

BRIEFING PAPER

STRONG FOUNDATIONS

Executive Summary

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- The cost of housing and office space in the UK is high by both international and historical standards, especially in the most productive towns and cities. Average rents in the UK have increased by 12.3% since 2015.¹ They have risen fastest in the most productive places, like London, Cambridge and Bristol.²
- Expensive housing makes people poorer in well-understood ways causing lower disposable incomes, lower rates of home ownership, longer commutes, poor quality housing, and overcrowding.
- Alongside these issues, high housing costs also have indirect long-term impacts because they affect people's decisions about where to live and what job to take, meaning that people are less likely to take jobs they are better suited to, have fewer people to collaborate with and learn from, experience higher startup costs for their business ideas, and have less of a stake in economic growth. Together, these effects mean that high housing costs undermine economic growth in general.
- The high cost of housing is primarily driven by a failure to grant sufficient permissions for development. Simply put, there are not enough homes being built.
- The last available data from the Office for National Statistics indicate that the total value of UK housing exceeded the current cost to rebuild that housing at today's costs of labour and materials by over £3 trillion. In a better-supplied market, that difference would be far lower.³
- The forthcoming Levelling Up Bill represents a major opportunity to tackle the UK's persistent shortage of housing and office space.
- **The Department for Levelling Up, Housing, and Communities should consider the following policies in the bill:**
 - Street Votes to create street plans, block plans and mansard extensions according to a design code voted on by residents.
 - Liberalise Green Belt rules to allow for homes to be built close to tube and train stations.
 - Build more public transport so that people can reach more jobs, thereby benefiting from the economics of larger clusters and cities.
 - Make it easier to convert properties between different use classes
 - Encourage local authorities to green-light high quality micro home projects in city centres.
 - Trial community land auctions which allow for local authorities to raise funds through the value uplift that planning permission gives to land.

1 Office for National Statistics. (August 2021). Index of Private Housing Rental Prices, UK: August 2021.

2 Collinson, P. (12 January 2016). Brighton and Bristol tenants hit by 18% rent rises in 2015. The Guardian.

3 Office for National Statistics. (January 2022). Main Figures: From our time series explorer.

Introduction

The UK is experiencing an acute housing shortage. Since 1980, the number of homes being built every year has declined by 44% while the population has been steadily increasing.^{4, 5}

The reason we know that there is a policy-induced shortage of housing, and that people are not simply choosing to live in larger groups, is that house prices substantially exceed building costs. It costs roughly £150 per square foot to build new housing, yet new housing sells for twice as much in many parts of the country.⁶

The shortage is getting worse too. House prices are rising quickly; outstripping inflation, GDP growth, and wage increases. The average UK house price is now ten times what it was in 1980, after adjusting for increased wages.⁷ In London, it is fifteen times what it was in 1980.⁸

The price of a house has risen much faster than the cost of building a house. The cost of rebuilding all the houses in the UK would be about 100% of GDP and this has been the case for the past 25 years. But during this time, the cost of land has doubled from a similar 100% of GDP to 200% of GDP.⁹

Offices are similar. You can get another measure of how scarce buildings are by comparing the value of a square foot of garden space to the value of a square foot of land under a building. The difference between these two numbers gives an indication of how much of the extra post-build-cost price of a building is due to natural scarcity caused by geography and how much is due to scarcity caused by planning restrictions. In London's West End, land under offices is worth eight times more than garden space and in the City it is three times more. In other parts of the country, where buildings are less scarce, this relationship is less extreme. In Bristol, land under offices is only twice as expensive, slightly less than Paris, Amsterdam and Barcelona.¹⁰

House prices rising above the cost of building and the value of land indicates that supply is unresponsive to demand. In other markets, when prices rise above costs and firms make large profits, new suppliers enter the

4 Office for National Statistics. (January 2015). Housing and Home Ownership in the UK.

5 Office for National Statistics. (January 2015). The Changing UK Population.

6 According to the Office for National Statistics, the average UK house prices is £270,000 and average dwelling size is 900ft. For building costs: Hughes, S & Southwood, B. (February 2021). Strong Suburbs. Policy Exchange.

7 Our World in Data. (January 2022). Nominal wages, consumer prices, and real wages in the UK, United Kingdom, 1980 to 2015.

8 Land Registry Data. (January 2022). House Price Statistics.

9 Harding, R. (15 July 2014). Target the planning laws not the one per cent. The Financial Times.

10 Cheshire, P. C., & Hilber, C. A. (2008). Office space supply restrictions in Britain: the political economy of market revenge. The Economic Journal, 118(529), F185-F221.

market and increase competition. But not in this case. Housebuilding has failed to increase sufficiently to meet demand because the planning system tightly rations what can be built and has led to decades of undersupply causing skyrocketing prices.

This has led to a range of well understood direct harms like reduced disposable incomes, overcrowding, low rates of home-ownership, longer commutes, and poor quality housing. But alongside these direct impacts, there are more hidden harms. Productivity, economic dynamism, and entrepreneurship are all damaged by high housing costs and recent research in urban economics suggests that these harms are magnitudes more significant than the initially salient harms. In the first section I focus on four of these indirect harms.

1. **Inefficient allocation of talent:** People are discouraged from living near the jobs they are most suited to so they are unable to make the best use of their talents.
2. **Unrealised benefits from agglomeration:** People have smaller networks which means they have fewer people they can work with and learn from. Therefore research and innovation happens less, is of a worse quality, and is less likely to be translated into products and services.
3. **High barriers to entry and reduced business competitiveness:** Higher housing costs mean that businesses have to pay more in wages and rent, which means that ventures that would otherwise be successful are instead unprofitable.
4. **Undermining public and political support for pro-growth entrepreneurship:** Rising housing costs in the most productive regions mean that large shares of gains of economic growth, instead of being translated into better standards of living generally, go to landlords. This creates groups of people who lose out from economic growth and are politically motivated to halt it.

In the second section I summarise recent economic research on the impact of development constraints on housing costs in the UK and US and review a range of estimates of the total economic impact of these development constraints.

