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By: James Pomeroy

The future of work

What follows decades of change in three years?

Technological innovations look set to alter the nature of jobs in the economy...

...while greater flexibility in working locations and hours may continue...

...with widespread impacts on labour markets and urban areas

This is an abridged version of a report by the same title published on 18-Jul-23. Please contact your HSBC representative or email AskResearch@hsbc.com for more information.



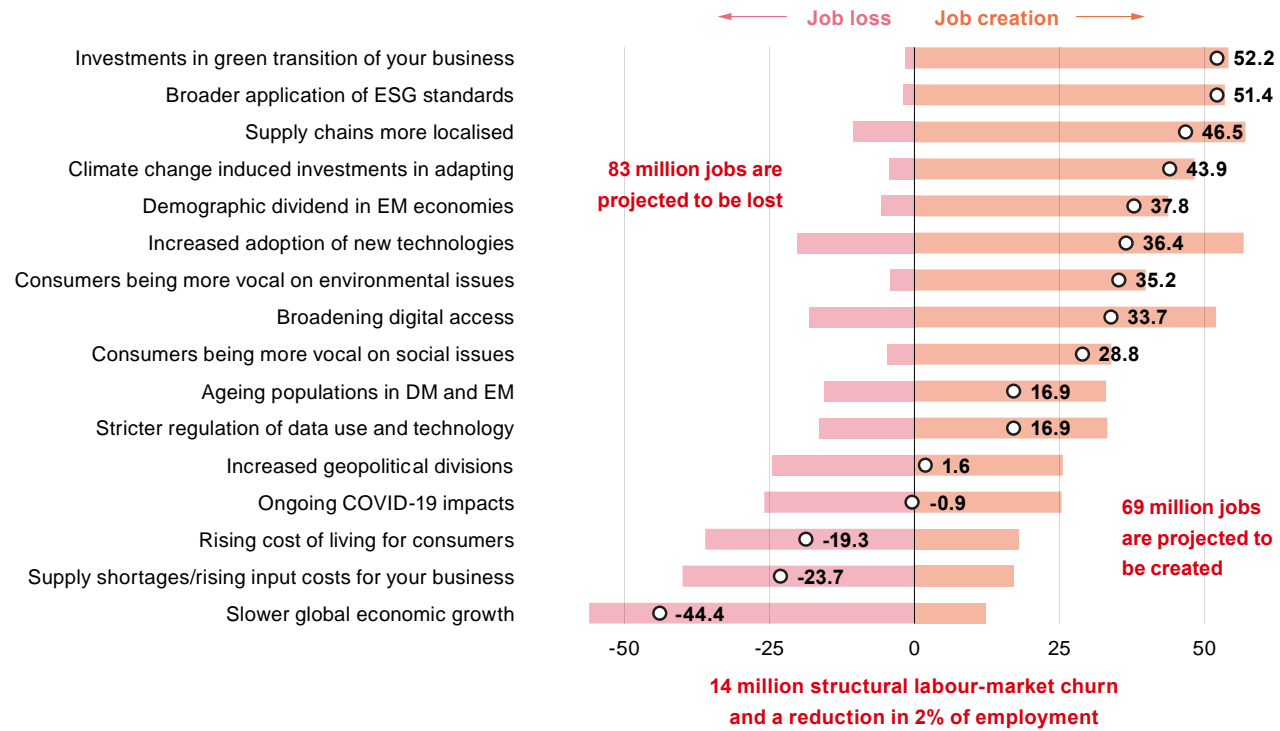
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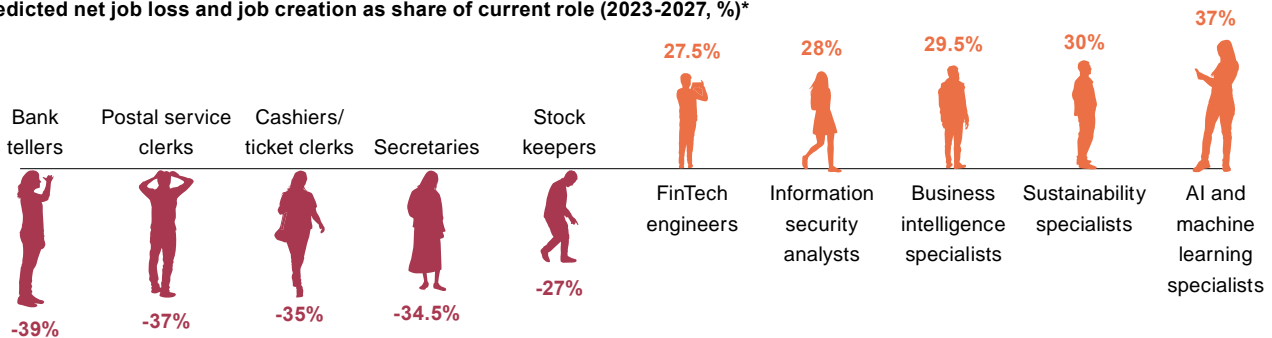
The future of work

Expected impact of macro trends on jobs

Share of organisations that expect each trend to create or displace jobs (net effect %, 2023-2027)*



Predicted net job loss and job creation as share of current role (2023-2027, %)*

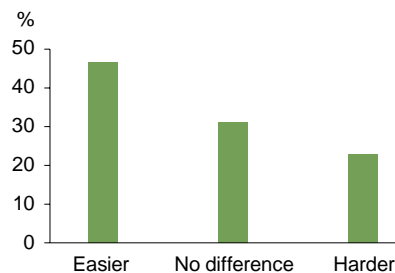


Hybrid working is embedded, which is better for jobs matching, but impacting cities

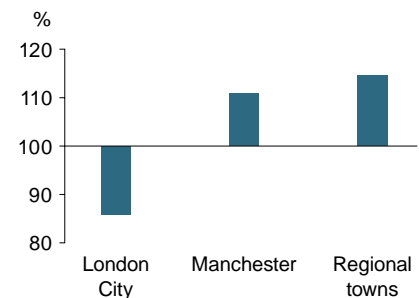
Number of days working from home post COVID-19 (of those who can WFH)**



Has working from home made it easier or harder to interview for prospective new jobs?*



Pret index: store transactions as a share of pre-pandemic levels (2023 average)***



Source: *World Economic Forum Report on Jobs 2023. ***"Why working from home will stick," National Bureau of Economic Research Working Paper 28731. Based on US survey data but similar results are evident across the world in regular surveys from the same authors. ***Pret a Manger is a UK-based chain of fast-serving cafes.
Source: WEF, NBER, Pret a Manger, ONS, HSBC

Executive Summary

The pandemic completely altered the shape of the labour market. From the sharp changes in labour supply and demand to working habits shifting more quickly in a couple years than they would have been expected to in decades, the labour market today is quite different to back in 2019. We've seen an alphabet soup of new terms, from 'quiet quitting' to 'ghosting coasting' and rapid progress in artificial intelligence which potentially threatens the demand for many roles in the future. With profound, and potentially conflicting, implications for productivity and wage growth, these changing supply and demand dynamics mean it is already clear that we need to rethink how we look at the labour market in the years to come.

Some of these changes are going to be longer-term: the role that automation and artificial intelligence play on the labour market will only increase – but the degree of which is uncertain. Much of the developed world is running up against a shrinking working-age population – which could mean some upward pressure on wages if these technological developments don't erode the need for many roles.

Of course, one of the biggest shocks from the pandemic has been where we work. Based on pre-pandemic trajectories, workers in the US and elsewhere have seen 40 years of growth in remote or hybrid work in the space of three years. This rapid change is one that continues to embed in working practices despite more firms calling on workers to return to offices, either entirely or for a majority of the week.

But it's not just about where we work. The number of hours we work may change, too. The pandemic has accelerated (or for some, triggered) the rollout of the four-day week, with recent pilots proving seemingly entirely positive: output and productivity held up alongside big jumps in worker satisfaction.

These impacts are among the possible positives – but there are challenges. There may be less idea generation or mentoring. Younger staff may lose out on some development. Productivity may be hindered by these changes, and we may also see a drop in output per worker (if not per hour), limiting the productive capacity of economies. Many workers could be displaced by technology and the importance of investing in adequate training and skills will only increase.

While the impact on traditional economic metrics like employment, productivity and wages are hard to ascertain given competing drivers, changes in ways of working could lead us towards social benefits. More remote and flexible working can lead to more diverse workforces, more satisfied staff and better mental health outcomes.

How will this all evolve? The simplest summation is that there's no one-size fits all approach for every firm or role. Greater flexibility and a stronger embedding of remote work seems likely, with impacts for how our urban areas function. For now, cities appear to be thriving still – but for activities not tied to office attendance – and that evolution looks set to continue.

Attitudes towards work may have been jolted by a once-in-a-generation event, and we cannot put that genie back into the lamp. The world of work already looks very different to before the pandemic and even more changes look likely in the years to come.

The future of labour demand

- ◆ Technological change means new jobs...
- ◆ ...but some may be at risk from these big shifts
- ◆ The question may centre on whether we can skill up correctly

The jobs of the future

A new world for the labour market

Labour market data have been incredibly closely watched over the course of the past few years – with the enormous volume of job losses in spring 2020, and the sharp rebounds in most economies leading to some of the tightest labour markets in history. Elevated wage growth, shortages of workers and huge numbers of job openings characterised the jobs market through 2022 and early 2023.

