FTI CONSULTING

UNDERSTANDING SUPPLY CONSTRAINTS IN THE HOUSING MARKET

REPORT PREPARED FOR SHELTER
JULY 2012

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We would like to thank Kate Barker who provided expert advice on technical aspects of the housing market.

1 Overview

1.1 An appropriate quantity and quality of housing is important for economic welfare and prosperity, social cohesion and the realisation of ambitious environmental goals.

1.2 However, for decades the supply of both private and public housing has fallen short of the level needed to match increasing demand, and it has been particularly unresponsive (or inelastic) to increases in house prices.

1.3 There are two main underlying factors that influence the level of housing supply and the responsiveness of supply to changes in prices:

- The fixed supply of land and the requirement to allocate this fixed resource between a number of economic and social uses i.e. the requirement for a planning system and the corresponding rate at which land is released for development; and
- The long lead times in the construction of housing.

1.4 It is important to recognise that while planning reforms may improve the position, they could only ever limit rather than remove the costs and constraints imposed on the availability of land. One of the key consequences of the risks and uncertainties created by the planning system is the business model and strategies that have been developed by house builders to deal with the risks and constraints imposed by planning and the risks associated with long lead times. As many commentators have argued, this places the acquisition and management of land at the core of their strategies, rather than house building itself.

1.5 The planning system therefore not only *constrains* the supply of a key factor of production, but it also significantly *distorts* behaviour in the market.

1.6 The nature of the planning system is clearly a major issue however in light of the recent implementation of the National Planning Policy Framework (NPPF) and the existing literature on this subject, the report does not consider the supply implications of specific planning policy regimes. Instead the report considers a range of additional factors which impact on housing supply, however we note that these are themselves in part a consequence of the two main underlying factors identified above. ,

1.7 Furthermore, as part of the context for the analysis it is important to note, that due to the impact of any planning system, the conditions under which a market leads to an economically efficient level of supply may not be satisfied in this market. Therefore, while action to address market failures and limit the unintended consequences of government action may well lead to an improvement in supply, it still may not deliver from the market the level of house building that is required.

1.8 Risk is an inherent feature of the housing industry due to the considerable investment and time lags involved. An asymmetric supply response results because, where there is uncertainty in the market, firms choose to constrain supply.

1.9 In addition there are further supply constraints that exist as a consequence of some of the strategies that firms have developed to mitigate these risks.

- **Market structure and conduct**, including the growth of larger and more dominant firms, competitive behaviour, the impact of vertical integration, the role of land acquisition and management, and market barriers to smaller entrants;

- **Land,** including the role of land banking and the role of incentives on development decisions;

- **Access to finance**, including the management of risk over the economic cycle and financing options available to firms; and

- **Innovation and skills**, including the constraints to investment in innovation and skills, whether a focus on land management has an impact on innovation, and the impact of skills shortages.

1.10 Alongside the fundamental issues that exist in the sector, the housing sector has been among those worst affected by the financial crisis and the recession. The immediate impact has led to a very sharp fall in housing starts and completions. But there are also likely to be longer term problems.

Risk aversion among housing firms and finance providers and the need to focus on improving balance sheets as a priority mean that the response to the eventual pick-up in demand may be weaker than in the past.

1.11 The government is currently taking some action to address both the short term problems – including measures to stimulate demand – and longer term constraints – most notably through the reform of planning. Further action, within a market-based approach, might examine the related issues of:

- **promoting more competition between incumbents:** while this is more difficult in the housing sector compared to other industries due to localised markets, one way of promoting competition could be setting a threshold number of units on a site above which planning permission cannot be granted exclusively to a single firm.
- **encouraging new entry and growth among smaller builders** by:
  - **improving access to land** – smaller firms could benefit if local authorities are required to allocate a certain proportion of land to smaller firms and new entrants. Similarly, a smaller firm and new entrant quota might be provided for public land that is made available for development. There should also be sites available for self-build homes.
  - **improving access to finance**: Government might consider the application of its existing range of financial interventions (including credit easing and its loan guarantee scheme) to smaller building firms. If necessary, consideration might be given to the development of an intervention to promote access to longer term finance in the housing sector (in addition to the current set of housing specific finance interventions).

1.12 The government also needs to continually assess the impact and timing of new regulation. Polices to promote sustainability are clearly needed, but it is vital that competing policy aims are carefully assessed, and that the full implications of the policy are understood – as far as possible – before implementation, to limit unintended adverse consequences.

1.13 Finally, when considering the promotion of investment in infrastructure either as a means to promote demand in the short to medium term, and/or competiveness in the longer term, it is important to recognise that the housing stock is an essential part of the economic and social infrastructure of the country.

2 Introduction

Purpose

2.1 This review of the housing market will inform Shelter's ongoing work to increase the supply of housing in England. Specifically, this report will contribute to Shelter's consideration of the nature and potential role of government (at a national and local level) in facilitating a greater level of housing supply to support long term sustainable economic growth and improving the position of households in housing need.

2.2 This report covers the economic characteristics of the housing market, the extent to which the structure and industrial organisation of the housing market differs from other markets and whether there are features of the housing market that constrain the potential supply of new homes.

2.3 Considerable attention has been focused on the importance of land and planning issues in other work, including the Barker Review, and the government has made significant changes to the planning system. This work thus focuses on whether there are other characteristics of the housing market that may also constrain housing supply outside of the planning system.

Content of this report

2.4 The following sections main sections will cover:

- The role of housing in the economy;
- The characteristics of housing supply;
- The factors determining the supply of housing;
- How the market has changed since 2008; and
- The policy response.

3 The role of Housing in the Economy

3.1 Housing is of intrinsic importance to the economy and society. Housing has a dual role as:

- a human need, through its functional use as somewhere to live and the influence of its attributes on people's well being; and
- an asset, given that for many it is a long term investment which represents a large proportion of their wealth.

3.2 Investment in house building also creates jobs for construction workers and those in related supply chains, which has knock-on effects on aggregate demand.

3.3 Meen (2005) asserts that housing as the largest component of personal wealth has a significant impact on spending power. [1] He argues that empirical evidence suggests that consumers' expenditure is affected by households' wealth – of which the largest component is housing – and consequently, volatility in house prices can impact upon spending power. This is also linked to equity withdrawal as many homeowners borrow against house prices to facilitate spending levels.

3.4 Historically, the market for housing has not met housing needs and there remains an insufficient quantity and quality of housing. Moreover, housing is a diverse product and the variety of tenure, stock, and geographic issues mean that the supply problem is more complex than other markets with more standardised requirements.

3.5 Housing's role means that society is concerned with the *need* for housing i.e. including those requiring support through social or subsidised housing as well as *effective* demand met by the market. This differentiation in the market between social and private housing and the rental versus buy market as well as geographic factors make the housing market very different to other markets. This difference provides a reason to consider the role for

[1] Page 951, "On the Economics of the Barker Review of Housing Supply", Housing Studies, Geoffrey Meen, 2005.

government in the housing market and explains why this might differ from its role in other economic markets.