The forthcoming Levelling Up Bill represents a major opportunity to increase the amount of land allocated for development in the UK's most productive cities. In the third and final section I highlight a range of policy options to increase supply and, in turn, unlock economic dynamism.

The impact of housing supply on productivity

Inefficient allocation of talent

If a founder cannot build the right team around them, they are going to struggle to build and scale good companies. By reducing the pool of talent an entrepreneur can draw upon, we limit the success of British firms. High housing costs shrink the talent pool because housing is most expensive in the most productive places, which stops people from moving to the jobs where they can make the most money and have the greatest impact.¹¹

There will be many people who have to choose between a high-paying job in a tech cluster, or a lower-paying job somewhere with cheaper housing. Many of them will choose the lower paying job because it means a better standard of living.

For example, a one-bedroom flat within a half hour walk of AstraZeneca's Discovery Centre in Cambridge costs about £1,500 per month to rent. If you worked as a senior research scientist you could expect to earn about £45,000, the 75th percentile wage for Cambridge, meaning that after tax, student loan repayments, and rent, you would be left with a disposable income of about £1500 per month. In Blackpool, someone working handling insurance claims can expect to earn about £35,000, also the 75th percentile wage for their city. A one-bedroom flat, within a half hour walk of Aviva's offices, costs about £400 per month to rent. A person in this situation would have a disposable income of about £1,800 per month.^{12, 13}

Although a person in Blackpool earns less money on paper, they are in many ways better off than their counterparts in Cambridge. This is especially clear when you consider that things are often more expensive in Cambridge because restaurants, shops, and supermarkets also have to pay higher salaries and higher rents too.

Those in Cambridge often have to live with less space, either in smaller homes or by living with people they may otherwise choose not to. The amount of space per person in Blackpool is 44.6sqm, compared with just 36.1sqm in Cambridge. In general across the UK, the more productive a city is, the less space there is available per person.¹⁴ In fact, an analysis by the Industrial Strategy Council, reproduced in the Levelling Up White Paper found that there was a moderate-to-strong negative correlation between productivity and rooms per person.¹⁵

“High housing costs shrink the talent pool because housing is most expensive in the most productive places which stops people from moving to the jobs where they can make the most money and have the greatest impact.”

11 Centre for Social Justice. (July 2019). Housing Commission: Interim Report 4.

12 Zoopla & Google Maps, author's analysis

13 Office for National Statistics. (October 2021). Earnings and hours worked, place of residence by local authority: ASHE Table 8

14 Centre for Cities. (November 2019). Revealed: Cities offering the most – and least – living space per person.

15 Department for Levelling Up, Housing and Communities. (2022) Levelling Up the United Kingdom.

The life sciences are an industry where Britain is world leading, but the staff who work there are punished particularly harshly by the cost of housing. Because the industry is mostly based around top universities, and many of the companies in the sector spin out from these universities, most life science companies are based in high-housing-cost cities such as London, Oxford, and Cambridge. As a result, the people who work in the sector often cannot afford to live in family homes near their offices. Instead, they move further out from the centre. As a result, when compared to other industries, people who work in the life sciences are 26% more likely to say that they are dissatisfied with the length of their commute, 24% more likely to say that the cost of their commute is a burden, and 23% more likely to say they were dissatisfied with their public transport options.¹⁶ This creates a pressure on people to leave the sector, especially if they have other responsibilities like a daily school run.¹⁷ As a direct consequence of the housing shortage growth is constrained in a sector where the UK has multiple natural advantages.

The lower living standards in key hubs also makes it harder for the UK to attract the best and the brightest talent. The world's best researchers in AI, battery design or vaccines will be looking at the difference in rents when deciding whether or not to move to London or Berlin. Our high housing costs discourage them from taking that leap, and we lose out on their abilities entirely. We also lose some of our home-grown talent who may choose to do the same job abroad in a place with cheap housing. As a consequence, we may lose some of our best entrepreneurs and researchers to places in the US with better developed clusters.

16 Savills. (March 2020). Life Sciences: Trends and Outlooks.

17 Babu, A. (October 2021). Inspiring Innovation.

CASE STUDY: PETER FRANCIS, FLUIDSTACK

FluidStack's marketplace democratises the cloud industry. An Airbnb for data centers, it connects businesses and researchers to the world's largest network of data centres. They get the same server quality as Amazon or Google but at 80% lower prices.

FluidStack is based in London. Peter Francis, one of the co-founders, says "the reason we chose London is that the whole founding team has ties to the city and it has good fundamentals; the English language, there's a good startup scene, and it's a fun place to live."

"But if we didn't have those original ties, would we choose to live in London?"

For Peter, housing costs are a drawback and a lot of decisions are made to minimise their impact when they can. They use WeWork so that staff can cut down on commute times by using their nearest office, but this comes at the cost of teams working together less and cannot be done all the time. They also hire staff remotely for roles that don't require them to be on site – talent from India, Brazil, and Nigeria costs less than in London, so for many positions a London-based candidate is simply not price competitive.

"With technology there is a popular cultural archetype of a nerd who invents something alone in their basement. No doubt this does happen. But most inventions are born through collaboration, rather than from isolated genius."

In addition to people sorting into less productive jobs, the people who do live in expensive cities are less productive than they otherwise would be. This is because they can no longer work with the people who were priced out of the city. A highly productive researcher can't work with a peer in the same field and learn from them. It also means that they cannot have support staff, because those staff cannot afford to pay the high cost of housing in the city. That means they spend more time on paperwork and lab maintenance, and less on research.

Unrealised benefits from agglomeration

One of the main issues with limiting the number of homes built is that it limits people's ability to cluster. British cities are smaller and less well connected than they would naturally grow to be. Limiting people's ability to cluster is one of the main ways that the housing shortage impacts entrepreneurship and therefore the entire economy.

Current planning rules in the UK stop cities from growing, making them less productive as a result. In countries where the workforce are mostly knowledge workers, smaller towns and cities are less productive and less innovative places than their larger neighbours. In a developed nation, if one city has twice the population of another, it will tend to have more than twice the amount of economic activity than its smaller neighbour.¹⁸

¹⁸ Bettencourt, L. M., Lobo, J., Helbing, D., Kühnert, C., & West, G. B. (2007). Growth, innovation, scaling, and the pace of life in cities. *Proceedings of the national academy of sciences*, 104(17), 7301-7306.

