parc

IS YOUR ORGANISATION BUILT TO *ADAPT* AND *SURVIVE*?

STEVEN TOFT ASSOCIATE RESEARCH DIRECTOR

FOREWORD

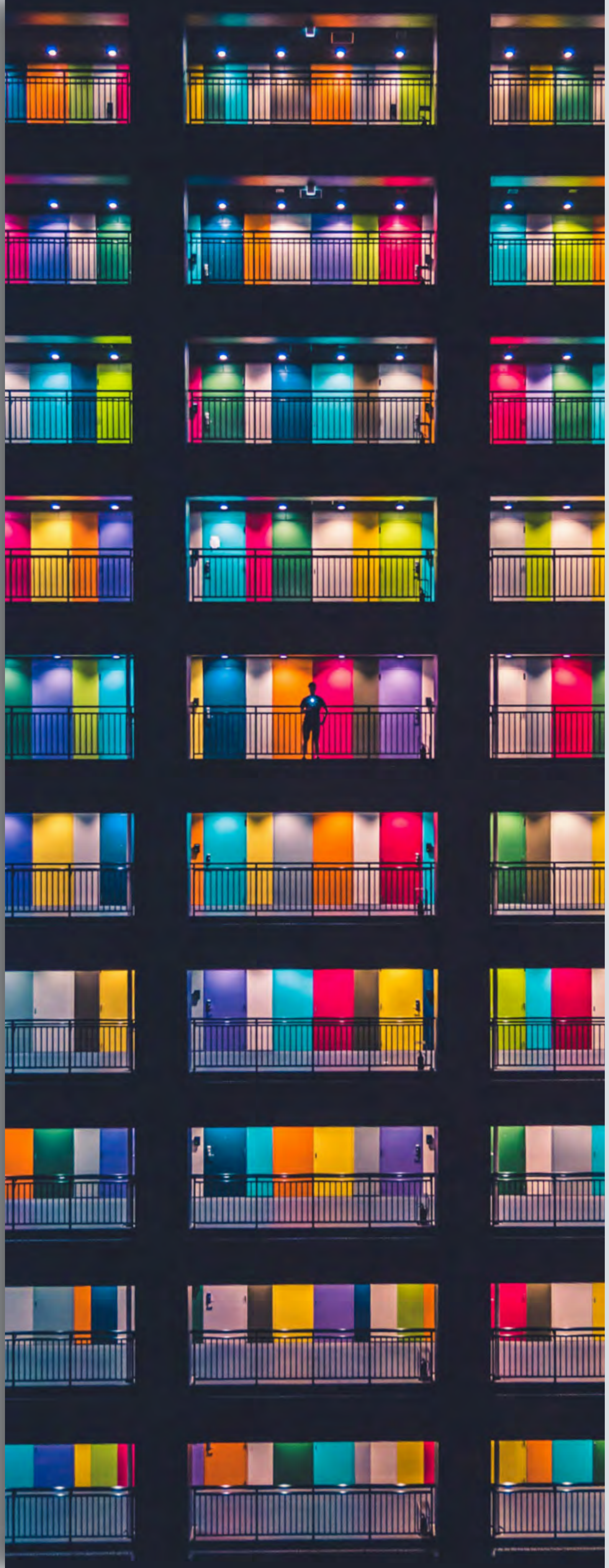
This has been a particularly challenging report to write. When we scheduled this piece of work for March 2025, we expected geopolitical instability to be one of its themes. PARC has been tracking the increasing significance of political developments for organisations since the middle of the last decade.

We were, nevertheless, taken aback by the speed of change since January 2025. The context of almost daily geopolitical developments during the writing period has been testing, to put it mildly. The knock-on effects in the economic and technological spheres, themselves moving at pace, made it feel rather like taking on a few rounds of chessboxing.

That said, it has also been an opportune moment to take stock at such a critical time. We couldn't have picked a better (or worse?) time to do it. The difficulties in writing this report reflect those that are facing executive teams around the world as they try to make sense of what is going on and to steer their organisations through what will inevitably be a turbulent half-decade.

This report covers a lot of ground. Many of the themes covered are worthy of further examination and some will form the basis of further research and events in 2026. In the meantime, we hope that this report and the associated event will help you to gain some perspective on these rapidly moving developments.

Karen Clark & **Steven Toft**



ACKNOWLEDGEMENTS

This report covers some complex subject matter. The research has involved wide-ranging conversations over a number of months, during which time the situation was evolving rapidly. Due to the broad scope of the report, a number of experts from various professions and disciplines have helped us to shape and develop it. Some of these contributors have asked not to be named in the acknowledgments. We thank them for their advice and comments.

We would like to thank the following people:

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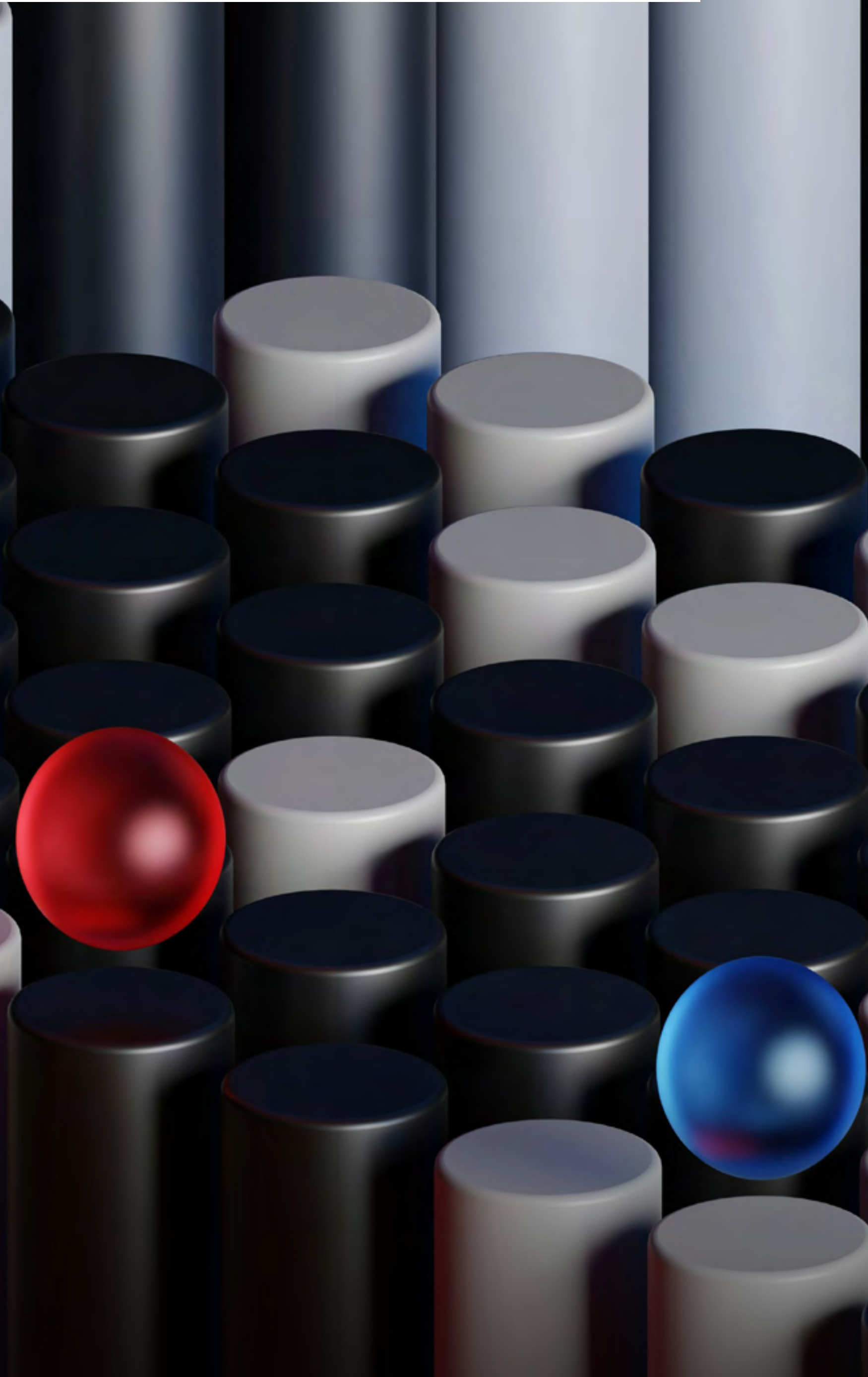
- **Prof. Amelia Hadfield**, Head of Politics and International Relations, University of Surrey
- **Michael Hume**, Partner and Head of Strategy and Research, MKP Capital Management

Our speakers:

- **Prof. Marleen Huysman**, Director of the KIN Center for Digital Innovation, School of Business and Economics, Vrije Universiteit Amsterdam
- **Prof. Thomas Roulet**, Director of Studies in Psychology & Behavioural Science, and Co-Director of the King's Entrepreneurship Lab, King's College, Cambridge University
- **Giles Wilkes**, Specialist Partner, Flint Global, and Senior Fellow, Institute for Government

Others who gave their insights:

- **Prof. Diane Coyle**, Co-Director of the Bennett Institute for Public Policy, Cambridge University and Director of the Productivity Institute
- **Simon Gorham**, Head of Employment, Boodle Hatfield
- **Greg Thwaites**, Research Director, Resolution Foundation



“I think it’s safe to say we’re living in the most economically disruptive moment since World War II and I don’t think we stop enough as boards to really process that.”

JON HUNTSMAN, VICE CHAIR, **MASTERCARD**

1.0

INTRODUCTION

New Year 2025 marked the mid-point of the 2020s. The first half of the decade was tumultuous, with the first global pandemic for a hundred years and the first invasion in Europe for eighty. The world continues to reel from the effects of the economic downturn, trade disruption and inflation that followed both.

There is every indication that the second half of the decade is likely to be as volatile. In the first two months of his second term, President Trump had already destabilised the western alliance to the point where Germany’s Chancellor-in-waiting was talking about ‘independence from the USA’ and an FT editorial declared that *“America has turned on its friends”*. Early indications suggest that an assault on the US government apparatus will follow and that the ‘Trump Tariffs’ will have a negative impact on the finely balanced system of global trade. Even a partial withdrawal of US military support would destabilise Europe and put significant financial pressure on Europe’s governments should they attempt to increase their defence capabilities to compensate. The fragile global consensus on Net Zero appears to be fracturing at just the point when the pace of the work needed to achieve the 2050 targets needs to increase. Meanwhile, severe climate change incidents are becoming more frequent, inflicting massive economic damage and untold human misery, all of which lead to increased costs for governments.

The capacity of the advanced economies to meet these challenges looks all the more questionable due to the ongoing period of slow growth which set in after the financial crisis of 2008. Dubbed ‘synchronised stagnation’ by Chris Giles in the Financial Times in 2019, the pattern of economic sluggishness returned once the post-Covid bounce-back had dissipated. Pressure on governments’ spending is rising due to ageing populations, climate change and, almost certainly in Europe, increased defence costs. If the stagnation continues, public spending will continue to increase faster than economic growth and tax revenues, eventually leading to a severe fiscal crisis. This is an economic challenge we have been aware of for some time but which is now becoming acute.

Economists are seriously worried and some are starting to point the finger at business executives. At the root of the economic stagnation is a productivity slowdown, a feature of the advanced economies for nearly two decades but now becoming a feature of emerging economies too. One possible cause has been identified as a slump in **‘business dynamism’**. Organisations such as the IMF, the World Bank and the OECD have published papers showing a decline in business dynamism on a number of measures. It is perhaps not surprising that some economists see ‘poor management’ as one of the causes. We consider the concept of business dynamism in Section 2.3.

What is beyond doubt is that, for the major economies to avoid economic, social and political upheaval by the end of this decade, a significant improvement in the performance of their private sector companies will be needed. While governments and public bodies will, and must, play a part, ultimately economic growth (and therefore increased tax revenue) has to come from improved company productivity.

But many executives will respond that their business ecosystem is becoming ever more complicated as it is. While navigating increased costs, turbulent supply chains and resourcing issues, they are having to expend more time and resource on balancing complex demands, from regulators, investors, employees, politicians and the wider public. The concept of corporate governance has expanded to the point where the range of stakeholders is many and varied. The scrutiny on company leaders is sharper than ever. Business leaders’ main focus is to maintain and, where possible, increase their companies’ profitability in a time of a stagnating economy and an increasingly insecure trading environment. With one eye on Net Zero targets and ESG demands (and governments pulling in different directions on both), they might feel that falling productivity is just another stick with which politicians and the media can beat them.

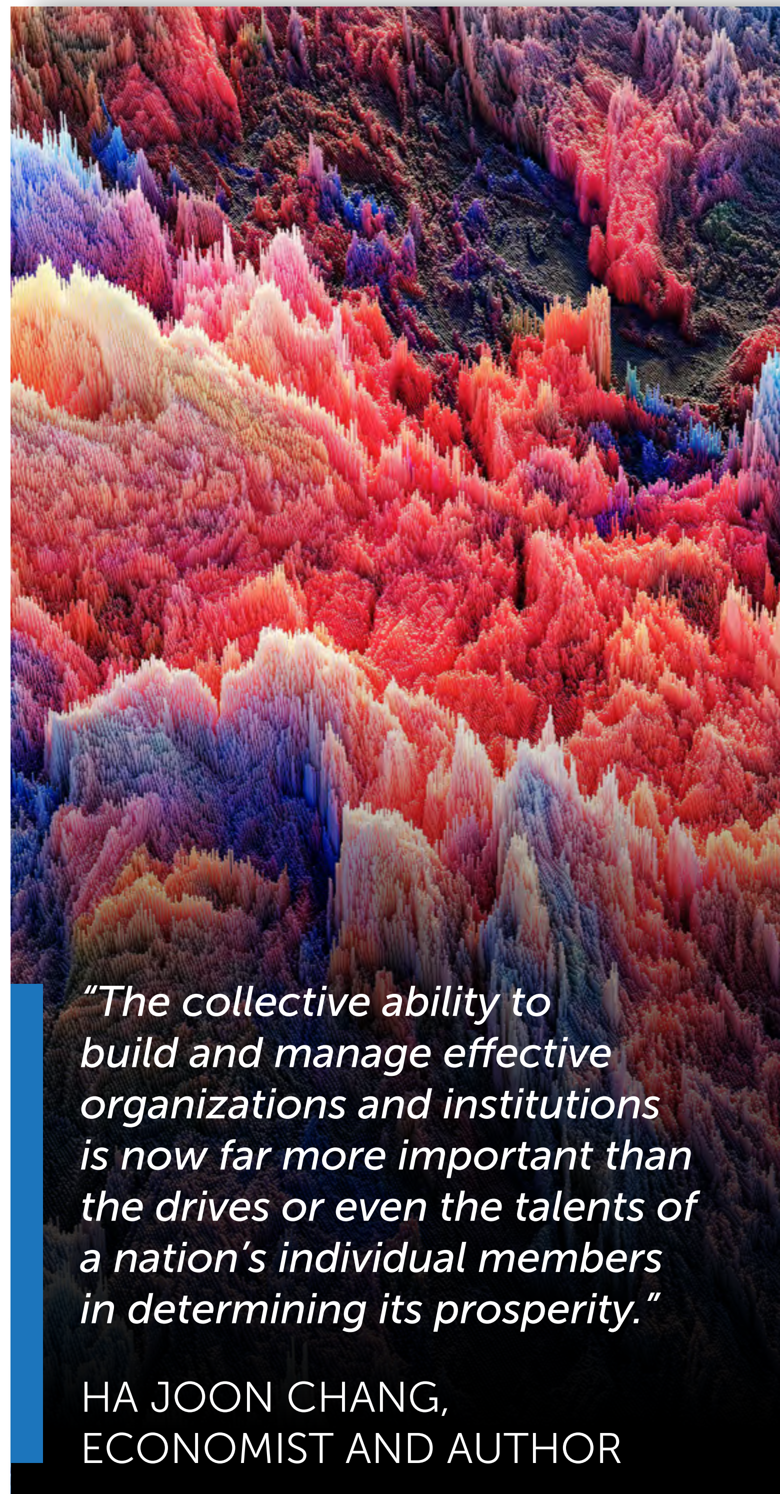
It may be that new technology, such as AI, robotics and quantum computing, will deliver the next leap in productivity. There has been much talk of the next industrial revolution. But the gap between the hype and the delivery in new technology is well documented and, so far, the AI Revolution is proving no different. It is highly likely that AI, in some form, will make some organisations and sectors more productive. Whether or not it will provide the boost that gives us 'escape velocity' from two decades of stagnation remains to be seen. There are reasons to be sceptical.

