions between tenure models and affordable housing options are becoming more blurred. For example, GLA (2019) argue that affordable housing delivery supports market sale delivery, citing Meen (2018), Letwin (2018) and Savills (2019). There is also anecdotal evidence to suggest that housebuilders have a greater awareness of the importance of affordable, mid-market and build-to-rent models to the delivery of their own business models. Policy thinking is also heading in this direction. In addition to promoting the scale of supply and improving build rates, DCLG (2017) put forward an improvement in diversity as the third key element of the government's approach to tackling affordability.

Letwin (2018a) argued that the four principal markets of open market sale, open market private rented, affordable rental and social rented are complementary rather than overlapping. He concluded that "there is evidence to back the common sense intuition that smaller sites will tend to build out a greater proportion of the site each year" and recommended a two pronged strategy involving "packaging" large sites in order to effectively break them up into smaller ones, and using the planning system to encourage the use of more smaller sites. The report cautions against the encouragement of smaller sites in isolation because larger sites have greater potential for making contributions to infrastructure, and because over-reliance on smaller sites could reduce allocation overall, as a consequence of opposition to development ("…it is often easier to pick a few, larger fights…").

3. Methodology

As highlighted in the previous section evidence regarding the problems facing the housebuilding industry has become outdated (Payne et al, 2019) and there has been little evidence on the constraints to the sector since the GFC (Letwin, 2018). This study has sought to address these issues through focusing on the current position (2019) in two nations of the UK, Northern Ireland and Scotland, both of which have been impacted to differing and significant extents by the GFC.

In both countries a semi-structured interview approach with developers was central to the evidence investigation. The interviews were carried out independently in Northern Ireland and Scotland but followed similar lines of investigation focussing upon the range of factors that Letwin has cited. In Northern Ireland interviews were carried out with four developers (development companies) and reflecting the larger size of the sector in Scotland, seven interviews were carried out. Sections 4 and 5 of this report briefly summarise some of the key practical delivery issues facing the house building sector in Northern Ireland and Scotland respectively.

4. Northern Ireland developer perspective

The developers interviewed were centred in the two main urban areas in Northern Ireland, namely the Belfast Metropolitan Area (BMA) and the Northwest of Northern Ireland, in Derry/Londonderry. Annual outputs varied from small production of between 20 to 30 units by one developer through to larger annual output, by Northern Ireland's standards, of circa 300 units per year. The companies have a long history of development in Northern Ireland dating back to the 1980s and, as a consequence, have built-up a strong network over that period of time and are well informed in terms of market intelligence. Extensive use is made of planning consultants and land agents who are aware of where development opportunities arise. Local estate agents were also a useful source of market intelligence.

Initial decisions on housing schemes are very much influenced by the developer's knowledge base but supported by spreadsheet analysis – cashflows and development appraisal models. An important and growing component of the latter are site conditions, particularly drainage, with developers in general allowing for expenditure on drainage infrastructure equivalent to £40,000 per acre or circa £4,000 per house. This was cited as an illustration of how just one factor adds to the price of new houses. It was apparent that developers' profits are squeezed and below the often quoted text-book 20% margin with some developers working to lower profit margins, into single figures. Development appraisal models are continually updated to reflect changes in the cost of building materials, wage costs and un-intended site costs.

The companies have experienced the recent highs and lows of the property sector, in particular the rapid escalation in land and property values in the early to mid-2000s, the events of the GFC which saw the value of land holdings collapse with severe loss of equity, and the subsequent slow recovery of the housing market in Northern Ireland, the most exposed country of the UK. Indeed, developments post GFC including certain flagship schemes were achieved on what was described as a price sensitive nature. All the interviewees confirmed that developments are subject to viability and feasibility models which are cashflow based.

Building costs are broadly similar across Northern Ireland though potentially higher in the northwest, where coupled with weaker demand, the viability of new housing development was seen to pose even greater challenges. In this respect, the difference between the Derry/Londonderry market, where it was noted that 13,000 plots are available on the city-side but demand is mainly for social housing (3,000 houses), and that of the BMA, where development land was highly constrained and demand levels most strongly focused, is marked.