According to the economic research, doubling a city's size tends to make its residents between 2% and 11% more productive per capita.^{19, 20} This is partly because people have access to a larger labour market allowing employers and employees the ability to find themselves better matches than they currently have.²¹ If you want to be a university lecturer in Ceredigion, the only possible employer is the University of Aberystwyth. If you live in Manchester there are five universities you could work for, and even more in nearby Liverpool, Leeds or Sheffield. This will make it easier to move to somewhere with a more interesting department, more prestige, better hours, or better pay.

Larger cities also have better resources. There is more variety and competition for services being provided. For individuals this usually means better entertainment venues, restaurants, childcare options, healthcare, shops, and schools. For businesses this will mean better support staff, more office space to choose from, and other factors that could make the business more productive.

People in large cities also have access to better networks. In a smaller city, there are fewer people to meet and network with. Less choice means worse networks so connections between people in similar fields are less good than they could be. This limits their ability to learn from each other and work together. We could make people richer by increasing the number of people they know who work in the same industry – enabling more knowledge spillovers.

Although larger cities are on average more productive than smaller cities, this relationship is significantly weaker in the UK. An analysis by the Centre for Cities found that poor public transport provision plays an important role in limiting the effective size of the UK's cities (itself a stronger predictor of productivity levels). For instance, two-thirds of people in Europe's big cities can reach their city centre in under half an hour using public transport, compared to just two-fifths in Britain's big cities. Approximately, 67% of people in big European cities can reach their city centre by public transport within 30 minutes, compared to only 40% of the people in Britain's big cities. The study's authors estimate that raising the effective size of big cities to European levels would increase agglomeration benefits by £23.1 billion each year.²²

19 Duranton, G., Henderson, V., & Strange, W. (Eds.). (2015). *Handbook of regional and urban economics*. Elsevier.

20 Lobo, J. L. M. A., Bettencourt, L. M., Strumsky, D., & West, G. B. (2011). The economic productivity of urban areas: Disentangling general scale effects from local exceptionality. In Santa Fe Institute working paper SFA-2011-09-046, September.

21 Dauth, W., Findeisen, S., Moretti, E., & Suedekum, J. (2018). Matching in cities (No. w25227). National Bureau of Economic Research.

22 Rodrigues, G & Breach, A. (November 2021). *Measuring Up: Comparing public transport in the UK and Europe's biggest cities*. Centre for Cities.

CASE STUDY: LEO RINGER, FORM VENTURES

Form Ventures invests in early-stage tech companies taking on markets where public policy and regulation matter, and helps founders navigate these issues by drawing on the team's extensive experience. It is investing out of a £30m fund.

Leo Ringer, a founder at Form Ventures says, "We just took out a lease on a central London office, which perhaps runs contrary to the 'new normal' way of remote working. But we are a new and small team of four, so the ability to be together in person is something we decided was valuable. We are also in an industry where we continuously meet founders, investors, and other stakeholders, so having somewhere to invite people is helpful".

They chose central London, despite the high cost, because their homes are spread out all over London, and because it minimises travel for visitors. The majority of VC deals take place in London – which is something they want to change – but it is where most of the industry currently is. London is a major talent pool for both investing and public policy, which is key to the skillsets Form Ventures is interested in. "We built our team from two to four, where it will remain for the time being and we're absolutely thrilled with the talent we managed to attract."

"It's certain that we could all live in bigger or nicer housing if we weren't London based. That feels like the big compromise we make to be here. Another would be the much higher cost of childcare, which is a relevant consideration for half the team. It's possible that when we recruited for two new team members we lost out on talent that was not already proximate to London or able to relocate. We specified that we didn't require more than two days of in-person work in London per week as one way to address this. We could have afforded a bigger office outside London too. But all this didn't outweigh the benefits of being here in our assessment."

"London is home to the most expensive office space in the world, costing on average £277.50 per sq ft."

This is intuitively understandable when thinking about places like Los Angeles. Everyone knows that LA is where a person goes to make films. This means if you're casting for a role you know where to find the most talented actors. If you want to sell sets, you know where to find the most buyers. The people interested in making films, once they live in the same area, go to the same parties and coffee shops. They form vast networks and introduce each other to helpful contacts. As a result, new ideas and projects grow out of this cluster of creative people.

The same is true for other industries too. With technology there is a popular cultural archetype of a nerd who invents something alone in their basement. No doubt this does happen, but most inventions are born through collaboration, rather than from isolated genius. Steve Jobs had

his biggest impact when he could collaborate with a host of thousands of talented experts in design, software, and hardware technology. He designed Apple and Pixar offices to make sure people bumped into one another, giving them chance moments to combine ideas together. Steve Jobs's initial ideas were themselves inspired by the work of the Palo Alto Research Centre (PARC) a collaborative office inspired by the same principles, with large teams of individuals each adding elements to ideas.

We can see the positive effects of clusters in practice. When a new factory is opened next to an old one, the new factory raises the productivity of the people in the older factory. This happens because the people in the newer factory meet their neighbours and share information, they will move between the companies and learn new ways of working, and the factory owners have to innovate more because of higher competitive pressure.²³

When people move from a small city to a larger one they earn more.²⁴ An American computer scientist moving from the median-sized cluster in computer science (Gainesville in Florida) to the 75th percentile cluster (Richmond in Virginia) tends to increase her productivity by 12% on average.²⁵ Researchers in larger cities are more productive too and as a result they file more patents per capita.²⁶

The Bay Area illustrates this point well. With a population of 7.5 million it has created more billion dollar startups than the entirety of Europe, which has 100 times the population. This is not just because large cities attract the best talent, although this is certainly part of the effect. The same inventors create more, and file better quality patents, when they move to bigger cities.²⁷ This is in part because innovators are more likely to be exposed to ideas from across disciplines in denser cities, but also because they have access to support allowing them to focus on inventing opposed to administrative or salesmanship.

