

Prior research by CPP estimates that such a policy shift could unlock over £200bn of potential investment in infrastructure and affordable housing over the next 20 years which would enable the government to meet its target of 300,000 for England.¹

Not much wage growth, and not inclusive either

Rising real wages for all sections of society has a long history as a central goal of public policy. Indeed, Adam Smith in the *Wealth of Nations* argued in favour of a high-wage, low-profit economy resulting from competition, and maintained through an increasing division of labour enabling unit production costs to fall.²

Recent evidence indicates that real wage growth is becoming increasingly elusive due to sluggish nominal wage growth and a higher rate of inflation relative to wages. Indeed, real wages in November 2018 for the United Kingdom remained lower than where they were a decade earlier in 2008.³

While an increasing number of lower and middle-income households have been affected by these rising costs, higher income households who are more likely to own a house with a mortgage have seen their housing costs fall due to the decline in interest rates since the onset of the financial crisis. The result of this is that housing costs for home owner occupiers with a mortgage have fallen substantially relative to renters.

Households across the UK have not only experienced limited wage growth over the last 20 years, but this limited growth has been characterised by a lack of inclusivity with higher income households seeing a fall in housing costs relative to lower to middle-income households.

Housing is the major driver of costs to households

An analysis of the growth of the components of the Consumer Price Index including owner occupiers housing costs (CPIH) relative to their weights indicates that housing costs have had the most impact on consumers over the last 20 years. Although baskets such as education and alcohol, tobacco and narcotics have grown faster, their low weighting in the index

means that this has had far less impact on consumers. Chart 1 shows that housing costs contributed to 35% of the overall increase in CPIH over the period.⁴



To a large extent the role of housing costs in consumers' lives should not be surprising. House prices have increased in the last 20 years at a much faster rate than earnings, resulting in the median house price to median earnings ratio roughly doubling.⁵

A weighted analysis of the components that make up the CPIH housing cost index indicates that rents, owner occupiers housing costs, and electricity, gas and fuels explain close to 80% of the weighted contribution to the price index increase.

Once the effect of rising oil prices is removed, which increased from just under \$20 per barrel in 1997 to over \$60 per barrel in 2018, rising housing costs are largely driven by rents and owner occupier costs. Owner occupier costs are estimated by the ONS using a rental equivalence approach which uses rental prices as a proxy for the cost of housing services.⁶

Although this more detailed analysis sheds further light on the cost drivers for households including rent and rental equivalence, it does not provide any detail on the impacts of households by tenure or at different parts of the income distribution. Furthermore, rental equivalence does not measure what households are actually spending on housing services. To assess these issues requires a better understanding of the relationship between income and tenure.

1 Aubrey, T. (2018) *Gathering the Windfall*. Centre for Progressive Policy. Available at <https://www.progressive-policy.net/publications/gathering-the-windfall-how-changing-land-law-can-unlock-englands-housing-supply-potential>