A much greater heterogeneity of new housing was identified. A combination of factors such as the growth of the private rent sector, student housing, co-living etc. was seen as greatly influencing the type of product with a mixed variety of housing types, design, layouts, density. In terms of product, in many new developments there is a focus on a suite of architectural styles with 1150sqft semi-detached houses the mainstay of many development schemes, coupled with a mix of terraced/townhouses and detached houses. Apartment schemes are usually one-off specific developments.

From a general perspective, it was considered that the house building sector is slow to respond to events and adapt to new conditions largely due to the nature of development, with long lead-in times arising from planning, where final approval can take years (up to 3 years) to achieve. In addition, the ability to react is highly constrained and it is difficult to make even minor changes due to planning conditions applied.

Four factors that impact significantly on the development supply were identified as land, planning, finance and construction costs.

Land

Land costs within the BMA have recovered slowly over the post GFC period and are currently (2019) circa 50% of pre-crash prices. However, site issues are increasingly becoming a problem in housing development – these are many in nature - environmental issues, legal issues, infrastructure deficiencies, planning, title. According to developers these factors need to be resolved upfront before any building commences and thereby add to the time lag in production. It was noted that vendors (of land) don't often recognise these issues in the pricing of sites particularly in relation to brownfield sites that dominate in the BMA. In the case of greenfield sites, frequent site issues relate to infrastructure – water, drainage, sewerage, roads.

Land is seen as a "massive risk" to the sector in general. In Northern Ireland this problem is magnified because area plans are out of date, and this causes considerable uncertainty for developers – the example of the Belfast Metropolitan Area Plan was raised on a number of occasions[1]. Furthermore, a land market does not really exist in Northern Ireland, the consequences of which are a lack of supply and land availability issues. There was seen to be four ways by which developers procure land namely being proactive with landowners (however the absence of area plans constrains this process), use of agents to source land, agents coming to developers with opportunities, and buying from other developers (as discussed in the literature review). The fragmented nature of this process clearly leads to inefficiencies in the development process.

Land prices/values are not openly available. At peak of the market (2005-2007), land values were highly inflated due to new players (often naïve players) in the market bidding up land prices to the extent that land represented 60% of the development costs. Currently (2019) land prices are considered to represent 20 to 30% of overall costs. One mechanism being used by the sector to reduce up-front risk associated with the cost of land is to use site fines whereby the developer pays the landowner on a house by house basis. Developers' flexibility depends upon access to land banks, in this context larger developers hold an advantage. Smaller developers have to react to land value changes and this can ultimately impact on developers' profits. Disposals from NAMA or Cerebus[2] have also provided another source of land in the post GFC era.

Planning

Planning has been largely a function of the 11 new district councils in Northern Ireland since they were established on the basis of a new spatial framework in 2015. In relation to planning procedures, developers consider that certain differences are apparent between the district councils. In all council areas in which the developers are active it is apparent that Chief Executives and Senior Planning Officers are very supportive but, nevertheless, it is generally perceived by developers that the planning system is "up against them". The main problems with planning were considered to lie in the number of consultees and the variable speed at which different consultees engage. It was argued that the wider planning system is overly fragmented and too piecemeal which in turn brings inertia and delays, leading to a sub-optimal planning system. The lack of coordination between planning and Roads Service was highlighted as a specific obstacle in moving forward with development. The case for a one-stop-shop was strongly advocated, but developers doubted whether councils have the necessary capability and expertise and indeed questioned whether the councils are even sufficiently large to offer the necessary range of services. Ironically, it was observed that when all these functions sat within one government department (the previous Department of the Environment) that at least the scope for some coordination existed.

[1] The 11 councils are currently in the process of producing new Local Development Plans, but so far none have been approved. Belfast City Council is the most advanced in the process and envisages final approval in late 2022.

