THE ECONOMY 2030 INQUIRY

SHAPING A DECADE OF CHANGE

Ready for change

How and why to make the UK economy more dynamic

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Centre for Economic Performance

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The Economy 2030 Inquiry

The Economy 2030 Inquiry is a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics, funded by the Nuffield Foundation. The Inquiry's subject matter is the nature, scale, and context for the economic change facing the UK during the 2020s. Its goal is not just to describe the change that Covid-19, Brexit, the Net Zero transition and technology will bring, but to help the country and its policy makers better understand and navigate it against a backdrop of low productivity and high inequality. To achieve these aims the Inquiry is leading a two-year national conversation on the future of the UK economy, bridging rigorous research, public involvement and concrete proposals. The work of the Inquiry will be brought together in a final report in 2023 that will set out a renewed economic strategy for the UK to enable the country to successfully navigate the decade ahead, with proposals to drive strong, sustainable and equitable growth, and significant improvements to people's living standards and well-being.

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Executive summary

Britain's productivity shortfall is its foundational economic problem. Output per hour is lower than in many other advanced economies, and the gap has been growing.

Debate about this gap and how to fix it typically focus on raising productivity of existing firms, via two routes. First, innovation: investment, R&D and patenting as ways to inject new ideas into pre-existing firms. Second, diffusion: the cascading of those new technologies and improved management practices as a way for less productive firms to catch up with the best.

Both processes are important, but something else has been largely forgotten: the role of economic change. The contribution of this paper is to put dynamism, reallocation and change back into discussions about UK economic policy. Reallocation happens when physical capital used in the production process, such as machinery and buildings, and workers flow between firms or sectors. If the most productive firms grow, while others shrink, resources are used more efficiently and economy-wide productivity rises. Zooming out from individual firms to the industrial sectors that they constitute, the waxing of more productive sectors and waning of less productive ones can also materially affect national productivity. These forces aren't theoretical: they have been major drivers of UK productivity gains for centuries.

The economy has become less dynamic

We're not just talking less about economic change, we're doing less of it. This may come as a surprise given that turbulence has defined Britain's economy over the past 15 years. Indeed, you might think that the ebb and flow of firms would have risen too, as companies adjusted to big financial, trade and other shocks to the economy. However, we show in this paper that this has not been the case. The sensitivity of UK firms' employment growth to their productivity – i.e. how quickly productive firms scale up – fell by 30% after the financial crisis. Instead, the pace of reallocation has slowed, with firms growing and shrinking less in response to shocks than they used to: the rate at which jobs were reallocated from shrinking to growing firms fell by one-fifth after 2008 – 7.5 million missing reallocated jobs. The world may be changing fast, but our firms have been moving slowly.

Zooming out, the pace at which the economy changes shape by shifting resources between sectors has also slowed to a nine-decade low. Slicing the labour market by occupation reveals a silver lining, with an increase in the relative growth of higher-paying occupations growing. The rate at which individual workers switch jobs has also declined in recent decades. There has been a recovery in that rate in the aftermath of the pandemic, but that now appears to be subsiding in the UK as it is in other countries, suggesting this won't be a lasting improvement.

This lack of dynamism has a big economic cost

The slowdown in the pace of economic change — the decline of business dynamism and sectoral reallocation — has a cost. There are large gains from reallocation within sectors: we estimate that moves between lower and higher-productivity wholesalers could yield gains of 70 per cent, for example. When dynamism declines these gains go untapped. If half of the missing reallocation between firms moves would have moved lower-productivity firms up two productivity deciles – e.g. from the 30th to the 50th centile – average productivity would be 4.5 per cent higher today, enough to boost wages by £1,500 a year. At the sectoral level, the contribution of reallocation from low- to high-productivity industries from sectoral reallocation 0.4 percentage points per year over 1997-2007 to zero between 2008-19. Had this source of growth remained constant, wages would be £1400 higher today.

The direction of recent economic change is also worrying. All countries have sectors in which wages are low—the UK's are no bigger overall than the average of France, Germany, Italy and Japan. But Britain has some large and low-paying, low-productivity sectors, such as warehousing, hospitality and care, all of which are growing. In some cases, the need for a larger workforce is clear: the country is ageing and will need more carers, for example. In other cases, however, such as the flow of Britons into careers in warehousing, this growth is less desirable.

There are important lessons for policy makers from putting economic change centre stage

Realising a higher productivity future means more change rather than less. Recent studies point to a range of factors that have reduced dynamism. Some of those, including ageing and technology, lie beyond the easy reach of UK policy makers. But there are many things we can do. We need new policies to ensure that markets are better equipped to enable capital and labour to move into more productive firms with good jobs.

First of all, direct policy barriers to reallocation should be reconsidered. For example, stamp duty on residential and commercial transactions directly holds back economic change. As proposed in previous Economy 2030 reports, halving both would boost the mobility of the workforce and the reallocation of business capital, even if stamp duties are not behind the recent slowdown. Restrictive planning controls (including those preventing the change of land use) don't just prevent things getting built, but also the economy from changing.

Second, policy should favour the dynamic firms that drive change, rather than small businesses per se which is where policy makers tend to focus support. For example, discounts on business rates and the VAT threshold are both currently targeted at small firms – actively discouraging those firms from growing. Instead, policy support should be focused on young and growing businesses, irrespective of size.

Third, competition should be encouraged using more than just competition policy. Competition is important, driving poor-performing firms to shrink or close. Weak competition for customers, workers and the capital tied up in their businesses

is what allows low-productivity firms to survive. Such pressure comes from within an economy — a strong start-up culture is important here, as is the ability to change land use easily. But also comes from outside in the form of trade, underlining the importance of policies that reduce trade costs, where our previous work has shown that the UK's increased trade costs with the EU will tend to shelter low-productivity firms. Policies in all these areas are as important as competition policy itself.

Fourth, policy must recognise that workers are themselves agents of economic change. As we advocated in a previous report, higher unemployment benefits for a period would enable workers to find a better job with a better firm, rather than the first job that comes up. Boosting minimum standards for pay and conditions would force low-productivity firms and sectors to up their game or shrink. Britain's recent success with occupational upgrading, driven by the improved educational attainment of the workforce, provides another example of how policy can drive beneficial economic change in this way.

The downsides, not just the positives, of change need focus

Finally, policy makers need to recognise that greater dynamism will bring costs as well as benefits: some disruption for workers that move or lose their jobs, and for the sectors, firms and places that grow or shrink. Temporary unemployment may increase if firms expand and contract more.

So, policies will be needed not only to boost dynamism, but also to cushion its impact. A stronger safety net will not only encourage workers to switch jobs, but also support them better if greater dynamism means more time between jobs. In another Economy 2030 paper we have recommended the introduction of higher, earnings-related but temporary unemployment benefits. Some enhanced employment rights (such as to sick pay) should apply from day one, allaying workers' fears of losing acquired rights when they move. Declines in sectors, occupations and places, are easier in countries with meaningful training offers for those mid-career – another major gap in the UK.

And policy makers need to recognise that the pace and concentration of change matters hugely. Even desirable change

can happen too fast for people and places to adjust, and economic change that is diffusely felt across the country as a whole is far easier to manage than shifts that are highly concentrated geographically.

Above all, the UK needs a change in mindset, bringing questions of economic change back where they belong: at the heart of economic policy making.

Section 1

Introduction

The UK has a fundamental problem of weak productivity. Output per hour is lower than in many other advanced economies, and the gap has been growing. This problem is at the heart of many of the economic problems we face as a country, including stagnant incomes and strained fiscal sustainability.

When thinking of how to fix this, people normally focus on diffusion: helping bad firms catch up with good ones. Here the argument is that diffusion is a rising tide that floats all boats: steps to boost technology adoption or better management practices are policies that would boost diffusion. But to close gaps between firms, an economy must be dynamic as well as diffusive, embracing change that allows resources to be reallocated towards more productive uses. By dynamism we mean the movement of resources – particularly physical capital and workers – between firms. As such, dynamism is a harsher process than diffusion: it means the worst firms should go out of business altogether.

Indeed, an important driver of past economic growth has been the movement of resources out of declining occupations and sectors of the economy, and into growing ones. This means resource reallocation is also necessary at a bigger scale – between whole sectors as well as between firms.

So, in this report we focus on the state of business dynamism in Britain, a much under-appreciated force in the country's dire productivity performance. We show in this paper that most measures of dynamism have been waning in the UK. Yet there are large potential gains from the movement of productive resources with large and growing differences in productivity among the firms and sectors that make up the UK economy. The upshot is that the UK has capital and labour tied up in lower-productivity firms and sectors. This report shows how this misallocation holds the economy back, leaving the economy smaller and wages lower than otherwise.

In this context, the popular narrative is one of a dynamic UK economy that has been the subject of accelerating change during the multiple economic crises of recent years. But the new data presented in this report refutes that, showing many measures of change

and beneficial resource reallocation have in fact slowed.

Stimulating dynamism will require policy reform. Dynamism comes with costs, as it disrupts the lives of workers that move firms, and the sectors and places that shrink. So, alongside policies to boost dynamism, the UK will need stronger policies to cushion the impact.

The remainder of this report is divided into following sections:

- Section 2 defines dynamism, and measures its dispersion at the level of individual firms and workers, presenting troubling new data on how they have evolved, and sets out what we know about the causes.
- Section 3 zooms out to the level of occupations and industrial sectors, showing that sectoral change has slowed, but occupational change has accelerated.
- Section 4 describes a set of policies, most of which have been put forward elsewhere in the Economy 2030 Inquiry, that would boost dynamism. We also discuss the downsides of a more dynamic economy, and how to manage them.

Section 2

Business dynamism in Britain has declined

A dynamic business environment is one in which firms respond to the opportunities and challenges they face, adjusting their main inputs – their workforce and the capital they employ – accordingly. Key measures of dynamism include the reallocation of workers from firms that are shrinking (or exiting) and those that are growing (or entering) and job-to-job moves. These measures of mobility have been in decline in recent years, suggesting that UK firms are becoming less responsive to economic change, and plausibly accounting for a substantial part of the UK's productivity slowdown. In addition, measures of change at the firm level show a slowing, with firms growing and shrinking less in response to shocks than they used to.

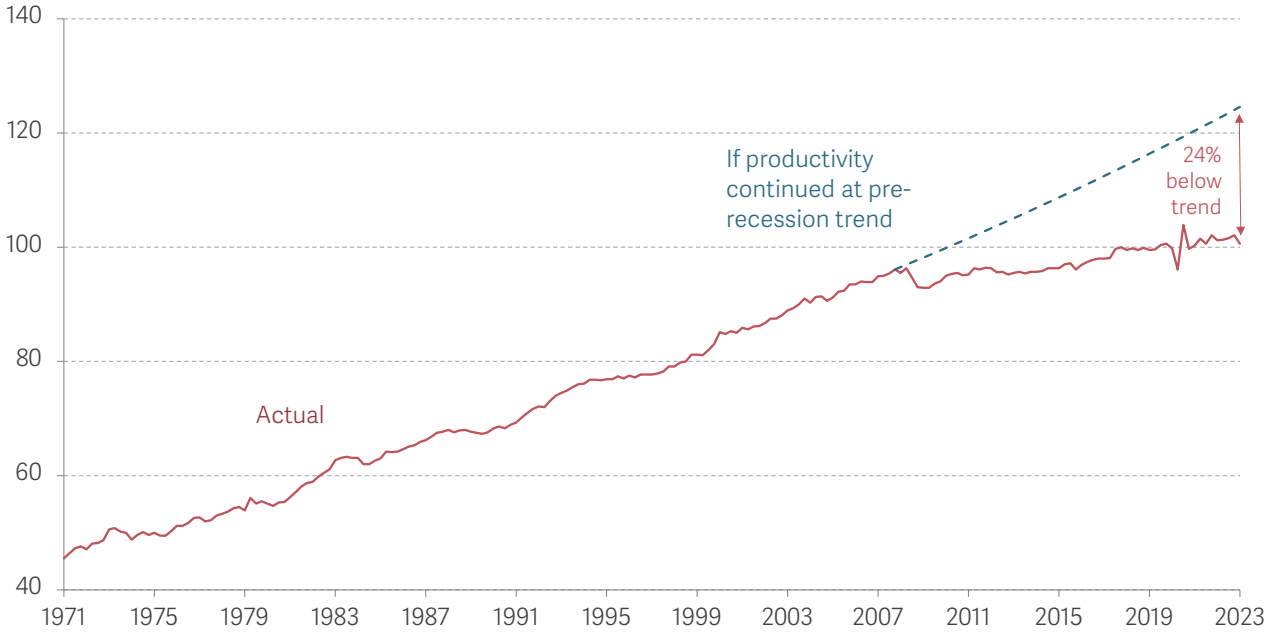
The UK's productivity performance has been dire, and must improve

Productivity growth is the main source of increases in wages and prosperity in the long run. It has been extremely weak in the UK, growing at only 0.4 per cent per year between 2007-19, less than half the OECD average of 0.9 per cent and much lower than the 1993-2007 average of 1.8 per cent.[1] Since 2019, the performance has been worse (see Figure 1). Low productivity growth is a key reason for UK's living-standards crisis.[2] And, when combined with high inequality, the UK's lacklustre productivity levels (15 per cent behind France, Germany and the US on average in 2022) are a key reason for the high prevalence of low incomes in UK households compared to these other countries.[3] An increase in productivity growth is, therefore, crucial if the UK is to return to more respectable rates of growth in real wages and GDP.