More unconventional ideas also disproportionately come from bigger cities.²⁸ This is because smaller towns can sometimes sustain a highly specialised cluster, like space-tech in Harwell, but larger cities can sustain multiple industries, which result in inventive people with different backgrounds finding unusual areas of commonality to pursue innovation in. This is why London is world-leading in fintech – it was already a global centre for both tech and financial services, and as a result it gave birth to a new industry.²⁹

23 Roca, J. D. L., & Puga, D. (2017). Learning by working in big cities. *The Review of Economic Studies*, 84(1), 106-142.

24 Ibid.

25 Moretti, E. (2019). The effect of high-tech clusters on the productivity of top inventors (No. w26270). National Bureau of Economic Research.

26 Balland, P. A., Boschma, R., Crespo, J., & Rigby, D. L. (2019). Smart specialization policy in the European Union: relatedness, knowledge complexity and regional diversification. *Regional Studies*, 53(9), 1252-1268.

27 Ibid.

28 Berkes, E., & Gaetani, R. (2021). The Geography of Unconventional Innovation. *The Economic Journal*, 131(636), 1466-1514.

29 Deloitte. (January 2022). *The UK FinTech Landscape*.

Entrepreneurship is contagious. People who work with or live near entrepreneurs are more likely to become entrepreneurs themselves.^{30 31} While it is difficult to establish that this relationship is causal since it is plausible that people who have entrepreneurial traits may also choose to work for the same companies and live in the same areas, we do know that children raised by entrepreneurs are more likely to become entrepreneurs, even if they were adopted and students who were randomly assigned entrepreneurs as mentors were more likely to found startups themselves.^{32,33} So there is significant evidence suggesting that social ties to entrepreneurs and innovators are important for driving more innovation.

Higher barriers to entry and reduced business competitiveness

The same factors that are causing a shortage of houses also cause a shortage of office and lab space.

London is home to the most expensive office space in the world, costing on average £277.50 per sq ft.³⁴ Of this, the shortage of office space costs businesses an extra £32 per sqm, meaning that an average firm of 300 people needs to spend an extra £48,000 on rent than they otherwise would.³⁵

We also seriously lack lab space, and analysis of planning data shows there are few plans to build more. To put this scarcity into perspective, according to Savills, London has only 90,000 sq ft of available lab space, while Manchester has 360,000 sq ft available. By contrast, New York has 1.36 million sq ft available.³⁶ The current trend is for research teams to custom install their own lab space into generic office buildings. But labs often need bespoke design, e.g. higher ceilings to allow for fume hoods, ventilation systems, or an unusual layout of corridors. For example, 'dirty corridors' between labs mean that researchers do not need to 'gown-up' and 'gown-down' as they do when they're working out of a traditional office building.

Together, this presents an additional cost to entrepreneurs who, in addition to having to pay for higher staffing costs, also have to pay more in rent.

Undermining public and political support for pro-growth entrepreneurship

In a democratic society, key institutions that sustain our living standards

30 Nanda, R., & Sørensen, J. B. (2010). Workplace peers and entrepreneurship. *Management science*, 56(7), 1116-1126.

31 Giannetti, M., & Simonov, A. (2009). Social interactions and entrepreneurial activity. *Journal of Economics & Management Strategy*, 18(3), 665-709.

32 Lindquist, M. J., Sol, J., & Van Praag, M. (2015). Why do entrepreneurial parents have entrepreneurial children?. *Journal of Labor Economics*, 33(2), 269-296.

33 Eesley, C., & Wang, Y. (2017). Social influence in career choice: Evidence from a randomized field experiment on entrepreneurial mentorship. *Research Policy*, 46(3), 636-650.

34 Pitcher London. (November 2020). 'World's Highest Ever' Office Rent Secured in London.

35 Ibid.

36 Ibid.

and wellbeing, like property rights and a tolerance for risk taking and entrepreneurship, depend on popular support. If that support is undermined then politicians are going to deprioritise policies which grow the economy. There is a risk that housing scarcity, by giving many an interest in lower growth (as it keeps rents down), reduces people's support for the key institutions of a dynamic market economy.

Houses continue to go up in price and they sell for much more than the cost of the land (without planning permission) and the cost of building them. Property is considered to be a safe investment, and we expect it to appreciate in value. Investors in the UK and many other developed countries thus bid the prices of houses up much higher than they otherwise would be. Yet this is not what happens in the places with more liberal planning systems.³⁷

In most wealthy countries, policy choices limit the number of homes that can be built. What is valuable, and what people are paying for, is not the house and not the land, but actually the tightly rationed legal right to build something. As a result of this situation, land without planning permission in places like Oxfordshire is worth 1% of the value of identical pieces of land with planning permission granted to it.³⁸

The housing market operates more like the luxury art or gold market, and less like the market for durable things that people consume, like refrigerators and cars. As we have become richer, the cost of consumables has decreased as a proportion of people's wealth. In terms of hourly wages, the cost of a 19-inch colour television has fallen to 10% of what it cost in 1975, despite the fact that a television now grants access to much more entertainment than it did then.³⁹ The same is true for cars, clothes, and other things people want to buy.⁴⁰

Unlike luxury art or gold, people cannot opt out of consuming housing. So as we get richer, the cost of housing increases, which means that many of the benefits of growth have instead of being translated to raised standards of living been absorbed by landowners. This is true across western nations.⁴¹ When we look at the US specifically, we can see that this trend is strongest in the states with the most restrictive planning rules.^{42, 43}

“Renters, who would benefit the most from new development in general, have little incentive to campaign or lobby in favour of new development near them.”

37 Glaeser, E., & Gyourko, J. (2018). The economic implications of housing supply. *Journal of Economic Perspectives*, 32(1), 3-30.

38 Murphy, L. (November 2016). *The Invisible Land: The hidden force driving the UK's unequal economy and broken housing market.*

39 Boudreaux, D. (1 January 2013). *Cataloging Our Progress from 1975: Using Sears.com's Selection on New Year's Day 2013.* Cafe Hayek.