2 Smith, A. (1986) 'Chapter 9: Of the Profits of Stock', in *The Wealth of Nations*. Penguin Classics: London.

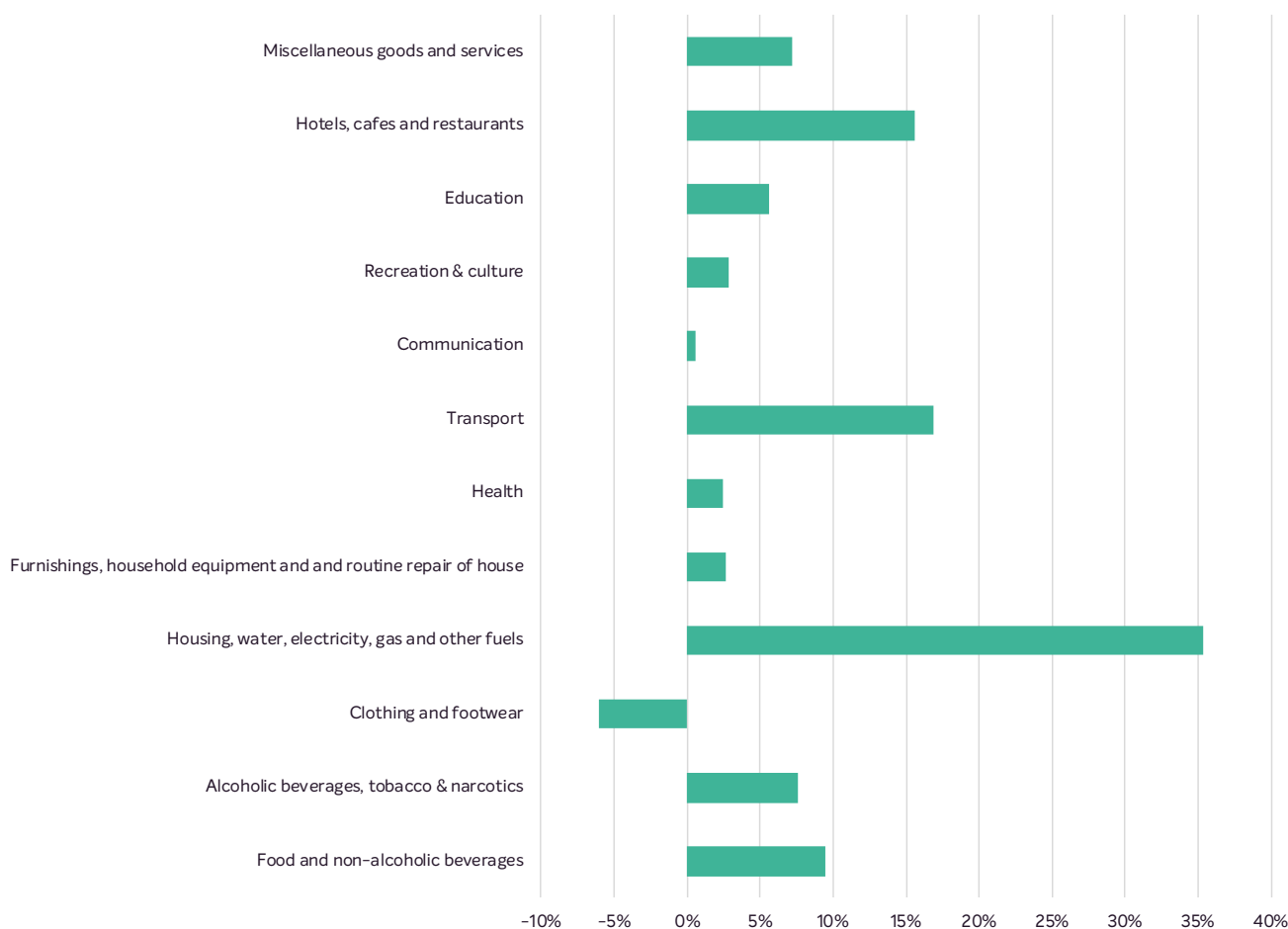
3 Office for National Statistics (2019) UK Labour Market: January 2019, Figure 8a:15. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/january2019#average-weekly-earnings>

4 Housing costs include rent, owner occupiers housing costs, maintenance, water, electricity & fuel and council tax. Capital payments are excluded as they are not viewed as costs as per the national system of accounts.

5 Office for National Statistics (2018) *Housing affordability in England and Wales*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/2017>

6 The rental equivalence approach to measuring owner occupiers' housing costs targets the measurement of ongoing consumption of owner occupiers' housing services, rather than when they are acquired or when they are paid for. See: Office for National Statistics (2016) *Measures of owner occupiers' housing costs UK: April to June 2016*. Available at: <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/understandingthedifferentapproachesofmeasuringowneroccupiershousingcosts/quarter2aprtojune2016>

Chart 1: Cumulative weighted contribution to CPIH 1997-2018



Source: ONS, CPP

Housing and income across the distribution

An insight into these relationships can be gleaned by an analysis of the Households Below Average Income (HBAI) database which is the foremost source for data and information about household income and inequality in the UK.⁷ The statistics are based on the Family Resources Survey (FRS), which captures more detail on different income sources compared to other household surveys.

i) Housing tenure by income distribution

An analysis of the HBAI database shows that those who own housing outright are broadly distributed across all income distributions as indicated by the dark blue section in chart 2. Although it may be counterintuitive that the highest rate of housing owned outright is in the lowest income quintile, this is due to a higher proportion of pensioners who generally live on lower incomes but have already acquired their home.