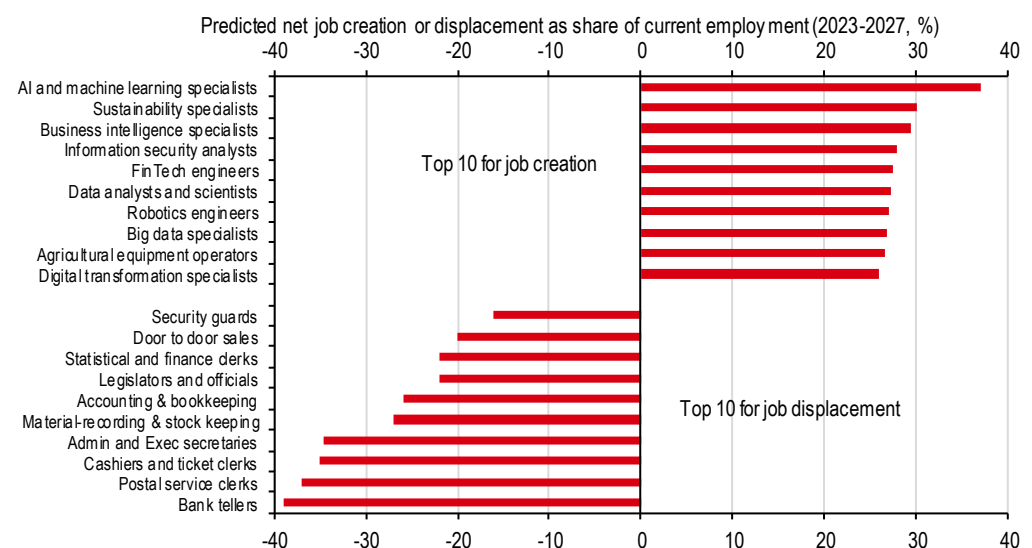
The start of this year has seen some of these indicators slip, but labour demand is still very robust and supply is still constrained, despite more people appearing to be coming back into the labour force, particularly prime-age workers.

Looking big picture

Technological changes will affect employment

In 2023 and 2024, our forecasts assume some loosening of labour markets, with unemployment rates edging up in most economies. But stepping away from that near-term view – the latest World Economic Forum Report on Jobs estimates that (globally), 83 million jobs are projected to be lost due to changes in sectoral labour demand, and 69 million are projected to be created over the next five years – meaning a structural labour-market churn and a reduction in employment of 14 million jobs, or 2%.

1. Some roles are likely to see many jobs created or lost



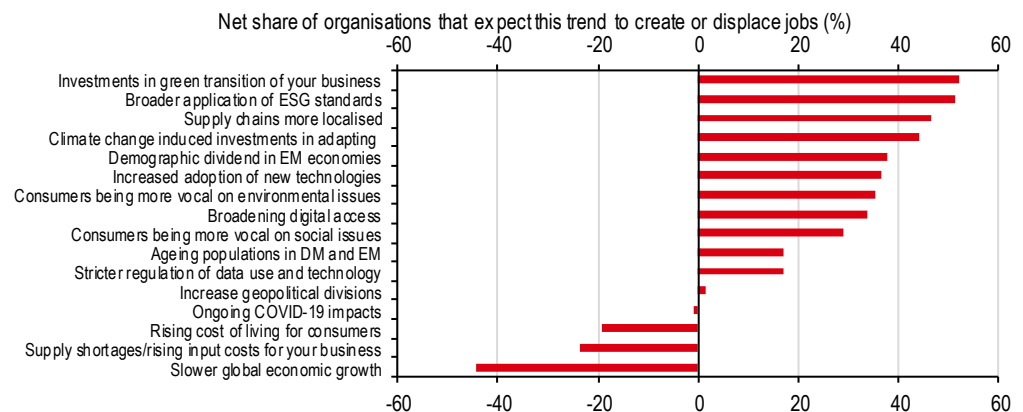
Source: World Economic Forum Report on Jobs 2023

Some jobs roles will be most vulnerable, as they have been in recent years – the same report highlights clerks across a range of industries and secretaries as well as a number of in-person roles such as sales people and security (given more automated surveillance and security). These are roles most at risk from automation threats. At the same time, some roles will see much more demand for workers – with jobs involving high-tech services, engineers and data specialists all likely to see an enormous amount of growth. Given ageing populations, healthcare workers look likely to be much more in demand, too.

Some roles could become more in demand

The drivers of these changes in the labour market are numerous, but many macro trends are expected, by firms, to mean more jobs. Notably, on the green transition – where most firms expect more jobs to be created. Re-jigged supply chains and greater regulation, too, appear to be likely to add jobs in the years to come.

2. Different macro trends may mean jobs get created or lost



Source: World Economic Forum Report on Jobs 2023

The challenges are clear – weaker economic growth and general shortages in supply or demand mean that many firms expect to operate with fewer workers. But it's important to remember that not all changes in the economy are expected to mean fewer workers – many evolutions such as in the green transition and rising spending and demand from the emerging world could well be net job creators in the years to come.

The role of new technologies

Technological change may accelerate labour market changes

Given the rise in interest in artificial intelligence in 2023, there is clearly a risk of more of these technological innovations having a material role on the labour market in the coming years. As we wrote in *Will AI take your job?*, 18 January 2023, there is a growing list of roles that could be at risk from rapidly developing technologies. See *Generative AI: The rise of the machines*, February 2023, for more information on the broader impact of artificial intelligence on the world.

Typically, automation has threatened in-person work – with both manufacturing and services robots removing the need for as many workers in warehouses, on production lines or waiting tables. This trend was accelerated during the pandemic by three underlying changes:

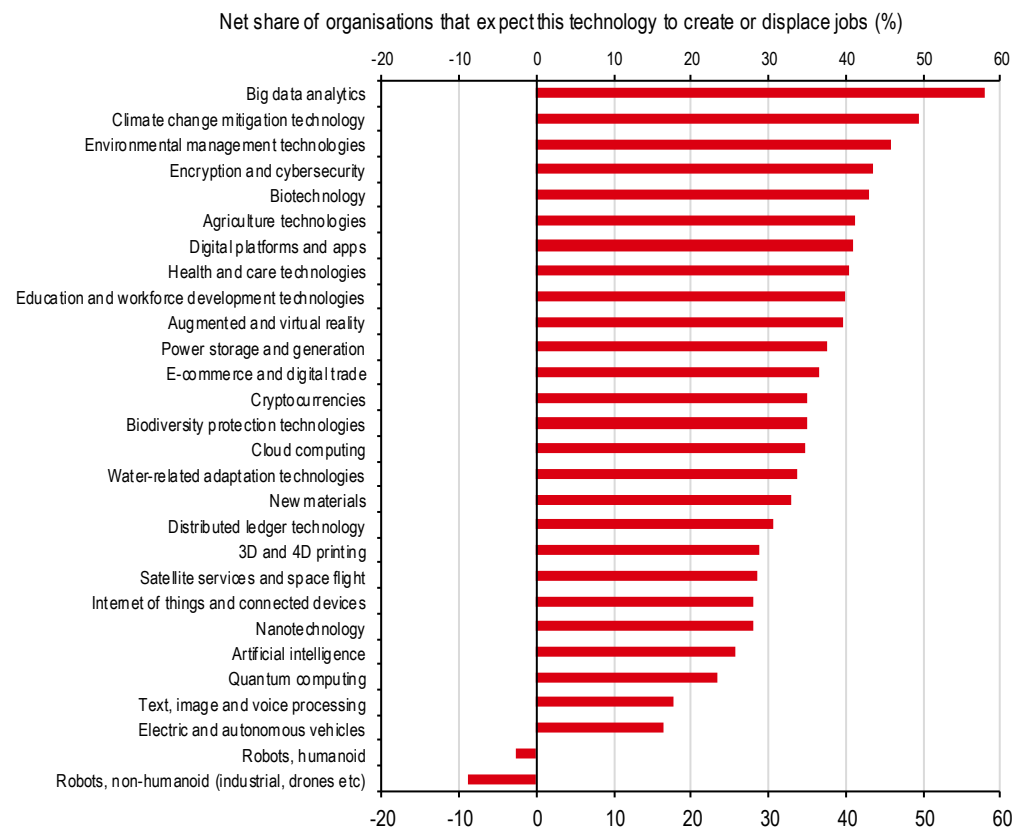
- ◆ Cheaper, more readily available robotics or automated processes
- ◆ A pandemic where we minimised human contact and firms may want to prepare for a similar world in future
- ◆ Very tight labour market, with wages rising quickly and firms reporting trouble finding and keeping workers

As a result, we suggested that the nascent threat of automation could act as a more structural barrier to a wage-inflation spiral – given that if wages in many roles were to cross certain thresholds (ie the cost of replacing them with an automated process), then they could well be automated away, resetting the supply-demand imbalance.

It's about more than AI

While AI gets most of the attention nowadays, it's worth fully considering the impact that a wide range of technologies could have on the labour market. Much analysis typically considers technological progress through the lens of jobs being lost, but as charts 3 and 4 show, in the latest WEF Future of Jobs report, many firms across a wide range of industries expect many technological advances to contribute to more jobs being created. This could range from big data analytics to improvements in medical technology.

3. Some technologies may create many jobs



Source: World Economic Forum Report on Jobs 2023

And so, it seems likely that many areas of the economy will always be required. Particularly those workers whose role isn't vulnerable to automation in the same way – either because of technological limitations or a preference for humans to do that work – such as hairdressers, construction workers or doctors. More workers will be required in new spaces (such as ESG operations), technologically advanced industries and roles that require data. The question is whether we can have enough workers and the right skills of workers to fill these new needs...