40 U.S. Bureau of Labour Statistics. (January 2022). *Consumer Price Index for All Urban Consumers: New Vehicles in U.S. City Average/Hourly Earnings: Private Sector for the United States*

41 Piketty, T. (2018). *Capital in the twenty-first century.* Harvard University Press.

42 Rognlie, M. (2016). *Deciphering the fall and rise in the net capital share: accumulation or scarcity?* *Brookings papers on economic activity*, 2015(1), 1-69.

43 La Cava, G. (2016). *Housing prices, mortgage interest rates and the rising share of capital income in the United States.*

In a well-functioning market for housing, when investment is attracted to the area, we would see a temporary increase in rents that would attract more construction. And then we would see rents fall after more homes were built. In the UK, the current planning rules stop this from happening. Instead, we see rising wages and productivity gains for some workers, driving down the standards of living for other people who live in the same town or city.

When growth makes people worse off, people have less of a reason to support pro-growth measures. We see this with fights about gentrification, where people will lobby against measures to improve their area, because they believe it will price them out.

How much is this costing us and how did we get here?

Quantifying the combined impact of the harms described above is not straightforward. Some types of harm are inherently difficult to make numerical estimates for because they rely on knowing what would have taken place in a counterfactual universe. We do not know precisely what would have happened if housing had been 10% cheaper in London.

But, a range of academic estimates, focusing largely on the US, suggests that the impact of inefficient talent allocation and foregone agglomeration effects are extremely large. Hsieh and Moretti analysed metropolitan areas in the United States and found that if planning restrictions in New York, San Jose, and San Francisco were as liberal as they are in the median US city, then GDP would be 8.7% higher. This result implies an average wage increase of about \$8,775 per person per year.⁴⁴

Using similar methodology, Nobel Prize winning economist Ed Prescott found that deregulating land-use restrictions from 2014 levels to 1980 levels would increase aggregate productivity by 7% and consumption by 5% in the US.⁴⁵ Another team of economists estimated that there would be an even greater impact if cities in the US adopted more permissive planning rules. They predicted that there would be a 25% boost to GDP in the long run.⁴⁶

There is reason to believe that a similar sized reduction in restrictions on housing supply would have even bigger effects in the UK than the US. Planning law in Britain is, in many ways, more restrictive than in America. Furthermore, regional inequality within the UK is very high. In fact, the

44 Chang-Tai Hsieh and Enrico Moretti. (2015) Housing constraints and spatial misallocation. No. w21154. National Bureau of Economic Research

45 Herkenhoff, Kyle F., Lee E. Ohanian, and Edward C. Prescott. "Tarnishing the golden and empire states: Land-use restrictions and the US economic slowdown." *Journal of Monetary Economics* 93 (2018): 89-109.

46 Duranton, G., & Puga, D. (2019). Urban growth and its aggregate implications (No. w26591). National Bureau of Economic Research.

difference between Britain's most and least productive places is greater than post-reunification Germany.

As a result, the model that predicts that Americans would be \$8,775 better off suggests that solving the UK's housing shortage would boost GDP by as much as 30%.⁴⁷ This would be an extra £9,000 per person.

So how has this happened?

As discussed, the UK suffers from a shortage of buildings, and the usable floorspace they provide. In most markets, if demand exceeds supply then prices rise and the market attracts more producers and sellers. The consumption of housing has major obvious externalities. Therefore, in most countries the supply of housing is regulated to limit spillover costs. In Britain, this used to be done with a simple regulatory system that prevented ugly facades and buildings from casting excessive shadows on their neighbours, but otherwise allowing homeowners to do broadly what they wanted with their properties. Since then, we have shifted to a system where homeowners need explicit permission from a planning authority to develop anything. This decision process is not strongly influenced by price signals and has led to a chronic undersupply of new buildings.

Social scientists such as Mancur Olson and Elinor Ostrom have demonstrated how different groups' incentives and capacity to organise can have a profound impact on which policies are adopted by different societies.⁴⁸ In principle, local governments have almost complete control over what can be built in their jurisdictions. As planners, their decisions are supposed to be driven, not by markets and price signals, but assessments of community 'need' and cost benefit analyses of what is best for the residents more broadly. However, they also face targets imposed from above, political constraints imposed from below, and political aims particular to each person and their area. In general, existing residents, including the homeowners who make up 63% of the population, have an active interest in limiting construction near them.⁴⁹ They believe that new homes will decrease the value of their own homes, increase the strain on local services, and that new buildings will be uglier and less pleasant than what they replace. They are often right on all these counts.

Renters, who would benefit the most from new development in general, have little incentive to campaign or lobby in favour of new development near them. Each individual new development will only have a modest impact on rents at the margin, while localised impacts in terms of disruption and congestion are often large and immediate. Because it is easier to enthuse and agitate people over the acute localised costs, there are powerful incentives for local authorities to block new developments.

"A similar rule exists in Israel and has accounted for a third of development in Tel Aviv since 2018."

47 Myers, J. (11 August 2017). The housing crisis: an act of devastating economic self-harm. CapX.

48 Olson, Mancur. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press, 1982. Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action. The Political Economy of Institutions and Decisions*. Cambridge ; New York: Cambridge University Press, 1990.

49 GOV.UK. (February 2020). Home Ownership.

This arrangement leads to consistent undersupply and causes immense damage to growth, entrepreneurship and living standards. The sooner we solve this problem and others like it, the sooner we can accelerate growth and catch up with wealthier nations like Germany, Canada or even the United States.

Options for reform

Expanding the construction of new market-rate housing is key to making it easier for entrepreneurs to start new companies. Importantly, the construction of new market-rate housing also has major positive impacts across the market for low-income households, professionals, and young families.

It may seem counterintuitive to focus on market-rate housing (sometimes described as ‘luxury housing’ in marketing material) over affordable housing, but research highlights the positive knock-on impacts of market-rate development. When a development of 100 ‘luxury’ flats was built in Helsinki, people towards the top of the income distribution moved into the new flats, but in vacating their old apartments they created new places for people to move. This ripple effect meant that 100 “luxury” flats created 60 vacancies in the bottom half of the neighbourhood and 29 in the bottom quintile.⁵⁰ This effect has been found in studies of the US housing market too.⁵¹ A large-scale increase in market-rate housing will see developers build for the top of the market and thus increase the average quality of the UK’s housing stock. The creation of “moving chains” will mean that all people will be able to benefit by moving into better houses than those they currently live in.