It is clear from previous technological innovation that the benefits are rarely realised without corresponding organisational innovations. It's not enough just to 'whack in' some new technology. Wide ranging organisational and behavioural changes are necessary to fully exploit its full potential. There are those who argue that the key to the entire productivity puzzle and reversing the fall in business dynamism is organisational rather than technological. As economist Ha Joon Chang put it:

> *"The collective ability to build and manage effective organizations and institutions is now far more important than the drives or even the talents of a nation's individual members in determining its prosperity."*

It is looking likely, then, that the second half of this decade is going to be challenging for the leaders of organisations across all sectors. Business leaders will be admonished to improve productivity and general wellbeing while, at the same time, trying to manage a bewildering array of stakeholders with competing demands. Building strong and effective organisations will be essential if this is to be achieved. The aim of this report is therefore to take up Professor Chang's challenge. How will we collectively build and manage the effective organisations for the next decade?

While much of the content in this report discusses geopolitical, economic and technological developments, its purpose is not to debate public policy. There are, of course, significant and potentially far-reaching political choices to be made by governments as they consider how to respond to this increasingly volatile period. However, it is outside our scope to debate those choices here. Our intention is to set out the background and context in which companies will have to operate over the next five years and to provide some insights, thoughts and questions to help you navigate through this challenging period.



Section 2 considers the **political, social and economic context** in which businesses are operating and the likely developments over the second half of this decade. We examine the increasing impact of **politics** on companies and the volatile and unpredictable nature of political and social change. This section also assesses the **economic backdrop,** the nature of the **'crisis in business dynamism'** and the extent to which it is contributing to **the decline in productivity growth** and to **economic stagnation.** We also look at the **implications of a low growth economy** for the social, political and business environment.

In **Section 3** we assess the **changing shape of the workforce** and look at the potential impact of **demographic** and **intergenerational shifts.** What is the potential impact of **shrinking working-age populations** on companies and companies? How important are **intergenerational tensions?** Has there always been a gulf in attitudes between the old and young or is what we are seeing now a significant **social rupture** – different from anything we have seen before? Has intergenerational difference been over-hyped?

Section 4 looks at the developments in **technology** and takes a critical view of the claims made for it. We take a deeper look at the emerging technologies, such as **AI and quantum computing,** to understand how they are being deployed and the organisational impact that they may have. We also examine the evidence for the **organisational changes** necessary to support the successful implementation of technology.

Section 5 pulls together the themes of the report and looks at the organisational innovations needed to support organisations through the coming half-decade – those that will enable the anticipation and management of global events while exploiting the rapid developments in new technology. Both will require **investment in human capital** and in **organisational and process changes.**

> *"The looming tariffs aren't even the main thing. The main thing is the corruption of the US state by a president and his cronies... There are many worse things than tariffs, and I fear we're seeing them."*
>
> ALAN BEATTIE, SENIOR TRADE WRITER, **FT**

2.0 CONTEXT

In the second half of the 2020s, the world economy will be faced with a number of unfamiliar challenges. Some of these have not occurred for over a century, others may be unique in human history. Either way, nothing similar has happened during the working lifetimes of those currently leading countries and organisations.

Scanning the horizon for the next five years, we can be reasonably sure that:

- Climate change incidents will increase in frequency and severity, causing significant damage and costs.
- The push for Net Zero will continue, in some form, requiring investment from companies and governments.
- Working age populations will continue to shrink as a proportion of the total population and, in some economies, in absolute terms.
- Technology will continue to evolve and advance at speed, with significant social and economic impacts, including a potential increase in inequality.
- Geopolitical volatility will continue – the impact of a shift of the US away from its historic global role in defence and world trade will have a further destabilising effect.
- The levels of public debt in most advanced economies will remain high relative to post-war averages, limiting governments' policy options.
- The economic stagnation that set in after the 2008 financial crisis will continue.

Embedded in these trends is the potential for feedback loops in which the headwinds compound and reinforce each other. Economic historian Adam Tooze came up with the term 'polycrisis' to describe how *"disparate shocks interact so that the whole is worse than the sum of the parts"*.

PARC discussed climate change and the push for Net Zero in some depth in our 2024 report *Getting to Net Zero the Role of Reward*. We noted that a divergence between the US and the rest of the world in the reporting of corporate greenhouse gas emissions and the setting of Net Zero targets was already building up. As of March 2025, the impact of the second Trump presidency on the global Net Zero timetable is difficult to predict but it looks likely that this gap will continue to widen.

Population dynamics and the changing shape of the workforce will be covered in more detail in Section 3 and the impact of technology in Section 4.

The last two factors on the list above are new manifestations of forces that have affected the world before but not in the working lifetimes of most people currently in the workforce. Geopolitical instability and economic stagnation have occurred before but you need to go back beyond the middle of the last century to find a period of such prolonged slow growth or a series of conflicts that have disrupted world trade on such a scale.

2.1

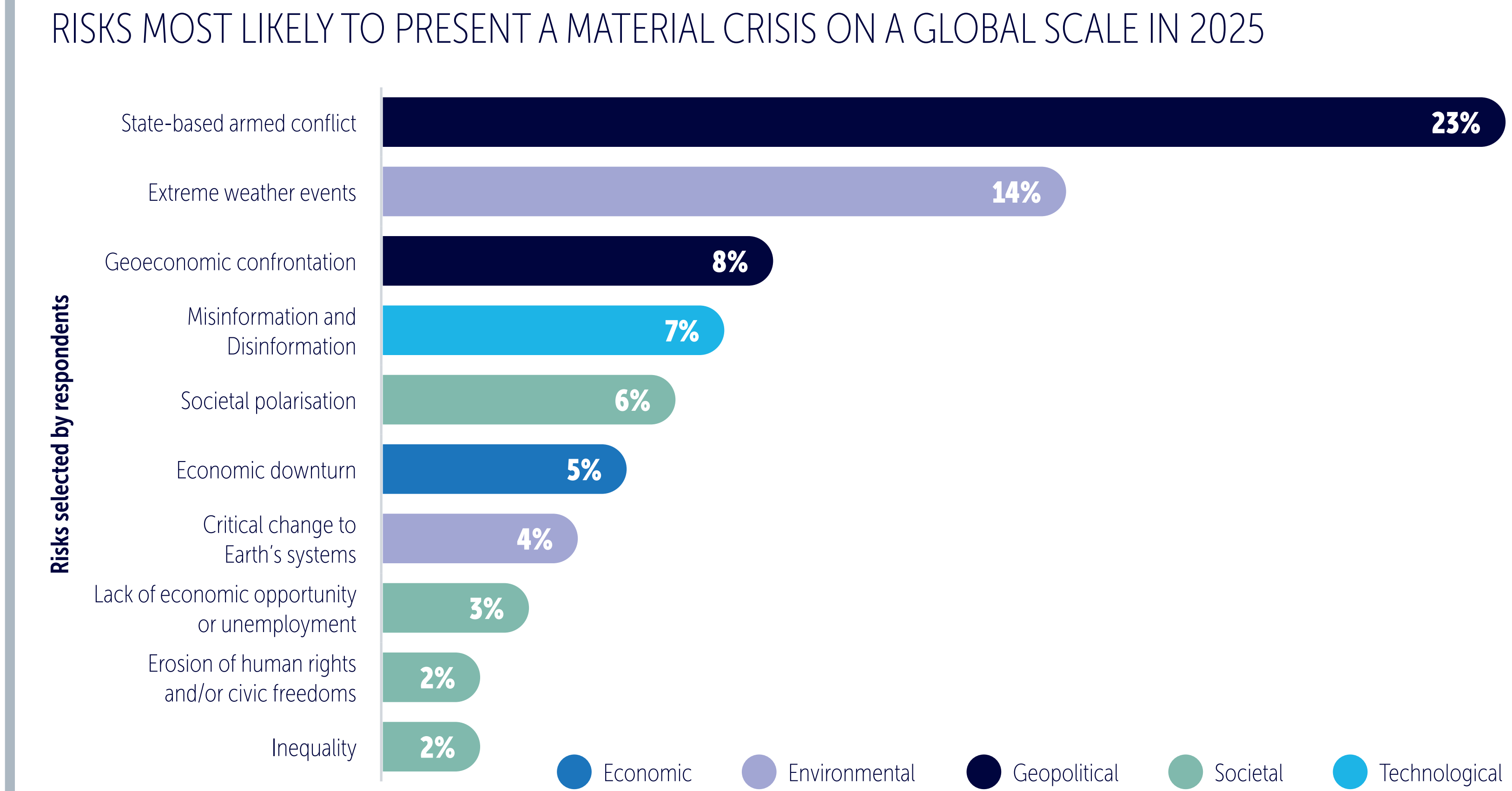
THE RETURN OF POLITICS

Any suggestion that things might 'get back to normal' after the end of the Covid pandemic and the inauguration of President Biden in 2021 have been dispelled. The geopolitical turbulence that manifested itself with Brexit and the first Trump administration continued into the 2020s. While the pandemic period was a global crisis it is now looking like it may also have seen the last gasp of global governmental consensus. Early indications suggest that the new Trump administration is intent on repudiating the very rules-based system that the US helped to create. It is difficult to over-state the importance of the Trump 2 approach.

Geopolitical security is something that businesses have taken for granted for much of the last three decades. The period after the collapse of communism and the fall of the Berlin Wall were one of unprecedented political stability, particularly for the advanced economies. Francis Fukuyama famously declared *The End of History in 1992,* arguing that the world was moving towards liberal democracy and western capitalism. Academics may have poured scorn on this idea but his book caught the moment. Governments and businesses began to behave as though he was right. The democratisation of the former communist countries and the trade liberalisation of China brought a massive increase in workers, resources, and markets into the global market system in what economist Charles Goodhart described as the largest ever positive supply shock. Political stability and a broad economic consensus saw trade barriers, regulation and business taxes fall and enabled the construction of complex global supply chains, linking the former communist economies to the capitalist world.

During this period, businesses didn't have to pay much attention to politics. There were even those who argued that the age of the nation state was over and that corporations would soon rule the world. A select group of CEOs and corporate bankers were dubbed 'masters of the universe'. While those firms that operated some of the world's more volatile areas might have employed political risk consultants, for most organisations, political change had little impact on their operations. This was the era of a rapid globalisation in which it was relatively easy to do business almost anywhere.

This benign economic period came to a halt with the financial crisis in 2008. The political consensus was rocked in 2016 with the rise of populism, Brexit and the election of Donald Trump.



Source: World Economic Forum, Global Risks Perception Survey 2024-2025

The Davos meeting of 2017 was in shock as the world's corporate leaders reflected on the impact of developments few of them had seen coming. It wasn't a blip, as some thought at the time. While there were suggestions of 'the adults being back in control' after the election of President Biden, the first half of this decade has seen an invasion in Europe and the return of President Trump, who many commentators had written off in 2020.

The globalisation of the 1990s and 2000s would not have been possible without a stable security situation. The fragility of the global supply chains built up during this period became apparent in the early 2020s as the impact of a global pandemic and armed conflict disrupted business in a way few had seen coming.

In advance of the Davos meeting in January 2022, the World Economic Forum published its Global Risks Report in which the world's business leaders rated Geoeconomic confrontation as a distant 10th on the list of potential dangers. Less than a month later, Russia invaded Ukraine.

In the same report ahead of the January 2025 Davos meeting, State-based armed conflict topped the list of risks in an outlook the WEF described as 'bleak'.

It's worth noting that the Global Risks' Report is based on 'perceived risks', based on the respondents' own experience and interpretation of what they and their organisation are experiencing or planning for.

Throughout the period since the end of the Second World War, the USA has taken on the role of leader of the capitalist world. Its military and its currency have guaranteed a degree of stability and order. The period of market reform, deregulation and globalisation after the end of the Cold War has been dubbed the Washington Consensus, in that an American view of world trade, politics and economics prevailed. At least some of the sense of 'bleakness' is due to the return of a US president many thought they had seen the back of in 2020 and the sense that the US may have swapped its traditional role of stabilising anchor for one of disruptor.

At the time of writing, these fears would seem to be justified. In his hostility to longstanding US allies and his willingness to use tariffs as a political weapon, President Trump is dismantling the entire concept of The West that has prevailed since the Second World War. Not only is the US refusing to play the role of world policeman; it is deliberately flouting the rules it created. That its former allies are now planning a defence and security architecture without the US is a sign of how far and how quickly the situation has changed.

President Trump's announcement of 25% tariffs took much of the business world by surprise. The prevailing wisdom in November 2024 was that markets had 'priced in' a Trump victory and had adjusted in anticipation of his administration's policies. This is now starting to look complacent. In February 2025, the FT published a roundup of the startled market reactions, the tone of which is best summed up by this quote from Rabobank's Senior US Strategist Philip Marey:

> *"Perhaps the pundits who have been thinking that we could take Trump's tariff threats with a grain of salt, should actually start listening to what Trump says, instead of clinging to self-delusional interpretations."*

Some still doubt whether the Trump administration will carry through its threatened tariffs to the full extent but, even if it doesn't, the damage to the finely balanced system of global trade may already have been done. As a Chatham House report in February 2025 pointed out, significant economic damage is likely to come from a loss of confidence in US governance. British trade expert Sam Lowe was more blunt, arguing that, if the US is going to flout World Trade Organisations rules, the WTO is effectively dead:

> *"I don't think we need to overthink this one. Under this approach a country would just say 'to hell with my international obligations, I'm going to match my tariffs with the US's for the US and for no one else. Whatcha gonna do about it?'"*
>
> *"And, well, what is anyone else actually going to do about it?"*

The FT's senior trade writer Alan Beattie reinforced the point that this isn't just about the tariffs:

> *"It might sound a crazy thing for a trade newsletter to say with a global trade war about to begin, but the looming tariffs aren't even the main thing. The main thing is the corruption of the US state by a president and his cronies. The tariffs are hugely illogical and massively destructive. But even if they were postponed this is still an administration prepared to trash norms of democracy and law to use the US's economic might to pursue vengeful campaigns against enemies real and imagined, foreign and domestic. There are many worse things than tariffs, and I fear we're seeing them."*

This comes on the back of a general trend towards protectionism across the world. The World Trade organisation has reported a doubling of trade restrictions between 2020 and 2024.