4. The impact of new technologies may not be all about removing jobs

Impact of technology on jobs

Net difference between the shares of organisations which expect technology adoption to create and displace jobs in the next five years (%). The share of organisations predicting a neutral impact on employment is not used in the calculation.

| | Acomodation, Food and Leisure | Agriculture and Natural Resources | Automotive and Aerospace | Care, Personal Services and Wellbeing | Education and training | Energy and Materials | Financial Services | Government and public sector | Health and healthcare | Information Technology and Digital Communications | Infrastructure | Manufacturing | Media, Entertainment and Sports | Non-governmental and Membership Organisations | Professional Services | Real estate | Retail and wholesale of consumer goods | Supply chain and transportation |
|--|-------------------------------|-----------------------------------|--------------------------|---------------------------------------|------------------------|----------------------|--------------------|------------------------------|-----------------------|---|----------------|---------------|---------------------------------|---|-----------------------|-------------|--|---------------------------------|
| Digital platforms and apps | 25 | 35 | 63 | 30 | 74 | 27 | 31 | 50 | 39 | 59 | 22 | 28 | 45 | 45 | 61 | 43 | 47 | 35 |
| Education and workforce | 41 | 44 | 65 | 50 | 75 | 32 | 30 | 38 | 34 | 51 | 44 | 31 | 65 | 58 | 47 | 18 | 29 | 31 |
| Big-data analytics | 42 | 68 | 78 | 71 | 64 | 47 | 66 | 69 | 36 | 64 | 38 | 56 | 55 | 44 | 71 | 36 | 60 | 57 |
| Internet of things and connected devices | 25 | 5 | 50 | 28 | 38 | 18 | 25 | 13 | 35 | 53 | 27 | 22 | 50 | 25 | 48 | 23 | 17 | 9 |
| Cloud computing | 27 | 33 | 50 | 53 | 46 | 15 | 36 | 47 | 20 | 60 | 16 | 25 | 35 | 25 | 51 | 20 | 46 | 33 |
| Encryption and cybersecurity | 33 | 29 | 63 | 25 | 53 | 43 | 62 | 39 | 55 | 63 | 24 | 42 | 50 | 11 | 38 | 38 | 28 | 44 |
| E-commerce and digital trade | 24 | 23 | 47 | 36 | 73 | 30 | 35 | 44 | 35 | 48 | 18 | 27 | 38 | 73 | 51 | 25 | 58 | 41 |
| Artificial intelligence | 0 | 28 | 59 | 47 | 36 | 12 | 18 | 33 | 31 | 45 | 30 | 19 | -5 | 20 | 42 | -7 | 31 | 15 |
| Environmental management technologies | 31 | 50 | 61 | 13 | 53 | 63 | 39 | 27 | 33 | 40 | 60 | 55 | 18 | 62 | 38 | 53 | 31 | 42 |
| Climate-change mitigation technology | 43 | 42 | 56 | 64 | 52 | 63 | 42 | 47 | 33 | 52 | 58 | 49 | 11 | 55 | 52 | 57 | 44 | 57 |
| Text, image, and voice processing | 23 | 8 | 28 | 13 | 41 | -4 | 8 | 20 | 0 | 33 | 16 | 12 | 35 | 36 | 35 | -30 | 15 | -9 |
| Augmented and virtual reality | 19 | 33 | 53 | 75 | 50 | 16 | 43 | 50 | 27 | 60 | 32 | 39 | 65 | 45 | 35 | 31 | 46 | 55 |
| Power storage and generation | 11 | 47 | 29 | 22 | 47 | 61 | 38 | 40 | 11 | 52 | 48 | 42 | 30 | 20 | 26 | 25 | 29 | 24 |
| Electric and autonomous vehicles | 0 | 14 | 56 | 18 | 42 | 28 | 18 | 36 | 28 | 39 | 16 | 20 | 20 | 0 | 6 | -8 | 18 | -18 |
| Robots, non-humanoid | 10 | -13 | 22 | 17 | 32 | -26 | 14 | 10 | -20 | 27 | -14 | -27 | 20 | -50 | 5 | -46 | -13 | -38 |
| Health and care technologies | 37 | 53 | 63 | 63 | 61 | 50 | 33 | 33 | 65 | 55 | 40 | 41 | 40 | 10 | 46 | 23 | 38 | 41 |
| Distributed ledger technology | -6 | 19 | 50 | 29 | 55 | 12 | 32 | 56 | 39 | 40 | 0 | 16 | 27 | 10 | 38 | 45 | 62 | 40 |
| Water-related adaptation technologies | 35 | 29 | 47 | 31 | 27 | 42 | 30 | 38 | 26 | 17 | 44 | 42 | 0 | 40 | 28 | 8 | 44 | 47 |
| 3D and 4D printing and modelling | 0 | -17 | 44 | 40 | 46 | 18 | 29 | 50 | 22 | 31 | 15 | 24 | 25 | 29 | 29 | 57 | 44 | 22 |
| Robots, humanoid | 10 | 0 | 13 | 50 | 31 | -3 | -2 | 20 | 8 | 10 | -5 | -9 | -11 | -25 | -28 | -20 | -22 | -35 |
| Quantum computing | 30 | -17 | -14 | 29 | 38 | 22 | 26 | 25 | 0 | 44 | 19 | 21 | 38 | 20 | 25 | 100 | 21 | 25 |
| Nanotechnology | 8 | 21 | 40 | 14 | 71 | 46 | 14 | 0 | 35 | 39 | 10 | 37 | 75 | -25 | 13 | 50 | 8 | 43 |
| Biodiversity protection technologies | 45 | 50 | 13 | 100 | 39 | 43 | 25 | 29 | 31 | 52 | 44 | 32 | 0 | 100 | 33 | 38 | 33 | 21 |
| New materials | 36 | 31 | 22 | 0 | 75 | 28 | 50 | 20 | 38 | 28 | 39 | 34 | 0 | 0 | 33 | 44 | 50 | 50 |
| Biotechnology | 22 | 65 | 100 | 57 | 55 | 36 | 35 | 33 | 63 | 50 | 8 | 43 | 0 | 75 | 63 | 33 | 41 | 22 |
| Cryptocurrencies | 17 | 0 | 100 | 40 | 47 | 14 | 43 | 50 | 0 | 44 | 0 | 27 | 25 | 0 | 40 | 0 | 31 | 17 |
| Agriculture technologies | 39 | 73 | 0 | 67 | 50 | 60 | 9 | 100 | 50 | 50 | 30 | 33 | 0 | 75 | 55 | 25 | 61 | 17 |
| Satellite services and space flight | 54 | 18 | 33 | 50 | 25 | 25 | 40 | 67 | 50 | 32 | 17 | 47 | 25 | -33 | 50 | -33 | 29 | 40 |

Fewer jobs
More jobs

Source: World Economic Forum Report on Jobs 2023.

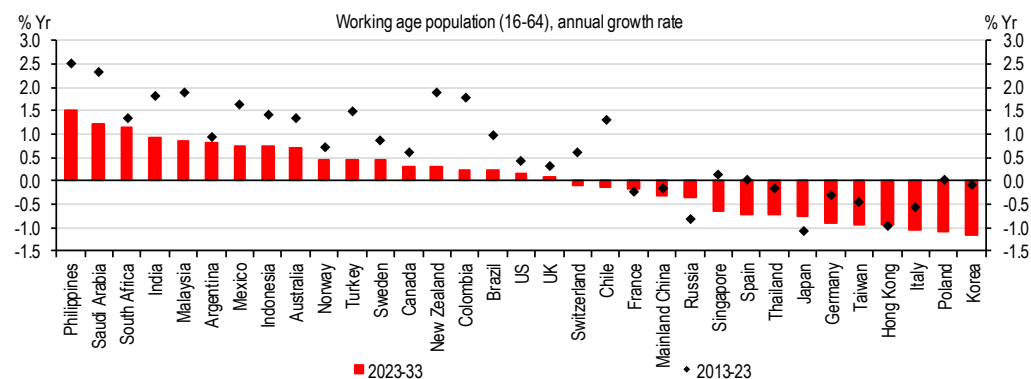
Labour supply

Will we have enough workers?

One of the key challenges that we will face in the coming years in the developed world is a structurally different backdrop in terms of labour supply. The pandemic years saw sharp shifts in labour availability – partly because of workers being displaced across industries, but also due to many workers leaving the workforce – either to retire or find other forms of income (such as starting a business or earning an income from content creation). Long-term absences from sickness have played a big role in the likes of the UK and Australia, where the data are cut accordingly.

But over the medium term, these labour supply issues could become more challenging in the developed world thanks to the ever-worsening demographic picture. Germany's working-age population looks set to shrink by nearly 1% per year during this decade and even in economies where the working-age population is growing, such as New Zealand, the US or the UK, the pace of that growth is likely to be much slower than previously.

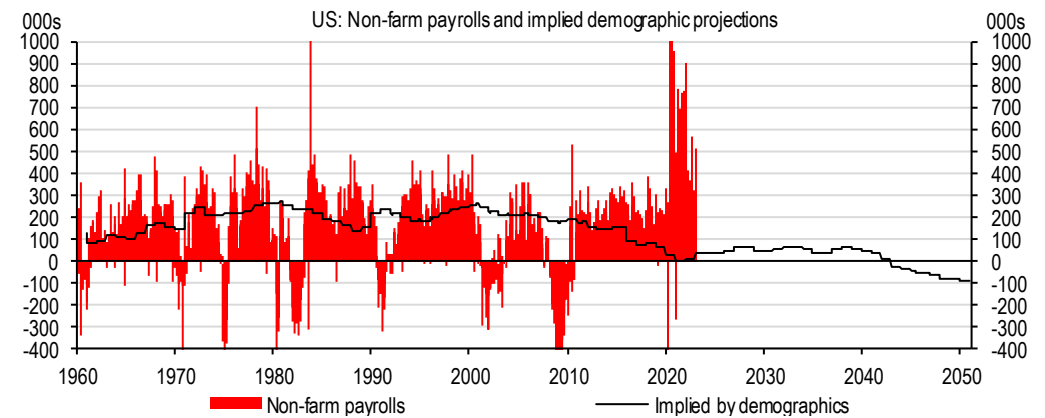
5. Most developed and some emerging economies are going to face demographic challenges



Demographics are key for labour supply

And this can be seen clearly in the US data – where (as we highlighted in our recent [Gamechangers](#) report) the “demographic par score” for non-farm payrolls (NFP) has already dropped substantially. Many people will have a number in their head of what a “good” reading is each month. But in reality, whereas back in the 1990s or 2000s, a reading of 200k would have been acceptable in terms of generating enough jobs to absorb the number of new people joining the labour force, that figure is now closer to 100k (excluding the sharp falls in the US population in the pandemic era). Going forwards, by the time we reach 2040, it would be widely expected that the monthly NFP figure oscillates around zero – changing the way markets interpret such a key data point.