To enhance economic dynamism, housing must become more affordable to people who are moving to an area in search of higher earnings, not just for preexisting locals. This is the shortcoming of strategies that focus solely on below market-rate housing like “affordable housing”. This is not to say that affordable housing is unimportant, but rather that supply needs to be increased at all levels of the market.

It is also important for housing to be built in the right place, where productivity and agglomeration effects are most significant. In practice, this will mean building in places that are already very expensive and that are getting more expensive, which means we need a planning system that is more responsive to price signals.

To this end, the policy ideas outlined all seek to increase the quantity of market-rate housing in high-cost housing markets. This list is non-

50 Bratu, C., Harjunen, O., & Saarimaa, T. (2021). City-wide effects of new housing supply: Evidence from moving chains. VATT Institute for Economic Research Working Papers, 146.

51 Mast, E. (2019). The effect of new market-rate housing construction on the low-income housing market. Upjohn Institute WP, 19-307.

exhaustive, but outlines politically viable policy solutions that have gained traction and could feature in the upcoming Levelling Up Bill.

Street Votes

Local people are often bothered by construction near them, even where they support more construction in the country in general. They believe that more houses will mean noisy building work, pollution, more congestion, fewer parking spaces, and more ugly modern architecture. They are usually right on all these counts.

Under the current system they have the ability to object to what is being built but no option to alter plans to minimise externalities or in ways that creates outcomes from which they may benefit.

The policy known as Street Votes has gained popularity because it aims to solve this problem.⁵² Street Votes allow for residents to vote for new design codes independently of their local council. For example, a street of semi-detached suburban houses could vote to become moderately dense Georgian-style terraces. Streets would have an incentive to create and vote for “street plans” which would increase the value of their homes, give them space for extra childrens’ bedrooms, or for granny to move in.

There is a lot of money to be made from allowing a street to vote to densify. For example, a street of 26 bungalows in Barnet, if redeveloped into terraced housing, could make £54m, after accounting for building costs and the cost of rehousing the current occupants. This is enough money to compensate everyone involved and gives residents a strong incentive to vote for both increased beauty and density.

A similar rule exists in Israel and has accounted for a third of development in Tel Aviv since 2018;⁵³ in South Korea another similar policy allowed the amount of floor space per person to double even though the population grew from 38 million to 50 million over the same period.⁵⁴

Street Votes would also create more opportunities for SME builders. Under the status quo, allocating and approving a large site for development takes nearly the same resources as allocating and approving a small site suitable for SME builders. Given that the latter generates far fewer homes, councils have powerful incentives to prioritise the allocation of large sites to meet housing targets set by national government. Also, when developers want to build anything, they have to battle the council. This is an expensive and time-consuming process which means developers are better off building a portfolio of multiple projects as they seek approval for each – thus making the market tend towards bigger developers because small builders are more easily wiped out if they suffer a single setback. Because Street Votes would mean a more predictable supply of smaller sites, it would create

“In large European cities, two-thirds of people are able to reach their city centre by public transport within 30 minutes. However, in the UK, only two-fifths can.”

52 Hughes, S & Southwood, B. (February 2021). Strong Suburbs. Policy Exchange.

53 Central Bureau of Statistics. (March 2021). Construction Begun and Completed in 2020.

54 Avery, E. (2021). Exporting urban Korea? Reconsidering the Korean urban development experience. Urban Geography, 1-3.

more opportunities for small businesses to enter the construction market and create more opportunities for PropTech. For example, a company like LandBay, a peer-to-peer lending market for landlords, would facilitate more improvements under Street Votes by giving property owners access to the capital they need to extend their properties. If people move house more often to vacate properties as they redevelop or to upsize with the money they have made, then PropTech companies like Nested or Settled, which make it easier to sell homes should also see more use.

Green Belts

Green Belts are enormous tracts of land around UK cities on which building is restricted. The goal of Green Belts was to stop urban sprawl, with New Towns picking up the slack. But the New Towns that were intended to meet housing needs have not been built due to political opposition. Instead, Green Belt policy has often resulted in homes not being built at all. In other cases it has given rise to “leap-frog development” where places just outside the green belt attract housing built for people to commute into a city which is now much further away than it needs to be.

Because building densely is a good thing – it is more environmentally friendly, leads to more walkable communities, and gives rise to beautiful architecture – we would not want to see green belt designation removed wholesale. However, in places like London’s commuter belt, there is land around key infrastructure – literally, fields and cattle sheds next to Tube stations – where building homes is de facto banned.

A 2019 Centre for Cities report recommends removing Green Belt designation on agricultural land within 800m of a station, which is enough to increase the housing stock by 7%.⁵⁵ Importantly, this plan would still keep existing protections for Areas of Outstanding Natural Beauty. Transit-oriented development along these lines would have a powerful impact on housing affordability.

A 2017 Adam Smith Institute report recommends allowing local parishes to swap low amenity land with Green Belt designation for protections on more desirable land.⁵⁶ For example, they could grant planning permission to intensive farm land and protect woodland in a different part of their local authority.

Public Transport

Throughout the world, larger cities are more productive. From an initial look at the data, this relationship seemed like it was weaker in the UK. Further inspection of the data revealed that this is directly related to poor public transport connections in British cities. If the roads become congested at peak hours, then people cannot travel from one side of the city to the other, so the city operates more like a collection of small towns.

55 Cheshire, P. & Buyuklieva, B. (September 2019). Homes on the right tracks: Greening the Green Belt to solve the housing crisis.