While governments may be in shock, many US corporations lost no time in realigning themselves with President Trump's agenda. As a Bloomberg article entitled *The great CEO flip-flop* commented:

> *"After Trump first entered the White House, US executives lined up to congratulate him and curry favor. This time, many aren't waiting for Inauguration Day: They're pre-groveling or, like Mark Zuckerberg, perhaps revealing their true selves."*

But, while it might be fun to watch the intellectual somersaults of some of the world's most powerful business leaders, the changing political atmosphere could have far-reaching consequences. The divergence between the US and the rest of the capitalist world on Net Zero looks set to grow wider as major corporations withdraw from green initiatives. Something similar may happen in the area of Diversity, Equality and Inclusion. There was already evidence of a gathering retreat from DEI in the US in 2024 due to pressure from conservative politicians or from investors who were, themselves, coming under political pressure. Big names such as Walmart and Ford have already pulled back on their DEI policies and initiatives. Blackrock, in 2020 the cheerleader for a new era of purposeful corporations and *"a fundamental reshaping of finance"*, quit the Net Zero Asset Managers group in the wake of Trump's election and was, by late 2024, rowing back on its ESG commitments.

The effect of this on the world's major companies is difficult to predict so soon into the Trump presidency but the fact that so many well-known firms have changed their policies suggests there will be some sort of ripple effect. This shift has happened remarkably quickly. In December 2020, noting the rapid rise of ESG and launching its new Moral Money series, the FT commented:

> *"Today's corporate zeitgeist looks notably different versus two years ago, never mind a decade back."*

One might make the same comment today, except things seem to be moving equally rapidly in the opposite direction. The launch of an 'anti-woke' investment fund to 'punish' companies with DEI quotas may be a publicity gimmick or the start of a movement. Either way, it underlines a shift in the mood that will exert an influence on companies across the world. As Simon Gorham, Head of Employment Law at Boodle Hatfield noted, this could see regulatory regimes and corporate policies pulling in opposite directions in the US and Europe:

> *"This divergence is likely to create significant tension in US headquartered multi-nationals. If one part of the company is pushing for greater implementation of Net Zero and DEI while the other is trying to row back on them, it will create a massive headache for HR functions and especially for those trying to design incentive payments."*

PARC's Managing Director Karen Clark also noted this shift:

> *"Our multi-national members, whether or not headquartered in the US, have started to voice concerns about the increasing risk profile of DEI and ESG initiatives and how to ensure a consistency of approach. They are aware of the potential for costly litigation and damage to employer brand both inside and outside of the US. In some companies the previously agreed, and in many cases hard fought for, approach has been dropped like a hot stone, and this has been reported in the media too."*

Already, in the US, companies have been dropping ESG targets from bonus plans. The scenario of multinationals facing a 'tug-of-war on wokeness' in their different jurisdictions isn't hard to imagine. It may be that there would have been a backlash against Net Zero, DEI and other ESG policies anyway but it is unlikely that it would have gained as much traction as quickly without the support of a well-funded political movement.

The clear message for corporations from the developments since 2016 is that politics is back. This has been emphatically underlined by the events of the first few months of 2025. After decades of not paying much attention to it, businesses will need to get a lot better at scanning the political horizon to anticipate and prepare for what is likely to be a very volatile half-decade.

As Jon Huntsman, Vice Chair of Mastercard remarked in an interview for McKinsey at the 2025 Davos meeting:

> *"I think it's safe to say we're living in the most economically disruptive moment since World War II and I don't think we stop enough as boards to really process that. Typically, in the past, we've had one annual dinner where we bring in a speaker focused on geopolitics. We have a nice event, a nice roundtable discussion, we close the book and we then go our separate ways."*
>
> *"Those days are gone. How you navigate, lead, and problem solve during this period – without a rule book and without precedent – will make or break your future and the success of your corporate strategy."*

McKinsey's Director of Geopolitics, Ziad Haider, reflected:

> *"When we survey business leaders about their views on risk, geopolitical risk is understandably at the top. When we ask those business leaders about their top priorities, geopolitical and political risks are toward the bottom. It's puzzling, and our hypothesis is that this is a new discipline for companies. Many executives have never dealt with so many geopolitical fractures."*
>
> *"You can't have an informed discussion about geopolitics without a common baseline of facts. Too often, we hear, 'I heard this from a friend,' or 'I read that in a magazine,' and that's the basis for decisions. The fact is that geopolitics is personal. Leaders of global organizations consume very different media."*

Hitherto, in many organisations, senior executives have discussed politics as they might discuss gardening or football – as something of interest but not directly related to the business strategy. Unless the organisation was operating in a politically volatile area, geopolitics has not been considered a major priority.

However, the general direction of travel over the past decade or so, and especially over the past few months, suggest that the entire world is now an area of political volatility. The 'one annual dinner' approach to managing geopolitics isn't going to cut it any more and businesses are starting to get that message.

Strategic communications consultant Helen Humphreys observed:

> *"Businesses have been caught out by political developments because they are not playing in the right space or at the right pace. A lot of companies still think of social media as something frivolous but anybody watching it closely in recent years would not be surprised by any of this. However, most companies were looking elsewhere. They were also completely unprepared for the speed of activity. If you've ever dealt with a social media storm this is the speed at which things happen. Geopolitics now moves at that speed and companies need to be prepared."*

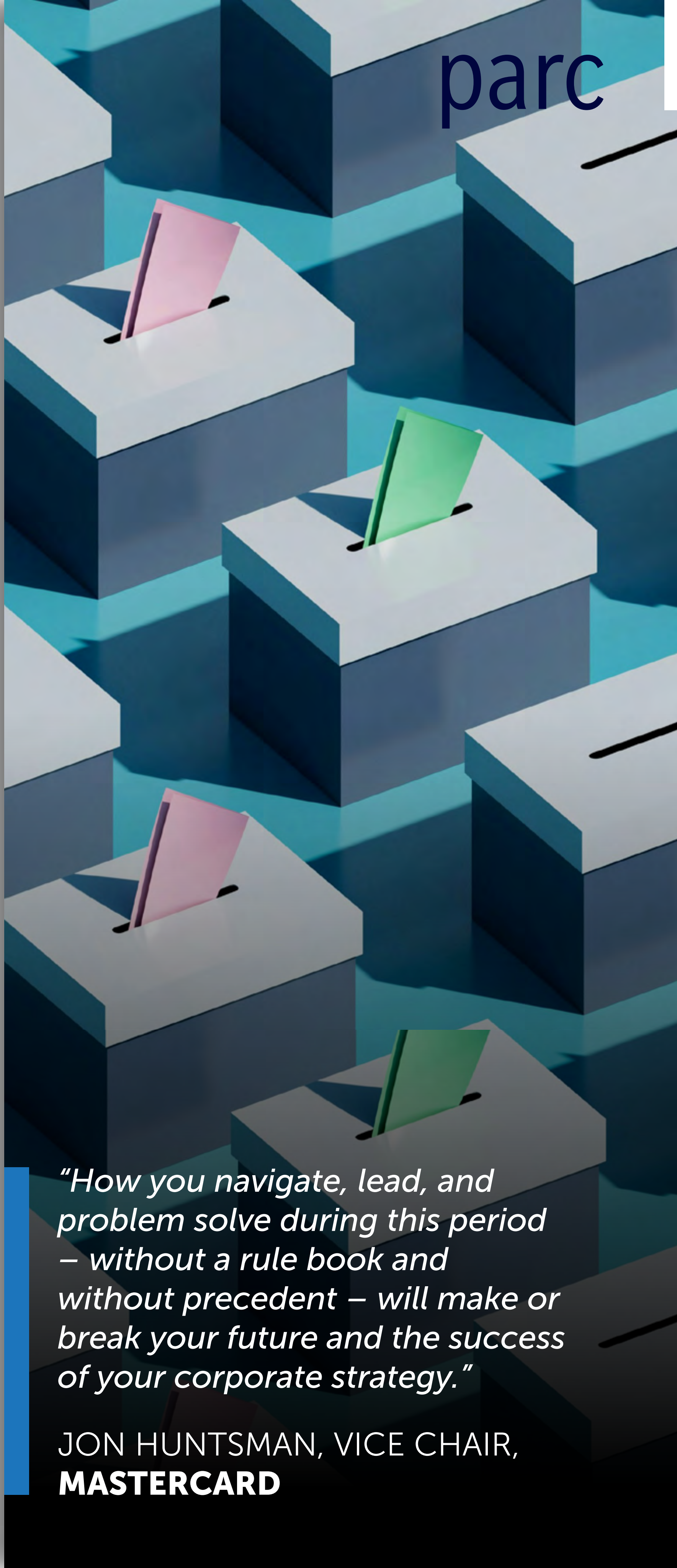
It is likely that an increasing number of companies will aim to have someone with a geopolitical brief and expertise in their senior teams. As Karen Clark observed:

> *"We've been discussing the emergence of the role of Chief Geopolitical Officer. There is growing awareness, and lived experience, of the critical impact external factors can have on an organisation. This has prompted some recognition that forward planning and risk assessment, via analysis tailored to a company's own business strategy, can create an advantage, or at least alleviate some pain. Disruption is happening so quickly that a homogenous quarterly briefing is no longer serving all businesses well. Leaders in performance and reward, and others, need to be geopolitically and economically aware enough to ensure informed, risk aware challenge and decision making."*

The period after the Cold War is increasingly looking like a blip. For much of the period since the 1990s, we have tended to assume that disruption would come from market innovations – from the creative destruction that causes capitalism to renew itself. We even framed 'disruption' as something positive. Everybody wanted to be a disruptor. But when the disruption came it was from unforeseen wars, unpredictable politicians, riots, disease and social unrest.

If anything, the economic 'creative destruction' went into decline, perhaps creating some of the conditions which are coming to characterise the 2020s – economic stagnation alongside extreme political volatility.

It is this discussion that we turn to in the next section.



2.2

LOW GROWTH

PARC's report on the Future Fit Workforce, written in September 2021, in the wake of the Covid pandemic, noted:

> *"Many forecasters believe we will return to historically low levels of GDP growth once the post-Covid catchup period is over."*

Those forecasters seem to have been proved right. To varying degrees, the advanced economies reverted to type and the synchronised stagnation of the 2010s returned.

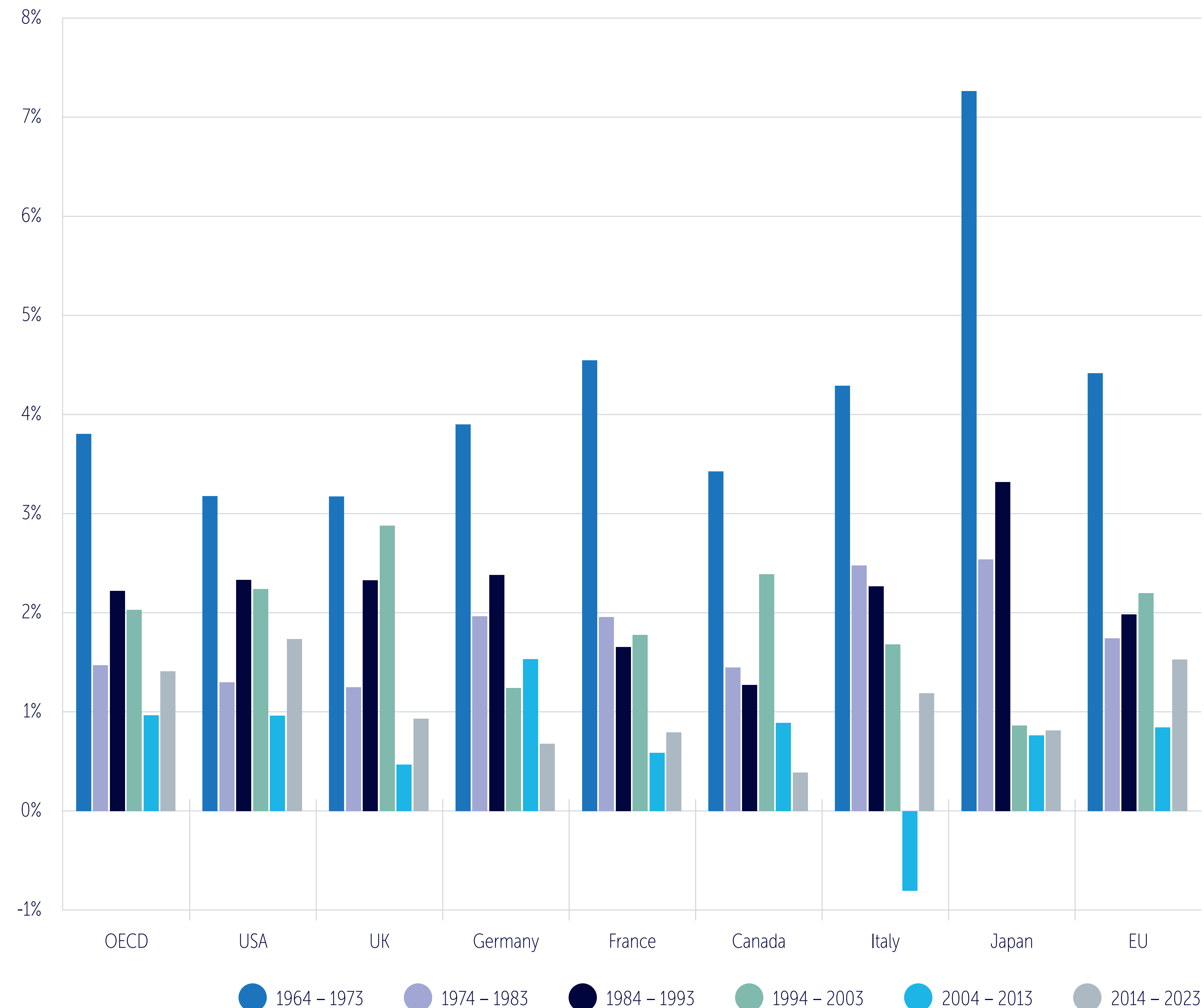
While it is true that the world has been buffeted by a series of challenges in the 2020s, these cannot entirely explain away the global economy's under-performance over the last decade or so. Many of the world's economies have been stagnating since the financial crisis and there is evidence that some were starting to slow down even before that. Crises are an ideal excuse for avoiding discussion of fundamental underlying problems in the economy.

Some of this slowdown can be explained by the factors that boosted growth in the past being thrown into reverse. As the UK's Office for Budget Responsibility put it, in terms that could apply to all the advanced economies, what were tailwinds have now become headwinds.