The level of income is however closely correlated to the ability to own a house with a mortgage. Indeed, the highest

quintile has three times more households owning a home with a mortgage than the lowest income quintile.

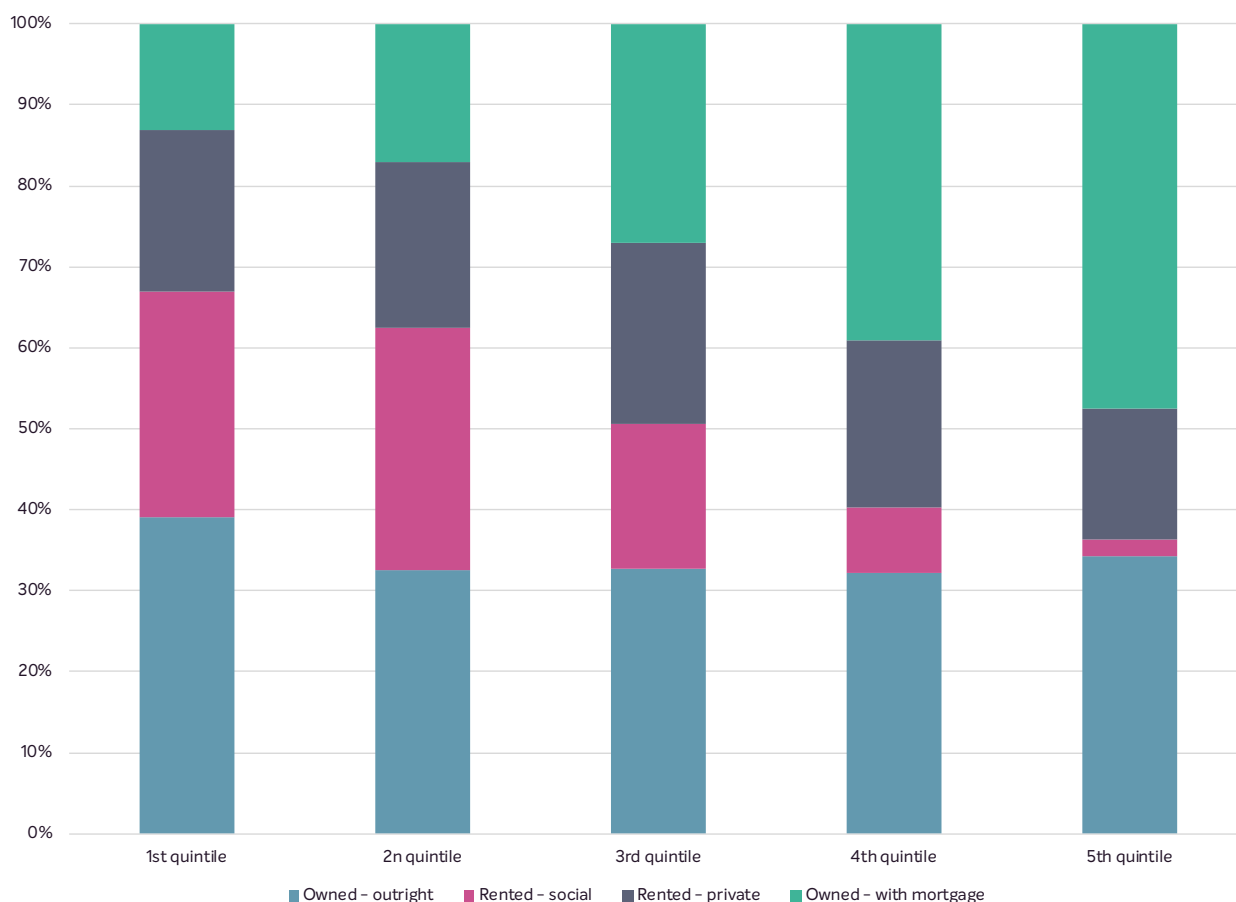
The bottom three quintiles unsurprisingly have much higher rates of renters, with the lowest two quintiles having a much higher proportion of those in social rent.