[2] The post GFC slump in the housing market resulted in a considerable proportion of the land owned by bankrupt developers being taken over by NAMA (National Assets Management Agency), a 'bad bank' created by the Government of Ireland in 2009 to address the fallout from the financial crisis and bursting of the property bubble. NAMA's property portfolio in Northern Ireland was subsequently sold to Cerebus, an American private equity company specialising in purchases of distressed investments.

Planning, as already observed, is a lengthy process which restricts the developers' flexibility to change product/output. The developers acknowledged that decisions made are generally the correct decisions but that the problem lay in the time to reach decisions. In this respect the transfer of planning powers to the 11 local government councils in Northern Ireland from the Department of the Environment has not improved the process to any significant extent and in some cases the quality of decision-making by councils was questioned. Furthermore, the concept of Housing Growth Indicators[3] was also deemed to be a major obstacle.

Differences appear to be emerging between councils, with Belfast driven by brownfield development while the neighbouring Lisburn/Castlereagh district council is perceived to be taking a more pro-development policy driven by the increased revenue generated by new build to maintain rates at existing levels. There was also a perception that local political factors could arise in relation to particular sites. While there is an appeal process through the Planning Appeals Commission, the fact that BMAP was not adopted and is out of date highlights the institutional complexities that exist. Furthermore, a policy of 20% social/affordable housing was considered as likely to make little impact on development as the price of apartments/terraced housing on schemes currently are well within affordable limits.

Overall planning is still seen by developers as a major deterrent to investment in Northern Ireland. In this respect it was perceived that planners "gold-plate" EU regulations and that the Environment Agency reinforces high levels of compliance. This strong adherence in Northern Ireland, which was contrasted with less stringent interpretations in England, was seen as a major barrier to entry to the house building sector. There were also issues concerning the level of experience of planners and particularly their knowledge of the economics of new construction.

In Northern Ireland, the efficiency of the planning system, and the length of time to take decisions has been a long-standing issue for the house building industry. It was apparent from interviewees that despite changes to the planning system, obstacles have not been resolved. In the developers' opinion, planning periods simply expand out and can still be in the range from 3 to 5 years. During this time window the market opportunity may have changed significantly with the developer potentially either taking a hit on each unit produced in terms of the sale price or re-submitting for a change in planning. Major obstacles seem to arise from planning conditions which can take considerable time to achieve. Furthermore, the pre-application process was not considered to be fulfilling the industry expectations and was generally an ineffective process.

Finance

Traditionally local banks were central in providing development finance, but post GFC different concepts of development have resulted in a shift in financing arrangements. It was apparent that since the GFC, that banks in Northern Ireland are significantly less involved in funding new development schemes. Hence those developers, who lack sufficient equity, have had to turn to alternate sources of finance such as private equity or venture capital companies. This was seen to push up the cost of development and hence the price of new build homes with financing rates of 10% or above being common. Reliance on non-traditional sources of finance is proving to be a major issue for those development companies which are not cash-rich.

The banking sector while weakened, still has a certain presence in lending for private house building. However, very strict criteria are applied and seemingly only selected development companies which can bring equity and full planning permission will be considered for bank funding. Under these circumstances the bank will provide circa 50 to 60% of development costs at a current (2019) rate of 3.5 to 4%; with lending being 50% on land costs (previously 75%) and 65% on construction costs (previously 75%), though figures can be variable by negotiation.

[3] Housing Growth Indicators were first introduced into Northern Ireland in 2001 by the first Regional Development Strategy in order to guide the distribution of new housing in Northern Ireland over a 15-year period. They have been updated on a number of occasions since then, most recently in 2019. https://www.infrastructure-ni.gov.uk/publications/2016-based-housing-growth-indicators-hgis

Bank lending is subject to yearly and quarterly reviews over the course of 3 to 5 year projects. Interest rates charged by banks are dependent upon the type of scheme, with apartment developments perceived to carry higher risk and hence higher interest on loans. Bank funding is based on developers profit of 15%. In contrast, funding through private equity or related routes is significantly more expensive on development finance thereby influencing the viability and feasibility of projects notably in locations with weak demand and higher construction costs. Also, the growth of the private rental sector and student accommodation has resulted in greater use of funds and investment institutions which are interested in security of tenure, occupancy and cashflows, as financing sources. This has brought in alternative sources of finance and more global investment into housing.