1 These figures are likely to be revised up slightly following the Blue Book 2023 revisions
2 N Oulton, The Productivity-Welfare Linkage: A Decomposition, Economics Statistics Centre of Excellence Discussion Paper 2022-07, March 2022.
3 A discussion of incomes across countries is provided in: M Gustafsson, K Henehan, F Rahman & D Tomlinson, After Shocks: Financial Resilience before and during the Covid-19 Crisis, Resolution Foundation, April 2021.

FIGURE 1: **Productivity growth in the UK has been very low**

Output per hour worked (index 2019 = 100): UK



NOTES: The blue dotted trendline is calculated based on average output growth between Q4 1993 and Q4 2007.
SOURCE: Analysis of ONS, UK Whole Economy: Output per hour worked, seasonally adjusted.

The reallocation of resources across firms can drive productivity

When people discuss productivity, they focus mainly on two things. First, on productivity growth at the frontier – how many 'world-beating' companies the UK has, and how well they have been doing.[4] Second, on the UK's 'long tail' of underperforming firms, how to bring them closer to the average, and more generally the diffusion of best practice from the frontier to the rest of the UK corporate sector.[5] These are indeed important sources of productivity growth.

But these debates typically miss a third source of aggregate productivity growth, a source which does not involve any one firm becoming more productive, but rather a reallocation in productive resources from less to more productive uses. When more productive firms grow faster than less productive firms, this raises aggregate productivity through a simple 'batting average' effect, with the more productive firms coming to receive a bigger weight in the average.

There is a substantial literature on the importance of this mechanism. First, there is a huge and well-documented dispersion between the most and least productive firms,

4 For example, see: Andrews et al., Frontier Firms, Diffusion and Public Policy, OECD Publishing, 2015; and PWC, The Productivity Puzzle Revisited, November 2019.
5 T Parikh, Lifting the Long Tail: The Productivity Challenge through the Eyes of Small Business Leaders, Institute of Directors, October 2018.ONS, Understanding firms in the bottom 10% of the labour productivity distribution in Great Britain: "the laggards", 2003 to 2015, July 2017.

even when comparing within quite narrowly defined sectors.[6] More productive countries tend to exhibit less inter-firm dispersion than others.[7] Second, more productive firms tend to grow faster.[8] Third, this reallocation effect has at times been a quantitatively important driver of overall growth in productivity.[9]

Slowing reallocation has coincided with weaker productivity growth

New evidence shows that productivity dispersion between firms has increased and reallocation has slowed. These facts suggest that there are large potential gains from reallocation that are not being realised in the UK economy.[10] Indeed, firms within the same industry have vastly different productivity levels, with these gaps growing in recent years.

The dispersion of productivity levels between UK firms has been growing

The distribution of firm-level productivity has been widening around the world. A cross-country productivity comparison of the top five per cent of firms in advanced economies (sometimes referred to as 'frontier' firms) to the rest of firms (the 'laggards') shows an increasing divergence between the most productive firms and firms in the tail of the distribution.[11] A related study shows that firm-level divergences from industry-median productivity have increased over time in the US.[12] We recreate and extend this analysis for the UK, by tracking the spread of productivity and also considering the role that firm size plays.[13]

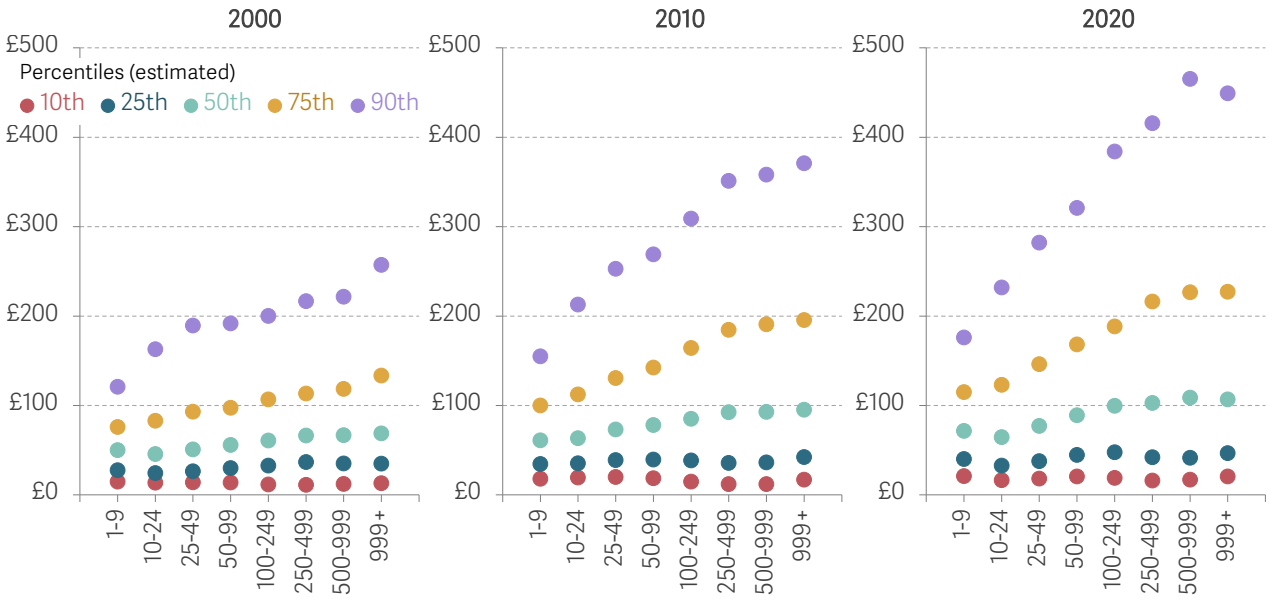
This spread of productivity is pronounced in the UK, and is particularly so for larger firms. The distribution of firm-level productivity widens as firm size rises. In particular, the frontier firms – the most productive in an industry – are further ahead of the pack: at the 75th and 90th percentiles increased employment is associated with large increases in productivity. This is important since it implies that for larger firms, where a larger churn of workers is possible as firms shed or hire staff, there are larger gains to be made

6 C Syverson, What Determines Productivity?, Journal of Economic Literature 49(2): 326–365, June 2011.
7 C T Hsieh & P J Klenow, Misallocation and Manufacturing TFP in China and India, The Quarterly Journal of Economics, 124(4), November 2009.
8 L Foster, J Haltiwanger & CJ Krizan, Aggregate Productivity Growth: Lessons from Microeconomic Evidence, in C R Hulten, E R Dean & M J Harper, New Developments in Productivity Analysis, January 2001.
9 C T Hsieh & P J Klenow, The Reallocation Myth, Center for Economic Studies Working Paper No. 18, 1–25, March 2018.
10 M King, The Great Repricing: Central Banks and the World Economy, in Monetary Policy Normalization: One Hundred Years After Keynes' Tract on Monetary Reform, 53–60, Cham: Springer Nature Switzerland. August 2023.
11 D Andrews, C Criscuolo & P Gal, The Best versus the Rest: The Global Productivity Slowdown, Divergence across Firms and the Role of Public Policy, OECD Productivity Working Paper No. 5, OECD Publishing, November 2016
12 RA Decker et al., Changing Business Dynamism and Productivity: Shocks versus Responsiveness, American Economic Review 110(12): 3952–90, December 2020.
13 We use 'revenue labour productivity' as a measure here, calculated as revenue per employee. This is an imperfect measure of productivity to the extent that revenue and value added diverge and/or if the number of employees of a firm and the true quantity of labour input diverge. Despite this limitation revenue labour productivity is widely used in the literature, and in a related study we show that it follows a similar trend to more commonly used productivity measures.

from reallocation. At the bottom end (the 10th and 25th percentiles of the productivity distribution) size has little correlation with productivity (Figure 2).

FIGURE 2: **The dispersion of productivity has widened for UK firms**

Nominal revenue per employee by year and firm size bracket: UK



NOTES: Percentiles are estimated as the average revenue labour productivity (RLP, nominal terms) in a band defined by the two neighbouring percentiles. For example, the median (50th percentile) is estimated as the mean value within a band between the 49th and 51st percentiles. Non-market sectors (education, healthcare) and the financial and real-estate sectors are excluded.
SOURCE: Analysis of ONS, Business Structure Database.

Several aspects of Britain's productivity challenge can be seen in Figure 2. Between 2000 and 2010 there is a clear widening of the productivity distributions. This is driven by 'frontier'-type firms: the 75th and 90th percentiles of the distributions move up, with leading firms becoming more productive. The median UK firm also improved markedly. By contrast, firms at the 10th and 25th percentiles show little or no improvement in productivity at any size. This is consistent with the idea that there is a 'long tail' of firms that have both low productivity levels and low productivity growth rates.

The comparison of 2010 and 2020 is also instructive. Below the 90th percentile the distributions are similar: there has been less change in productivity over the most recent decade. The laggard problem also appears more sharply: for many firm sizes the 10th percentile firm is slightly less productive in 2020 compared to 2010. The similarity of 2010 and 2020 data is consistent with the stalling of productivity growth in the UK. The wider dispersion in the most recent data shows that there is a large and unexploited potential productivity gain here: to reallocate more labour from lesser to more productive firms.

And reallocation seems to have slowed

So, given this growing dispersion of productivity between firms, what can we say about the rate at which resources are flowing from low- to high-productivity firms?

To answer this, we start with the reallocation of labour in the form of workers. Reallocation of labour between firms occurs when roles are created or are destroyed. Total reallocation is, therefore, the sum of creation by entrants, creation by growing firms, destruction by exiting firms and destruction by shrinking firms.

It is often thought that small firms play an outsized role in job creation and reallocation – making them the frequent beneficiary of policy support – but this does not appear to be the case. Firm-specific data allows us to examine hiring activity among firms by age and size bracket. A key finding here, which echoes similar work for the US, is that age is more important than size.[14] The probability of a firm creating a job falls rapidly with age across all sizes of small firm. As an example, consider Table 1 below: the bigger numbers are in the first row (young firms) rather than the first column (small firms). So, a policy maker interested in job creation would be better off supporting young firms rather than small firms. Small firms may be important for hiring, but that is because they tend to be young, not because they are small. In line with this result, research for the US shows that loans that target small firms tend to be a poorly targeted policy.[15]

TABLE 1: **The probability of job creation falls rapidly with age**

Firm probability of creating a job by size and age: UK

	Size	
Age	2	10
2	0.20	2.17
10	0.07	0.94

NOTES: Hiring rate is the number of new hires per firm-year. Averages calculated over the entire BSD sample, 2000-2020.
SOURCE: Analysis of ONS, Business Structure Database.

The presence of firms whose sizes seem fixed is another reason why policies to support reallocation need careful targeting. Our analysis of the microdata show that some

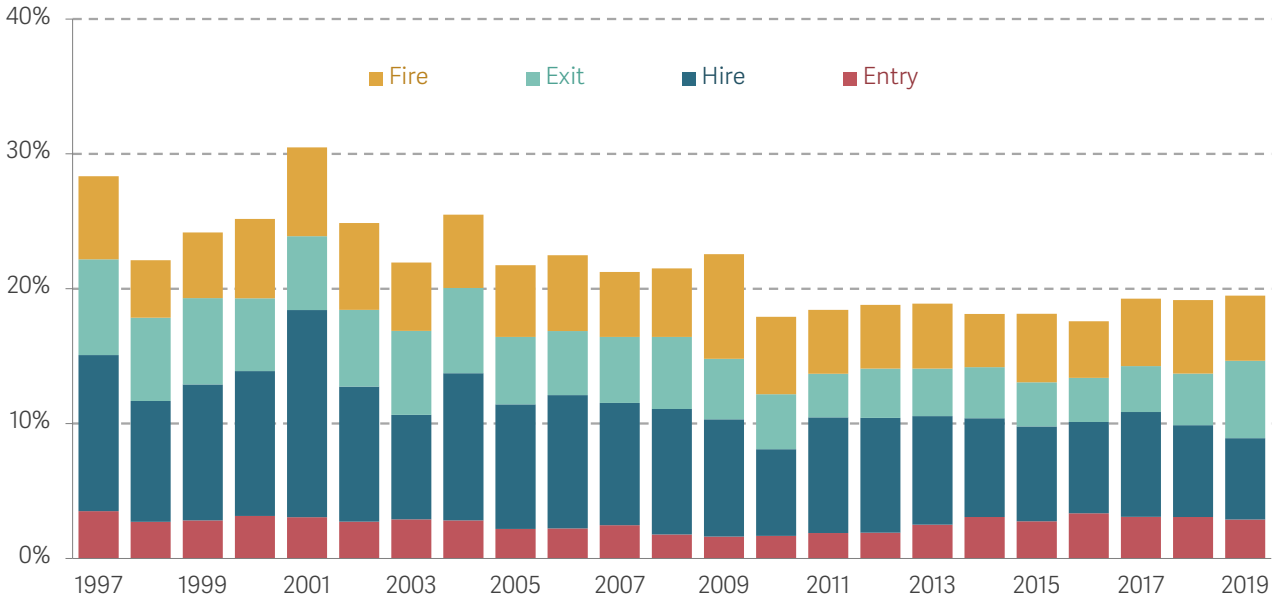
14 J Haltiwanger, RS Jarmin & J Miranda, Who Creates Jobs? Small versus Large versus Young, Review of Economics and Statistics 95(2): 347–61, May 2013.
15 B J David, J S Earle & Y Morgulis, Job Creation, Small vs. Large vs. Young, and the SBA, National Bureau of Economic Research Working Paper 21733, November 2015.

firms never change size. These firms tend to be small: they most often have one or two employees, while for dynamic firms (those that do grow and shrink) the mean is greater than 8. Non-dynamic firms also tend to have lower productivity. Millions of these firms, likely to be family businesses, maintain the same size for decades, despite productivity shifts that suggest they should grow or shrink. The proportion of non-dynamic firms is stable over time.