> *"Fiscal tailwinds from a post-World War II baby boom, global economic integration, and easing of Cold War tensions have switched to headwinds in the first part of this century. Public finances are now under growing pressure from ageing populations, disappointing economic growth, a warming planet, and rising geopolitical tensions. Amidst these pressures, many governments have struggled to rebuild their fiscal resilience during the increasingly brief interludes between global crises."*

Growth rates for all the G7 economies show a gradual decline since the mid 20th Century. The average growth rates for the last six ten-year periods show a general downward trend. It is a sign of how far economic expectations have shifted that economists and commentators get excited about growth rates that would have been described as 'disappointing' thirty years ago and maybe we have seen the same moderating of expectations in the corporate world too.

AVERAGE PER CAPITA GDP GROWTH, 10 YEAR PERIODS



Source: World Bank

This is not just a problem for the advanced economies though. The slowdown in economic growth is affecting the emerging economies too. As a World Bank report noted in February 2024, while per capita GDP growth is higher in emerging economies, their growth rates also tailed off during the 2010s.

> *"Major shocks have battered the global economy over the past three years – including the coronavirus disease 2019 (COVID-19) pandemic and the war in Ukraine. A steep rise in inflation over the past two years has led to the sharpest tightening of global monetary policy in four decades."*
>
> *"Even as policy makers confront these short-term challenges, a longer-term setback of considerable importance has been brewing quietly: a persistent decline in long-term growth prospects. The slowdown was particularly pronounced in EMDEs [Emerging Market and Developing Economies]. As a result, the pace at which the per capita incomes of these economies are catching up to those of advanced economies (so-called income convergence) has fallen."*

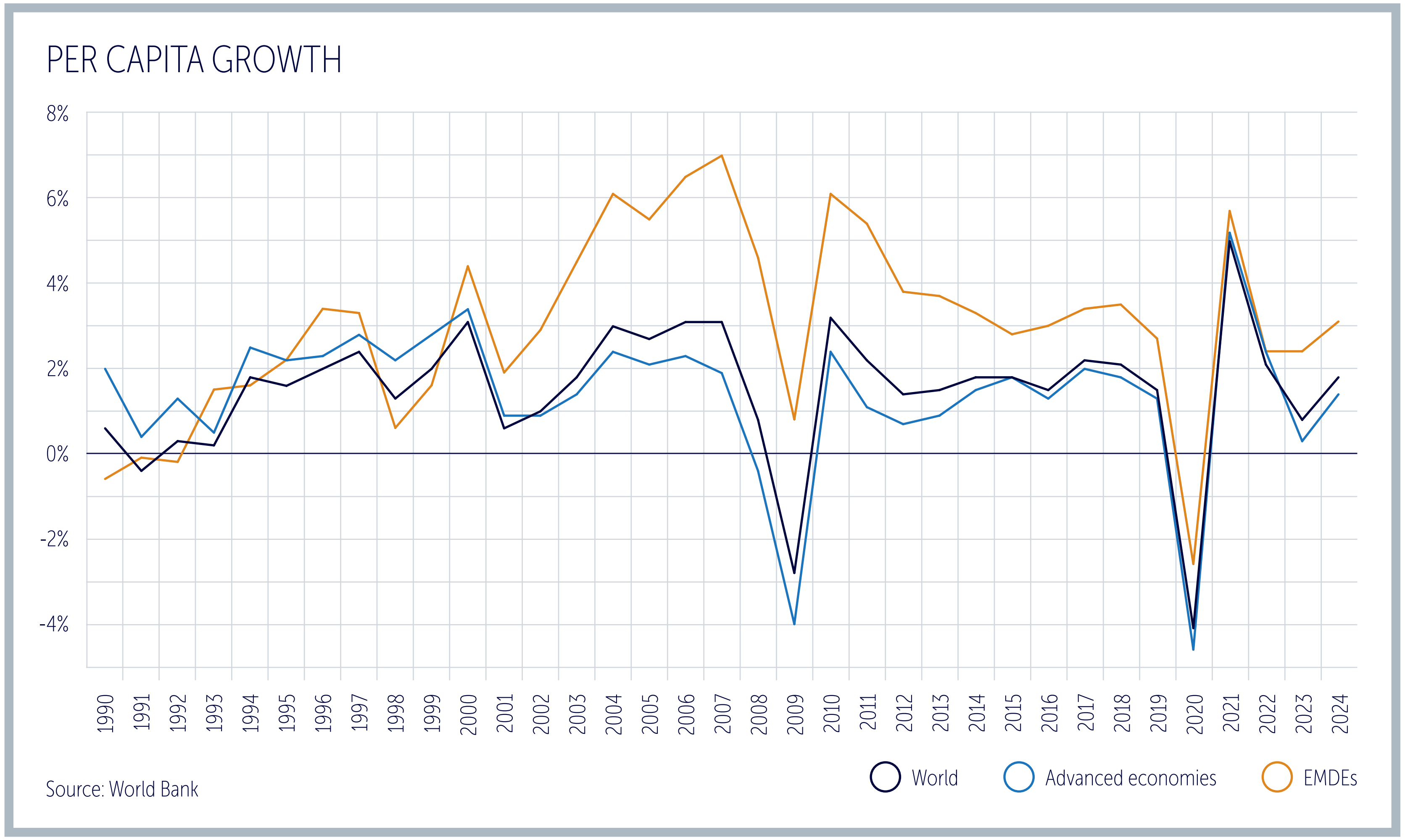
The report points out that this is not entirely due to the recent economic shocks. Something more fundamental has been happening.

> *"Across the world, a structural growth slowdown is under way: If current trends continue, the global rate of potential growth – the maximum rate at which an economy can grow without igniting inflation – is expected to fall to a three-decade low over the remainder of the 2020s. Nearly all the forces that have powered growth and prosperity since the early 1990s have weakened, not solely because of a series of shocks to the global economy over the past three years."*

It cites an ageing workforce together with low growth in investment, productivity and global trade as major contributors to this slowdown. It warns of *"a lost decade in the making – not just for some countries but for the whole world"* and that another global crisis in the second half of this decade could 'permanently damage' the growth prospects of an already fragile world economy.

The IMF's World Economic Outlook in October 2024 was similarly pessimistic about the prospects for the rest of the decade, describing the outlook for growth as *"stable yet underwhelming"* and forecasting:

> *"Five years from now, global growth should reach 3.1 percent – a mediocre performance compared with the pre-pandemic average."*



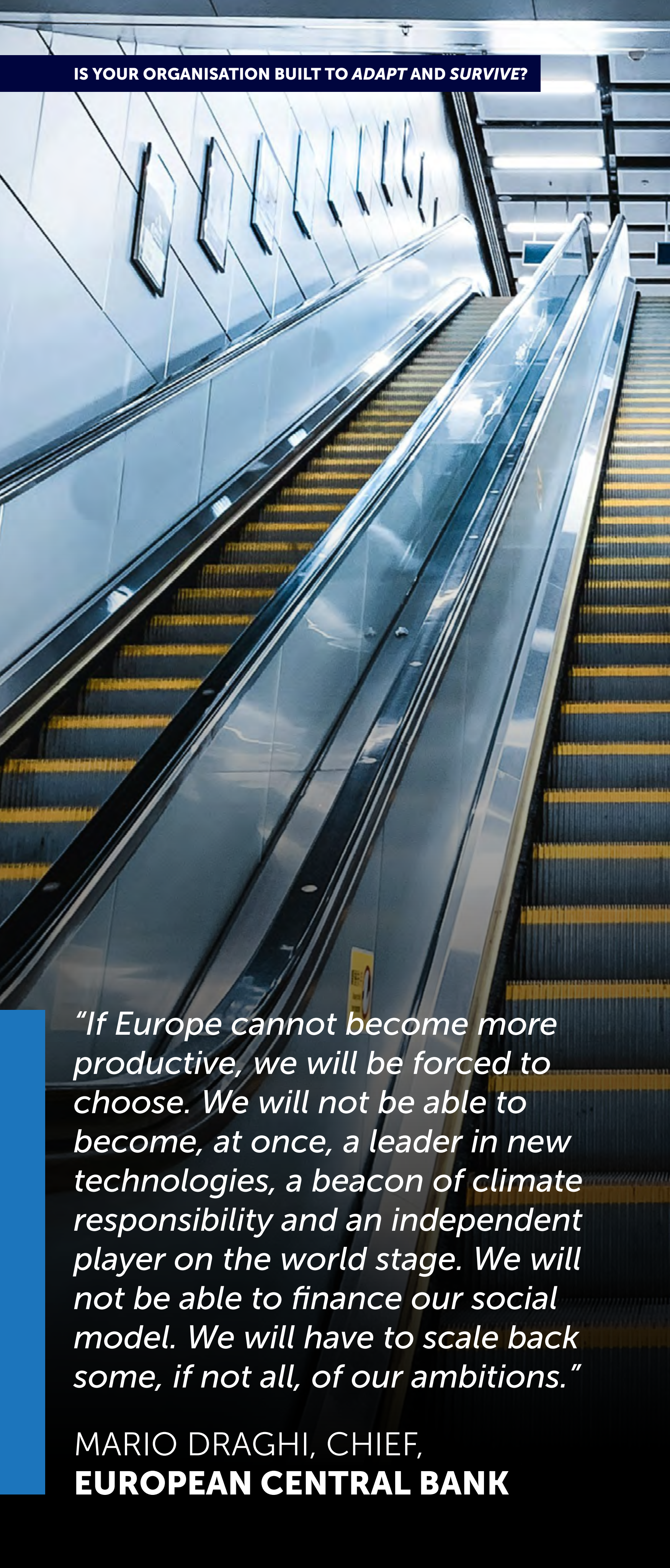
The OECD's December 2024 outlook was slightly more upbeat about the next two years but it, too, said that medium term growth prospects are weak. Its chief economist Alvaro Pereira cited human capital factors as one of the drags on growth:

> *"Labour shortages are already a challenge for firms in many countries, and population ageing will only exacerbate this. Policy action needs to ensure that skills evolve with demands on labour markets and that labour force participation, especially of older workers and women, rises."*

Most economists agree that falling productivity growth is the main reason for low GDP growth. That then raises the question of why productivity growth has slowed and on that there is very little consensus. A number of explanations have been put forward but none are entirely satisfactory. Some economists, such as Robert Gordon and Dietrich Vollrath, argue that mature economies have reached their limits of productivity growth and that rates of increase in GDP will inevitably be lower in the coming decades.

Although the growth forecasts might seem to support Gordon and Vollrath's view, such declinism has little support among politicians. The implications of permanently low growth are severe for states and societies built on the premise of postwar growth rates. Indebted governments facing increasing pressure on public finances from ageing populations, climate change and defence commitments are desperate for increased economic growth.

It is perhaps unsurprising, then, that the focus on productivity raises questions about what is going on in businesses. Private sector companies are the engines of economic growth. If productivity growth is falling it must have something to do with the aggregate performance of these organisations. Hence the rising interest in business dynamism in recent years.



"If Europe cannot become more productive, we will be forced to choose. We will not be able to become, at once, a leader in new technologies, a beacon of climate responsibility and an independent player on the world stage. We will not be able to finance our social model. We will have to scale back some, if not all, of our ambitions."

MARIO DRAGHI, CHIEF,
EUROPEAN CENTRAL BANK

2.3

DECLINING BUSINESS DYNAMISM

Business dynamism is the process by which capitalism becomes more efficient. It was described as 'creative destruction' by Austrian economist Joseph Schumpeter – the process of reallocation of resources from the stagnating companies and sectors to the more productive and innovative ones.

Indicators of business dynamism include the entry and exit of firms and the rate of job-to-job moves. As the Institute of Productivity explains:

> *"When economic growth slows and, in particular, productivity growth is weak, a number of things seem to happen concurrently:*
>
> 1. *Fewer start-ups and new entrants enter the market – this means less disruption shaking things up.*
> 2. *With fewer new firms, older firms make up a greater share of the market, and these often exhibit slower productivity growth than new entrants.*
> 3. *Reduced churn in jobs – firms do not hire quickly, but they also do not fire quickly, meaning people stay where they are.*
> 4. *Positive productivity events, like new technologies, do not lead to the creation of as many new jobs. Even when firms become more productive, they create fewer new jobs.*
>
> *This means that business dynamism declines when productivity is weak and this drop poses several challenges. It hampers technology diffusion, limits wage improvements, stifles competition, and fosters market domination by a few firms."*

Paradoxically, business dynamism appears to have gone into decline at around the time the Berlin Wall fell. The 'triumph of capitalism' saw capitalism start to slow down. The quarter century between 1990 and 2015 was largely one of entrenchment and consolidation by established firms, rather than one of dynamic change.

The process of 'creative destruction' that sees less productive operations fail and be replaced by more productive ones has stalled. The rate of job creation and destruction caused by the entry and exit of businesses has fallen. It is a similar story for rates of task, job and sector re-allocation in employment.

In the UK, for example, the rate of the re-allocation of labour between sectors fell in the last decade of the 20th Century. Reports from the Bank of England and the Resolution Foundation show a slowdown in the UK economy's labour reallocation after the early 1990s. The Office for National Statistics found that the rate of job creation and destruction caused by the market entry and exit of firms declined in the UK between 1999 and 2019. A study by NESTA reached the astonishing conclusion that the 'allocative efficiency' of the UK economy was falling, as productive firms were disappearing and being replaced by less productive ones. The UK appeared to be experiencing the reverse of Shumpterian creative destruction.

The UK is far from unusual. A Productivity Institute paper in 2022 noted that the 'productivity puzzle' was a feature of most advanced economies. An OECD report in November 2020, entitled Declining Business Dynamism, focused on 18 OECD countries, not including the UK and US. It concluded, *"steady declines are evident over the last two decades even after accounting for the role of the business cycle."* In March 2021, an IMF report noted a decline in business dynamism across 28 countries over the last two decades:

> *"The analysis, which covers 28 economies since 2000, shows declines in the rate of entry of new firms, implying that incumbent firms face an increasingly small number of new competitors, the dispersion of growth rates across firms, suggesting that there are fewer firms with very fast growth, and less market experimentation more broadly."*

A recent IMF report on growth prospects for Europe gave a grim assessment of European productivity and business dynamism. It noted that Europe's firms lagged behind their comparator companies in the US. This applied as much to Europe's start ups and tech firms as to its large listed companies. It pointed out that young high-growth firms had a smaller footprint in the economy and that fewer such firms made the leap to big company status. The report also cited low innovative capacity and a falling rate of adoption of new technology.

The European Commission released a report on the bloc's competitiveness in September 2024, led by former European Central Bank Chief Mario Draghi. Calling for greater co-operation, more investment and less regulation, its conclusion was stark.