4 Characteristics of Housing supply

4.1 This section discusses both the level of house building in relation to demand and the requirement of housing to meet basic needs. It illustrates how the housing market differs from other markets – in particular that housing supply is more complex than the number of units built.

Supply levels

4.2 It is widely accepted that new supply levels are insufficient to meet arising housing needs; the previous government recognised the failure of housing supply to keep up with rising demand.

4.3 In 2007, a target was set by the previous government to deliver 240,000 additional homes a year in England including at least 70,000 affordable homes per year by 2010-11; however, this has since been compromised due to the credit crunch.[2]

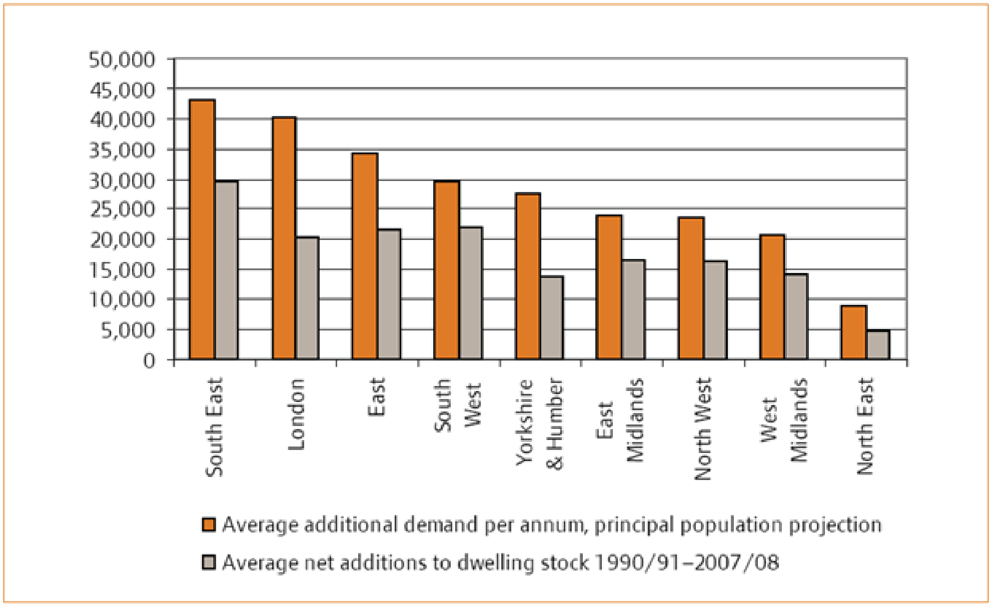
4.4 In *Laying the Foundations: A Housing Strategy for England*, the current government identified that too many families struggle to meet their housing needs. Furthermore, the slow pace of new housing supply means the UK is missing out on economic growth and on jobs.[3]

4.5 A shortage of housing is likely to worsen as population growth continues and the supply response remains sluggish. Latest household projections suggest that housing supply would have to rise very significantly from its levels over the past twenty years in order to meet rising demand. The likely shortfalls are most notable in London and the South East as shown in Figure 4.1.

2 See: http://www.parliament.uk/business/publications/research/key-issues-for-the-new-parliament/social-reform/housing-supply-and-demand/.

3 See: http://www.communities.gov.uk/documents/housing/pdf/2033676.pdf, published November 2011.

Figure 4.1 Past supply compared to future demand, by regions

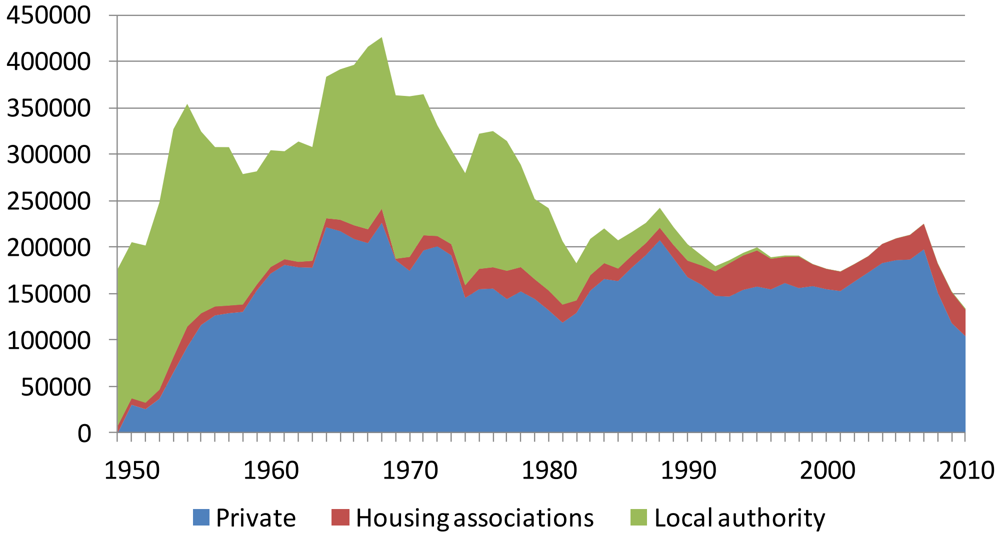


Source: Housing supply figures from CLG Live Table 109 Dwelling Stock by Tenure and Region from 1991 http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/housebuilding/livetables/

Source: CLG data from figure 9, IPPR (March 2011). Note: this graph provides an indication of the undersupply of housing if supply levels (as indicated by the period 1990-2008) do not adapt to meet predicted demand levels (to 2025). Please note that the time periods of the indicators are different and that measurement changes over time may mean inconsistencies in the data over time.

4.6 With existing shortages and a rising population, the demand and need for housing outstrips supply and will continue to do so without action. As shown in Figure 4.2, housing completions for the UK as a whole have declined considerably over time, and in 2010 were at a level well below half of the peak during the 1960s. The decline in local authority building is notable and suggests that the most vulnerable of society have been hit as private completions have not increased to meet this need.

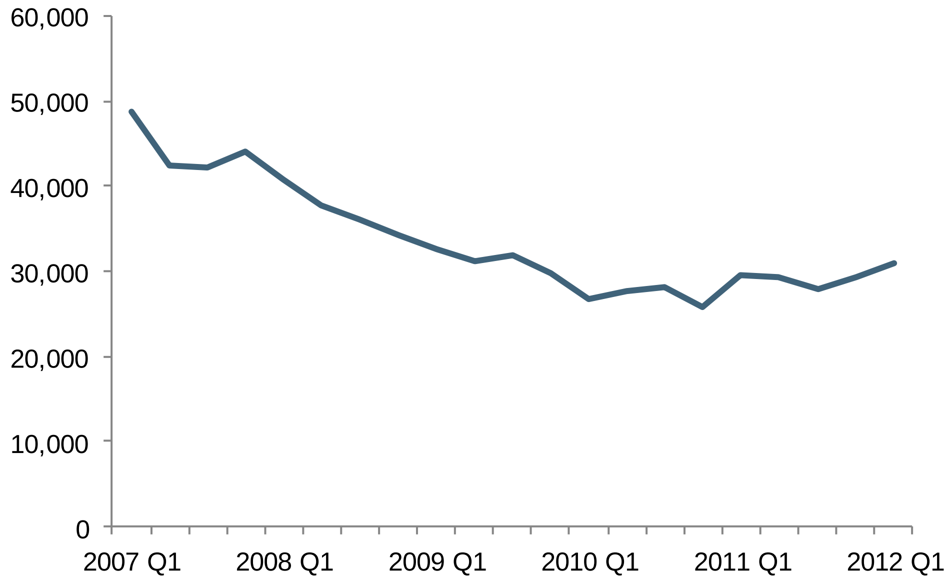
Figure 4.2 Housing Completions, UK, 1950-2010



Source: Housing Completions, 1950-2010, CLG.

