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Raising Productivity, Housing the Economy

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About PIN

The Productivity Insights Network was established in January 2018 and is funded by the Economic and Social Research Council. As a multi-disciplinary network of social science researchers engaged with public, private, and third sector partners, our aim is to change the tone of the productivity debate in theory and practice. It is led by the University of Sheffield, with co-investigators at Cambridge Econometrics, Cardiff University, Durham University, University of Sunderland, SQW, University of Cambridge, University of Essex, University of Glasgow, University of Leeds and University of Stirling. The support of the funder is acknowledged. The views expressed in this report are those of the authors and do not necessarily represent those of the funders.

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1. Urban Economic 'Triumph' and Housing 'Crises'

There are well-established, longstanding concerns regarding the weak overall productivity performance in the UK economy that lie at the core of agenda of the ESRC PIN Network. Similar issues are urgently debated in Canada and Australia where the work of this project has stimulated much interest and research support. Productivity is a pervasive puzzle. At the same time, and again in all three countries, whilst there is a well-established belief that strengthening agglomeration economies and increasing global flows of trade, labour and ideas raised productivity and growth in larger metropolitan areas (OECD, 2006: Ciccone and Hall, 1996: Glaeser and Gottlieb, 2009: Graham, 2007), these city 'triumphs' have been associated with housing 'disasters. An unholy trinity of rising homelessness, lengthening queues for affordable non-market housing and historically high housing rents and prices (in relation to incomes) is now widely recognised as a deep housing 'crisis' (Maclennan, Pawson, Gibb and Hulchanski 2019).

There is, however, little empirical, or indeed conceptual, research probing the links between productivity and housing outcomes and the two difficult policy challenges have been resolutely separated in policy debates in the UK and elsewhere. In earlier and recent discussions with senior national policymakers in Australia and Canada it became clear that Finance Ministries and Central Banks pay much attention to the financial stability and prudential policy implications of housing market outcomes but with limited understanding of their affordability and productivity outcomes. Public expenditure officials, at national and more local levels, are familiar with the employment 'multiplier' arguments for housing investment support but have, in recent years, paid them less attention (on the grounds that they are offset by 'displacement' effects). This contrasts sharply with prevailing views on other infrastructure, notably transport investment, where potential productivity effects (such as the value of saved travel time) are recognised. The important role of housing price and rent outcomes in shaping the distribution of residual (after housing costs) incomes and the distribution of wealth (Maclennan and Miao, 2017) is only now being recognised. However, the extent which sustained real house price increases (ahead of real incomes) have driven savings and investments into shaping a rentier rather than an entrepreneurial economy (with a likely long-term effect on productivity and effort in the economy) has been little explored in the UK and other advanced economies.

Housing policy advocates and lobbies have primarily focussed on making 'merit good' cases that have generated much expertise and effort in estimating housing investment 'needs', usually defined of provision shortages in relation to estimated 'deserving' cases or investment requirements to raise physically defined housing standards.' Economic' cases for housing policies have been restricted to multiplier effects of investment. There is half a century of housing policy practice and research in this area that leaves implicit any idea that better housing outcomes might raise individual capabilities or create infrastructures supportive of economic change. This 'blindness' is also reflected in the professional training of practitioners in housing, planning and local economic development who have central roles in shaping

[1] We would like to acknowledge the support of Places for People, especially Dr Roger Wilshaw and Mary Raymer, in undertaking the UK elements of this research and to Wendy Hayhurst, Chief Executive of the Community Housing Industry of Australia for mobilising interest and financial support for our work and her sustained efforts to drive forward the housing and productivity debate there.

sectoral advocacy cases. Advocacy for housing investment programmes from the construction sector have rarely given much attention to the economic consequences of the homes constructed.