56 Myers, J. (August 2017). Yes In My Back Yard: How to end the housing crisis, boost the economy and win more votes.

In large European cities, two-thirds of people are able to reach their city centre by public transport within 30 minutes. However, in the UK, only two-fifths can. Historically our planning rules mandated low density housing with no more than 30 homes per hectare, which reduces the number of people who can live close to city centres or train stations.⁵⁷ According to Centre for Cities research, this effect costs the UK economy more than £23.1bn every year.⁵⁸

One way to increase the size of our cities, without even needing to build any new housing, would be to improve public transport networks inside cities. For that to be economically viable, we need to make better use of the land within those cities, adding more housing while improving those neighbourhoods.

Change of Use

We should make it easier for people to convert properties between different types of use. The economy is fast-moving and dynamic. We have seen regions that used to be full of factories turn to wastelands as the economy has moved on. British cities currently have an average retail vacancy rate of 10%, indicating that we have a surplus of retail property.⁵⁹

Ideally it would be easy to turn shops into offices, homes into labs, and cafes into co-working spaces, and it should be easy to turn them back again. Recent change has been positive and it is now easier to turn different types of commercial property into residential use but to have a truly dynamic supply of buildings, we need to make it easy to create more commercial property and more office spaces too.

There are reasons to be cautious though. Under the status quo, property designated for business use is taxed at a higher rate than housing. This is a distortion and under more flexible rules may cause more landlords to convert business property to housing than is ideal. There are already calls to replace business rates with a form of land value tax, which would solve other distortions caused by the tax and should be done as part of a liberalisation.⁶⁰

Micro flats and Co-Living

Young professionals at the start of their career who want to move to high-cost, high-productivity cities are forced to decide between lengthy commutes, sharing with strangers, or spending their entire paycheck on rent. In many cases, they accept all three. It is in effect impossible for young professionals on average incomes to live alone in London, Oxford, or Cambridge. High rates of house-sharing might reflect a preference for

"Decades of policy choices in the UK, driven by strong political incentives, have led to planning rules which restrict the amount of housing that is built."

57 Communities and Local Government. (June 2011). Planning Policy Statement 3.

58 Rodrigues, G & Breach, A. (November 2021). Measuring Up: Comparing public transport in the UK and Europe's biggest cities. Centre for Cities.

59 Breach, A & McDonald, R. (June 2018). Building Blocks: The role of commercial space in Local Industrial Strategies. Centre for Cities.

60 Dumitriu, S. (February 2021). The problem with an online sales tax. See also: Corlett, A., Dixon, A., Humphrey, D., & Thun, M. V. (2018). Replacing business rates: Taxing land, not investment—Introducing the commercial landlord levy. Liberal Democrats.

community and friendship, but the relatively high rents (per square metre) for studio flats and one-bedroom households suggest that house-sharing is often driven by necessity. The specific shortage of one-bedroom and studio housing in high-cost cities is driven by inappropriate minimum space standards. In London, the average resident has approximately 33 square metres of floor space, but minimum space standards require that new one-bedroom houses have 50 square metres floor space.⁶¹ In cities we should expect to see houses of all different sizes built on a smooth curve, but instead we see bunching at the lowest amounts of floor space, with lots of one beds built with 50 square metres, two beds built with 70 square metres, and three beds built with 85 square metres of space. This implies that there is demand for smaller homes that is not being met.⁶²

Allowing the construction of new co-living developments, such as those proposed by the innovative property developer U+1, which have 25 square metre private bedrooms and provide residents with access to large communal areas shared across the development, would allow more new residents at the start of their career to live near the best job opportunities without being forced to find flatshares.

Recent criticisms of ‘rabbit-hutch homes’ prompted by a rise in the number of new flats in office-conversions, where minimum space standards did not apply until 2019, are not applicable to modern co-living developments, which are typically built to higher standards and creatively use furniture to increase space in practice.

The Department of Levelling Up, Housing and Communities should create a micro-housing and co-living regulatory sandbox to allow high-quality, innovative developments to be built providing new developments comply with local plans in all other ways. This sandbox would be used to generate new smarter space regulations, which take into account the fact that under the status quo most people have access to less than 37 square metres of floor space.

Community Land Auctions

As described earlier, the main “value” in a piece of land is not the land itself, but instead the planning permission granted to it. Councils can raise money by buying pieces of land, granting planning permission to it, and then selling it at the higher price.

One mechanism for allowing this would be a Community Land Auction in which landowners name prices at which they are willing to sell their land to the council for in 18 months time. The council can then write a development plan, taking these different prices into consideration, purchase

61 Breach, A. (2020). Minimum space standards make the housing crisis worse: here’s why’. Centre for Cities.

62 Breach, A. (31 January 2020). Minimum Space Standards are making the housing crisis worse. City Monitor.

the relevant pieces of land, and then sell it to developers.⁶³ The difference between the price named by the original landowner and the developer is profit that the council can then spend on public services, both for the residents of the new homes and existing residents, to make development a win-win.

The Department for Levelling Up, Housing, and Communities should work with local authorities to fund trials of Community Land Auctions.

Conclusion

Decades of policy choices in the UK, driven by strong political incentives, have led to planning rules which restrict the amount of housing that is built. When it is built, it is not necessarily built where it is most needed, nor the right size or type of style, and it is often poor quality.

Planning rules have made people poorer by increasing their cost of living. But there is an additional, even greater, hidden cost. The cost of housing holds back the rest of the economy. Workers are held back from doing the jobs where they are most productive, and because they cannot work with other people who are priced out of the towns and cities they live in, they become less productive still. Because people in smaller towns and cities have smaller networks, collaboration suffers which means we create fewer patents, lower quality patents, less unorthodox innovations, and inspire fewer people to start businesses. The people who do come up with ideas and decide to start businesses face higher barriers to entry, as they have to pay higher staffing costs and higher rents, as well as being unable to hire the best talent. Under this system, support for entrepreneurs and pro-growth policies is weaker because increased productivity and innovation pushes up rents and property prices. These effects together mean that the UK is about 30% poorer than it otherwise would be – costing the average Brit £9,000 per year.

Solving the housing shortage is one of the most important political problems facing the country. The Levelling Up Bill is an opportunity to spur on economic growth by building more private housing in the most productive places. In this report, I have set out several possible solutions, but anything that results in a major increase in the supply of housing in the places people want to live and work would be a policy win.