While this analysis provides insight into tenure across the income distribution, it does not indicate how the different tenures have fared in terms of costs over time. As house prices and rents increase, housing costs will rise for renters. However, for those owning a house with a mortgage, interest rates play a far bigger role in the overall cost once the initial mortgage has been acquired.

The highest quintile has three times more households owning a home with a mortgage than the lowest income quintile

⁷ Department for Work and Pensions (2014) *Households Below Average Income (HBAI) Quality and Methodology Information Report*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/530905/households-below-average-income-quality-methodology-2014-2015.pdf

Chart 2: Household Tenure by income distribution 2016-17



Source: DWP, CPP

ii) Changes in housing costs by income distribution

While the definition of housing costs used by the HBAI database is slightly different to the CPIH definition it does provide a much clearer picture of the actual experience of households across the income distribution.⁸

The analysis of the growth in housing costs by quintile between 1997/98 – 2016/17 shows that households in the bottom three quintiles have seen their housing costs increase at more than twice the rate of the top quintile. This increase in cost for lower income quintiles places additional pressure on affordability given the lower absolute levels of income. Moreover, housing benefit has doubled over the period from £11.2bn in 1997 to £23.4bn in 2017.⁹

The main driver behind this relative shift in housing costs between income groups was the downwards movement in the Bank of England base rate from 5.5% in December 2007 to 0.5% in March 2009. This in turn had a significant impact on lowering mortgage interest rates, thereby reducing the cost of interest on the amount borrowed. In essence, lower income households that have a greater share of renters have seen their costs rise more than higher income households who have a greater share of owner occupiers with a mortgage.

It is worth noting that this analysis does not take into account the impact that rising house prices have had on making housing less affordable for first time buyers. According to the Resolution Foundation it takes around 19 years for an average young family to save up for a first-time buyer deposit. In 1997 it was closer to three years.¹⁰ This issue has also sparked a debate whether this section of society needs its

8 The definition of housing costs within the HBAI data set excludes electricity & fuel and council tax. Rather than using a rental equivalence approach it uses a payments approach for owner occupiers housing costs which captures what households are actually paying. As with CPIH, capital payments are excluded as they are not viewed as costs by the national system of accounts.
 9 Department for Work and Pensions (2018) *Outturn and forecast: Autumn Budget 2018*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757201/outturn-and-forecast-autumn-budget-2018.ods
 10 Resolution Foundation (2018) *The Intergenerational Commission: A new generational contract*. Available at <https://www.resolutionfoundation.org/app/uploads/2018/05/A-New-Generational-Contract-Full-PDF.pdf>

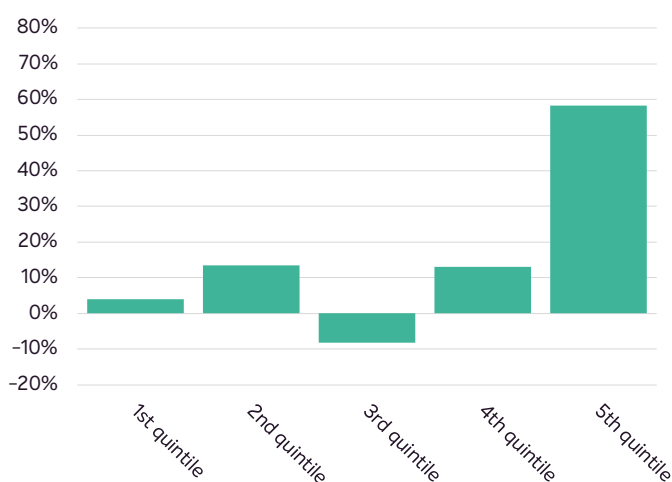
When the growth of individual earnings (ASHE) is compared to the growth of household earnings (HBAI), a dramatic change can be observed for the bottom two quintiles as shown in chart 6. Household earnings data has grown significantly more than individual earnings. This implies that overall household earnings have increased due to more people in each household working, indicating a jump in employment. Household size at the beginning and end of the series has remained roughly similar – although they dipped in the middle of the period analysed.