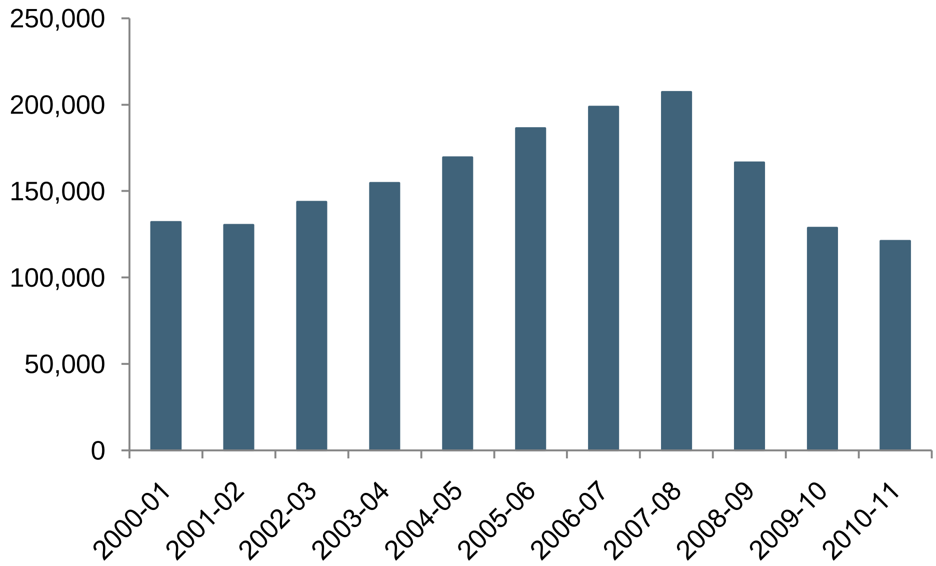
4.7 Completions in England have declined sharply since 2007. The weather-affected last quarter of 2010 showed a low of 25,740 completions, although numbers have begun to recover slightly since (see Figure 4.3). Completions are not quite the whole story – however even when demolitions and conversions are accounted for new supply is still far too low. In the financial year 2010/11 net additions totalled just 121,000 in England, as shown in Figure 4.4.

Figure 4.3 Permanent dwellings completed in England, quarterly, seasonally adjusted



Source: House Building: March Quarter 2012, England, Communities and Local Government, 17 May 2012.

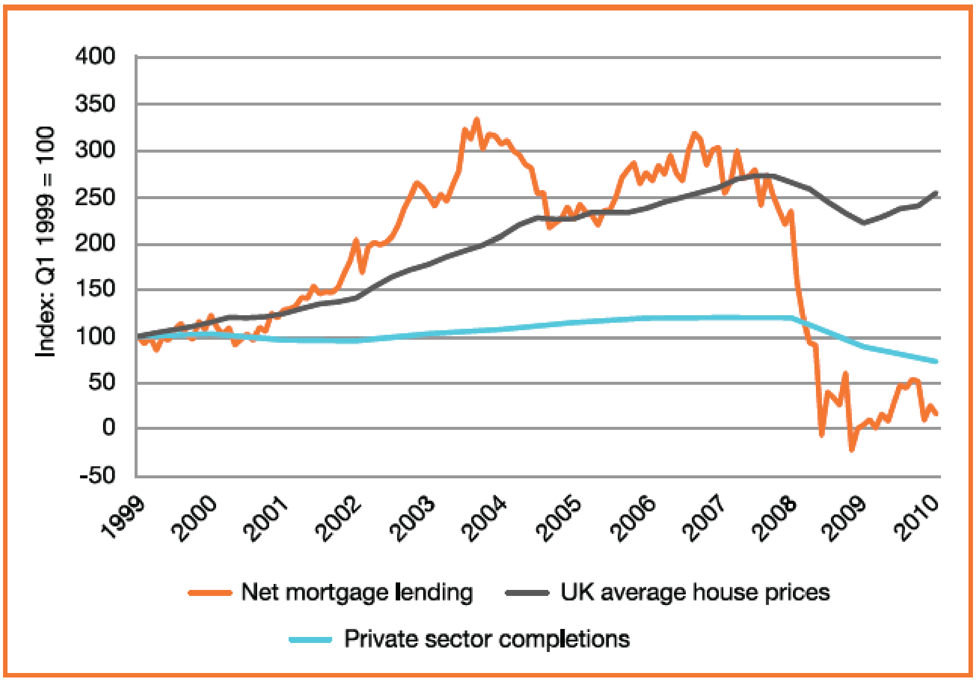
Figure 4.4 Annual net additional dwellings, England



Source: CLG Live Tables, Table 118. Note: net additions take into account completions, demolitions, conversions, and changes in use.

4.8 From 1999-2004, both house prices and mortgage lending levels were increasing whilst private housing output remained almost stagnant. With rising demand and a low rate of completions, undersupply and lack of affordability in the housing market ensued and continued in many regions. As shown in Figure 4.5, the credit crunch meant all three indicators fell. However, mortgage lending fell more dramatically than house prices, meaning that, despite lower house prices, ability to buy tended to deteriorate as mortgages were less attainable for those without access to significant deposits.

Figure 4.5 House prices, mortgage lending volumes and private market housing output, 1999- 2010



Source: Bank of England, Nationwide and DCLG. Taken from: "We Must Fix It: delivering reform of the building sector to meet the UK's housing and economic challenges", Matt Griffith, IPPR, December 2011.

Nature of housing supply

4.9 In addition to the number of available dwellings, the suitability of housing is also a concern as any increases in supply must meet current needs and demands. The housing market is subject to geographical differences in demand and supply with regional and urban/rural divides and unique local area effects. It is also subject to segmented sub-markets for certain needs – by type of consumer lifestyle and life stage – as well as including both a rental and purchase market.[4]

4.10 For example, prior to 2008, more single occupancy dwellings were being built in line with household growth trends, as one person households are projected to account for 159,000 of the 232,000 annual increase in the number of households.[5] An increasing amount of one person households can be accounted for by older people who are living alone in larger homes with spare rooms - and with few expressing a preference for flats.[6] This implies pressure on space for younger families.