The reallocation of workers between firms shows a noticeable step down after the 2008 financial crash (Figure 3).[16] Across the market economy the pre-financial crisis reallocation rate was 24.6 per cent, while post it fell to 20.9 per cent. These results hold across a broad range of industries. Job moves can be seen as a safety valve, releasing some of the pressure of labour misallocation as workers move between firms. With this in mind, it is clear that missing reallocation is a problem that builds over time.

FIGURE 3: **The reallocation of labour declined after the financial crisis**

Jobs created and destroyed by entry, exit, growing and shrinking firms: UK



NOTES: Rates are defined as total jobs created or destroyed in a particular period relative to the stock at the end of the previous period. Rates are percentages as a proportion of the total workforce. Non-market sectors (education, healthcare) and the financial and real-estate sectors are excluded.
SOURCE: Analysis of ONS, Business Structure Database.

Taking each year's 'reallocation gap' and cumulating this over time results in a reallocation shortfall of 7.5 million 'missing' reallocation events between 2009 and 2020

16 These new data show a much more pronounced slowdown in reallocation than ONS, Business dynamism in the UK economy, October 2020, which we referred to in J Oliveira-Cunha et al., Business Time: How Ready Are UK Firms for the Decisive Decade?, Resolution Foundation, November 2021, and from which we concluded that there was no marked slowdown in reallocation. There are two main reasons why the new data are preferable: they measure reallocation at annual frequency, stripping out very short-term reallocation; and they are for the market sector only, excluding finance and real estate, as is standard in the literature

due to lower rates of reallocation. While there was a boom in business registrations during the pandemic it is not yet clear how much reallocation these new start-ups will equate to; this rush of entrepreneurship in the face of Covid-19 will not have offset the decade of lower reallocation set out in Figure 3.[17]

The fall in dynamism does not seem to reflect a change in the shocks hitting the economy

Models of firm dynamics suggest we should expect firms to adjust their size as their own idiosyncratic productivity changes.[18] This is simply because firms that do better tend to hire more. This suggests that one reason firms are reallocating less could be that the shocks they face have changed, so that there is less reason to adjust. In this context there are two obvious candidate stories for slowing reallocation that are worth considering:

- Smaller shocks. Firms could be becoming more alike, or the markets in which they operate could be changing less over time post-financial crisis so that productivity differences become smaller. If this is the case, the payoff to reallocating is lower, and we would expect less movement of labour between firms. The story here, is that a 'tranquil business environment' could reduce the incentives for businesses to change their size.[19] The intuition is that when times are steady, firms won't rock the boat by hiring or firing.
- Shorter-lived shocks. A different phenomenon could occur in an economy in which productivity shocks are large but become more short-lived. In this scenario 'blips' in productivity (negative or positive) would not be worth reacting to, since adjusting inputs is costly.

But neither of these hypotheses fit the UK data.

We calculate the standard deviation of firm-level productivity at the economy and industry level; we also construct a measure for each firm as its divergence from industry-level mean productivity in given year.[20] A clear finding from this exercise is that there

17 Bank of England, Booming Entrepreneurship during the Covid-19 Pandemic, Bank Underground, June 2022.
18 See, for example: H A Hopenhayn, Entry, Exit, and Firm Dynamics in Long-Run Equilibrium, Econometrica 60(5), September 1992; and C T Hsieh & P J Klenow, Misallocation and Manufacturing TFP in China and India, The Quarterly Journal of Economics, 124(4), November 2009.
19 RA Decker et al., Changing Business Dynamism and Productivity: Shocks vs. Responsiveness, American Economic Review 110(12): 3952-90. December 2020.
20 The measure of firm divergence follows: RA Decker et al., Changing Business Dynamism and Productivity: Shocks vs. Responsiveness, American Economic Review 110(12): 3952-90. December 2020. For a detailed definition and derivation, see R Davies, Productivity, Responsiveness and Adjustment in a Service Economy, in Macroeconomics with Micro Data, Mimeo, New York University Stern, September 2022.

is little evidence that shocks at the firm level are getting smaller. We find no evidence that the spread of productivity is narrowing or that innovations to industry relative productivity are declining over time.

To examine the idea that shocks are becoming shorter lived we looked for evidence that firms return to a 'typical' productivity levels faster in recent years. By examining the ranking of firms within their industry over time we tracked how long firms stay above or below their peers. The correlations of a firm's rank in one year compared to future years rises with time: that is, leaders are more likely to stay leaders and laggards to stay as laggards, in the later data.[21] Moreover, there is also no evidence of speedier returns to an average productivity level in the more recent data.

In summary, then, we have shown that firms have reallocated less since the financial crisis and that this is not because times have been tranquil, nor because shocks are fleeting. Rather, UK firms seem subject to large and persistent idiosyncratic shocks.

Instead what seems to be happening is that UK businesses have become more rigid and less responsive to changes in the environment since the financial crisis. We examine this using firm-specific data, tracking how much firms raise or cut their employee count in response to the shocks that they face. We find evidence that this measure of responsiveness has declined over time: consistent with the data presented above, UK firms hiring responses are 30 per cent lower than in the immediate aftermath of the financial crisis than they were before it.[22]

These results suggest that, consistent with the reduction in employment reallocation, and recent findings for the US, firm-level responsiveness to productivity changes has fallen in the UK.

The benefits of faster reallocation could be substantial

Suppose that the UK could come up with a new policy that triggered higher rates of reallocation among firms – what would the costs and benefits of such an intervention?

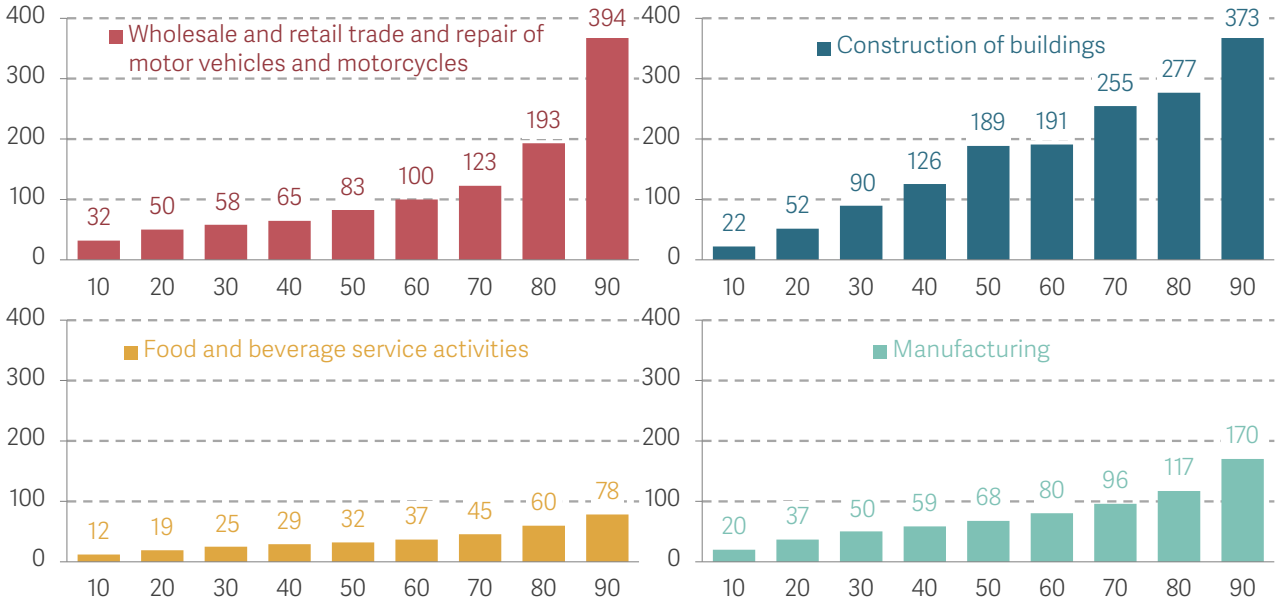
The UK microdata shows that the productivity journey that an employee can pass along as they move to more dynamic firms is a steep ladder. That is, the steps between firms at each point of the distribution are large. This basic fact, set out in Figure 4 below, suggests that the gains from reallocation are significant, and any reduction in reallocation is worthy of policy attention.

21 We measure the correlation of firm-level revenue productivity within industry between year t and t+s, where t is the calendar year and s is the interval between the years. This correlation is decreasing in s, as one would expect, but increasing in t, suggesting that firm-level productivity has become more persistent.

22 For further details on firms' responsiveness to shocks, see Annex.

FIGURE 4: **The UK productivity ladder is a steep one**

Estimated firm-level productivity (turnover per employee) by decile in selected sectors of the market economy: UK, 2020



NOTES: Deciles are estimated as the mean value in a band defined by the two neighbouring deciles.
SOURCE: Analysis of ONS, Business Structure Database.

At the very top of the distribution, above the 90th percentile, there are huge gains in productivity. But even further down, around the median, the steps are large: other things equal, moving a worker from the 30th to the 60th percentile would almost double revenue per employee.

A simple policy counterfactual suggests that gains like this would have a huge impact. As discussed above, prior to the financial crisis, the reallocation rate in the UK has been around 24.5 per cent. Since then, the rate has fallen to 20.9 per cent, with every year lower than the pre-financial-crisis average. We have also shown that in terms of the volatility and persistence of productivity it seems that reallocation should, other things equal, be higher in the most recent period. That is, each year since the financial crisis there appears to be a 'reallocation gap'. Cumulating these gaps over time give the shortfall of 7.5 million 'missing' job reallocations (i.e., a firm hiring, firing, growing, or shrinking) that is mentioned above.[23]

Consider a suite of policies that helped firms expand and contract their workforces more easily, so that their responsiveness returned to its historical rate offsetting the 'missed' reallocation we have set out above. How much will the aggregate productivity gains be?

23 From the individual worker perspective movements between jobs will tend to appear as two reallocation events as workers are fired by one firm and hired by another. (The true number will likely be lower than this over the period in question since some workers are hired from the out-of-work pool). This suggests that may be roughly 3.6 million missing worker moves in the Business Structure Database data. This is around 17% of the employment level in the 2020 Business Structure Database data.

Assumptions are needed in this calculation. As an example, first assume that half of the workers that move see no gain – that is, on average, their firms have the same level of productivity. Second, assume that those that do receive a productivity boost move up by just two deciles: from the 30th to the 50th percentile, for example. Applying these modest assumptions to the estimated productivity levels in the 2020 Business Structure Database data and holding everything else equal would deliver an aggregate productivity increase of 4.5 per cent.

This would offset around a quarter of the UK's missing productivity, represented by the gap between observed productivity and that implied by the pre-2008 trend. This figure is stylised, but shows how small jumps up a steep ladder could drive the macroeconomy. In previous research, we took a similar approach but used a structural model to estimate the gains.[24] This work found that, on plausible assumptions, reallocation could account for three-quarters of the UK's missing productivity growth since 2008.[25]

Such large gains explain why reallocation can be valuable even if it brings other costs. The case of South Korea is instructive here. Between 1972 and 2011 the South Korean economy grew by nearly 8 per cent per year, delivering a near 12-fold increase in economic output over that period.[26] The country's most productive firms were three to five times more productive than others; they grew, hiring fast and acquiring rivals. The result was higher concentration, which is normally a concern: globally it has been shown to be part of a trend towards market power and higher mark ups.[27] However, in South Korea's case the growth was welfare-improving, since it was driven by a shift towards the most efficient firms.

There are some important caveats that should be borne in mind when considering the gains from increased dynamism

Differences between firms in average productivity might not fully translate into gains from productivity, for a number of reasons.

First, even the most productive firms may see their per-worker productivity decline as they try to expand their workforce. The intuition here is one of congestion: a firm with a limited number of machines, or stores, or vehicles cannot keep expanding its staff: offices and factories get too cramped. In modelling terms this is captured in the common

24 The approach takes the distribution of Business Structure Database firms forms worker-firm pairs. The model then takes the estimated missing moves as a target data moment and force worker-firm ruptures missing moves are eliminated. Reallocation takes place within industry, with hiring based on size and productivity. The resulting productivity improvement for the aggregate economy is 15.9 per cent.
25 J Choi et al., Superstars or Supervillains? Large Firms in the South Korean Growth Miracle, July 2023.
26 J Choi et al., Superstars or Supervillains? Large Firms in the South Korean Growth Miracle, July 2023.
27 J De Loecker, J Eeckhout & G Unger, The Rise of Market Power and the Macroeconomic Implications, Quarterly Journal of Economics, 135(2), January 2020; D Autor et al., The Fall of the Labor Share and the Rise of Superstar Firms, The Quarterly Journal of Economics, 135(2), May 2020.

assumption of decreasing returns to scale. This caveat relates to the fundamental technology operated by a firm.

Second, consumer preferences play a key role. The simple counterfactuals presented above assume that firms that do decide to grow can sell their wares with no change in price. In practice, when firms produce more, they may have to cut their prices.[28]

Third, we need to consider the costs of reallocation. In this paper our main focus is the expansion and contraction of a firm's employment. The frictions associated with hiring and firing can have significant implications for firms both in terms of financial cost and overall productivity. Adjustment costs not only include the logistical costs of hiring but also the loss of output during the time a new employee takes to reach optimum productivity. In one UK study, the cost of losing an employee and hiring a replacement was estimated to be over £30,000, of which around £5,000 is attributed to the recruitment logistics and £25,000 associated with the output lost while a new employee gets up to speed.[29] In addition, firms may have to make a redundancy payment to employees that are fired: these payment rise with an employee's tenure.[30] These costs will be borne in mind by any manager considering either growing or reducing their workforce, and will tend to hold back reallocation.