The increase in employment levels can also be observed in the growth of the labour force participation rate which has risen more than 2% from 76.4% to 78.8%.¹⁷ This growth has largely been down to the increase in female participation in the labour force given the male participation rate has fallen marginally from 84.6% to 83.4%. This amounted to an increase of four and a half million jobs over the period. The data indicates that this significant growth in jobs for women has been mainly focussed in the bottom two quintiles, indicating these jobs are mostly paying less than median wages.

Rising housing costs squeeze the middle further

Chart 7 compares the growth in HBAI household income including benefits to the growth in housing costs. The data shows that the median quintile is unique in having experienced negative growth in household income after housing costs since 1997 indicating a fall in the standard of living. Median households therefore lie at the heart of the housing crisis across the UK, particularly for those who rent.

Chart 7: Growth in household income after housing costs, 1997/98 – 2016/17



Source: DWP, CPP

The squeezed middle's fall in its standard of living based on the relationship between total household income and housing costs has not been experienced by other income groups

The challenge for the median quintile is that not only has it experienced the lowest wage growth for all quintiles, but due to higher income levels median households do not receive as much housing benefit in absolute terms. Although housing benefit to this quintile has roughly doubled from 2% to 4% of household earnings it still remains a small portion of overall income.

In addition, households in this quintile have a much lower probability of gaining access to social rent given that the limited stock of subsidised rental units tend to be prioritised for lower income households.

The median quintile is also where first-time buyers are likely to emerge from. However, due to increasing affordability issues, it is now taking much longer to save up for a deposit to get on to the housing ladder. This difficulty is due principally to the rapid divergence between incomes and house prices over the past two decades and has been compounded by the squeeze on post housing cost incomes. Not only do median households need to save a bigger deposit than previous generations, but their ability to save has been diminished at the same time.

It is also worth noting that there are quite stark regional differences in first time buyer affordability across the country. As shown by Geoff Meen, 60% of potential first-time buyers in the South East (outside London) could not afford to purchase a property without paying more than 30% of its income in housing costs. This falls to 30% in the lower priced North East.¹⁸ While there are regional differences with respect to housing costs and incomes, Resolution Foundation analysis on the housing cost to income ratio found that all regions saw an increase between 1994/95 and 2015. Moreover, the gap between the North and South has narrowed, although London remains an outlier.¹⁹

The squeezed middle's fall in its standard of living based on the relationship between total household income and housing costs has not been experienced by other income groups. The bottom two quintiles have seen an increase in household income after housing costs largely due to a jump in the number of people per household working. While the ongoing availability of benefits including housing benefit (the cost of which has doubled over the period) has provided an additional level of income, the rate of growth of

17 Office for National Statistics (2018) *UK Labour Market: March 2018*. Available at <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/march2018>

18 Meen, G. (2018) *How should housing affordability be measured?* Available at: http://housingevidence.ac.uk/wp-content/uploads/2018/09/R2018_02_01_How_to_measure_affordability.pdf

19 Resolution Foundation (2016) *The Housing Headwind*, 23-28. Available at <https://www.resolutionfoundation.org/app/uploads/2016/06/The-Housing-Headwind.pdf>

benefits has been much lower than overall household income growth. To what extent rising housing costs have changed employment behaviour is unclear, although the increase in housing costs may well have been a factor in household decisions to seek employment opportunities.

The wealthiest households though have seen their household income after housing costs grow at nearly five times the rate of growth experienced by the second and fourth quintiles. This high rate of growth, exclusively experienced by the top quintile, is largely due to rising wages and falling interest costs as the top quintile maintains the highest proportion of home owners with a mortgage.