6. Payrolls numbers may be lower in the years to come



Source: Refinitiv Datastream, HSBC estimates using BLS working-age population data and UN demographic projection.

And the demographic situation may not get much better in the near term thanks to the longer-run drop in birth rates across the developed world – if anything it may get much worse over the next 20 years, as we outlined in *The big baby bust*, 22 August 2022. On the other hand, climate change or other major events (such as wars and humanitarian crises) poses the risk of mass migration – and in some scenarios we could see labour forces grow quickly in many economies if arrivals can be integrated into the workforce (see *Climate Change and Migration: A potential shock to demographic projections*, 25 May 2023).

Have we got the skills?

Skills will be key

Having *enough* people is one thing, but a bigger challenge may be having the *right* people. Already, firms complain about skills shortages – in the UK, ONS surveys suggests that roughly 13-15% of firms are experiencing this issue¹ - and in an evolving labour market, as things stand, this is only going to get worse.

Against that backdrop, it's striking that only 36% of non-managers who responded to a recent Adecco survey² said that their company is investing effectively in developing their skills, compared to 64% of managers. And if that's the challenge facing those in work, the ability to re-train and upskill for those out of work is even harder in most economies.

More training may be needed

And this means that we're likely to fall short of the right skills in the labour market in the years to come. Returning to the WEF's Future of Jobs report, the skills that are going to be most in demand are creative and analytical thinking and technological literacy. Of a range of 27 key skills they asked firms whether they think they will rise or fall in importance, "reading, writing and mathematics" was fourth bottom, ahead of "global citizenship", "sensory processing abilities" and "manual dexterity". While none of these skills were likely to be in decline, their relative importance is set to drop due to greater relevance of softer skills.

It's clear that much more time and money will need to be invested in re-training many workers in the years to come – either in terms of on-the-job training, or for those who need to change careers due to declining employment in their field of work. Education programmes, too, may need to be re-thought to prepare the workers of tomorrow for a very different labour market. Without investment in these programmes, we may see higher levels of unemployment and lower levels of productivity and output.

¹ Skills and labour shortages, House of Commons Research Briefing, 10 January 2023

² The Future of Work Beyond the Pandemic: Takeaways from our Global Workforce of the Future Report, Adecco, 28 September 2022

The future of working styles

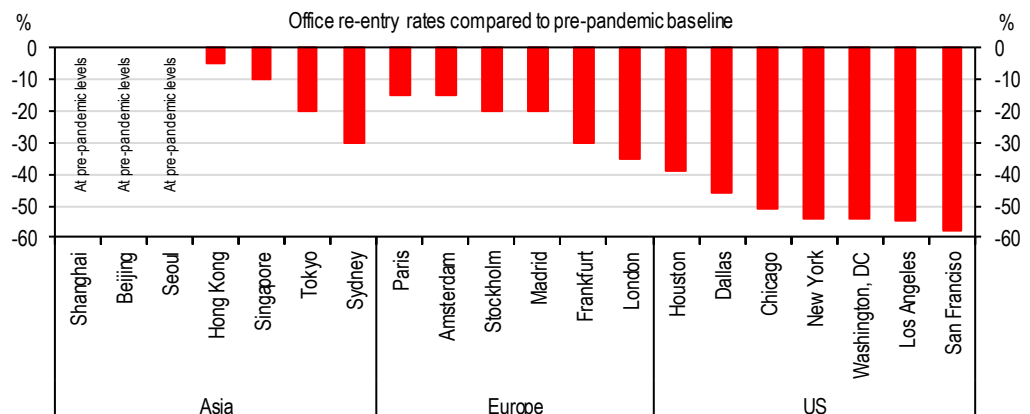
- ◆ Remote and hybrid work continue to get embedded...
- ◆ ...and more flexible working hours and patterns may become the norm in a range of roles...
- ◆ ...as many workers' relationships with work appear to have changed

Remote work: Converging on flexible hybrid

Remote work varies across the world

Before discussing the future of working locations, it's important to spell out how different these trends are across the world. In much of Asia, office attendance rates are at, or close to, pre-pandemic levels in many cities. In Europe, we're down around 20% on average, with London lower than others, while in the US, offices are much emptier. It's also worth noting that many jobs are not affected by remote-working trends due to a need to be on site, but these roles may still see an impact from other forms of flexible working that we discuss later. While it varies by city, in most developed markets, more than half of jobs are office-based.

7. Office attendance rates vary greatly across the world

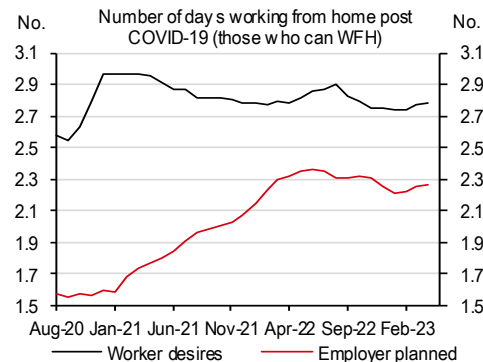


Source: JLL Research, The Future of the Central Business District, May 2023

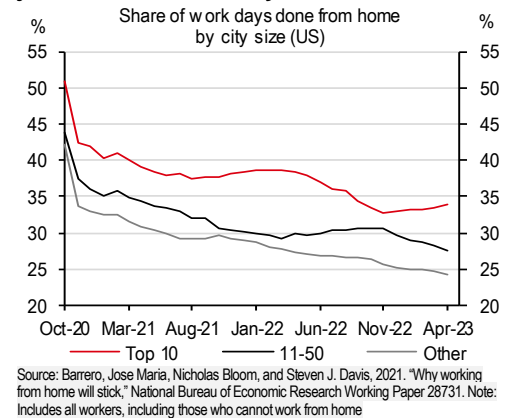
Returns to offices may have settled at around half of days

Much of this section focuses on trends in the US and Europe as a result of these geographical splits. And as we wrote in *Has the office return already peaked?*, back on 30 March 2022, there was mounting evidence that the share of work being done in formal workplaces was close to peaking, even back then. While the figures have nudged slightly higher, Kastle's Back to Work monitor data show that offices across the US are still less than half full – and have plateaued around these levels. Our assumption is that office attendance settles in range of 45-50% of pre-pandemic levels in the US, close to where we are today, a model that represents hybrid working in most cases. Given that many workers still want nearly 3 days working remotely (chart 8), we see plenty of reasons as to why remote and hybrid work will continue to be embedded within working practices.

8. Remote work may continue to get entrenched...



9. ...particularly in bigger cities, where more jobs are remote-friendly



Some firms want more workers in...

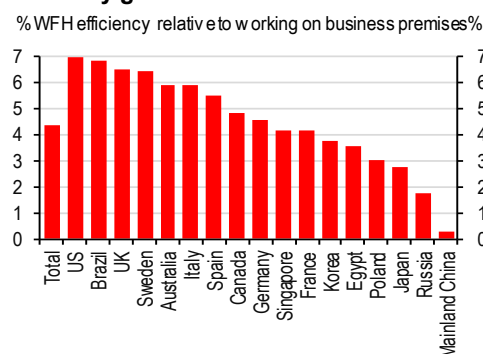
Despite this, we continue to hear more companies, including many technology firms, trying to get their workers back into offices more regularly, either for a fixed number of days a week, or full time³. Why is this? The reasons are relatively consistent – the fact that there's *"there's just no substitute for coming together in person"* (Google), to restore *"in-person collaboration"* (Apple) or that *"in a creative business like ours, nothing can replace the ability to connect, observe, and create with peers that comes from being physically together"* (Disney).

What is the evidence to suggest that bringing workers into offices more regularly is a good thing? A study published by Nature, from Melanie Brucks & Jonathan Levav⁴, suggests in-person meetings lead to 15% more innovation and many concerns exist over collaboration and training of staff (the latter of which is discussed in more detail on page 17).

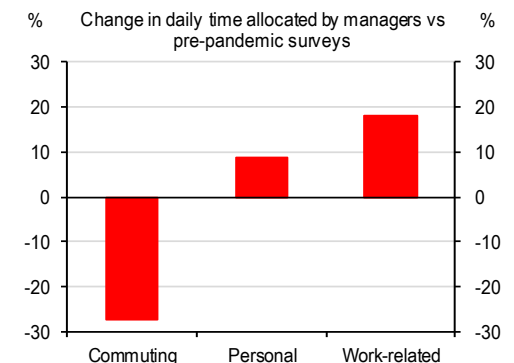
...but hybrid is likely to be better

While these concerns are valid, much evidence shows that a hybrid approach leads to better outcomes than simply dragging workers back to a fixed place of work. A study from economists at Stanford University, based on measuring the productivity from within firms found no impact on overall output from hybrid working (vs full-time office attendance), but a huge improvement in terms of staff satisfaction and retention⁵. At the same time, workers feel they are more productive, using the saved time from commuting to achieve both more work output and to tick off items from their personal to-do list⁶. Of course, some of these studies are based on workers' own views of their own productivity, but the evidence in favour of hybrid work is far stronger across a range of surveys and natural experiments far outweigh the supporting data for dragging people back into offices.