And fourth, the impact of uncertainty needs to be considered.[31] Productivity is hard for mangers to predict – for many firms it will only be discovered after the fact. Indeed, reallocation of workers takes time. Consider hiring: a firm needs to post a vacancy, interview its worker, complete HR tasks, and wait for notice periods to be served. By the time a newly productive firm can hire workers, its productivity may have waned. Knowledge of this could cause managers to sit on their hands.

Each of these caveats may chip away at the gains from reallocation and help explain why such large difference in productivity persist. More broadly, understanding the causes of the cross-firm differences in productivity is important for the design of policies and to quantify their benefits. We return to this point below.

Job moves boost wages for workers

We have seen that reallocation of employment between firms can raise average productivity, and that this process slowed during the pre-pandemic period of slow aggregate productivity growth. A related process operates at the level of individual

28 For examples of the role of consumer preferences, growth of firms and reallocation, see: L Einav et al., Customers and Retail Growth, National Bureau of Economic Research Working Paper 29561, December 2021.
29 Oxford Economics, The Cost of Brain Drain: Understanding the Financial Impact of Staff Turnover, February 2014.
30 https://www.gov.uk/redundancy-your-rights/redundancy-pay, accessed 6 September 2023.
31 E Mäkynen, O Vähämaa, Misallocation and the Life-Cycle Growth of Firms, Aboa Centre for Economics Discussion Paper No.146, May 2021; J Asker, A Collard-Wexler & J De Loecker, Dynamic Inputs and Resource (Mis)Allocation, Journal of Political Economy 122(5): 1013–63, October 2014.

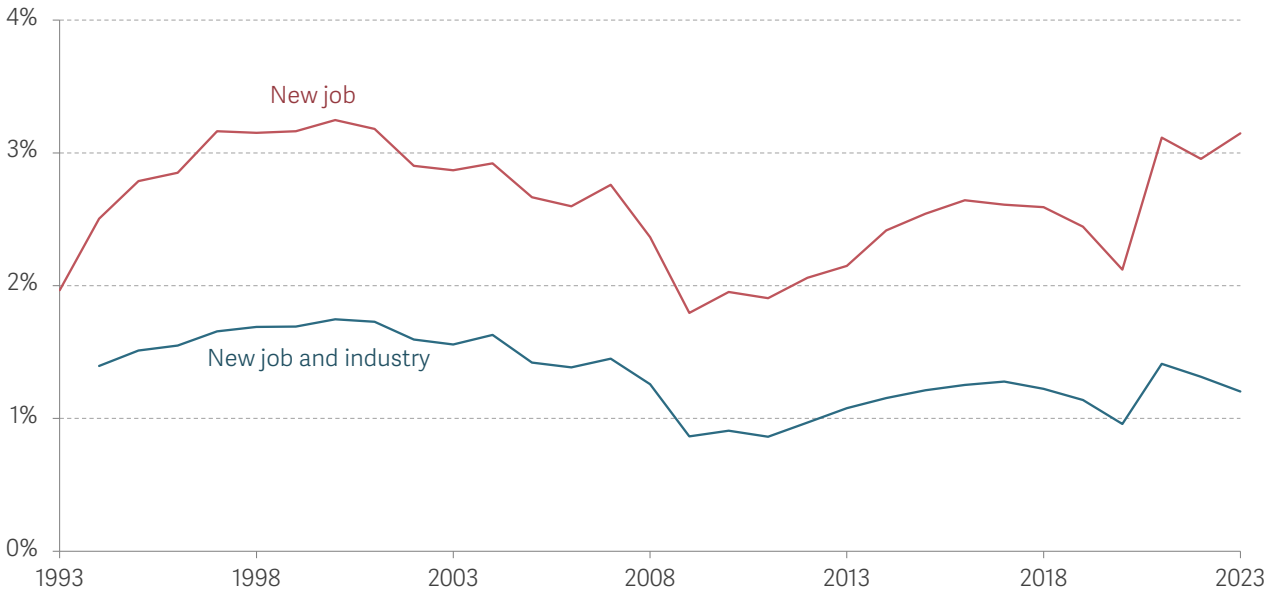
workers. Workers can move from job to job even if there is no net reallocation of labour from one firm to another.

Moving between firms is an important part of pay and career progression for many workers. Pay tends to rise faster for people who switch jobs: the median pay growth of job movers exceeded that of job stayers by 3.7 percentage points on average in the 2010s.[32] This is consistent with the idea of a 'job ladder', whereby workers gradually sort towards employers for whom they are a better match.

Job moves were lower in the period between the financial crisis and the pandemic than in the preceding decade (see Figure 5).[33] This mirrors the pattern in business dynamism we saw earlier. Since the pandemic, job moves have picked up a great deal, driven by the economic restructuring and tight labour market we have seen since then.[34]

FIGURE 5: **Job switching slowed in the decade before the pandemic, but may have accelerated more recently**

Proportion of workers moving to a new job per quarter: UK



NOTES: A job move is defined using an employment tenure reset condition, and industry moves are defined at SIC section level.
SOURCE: Analysis of ONS, two-quarter longitudinal Labour Force Survey.

32 N Cominetti et al., Changing Jobs? Change in the UK Labour Market and the role of worker mobility, Resolution Foundation, January 2022.
33 A version of this chart appeared in: N Cominetti, Changing jobs? Change in the UK labour market and the role of worker mobility, January 2022m
34 N Cominetti et al., Changing Jobs? Change in the UK Labour Market and the role of worker Mobility, Resolution Foundation, January 2022.

These two kinds of dynamism–of workers and firms–are separable: it is possible for workers to swap jobs without firms changing in size, and firms can grow and shrink with workers who enter and exit employment.[35] But they are likely to be related and driven by many of the same factors. The Annex discusses what we know about these factors. And the next Section zooms out from individual firms and workers to the level of industrial sectors and occupations, measuring dynamism and change at this higher level.

35 For evidence on sectoral restructuring happening at the beginning and end of working lives, see: N Cominetti et al., Changing Jobs? Change in the UK Labour Market and the Role of Worker Mobility, Resolution Foundation, January 2022.

Section 3

How the UK economy stopped changing shape

The reallocation of resources to high-productivity sectors of the economy has been a major driver of economic growth for centuries. But, as discussed in the previous section, this process has slowed down in recent years in the UK and contributed less to overall productivity growth.

In this section we look at the broader, sectoral picture. In this context it is striking that the UK does not have more labour overall in low-paying sectors than other rich countries. But looking at changes in low-paying sectors presents a mixed picture: some, such as retail, have been shrinking; while others – including social care and warehousing – have been growing.

Turning from sectors to occupations, the share of employment in high-paying occupations has grown in recent decades, and this benign trend actually seems to have accelerated recently. This 'occupational upgrading' has boosted pay, but the boost has been offset by a fall in the relative pay of high-paying occupations. This pattern of higher quantities and lower 'prices' of high-paying occupations is consistent with a rise in the supply of labour to high-paying occupations, probably driven by improved educational attainment. This points to the importance of education and human capital in shaping the economy.

This section zooms out from individual firms to look at dispersion and change at the level of industrial sectors. Sectors such as agriculture and manufacturing have grown and then shrunk as a share of the economy over time. This process is known as 'structural transformation' and has been a major driver of economic growth for hundreds of years.[36] As discussed below, there has also been a lot of transformation within the broad category

36 B Herrendorf, R Rogerson & A Valentinyi, Growth and Structural Transformation, Handbook of Economic Growth 2, 2014.

of services industries, such as a shift to less domestic service and more healthcare. But we will see that, as with the slowdown in firm-level dynamism, this process has been sputtering of late, and is one of the culprits behind the slowdown in overall economic growth. We'll also look the occupational composition of the labour market, where recent trends have been more encouraging.

Structural transformation drives much of productivity growth in the long run

Economies can and do grow by making a bit more of the same kinds of stuff each year. But a big part of the normal economic growth process is of a different kind, coming in the form of the economy changing shape. In this process, the economy grows as higher wages attract labour to growing sectors. As a byproduct, wages rise in the sectors the workers left. Labour shifted from agriculture to manufacturing from the Industrial Revolution to the mid-20th century, and then from manufacturing to services after that. This process has happened repeatedly across the world as countries get richer, and is evident among many developing countries today.[37]

The process of this structural transformation has three main drivers: tastes, technology and the supply of productive factors, such as capital and different types of labour. The tastes of consumers clearly matter for what they will want the economy to produce. As people get richer (and older) they want to consume proportionally more services, having largely satisfied their need for goods such as food and appliances.[38] Technology determines the amount of labour firms need to produce a given product. The mechanisation of agriculture and the robotisation of industry have reduced the labour requirements of these sectors even as the amount they produce has increased. The flip side is that technological change has created entirely new categories of products and jobs.[39] Finally, factor supply – and especially the educational composition of the workforce – helps to determine how much different things cost. An economy with lots of unskilled labour will see low wages for these workers and low prices for what they make and sell, encouraging people to buy more of them. Conversely, rising education levels have been one driver of structural transformation in the past, reducing the supply of agricultural workers and domestic servants.[40] The importance of these three big factors has been extensively studied when explaining both economic transformation in the long run and differences between rich and poor countries today.

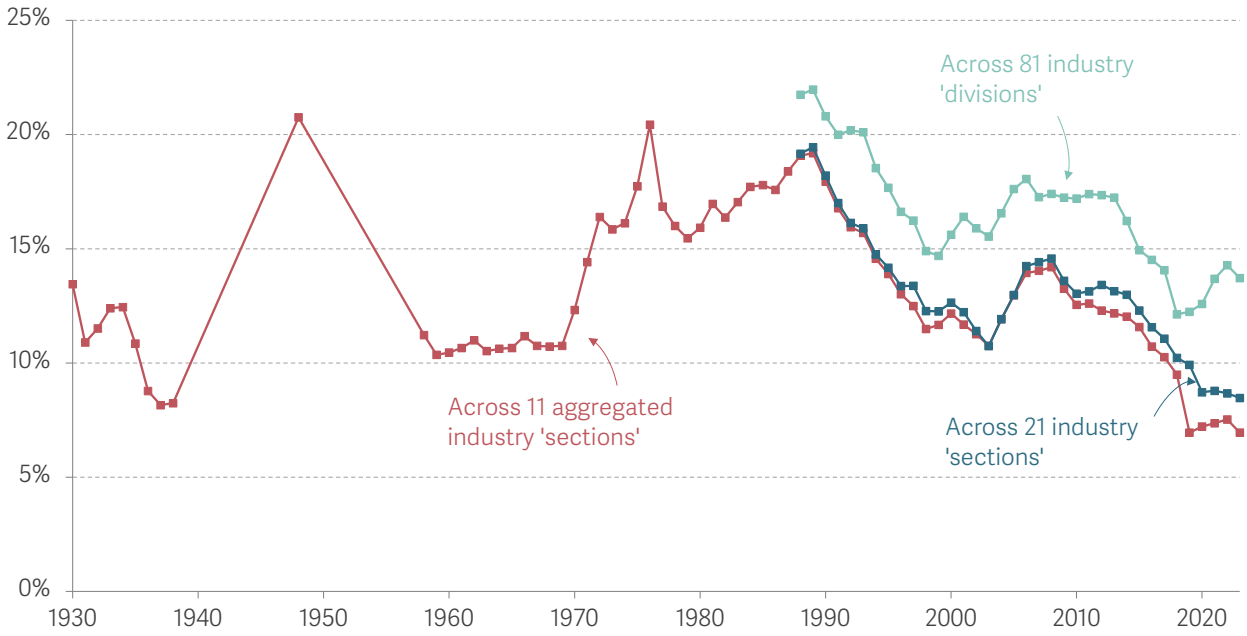
37 B Herrendorf, R Rogerson & A Valentinyi, Growth and Structural Transformation, Handbook of Economic Growth 2, 2014.
38 J Cravino, A Levchenko & M Rojas, Population Aging and Structural Transformation, American Economic Journal, 14(4), October 2022.
39 D Autor et al., New Frontiers: The Origins and Content of New Work, 1940–2018, National Bureau of Economic Research Working Paper No. 30389, August 2022.
40 T Porzio, F Rossi & G Santangelo, The Human Side of Structural Transformation, American Economic Review 112(8): 2774–2814, August 2022.

Structural change has been slowing in the UK, and contributing less to growth

But much less is known about what drives structural change in rich countries like the UK today. There is even some confusion about the basic facts. The popular narrative is that the economy is changing quickly, given the economic tumult of recent years. But this narrative is wrong: as Figure 6 shows the rate of labour reallocation between sectors has slowed to eight-decade lows.[41]

FIGURE 6: **The rate of labour reallocation between sectors has slowed**

Sectoral reallocation in the 10 years to date shown, expressed as a percentage of total employment: UK



NOTES: Sectoral reallocation is measured as the weighted average, across sectors, of the absolute change in employment share compared to a decade ago, based on a measure used in G Chodorow-Reich & J Wieland, Secular Labor Reallocation and Business Cycles, Journal of Political Economy, 128(6), April 2020. Red line uses SIC 2007 sections but some have been condensed for consistency with long-run data; the blue line uses the full set of industry sections in SIC 2007, for which Workforce Jobs data is available from 1978 onwards.
SOURCE: Analysis of ONS, Workforce Jobs; Bank of England, Millennium of Macroeconomic Data.