This analysis highlights the importance of not using national averages for public policy analysis as they provide limited insight into what is happening across different tenures and income distributions. The analysis also indicates that despite a doubling of housing benefit to £23.4bn, the ongoing affordable housing subsidies for social rent and the numerous housing policy initiatives that have been implemented over the last two decades, the market still clears at prices that are unaffordable for a large number of households. This is why the government's 2017 housing white paper was entitled "Fixing our broken housing market".

Supply matters as well as demand

Given the failure of prior policy initiatives, all housing policy recommendations should be subject to increasing scrutiny. However, there are two key principles that are attracting a greater consensus across the political spectrum that deserve greater focus and support.



number of households waiting for social housing

First, there is a need to expand social housing to ensure that those who wish to live in social housing are able to do so. According to the Shelter Social Housing Commission there is a waiting list of 1.157m households for social housing which includes over 144,000 homeless people.²⁰ An expansion of social housing for median households would not only provide housing at a lower cost and therefore cushion the fall in the standard of living, but it would also provide households with cheaper rent that would enable them to save up a sufficiently large deposit to get on to the housing ladder.

Second, the broader debate on supply and its impact on the cost of housing services needs to be reinvigorated. The modelling of house prices has traditionally been split into the short term and the long term, with the short-term price of housing set by demand given the time it takes to build new houses. However, in the longer term most housing models do take supply into consideration.²¹

Analysis undertaken for the Barker Review indicated that trend real house price growth would fall from 2.7% to 1.8% as a result of just over a 50% increase in private sector output and a doubling of social housing output on an annualised basis.²² To the extent that this model is still applicable today, delivering around 300,000 units a year could reduce trend growth by around 1%.²³ While a slightly lower rate of growth of house prices might seem insignificant, its impact on median quintile real incomes is potentially transformative.

To test the impact of a 1% lower growth in house prices on housing costs, two scenarios have been modelled. The first assumes that a 1% lower rate of house price growth results in a 0.35% fall in housing costs. This is based on the relationship between the Nationwide house price index and the corresponding HBAI increase in housing costs over the period analysed.

Given the downward shift in interest rates over the last 20 years it is feasible that going forward housing cost falls might be marginally higher relative to house prices so a 0.5% fall in housing costs has also been modelled. In a period of rising house prices but with limited downward movement in interest rates, rents and owner-occupied housing costs are less likely to diverge. Chart 8 shows the transformative effect of such an outcome for the median quintile over the past 20 year period for the two scenarios.

When the growth in household income for the median quintile is compared to actual housing costs and the two scenarios, even the 0.35% fall in housing costs would be transformative for the median quintile with household income after housing costs rising by 4% instead of falling by 8%. In the scenario where half of the slower rate of house price growth is passed on to housing costs household income after housing costs would have risen by 8% over the period. In other words, supply can make a real difference to household welfare over time.

Both the effect of increasing supply and the significant shortfall in social housing indicate that an increase in both social housing and private sector output is desirable. The question is what policy might actually increase the current levels of output?

20 Shelter Social Housing Commission (2019) *A Vision for Social Housing*. Shelter. Available at https://england.shelter.org.uk/_data/assets/pdf_file/0005/1642613/Shelter_UK_-_A_vision_for_social_housing_full_interactive_report.pdf

21 Monk, S., Pearce, B. J., & Whitehead, C. M. E. (1996) *Land-Use Planning, Land Supply, and House Prices*, Environment and Planning A: Economy and Space, 28(3): 495-511.

22 Barker, K. (2014), *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs* - Table 1.1, 21.

23 For modelling purposes New Build Completions has been used from Table 120 given that the current rate of net conversions is not sustainable in the long run which has driven net dwellings in recent years.

A solution to the infrastructure deficit

To increase the rate of housebuilding, particularly for affordable housing, Britain needs to increase its investment in infrastructure, thereby opening up land for more homes. Between 1960-75, public sector net investment averaged 5.4% of GDP peaking at 7.4% in 1967, which is a major reason why housing completions per 1000 of population averaged 6.5 during the period. This investment in housing and infrastructure was part of the wave of second and third generation of new towns.

However, between 1976 and 2016 the average level of public sector net investment fell by two thirds to only 1.9% p.a. resulting in a drop of nearly 50% in housing completions per 1000 of population to just 3.4.