10. Working remotely can lead to efficiency gains...



11. ...and also more time worked

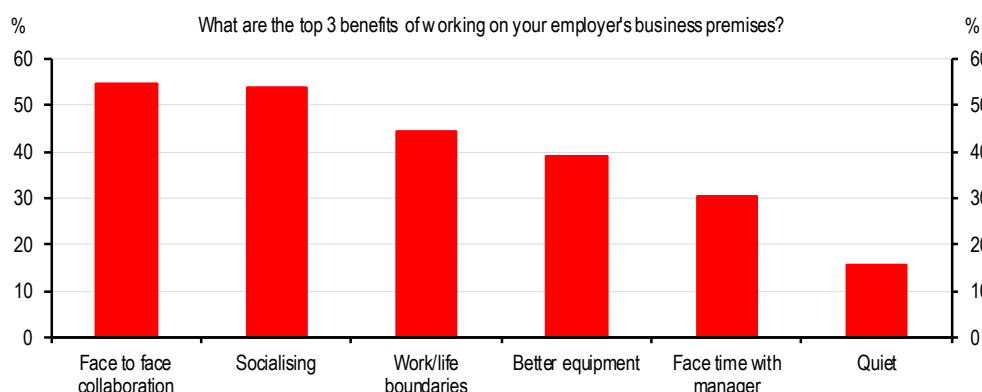


³ See, for example: Google to crack down on office attendance, asks remote workers to reconsider, CNBC, 7 June 2023.
⁴ Brucks, M.S., Levav, J. Virtual communication curbs creative idea generation. Nature 605, 108–112 (2022).
⁵ How Hybrid Work From Home Works Out, Nick Bloom (Stanford), Roubing Han (Stanford) and James Liang (Fudan and Trip.com), April 2022
⁶ How does working from home during Covid-19 affect what managers do? Evidence from time-use studies, Thomaz Teodorovicz, Raffaella Sadun, Andrew L. Kun, Orit Shaer

Workers don't see many benefits of in-person work

It is interesting to note that workers don't universally see many of the benefits of working in the office. As part of a tranche of WFH Research's monthly survey, US workers were asked what the benefits were to in-person work – only 54.8% highlighted collaboration and based on the results in chart 12, workers, on aggregate, feel that equipment is worse in offices, it's noisier and they're not bothered about face time with their manager. While many firms tout the benefits of returning to offices, unless workers feel those too, the return to offices may hit a natural stopping point – which we see as 2-3 days remote per week for the average worker (who is able to).

12. Workers don't see a huge range of benefits from working on site



Source: How Hybrid Work From Home Works Out, Nick Bloom (Stanford), Roubing Han (Stanford) and James Liang (Fudan and Trip.com), April 2022

Flexibility is key

But – importantly – there needn't be a one size fits all approach. Some work is better done in isolation and some is better done with people to bounce ideas off. Some people have a quiet home office with no kids, others have a kitchen table and kids running around. People want choice. A survey done between July and December 2021 shows that 70% of workers would like to be able to choose their working-from-home arrangements⁷. May 2022's wave of survey respondents from WFH Research⁸ showed that if mandated to be in for two days a week, 57.7% of respondents would rather have choice over which days they come into the office compared to being told which days to come in or those days being fixed.

Every role and person is different...

This is where we have seen a wide range of outcomes in the post-pandemic period. In some economies, where people are more likely to live in smaller apartments or closer to an office, the appeal of travelling into a specific place of work is much higher than where commuting is more time-consuming or people are more likely to have space for a home office. As a result, these remote-work trends have been much stronger in the US and some European economies than in city states like Hong Kong or Singapore, as seen in chart 7.

As a result, it seems intuitive to many people that many roles move organically towards a rough 2/3 week – with two days in the office and three at home. However, this enthusiasm from some employers for a such an approach isn't always being met by workers, who like the flexibility. Critics of the 3-2 model⁹ say that it takes away the autonomy that workers have enjoyed during the past few years, which can damage mental wellbeing and lead to considerably reduced productivity.

...and will need a different set of 'rules'

There's unlikely to be a one-size fits all approach across businesses, either. Some things will work better for some firms than others, and even for some workers rather than others within firms.

⁷ Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. "Why working from home will stick," National Bureau of Economic Research Working Paper 28731

⁸ Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. "Why working from home will stick," National Bureau of Economic Research Working Paper 28731

⁹ We're calling this 'the worst return to office strategy.' Why this hybrid approach won't work, Fast Company, 21 June 2022

Experimentation is likely to be key, but flexibility will play a role in working out what works best. As Nick Bloom, arguably the world's foremost expert on remote work, puts it:

“ I advise companies to figure out how many days employees genuinely need in the office and aim for that—no more and no less. Evaluate how long employees in each team need for all their weekly face-to-face meetings, trainings, presentations, mentoring events, lunches, and client meetings. The rest of the time they should be home.

Nick Bloom, Economics Professor, Stanford University¹⁰

Retention and loyalty may improve

A key for retention?

One of the evolving reasons for remote or hybrid work to continue to gain prominence is in terms of keeping hold of workers or attracting them, particularly when the labour market is tight. Workers continue to want it – with 50% of applications submitted on LinkedIn being for fully remote jobs, while just 15% of postings are advertising as such – with adverts for such roles getting many multiples more applicants. In terms of retention – LinkedIn research suggests that more than a third of UK workers have said they would quit their job if their employer demanded they return to the office full time, with the share being higher for women¹¹.

Flexibility isn't just about remote work

So if workers want more flexibility – how quickly will that truly transcend into the way we work, not just *where* we work? Flexibility comes in two main forms – location and hours, and while the pandemic has moved the dial substantially on location, the impact on fixed hours has been much smaller, at least so far. However, greater flexibility on this front may rise as a result of some of the possible benefits:

- ◆ **Productivity:** Gartner's 2021 Digital Worker Experience Survey¹² showed 43% of respondents saying that flexible working hours helped them achieve more productivity.
- ◆ **Loyalty:** Even prior to the pandemic, a Flexjobs survey¹³ in 2019, found that 80% of respondents said they'd be more loyal to their employer if they provided flexible working arrangements (with 72% preferring a flexible schedule).
- ◆ **Lower absenteeism:** Flexible working can reduce absence rates as it allows employees to manage disability and long-term health conditions, caring responsibilities, as well as supporting their mental health and stress¹⁴

These points make sense – flexible working can foster a stronger relationship between workers and firms – given the trust to work out schedules depending on output, rather than inputs (the number of hours sat at a desk). Equally, given that flexible working would empower workers to cover more hours when needed and fewer in quiet periods, productivity would almost certainly go up.

Flexible work isn't without pitfalls

What's the issue? The obvious one is around knowing when people are available – to solve problems, discuss projects or answer questions. In some roles, due to these limitations, such flexibility just isn't possible. For others, while this could be solved with an element of “core hours” (where a set middle of the day was worked each day), this in itself doesn't provide full flexibility. As a

¹⁰ What the future of hybrid work will (and won't) look like, according to 27 business leaders, Fast Company, 23 June 2022

¹¹ More than a third of UK workers 'would quit if told to return to office full-time', The Guardian, 15 March 2023

¹² Digital Workers Say Flexibility Is Key to Their Productivity, Gartner, 9 June 2021

¹³ FlexJobs 2019 Annual Survey: Flexible Work Plays Big Role in Job Choices, FlexJobs, July 2021

¹⁴ CIPD (2018) Health and well-being at work survey

result, while firms may be more likely to promote the notion of flexible working hours, in practice the translation into behaviour has been much smaller. This may be something that grows in future as the next leg of flexible working, as long as the nature of roles allows for this to happen.

Time to work less?

So, in an attempt to improve productivity and to improve worker satisfaction, we have seen a notable rise¹⁷ in the number of firms offering reduced-hours contracts. The tight labour market and a re-thinking of what workers want in a post-pandemic world has seen the likes of PwC re-introduce and extend its summer working hours, of 4.5 days a week, while 60 UK firms recently undertook a six-month trial of a four-day week in a range of sectors to assess the impact on productivity, staff satisfaction and retention.

Four-day week trials have been successful

The outcome was almost universally positive. More than 90% of firms in the trial will continue to use the flexible working practices where workers were paid 100% of the salary for 80% of the hours, on the condition that output was maintained¹⁵. Revenues rose at the firms on the trial (although against a favourable base from 2021) but importantly, staff retention was much stronger. 75% of workers on the trial said that they suffered less burnout, and 40% said they felt less stressed. The success of this trial, which was seen across a wide range of firm sizes and industries, suggest that cutting working hours could see a productivity boost that goes beyond output per hour if staff are happier, less stressed and more motivated.

That's not to say there aren't challenges – some businesses in the trial, particularly in regards to customer-facing roles, found it hard to manage schedules around the irregular inflow of work. As a result, greater flexibility in working hours in many roles may not be so regimented as to work a given number of days per week, but may lead to less overtime or a changed mentality towards finishing early, with the idea of a 6-hour working day being mooted¹⁶ – which may mean shifts finishing earlier to help with childcare or simply giving more flexibility for leisure time. Nonetheless, the number of jobs being advertised offering four days a week in the UK rose by 90% between 2019 and 2022¹⁷, suggesting that this may be more widespread than simply trials.

Working hours may be able to fall

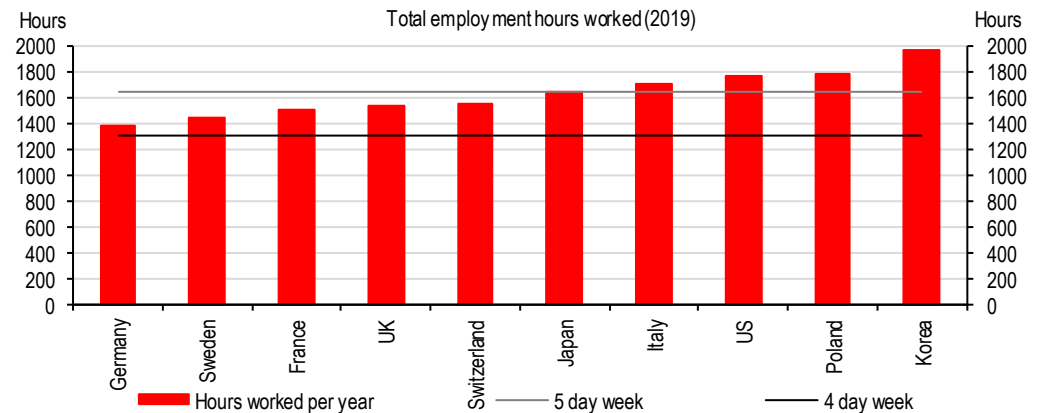
Looking at working hours, there's scope for change on this front. The number of hours worked already varies wildly across the world – with workers in Korea, Poland and the US on average working more than a 5-day-a-week (estimated at 235 working days at 7 hours per day), while workers in Germany, Sweden and France work much less on average. As a starting point, this serves to suggest that at least in some economies there is scope for fewer hours, particularly for those using new technologies – such as those mentioned earlier – where productivity improvements mean the same output can be done in less time.