4.11 Housing suppliers consider household types in their plans as well as target locations with the greatest likely future demand. Meanwhile, Government seeks to ensure the appropriate mix of market and affordable housing.

4.12 These needs mean that the supply of housing is considerably more complex than the number of units of housing supply. Moreover, as the supply of market housing will respond to effective levels of demand, rather than housing need, we would not necessarily expect the market to meet the full extent of housing need. This suggests that, even if the market delivered an economically efficient level of housing, there would still be a role for government to provide affordable housing.

Price elasticity of supply of housing

4.13 The previous section examined how adequate the overall level of housing supply has been in the UK. This section examines the evidence on how much the level changes in response to changes in house prices.

4.14 The price elasticity of supply refers to the responsiveness of new supply to changes in prices. Inelastic supply means that a given percentage change in

4 As discussed by Coiacetto, November 2006 in “Real estate development industry structure: Is it competitive and why?”

5 Household projections in England and the Regions: 2008 - 2033 , 27 May 2011. Available at: www.parliament.uk/briefing-papers/SN03949.pdf .

6 As considered in “A better fit? Creating housing choices for an ageing population”, available at http://england.shelter.org.uk/__data/assets/pdf_file/0005/427730/Policy_report_A_better_fit.pdf.

price will be associated with a smaller percentage change in supply. Therefore as house prices rise, the housing stock will grow at a slower rate.

4.15 This section summarises some of the key findings from empirical work aimed at estimating the price elasticity of supply.

4.16 Meen (2005) compared price elasticity estimates across countries, finding that differences in the price elasticity of housing supply were the main reason for differences in long-run real house price trends between the UK and the USA. In the USA, elasticity was estimated at approximately 3.0 whilst it was found to be less than 1.0 in the UK.[7] This means that supply increases by a smaller proportion than price increases.

4.17 Swank et al (2002) report a price elasticity of supply of 0.3 for the UK compared to 0.45 for the Netherlands, 1.1 for France, 1.4 for the US and 2.0 for Germany. Moreover, OECD estimates from 2011 estimate UK responsiveness of supply at half the level of Japan and less than a quarter of the US.[8]

4.18 It is important to note that factors such as population density and the specific methods employed in studies mean that the absolute values of estimates vary. However, the relative positions of countries are indicative. The UK has less elastic supply in both of the above mentioned studies when compared with the US.

4.19 A recent CLG publication (Ball, Goody, Meen and Nygaard, 2011) has updated the price elasticity of housing supply findings.[9] The study observes that a wide range of estimates in the literature are due to modelling differences. It also observes that supply is more responsive to the change in house prices than their level and that findings differ across the time periods and regions studied. However, the general consensus is of a low elasticity of supply in Britain.

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[7] Page 956, "On the Economics of the Barker Review of Housing Supply", Housing Studies, Geoffrey Meen, 2005.

[8] As cited in "We must fix it: Delivering reform of the building sector to meet the UK's housing and economic challenges", Griffith, IPPR, December 2011.

[9] "Housing Supply Revisited: Evidence from international, national, regional, local and company data".

4.20 Typically, supply elasticity will be higher in the longer term, as companies have time to change their factors of production, or the type of housing built to meet demand.

4.21 The price elasticity of demand and supply is always dependent on the scope for substitution between products. The price elasticity of housing supply is impacted by ease of substitutability between land and non-land inputs, responsiveness of land supply, and share of land and non-land costs. Clearly, many of the elements of supply are fixed – particularly in the short term - and the high proportion of cost made up by land means that responsiveness is low due to the various barriers to development.

4.22 Barker (2003) argues that areas of high demand are likely to be less responsive to price changes due to land issues, which is important as housing demand is very localised:

"In principle, it should be possible to switch land from one use to another. However, as land in any region or area becomes more scarce, opportunities for substitution become limited."[10]

Asymmetric market

4.23 In addition to the differences in the timing of responses of supply and demand to market conditions, the reaction of supply to market changes is also asymmetric. When house prices increase, supply does not necessarily increase as a result, or, if it does, the response may be sluggish. On the other hand, as was observed in the recent recession, finance problems and lowered demand meant that construction decreased quickly in response to falls in the price level. This asymmetric response accentuates undersupply problems.

4.24 Pryce estimates that the price elasticity of supply of housing during booms (0.58) is smaller than during slumps (1.03). This is in spite of the price elasticity of the supply of land being marginally greater (0.75) during booms than during slumps (0.71).[11]

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10 Page 41, "Barker Review of Housing Supply; Interim Report– Analysis", Kate Barker, December 2003.

11 G. Pryce, as cited on page 43, "Barker Review of Housing Supply; Interim Report– Analysis", Kate Barker, December 2003.

4.25 In the relatively short run, house prices can be volatile and they react swiftly to changes in overall economic conditions and in credit supply. Inevitably supply will respond more slowly than prices when prices rise, due to the unavoidable time taken in planning, building and selling homes. Further, if developers are concerned that house prices are rising too far, they will be cautious about committing to new sites and higher volumes.

4.26 But when prices fall, the potential losses which would be incurred if developments continue to be built out (and prices have to be heavily discounted) mean that developers have the incentive and the ability to reduce new supply quickly.

4.27 These findings suggest that housing supply is price inelastic in the face of rising demand – thus contributing to the exaggerated booms in house prices in the recent past. This is supported by Glaeser et al (2008), who find that bubbles are common and last longer in areas where supply is inelastic.[12]

4.28 The asymmetric and inelastic housing supply response will then lead to an undersupply of housing over the cycle.

[12] As cited on page 26, “The Price Responsiveness of Housing Supply in OECD Countries”, OECD Economics Department Working Papers, No. 837, OECD Publishing; Caldera Sánchez, A. and Å. Johansson, 2011.

5 Factors determining the supply of housing

5.1 There are two main underlying factors that influence the level of housing supply and the responsiveness of supply to changes in prices:

- The fixed supply of land and the requirement to allocate this fixed resource between a number of economic and social uses. This leads to the requirement for a planning system which determines the level and the rate at which land is released for development; and
- The long lead times in the construction of housing.

5.2 Any planning system affects housing supply in a variety of ways:

- The amount of land that is made available in a given period of time;
- The length of times it takes for land to be released; and
- The uncertainty that is created over whether planning permission will be granted.

5.3 However, in light of the recent implementation of the National Planning Policy Framework (NPPF), this section does not consider the supply implications of specific planning policy regimes.

5.4 Instead this section considers a range of additional factors which impact on housing supply, but we again note that these are themselves in part a consequence of the fixed supply of land and long lead times. Delays also reflect issues inherent in the house building industry. This includes the time taken for financing, site identification and land acquisition, as well as the construction process itself which can also become delayed.

5.5 These long lead times add a further layer of risk – economic and financial – to the uncertainties inherent in navigating the planning system. These risks would be a key issue in a stable economic environment, and assume an even greater significance when the economy is prone, or perceived to be prone, to large cyclical fluctuations.