> *"If Europe cannot become more productive, we will be forced to choose. We will not be able to become, at once, a leader in new technologies, a beacon of climate responsibility and an independent player on the world stage. We will not be able to finance our social model. We will have to scale back some, if not all, of our ambitions."*
>
> *"This is an existential challenge."*

Since that report was written, the defence challenge has become much more urgent. A withdrawal of US defence support, possibly imminently, will require a large and rapid increase in European defence spending for which few governments are prepared. As the Draghi report notes, the challenge is huge:

> *"To digitalise and decarbonise the economy and increase our defence capacity, the investment share in Europe will have to rise by around 5 percentage points of GDP to levels last seen in the 1960s and 1970s. This is unprecedented: for comparison, the additional investments provided by the Marshall Plan between 1948-51 amounted to around 1-2% of GDP annually."*

A paper by the Bank of International Settlements in October 2024 echoed the warnings about business dynamism describing stagnation in productivity as a *"significant risk for the global economy"*. It noted that the US seems to be the only major economy bucking the trend:

> *"The United States stands as a notable exception. There, productivity growth has been robust. This performance is in line with strong business dynamism and investment starting around the Covid-19 crisis, partly spurred by expansionary fiscal policy. In particular, incentives for investment in high-tech manufacturing and clean energy have catalysed private investment."*
>
> *"By contrast, in most other countries, a lack of business dynamism and weak investment are pervasive. For instance, in Europe, the investment share of GDP has been significantly lower than that in the United States over the past decade."*

Even so, this is a recent development. In February 2020, immediately before the Covid lockdown, the Federal Reserve sounded the alarm about the lack of American business dynamism. observed similar trends in the US. A decrease in job reallocation, lower entry rates of new firms and those firms having a lower share of the total economy. At the same time, market concentration increased allowing increases in average markups.

The US seems to be the only major economy where the 'Roaring Twenties' post-pandemic recovery actually happened. As the BIS paper indicates, this is, in part, due to President Biden's investment stimulus. A piece in the FT in December 2024 cited high R&D investment from tech firms as a source of high US productivity growth. However, Giles Wilkes of Flint Global looked into the gap between US and UK economic performance and noted that, while tech sector investment and the US start up culture might explain some of it, a resurgence of business dynamism also played a part.

> *"Something seemed to click during the covid pandemic: the US approach was to allow more job separations and business reallocations. A loss of dynamism and beneficial reallocation in the UK is responsible for a fair chunk of our problems. Has the US avoided this problem? It saw record startups after Covid and its interventions did not focus as hard on keeping workers in the same job."*
>
> *"It may be thousands of small reallocations, rather than two or three humungous Trillion Dollar success stories, that really explains the difference."*

It remains to be seen how far the US can continue to buck the stagnation trend in the face of the Trump administration's declared intention to increase tariffs and cut government spending.

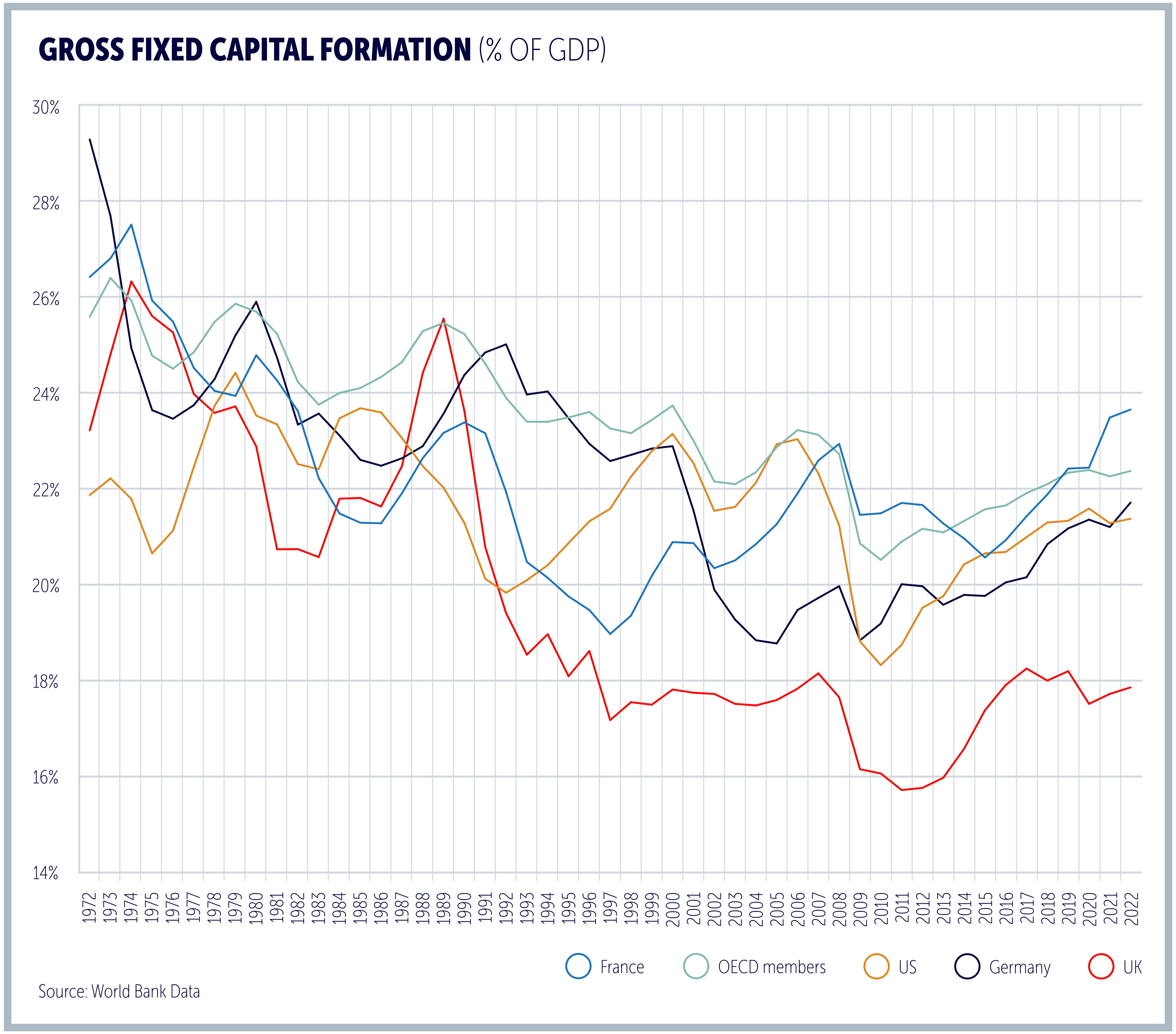
It is likely that any reversal of the decline in business dynamism will require significant increases in investment, reversing a trend across the developed economies for falling capital spending since the 1980s. As Martin Sandbu put it in the FT, western countries squandered the post-Cold War peace dividend:

> *"For decades, most advanced economies did not build their future but languished in an investment drought, the scandal of which is greater for being unacknowledged."*
>
> *"European countries have come to rue how they used the 'peace dividend' of 1989 to cut defence spending. The same moment pushed the west as a whole to forget the broader idea of short-term sacrifice for a more prosperous future. Western voters and governments have both unlearned the virtue of delayed gratification. They have to relearn it, and fast."*

"For decades, most advanced economies did not build their future but languished in an investment drought, the scandal of which is greater for being unacknowledged."

MARTIN SANDBU, ECONOMICS EDITORIAL WRITER, **FT**

parc



In the PARC and CRF co-published [2023 HRD Briefing Paper](), economist Duncan Weldon noted the decline in private sector investment:

> *"Firms are now, in aggregate, less likely to borrow than in the 1980s or 1990s and more likely to retain profits than reinvest them. Whilst balance sheets may be stronger, as a result it has led to weaker investment rates and slower growth."*

A McKinsey Global Institute report in March 2024 cited falling investment as a significant factor in the persistence of low productivity growth:

> *"If there is a common thread in this report, it is the importance of investment. Fully half of the drop-off in productivity growth in advanced economies is a slowdown in capital deepening (that is, the growth of capital per worker)."*

While this is clearly a trend across the advanced economies, as the chart above shows, investment levels have been particularly low in the UK. A June 2024 study by LSE's Centre for Economic Performance cited low investment as being the key reason for the UK's poor relative productivity:

> *"UK productivity is lower than in France, Germany and United States – and almost all of this gap is due to a lack of investment in capital and skills."*

That said, while it's easy to say 'just increase investment,' doing so will present a significant challenge for both public and private sectors faced with rising costs and a more difficult operating environment. Against a background of economic stagnation, geopolitical turmoil and high public debt, even doing the 'essentials', such as increasing defence spending while investing for Net Zero and improved health provision, will be a stretch.

But, even without the impact of the upheavals of the 2020s, there was always going to be an imperative to improve productivity simply because the global workforce is starting to shrink. If there are fewer people of working age, finding ways of making them more productive is imperative if long-term stagnation is to be avoided.

“Demography is already politics. Soon it will be a business issue too. One ‘known known’ is today’s dramatic demographic shifts. The prospect of global population decline from the middle of this century now looks irreversible.”

BEN PAGE, CEO, **IPSOS**

3.0 CHANGING SHAPE OF THE WORKFORCE

3.1 AGEING POPULATIONS AND THE LOOMING LABOUR SHORTAGE

Amidst the rapidly shifting economic, political and technological landscape, with hot takes and forecasts changing by the day, there is one factor about which we can be reasonably certain. In the words attributed to Auguste Comte, *“Demography is destiny”*.

Demographic forecasts tend to be more reliable than economic ones, particularly over the short to medium term, so we know that working age populations are shrinking in most parts of the world. This is true almost everywhere when measured as a proportion of a country’s total population. In some countries, the working age population is shrinking in absolute terms.

As Ben Page, CEO of Ipsos put it:

> *“Demography is already politics. Soon it will be a business issue too. One ‘known known’ is today’s dramatic demographic shifts. The prospect of global population decline from the middle of this century now looks irreversible.”*

The population aged 15-64 is already shrinking in France, Germany and Italy and is projected to start doing so in the UK, US and Canada early in the next decade. Some of the emerging economies are ageing rapidly too. Their falling birth rates and rising life expectancy are happening at a much faster rate than in the advanced economies. As a result, countries we think of as having young populations, such as Brazil, Vietnam, South Korea and Iran, are forecast to have higher median ages than the UK by 2050. The emerging economies’ rate of ageing is such that they will catch up rapidly with the advanced economies during this decade and the next. The size of the working age population of China is already in decline and is forecast to shrink by more than 50 million over the next decade.

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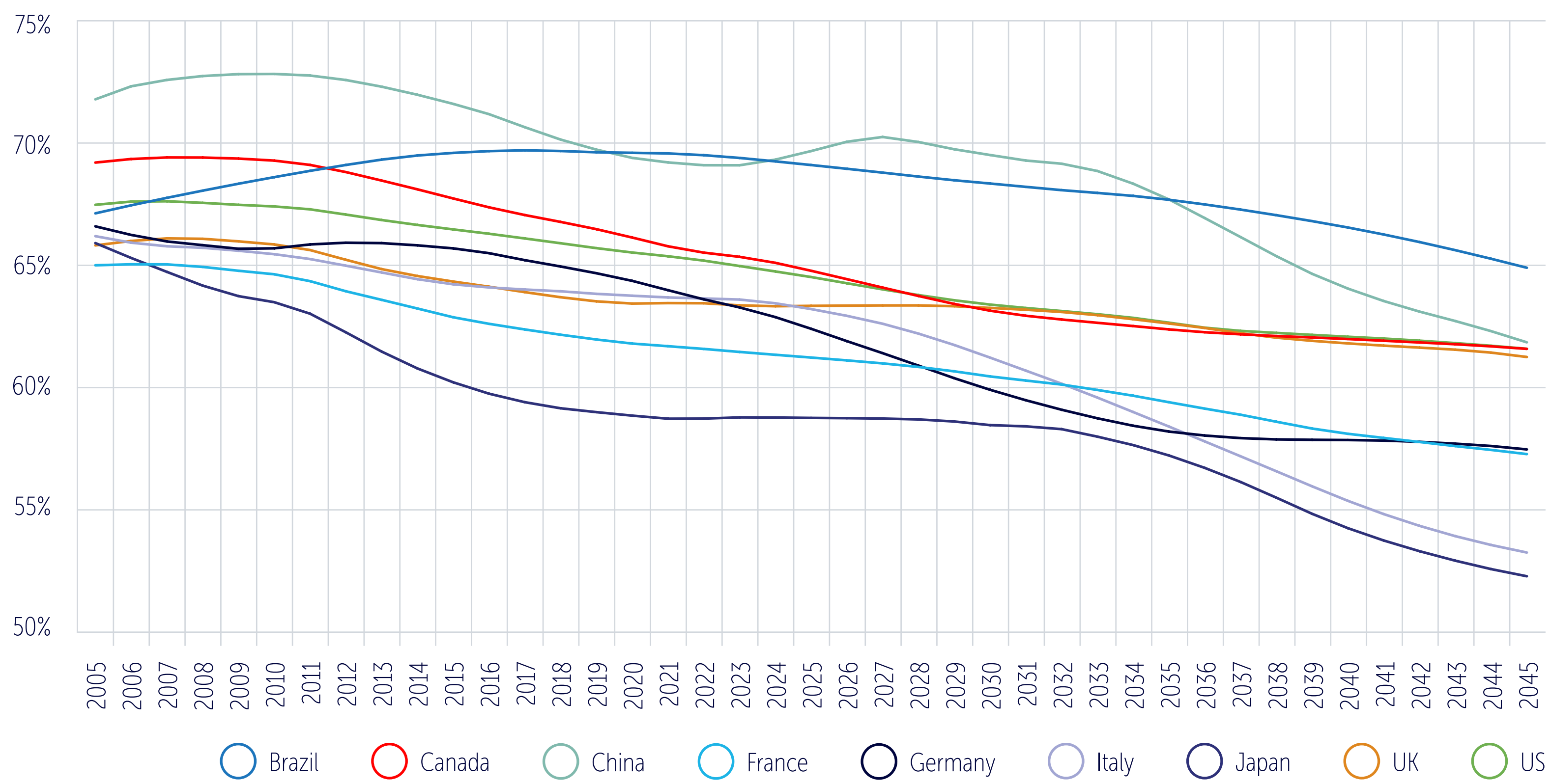
WORKING AGE POPULATION (15-64) AS PERCENTAGE OF TOTAL



Source: United Nations Population Prospects, 2024

All other things being equal, ageing populations will reduce economic growth. The only way economies grow is by having more people in the workforce or by producing more per person. Historically, economies have tended to grow at their fastest when the proportion of their population of working age was at its highest. Most economies are now past this 'demographic sweet spot'. The fewer working age people there are, the greater the productivity increase needed to compensate. Countries with falling working age populations will need to increase productivity significantly just to stand still. However, as we saw in Section 2, productivity increases of the sort we saw in the last century are proving elusive. Even with generous assumptions about the workforce participation of older workers, most economies will face an uphill struggle to balance their public services, public debt and taxation in the face of rising demand and sluggish growth.

A report by McKinsey Global institute in July 2024 noted that labour markets have been tightening since the financial crisis and that much of the economic growth in the advanced economies since 2008 has been due to increasing the size of labour forces rather than increasing productivity. This trend continued after the pandemic to the point where there is now very little labour surplus in the advanced economies.