Construction costs

Labour and material costs are considered to have steadily increased, placing stress on the overall viability of development. Due to the vagaries of the market, previous employees have left the sector post-GFC and there has been fewer entrants. Problems of bringing workers into the industry and the skills deficit in Northern Ireland places further limitations on the potential capacity to respond to demand in the market and produce enhanced levels of output.

Once a scheme is on site, it is apparent that there is little flexibility on the part of the developer, with increased costs often having to be absorbed within the developer's profit element. It was noted that construction costs have increased significantly in recent years (up by 50%) due to tighter regulation notably in meeting energy efficiency targets. Also, site works, sewers, upgrading roads and infrastructure are adding to development costs and hence the price of the individual units to potential buyers. A lot of building materials are sourced locally but those that are imported have risen due to currency fluctuations following the Brexit vote in 2016. It was also noted that increasingly a lot of construction is off-site (SIP) and hence construction is less exposed to traditional skills. Furthermore, labour costs tend to be cheaper in Northern Ireland, this factor serving to reduce the costs of construction. Any shock in terms of labour costs during the construction process either impact on the developer's margin or increased sale price of units. The size of developments, as noted in the literature evidence, is also important with larger sites benefitting from the economies of scale compared to smaller sites, the latter usually is reflected in higher unit prices.

5. Scotland developer perspective

Broadly similar themes are apparent from the Scottish interviews but with a greater focus on community engagement and consumer groups from the perspective of emerging demand. Like the situation in Northern Ireland there has been considerable restructuring of the sector in Scotland, post GFC which saw many small to medium sized companies going out of business. However, unlike Northern Ireland, in Scotland this has promoted the role of plcs in the development process, allowing it to benefit more from the operation of larger companies with significant levels of annual output, though levels are only beginning to return to those experienced pre-GFC. Currently there are 4 or 5 national players operative in Scotland with several smaller companies. The move to larger developers has seen these companies gaining more control over the land supply and indeed the rising importance of RSLs has reinforced this trend with strategic relationships between RSLs and major developers facilitating cashflow. Possibly reflecting the involvement of larger housing building companies in Scotland, development finance was not considered to be an important barrier though it is apparent that sites of up to 50 units tend not to come to fruition due to the lack of development finance.

The dominant themes arising from the Scottish interviews are as follows.

Planning

The costs associated with applying for planning permission were considered to have risen considerably and have been instrumental, along with the financing of infrastructure, in developers seeking larger opportunities. It was considered that planning delays seldom related to design issues but rather to third party consents and/or infrastructure issues. Overall, the planning system was perceived as being inefficient, the reforms that have been attempted have been largely unsuccessful, local authorities poorly resourced and thus unlikely to cope with the greater focus on technical appraisal. Developers generally considered that they get a poor service from the planning authorities due to the lack of resources arising from budget cuts coupled with a lack of experience and demotivation of staff. Furthermore, developers considered that planning has become highly politicised with some interviewees of the opinion that decisions are sometimes irrational and/or unduly influenced by councillors taking account of local pressure groups.

Land

For the larger development companies, sites with planning consent are brought forward quickly. Housebuilders voiced the opinion that there is no point "sitting on sites". However, it is also apparent that where land traders are active, delays are introduced into the development process, and that such actors have proliferated since the GFC. The scale of this issue within the UK is still unclear and was thought prior to this research to relate more strongly to England than elsewhere - so the finding is of clear interest. It was also considered that some land owners and public sector bodies could bring forward sites more quickly. Access to land and navigating the planning system were repeatedly identified as key barriers to scaling up output.