5.6 The risk involved in investment in housing will tend to affect directly construction firms' supply response, and their ability to access finance – reducing the expansionary supply response to rising prices, but increasing the level of contraction in the face of falling prices.

5.7 In addition there are further supply constraints that exist as a consequence of some of the strategies that firms have developed to mitigate these risks. These additional constraints are considered in the remainder of this section, which looks at the following characteristics of the house building sector:

- Market structure and conduct;
- Land;
- Access to finance; and
- Innovation and skills.

5.8 We also consider briefly the impact of other government regulation.

Market structure and conduct

5.9 Housing supply involves more stages and factor inputs than many other products. New homes depend on various elements and processes: land acquisition, planning and development stages and the construction process itself.

5.10 There are also various differentiated markets in housing. Housing is clearly a highly heterogeneous product (as noted by Coiacetto, 2006) due to the specific demands of individuals and differences in supply – for example size, design, quality, price, location and timescales of construction.[13]

5.11 The complexity and the significance of housing within society means that the competitive nature of the housing supply market is especially important, as adverse impacts on quality and efficiency could have significant effects on welfare.

[13] "Real estate development industry structure: Is it competitive and why?" Eddo Coiacetto, November 2006.

5.12 However, this complexity also makes it difficult to assess the competitiveness of the supply market. Local construction markets vary greatly and the size of players in the industry ranges from small local builders of individual homes to the large national house builders constructing large developments.

Classification of market structure

5.13 Industry structure is defined by both the number and size distribution of firms. The most competitive markets have many small firms competing against each other and competition drives down prices. Meanwhile, at the other extreme, a monopoly firm has considerable price setting power. The oligopoly structure is a market dominated by a small number of large firms, in which each firm must consider the actions of other firms very carefully in order to maximise profits.

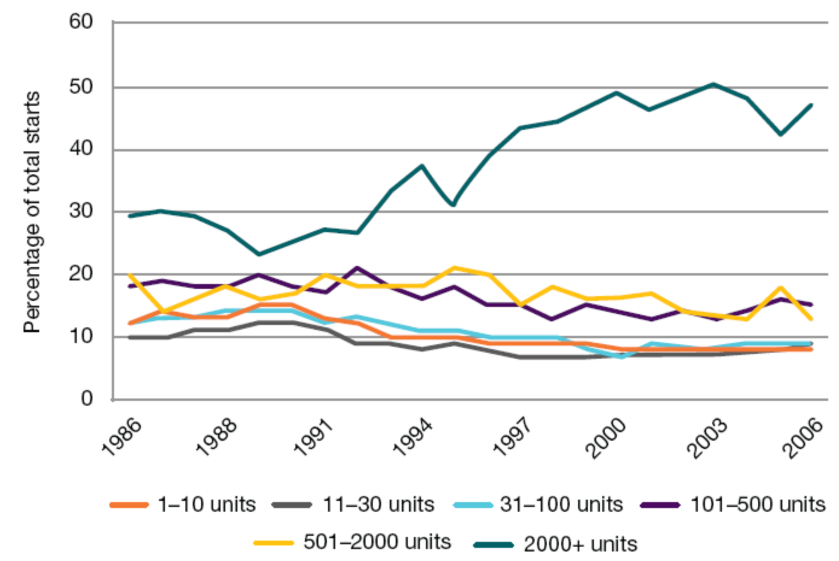
5.14 Industry structure affects conduct as firms behave differently according to conditions and market structure can affect strategic behaviour including advertising, ability to influence supply and collusion. Similarly, this works in reverse, as the conduct of firms can influence other firms and potential entrants and thus determine the industry structure.

5.15 Firms' conduct has an impact on consumers as efficiency, quantity, price, quality and innovation are affected according to the competition faced by firms that wish to maximise profits. A key aspect of conduct (and strategic behaviour) among larger firms in the housing industry is the use of land banks. This is considered below in the discussion section on land.

5.16 In addition to the national picture, competition in the house building sector should also be considered within a local context, as there can be instances of concentrated power in a local market where large firms are dominant over a period of time. Further factors affecting competition within the sector may include the various stages of construction involved, the levels of demand and regulation, and types of developments planned or under development.

5.17 Looking at the size profile of house building companies, it is clear that over the past twenty years the sector has been characterised by the growth of large dominant firms (Figure 5.1). Firms developing more than 2,000 units per annum, account for around fifty per cent of total starts, up from thirty per cent over a twenty year period.

Figure 5.1 Percentage of total starts in UK by companies of different size categories, 1986–2006



Source: NHBC; Figure 3.6, "We Must Fix It: delivering reform of the building sector to meet the UK's housing and economic challenges", Matt Griffith, IPPR, December 2011.

5.18 There are a number of factors that have contributed to the increasing dominance of large firms. One key factor is the vertical structure of the house building supply process – with its various design and construction contractors, specialist sub-contractors and the sales stage – which means that for smaller developers, various other components are required as well as planning to complete a project. Large developers which comprise all these elements can potentially make the process more efficient and thus more profitable.

5.19 Furthermore, the scale of projects means that the large industry players are heavily involved in the land acquisition and the development stage – this can be highly profitable but is risky and dependent on their retained profits, use of land banks (discussed in more detail below) and ability to raise additional finance. This would not be feasible for new entrants.

5.20 Factors including the considerable capital requirements in the house building industry as well as requirements for training and regulation are barriers to entry by newer firms at a significant scale.

5.21 The early stages including land buying are also advantageous to established large firms as they will have the experience to understand the framework in a given area and have an existing relationship with local authorities. In these cases the existing large firms are more likely to have the technical expertise of the preferred approach to land acquisition and planning.

5.22 Furthermore, incumbent firms have more scope to raise finance through retained profits rather than debt or equity and may be able to utilise option contracts to acquire land.[14] Moreover, the market tends to become more concentrated as financing and regulation are tightened and larger incumbent firms are better placed to withstand short term problems and commit to longer term risks. Competition in local markets varies by area. At a national level, house building is dominated by larger firms due to the advantages held by established firms as discussed – which may serve as barriers to entry, or at least to growth of smaller firms.

Land

5.23 Barker (2006) argued that land supply is the key constraint to housing supply: insufficient land is allocated for development, and, combined with planning and regulation, not enough homes are provided.[15] The availability of infrastructure, costs and complexities involved with brownfield land, weak incentives to bring land forward and difficulties in assembling a site due to fragmented ownership are discussed by Barker (2004).[16] Land-ownership patterns are a fundamental obstacle to recognise as a barrier to entry.

5.24 A contributory factor to the low responsiveness of supply is the use of land banks by large firms. Large construction firms often have both short term and "strategic" land banks (longer term investments often bought by option

14 In addition to perhaps holding land in strategic land banks.
15 "Barker Review of Land Use Planning, Final Report – Recommendations", Kate Barker, December 2006.
16 Page 25, "Review of Housing Supply, Final Report – Recommendations", Kate Barker, March 2004.

to enable long term security and the opportunity to gain from increased land prices).