The report found that, across economies, vacancy rates are higher in all sectors than they were in 2010. As might be expected, the labour shortage is most acute in technology related jobs but there is also a growing shortage of skills in physical and manual jobs. This is likely to become more critical as countries retrofit residential and commercial buildings to meet their Net Zero targets. As Flint Global's Giles Wilkes remarked, much of the work involved in the transition to Net Zero *"is bluntly physical in its nature"*. The UK construction industry, with a workforce already skewed towards the older end of the working age population, estimates that it will need a 13% increase in its workforce by the end of this decade. With many countries on a similar path and timescale, it is probable that they will all be looking for the same skills at the same time.

There are, then, likely to be some winners from the demographic change. Ageing populations significantly increase the risk of labour shortages. Older workers tend to be reluctant to move location and to acquire new skills. Those younger people with skills that are in high demand will find employers competing for their labour. Charles Goodhart argues that a falling labour supply will have the reverse effect of the rising labour supply seen during the 1990s:

> *"The coming reversal of these demographic trends will mean that future inequality is also likely to reverse. Rising wages will mean a larger share of national output for labour and falling inequality within economies."*

> *"Labour scarcity will put [workers] in a stronger bargaining position. They will use that position to bargain for higher wages."*

There are already signs of this happening. There was much talk of a 'Great Resignation' and a 'Great Retirement' after the pandemic as employers experienced labour shortages. Commenting on it at the time, Professor Rebecca Riley of Birmingham University pointed out that these labour market pressures would have happened anyway sooner or later. A number of people leave the workforce early anyway, but now their numbers are increasing because the of the high number of people in the age cohorts approaching retirement age.

As she pointed out, while those in the high birthrate cohorts are now moving out of the labour market, those in the low birthrate cohorts are now moving into senior management, creating a potential double-whammy of skills shortages:

"The labour pool will continue to reduce significantly. Businesses will continue to find it difficult to fill posts. As the 1970s trough is now moving into senior and middle management this also reduces the pool of experienced people who will lead responses to this labour constraint."

For the next 10 years, it is likely that we will see a natural decline in the labour pool as the reduced birth rate cohorts move into the workforce. However, this will probably lead to an overall stabilisation in the labour pool but at a much lower level than seen in previous years. This points to challenges for the policy as the labour constraints continue for many decades."

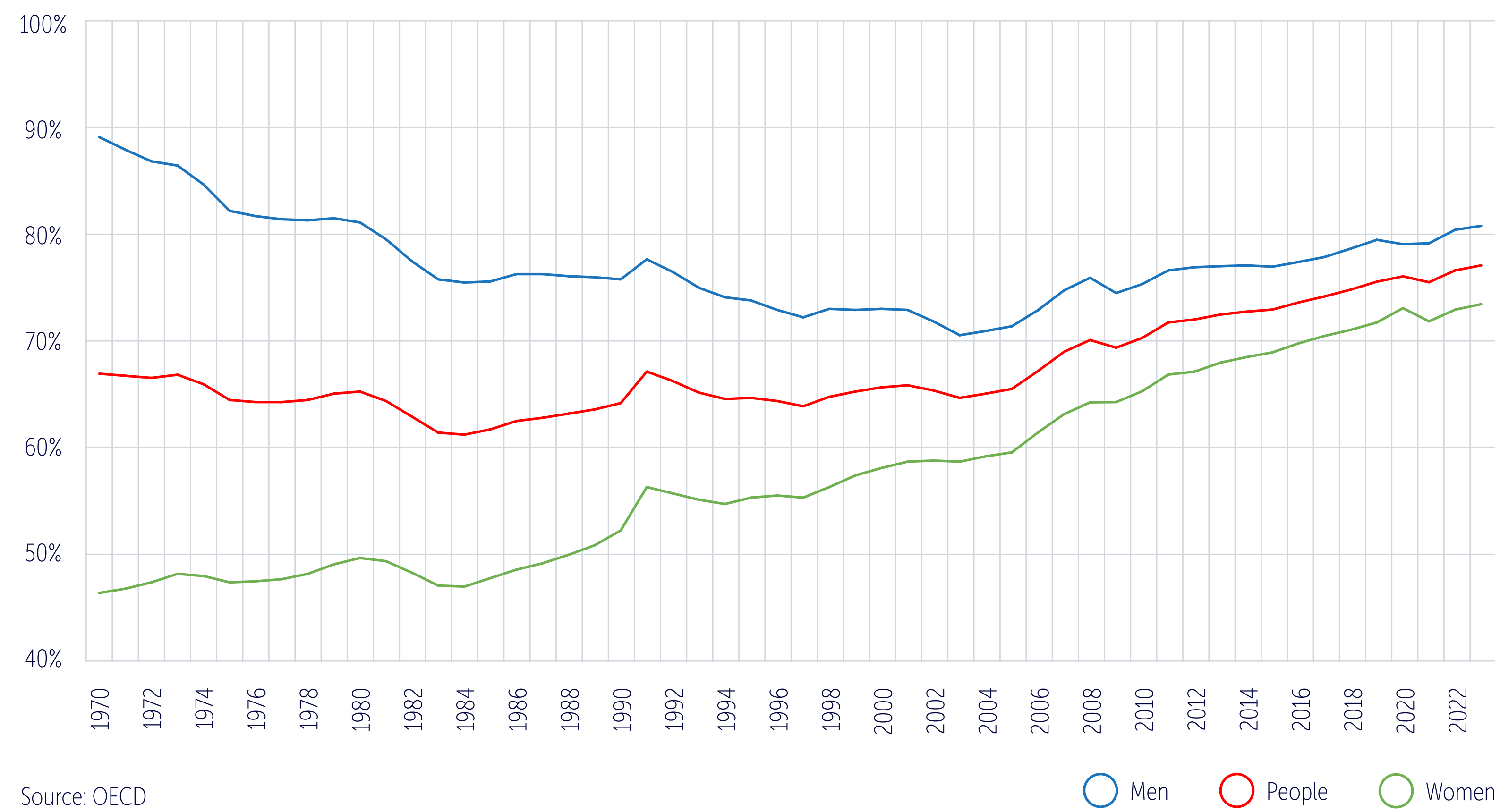
Although the population has been aging and the labour market tightening for well over a decade, some employers, it seems, still haven't got the message. A number of surveys, including a multi-country one by the OECD in 2023, found a majority of managers reluctant to recruit workers aged over 55. Like Ernest Hemingway's observations about bankruptcy, the labour market crunch is likely to hit gradually then suddenly.

Excluding groups of workers from the workforce, whether deliberately or simply by failing to challenge assumptions, seems irrational when faced with a looming labour shortage. Japan is ahead of the curve, having experienced a declining working-age population some years before most other economies. The Japanese tackled this problem by attracting groups of under-represented people into the workforce, especially women. The country managed to maintain the numbers in employment even as the working-age populations shrank.

In almost all advanced economies, the record employment levels have been mainly due to rapid increases in female workforce participation. Most show this trident-shaped pattern. This chart shows employment in Germany but the shape is similar for most countries, with women's employment pushing up the total.

This seems an inopportune time for governments and organisations to row back on policies designed to bring under-represented groups into the workforce. The US military might be a case in point. The Trump administration is reported to be purging senior military officers who support DEI policies, yet the armed forces are struggling to recruit men. The US Army is only meeting its recruitment targets due to the increased enlistment of women. The army is learning what many employers will discover over the second half of this decade. As workforces shrink, they will need to redouble their efforts to recruit previously under-represented groups. The brutal arithmetic

EMPLOYMENT RATE – GERMANY PERCENTAGE OF POPULATION AGED 15-64



Source: OECD

of labour shortages may mean they have to change their assumptions about what their ideal employee looks like.

Increased employee bargaining power may be having an effect in other areas too. Many employers are becoming acutely aware of their workforces becoming more demanding. PARC's January 2025 member survey noted rising employee expectations in several areas, and a perceived shifting in the balance of power from employer to employee.

This is being framed in the media and elsewhere as an intergenerational conflict – but is it, or are we talking about more widely developing ideas and expectations of work – what some have dubbed a 'new social contract'?

"Despite the continued interest, research has failed to find convincing evidence for the existence of distinct generations."

PROF. DAVID CONSTANZA,
VIRGINIA UNIVERSITY

3.2

INTERGENERATIONAL TENSIONS

During our initial conversations when scoping this report, we noted that getting to grips with the perceptions and motivations of the 'Gen Z' demographic – now aged between 14 and 26 – is seen as an 'existential' issue by some business leaders.

Intergenerational conflict is a subject that has risen up the news agenda since the global financial crisis. Contrasting the prosperity, wealth and, especially, home ownership prospects of today's thirty-somethings with their counterparts in their parents' generation brings their economic predicaments into sharp relief. Concern about the living standards of young adults compared to those of their parents' generation is evident across most high-income countries, though some of the specific challenges differ. Age is increasingly becoming a more reliable predictor of voting behaviour than social class both in terms of participation and party preference.

An entire industry has grown up focusing on generational attitudes to life and work. Articles proliferate about the lack of work ethic of Millennials and Gen Z or the control-freak tendencies of Boomer and Gen X managers. There are many consultants who will offer to help senior managers to understand the motivations and characteristics of 'the younger generations'. Such is the ubiquity of these pieces, it can be difficult to separate the noise from the evidence. Once you get past that, the story starts to look a lot murkier. Most importantly, there is no evidence that the generations as defined by the generational labels actually exist. Baby Boomer is the only generational label recognised by the US Census Bureau. All the rest have been made up and fitted in around it. Academic research has largely debunked the idea and value of generational labels. A paper meta-analysis in 2023 by David Constanza, Professor of Commerce at Virginia University, from November 2023 concluded:

> *Despite the continued interest, research has failed to find convincing evidence for the existence of distinct generations, commonly conceptualized as broad groupings of birth cohorts (e.g., 1980-2000) that have been influenced by a set of significant events (e.g., economic depressions) and labeled with names and qualities that supposedly reflect their defining characteristics (e.g., Millennials).*

Pew Research announced in 2023 that it was revising its approach to reporting on different generations.

> *"We'll only do generational analysis when we have historical data that allows us to compare generations at similar stages of life. When comparing generations, it's crucial to control for age. In other words, researchers need to look at each generation or age cohort at a similar point in the life cycle. ('Age cohort' is a fancy way of referring to a group of people who were born around the same time.)"*

> *"When doing this kind of research, the question isn't whether young adults today are different from middle-aged or older adults today. The question is whether young adults today are different from young adults at some specific point in the past."*

> *"When we do have the data to study groups of similarly aged people over time, we won't always default to using the standard generational definitions and labels. While generational labels are simple and catchy, there are other ways to analyze age cohorts. For example, some observers have suggested grouping people by the decade in which they were born."*

The 10-year cohort approach is used by organisations such as the UK's Institute for Fiscal Studies (known for its robust data analysis) when comparing the economic outcomes between generations.

Ipsos has done extensive research on generational differences. Their Generations report in 2015 found that some assumptions about generational attitudes were outdated. For example, there was significant evidence that an increase in socially liberal attitudes wasn't simply due to generational change – people in older age groups had become more socially liberal over time, particularly in respect of attitudes to gender roles and sexuality. Their 2024 report found that, globally, people have a limited understanding of generational terms. In some countries, such as Germany, Norway and South Africa, *"pop sociology in the media coined its own local contextual labels independently from the US."*

The report concludes:

> *"Varying cultural and historical contexts across countries result in different 'collective' experiences, raising questions about the relevance of concepts like the 'baby boom' period."*

> *"Generalisations only get us so far. Businesses and policymakers must embrace the diversity that exists among people within a generation."*

3.3

EMPLOYEE EXPECTATIONS – A NEW 'SOCIAL CONTRACT'

Professor Thomas Roulet argues that many of the tensions being framed as intergenerational conflict are more accurately explained as a shift in the social contract that is occurring among all generations.

> *"One of the biggest trends that is happening in the workplace is a change in the social contract. We have switched to a different dynamic between employers and employees. Employees are demanding more from their employers than they used to."*
>
> *"The main demand that you see from employees is for flexible work and you see that across the generations."*
>
> *"This shift has survived a change in the employment conditions. Higher unemployment doesn't seem to have reduced these demands."*

As we noted in PARC's Reward Manifesto report, public expectations of companies have been rising for the past decade. During the 2010s, the idea took root that companies have responsibilities to a wide group of stakeholders and to society as a whole. People expect leaders to be visible and perceived unethical behaviour is quickly called out on social media. It is now almost inevitable that any criticism of a high-profile company will be followed by allegations and revelations about the remuneration of its bosses. Senior executive pay has become a lightning rod for negative feelings about a company's behaviour. Inevitably, as public expectations rise, so do those of employees. As senior executive pay again shows signs of increasing at a higher rate than that of the wider workforce, we can expect this topic to remain on the agenda alongside the requirement for evidence-based justification, and well-reasoned arguments for the proposed increases ideally founded on increasing productivity, enhanced competitiveness and positive impact on financial performance.

Potential recruits are increasingly likely to research a company before joining to understand both its management practices and its policies on key issues. Customers, employees and potential recruits are quick to call out their companies and to do so publicly on social media.

Some of this behaviour has undoubtedly come as a shock to senior executives in companies. The very idea of employees at an investment bank like JP Morgan organising a petition to keep hybrid working arrangements would have seemed outlandish even five years ago.