This trend can also be observed in the local government net investment data set, although this would generally exclude capital investment in transportation, healthcare and education facilities. Private sector infrastructure has not replaced this fall in public investment and is estimated to be running at just £10bn p.a. or 0.5% of GDP. Moreover, 70% of this investment is in the energy and mining sectors.²⁴

50%

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Chart 10. UK public sector net investment & Local gov. net investment vs UK housing completions per 1000 population



Source: MHCLG, OBR, ONS, CPP

²⁴ Office for National Statistics (2018) *Developing new statistics of infrastructure*. Available at :<https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/articles/developingnewmeasuresofinfrastructureinvestment/augusy2018>

Landowners would still play an important role as risk sharing partners, but they would no longer be able to benefit from prospective planning permission without having to take some risk, and not until after the infrastructure costs had been paid for.

This is particularly important for large scale infrastructure projects such as the West of England Joint Strategic Plan and Crossrail 2, both of which have ambitious plans for more housing. However, they are currently unable to proceed due to funding challenges. If they had access to the full uplift in land values to fund infrastructure, it ought to be able to help fund up to half of the total infrastructure costs while paying for all of the affordable housing subsidy.³⁰

CPP analysis indicates that such a reform of the 1961 Act could result in an incremental £214bn of investment in infrastructure and affordable housing over the next 20 years, which would enable the government to meet its target of 300,000 for England.³¹

Conclusion

Housing costs including rent and owner-occupied housing costs have been the major driver in the cost of living over the last 20 years. But these costs have impacted different income groups in different ways. An analysis of household incomes and housing costs between 1997-98 and 2016-17 indicates that:

- Median income households have uniquely seen their household income fall by 8% relative to housing costs. This is due to lower nominal wage growth compared to other income distributions, the limited availability of social housing with subsidised rent and higher private rental costs. Furthermore, for renters in this quintile wishing to make the switch to owning a house with a mortgage, higher housing costs to income have extended the period required to save for a deposit.
- The richest 20% have seen their household income after housing costs grow more than 50% over the period. This is due to a combination of faster earnings growth and above all a fall in the cost of housing through home ownership due to falling interest rates.
- The poorest 20% of households have seen their housing costs rise at more than twice the rate as the top 20%. But their total household income has risen marginally faster than costs due to an increase in the number of people working in each household, in addition to the

introduction of the minimum and living wage. Benefits including housing benefit, which make up around half of household income for this quintile, have grown more slowly than total income over the period.

If the government is to address this critical issue and ensure that the squeezed middle can once again see a rise in their standard of living, policies that tackle the supply of housing need to be addressed as well as demand. The government has recognised the need to increase supply to tackle high housing costs with the housebuilding target for England now raised to 300,000 per annum. However, the gap between output today and this target remains significant.

CPP analysis suggests that if this 300,000 target is met year on year then this would help significantly improve the living standards of the squeezed middle. This would result in a marginally lower rate of growth in house prices of 1% p.a. and housing costs growing at 0.35% less p.a.. This would have meant that instead of the median quintile experiencing an 8% fall in household income, it would have experienced a 4% increase over the period 1997/98 to 2016/17. However, such an increase in output in both social and private sector housing will not be achieved unless infrastructure investment is dramatically increased.

One policy recommendation that could facilitate a significant increase in investment would be to amend the Land Compensation Act 1961 thereby enabling development corporations to receive a greater share of the uplift in land values as recommended by the cross-party House of Commons Select Committee on Housing and Local Government.

It is estimated that such a policy shift could unlock over £200bn of potential investment in infrastructure and affordable housing over the next 20 years which would enable the government to meet its target of 300,000 for England

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30 Aubrey, T. (2017) *Funding Infrastructure and Affordable Housing for the East West Corridor*. Centre for Progressive Policy. Available at: <https://www.progressive-policy.net/publications/funding-the-infrastructure-and-affordable-housing-for-the-east-west-corridor>

31 Aubrey, T. (2018) *Gathering the Windfall*. Centre for Progressive Policy. Available at <https://www.progressive-policy.net/publications/gathering-the-windfall-how-changing-land-law-can-unlock-englands-housing-supply-potential>

Appendix A: Assessment of available income measures

Average weekly earnings (AWE)

AWE is calculated from returns to the Monthly Wages and Salaries Survey (MWSS), which is a survey of 9,000 businesses covering 13.8 million employees. AWE also reflects changes to the industrial composition of the workforce. For instance, an increase in the relative number of employees in highly paid industries will cause average earnings to rise.