5.25 KPMG (2008) calculated that land banks for the major listed builders grew from an average of 4.6 years in 2002 to 6 years by 2007.[17] Moreover, Barker (2003) found that one listed firm held 33.8 years of strategic land in 2003.[18]

5.26 Barlow (2000) has explained the incentives for land bank use:

"Stocks of land, whether owned outright or under contract (land banks), can help to increase development profit by keeping down land costs relative to house prices."[19]

5.27 Whilst land banks serve as a mechanism to mitigate risk and uncertainty for the firm, they may also constrain supply where land is kept strategically (even though the local authority would be prepared to see development in the short-term). Land banks may also give large firms competitive advantage by acting as a restraint on rivals' ability to compete.

5.28 Somerville (1991) notes that construction firms are larger in more active housing markets and where there is a greater supply of readily developed land suitable for large developments.[20] Moreover, the size and concentration of firms is sensitive to the type of regulating jurisdiction imposing land-use laws – a jurisdiction with high levels of regulatory and planning requirements tends to benefit larger firms who can accommodate this burden.[21]

5.29 Furthermore, the difficulties discussed above of developing brownfield sites, often necessary in more developed areas (and encouraged over greenfield development), favour larger developers as it is more capital intensive. This encourages market concentration and thus contributes to potential constraints to supply.

17 As cited in "We Must Fix It: delivering reform of the building sector to meet the UK's housing and economic challenges", Matt Griffith, IPPR, December 2011.
18 Table 5.1: Private Housebuilding Annual 2003; page 81, "Barker Review of Housing Supply; Interim Report– Analysis", Kate Barker, December 2003.
19 Page 3, Barlow, as quoted in "Economics, Planning and Housing", Michael Oxley, 2004.
20 Across a US regional comparison.
21 "The Industrial Organization of Housing Supply: Market Activity, Land Supply and the Size of Homebuilder Firms", Somerville, Real Estate Economics, 1999.

5.30 It is hard to stimulate production levels and new competition as incumbent firms have low incentives to increase output levels as described by Griffith (2011):

"*Most housebuilders appear to prefer to concentrate on smaller levels of controlled output at larger margins (capitalising on maximum land value uplift), rather than increase production, even if this may mean short-term absolute profits are lost. This can be characterised as either realistic risk management (Ball 2006) or the behaviour of a stagnant and unresponsive business sector (Morton 2011). As one housebuilder put it when interviewed about its growth strategy: 'We'll double in size, but halve the margins, so what's the point?' (Wellings 2006).*"[22]

5.31 In addition to the competitive behaviour of firms, it is also important to recognise the impact of other factors on the supply of housing. Land will only be developed if the right incentives are in place for those making development decisions and delays and restrictions in the early stages of housing supply can be classed as government failure as quick, efficient policy processes to increase supply effectively are not always achieved.

5.32 In fact, Bramley and Leishman (2005) observe the large gap between when land is released and its rate of take-up for housing starts, and promote the need for a proactive approach by government and firms to development.[23] [24]

5.33 The role of planning obligations also needs to be considered. Local authorities in granting permissions on most sites will enter into a negotiation for S106 'Planning Gain' agreements which will typically cover infrastructure requirements related to the development, requirements for 'affordable' housing and environmental offsets or improvements. Local authorities may now change to charging a Community Infrastructure Levy (CIL) designed to meet overall infrastructure requirements, with S106 agreements limited to social rent and 'affordable' housing and matters specifically related to the development.

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22 Page 29, "We must fix it: delivering reform of the building sector to meet the UK's housing and economic challenges", Griffith, IPPR, December 2011.

23 "Planning and housing supply in two-speed Britain: modelling local market outcomes", Urban Studies, Bramley and Leishman, 2005; cited in Bramley (2007).

24 A simulation was performed for increasing land supply in Berkshire and the effects modelled

5.34 In conducting negotiations and in setting the CIL, local authorities have to have regard to the viability of development – which implies that they will be able to raise larger sums per unit of new housing when prices are higher. Encouraging a rapid buildout of sites with the implied discounting of prices therefore risks reducing their ability to finance infrastructure.

5.35 Planning (which is not the direct focus of this report) is obviously linked to these factors. The Department for Communities and Local Government (CLG) research found that the high and growing regulatory burden was the second greatest concern for builders after availability of land.[25] This regulatory burden can entail both regulatory costs to comply and the costs of uncertainty due to regulatory decisions. Planning requirements, building regulations and sustainability policies can all hamper efforts to increase supply.

Are there competition problems? – OFT market study

5.36 The existence of barriers to entry, the increased market shares of the largest builders, strategies of land-banking, and the weak supply responsiveness might suggest that there may be competition problems in the industry. However, an OFT market study in 2008[26] found:

- *"little evidence of competition problems with the delivery of new homes in the UK";*
- *"no evidence that individual builders have persistent or widespread market power or that they are able to restrict supply or inflate prices"; and*
- There was not *"any evidence that homebuilders have the ability to hoard land or own a large amount of land with planning permission on which they have not started to build".*

However, while there may not be evidence that house builders are acting in an uncompetitive way, it appears that the need to focus on land has shaped the strategy and conduct of firms in the industry i.e. through the investment

25 "The housebuilding industry: Promoting recovery in housing supply", CLG, April 2010.
26 Homebuilding in the UK: A market study, September 2008, Office of Fair Trading.

in strategic land banks. Finally, more competition and lower barriers to entry generally have a positive impact on performance – particularly in a sector not exposed to international competition – even if there are no formal competition issues.[27]

Access to finance

5.37 The fixed supply of land and resulting planning requirements and the long lead times of development (interacting with the fluctuating economic cycle) make house building a risky industry. Even in a more stable economic environment, this will be reflected in both the cost and availability of finance. This will tend to be even more of an issue for smaller firms with smaller and less diversified portfolios of investments, and less sophisticated financial management processes. These risks will not only affect the decisions of finance providers, but also firms – many of which will be reluctant to leave themselves too exposed to substantial debt repayment obligations over an extended period.

5.38 Risk has increased in recent years. Once the immediate problems of the recession are over, then consideration may be given to how better long term stable finance could be channelled to house building.

5.39 With more limited bank finance available, house builders may want to consider other sources of funding. One channel would be greater use of institutional investment. These institutions will want to continue to invest in a broad range of assets including both debt and equity. But during a period of slower growth and heightened uncertainty, pension funds, for example, may look to invest relatively more in bonds than equity.

5.40 Access to appropriate finance is a long term, structural issue facing the industry, but the problem is currently particularly acute following the financial crisis and the recession – impacting on both the willingness of banks, in particular, to extend finance, and the willingness of firms to take on more debt. This is discussed in more detail in section 6.