The policy narratives of economic policymakers and housing ministries and the advocates who lobby them, have remarkably little overlap given the significance of housing as a sector within the economy. A clearer sense of overlap might have been expected in regional and urban economics and policymaking given their interest in the systems that ground and drive economic change. Housing systems and markets are inherently local. They may be impacted by global and national shocks, such as Brexit, and longer trends such as population ageing and the need to reduce residential carbon emissions. But they primarily cohere at the metropolitan-regional scale that ground the quotidian household activity patterns of commuting, working and living and at the neighbourhood scale of detailed, spatially defined social and service interactions of household and family members. Housing systems obviously shape the functioning of regions, or city-regions, and neighbourhoods (Maclennan, Ong and Wood, 2015)). Moreover, these systems may be much impacted by changes in income and population but the detailed outcomes of the functioning of the system at any point in time lay the foundations, sometimes literally, for the next cycle in the local and regional economy. That is, housing systems are best understood as spatial or place systems with path dependencies and evolutionary properties and they may have transcendent properties shaping new geographies for the evolution of the regional economy. They obviously have potential productivity effects. The economic history of sustained house price increases over time in major metropolitan areas, suggests that the mainstream general spatial equilibrium models linking housing, labour markets and spatial economic change that are useful as thought experiments (Glaeser, 2010) have limits as a feasible framework for exploring real, out-of-equilibrium housing markets (Maclennan et al, 2018).

Regional economics and policy have, since the 1950's, consigned housing to social policy interest. The foundational measures in UK regional policy, in the 1935 Special Areas Act and in the early post-war years recognised two important 'housing' dimensions to regional imbalances. The 1935 Act included an explicit housing investment measure to improve the supply of adequate and affordable housing in 'depressed' regions with the clear intention of removing the damaging effects of slum housing on labour quality, health and economic performance (capability and productivity effects). The core rationale for regional policies also drew attention to the coexistence of congestion costs in pressured regions with the abandonment and underuse of infrastructure in lagging regions (Maclennan and Parr, 1979). If, from that time onwards, housing in Britain had been regarded by policymakers and academics as essential economic infrastructure, rather than as (solely) an important social 'merit good', then the persistence of an interest in housing processes and outcomes in regional and more local economic development policies might have been maintained. For more than half a century the role of housing in reflecting, reinforcing and shaping regional economic imbalances has lain outside of the interests of regional policymakers and indeed regional economists and planners.

There are now three, unrelated strands of research and policy that are leading policymakers, but not yet researchers, to refocus on the productivity effects of housing outcomes. There, first, is a concern that there are negative 'congestion' effects of metropolitan housing shortages and associated price appreciation rates, that may now be attenuating the growth of the most productive locations within national economies (Hsieh and Moretti, 2019: Maclennan et al, 2018; Westmacott, 2018). Secondly, national policy programmes, such as City Deals, in the UK and Australia have faced major challenges in trying to articulate and estimate how sectoral infrastructure investments shift metropolitan growth paths, and housing investment is increasingly featuring in such programmes. Finally, new conversations about regional inclusive growth are occasioning a new interest in how changing capabilities for less affluent individuals and communities raise both growth and fairness. That discussion will inevitably have to engage with income and capability effects of housing system outcomes.

Taking all these different policy narratives and interests together, the 'missing links' in policy design and delivery and in academic research and professional education become readily apparent. This pathfinder project has taken the approach of outlining broad economic approaches to estimating productivity and proposing a new, simple framing of housing and productivity links (section 2) and then reviewing, within that framing, existing empirical evidence of connections (section 3). Section 4 presents a brief summary of the housing-productivity conversation/understanding in 3 UK case study areas and contrasts the main findings with an earlier Australian study (Maclennan, Ong and Wood 2015)). Key questions and some potential next steps for UK, and international collaborative, work are summarised in Section 5.

2. Frameworks for Exploring Productivity Effects for Investment in Infrastructure and Housing

Through the 1990's there was an increase in the number of econometric studies (most notably the work of Aschauer,1989) that estimated significant effects on growth and productivity from public capital investment. By the early years of this millennium advances in econometric techniques and better-quality data reversed this research conclusion. The complex correlations prevailing in investment and output relations at the macroeconomic scale meant that no clear infrastructure-growth effects could be identified. Reviews of the literature by the Government of Canada (2007) and the Scottish Executive (2007) indicate the absence of firm conclusions. Academic, meta reviews (see El Makhloufi 2011) of growth effects from public capital investment suggest that relationships vary substantially and depend upon the scale of analysis, the type or definition of capital used, the country or context type, and the econometric specifications and types of data used.

An unpublished study of housing investment effects on growth in the UK (Meen and Maclennan, 1995) has already reached that conclusion. Haughwot (2002) and others moved the focus of analysis of such studies down to regional and metropolitan scales but the absence of good data at that scale has stalled attempted macro-production function analysis.