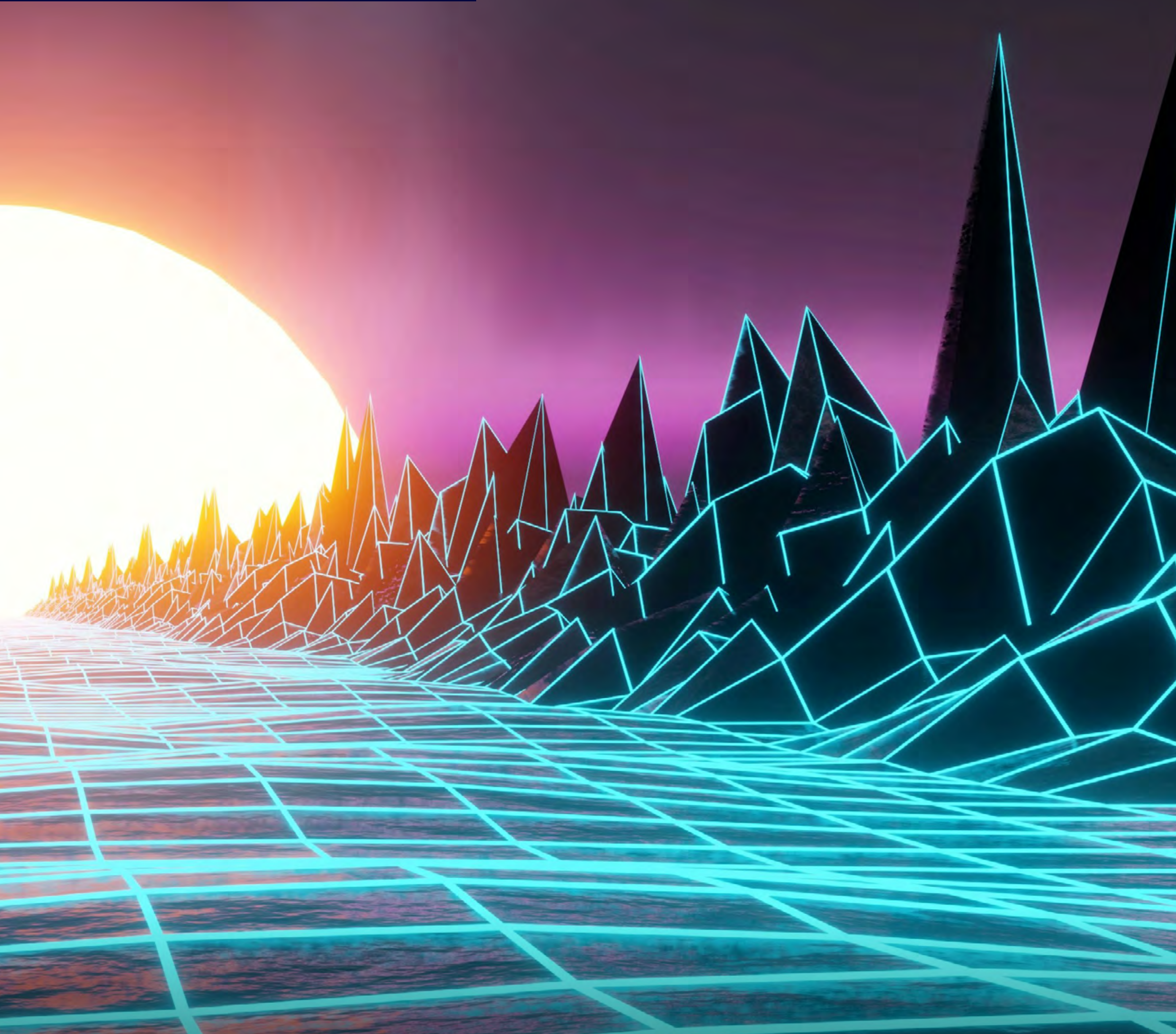
The battle between those who insist employees should return to the office and those who wish to retain an element of working from home has become something of a flashpoint over the past year. CEOs may rail against such developments but the practice of allowing employees to work from home for part of the week appears to have become established. A study by the UK's Office for National Statistics (ONS) in November 2024 found that 28% of working adults were hybrid working. The Economist concluded that, while hybrid working is becoming entrenched, there is a gap across the OECD economies between the amount of home working employees say they want and the amount employers are prepared to allow.

Arguments rage about whether home-working is more or less productive than working in the office. Advocates of other positions will cite evidence in support but there is little conclusive proof either way. There is still less evidence that moving from three to five days in the office improves productivity, once other factors are taken into account, such as a decrease in employee satisfaction and an increase in turnover. In any case, that might be the wrong question. The desire for job flexibility has now become a feature of office-based occupations to the point where people are prepared to take pay cuts rather than return to the office full-time. While 'back to the office' orders gain the most publicity, office occupancy figures suggest that hybrid working is here to stay and that many companies have been quietly adjusting to it.

Many workers are unable to work remotely and the debate is very much focused on office-based roles. The ONS study found that those with hybrid working arrangements are disproportionately graduates. However, the stiff resistance to demands for a full-time return to the office does suggest a shift in the power dynamics in the workplace. Employees, many of them not unionised, have forced a change due to a widespread shift in social attitudes. As workers, and especially skilled workers, become scarcer, it is likely that the resulting power shift will manifest itself in other ways.

"One of the biggest trends that is happening in the workplace is a change in the social contract. We have switched to a different dynamic between employers and employees. Employees are demanding more from their employers than they used to."

PROF. THOMAS ROULET,
KING'S COLLEGE, CAMBRIDGE UNIVERSITY



"What happened in the years immediately after the 2013 panic, while policy makers held never ending seminars on the robot risks? Employment levels rose year after year, repeatedly hitting record highs."

TORSTEN BELL, PENSIONS MINISTER, ECONOMIST, AUTHOR, **MEMBER OF PARLIAMENT**

4.0

TECHNOLOGY

4.1

FOURTH INDUSTRIAL REVOLUTION?

The impact of technology is one of the topics most often discussed under the 'Future of Work' heading. This isn't new; it has been the case for the last twenty years or so, with a technology driven 'Fourth Industrial Revolution' always being just a few years away. However, the language has changed.

A decade ago we were talking about robots, now Artificial Intelligence (AI) is the most common shorthand. Attempting to define AI is becoming something of a futile exercise as many different technologies are being discussed under the broad AI heading. A recent example is the UK government's AI Playbook, which gave eight examples of quite different technologies that would be used to transform government efficiency. Whether or not these qualify as a purist's definition of AI is probably irrelevant given that many of the significant advances are likely to come from combining AI with other technologies. Certainly there is some confusion as to what is and isn't AI, with the label being used quite freely.

Many hopes are being pinned on a technological leap to boost productivity and end the long period of synchronised stagnation. Emmanual Macron hailed Paris as 'the city of AI' while Keir Starmer promised an AI-driven 'decade of national renewal'. Historically, technology has been a major enabler of productivity growth. Machines enable humans to produce more with less effort. Periods of high economic growth, such as the mid 19th Century and the boom in the advanced economies after WW2, were brought about by technological innovations. It is likely that any significant increase in productivity will be brought about, at least in part, by technology.

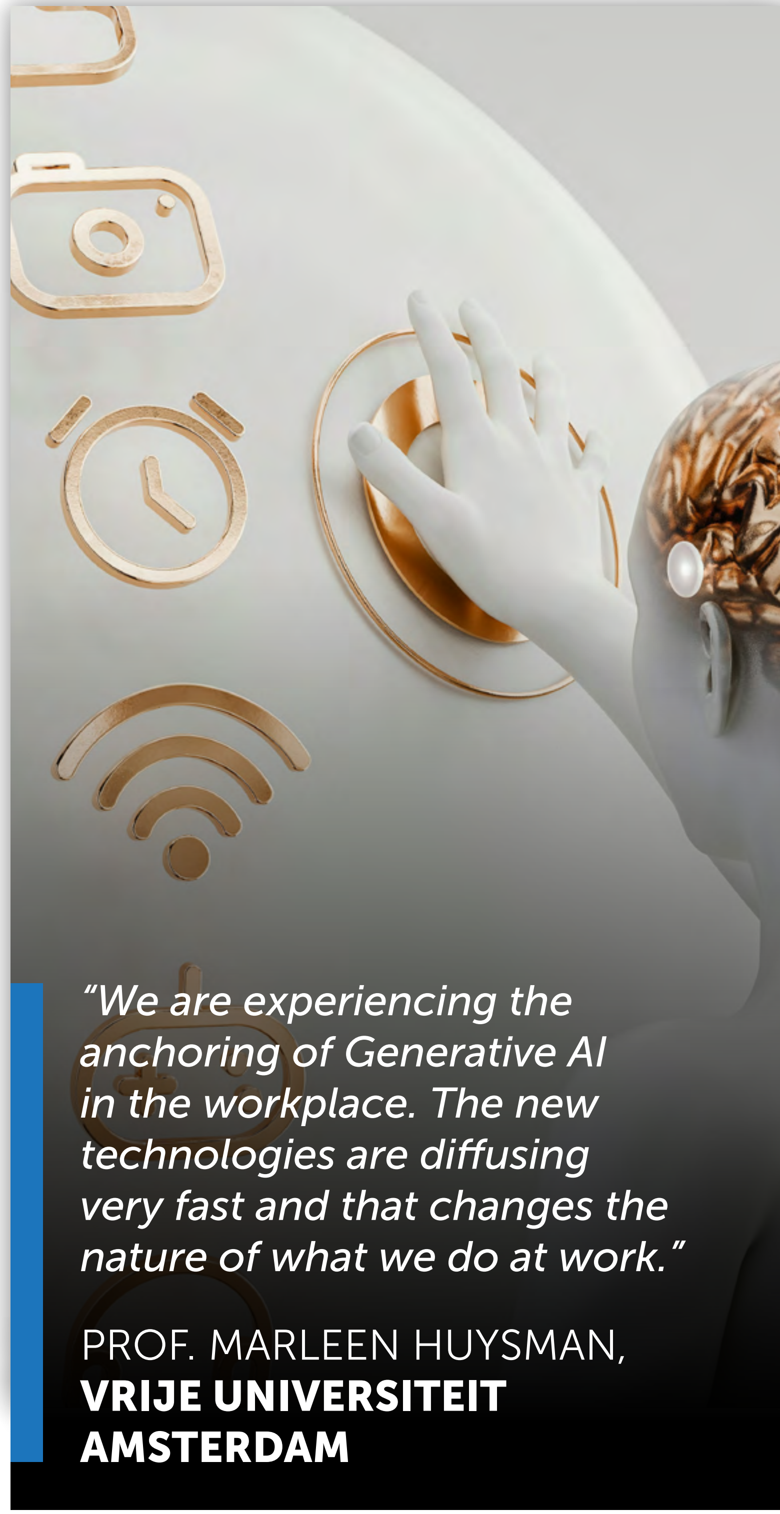
Some economists and tech evangelists have been predicting a new industrial revolution for well over a decade. We have certainly seen a revolution of sorts. Many (if not most) of us walk around with supercomputers in our pockets. The things we call phones are rarely used for taking calls. Instead, they plug us into a global network that enables us to shop, do business, interact socially and watch entertainment from almost anywhere. Few would have imagined such a thing twenty years ago. Yet the impact on productivity has been almost negligible. As we saw in Section 2, the advent of the smartphone, mobile technology and social media have coincided with the longest period of stagnation in living memory.

It's almost twelve years since Carl Frey and Michael Osborne famously predicted that 47 percent of US employment would be at risk from automation. As Torsten Bell quipped in January 2024, given what they said you'd expect to be seeing the start of the robot apocalypse by now.

> *"What happened in the years immediately after the 2013 panic, while policy makers held never ending seminars on the robot risks? Employment levels rose year after year, repeatedly hitting record highs."*

In most of the advanced economies, employment was at record or near-record highs before the pandemic. As the Economist noted in 2022, contrary to many predictions, there was little evidence that the Covid pandemic initiated a surge in automation. The paper pointed out that wage growth for low-skilled workers, whose occupations are generally thought to be more vulnerable to replacement by technology, was unusually fast.

Research by Goldman Sachs in 2024 seems to bear this out. Despite large scale investment, the adoption of AI has been slow. The study found very little evidence of labour displacement in the US, with unemployment rates in those jobs most exposed to AI broadly tracking that of the rest of the labour market.



> *"We are experiencing the anchoring of Generative AI in the workplace. The new technologies are diffusing very fast and that changes the nature of what we do at work."*
>
> PROF. MARLEEN HUYSMAN, **VRIJE UNIVERSITEIT AMSTERDAM**

4.2

DISCRIMINATIVE AND GENERATIVE AI

Trying to understand the impact of technology is difficult when developments are moving at such a rapid pace. A helpful distinction is that between Discriminative AI and Generative AI. Discriminative AI is designed to classify, recognise patterns and predict outcomes based on existing data. It provides high accuracy and is useful for the rapid analysis of large data sets. This makes it reliable for analysing telephone and online conversations with customers, facial recognition, credit scoring, fraud detection, detecting antibiotic resistant microbes and identifying rare or aggressive cancers. Discriminative AI is rolled out by the organisation and usually deployed on the analysis of distinct data sets collected by the organisation.

Generative AI draws data from much wider sources. It can create content such as text, images and videos. It is therefore useful for creating first drafts of communications campaigns and press releases, creating images and producing videos. As an article on Data Science Dojo put it, Discriminative AI is like a detective while Generative AI is like a storyteller.

A key difference identified in this useful article by GeeksforGeeks is that Discriminative AI is *"typically robust in classifying input data accurately"* while Generative AI *"may produce unrealistic or low-quality samples"*. This gets to the heart of many of the arguments that are currently raging about the usefulness of AI. Generative AI has captured the imagination of commentators because it has given creative power to people who do not need to be technical experts. It can create a lot of content very quickly. However the content is quite often inaccurate. The term 'hallucination' is used to describe Generative AI's propensity to make things up. In our view, this anthropomorphism is unhelpful, giving the impression that the technology is somehow 'alive'. Generative AI is only as good as the data it accesses and is trained on. If it is drawing that data from the wider internet there is no way of checking the accuracy of that data. In short, Generative AI's lack of accuracy is because it is non-discriminative.

Because Generative AI is a relatively new development, there is little conclusive evidence of its impact on productivity. Some experimental and workplace based studies have found evidence of AI tools helping to disseminate the behaviours of the most productive workers but the usual context-specific caveats apply.

Another key difference between Discriminative and Generative AI is its implementation in organisations. Professor Marleen Huysman of VU Amsterdam has researched the implementation and adoption of AI. As she points out, organisations have been deploying Discriminative AI for some years. It is implemented in a similar way to most IT projects, with the specification, design and rollout being led by an organisation's management.

The implementation of Generative AI is very different. The release of ChatGPT and other publicly available AI programmes at the end of 2022 saw sudden shift in the level of technology available. It put the ability to deploy massive computing power into the hands of millions of people.

> *"We found that early adopters were driven to use ChatGPT either out of curiosity or anxiety. While some were intrigued by the media hype around GenAI, others mentioned anxiety that soon their organization may not need their human labor anymore. Trying out ChatGPT was sometimes seen as a way of getting ahead of this threat."*

> *"Whether out of curiosity, anxiety, or both, we found that participants start using ChatGPT through tinkering. Because use was inspired by an emotional response to the technology rather than a directive from management, participants tinkered regarding topics that popped up in their private lives."*

The adoption of this technology is therefore not happening using the usual method of corporate IT implementations. Because ChatGPT and similar Large Language Models are widely available, people have been using them at home for some time before they are formally implemented in the workplace. The adoption of these tools is, says Professor Huysman, similar to that of social media a decade ago. It is taking place outside the workplace then being brought into the workplace by people who are already familiar with its use. It's a bottom up rather than top down implementation, therefore managers often have almost no idea how employees are using it and very little control over what they do with it.

This is creating some unforeseen side effects.

- Employees are brainstorming ideas on ChatGPT rather than with their colleagues. It is hastening a shift towards isolated work brought about by the pandemic. There is a potential for expert knowledge to become siloed. And for the expert to allow themselves to become isolated and in turn less socialised, less challenged and, with time, less expert.
- Employee's jobs are being redesigned without any formal input from managers. For example, if ChatGPT is drafting work, an employee becomes an editor rather than a writer.
- Over time, employees become 'intertwined' with ChatGPT to the point where it is no longer clear what aspects of their work are AI generated. It therefore becomes difficult for managers to control the quality of knowledge that circulates within the organisation and is delivered to clients.
- It becomes more difficult to assess employee performance. How much of an employee's output is produced by ChatGPT? Do managers find themselves inadvertently measuring an employee's skill at using ChatGPT rather than what they thought they were measuring?
- Managers lose their grip on the quality and sources of knowledge that are being used in the organisation.