27 Although a more competitive industry would also tend to be a riskier one.

Innovation and skills

5.41 Innovation can be a means to make production more efficient, thus increasing potential supply. Ball (1999) argues that house builders face particular market constraints on innovation in both their output and input markets.[28]

5.42 Consumers may hold a preference for a "traditional" style house (although some are seeking more green, efficient homes but this comes at a cost), thus leading to little change in construction techniques due to a lack of motivation to innovate. This is reinforced by mortgage lenders who are led by the ability to resell and follow their perception of consumer preferences.

5.43 One feature of house building is the specific skills that are employed – it is a labour-intensive industry plagued by skill shortages, which can impact on innovative capacity. The Housing Green Paper (CLG, 2007) states that:

"To deliver the Government's ambitions for housing growth, higher environmental standards and better places to live, we need enough skilled workers. However, recruitment and retention difficulties in key areas, as well as skills gaps, present significant obstacles".[29]

5.44 Firm behaviour and management culture can also constrain innovation. Ball has suggested the direct employment of workers to train them in labour saving techniques, but accepted that for this to work it requires that the knowledge be proprietary and thus valuable to the firm[30].

5.45 The complexities of land and planning may contribute to the lack of innovation. Lack of innovation is a product of features such as those discussed – some are inherent to the market and some require attitudes to change. Consumer preferences and thus lenders drive the nature of the new housing which is delivered. The skills, building methods and management are slow to change unless incentives are provided. Innovative methods require costly investment and building and planning regulations can hold back potential.

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28 "Chasing a Snail: Innovation and Housebuilding Firms' Strategies", Michael Ball, 1999.
29 Page 94," Homes for the future: more affordable, more sustainable", CLG, July 2007.
30 Op Cit

5.46 In a more recent report for CLG, Ball reiterates his view that *"innovation in the ways that houses are constructed is relatively slow."* He notes that the *"industry needs to work out mechanisms enabling the timely adoption of key building innovations and mechanisms for cooperation"* and that *"developing the required skills base will clearly be important".* Not unreasonably, Ball suggests that *"government should not be expected to play a leading role in such activities."* [31]

5.47 However, for an industry where the key focus may be on land management rather than production, innovation may not have the same priority as other industries. Furthermore, at present, many firms will be focused on action to improve their immediate financial position rather than innovation. This adverse impact of the recession on investment in innovation and skills is an issue many sectors will be facing, but the building industry may be affected more than others due to the greater impact of the recession on its financial health

5.48 The supply of housing is influenced by various factors – including the fixed supply of land and its slow take-up for housing due to planning and firms' risk averseness. Long lead times, the need for considerable finance and thus the high risk levels have influenced the market structure of the house building industry, which, in turn, and vice versa affects firms' conduct and completion rates.

[31] The Housebuilding industry: Promoting recovery in housing supply, Michael Ball, April 2010

6 How has the market changed since 2008?

6.1 The recent collapse in supply shown in Figure 4.3 was cyclical – linked to macroeconomic conditions which we discuss in this section.

6.2 Since 2008, the industry has suffered from increased risk and uncertainty and financing difficulties. The level of transaction activity in the market has been particularly low due to reduced consumer confidence and thus willingness to buy.

6.3 The reduction in the availability of mortgages, restricted lending from financial institutions and government fiscal consolidation have meant that all housing sectors have been affected.

6.4 Debt levels and gearing of firms rose sharply at the start of the crisis, although considerable balance sheet repair has subsequently taken place. The ability to increase output is impaired and less of a priority when cash positions must be restored and maintained. Margins have required rebuilding to levels which restore the confidence of investors.

6.5 The type of building undertaken has changed due to economic conditions:

"(The) top end of the market had shown some resilience, with buyers tending to be better able to raise finance. And the supply of new homes was increasingly focused on meeting the needs of this segment".[32]

6.6 The significant fall in house prices inevitably led to an even larger reduction in land values, requiring write-downs for developers on their land banks. Landowners also withdrew land from the market to await an improvement in future values.[33]

6.7 Uncertainty about future macroeconomic conditions means supply is at present particularly slow to adjust to any improvement in demand. According to the KPMG construction survey 2012, 71% of construction respondents

[32] Page 2, BoE Agents' summary of business conditions, November 2011.
[33] Page 13, "Mind the gap – housing supply in a cold climate", Pretty and Hackett, September 2009.

say economic uncertainty is the biggest business concern in their home region.[34]

6.8 This uncertainty may serve as a supply constraint as firms are less willing to commence large developments in case of deteriorating conditions. In particular, this could hold for flats which depend on pre-sales; it should also make developers cautious about having too many sites in operation at once.

6.9 While an issue for many sectors, and especially smaller firms, the financial crisis has had a larger impact on house building than in most other sectors. As Ball noted[35]:

"House building has been badly hit by the risk assessments made by banks and through the loss of so many financial institutions that used to provide finance. Small and medium-sized builders are particularly constrained ... it is also very challenging for new entrants."

6.10 Although this comment was made in 2010, the issues facing builders are unlikely to have changed significantly as the problems facing the banking sector remain and the economic outlook continues to be very uncertain.

6.11 The problem of accessing finance has been reflected in survey evidence – in particular for the SME end of the sector. According to Brian Berry, Director of External Affairs at the Federation of Master Builders (FMB):

"Nearly 58% of survey respondents told us they had been unable to implement growth or investment plans because they had been unable to raise the necessary funds from the bank, and nearly 49% of respondents told us that they had been unable to implement expansion plans that would have created new jobs."

6.12 Furthermore, another FMB survey found that nearly 40% of small building firms have seen their lending charges increase over the last year (as at November 2011).[36]

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[34] Page 10, The great global infrastructure opportunity, Global Construction Survey 2012, KPMG. Available at: http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/global-construction-survey-2012/Documents/infrastructure-opportunity.pdf.

[35] The Housebuilding industry: Promoting recovery in housing supply, Michael Ball, April 2010.

6.13 Although funding issues are perhaps more pressing for smaller firms, large firms have also had to adapt to the deteriorating conditions and slowed production accordingly – reducing overall output significantly.

6.14 However, it should be noted that a £420m development finance fund (increased to £570 million in the 2012 Budget) to Get Britain Building was announced on 21 November 2011 as part of the Government's Housing Strategy for England:

"The programme aims to unlock stalled sites with planning permission to support construction activity and restart work on sites delivering more than 15,000 new homes. It is intended to address difficulties in accessing development finance faced by some housebuilders and to help bring forward marginal sites by sharing risk."[37]

6.15 This may ease the strain on firms that qualify for the scheme but a more cautious approach could still prevail amongst building firms until conditions are more certain.

6.16 This further contributes to the asymmetric characteristic of elasticity – construction was quick to fall in response to declining conditions but the aftermath of the credit crisis with continued restrained lending will make it more difficult to expand as quickly.

6.17 The need to cut back production and lay off staff has also led to reduced productive capacity of the private and social house building sector; this will dampen future prospects.

6.18 Skills and innovation constraints will remain, due to the uncertainty on behalf of potential workers and house building firms creating reluctance to make long term investments in both physical and human capital whilst macroeconomic and market conditions remain uncertain.