Although AWE is a timely indicator, there are also a number of drawbacks, including the fact that the survey does not cover the self-employed and excludes businesses with fewer than 20 employees. Furthermore, the composition effect captured by the AWE refers only to changes between industries, hence it does not capture compositional changes between occupation, age or changes within the same industry.

In addition, AWE does not capture earnings growth by income distribution nor what is happening at the household level.

Annual Survey of Hours and Earnings (ASHE)

ASHE provides information about the levels, distribution and make-up of earnings and hours paid for employees in all industries and occupations across the UK. The data also provides a time series of weighted comparisons from 1997. Crucially it provides earnings data across the income distribution as well as differentiating between full and part time employees. The dataset is a measure of gross wages before taxes and benefits are taken into account.

The main drawback, which is also present in AWE is the lack of data on self-employment. In addition, ASHE does not capture what is happening at the household level.

Gross Disposable Household Income (GDHI)

GDHI is the amount of money that individuals in the household sector have available for spending or saving after they have paid direct and indirect taxes and received any direct benefits. This measure does include self-employment data which provides additional information above and beyond ASHE and AWE.

One drawback of GDHI is that like AWE, it does not provide data across the income distribution, which is problematic given that an individual's experience of housing affordability is affected by the level of income.

Furthermore, a number of components of GDHI do not provide individuals with actual "income" that could be used to acquire housing services. For example, the imputed rent of owner occupiers is counted as an income stream. However, this is merely an accounting rule and is income that cannot actually be used by individuals to pay for housing services. GDHI also takes account of employer social contributions such as pensions, which grew at 219% between 1997 and 2017 nearly twice as fast as the wage component of GDHI of 117%. However, this income cannot be used until 55 when an individual can withdraw up to 25% of their pension as a lump sum. As of 2017, imputed rent and pension contributions account for nearly a quarter of the primary income captured by GDHI.

Finally, it is also noteworthy that social benefits which is part of GDHI have grown 135% over the period between 1997-2017, again faster than household wages of 117%. This includes housing benefit that has more than doubled over the period.³²

Household below average incomes (HBAI)³³

HBAI is based on the family resources survey and remains one of the foremost sources of data about household income and costs across the income distribution. The primary measure used in HBAI is equivalised disposable household income adjusted for household size and composition. The sources of household income include contributions from earnings, state support, pensions, and investment income among others, and is net of tax. HBAI uses this equivalised disposable household income as a proxy for living standards.

HBAI data is useful as it can be disaggregated by sources of income in order to isolate the wage component of income which is defined as household earnings. In addition it provides the associated housing costs across the income distribution.

Self-employment

While self-employment data is accounted for in the HBAI and GDHI measures, it is worth noting that wage levels and wage growth for self-employed is significantly lower than for employees. The modal income category for self-employment is 40% lower than for employees at £240 compared to £400 a week, which may be due to a combination of lower pay and

32 Department for Work and Pensions (2018) *Outturn and forecast: Autumn Budget 2018*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757201/outturn-and-forecast-autumn-budget-2018.ods

33 Department for Work and Pensions (2018) *Households Below Average Income: An analysis of the UK income distribution: 1994/95-2016/17*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691917/households-below-average-income-1994-1995-2016-2017.pdf

fewer hours.³⁴ In terms of the rate of growth of income we can also see that self-employment levels at the household level have grown at a much slower pace than for employee wages. According to GDHI data, employee wages between 1997 and 2017 grew by 117% with self-employment (gross mixed income) growing by 100%.

³⁴ Office for National Statistics (2018) *Trends in Self Employment in the UK*. Available at <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/trendsinselfemploymentintheuk/2018-02-07>