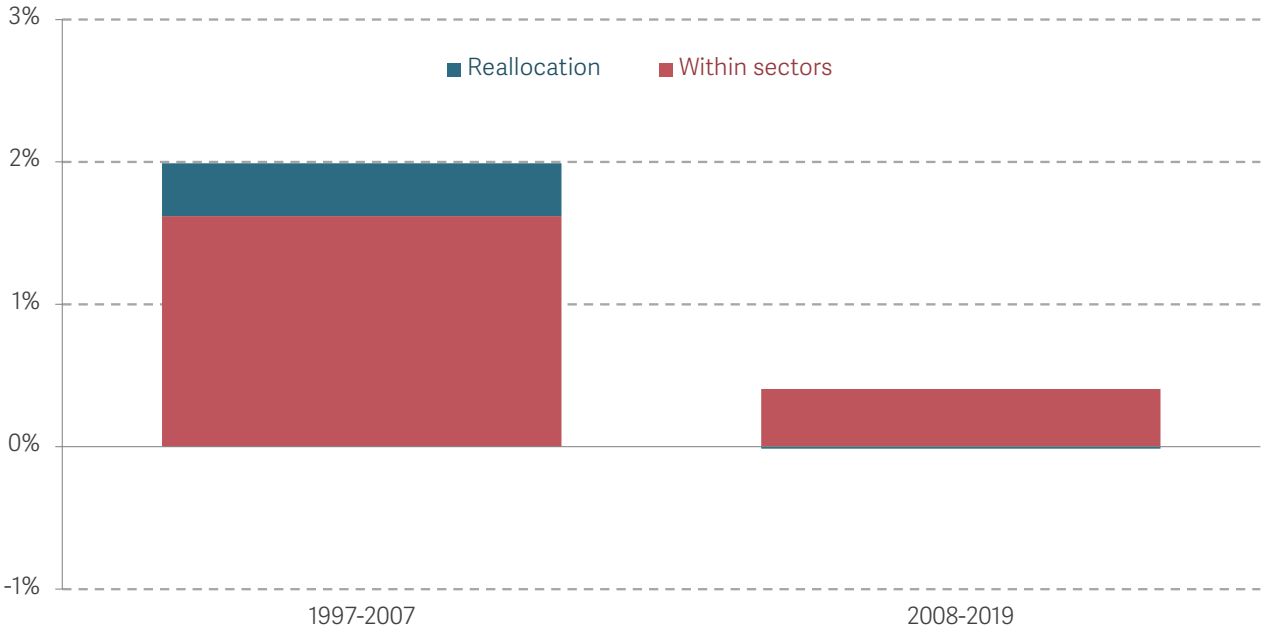
The slowdown in structural change before the pandemic explains part of the slowdown in GDP growth. Figure 7 decomposes labour productivity growth into the contribution from the average growth rate within each sector (weighted by the sectors' employment shares) and the contribution from the changes in employment shares of more or less productive sectors – what some call a 'batting average' effect.[42] The figure shows that both sources

41 A version of this chart appeared in: N Cominetti, Changing jobs? Change in the UK labour market and the role of worker mobility, January 2022.
42 MN Baily, EJ Bartelsman & J Haltiwanger, Labor Productivity: Structural Change and Cyclical Dynamics, The Review of Economics and Statistics 83(3): 420–433, August 2001.

of growth diminished in the 2008-2019 period: growth slowed within sectors, but the contribution from sectoral reallocation fell to zero.

FIGURE 7: **The contribution of sectoral reallocation to labour productivity growth fell to zero between 2008 and 2019**

Contributions to annual productivity growth from employment-weighted growth in industry productivity and from productivity-weighted changes in industry employment shares



NOTES: 'Within sectors' is the employment-weighted growth in nominal GVA per hour by 1-digit industry, minus growth in the GVA deflator. 'Reallocation' is the contribution to growth from nominal productivity weighted changes in employment shares. Growth is calculated at quarterly frequency, annualised and then averaged over the respective periods.
SOURCE: ONS and RF calculations.

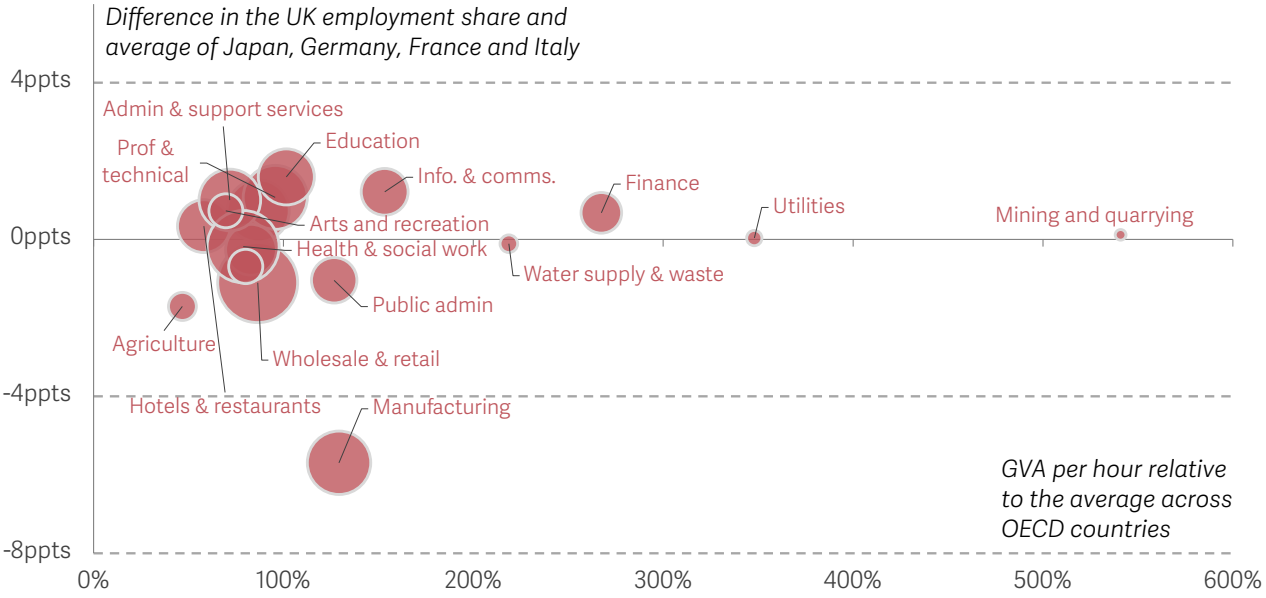
When thinking about growth policy, therefore, we should keep in mind that our most recent period of sustained rapid growth was characterised by a solid contribution from sectoral reallocation.

The UK has some big low-productivity sectors, and some big high-productivity ones

How big is the prize to be had from reshaping the sectoral composition of the UK economy? Let's start by taking stock of how out of shape the economy is to begin with. Figure 8 shows how the productivity of the sectors that comprise the UK economy compare to the average, and plots this against the composition of employment by sector compared to the average for a set of high-income OECD countries.

FIGURE 8: **The UK economy is not skewed overall towards low-productivity sectors**

Productivity per hour by sector in the UK and employment by sector compared to cross-country average



NOTES: The size of the bubbles is proportional to employment in hours in the UK. The x-axis is the ratio of GVA per hour each sector relative to the average across Japan, Germany, France and Italy. The y-axis shows the percentage point difference in the UK employment share in hours and the average of Japan, Germany, France and Italy.
SOURCE: Analysis of EU-KLEMS.

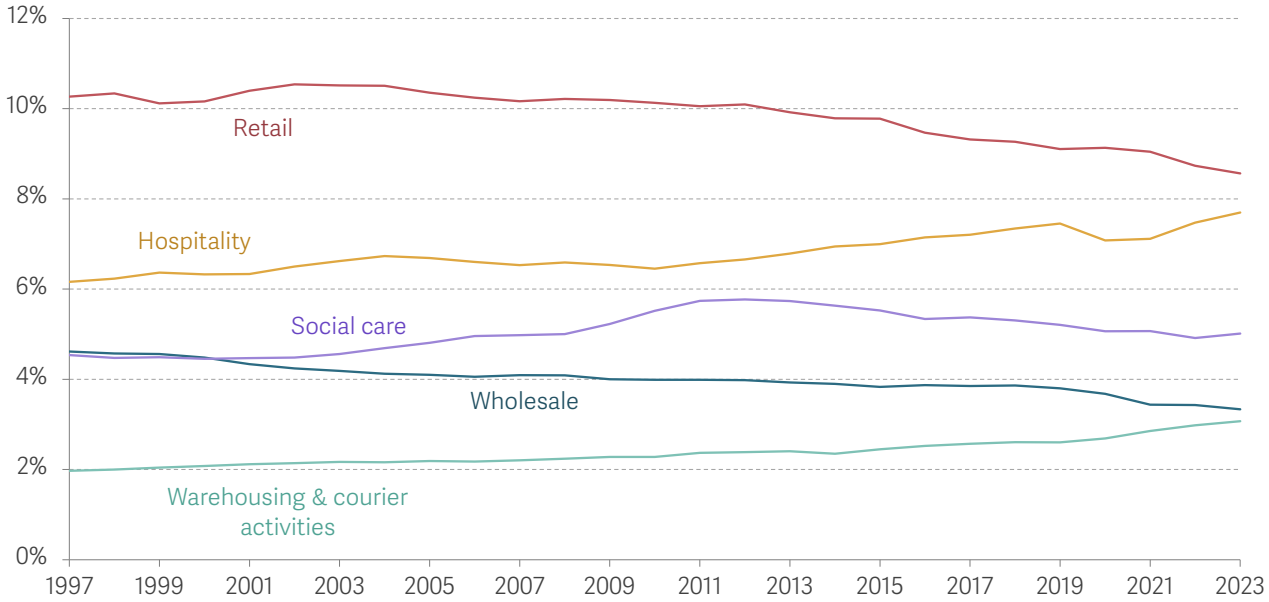
The figure shows that the UK has a relatively large share of its labour force tied up in the low-productivity 'accommodation and food services activities' sector (basically hotels and restaurants). But we also have more labour than average in the ICT and finance and insurance sectors, both of which are highly productive. The UK has relatively little labour in both agriculture (which is less productive than the average across OECD countries) and in manufacturing (which is more productive). On average, though, the UK does not have a bigger share of workers than other countries in low- or high-productivity sectors. This means that the UK would be no more productive overall if the labour force was allocated the same way as the average of other countries.

But this doesn't change the fact that the UK has lots of labour committed in certain low-productivity, low-paying sectors. The size of the bubbles in Figure 3.3 show that the UK has a substantial amount of labour in the low-paying sectors of retail, social care, and leisure and hospitality. Figure 9 focuses on the waxing and waning of a few of the big low-paying subsectors. The share of employment in retail has been shrinking for many years, but has been partly offset by rising numbers in warehousing – two sides of the decline

of bricks-and-mortar shopping. Care has been growing and is likely to get bigger still given the ageing of the UK population. Hospitality – a large sector with low wages and productivity – has also grown quickly over the recent past.

FIGURE 9: **Some low-paying sectors are shrinking, but others are growing**

Employee jobs as a proportion of total jobs in selected sectors: GB



NOTES: Figures are expressed as annual averages.
SOURCE: Analysis of ONS, Workforce Jobs.

In contrast, occupational upgrading has accelerated, but better occupations pay relatively less than before

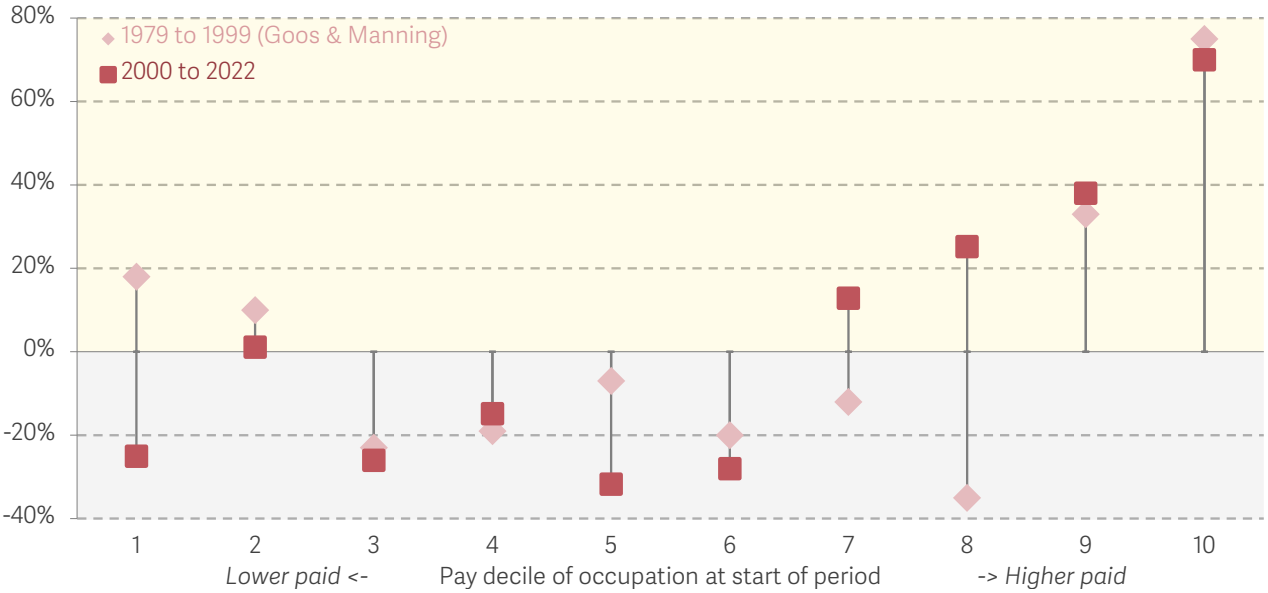
We can slice the labour market a different way – by occupation rather than by sector. Recent trends have been more encouraging here: the UK has seen disproportionate employment growth in high-paying occupations. Figure 10 shows that employment in higher-paying occupations has increased as a share of the total.[43] This picture is different to the 'hollowing out' of the middle of the pay distribution documented in the US.[44] Technology has been destroying occupations for several centuries – hand-loom weavers, telephone operators and typists have all been replaced by machines of various kinds. More may be due to come, perhaps because of the on-going revolution in Artificial General Intelligence.[45] However, at least over the recent past, in the UK the economy has managed to continue to create plenty of good jobs to replace those which are lost. This