In recent years Moretti and Hsieh (2019) have applied a production function approach at sub-national scales across the USA and concluded that high housing costs (requiring higher housing capital expenditures per capita) may have reduced productivity by 10-15 per cent. They suggest that the loss of productivity and reduced affordability of housing, can be squarely laid at the doors of municipal and state land planning bodies. Glaeser and Gyurko (2018) suggest that the scale of the effect identified is unduly exaggerated and is more likely to lie in the range of 2-3 percent, though they concur with the planning cause. Maclennan and Miao (2019) challenge these results on the grounds that equilibrium-based estimates do not characterise the systems being analysed due to no systematic assessment of other potential causes of supply side restrictions and costs, most notably, limited expenditures on infrastructure that are needed to transform zoned land into housing development. Work of this kind is missing in the UK.

Maclennan, Ong and Wood (2015) have proposed, using an ‘economic’ definition of housing developed by Maclennan and Miao (2015), a bottom-up framework that involves a recognition of the nature of housing as a good and of the systems by which it is provided and used. It seeks to identify rather than presume, the ways in which housing impacts the economy.

The activities involved in designing, planning, financing, trading, maintaining and, especially constructing housing (housing as an ‘adverb’) can have significant employment effects, especially in the upswing periods of metropolitan housing markets, and these connections underpin the traditional ‘multiplier’ arguments for expanding investment in housing. Long housing booms as economies transform, for instance the urbanisation of china in the last three decades, that raise the share of residential construction in the economy may have a short-term effect on reducing national productivity growth as the inherent nature of construction activity has productivity rates below national averages. In 1963 Duncan Burn (NEDO, 1963) noted, for the UK, that ‘the construction sector was like a large and shambling giant with difficulty in coordinating one limb with another in order to move forward’. Construction sector productivity is not the focus of this pathfinder project, but Burn’s description does still seem apposite.

The focus on this pathfinder was on the complex nature of housing as a good. Housing is a durable capital good that has multiple attributes or characteristics and is spatially fixed (Maclennan, 2012). Attributes are used in conjunction with other household expenditures and household time to produce different ‘services’ for the household, such as shelter and comfort and, sometimes, social status. The fixed spatial location of the home has a significant effect on the access of household members to the different activity sites they use on a daily or regular basis, such as work, shops, schools and services. Housing and neighbourhood choices are ineluctable joint, and purchase of a home involves the acquisition of a range of neighbourhood goods and bads that are unpriced. The durable nature of housing makes it an asset for the owner. In very broad terms the vector of housing outcomes associated with a dwelling, for a given household, include size, shelter, comfort, access to friends and work, neighbourhood services, investment returns as well as rents and mortgage payments.

The framework used here, and outlined in Maclennan, Ong and Wood (2015) links these outcomes to household capabilities and then to the widely identified growth drivers for local and metropolitan economic development. Which connections matter, when and for whom? These are the microeconomic bases for understanding how housing choices are not simply driven by income but feedback onto growth and change. The framework can be applied to economies in or out of equilibrium and in an evolutionary perspective. Whilst much looser than the neoclassical growth model-well-behaved production function modelling approach it does not presume, in reductionist fashion, housing outcome to output relationships that may have significance for productivity and that need to be recognised in the design and delivery of housing investment programmes. It is used to frame our overview of evidence for key housing-productivity effects.

3. Housing and Productivity: What Matters?

The housing sector emphasis on needs and stabilisation investment cases for housing investment support, has resulted in a fragmented evidence base regarding housing outcomes-productivity connections. Economics and Finance Ministries have not been motivated to research the connections and strengthen the case of those seeking fiscal resources for housing investment. The multi-attribute character of housing, that gives it such a large weighting in consumer spending and personal wealth, also often means that housing outcomes combine with other influences in addressing 'wicked issues' through a wide range of small and moderate effects. These effects form a physically visible but economically 'hidden' infrastructure for economic activity. Housing research has rarely got to grips, empirically, with these housing effects, as multiple sector impacts often both spillover outside of local neighbourhood contexts and may take long timescales to be reflected in economic outcomes. For instance, poor quality and unsettled homes for children may only manifest as an economic impact when teenagers with lower human capital, as a result of their early housing careers, enter the labour market. Researching the evidence base for these effects built upon earlier studies for Canada (Maclennan, 2008) and Australia (Maclennan et al. 2015, 2018) demonstrated that housing outcome effects tended to be investigated and identified not within housing research, but as a secondary influence in other sectoral research such as the influence of poor and unaffordable housing on outcomes for health, education and environmental quality.