Demand

The changing nature of demand groups, notably the older age of first-time buyers is a key factor. Formerly this group would have taken 40% of the market, but now only take 15%. However, there was the perception that buyers in different generations, those in their 30s and also the over 55 age group, are more interested in new build houses. Shared homes are considered to be a new potential demand group, but currently not to any appreciable extent in Scotland, though hidden/concealed households, largely younger adults are an important group that are not sufficiently recognised in housing demand assessments.

Community engagement

Developers pointed out that public exhibitions/community engagement now attracts much larger numbers of participants which can result in opposition to development being mobilised more quickly than in the past particularly through the use of social media. Indeed, local councillors were often considered to be influenced by social media campaigns opposed to developments. Ironically, it is the more affluent areas in which residents wish to block development while in the more deprived areas there is less engagement with the planning process. The heightened awareness of communities has increased the aspirations of people and objections are mostly to the principle of development. According to interviewees, pre-application community engagements, Section 75 agreements and stakeholder consultations means that it can take over a year for planning approval.

6. Conclusions – reflections on gaps in the evidence base

The evidence review in Section 2 of this paper reveals that there has been a considerable shift in conceptual and policy thinking since the GFC. In particular, there is a lack of consensus notably in England in relation to the number of newly constructed dwellings needed each year to deliver more affordable housing, and questions about how important higher levels of new supply actually are in generating affordability outcomes.

In terms of micro perspectives, there is a remaining or recurring question about whether competition between housebuilders matters in terms of generating affordability outcomes, and a debate about the rate at which local housing markets can absorb new housing completions. To this could be added a related question of to what extent this varies according to regional or local contextual factors?

Restructuring within the housebuilding industry, the emergence of new product and tenure models, and government interventions all come together to beg the question: how much have the distinctions between traditionally siloed housing sectors and tenures become blurred, and what does this mean for the housebuilding industry and for policy responses?

As recently as the Letwin Review, it appears that the perennial problems faced by the housebuilding industry remain, but as Payne et al (2019) pointed out, the evidence here has become somewhat dated. Letwin cited factors such as planning delays, utility delays, infrastructure contribution requirements, skills and materials shortages (supply chain factors), access to developable land, and access to capital as barriers to the industry, but there is little actual evidence on how the balance of these barriers has changed since the GFC.

Interviews with developers in Northern Ireland have highlighted a number of key challenges facing the housebuilding sector, notably site issues (including those relating to infrastructure) that need to be resolved before construction can commence, the lack of information on land availability and supply, the fragmented nature of the planning system and the delays which result from this, the cost of development finance for smaller developers, rising construction costs and scarcity of skilled labour.

The study has also highlighted significant evidence gaps in Northern Ireland, in particular, the total lack of information on land prices and land valuations, the lack of a robust evidence base to indicate the extent to which the regulatory regime impacts on the volume of new supply and, finally, the capacity of the development sector to increase supply, even if more highly incentivised.

There are some similarities in the context of Scotland, particularly in relation to the planning system. However, the consequences of community engagement in terms of delaying schemes appear to be more significant in Scotland. The structure of the construction industry - the role of large scale RSLs and the growing involvement of plcs has meant that issues surrounding land supply and access to development finance may not have the same significance as in Northern Ireland highlighting the importance of regional differences in the house building industry

Finally, at the time of writing the UK, like many other countries in the world were in a state of lockdown as a response to the Corona virus pandemic. It is important to consider how the gaps in knowledge and evidence will change as the shape of the economic aftermath of this latest crisis becomes clearer.

UK COLLABORATIVE CENTRE FOR HOUSING EVIDENCE

References

Adams, D., Leishman, C. and Moore, C. (2009) *Why not build faster? Explaining the speed at which British house-builders develop new homes for owner occupation*, Town Planning Review, Vol. 80, No. 3, 291-314

Adams, D., Leishman, C. and Watkins, C. (2012) *Housebuilder networks and residential land markets*, Urban Studies, Vol. 49, No. 4, 705-720

Archer, T. and Cole, I. (2016) *Profits before volume? Major housebuilders and the crisis of housing supply.* Centre for Regional Economic and Social Research: Sheffield Hallam University, Sheffield.