43 A version of this chart appeared in: N Cominetti, Changing jobs? Change in the UK labour market and the role of worker mobility, January 2022.
44 D Autor, The Polarization of Job Opportunities in the U.S. Labor Market: Implications for Employment and Earnings, Community Investments, 23(2), 2011.
45 J Manyika et al., Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages, McKinsey Global Institute, November 2017.

is an example of 'labour reinstatement', whereby technological progress and innovation create entirely new kinds of jobs to balance the loss of jobs to machines.[46]

FIGURE 10: **Employment has grown fastest in high-paying sectors**

Change in the proportion of employment by pay decile of occupation at start of period: UK, 1979-1999 and 200-2022



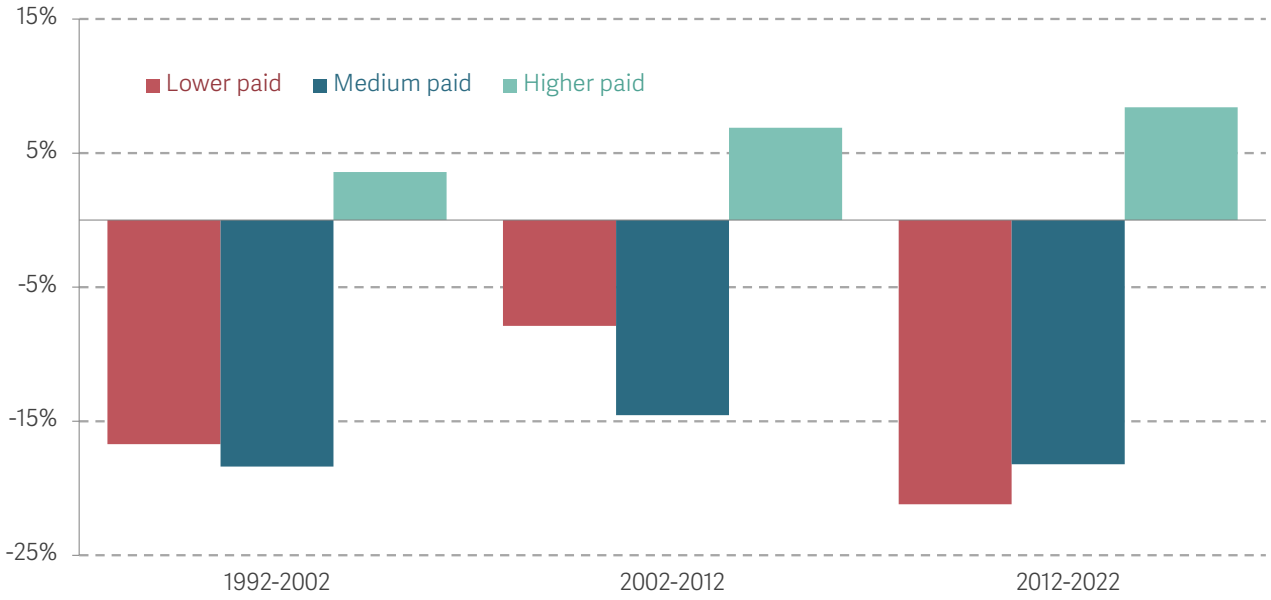
NOTES: SOC 1990, SOC 2000 and SOC 2010 codes have been mapped to SOC 2020 codes using a probabilistic mapping relying on dual-coded data. Minor group occupations are grouped into pay deciles by their median hourly pay at the start of each period. The occupation pay decile groupings for the Goos & Manning analysis (for the period 1979-1999) are not necessarily the same as those from our analysis (for the period 2001-2019).
SOURCE: M Goos & A Manning, Lousy and Lovely Jobs: The Rising Polarization of Work in Britain, Centre for Economic Performance, London School of Economics, February 2007; and analysis of ONS, Labour Force Survey.

Moreover, this process of occupational upgrading has been speeding up. Figure 11 shows employment growth in low-, middle- and high-paying occupations in each of the three decades to 2022, compared to average employment growth. Only high-paying occupations (those in the top three pay deciles) have grown faster than average, and this pattern has become successively more pronounced.

46 D Acemoglu & P Restrepo, Automation and New Tasks: How Technology Displaces and Reinstates Labor, Journal of Economic Perspectives, 33(2), 2019.

FIGURE 11: **The process of occupational upgrading has accelerated**

Difference in employment growth by occupational pay decile group and average employment growth by period: UK, 1992-2002, 2002-2012 and 2012-2022



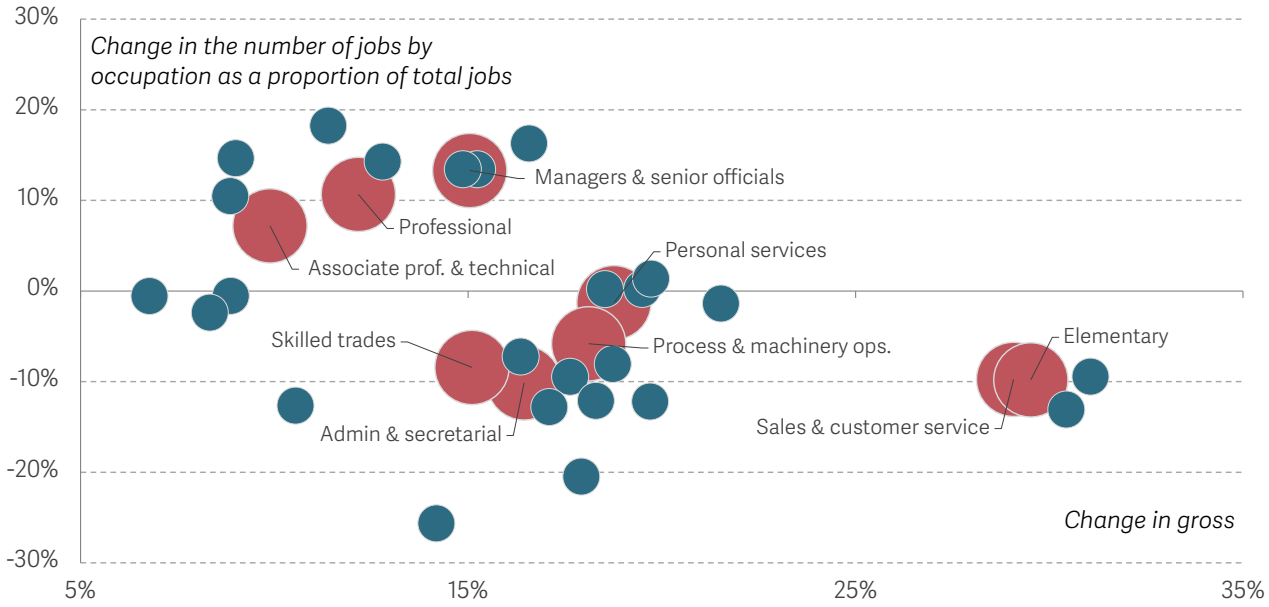
NOTES: SOC 1990, SOC 2000 and SOC 2010 codes have been mapped to SOC 2020 codes using a probabilistic mapping relying on dual-coded data. Minor group occupations are grouped into pay deciles by their median hourly pay at the start of each period. Lower paid group contains the bottom three occupational pay deciles, medium paid group contains occupational pay deciles 4 to 7, and higher paid group contains the top three occupational pay deciles.
SOURCE: RF analysis of ONS, Labour Force Survey.

However, Figure 12 shows that occupations which have grown fastest – typically the highest-paying ones – have also seen their relative pay fall. This combination of increasing quantity and falling price suggests a positive shock to the supply of labour that can do these occupations. In other words, improving educational attainment has driven structural transformation in the UK labour market.

Reforming the economy through labour supply is one way in which policy can reshape the labour market. In the final section of this report, we will look at this and several other reforms that will encourage more labour into high-pay, high-productivity sectors, boosting growth and pay in the economy as a whole.

FIGURE 12: **The pay of high-paying occupations has fallen in relative terms**

Change in the number of jobs by occupation as a proportion of total jobs and change in gross hourly pay: 2011-2019



NOTES: Blue dots are 2-digit occupation groups, red dots are 1-digit occupation groups. Pay is median gross hourly pay.
SOURCE: RF analysis of ONS, Earnings and hours worked: Annual Survey of Hours and Earnings, Table 3.

Section 4

Policy for a more dynamic economy

The UK needs a set of policies to help markets promote the freer movement of labour and capital to the most productive firms. This suite of dynamism-enhancing steps should start by dismantling barriers to reallocation: these are most obvious in the tax system, planning rules and labour market. Where subsidies and tax breaks are given, they should tilt the playing field in favour of young firms, not small ones. Intense competition – both home-grown and from productive foreign entrants to the UK – will be vital: it both drives out the weakest performers, and places limits on the pricing power that can emerge for the strongest firms in some markets. And policy must recognise that while diffusion helps all firms, dynamism is a matter of rivalry, survival and failure: it will bring costs, which policy – particularly in the labour market – must cushion. Finally, there is a clear need to recognise that greater dynamism will create losers as well as winners, with some workers losing their jobs and some sectors, firms and even places set to shrink.

We have seen that the reallocation of resources towards more productive or higher-paying jobs, firms, occupations and sectors can drive growth in wages and productivity. This engine of growth has been sputtering in recent years in the UK, as it has in many other high-income countries. In some cases, the root cause lies outside of UK policy makers' control: demographics; the level of world interest rates; the nature of technological advance at the frontier.[47] However, there are some things that government policy can do, and that is the topic of this final section of the report.

47 See, for example: M Peters & C Walsh, Population Growth and Firm Dynamics, National Bureau of Economic Research Working Paper No. 29424, October 2021.

Removing barriers to reallocation should be the top priority

The first thing to recognise is that several aspects of existing government policies discourage reallocation. Correcting these policies is a logical place to start.

There are some features of the tax system that create disincentives for capital and workers to move. Most obvious here is Stamp Duty Land Tax (SDLT) on residential transactions that slows the rate at which people move house, dissuading job moves and geographic reallocation.[48] As we argued in our previous work, the burden of this tax should be lowered.[49] (The threshold on paying Stamp Duty should not be cut, and the rates on residential property should be halved.[50]) This will boost labour reallocation and make more labour available to growing firms.

Similarly, Stamp Duty on commercial transactions artificially discourages the beneficial reallocation of business structures (mostly buildings), which comprise around half of the business capital stock, to their most productive use. Once again, we recommend that the rate be halved. On HMRC's preferred estimates, this would be enough to boost transaction volumes by 20 per cent.[51] That would be a major increase in the rate of business capital reallocation.

Looking beyond the tax system, planning controls limit the extent to which a key factor of production – land – can be reallocated between its different potential uses. It impedes the reallocation of capital directly, by preventing the creation of new business structures. Planning bottlenecks also limit labour reallocation, as firms without the correct premises are less likely to grow, and workers cannot move to them if housing is not available. Consistent with this, housing costs now eat up a larger share of the gains from moving to higher-wage areas, and private renters' residential and job mobility fell together in the 2010s.[52]

Some form of land use planning is justified because of the effects that building has on local neighbourhoods and their residents. However, the current system does not trade off costs and benefits in a consistent or economically rational way. We therefore recommend that binding plans for land use, at an appropriate and generally higher level of geographic aggregation than currently (which is mostly local authorities), be required everywhere in the UK, with financial incentives aligned to increase support from local residents. Such a reform would increase aggregate investment but also boost reallocation.[53]

48 For further details, see Box 2 in: M Broome, A Corlett & G Thwaites, Tax planning: How to match higher taxes with better taxes, Resolution Foundation, June 2023.
49 M Broome, A Corlett & G Thwaites, Tax planning: How to match higher taxes with better taxes, Resolution Foundation, June 2023.
50 Current policy is for Stamp Duty to revert to its previous lower level in March 2025.
51 See footnote 30 in: M Broome, A Corlett & G Thwaites, Tax planning: How to match higher taxes with better taxes, Resolution Foundation, June 2023.
52 L Judge, Moving matters: Housing costs and labour market mobility, Resolution Foundation, June 2019.
53 P Brandily et al., Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth, Resolution Foundation, June 2023.

Reducing the barriers the Government currently puts in the way of resource reallocation will help, but will not be enough. We must go further, lubricating the markets for productive resources to ease their path to their best use.

The focus should be on young firms, not small ones

Policy should favour the dynamic firms that drive change, rather than small businesses per se. Our systems of tax and regulation explicitly favour small businesses at the expense of large ones. Smaller businesses pay lower rates of Corporation Tax and have more of their investment covered by full expensing through the Annual Investment Allowance. Business rates can be lower for certain small business premises. Firms with turnover below £85,000 are not required to register for VAT, making their sales artificially cheaper to some customers.

These policies act as a tax on firms' growth. There is clear evidence of firms bunching below the VAT threshold.[54] Evidence from France suggests that regulations which kick in when firms reach a certain size discourages them from growing, reducing productivity in the economy as a whole.[55] This is because larger firms are on average more efficient than smaller ones.

Young firms grow most quickly, attracting new staff, as our evidence above shows. Old firms which are small do not generate much growth or many jobs. So, there is no good reason to stack the deck in favour of small firms. Rather, the watchword of policy should be 'young, not small'.[56] Young firms are responsible for a disproportionate share of innovation in the economy.[57] Levelling the playing field for small and large firms will increase dynamism by removing the drag on firm growth it engenders.