The notion that housing outcomes could influence the competitive, growth performance of the economy (not just through the micro-based influences noted above) but through macro 'productivity' effects related to housing market instability and house price inflation, induced distortions of household savings and investment patterns (more plausibly recognised in Piketty (2014) growth and distribution models, than in neoclassical growth models, Maclennan and Miao, 2017),identified in Maclennan (1995). That met with little research response and indeed a broad overview of how housing fitted in the economy was left to geographers (Smith & Searle, 2010).

An outline of existing evidence is provided in Christie and Maclennan (2020). The review of fragments for 2008, 2015 and 2018 (noted above) were assessed by the research team and discussed with a wide range of senior practitioners and policymakers, and academic colleagues, in Sydney as a preface to the collaborative empirical research project funded in summer 2018. It was also discussed with the project research partners in the UK, namely Places for People. It was decided that it would be fruitful, in the context of metropolitan housing markets, to focus further housing-productivity work on 5 key themes.

a. *General-Spatial Equilibrium models:* There was a strong case to replicate the macro-GSE-production function work, noted above, of Glaeser and Gyurko (2018) and Moretti and Hsieh (2019), where possible but to build-in more complex supply models and this was left to further future consideration.

b. *Housing and accessibility to employment:* There was an immediate interest in assessing how house price and tenure options in major metropolitan economies had induced middle and lower-income households to locate further away from nodes of employment density, as this was likely to have impaired the matching functions, and productivity consequences, of metropolitan housing markets. Maclennan, with significant research support in Australia (amounting to $145,000) led a pathfinder project (coordinated though CHIA) to design a shock that would improve housing outcomes in terms of rental affordability and accessibility to employment density; the first round improvements of the shock in terms of saved travel times and permanent incomes, were then modelled in a standard CGE model (in a fashion similar to conventional modelling of transport investments). Providing better housing outcomes, in these terms, had significant effects on labour productivity for Sydney, New South Wales and the Australian economy (Maclennan et al 2019b). Discussion of the results in UK and Canadian metropolitan areas suggest that such effects will likely prevail in any growing metropolitan economy. The results have stimulated a new interest in the possibility of estimating some significant housing effects on productivity.

c. *Economic wellbeing of younger households*: There is also a widespread concern about effects of persistently high housing costs (prices and rents) on the short and long-term economic wellbeing of younger households (aged under 40). The Sydney study indicated that households with income up to middle income levels, in 2016, paid an average of excess of $6500 over and above 30 percent of their incomes. It was not possible to estimate the effects of this ‘overspend’ by using CGE models, as higher rent losses for tenants were transfer gain to their landlords, and data was not available to typify landlord and tenant spending/savings decisions separately. In early December (2019) a dozen research funders in Australia agreed to work with Maclennan and others to establish a $2m, three-year Housing and Productivity Research Consortium. The key areas to be explored, using the HILDA panel survey as well as other econometric modelling approaches, include understanding the long term economic and productivity consequences of housing a generation for significantly longer durations and at higher shares of rent to income in rental housing rather than home-ownership. The key concerns are:

   i. Effects on consumption, and scale economy effects, of reduced post housing cost incomes
   ii. The impacts on savings, timing of entry into home-ownership and impacts on long-run household asset accumulation
   iii. Implications for household and family formation decisions (and potential linkages to future labour supply effects)
   iv. The impacts of high metropolitan costs on the wider location choices of younger households and whether there are now augmented flows of skilled, two earner households away from larger core cities and to second order cities and smaller towns as high rents and squeezed owning options prevail (the ‘congestion’ effect referred to above); there is prima facie evidence for this shift in some UK, Australian and Canadian cities

d. *Human capital effects of housing outcomes:* The potential effects identified in a) to c) above reflect growth pressures that impact middle as well as lower income households. Discussions of the research evidence on the effects of poor-quality homes and neighbourhoods, highlighted several likely adverse effects in accumulating and utilizing human capita (noted above). The housing lobby, and governments who support low income housing programmes, have paid scant explicit attention to identifying what poor housing outcome actually do to children and adults, of different ages, and how this affects their accumulation and utilisation of human capital. Good quality national panel studies, as exist in Australia and the UK, need to be deployed to address this set of research questions, which are key to assessing housing outcome effects on labour productivity and in understanding more inclusive growth policy approaches.