Ball, M. (2013) *Spatial regulation and international differences in the housebuilding industries.* Journal of Property Research, Vol. 30, No. 3, 189-204

Bramley, G. (2018) *Housing supply requirements across Great Britain: for low-income households and homeless people*, Crisis and National Housing Federation: London

Callcutt, J. (2007) *The Callcutt Review of Housebuilding Delivery.* Department for Communities and Local Government: London.

DCLG (2017) *Fixing our broken housing market*, London: Department for Communities and Local Government

DfCNI (2018) *Housing Market Symposium 2017: Final Report and Recommendations*

https://www.communities-ni.gov.uk/sites/default/files/publications/communities/dfc-housing-market-symposium-report-2017.pdf

Fingleton, B. (2008) *Housing supply, demand and affordability*, Urban Studies, Vol. 45, No. 8, 1545-1563

GLA (2019) *The 2022-2032 affordable housing funding requirement for London: technical report*, London: Greater London Authority

Griffith, M. and Jefferys, P. (2013) *Solutions for the housing shortage: how to build the 250,000 homes we need each year*, London: Shelter

House of Lords (2016) *Building more homes*, House of Lords select committee on economic affairs, HL Paper 20

KPMG and Shelter (2015) *Building the homes we need: a programme for the 2015 government*

Leishman, C., & Bramley, G. (2005). *A local housing market model with spatial interaction and land-use planning controls.* Environment and Planning A, Vol. 37, No. 9, 1637-1649

Leishman, C., Jones, C. and Fraser, W.D. (2000) *The influence of uncertainty on house builder behaviour and residential land values*, Journal of Property Research, Vol. 17, No. 2, 147-168

Leishman, C. (2015) *Housing supply and suppliers: are the microeconomics of housing developers important?* Housing Studies, Vol. 30, No. 4, 580-600

Letwin, O. (2018a) *Independent review of build out rates: draft analysis*, London: MHCLG

Letwin, O. (2018b) *Independent review of build out rates: final report*, London: MHCLG

Lyons, M. (2014) *Mobilising across the nation to build the homes our children need*, https://www.policyforum.labour.org.uk/uploads/editor/files/The_Lyons_Housing_Review_2.pdf

MHCLG (2018) *Analysis of the determinants of house price changes*, London: Ministry of Housing, Communities and Local Government

Meen, G. (2013) *Homeownership for future generations in the UK*, Urban Studies, Vol. 50, No. 4, 637-656

Miles, D. and Monro, V. (2019) *UK house prices and three decades of decline in the risk-free real interest rate*, Staff working paper No. 837, London: Bank of England

Muellbauer, J. and Murphy, A. (2008) *Housing markets and the economy: the assessment*, Oxford Review of Economic Policy, Vo. 24, No. 1, 1-33

Mulheirn, I. (2019) *Tackling the UK housing crisis: is supply the answer*? UK Collaborative Centre for Housing Evidence

NHPAU (2007) *Affordability matters*, London: National Housing and Planning Advice Unit

NHPAU (2008) *Affordability still matters*, London: National Housing and Planning Advice Unit

OFT (2008) *Homebuilding in the UK: a market study*. Office of Fair Trading: London

Payne, S. (2020) *Advancing understandings of housing supply constraints: housing market recovery and institutional transitions in British speculative housebuilding*, Housing Studies, 35:2, 266-289, DOI: 10.1080/02673037.2019.1598549

Payne, S., Serin, B., James, G. and Adams, D. (2019) *How does the land supply system affect the business of UK speculative housebuilding? An evidence review*, UK Collaborative Centre for Housing Evidence

Wallace, A. and Jones, A. (2009) *Rapid evidence assessment of the economic and social consequences of worsening housing affordability*, York: Centre for Housing Policy