If we manage to take full advantage of this opportunity, we could see the problems described above reverse. If more housing is built we should expect to see the cost of living ease, as people have to fork out less of their paycheck on rents or mortgages. They will have access to more job opportunities so they can do work that suits them better, be it in a place where they can have a better office culture, earn more money, or have

⁶³ Leunig, T. (23 March 2013). Housing is expensive in Britain. This is because we have built too few houses for the number of new households – land auctions will help give us the homes we need.

a greater impact. People's networks will grow and we should see more learning, collaboration and inventiveness coming from all parts of the economy.

Some of the best entrepreneurs and tech talent are currently leaving Silicon Valley because the housing costs are too high. These people are moving to Miami and Texas, but with smarter housing policy, the UK would be an obvious destination. We have a lot of the raw material to be an attractive place to start a business: world class universities, the highest amount of venture capital investment in Europe, and a pre-existing wealth of companies and talent. If we manage to take full advantage of this opportunity we could see the UK become a tech centre to rival the United States.

Housing policy is only one pillar in this vision, but it is a necessary one if we want to make the country richer.

ENDORSEMENTS

Matt Clifford**Founder, Entrepreneur First**

The supply of great innovators is not fixed and there are lots of policies we could do to increase the number. We have two world-class innovation clusters in the UK - Oxford and Cambridge - whose growth is artificially held back by planning regulations. In both cities, it's extremely difficult to build new housing, which has knock-on effects for our ability to cluster talent. We shouldn't limit ourselves to Oxford and Cambridge, of course, but both places already benefit from agglomeration economics, so removing the restrictions is low hanging fruit.

Anne-Laure Le Cunff**Founder, Ness Labs LTD**

Early-stage founders and small businesses are the fuel driving our economy. And yet, many cannot afford the space they need to start and grow their business. I hope the UK can keep on attracting the best talent and encouraging entrepreneurial risk by addressing the extremely high cost of housing and office space that's currently hindering our growth.

Erika Brodnock**CEO, Optimum Health**

Expensive housing costs drive up costs for our staff. Many of our team members are now choosing to live outside of London and we are being forced to operate remotely, leading to suboptimal decisions to manage this constraint.

Maria Tanjala**Founder, FilmChain**

With the huge increase in energy bills and household goods, we're now seeing our London-based team start to consider moving outside of London, even to other countries with better quality of life. It's demoralising. Us, as employers, especially as startups, should not be forced to compensate for the broken system of living in London.

Rachel Wolf**Co-Founder, Public First**

Aria Babu has given a typically interesting and original spin on the classic (but correct) analysis that we make it too hard to build. She points to the highly detrimental impact this can have on the success of cities, and entrepreneurs within it.

Jevan Nagarajah
Founder, Better Dairy

As part of Better Dairy's mission to make products molecularly identical to dairy without involving any animals we need to hire the best research talent which means we have to be based in London. The high cost of housing makes our staff and building costs higher than they otherwise would be - which slows us down. We've taken some measures to minimise the costs, for example, we moved our offices and labs to the less central location of Hackney Wick to save money, but this is not without its downsides.

Andrew Evans
CEO, Smart Pension

For successful businesses like Smart Pension to grow to help as many customers as they can, strengthening UK leadership for tech startups and scale-ups, we critically need more housing and office space where it is most in demand. I enthusiastically support the recommendations of this report."

Simon Reeves-Jackson
Founder, Uni-Powa

Restricted supply of housing increases the wealth of the asset rich whilst levying an economic and social tax on the low to middle income families – it's morally reprehensible and economically illiterate.

Alison Surtees
Co-Founder, Future's Venture

It is impossible at any stage of your life, and acutely so for younger entrepreneurs coming up, to get a secure footing with accommodation for living and working near to major cities. The precarious nature of the rental market and upcoming rises in fuel costs will see much talent fail before they even get off the ground.

Lance Forman
Owner, Forman & Field

Planning Reform which will allow more housing is one of the biggest opportunities for Britain. It creates economic growth and increases living standards by reducing the cost of living. This should be a top priority.

Sharief Abdel-Hadi
Co-Founder & CEO, Apricot

The UK housing crisis is a real issue that is encroaching on ever more people. Without a significant increase in supply, this problem is only going to accelerate and make London and the UK an unattractive place for entrepreneurial, ambitious startups and their employees to call home. There is an opportunity to make positive change here - let's not miss it.

Elle Sharman**Founder, Swan**

I'd like to build my business in London, but that's an increasingly hard decision to justify when housing is often three times cheaper in other European cities. Everything that adds cost to founders' lives not only functions as a growth tax; it also limits the pool of people who can start businesses to those who already have disposable income, entrenching inequality from the outset.

David Murray-Hundley**Co-Founder & CEO, Pario Ventures**

As an investor in 75 businesses. One of the challenges I have seen in the past 10 years, but even more so in the last 2 years, is a massive rise in talent costs due to high housing costs. In particular cities like London, Bristol and Edinburgh. It has become so significant that alongside the rise in costs of technical development staff it has pretty much-raised salaries in some areas by 80%.

Daniel Pryor**Head of Research, Adam Smith Institute**

This important paper shows how the UK's housing crisis lowers living standards in more ways than we might expect and makes the case for reforming our broken planning system all the more compelling.

Ben Southwood**Senior Fellow, Create Streets**

Housing and the built environment are hugely important for how we live our lives. This brilliant new paper shows how they affect the economic world as well, suggesting that insufficient office space and housing are slowing down British growth and part of the reason we lag behind Germany, Canada, and the USA in earnings, income, and GDP per capita. Even better, it suggests a range of politically viable ways we could help the situation, including by enabling gentle density through sustainable improvements to our neighbourhoods. Hopefully some of these ideas will be reflected in the upcoming Levelling Up Bill.

John Myers**Founder, London YIMBY**

The high cost of housing causes many immediately obvious problems, like driving up the cost of living, and this is why lots of people initially join our network of YIMBY campaigners. However, the problem is much deeper than is immediately obvious and Aria spells out the ways in which the housing crisis makes the whole country poorer in important ways.

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