Slashing the VAT registration threshold will stop favouring micro-businesses over others.[58] For investment allowances, we recommend that investment be fully expensed for all firms, rather than just smaller ones.[59] There should ideally be a flat rate of Corporation Tax, as was the case before the rate for large firms increased to 25 per cent in March 2023. Reliefs for small businesses and properties in the business rates system should be gradually phased out.

54 Office for Budget Responsibility, The impact of the frozen VAT registration threshold, in Economic and fiscal outlook – March 2023, March 2023
55 L Garicano, C Lelarge & J Van Reenen, Firm Size Distortions and the Productivity Distribution: Evidence from France, American Economic Review 106(11), November 2016.
56 J Haltiwanger, R S Jarmin & J Miranda, Who Creates Jobs? Small versus Large versus Young, Review of Economics and Statistics 95(2), May 2013.
57 P J Klenow & H Li, Innovative Growth Accounting, National Bureau of Economic Research Macroeconomics Annual 35(1), 2021.
58 M Broome, A Corlett & G Thwaites, Tax planning: How to match higher taxes with better taxes, Resolution Foundation, June 2023.
59 P Brandily et al., Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth, Resolution Foundation, June 2023.

The aim should be to make sure poor performers are squeezed out

Low productivity firms are able to survive in part because they face weak competition for customers, workers and the capital tied up in their businesses.[60] But competition is about far more than competition policy. Reforms to strengthen competition in all product, labour and capital markets would increase the pressure on bad firms: those that fail will release their productive resources to better-performing ones.

A higher minimum wage and improved labour standards help workers at the bottom of the labour market.[61] More generous minima can also have the benign side effect of forcing labour out of low-wage, low-productivity firms and reallocating it to firms whose productivity means that they can afford to pay their staff more.[62] Facing a bigger pool of labour, good firms would then have the space to create more high-productivity jobs.[63]

Turning to the market for capital, we know that the returns that firms' owners earn on their investments vary widely.[64] Fragmented owners have less incentive to monitor the management of the firms they own, when the costs of doing so are private and the benefits accrue largely to other owners. In a companion paper, we have recommended reforms to the pensions industry that would have the effect of de-fragmenting company ownership and thereby improving oversight of corporate boards.[65] We recommended that larger firms be required to put workers' representatives on their corporate boards, as is the case in many other European countries. This has been shown to increase productivity and long-termism in decision-making.[66] Taken together, the management of UK firms would then face greater pressure from 'above' and 'below' to improve their performance. Those which cannot will be more likely to shrink as their owners take their capital elsewhere.

The tax system can also be used to guide capital to its most productive use. Compared to taxes on profits, wealth taxes fall more heavily on owners who are using their assets less productively.[67] More consistent taxation of wealth, as we have advocated in previous

60 For strong evidence of weak competition in the labour market, see: A Garin & F Silvério, How Responsive Are Wages to Firm-Specific Changes in Labour Demand? Evidence from Idiosyncratic Export Demand Shocks, The Review of Economic Studies, July 2023.
61 N Cominetti et al., Low Pay Britain 2023: Improving low-paid work through higher minimum standards, Resolution Foundation, April 2023. Similarly, it is crucial that the standards that do exist are effectively enforced, to prevent firms from gaining a competitive edge by cutting corners on labour rights. See: L Judge & H Slaughter, Enforce for good: Effectively enforcing labour market rights in the 2020s and beyond, Resolution Foundation, April 2023.
62 C Dustmann et al., Reallocation Effects of the Minimum Wage, Quarterly Journal of Economics 137(1), February 2022; D Berger, K Herkenhoff & S Mongey, Labor Market Power, American Economic Review 112(4), April 2022; J Eeckhout & A Sepahsalari, The Effect of Wealth on Worker Productivity, Review of Economic Studies 1–50, July 2023.
63 D Acemoglu, Good Jobs versus Bad Jobs, Journal of Labor Economics 19(1), January 2001.
64 J De Loecker, T Obermeier & J Van Reenen, Firms and Inequalities, IFS Deaton Review of Inequalities, March 2022.
65 P Brandily et al., Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth, Resolution Foundation, June 2023.
66 S Jäger, B Schoefer & J Heining, Labor in the Boardroom, The Quarterly Journal of Economics 136(2), May 2021.
67 F Guvenen et al., Use It or Lose It: Efficiency and Redistributional Effects of Wealth Taxation, The Quarterly Journal of Economics 138(2), May 2023.

work, would accordingly spur the reallocation of capital.[68] Likewise, businesses managed by founders' descendants tend to be less efficient than others.[69] To encourage family businesses to be sold to or managed by the most efficient owners, the same companion paper recommends that full Inheritance Tax be levied on business assets.[70]

Turning to customers, the interaction between productivity and product-market competition is multifaceted. On one hand, we want the most productive firms to employ a larger share of the economy's resources: this can mean they grow large, as has been seen in South Korea. But this can lead to concentrated markets and an erosion of competition, pushing up prices and holding down wages.[71] The solutions are: first, to keep incumbent firms on their toes by ensuring that markets are contestable; second, to ensure that profits and wealth are properly taxed; third, as mentioned above, to counter uncompetitive behaviour in the labour market with high (and well-enforced) minimum wages and standards; and fourth, to promote competition through international trade by minimising trade costs.[72]

Oiling the wheels of workers job moves should help labour market dynamism

Workers are often the agents of economic change. But the operation of the labour market frequently discourages job moves. Moving jobs leads to pay increases, as we have seen, but also entails risks – such as a loss of acquired employment rights, and more broadly that the new job might not work out. Moreover, the low level of unemployment benefit in the UK means that unemployed workers are incentivised to take the first job that comes along, rather than continuing to search for a better fit.[73] In a recession when jobs are scarce, these effects will be stronger and more damaging.[74]

As discussed in related work, we recommend that unemployment benefits be increased and made to depend more closely on a worker's past earnings and potentially on the

68 For further details on wealth taxes, see: M Broome, A Corlett & G Thwaites, Tax Planning: How to match higher taxes with better taxes, Resolution Foundation, June 2023.
69 B Villalonga & R Amit, How Do Family Ownership, Control and Management Affect Firm Value?, Journal of Financial Economics 80(2), May 2006; B Pellegrino & L Zingales, Diagnosing the Italian Disease, National Bureau of Economic Research Working Paper No. 23964, October 2017.
70 P Brandily et al., Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth, Resolution Foundation, June 2023.
71 Baqaee and Farhi (2019) find that, for the US economy, 'about half of measured aggregate productivity growth over the last 20 years can be accounted for by firms with higher mark-ups increasing their relative size. This implies that the slowdown in pure technology growth is even slower than suggested by aggregate productivity statistics. Eliminating mark-ups would increase the productivity of the US economy by about 40%'. See: D R Baqaee & E Farhi, Aggregate Productivity and the Rise of Mark-Ups, Centre for Economic Policy Research, December 2021.
72 Research has linked more concentrated labour markets to lower wages. For further details, see: J Azar et al., Minimum Wage Employment Effects and Labor Market Concentration, National Bureau of Economic Research Working Paper 26101, July 2019. For examples of the impact of trade costs, see: S Bhalotia et al., Trading Up: The role of the post-Brexit trade approach in the UK's economic strategy, Resolution Foundation, June 2023.
73 R Chetty, A General Formula for the Optimal Level of Social Insurance, Journal of Public Economics 90(10–11), November 2006.
74 C Landais, P Michaillat & E Saez, A Macroeconomic Approach to Optimal Unemployment Insurance: Theory, American Economic Journal: Economic Policy 10(2), May 2018.

economic cycle.[75] As recent Economy 2030 work argued, workers who lose their jobs should be eligible for temporarily higher unemployment benefits which are not be conditional on taking the first job that comes along.[76] This will encourage workers to search for and take better jobs, making the labour market more dynamic and improving job quality.[77]

Turning up the temperature in the low-wage economy

Zooming out again from firms and workers to sectors and occupations, we have seen that labour supply is a key factor in shaping the sectoral composition of the economy. We propose two sets of policies that will restructure the economy through their effect on labour supply.

First, the Government should invest more in the skills of those that do not attend university – roughly half of the workforce – by raising the funding for technical and vocational education including apprenticeships. This would rebalance another bias in the British economy and would tend to reduce the supply of unskilled labour. Mid-career training would provide a further boost to labour reallocation. Second, the enhanced national minima for wages and employment conditions mentioned above will naturally tend to bite harder in low-wage sectors. On top of this, we propose sectoral Good Work Agreements to tackle problems in particular sectors.[78]

These policies will raise relative wages in low-paid sectors and occupations. Higher wages will in turn lead to increases in the relative price of the output of sectors which use unskilled labour intensively, just as more-expensive labour will squeeze out low-productivity firms. The care sector is an important example in this context as it will need to grow to meet the increased demand from an ageing society. But it is largely publicly funded and, therefore, subject to fiscal rather than competitive pressures. In contrast, labour in sectors such as retail, leisure and hospitality will become more expensive, pushing down on employment. This is not a bug, but a feature: the aim of the policy should be to reduce the incidence of low wages in part by shifting labour into sectors that pay better. But it's a feature that nonetheless implies trade-offs, one of several that greater dynamism will create.

75 M Brewer et al., Sharing the benefits: Can Britain secure broadly shared prosperity?, Resolution Foundation, July 2023; M Brewer & L Murphy, From safety net to springboard: Designing an unemployment insurance scheme to protect living standards and boost economic dynamism, Resolution Foundation, September 2023.
76 M Brewer & L Murphy, From safety net to springboard: Designing an unemployment insurance scheme to protect living standards and boost economic dynamism, Resolution Foundation, September 2023.
77 D Acemoglu, Good Jobs versus Bad Jobs, Journal of Labor Economics 19(1), January 2001.
78 C McCurdy, H Slaughter & G Kelly, Putting good work on the table: Reforming labour market institutions to improve pay and conditions, Resolution Foundation, September 2023.

Easing the hardship felt by those impacted by dynamism

A more-dynamic economy would be more productive, boosting average incomes. It is not just average incomes that should improve: a number of the routes we propose to get there – for example, tightening the supply of low-wage labour – should also make the economy more equal. But policy makers must recognise that a more-dynamic economy will have downsides that we need to own and address.

An economy with more reallocation will see more hiring and firing, and more firms going out of business. Losing one's job or business can be traumatic as well as financially costly, and these costs are larger during a recession.[79] So the first step to minimise these costs is to ensure a stable macroeconomic environment. A forthcoming paper in the Economy 2030 Inquiry will set out our proposals in this area.

People who lose their jobs take time to find new ones. Moreover, taking longer to search for a job can help reallocation insofar as a longer search leads to a better job match. The net result of more churn in the labour market and longer search will be higher 'frictional' unemployment.[80] This will chip away at how much the gains in productivity lead to higher GDP. The impact on workers' incomes should be smoothed with the introduction of temporarily-higher earnings-related unemployment benefits, as mentioned earlier.

And paying higher wages for low-skilled employment will lower the return to acquiring more skills. Forthcoming papers for the Economy 2030 Inquiry will set out a skills strategy to ensure investment in skills goes up, not down.

The UK needs a new approach that puts economic change back at the heart of economic policy making

The economy resulting from these reforms would be very different from that of today. It would economise more on unskilled labour, freeing up capacity for high-productivity industries in which the UK has a comparative advantage. Workers' labour incomes could be more volatile over time, but would be higher on average. Pay would be more equal across the workforce, and would be smoothed out better by the state. Firms and sectors would wax and wane more, land would be repurposed more readily, and people would change jobs more frequently. Sometimes these changes may even happen too quickly, calling forth additional policy measures to smooth their impact.

But, overall, the UK needs a new mindset that puts questions of economic change back at the centre of economic policy debate. The new, more-dynamic version of the British

79 S J Davis & T M von Wachter, Recessions and the Cost of Job Loss, National Bureau of Economic Research Working Paper 17638, December 2011.
80 The Beveridge Report was the first UK policy report that discussed frictional unemployment. For further details, see: W Beveridge, Social Insurance and Allied Services (Beveridge Report), November 1942.

economy that results will be better placed to handle whatever big changes are wrought by technology, demographics and decarbonisation. Meanwhile, the economy would deliver more growth that benefits everyone.

Annex: Research into the factors driving the fall in dynamism

The reasons behind the fall in dynamism are poorly understood. In this context, two related, but distinct, processes can be summarised in the following way:

Reallocation. This occurs when firms enter or exit the market, grow or shrink. It is a measure of how labour is adjusted up and down in response to the productive opportunities firms face.

Job-to-job moves. This occurs when workers move between firms. In theory it would be possible to have a high level of job moves, without any reallocation if firms consistently swapped workers but stayed the same size.

In a dynamic and productive economy both processes will occur. They will also both tend to be stimulated – and limited – by the same factors. This section considers the barriers to reallocation and to job-moves; below, we discuss policies that might help lower these barriers.

The facts on reallocation and responsiveness presented above suggest that something in the UK is preventing firms from reaching their optimal size (as there is in the US). Intuitively, this could be any factor that either (1) raises the cost of, or (2) reduces the incentive to reallocation resources. Higher costs or lower incentives mean that higher (or lower) productivity firms are too small (or large), relative to the size they would be otherwise. Policies that seek to simulate dynamism will tend to lower adjustment frictions and/or clarify or otherwise unblock firms' incentives to adjust.

Designing policy requires more detail on what the costs, frictions and incentive blunting problems are. These deep drivers behind the fall in dynamism are at present unknown, with the frontier research in this area noting no single definitive cause at present.[81] That said, there are a number of potential drivers, including:

- Job specificity and occupational licences.
- Labour market regulation.
- Credit Supply
- Heavily indebted firms.
- Competition.