e. *Income and wealth inequalities from housing*: It was also considered that the increasing evidence on the ways in which high housing costs and prices were exacerbating income and wealth equalities, in turn shaped subsequent growth paths for the economy. Piketty's (2014) work is the only major research that considers how housing sector outcomes may have critical effects on the long run growth path of national economic development, drawing attention to the ways in which housing markets may drive an economy onto a rentier, rather than an entrepreneurial development path. This requires high quality macroeconomics research and this pathfinder project saw it as beyond our scope.

4. Identifying Local Understandings and Conversations

The 2015 Australian study of housing-productivity connections (Maclennan, Ong and Wood) developed the 'characteristics-capabilities-productivity' framework to shape their interviews with economic development, housing and planning officials at local and metropolitan government levels. Officials in more than 60 local and metropolitan authorities in Victoria and Western Australia were interviewed. That study found no coherent understanding of how housing policies and outcomes impacted local economic change. Initial interviews with local economic development leaders identified interests in the mix and availability of local skills, accessibility for workers and to markets and the mix and innovative capacities of local firms. Housing was only revealed as an issue of economic relevance when follow-up questions probed how housing effects impacted these growth drivers. Interviews tended to end with a reflection 'well yes, housing does seem to affect the things we are responsible for but go and talk to the housing department'.

Over at the housing office (most commonly a social services department with a small housing group), sympathetic officials would explain they have a growing list of housing 'needs', falling budgets to meet them and no real engagement with the economic consequences of their action. A reference on to the planning department usually followed. Planning relied on demographic forecasting techniques and had scant information on economic influences on demand drivers, supply elasticities and the economic implications of the planning strategies they were implementing. The report recommendation that a new conversation across key policy silos was required, to induce a new concern with productivity outcomes of housing investment decisions. There is recent evidence that some authorities have grasped the need to change (Maclennan, et al 2018; Lawson et al, 2018).

A key element in this pathfinder was to illustrate how the housing-economy 'conversation' was progressing in the UK. A detailed discussion can be found in Christie and Maclennan (2020). Interviews were restricted to 3 city regions with a mix of different economic growth-decline processes involved, to allow for different kinds of housing effects to be considered. These interviews have post-dated the formation of substantial city-deals in all three city regions, and for Newcastle City Region and Cambridge-Peterborough integration into multi-regional policy initiatives (the Northern Powerhouse and the Oxford Cambridge Arc, respectively).
The interviews and discussions with around 40 senior staff display both contrasts and commonalities with the Australian study. The key findings were:

1. In contrast to Australia, the Housing-Productivity economic nexus was widely understood at a basic level in both policy documentation and interviews. However, policies and approaches to managing the negative effects of high house prices and consequences of increased housing demand are missing (this is a particularly acute problem in Cambridge), and this undoubtedly has adverse productivity

implications. There is a lack of robust analysis of the relationships between housing and productivity and present understanding are, at best, superficial.

2. The lack of developable land (easily and quickly) for housing was acknowledged and a general focus on progressing transport innovations/investment as a common solution to supporting household access to jobs, as opposed to building more affordable homes closer to jobs. Housing and transport need to be jointly planned and the economic arguments for transport investment better balanced with similar evidence for the gains from more, and denser, housing investment near job rich localities.

3. There is a complex and cluttered policy, partnership and institutional landscape across all three study areas for planning housing and other types of infrastructure across metro areas, though the Edinburgh City-Region had simpler processes (and politics). New strategies that better recognise the relationship between housing within an economic development context are evolving, although, housing supply/innovative solutions for funding and creating more affordable homes needs greater momentum.

4. There is a tension between national policy objectives for housing development, and those required at the local authority level. For example, nationally developed models for estimated Housing Needs are thought outdated, underestimate the number of housing required at a local level and have no explicit consideration of productivity effects of potentially different investment responses.

5. There is on-going institutional tension between different agencies aiming to work better together to achieve more joined up working. In particular, strategic planning for housing, and transport other economic development infrastructure is largely done separately and not joined up across all three local authority metropolitan areas. Spatial plans are not ‘funded’ in ways that would speed access.