¹⁵ Most companies in UK four-day week trial to continue with flexible working, FT, 21 February 2023

¹⁶ The case for a shorter workday, BBC, 13 July 2022

¹⁷ Making the four-day week work for Britain, Reuters, 23 May 2022

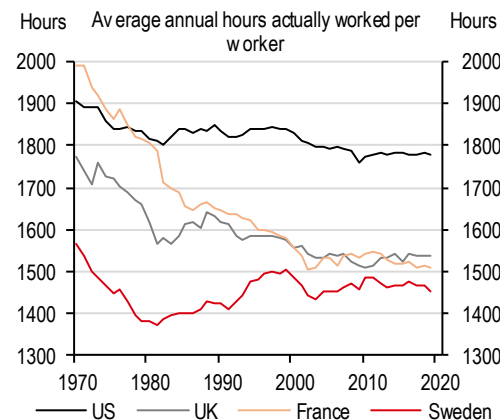
13. Some economies have workers who work much more than others



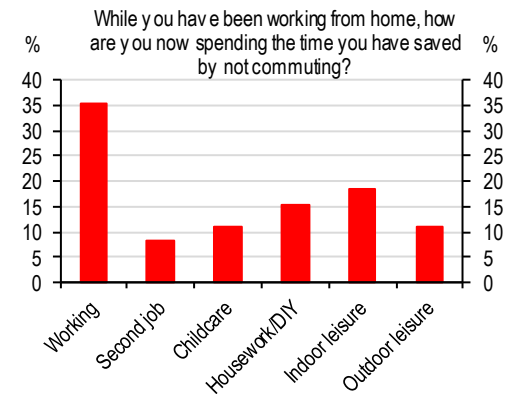
A long-term trend of working less has paused

What's striking is how in some economies – notably in the UK and the US, workers have stopped working fewer hours. The UK data in chart 14, in particular, are striking – that after a 20-year drop in working hours through the 1990s and 2000s, workers started working more hours in the economic cycle following the Global Financial Crisis. The same applied in the US, but with a slightly shallower decline in hours worked in the prior two decades. In France - an economy with relatively low working hours – the collapse in hours stopped in the mid-2000s. Despite the greatest improvements in communications technologies and the spread of the information the world has ever seen (that theoretically should allow us all to be much more productive) – the drop in working hours has stalled. Sweden's lower level of working hours through the past 50 years appears to have acted as a convergence point, while US workers are clearly spending far longer at work than their European counterparts – something that may have potential to change in the coming years if workers are able to prioritise their work-life balance.

14. The multi-decade trend of fewer working hours has stalled



15. People could use future saved time in many ways



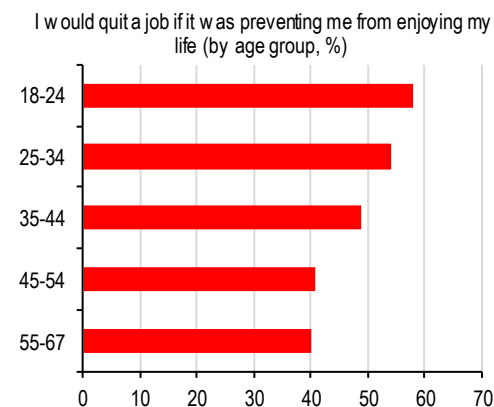
These changes in flexibility, coupled with improvements in technologies (such as AI) that allow workers to do more with less time means that working hours could drop sharply (for such roles), from the ~42 worked by the average full-time worker in the US today. Equally, firms may be able to cope with fewer workers in some cases – leading to job losses. Of course, that wouldn't be true of all workers, but if these sorts of changes in the labour market become more common in the years to come it's worth thinking about what they all could mean for both economic and social outcomes.

Changing attitudes

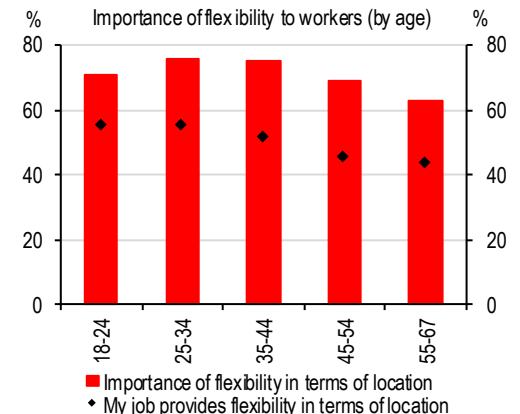
What if attitude changes are permanent?

Many have said that once the labour market softens, workers' ability to demand flexibility will dissipate. But what if it doesn't? The pandemic, as well as ushering in a new era for *how* we work, appears to have had a more lasting impact on how people *feel* about it, too. A number of surveys suggest that workers now value work-life balance more than before – with workers putting more of a weight on these factors – wanting more flexibility, work-life balance and job security, rather than feeling like cogs in a system. This may mean that these changes become more entrenched as time goes on, rather than the other way around.

16. Many workers see work as a means to an end...



17. ...and flexibility is more valued than businesses appear to offer



Additionally, surveys suggest workers are putting a lot of weight on the purpose of their company. According to a survey from the Net Positive Employee Barometer¹⁸ half of UK workers are willing to quit their jobs if their company doesn't align with their values, especially around issues like the environment and social equality. The study shows that more than 40% of workers across all age groups would consider "conscious quitting", with over half willing to take a pay cut to work for a company that shares their values. This follows a KPMG study¹⁹ in January 2023 that found 46% of employees want their employer to demonstrate a commitment to environmental, social and governance, with one in five having turned down job offers if they weren't satisfied.

If workers continue to value these things much more than simply pay or promotions, we could have a very different sort of competition for talent. We could see flexibility and purpose become more engrained into working life in the years to come.

¹⁸ Net Positive Employee Barometer, Paul Polman, February 2023

¹⁹ Climate quitting - younger workers voting with their feet on employer's ESG commitments, KPMG, 24 January 2023

The impacts

- ◆ What could these shifts mean for the labour market more broadly?
- ◆ We could see better skills matching and a more diverse workforce
- ◆ Cities are still likely to see the biggest impacts

These shifts are likely to have a number of impacts on labour markets across the world. We outline some of the biggest below.

The macroeconomic impact?

Productivity: The good and bad news

Measuring productivity may be hard

New ways of working can unlock productivity gains – as they have in the past. Journalist Tim Harford's book, "50 things that made the modern economy", highlights that when the dynamo was invented and rolled out in the late 19th and early 20th centuries, many factories persisted with their steam engines for a long time after. And when they were eventually replaced with dynamos, many simply replaced their old steam engine with a dynamo, using it in the same way. But the true revolution from the dynamo came from running them more locally, with each workbench having its own motor, allowing factories to spread out, and to be cleaner and more efficient. Paul David (Professor Emeritus of Stanford University) agrees, stating that it took four decades from the opening of the first power station for electricity to have a significant effect on productivity.²⁰ While unlikely to impact productivity to the same degree, there may be an element of productivity gains still being in the pipeline while we adjust to how to use flexible working practices and new technologies more effectively.

The technological developments discussed in the first section of this note will take time to filter through and be used effectively – such as embedding the usage of AI into more processes. More "traditional" automation technologies could also increase the productivity of manual roles further in the coming years.

Some upside and downside risks to productivity

Some of the changes in terms of flexible and hybrid work could have led to a leg up in productivity already in some sectors. Even prior to the pandemic, economist Nick Bloom's paper looking at the productivity levels of 16,000 workers in a call centre saw productivity rise by 13%²¹ from hybrid working. Equally, an August 2021 paper led by Jose Maria Barrero at the Centre for Economic Performance²², suggests that, in the US, shifts towards 20% of workdays being completed remotely imply a 5% productivity boost in the post-pandemic economy. However, the authors argue that because traditional metrics of productivity do not capture the time saved from less commuting (as that isn't counted in working hour calculations), we may only see a fraction of this in the data (they estimate just a fifth).

²⁰ David, P., The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox, The American Economic Review, Vol. 80, No. 2

²¹ Bloom, N., et al., Does working from home work? Evidence from a Chinese experiment, Quarterly Journal of Economics, February 2015

²² Why working from home will stick, Centre for Economic Performance, August 2021

13%

The gain in productivity seen from call centre workers from remote working in a study pre-pandemic

While broad-based evidence on the impact of four day weeks will be seen in the coming years based on studies ongoing today, previous company-based studies have shown a resounding impact. A summer 2019 trial for all roles at Microsoft in Japan²³ showed a 40% productivity boost, aided by workers making other changes – such as shorter meetings and fewer people at them. The widely-cited example at Perpetual Guardian in New Zealand²⁴ saw a 20% gain in employee productivity and a 45% improvement in work-life balance metrics.

The lost productivity?

One of the biggest concerns many managers of firms regularly cite about workers not being physically located near each other is the loss in training and development without the ‘osmosis’ of knowledge and skills that occurs in an office. However, this is hard to quantify and will depend very much on a case by case basis, both in terms of persons and roles, on how big an impact this could be. This is why Nick Bloom and many economists studying changing work patterns advocate a hybrid model – where activities that can be better done remotely are done so and some activities can be done in person, providing these key learnings. It’s also important to stress the difference between labour productivity in terms of output per hour and output per worker. The former may be higher with more flexible working models, but total output may end up being lower, acting as a supply constraint on the economy.