81 R A Decker et al., Changing Business Dynamism and Productivity: Shocks vs. Responsiveness, American Economic Review 110 (12): 3952–90, December 2020.

- A lack of new ideas.
- Retrenchment of Foreign Direct Investment (FDI).

Job specificity and occupational licences

Both reallocation and job moves could become rarer if workers are becoming more tightly bound to their particular jobs and firms, so that moving between firms and industries is harder. The simplest example of this would be firm-specific skills. Some firms will develop processes – from the machines they use to the types of software they favour – that are idiosyncratic and not shared by others. This makes it both harder to hire, when a firm is expanding, and harder for workers to leave, when a firm is contracting. The same logic means that changing industry may be even harder.[82]

Another example is occupational licencing. This occurs when legal permission from a central authority (government or professional) is needed to work in an industry. The prevalence of this has grown considerably in the recent past.[83] A recent OECD publication shows that licencing goes much further than the typical industries—lawyers, architects, engineers—that spring to mind. Offering hair removal services as a cosmetologist in Pennsylvania, for instance, takes 1250 hours of training, an exam and a clean criminal record. Bakers in France face a seven-hour exam.[84] The OECD notes that these kinds of occupational entry regulations (OERs) can reduce business dynamism. While occupational licencing is lower in the UK than the US, it has grown significantly since the 1990s.[85]

Job-specificity formalised via a legal license is a type of adjustment cost. Consider a firm that has received a significant positive productivity shock and is looking to hire workers. If the pool of workers lacks the specific skills – or regulated licences due to OERs – then it faces the cost of training and/or licencing them. Researchers have shown that adjustment costs of this type can explain the allocation of capital well: for example,

82 Donovan & Schoellman (2021) review the literature, which generally points to large costs to changing sectors. K Donovan & T Schoellman, The Role of Labour Market Frictions in Structural Transformation, Centre for Economic Policy Research, Structural Transformation and Economic Growth Pathfinding Paper, April 2021.

83 MM Kleiner & AB Kreuger, The Prevalence and Effects of Occupational Licensing, British Journal of Industrial Relations 48(4): 676–87, December 2010.

84 I Bambalaite, G Nicoletti & C von Rueden, Occupational licensing – how much and what effects?, OECD Economics Department, OECD Publishing, March 2020; K Sweetland et al., The Continuing Burden of Occupational Licensing in the United States, Institute for Justice, October 2019; C von Rueden & I Bambalaite, Measuring occupational entry regulations: A new OECD approach, OECD Economics Department Working Paper No. 1606, OECD Publishing, Paris, March 2020.

85 See, for example: MM Kleiner, The influence of occupational licensing and regulation, Institute of Labor Economics World of Labor, Bonn, 2017; and A Humphries, A., MM Kleiner & M Koumenta, How does government regulate occupations in the United Kingdom and the United States? Issues and policy implications, in: D Marsden (ed.), Employment in the Lean Years: Policy and Prospects for the Next Decade, Oxford: Oxford University Press, 2012, 87–107.

a related study looks at several advanced economies showing that a model with capital adjustment costs fits the data better than one in which firms may costless adjust their inputs.[86] It may be the case that a similar process is at play but with employees.

Labour market regulation

In theory, policies that protect workers and at the same time add costs to hiring and firing could result in lower reallocation and job moves. The economic logic is akin to that set out above: a firm's owners might want to hire or fire, due to a rise or fall in productivity, but policies that protect workers might prevent this or add costs to doing so. While well-intentioned in terms of the direct impact – more secure employment – labour market protections might lower reallocation.

It is hard to tell this story about Britain, however. Labour has become ever more important as an input, with services sectors now accounting for 80 per cent of employment, and high employment and GVA growth sectors (including wholesale, retail, professional services and ICT services) having lower capital intensities than manufacturing. In other words, labour is the primary input to the UK economy. In addition, other evidence suggests that labour is becoming easier to adjust, due to weaker contractual terms, including zero-hours contracts (ZHCs), the prevalence of which have risen.[87] In other words, the British worker is becoming more central to firms' production and is easier to contract in a 'light touch' way, yet workforces are being adjusted less. This makes the reallocation shortfall even more puzzling.

Credit supply

A firm looking to expand will often need access to credit. As noted above, most firms will experience a decline in per-worker productivity if they simply ramp up their workforce without also adding new machines, outlets, computers, or other capital inputs. All of this means that supply of credit – the quantity offered, the price of funding, and the time taken to access it – are an important factor underpinning reallocation and business dynamism.

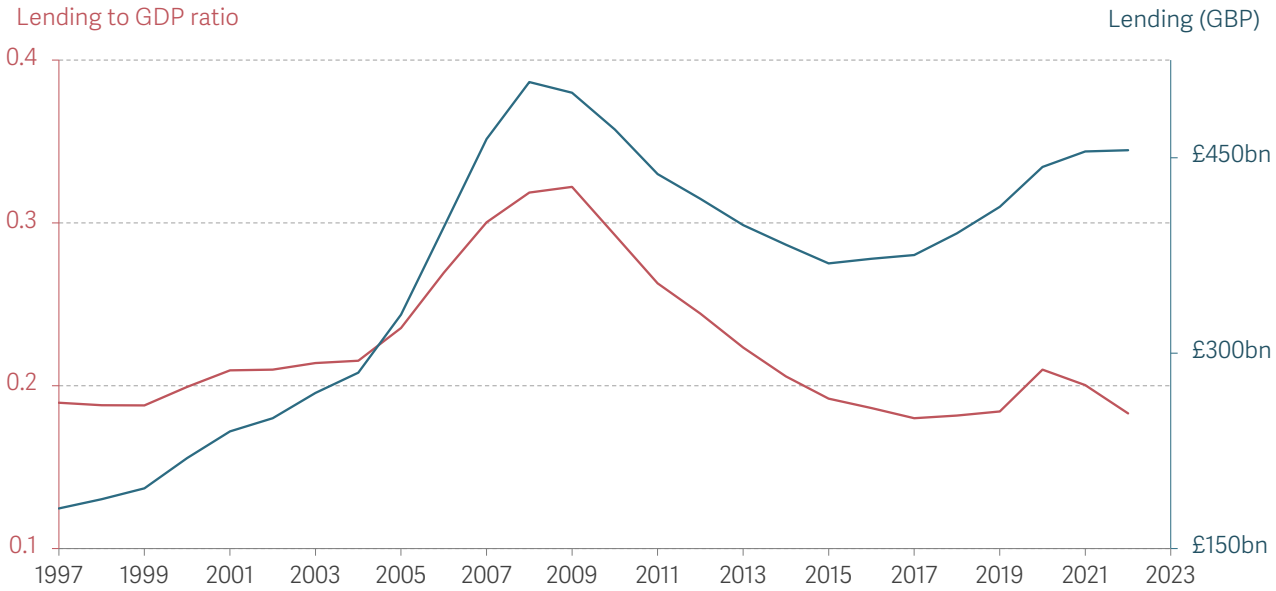
The UK corporate sector experienced a sharp reduction in credit supply following the financial crisis. Fifteen years on, the crash is often looked back on as a housing crisis. This was true in the US, but not the UK. In Britain, the value of commercial real estate (CRE) fell by 40 per cent between 2008 and 2009, with CRE lending the primary concern in the immediate aftermath of the acute money-market phase of the crisis.[88] Following

86 J Asker, A Collard-Wexler and J De Loecker, Dynamic Inputs and Resource (Mis)Allocation, Journal of Political Economy 122(5): 1013–63.
87 N Datta, G Giupponi & S Machin, Zero-Hours Contracts and Labour Market Policy, Economic Policy 34(99): 369–427. July 2019.
88 Bank of England, Financial Stability Report, December 2010.

the crisis, banks rebuilt their capital ratios by deleveraging – reducing their loan books. This reduction in lending fell on the corporate sector, with lending to firms falling sharply, as shown in Figure 13 below.

FIGURE 13: **Lending to companies fell sharply after 2008 and has still not recovered its pre-GFC levels.**

Sterling net lending to firms (PNFCs) – amounts outstanding and as a ratio to GDP



NOTES: Net lending figures are the annual average for monthly amounts outstanding. The ratio is the lending figure divided by the annual estimate of nominal GDP (YBHA) from the ONS.
SOURCE: Analysis of Bank of England, Bank Stats; ONS, GDP.

A reduction in demand from firms will have played a role too: many firms were in negative equity (which we discuss below). However, for some years after the 'credit crunch' of 2007-08, qualitative and survey evidence for the UK suggested that credit constraints were still holding back firm expansion.[89]

Low interest rates and heavily indebted firms

Another factor dulling responsiveness could stem from an overhang of existing credit. If firms have high amounts of debt and bank loans – potentially secured against business properties that have declined in value – then their priority, with any free cash flow, may be servicing these existing debts rather than expansion. So-called 'zombie' companies may be unresponsive to business conditions since their primary aim is debt servicing. This phenomenon has been observed in Japan, following its 1989 stock and real-estate market bubble implosion and also in the US.[90]

89 See, for example: Bank of England, Credit Conditions Survey – 2010 Q1, April 2010.
90 O Jordà et al., Zombies at Large? Corporate Debt Overhang and the Macroeconomy, The Review of Financial Studies 35(10): 4561–4586, October 2022.

The Bank of England has investigated this hypothesis.[91] The Bank now forecasts that the share of non-financial UK companies experiencing debt-servicing stress - defined as having a low ratio of earnings to interest expenses - will rise to 50% by the end of this year, up from 45 per cent in 2022. Among medium size companies, those with an annual turnover of £10m to £500m, the proportion of companies at risk of distress rose to 70 per cent. In the UK, the GFC had a considerable impact on the commercial real estate. Companies were hit harder than households in terms of the value of their assets, with changes in the capital values of commercial property showing higher volatility than GDP growth.[92]

Competition

A rise in the market power of firms has been tracked both by academic research[93] and think tanks.[94] Intuitively, a firm with market power might respond less to a change in its productivity than one subject to competitive constraints: less intense rivalry may mean managers lose the incentive to respond to productivity shifts. Barriers to entry might mean that existing firms are able to protect their entrenched positions even if their productivity is lower than newer, younger rivals. These notions, and the idea of winner-take-all economics are discussed in related research.[95] The idea is that once a firm has 'won' a market, it may not need to respond to productivity shocks.

The interplay between productivity, dynamism and market power is an intricate one. A large positive productivity shock – inventing a new product or patenting a new process, for example – may stimulate a firm to hire; if successful, it will build market share. This results in reallocation (in general positive) and a rise in concentration (often negative). Recent research for the US shows that both of these channels are important.[96] Between 1980 and 2016, the authors show that there are positive effects from reallocation but that these were offset by distortions (deadweight loss) caused by rising market power. Against this, the South Korean evidence presented above shows that reallocation towards large and efficient market leaders can be so beneficial in productivity terms that it outweighs competition concerns.

Competition can also come from overseas. The financial crisis saw a retrenchment in foreign direct investment globally. This may have reduced the role that productive foreign

91 Financial Policy Committee, Financial Stability Report, Bank of England, July 2023.
92 Shawbrook Bank & CEBR, The UK commercial property market: Recent trends and outlook, June 2019.
93 D Autor et al., Concentrating on the Fall of the Labor Share, American Economic Review 107(5): 180–185, May 2017; and J De Loecker, J Eeckhout & G Unger, The Rise of Market Power and the Macroeconomic Implications, Quarterly Journal of Economics 135 (2): 561–664, January 2020.
94 Z Qureshi, The rise of corporate market power, Brookings, May 2019.
95 J De Loecker, J Eeckhout & G Unger, The Rise of Market Power and the Macroeconomic Implications, Quarterly Journal of Economics 135 (2): 561–664, January 2020.
96 D R Baqaee & E Farhi, Productivity and Misallocation in General Equilibrium, The Quarterly Journal of Economics 135(1):105–163, February 2020

firms have played in the UK. If high-growth foreign firms were less likely to expand after the financial crisis than before it (despite their high productivity) this could explain the lost responsiveness set out above.

A shortage of new ideas

A final hypothesis is that productive new ideas are becoming harder to find: that firms realise this and as a result have a lower incentive to hire workers than otherwise. This mechanism is related to a parallel argument (and literature) about whether new ideas have 'run out' versus the idea we should be optimistic about our abilities to make new discoveries. The pessimistic stance is that we have discovered all the productivity-enhancing ideas;[97] against an optimistic stance which points out to huge new advances in technology. [98]

Economists interested in dynamism and reallocation have looked at this idea. A recent paper provided a growth model in which firms discover ideas and then hire workers (poaching them from rivals) in a labour market that has frictions of the type noted above.[99] In an economy like this, intuitively, growth comes when older firms working with older ideas are replaced by higher productivity upstarts that steal their workers. The authors show that if the ability to discover high-productivity business ideas falls, then so does entry, reallocation, and job to job moves. The market share of old firms will also increase. Many of the predictions of this model fit with the UK experience. [100]

97 R J Gordon, The Rise and Fall of American Growth: The U.S. Standard of Living Since theCivil War, Princeton, NJ: Princeton University Press, 2016.
98 E Brynjolfsson, A McAfee, The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies, WW Norton & Company, January 2014.
99 A Bilal et al., Labor Market Dynamics When Ideas are Harder to Find, National Bureau of Economic Research Working Paper No. 29479, September 2021.
100 N Bloom, C Jones, J Van Reenen, and M Webb, Are Ideas Getting Harder to Find?, American Economic Review 110(4): 1104–1144, April 2020.

THE ECONOMY 2030 INQUIRY

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