6. There is a distinct lack of sophisticated logic chains and models that incorporate the longer-term outcomes from housing investment, including a lack of ongoing monitoring and evaluation of housing investment that considers wider economic and social outcomes from housing.

7. There is a lack of joint governance/planning, monitoring and evaluation of housing investment.

The case for a strengthened economic conversation about the economic and productivity effects of housing plans is as strong in the UK as it now is in Australia.

5. Next Steps

5.1 Thinking Abroad

The importance of progressing applied economic understandings of the connections between housing outcomes and economic growth at metropolitan levels, and downwards to neighbourhoods and upwards to national and 'provincial' economies is emphasised above. The involvement of this pathfinder project and research team in shaping the rapidly emerging research effort in Australia is reflected in the formative research agenda of the Australian Housing Productivity Research Consortium (with most of these issues also of research concern in the UK). There would be merit in the ESRC linking UK research efforts with those now emerging in Australia.

During December 2019, Duncan Maclennan discussed the key findings of this project with Larry Schembri (Deputy Governor, Bank of Canada), Paul Rochon (Deputy Minister, Federal Department for Finance) and six senior colleagues, Graeme Flack (Deputy Minister, Economic and Social Development Canada) and Evan Siddall (President, Canadian Housing and Mortgage Corporation) and had informal discussions with SSHRC (who are set to co-fund significant new investments in Canadian housing research). Duncan Maclennan and Linda Christie are to present a seminar on the results of the pathfinder, and the wider range of studies it has stimulated at MHCLG and have already discussed key questions with Stephen Aldridge (Chief Scientist at MHCLG). There is an intention to hold a 'summit' on housing, productivity and the economy in Melbourne in May and Duncan Maclennan has agreed to present the keynote address.

This 'pathfinder' reached a longer ramble (in the ambulatory sense) and lifetime than first planned. It has, assuming PIN value the findings presented above, generated a practice debate for the UK, outlined below and at the same time, placed ESRC-funded conceptual research at the centre of housing-productivity policy discussions in both Australia and Canada. There is the potential to have a high-level summit of researchers, policymakers and senior practitioners across all three countries (and interested others) around the theme of 'Metropolitan Change, Housing and Productivity: Progressing Research and Policy'. The team are already aware that London, Edinburgh, Manchester, Melbourne, Sydney, Vancouver and Toronto would be interested in contributing to such an event.

There is also an obvious potential gain in promoting a collaborative research network around this theme. If the UK/ESRC is to maintain a presence in leading research in this topic these developments should occur prior to autumn 2020. The research team that have developed this pathfinder are all based at or connected to the University of Glasgow and would have no difficulties in taking any such initiatives forward under the rubric of CACHE (this would simplify international networking) and Maclennan and Miao already have close working links with key Australian research centres and the Canadian housing research hubs soon to be announced by SSHRC.

5.2 Talking at Home

During December 2019, and throughout the project, the research team worked extensively with senior municipal officials in housing, planning and economic development and with leading housing practitioners. Places for People have been enormously supportive of this extensive co-production, as have the Community Housing Industry of Australia. The team have also worked with groups rethinking spatial and housing policies for the UK and have written a Briefing Paper for Lord Kerslake’s Commission on UK 2070.

There is an appetite in the housing sector to generate a new understanding and conversation about ‘housing as economic infrastructure and as a productivity shaper’. There is a recognised need at local and metropolitan government levels, within the not-for-profit sector and in the peak bodies for the private housing and business sectors that there needs to be a new understanding of these connections. Concerns relate not solely to the need to raise supply responsiveness to capture agglomeration gains as real, long-term productivity gains, but also to rethink how better housing outcomes could shape more inclusive patterns of economic growth.

As this project concludes, the research team with Places for People will seek support to work with the major professional bodies in housing, planning and economic development (CIH, NHF, RICS, RTPI, for example) continue to inform better ‘case making’ for housing investment policies, communicate the broad framework above to non-economist professionals within the housing and infrastructure sectors, develop a clearer emphasis of the business consequences of unaffordable housing and the implications for business growth and potential displacement of economic activity where housing shortages prevail. This would, ideally, entail, the development of continuing a knowledge co-production programme of engagement with key national housing organisations and key housing providers across the UK.

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