Lost skills sharing?

Who actually benefits from being in the office?

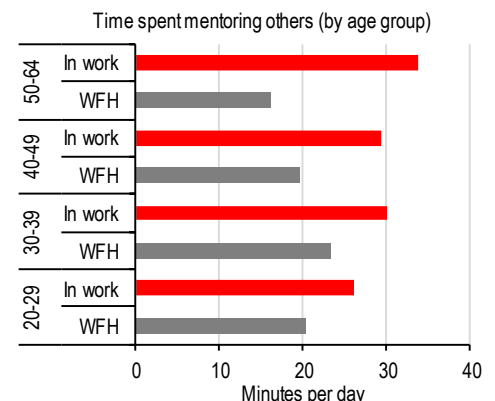
However, what is interesting is that the data suggest that it is older workers who gain the most from office attendance on that front. Data from the March and April 2023 waves of WFH Research’s survey of US workers (charts 18 and 19) show that the gap in time being mentored between remote or in work days is largest for older age groups. Younger workers feel they get more mentoring working remotely. There is also an age correlation when it comes to the amount of time spent (reportedly) helping others – older workers feel that they give much more support in person.

18. Workers feel they get more mentoring in offices...



Source: Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. “Why working from home will stick,” National Bureau of Economic Research Working Paper 28731. Note: Each figure shows the average number of minutes for the activity in question among respondents who either worked from home or worked on business premises. The sample includes persons who were asked about Monday thru Friday, who are able to work from home, based on March and April 2023 data.

19. ...and feel they spend more time mentoring others



Source: Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. “Why working from home will stick,” National Bureau of Economic Research Working Paper 28731. Note: Each figure shows the average number of minutes for the activity in question among respondents who either worked from home or worked on business premises. The sample includes persons who were asked about Monday thru Friday, who are able to work from home, based on March and April 2023 data.

²³ 4-Day Workweek Boosted Workers’ Productivity By 40%, Microsoft Japan Says, NPR, 4 November 2019

²⁴ 4dayweek.com

Studies suggest that some form of hybrid work is best

Some studies have found outright drops in productivity from remote work. Natalia Emanuel and Emma Harrington via the NY Fed²⁵ found that while workers at an American call centre saw their productivity drop by 4% when working remotely (vs in the office), but they also found a bigger shock to output among those already working remotely, leading them to suggest that “remote work should have been more prevalent than it was before the pandemic”. A paper from Gibbs et al.²⁶ found that productivity dropped by 8-19% at an Indian IT firm during the pandemic – with more time being spent on coordination activities and meetings.

The sum total of the body of work to date suggests that fully remote work may bring some negative productivity impacts but hybrid work could lead to higher productivity if managed correctly. As noted before, the correct mix will vary by role and employee in order to maximise productivity, and so having that element of flexibility may be the best to lift overall productivity.

Lower wage growth?

Workers may take less pay if they can work more flexibly

Many of these new ways of working are growing in response to greater wage pressures that businesses are feeling as a result of a tight labour market and workers having bargaining power for the first time in many years. There is an amenity value (the value attached to good feeling) of remote work which is key when thinking about the future of wage growth in high-skill and higher-paid professional work. A paper led by Jose Maria Barrero in June 2022²⁷ associates this value at roughly 2ppts over two years, with firms saying they expect wage growth in the US to be roughly 1ppt lower than it would otherwise have been given the opportunity to offer more flexible working.

But, it's important to note that wage pressures have been less for work where there is the option for remote or flexible work, but wages among many in-person services (especially lower paid roles) have risen extremely quickly. A study from Autor & Dube (2022)²⁸ found that the real wage compression seen during this recent period of high inflation is almost entirely from the highest deciles of income growth – because of the “*changes in the amenity value of working arrangements and working conditions that operate differentially across the earnings distribution*”.

Much will, however, depend on other factors such as labour productivity, the size of the workforce and demand for workers.

Could job uncertainty be higher?

Workers may lose some job security

To an extent, workers may see wages curtailed if more remote or flexible work allows these jobs to head overseas, or at least to a much larger pool of potential workers, essentially creating a larger labour pool for work that many limit workers' bargaining power. Based on a June 2022 study in the US, 15.8% of survey respondents said that their employer has reduced pay for workers who weren't attending in person as much as requested, while 6.3% saw their position terminated²⁹. Workers may also see their job security and bargaining power reduced if artificial intelligence or automated process remove the need for certain roles. The impact may not be universally similar, with workers in some industries more adversely affected than others, potentially widening inequality.

²⁵ Working Remotely? Selection, Treatment, and the Market for Remote Work, Natalia Emanuel and Emma Harrington, NY Fed Staff Reports May 2023

²⁶ Gibbs, Michael and Mengel, Friederike and Siemroth, Christoph (2023) Work from Home and Productivity: Evidence from Personnel and Analytics Data on Information Technology Professionals. Journal of Political Economy Microeconomics, 1 (1). pp. 7-41.

²⁷ The Shift to Remote Work Lessens Wage Growth Pressures, by Jose Maria Barrero, Nicholas Bloom, Steven J. Davis, Brent Meyer, and Emil Mihaylov, 20 June 2022

²⁸ Autor, D and A Dube (2022), “The Unexpected Compression: Employment and Wage Trends Before and After the Pandemic,” presentation to the CBO Advisory Board Meeting, June

²⁹ Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. “Why working from home will stick,” National Bureau of Economic Research Working Paper 28731, June 2022 updates.

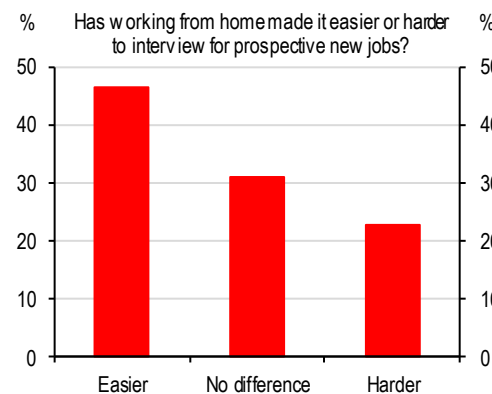
A wide range of social benefits?

Social benefits are likely to be clearer

The impact of the future of work on the economy could stretch beyond the traditional economic metrics and lead to a number of social changes. One impact is the possibility of a faster churn of labour and better jobs matching from the fact that remote working makes it easier to interview for prospective jobs. A survey from WFH Research (chart 20) shows that nearly half of workers say that it's easier to have interviews working remotely, meaning that it could be easier for workers to find a role that fits with their skillset and life priorities.

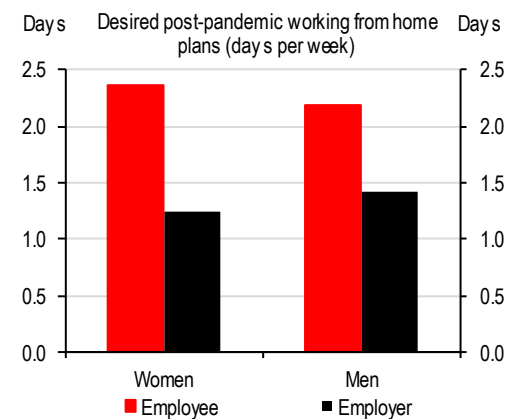
While this greater choice for workers may create challenges for firms, it may incentivise more businesses to focus on the various elements of work that their employees value – such as flexibility and hours – in order to hold onto talent.

20. More remote working may improve skills matching



Source: Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. "Why working from home will stick," National Bureau of Economic Research Working Paper 28731. May 2022 update.

21. Women would typically like to work from home more than men



Source: Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis, 2021. "Why working from home will stick," National Bureau of Economic Research Working Paper 28731. February 2022 update.

Good for diversity

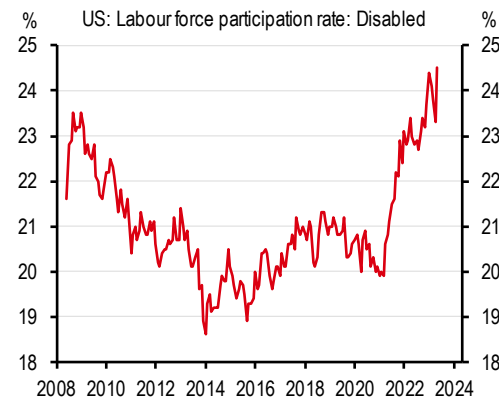
Secondly, and very importantly – more flexible working practices – both in terms of locations and hours can help to broaden out the labour pool. For example, typically women want to work from home more than men – just as those (both men & women) with either very young children or children in secondary education would like to (based on similar survey data). So as a result of these new ways of working we could find more women in the workforce as well as a more diverse workforce if this allows those with disabilities or care demands easier access to some roles.

A better labour market for some

The latter is one of the key strands that workers flagged to Apple in an open letter pushing back against the company's attempts to bring more workers back into offices for fixed periods³⁰. And one of the remarkable statistics about the post-pandemic labour market is the speed at which the participation rate of disabled workers in the US has soared – rising through the pandemic to record highs (chart 22).

³⁰ Apple Employees Write Scathing Hybrid Work Open Letter, Forbes, 3 May 2022

22. The rise in disabled worker labour participation has been very encouraging...



23. ...while more part-time work could open up opportunities



More part time work could become common

One other possible benefit from remote, hybrid and more flexible work is the opening up of more job-sharing. Historically, the downward trend in the share of workers working part-time may have been seen as a good thing, as a greater share were able to work more hours. But with rising childcare costs across the developed world and a collapse in birth rates (see: *The big baby bust: Fewer babies, slower growth*, 22 August 2022), more job-sharing, with full-time roles being replaced by multiple part-time workers, could lead to a more diverse workforce if it allows parents or those with other commitments to re-enter the labour force.