6.19 Cutting apprenticeships due to financial difficulties and lack of demand will threaten future building as insufficient skills will be available to increase supply. Government funding cuts to the Kickstart scheme (including

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[36] Press Release: FMB Contradicts Bank Lending Data, Monday 14th November.

[37] See: http://www.homesandcommunities.co.uk/get-britain-building.

apprenticeship incentives) have been described by the Home Builders Federation (HBF) as *"a cut on investment not waste"* and they argued that cuts to apprenticeships will:

"have a long term impact on the country's ability to deliver new homes, at a time when we are already building less than at any time since before World War 2".[38]

6.20 Clearly a strategy which considers both long and short term prospects, not just immediate output, is preferable.

6.21 Griffith (2011) compares the building sector to the banking sector, describing it as a *"broken transmission mechanism"*; the focus on restoring damaged balance sheets means that we are entering into a long period of risk aversion and stagnation.[39] [40]

6.22 Whitehead and Williams (2011) have argued that the crisis will have a lasting effect for years to come:

"The major problem when the upturn comes is that demand will adjust upwards far more quickly than supply, resulting in continued volatility. The main constraint is likely to come from greater regulatory constraints rather than a better operating market. The crisis has thus generally exacerbated, rather than helped resolve, the UK's fundamental and long-standing housing problems."[41]

[38] HBF, see: http://www.hbf.co.uk/media-centre/news/browse/15/view/kickstart-cuts-threaten-economic-revival-and-jobs/?encryptionKey=&tx_ttnews[backPid]=1704&cHash=da5c5df111.

[39] Page 6, "We must fix it: delivering reform of the building sector to meet the UK's housing and economic challenges", Griffith, IPPR, December 2011.

[40] Stagnation refers to a prolonged period of slow economic growth, usually accompanied by high unemployment.

[41] "Causes and Consequences? Exploring the Shape and Direction of the Housing System in the UK Post the Financial Crisis," Whitehead and Williams, Housing Studies, October-November 2011.

7 Policy response

7.1 A thriving and successful housing sector that responds effectively to changes in demand is an important pre-requisite to the delivery of the government's economic, social and environmental objectives. The coalition government recognised these points when it launched its housing strategy last year.[42] This contained measures to stimulate the housing market in the short term, as well as some longer term policy reforms – particularly on planning, as part of a wider reform of the planning system.

7.2 Many have welcomed the prospect of more land becoming available as a result of the 'presumption in favour of sustainable development'. But it remains to be seen whether a locally based approach really will deliver significantly more land for housing than the 'top-down' approach. For example, a survey cited in the government's strategy noted that forty six per cent of respondents would be opposed to new homes being built in their area.[43] And that number might well be higher when faced with a specific proposal. Local plans need to be developed using robust methodologies to assess likely housing need over the plan period – and it remains to be seen how far these plans win local support.

7.3 An equally fundamental issue is whether the market will ever be able to supply an economically (or socially) efficient level of housing. It is questionable whether the conditions under which the market delivers an efficient outcome apply in the housing market – where regulation restricts the supply of a key factor of production and distorts the strategies of firms (i.e. the main focus on land management rather than production).

7.4 The inherent nature of house building, even in a planning free environment would be subject to development lags and most likely still produce asymmetric responses to some extent.

7.5 These fundamental and inherent issues about the nature of the house building industry and the housing market raise questions about the

42 Laying the foundations: A housing strategy for England

43 British Social Attitudes survey. See: http://www.iea.org.uk/blog/housing-policy-in-the-public-choice-trap.

appropriate role of the state in facilitating an economically and socially optimal level of supply. Addressing such questions is beyond the scope of this report. But within the existing policy framework, the government might look at what more can be done to address the related issues of: promoting more competition between incumbents; encouraging growth among smaller builders and new entrants; and facilitating improved access to stable long-term finance for house builders.

7.6 Promoting greater competition between incumbents is more difficult than in other industries because of the often localised nature of the way firms compete. One way of promoting competition could be to consider whether there should be a threshold number of units on a site above which planning permission cannot be granted exclusively to a single firm (in practice, developers themselves frequently parcel out a large site.)

7.7 The role of infrastructure funding also has to be taken into account. In the long run, an improved and less costly supply of housing is in the interests of those wishing to enter the market, and of the wider taxpaying community through a lower housing benefit bill and fewer subsidies for shared equity and similar schemes. But in the short run a local authority may feel pressure to raise a certain amount for infrastructure from each new dwelling and therefore may have some interest in maintaining a high level of prices, and those already owning houses in the locality would share this preference. The costs and benefits of additional supply are therefore located at different spatial and governmental levels.

7.8 Competition can further be encouraged by addressing the barriers to growth and entry of firms into the industry. This will also have a direct impact on supply, which will be important at a time when many firms may be unable to respond effectively to increases in demand, as they seek to improve their balance sheet (and so focus on improving their financial positions rather than ambitious longer term investment). The key barriers to entry and growth are probably access to land, access to finance and local expertise.

7.9 Access to land might be improved by requiring local authorities to allocate a certain proportion of land to smaller firms and new entrants.[44] Similarly, a smaller firm and new entrant quota might be provided for public land that is made available for development. There should also be sites available for self-build homes.

7.10 However, it should be noted that this is limited due to the large proportion of private land in the UK.

7.11 The Prime Minister has recently indicated his enthusiasm for applying 'the principles of garden cities'. If such an approach is pursued, it will be important to consider how best to ensure smaller builder and new entrants are encouraged e.g. by allocating, as suggested above, a certain proportion of land to such firms.

7.12 Access to finance is, as noted earlier, a particular problem for smaller firms. The government might look at the range of its access to finance interventions (including credit easing and its loan guarantee scheme) and assess whether they are suited to the particular requirements of smaller building firms – and the extent to which they are used. If necessary, consideration might be given to the development of an intervention to promote access to longer term finance in the housing sector – to match the longer term nature of the investment (this would be in addition to the current set of housing specific finance interventions set out in the housing strategy).

7.13 Government regulation (in addition to planning controls) also affects the costs facing firms and thus entry and expansion. Clearly, the housing sector needs to make its contribution to wider policy goals. But it will be important to consider the current state of the industry when considering the timing of the implementation of new regulations – otherwise excessive costs may be imposed on the industry and the impact on the policy goal may be counterproductive. As Ball notes in relation to environmental regulation,

[44] Although as much land is optioned, this may be limited to certain sites.

“if new building is slower than it would otherwise have been, a less environmentally sustainable overall housing stock will persist for longer.”[45]

7.14 Finally, it is important that housing is recognised as an essential part of the infrastructure of the economy, therefore, when consideration is given to promoting investment in infrastructure – as a means to promote demand in the short to medium term, or competiveness in the longer term. Investment in housing should therefore be a central element of any integrated plan for investment in infrastructure in the UK.

45 The Housebuilding industry: Promoting recovery in housing supply, Michael Ball, April 2010

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