A more diverse workforce can also bring with it substantial benefits in terms of idea creation, problem solving and productivity – as highlighted in Matthew Syed's book, *Rebel Ideas: The Power of Thinking Differently*, which advocates the power of diverse ways of thinking within teams.

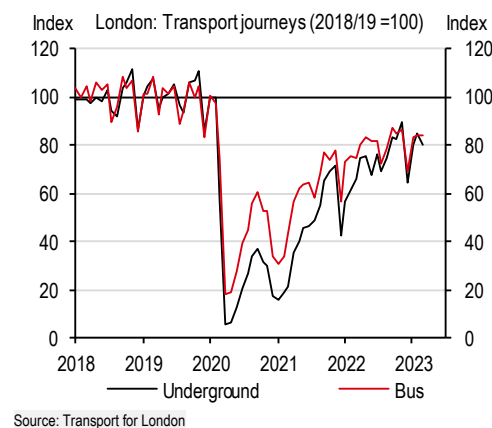
The impact on cities

Some continued impacts on cities

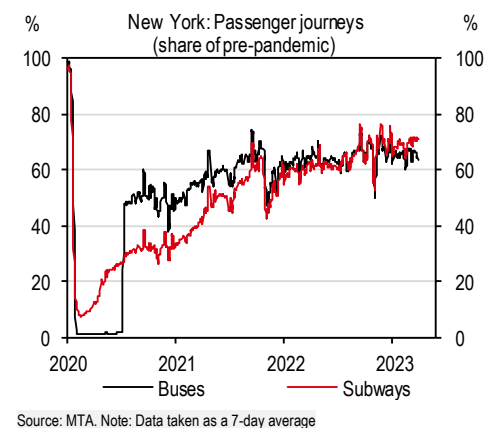
We spend time looking at these labour market trends for a number of reasons – partly because of the re-shaping of the labour market, but also because of the impact that it has on how developed market cities will function going forwards. We have highlighted how the impact of future work trends are likely to be much more evident in the developed world than in the emerging world, where more work is still manual and in-person. Over time, as job mixes evolve, the impact may become more apparent.

The drop in the number of commuting journeys is clearly one of the biggest changes – and if remote work and shorter working weeks become more entrenched then it is hard to see how the total number of journeys can get back to pre-pandemic levels in major cities.

24. Public transport usage is roughly 20% below pre-pandemic norms in London...



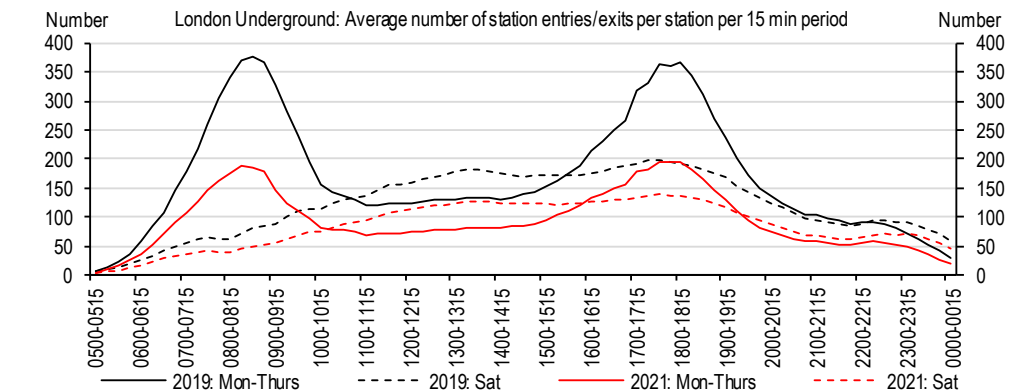
25. ...and 30% lower in New York



Travel has dropped more on weekdays than weekends

But within this data, we can try and assess how many fewer journeys are being made at various parts of the day. Travel data by 15 minute intervals from Transport for London (TfL) show for 2021 (where there was still a broad pandemic effect in some parts of the year – 2022 data are yet to be released) how the drop in journeys compared to 2019 was much more dramatic for weekday rush hours, whereas weekend travel saw a smaller drop. As a result, it seems that commuting journeys could be down more than 30% compared to pre-pandemic levels, in-keeping with the idea of roughly half of office hours being completed remotely.

26. Although 2021 data was affected by the pandemic, rush hours saw more of a hit than Saturday traffic



Source: TfL, HSBC

Fewer journeys could be good for the planet and local pollution

This can carry some environmental benefits for cities as the chance for cities to see a rapid drop in CO₂ emissions from fewer journeys is clear. As a result, urban areas would be well-advised to encourage fewer days spent commuting (be that due to shorter working weeks or remote work) to improve environmental quality and ease the strain on public transport networks – as long as those choosing to travel did so by public transport and not private vehicles.

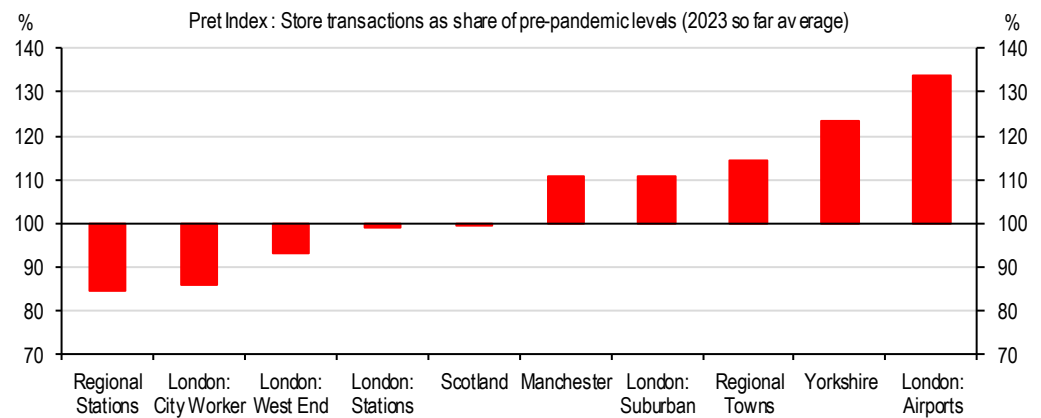
Evidence from data since pandemic-related restrictions have been relaxed show that despite fewer commuting journeys, attendance at cultural and entertainment activities has not been as adversely affected³¹. Urban areas may see a positive impact from fewer journeys without the same degree of economic hit that we may have expected to have followed suit.

Suburbs and smaller urban areas may be winners

This can be seen in the Pret Index: data from the UK coffee chain that shows how sales volumes have evolved in different regions compared to pre-pandemic. The data in chart 27 show that regional towns and suburbs are seeing more footfall at the expense of regional stations, city worker areas and the west end. The impact on consumer spending activity looks to be heavily concentrated in certain parts of urban activity, while other regions and types of spending continue to benefit. Given the evolving labour market, it seems sensible for this to continue.

³¹ Death notices for the city are premature, FT, 20 May 2022

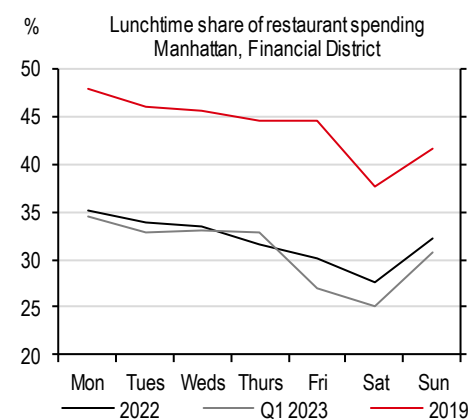
27. Coffee shop transaction data show where the impact has been



Source: Pret a Manger, ONS. Note: Pret a Manger is a UK-based chain of fast-serving cafes.

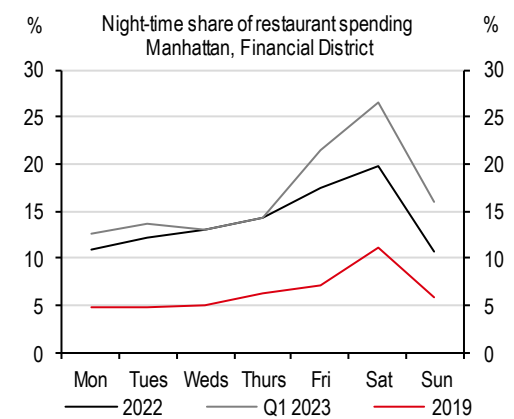
It's not just between locations that spending is rotating. Data from Mastercard's NYC's Economic Clock looks at restaurant spending changes based on the time of day at which transactions take place. While the share of spending that takes place at lunchtime has dropped notably since 2019, the late-night trade has become much more important. Mastercard's data suggest that spending, in aggregate, is up by 13% compared to pre-pandemic – but with Manhattan faring much worse than suburbs such as Brooklyn (up 30%) and The Bronx (up 33%). Lunch spending in the area is down about 5% from pre-pandemic levels, but with variability by day of the week.

28. Spending may be dropping at lunchtime...



Source: Mastercard, NYC's Economic Clock

29. ...but is picking up late at night



Source: Mastercard, NYC's Economic Clock

Some parts of cities may lose out

But some parts of the urban economy will clearly lose out. Theoretically, that could be commercial real estate – but with different needs for office space (for more collaboration spaces or more spaced-out desks), and with a record number of companies signing their first office leases in 2022– the sector is not faring as badly as it clearly could³². That hasn't stopped commercial real estate emerging as a worry for markets in 2023 in a period of higher interest rates and potential stresses in terms of lending.

We continue to see cities as evolving, from being places of work, to places for fun – and this will bring with it many structural changes in terms of urban investment as cities compete for people.

³² Record number of companies sign first London office leases, FT, 27 June 2022

Disclosure appendix

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