As Professor Huysman commented:

> *"We are experiencing the anchoring of Generative AI in the workplace. The new technologies are diffusing very fast and that changes the nature of what we do at work."*

So, while the research indicates slow management-led implementation of Generative AI, it is having an impact in the workplace regardless. Managers may be put off by the unreliability of Generative AI but their employees are using it anyway.

As the technology develops, some of these accuracy problems may be reduced. David D'Souza of the Digital Badging Commission remarked:

> *"People are working outside the system as solutions can't be found within it. That will shift over the next 18 months as vendor solutions start to incorporate Generative AI in workflows. If you put a useful version of it in front of me, then I won't have to go and find my own."*

Ideally, combining the capabilities (and reducing the disadvantages) of Discriminative and Generative AI would mitigate some of the output quality issues. Synthesising the talents of the detective and the storyteller to create, say, an 'Insights & Intelligence Officer'.

There is much discussion of Agentic AI – programmes that will collaborate to achieve set goals rather than simply generating content. However, at the time of writing, there still seem to be a lot more articles about how it might work than practical examples of it having done so. As a January 2025 article in the MIT Sloan Review noted:

> *"Agentic AI seems to be on an inevitable rise: Everybody in the tech vendor and analyst worlds is excited about the prospect of having AI programs collaborate to do real work instead of just generating content, even though nobody is entirely sure how it will all work."*

Similar hopes for a breakthrough are being placed on Quantum AI, the combination of AI with quantum computing. This promises a leap in processing power and a reduction in errors that could be transformational. Google brought out its Willow computer in late 2024, claiming that it is much faster than the most powerful supercomputers and can correct its own errors. But New Scientist concluded in December 2024 that it *"still isn't clear whether Willow can actually do anything useful"*. Microsoft and Amazon made similar claims about their AI 'tools' early in 2025 but, as the FT's West Coast Editor Richard Waters noted, senior figures in the industry are saying that practical uses for the technology are decades away:

> *"In quantum, much will depend on whether the race turns out to be a sprint or a marathon. Recent advances, like the progress in error correction Google reported last year, have brought optimistic estimates of a practical quantum computer by the end of the decade. Yet Nvidia CEO Jensen Huang shook the quantum world earlier this year with his estimate of 15-30 years, while Painter at Amazon predicts that working machines are still 10-20 years away."*

As with so much in the tech space, there is a lot being said about what might be possible but tangible applications are more difficult to find.

4.3

HYPE V SCEPTICISM

The entire debate over AI and its likely impact on the workplace has been characterised by industry hype and often an equally hyperbolic scepticism from opponents. In recent weeks we have seen Open AI CEO Sam Altman's claims to be 'confident we know how to build AGI' (Artificial General Intelligence) attacked by arch-sceptic Gary Marcus and in turn followed up by an announcement from Altman playing down the original claim.

Into this febrile debate came China's DeepSeek, which claimed to be able to do what Open AI does but with much lower costs and using a fraction of the computing power. That this was achieved despite US sanctions only added to the shock in Silicon Valley. Even so, as Gary Marcus noted, at the moment, Deep Seek only does what other large language models do, only more cheaply. It still has the same *"inherent issues with reliability and hallucinations"*.

The sceptics may have a point. Billions have been invested in building up the massive computing power necessary for LLMs to function. As Marcus notes, simply throwing more and more computing power at the problem hasn't achieved much.

> *"In short, half a trillion dollars have been invested in a misguided premise; a great deal more funding seems to be headed in the same direction for now."*

> *"Unfortunately, none of this looks to be sustainable. Most of the money has been invested on the premise that one of these companies would reach artificial general intelligence, which seems (at least in the near term) increasingly unlikely. Yet virtually all of them, from American companies like OpenAI, Grok, and Anthropic to Chinese companies like DeepSeek and ByteDance, are following essentially the same playbook, making mild improvements but not solving the core problems – unreliability, hallucinations, and occasionally absurd reasoning – that have plagued LLMs since the beginning. The reason we are having a price war is that everybody knows basically the same recipe, but nobody has been able to produce a true quantum leap forward."*

Tech industry PR consultant Ed Zitron was equally blunt:

> *"The Large Language Models run by companies like OpenAI, Anthropic, Google and Meta are unprofitable and unsustainable, and the transformer-based architecture they run on has peaked. They're running out of training data, and the actual capabilities of these models were peaking as far back as March 2024."*

As the FT's Innovation Editor John Thornhill remarked:

> *"Any company such as OpenAI, heading for a loss of $5bn last year on $3.7bn of revenue, needs a good story to tell to keep the funding flowing. And stories don't come much more compelling than saying your company is on the cusp of transforming the world and creating a 'glorious future' by developing artificial general intelligence."*

> *"The returns from AI will have to be spectacular to justify the colossal investments being made by the big tech companies and VC firms. How long will impatient investors hold their nerve?"*

Huge amounts of money have been invested in something that, at the moment, doesn't do very much and gets a lot of what it does do wrong. Whether, over time, this will develop into a technology that is as economically transformational as the steam engine or electricity remains to be seen. There is also the question of how such a transformation can be powered over the longer term, not least with an eye on Net Zero ambitions.

Even so, AI in its various forms is still likely to have a significant impact on work and on society. Discriminative AI is already helping companies to make significant improvements in data capture and analysis. Its implementation has been less 'noisy' than that of Generative AI and its progress more evolutionary than revolutionary. It may be that the row about whether or not AI is a game-changer is blinding us to a gradual and evolutionary implementation in the workplace. The newly formed Bennett Institute, set up by Cambridge University to help develop public policy on AI, comments that AI is particularly useful for taking meeting notes, writing agendas and tracking tasks – in other words, a lot of the time-consuming things that many of us don't like doing.

As political commentator Chris Hayes remarked:

> *"It seems like there are increasingly two distinct questions:*
>
> 1. *is the tech useful and advancing?*
> 2. *is it going to be a business worth the hundreds of billions being invested?*
>
> *It feels like there's a future in which the answer to 1 is yes and the answer to 2 is no."*

There is little doubt that AI, and especially Generative AI, is already having an impact on society and in the workplace. Professor Huysman's analogy with social media is well-observed. As we have seen with the smartphone and mobile data, it is possible for technology to have a revolutionary impact on society without having much impact on productivity. ChatGPT and other LLMs has given a lot of people a lot of access to computing power. This is bound to change workplaces significantly over the next five years. We just don't know where and how yet.

There are also encouraging signs that, with the right organisational innovations, technology might be the key to boosting productivity. We expand on that in the next section.

"General purpose technologies (GPTs) such as AI enable and require significant complementary investments, including co-invention of new processes, products, business models and human capital."

ERIK BRYNJOLFSSON, FELLOW,
STANFORD INSTITUTE FOR HUMAN-CENTERED AI

5.0

CONCLUSIONS AND ACTIONS

5.1

THE CHALLENGE

From the discussions in the previous sections, it is likely that businesses will face five imperatives over the next half-decade:

1. Building resilience in the face of volatile and unpredictable geopolitical events.
2. Improving performance despite trade disruption and economic stagnation.
3. Recruiting and retaining talent as labour shortages bite and employee expectations rise.
4. Maximising the gains from technology while guarding against its pitfalls.
5. Structuring organisations and shifting culture to enable all of the above.

5.2

UNDERSTANDING THE POLYCRISIS

Understanding and anticipating the compound risks from the interactions we have discussed in this report may require expertise from outside an organisation's usual disciplines. As we noted in Section 2, some organisations are recruiting Chief Geopolitics Officers but, even without doing that, organisations are likely to need a dedicated group of people to keep a watching brief on geopolitical events. This is likely to need people with perspectives outside the usual risk management disciplines. Many organisations routinely employ economists but there is now a case for recruiting political analysts too. As we noted in Section 2, some of the financial analysts may have misjudged the events of this year. If politics is back, we need people who understand it.

5.3

ORGANISING TO EXPLOIT TECHNOLOGY

If economists, central bankers and intergovernmental agencies are citing falling business dynamism as a cause of productivity slowdown then some of the ways of mitigating it must lie in the management of private and public organisations. In an economic environment where stagnation is the norm and productivity growth is proving elusive, the ability of organisations to organise and deploy their resources more effectively is likely to make the difference between success and stagnation at both a company and country level.

The last significant productivity growth period in advanced economies occurred during a period of ICT implementation of the 1990s. Crucially, during that period, the companies that made the strongest productivity gains were those that invested in the organisational, managerial and business process change required to support its adoption and exploitation.

Professor Diane Coyle of the Productivity Institute posed the question '[Why isn't digitisation improving productivity growth?]' and concluded that a key factor was investment in 'organisational capital':

> *"If some firms can use digital technologies so successfully, why can the rest not manage to do so? The answer seems linked to those complementary investments – the general challenge of reorganising production to adopt innovations".*

> *"Using the new technologies requires complementary investments. These are needed in physical (wired and wireless broadband and data centre) infrastructure, and in organisational change. Of these, the latter seems to be the hardest."*

Stanford's Erik Brynjolfsson has carried out extensive research on the effects of information technologies on business strategy, productivity and performance. In his paper [The Productivity J-Curve] he remarks:

> *"General purpose technologies (GPTs) such as AI enable and require significant complementary investments, including co-invention of new processes, products, business models and human capital."*

Professor Brynjolfsson found that US manufacturing firms using big data for predictive analytics had significantly higher sales and productivity than others – as long as they had made complementary investments in hardware, skills and workplace organisation.

It is not enough, then, simply to invest technology or in recruiting and developing the people who can use it. As Wharton's Ethan Mollick pointed out in his study 'Suits and Innovators', the middle managers (the 'Suits') are as important as the innovators when it comes to exploiting technology developments.

Strong organisations are the key to deploying talent and technology. Recruiting good people and investing in state-of-the-art tech are never enough on their own. Organisations provide the scaffolding which supports everything else and enables it to operate. Creativity and innovation are only of use when you have the organisational capability to deploy it.

5.4

DEVELOPING A WORKFORCE STRATEGY

The IMF, OECD and World Bank have cited human capital and skills issues as one of the risk factors for economic growth this decade. A report by the OECD in December 2024 noted that firms at the 'productivity frontier' are heavily reliant on highly skilled workers and tend to hire the most skilled workers in each occupation.

The business and the workforce challenges of the next five years are inextricably linked. An understanding of the industry and geography specific impacts of demographics on the company's potential labour supply will be critical.

There is a vast literature on alternatives to traditional employee resourcing methods. We expanded on these in our Future Fit Workforce report in 2021.

Recommendations include:

- Removing barriers to employment wherever possible
- Targeting groups of people with low labour force participation
- Assessing hours, location, and terms and conditions can make it easier for some groups of people to work.
- Investing in identifying and re-training internal talent.

However, people have been talking about measures such as these for many years but often workplace cultures are entrenched. Questioning managers' assumptions and encouraging them to think of can by crucial to making a change. This is what many DEI and similar initiatives aim to do. As we discussed in Section 3, there may be a business imperative to retaining such initiatives regardless of the hostile political climate.

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5.5

FINAL THOUGHTS

It was common during the 1990s and 2000s to remark on the dazzling speed of change facing organisations. Hundreds of books were written about it and a whole new discipline called Change Management emerged. Yet we now know that the two decades after the Cold War were relatively benign for commercial organisations. A stable and largely business-friendly environment prevailed. In the years since the 2008 Financial Crisis, the context in which businesses have been operating has become progressively more challenging. As the Pensions' Minister Torsten Bell put it in his previous role as CEO of the Resolution Foundation, we have faced a series of 'once-in-a-lifetime' crises. And, halfway through the decade, it looks as though the 2020s has plenty more to throw at us yet.

The politically benign post-Cold War period now feels like a distant memory. Economic stagnation, environmental threats and highly unpredictable political volatility face us in the second half of the 2020s. Companies will need to reconfigure on a number of fronts at the same time to meet these challenges. The merging of new and existing technologies offers the promise of the productivity gains essential to restore economic and thereby, hopefully, political stability but this, too, will require significant organisational interventions – an area in which Performance & Reward professionals should be poised to challenge and lead.

"Labour scarcity will put [workers] in a stronger bargaining position. They will use that position to bargain for higher wages."

CHARLES GOODHART, BRITISH ECONOMIST

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APPENDIX

APPENDIX 1

POINTS OF DISCUSSION FOR PERFORMANCE AND REWARD TEAMS

Here are some questions that can be considered in the context of your organisation. We encourage you to debate and discuss within your teams, with other colleagues, with advisers, and across your broader ecosystem.

FURTHER READING FROM THE PARC ARCHIVE

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The following PARC reports go into some of the subject matter covered in this report in greater depth.

- *Getting to Net Zero the Role of Reward*, 2024
- *The Future Reward Leader*, 2023
- *Retirement Strategy – Does Your Company Have One, Does It Need One?*, 2022
- *Building a Future-Fit Workforce*, 2021
- *Productivity: Puzzle or Pandemic?*, 2018

SECTION 1: **INTRODUCTION**

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- Given the current geopolitical instability and economic uncertainty described in the foreword and introduction, how should our performance management frameworks account for external factors beyond the control of employees and teams?
- The report highlights the need for improved private sector productivity to avoid economic, social, and political upheaval. What role can our performance and reward strategies play in incentivising and recognising productivity improvements?
- With businesses navigating increasing complexity and diverse stakeholder demands, how can our reward systems balance the needs of various stakeholders (investors, employees, public, etc.) while driving performance?
- Considering the potential of new technologies like AI, robotics, and quantum computing to boost productivity, how can we design reward strategies that encourage the adoption and effective use of these technologies within our organisation?
- The report emphasises that the benefits of new technology require corresponding organisational innovations. How can performance management processes be adapted to support and measure the impact of organisational changes related to technology implementation?

SECTION 2: **CONTEXT**

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- With the return of significant political volatility and its impact on businesses, how can we better understand and incorporate geopolitical risks into our long-term compensation and benefits planning?
- Given the potential for trade disruptions and tariffs, how can our reward strategies help to mitigate the impact on supply chains and maintain employee motivation in affected areas?
- The report notes a trend towards protectionism. How might this impact our global talent strategy and reward approaches for international assignments or remote workers?
- In an era of low economic growth and potential stagnation, how do we need to adjust our expectations for salary increases and bonus payouts while still attracting and retaining key talent?
- Considering the decline in business dynamism and potential productivity slowdown, what performance metrics and reward mechanisms can we implement to foster innovation, risk-taking, and the reallocation of resources towards more productive areas?
- How can our reward systems better differentiate and reward performance in a way that drives overall organisational dynamism?
- The report highlights the contrasting productivity growth in the US compared to many other economies. What can we learn from these trends and how might they influence our performance and reward strategies, particularly if we operate internationally?
- Given the long-term trend of falling capital spending, how can our reward systems encourage behaviours that lead to more efficient use of existing capital and drive investment in productivity-enhancing assets?

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SECTION 3: **CHANGING SHAPE OF THE WORKFORCE**

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- With ageing populations and looming labour shortages, how do our recruitment, retention, and reward strategies need to adapt to attract and retain a shrinking pool of working-age individuals?
- The report mentions the reluctance of some managers to recruit older workers. How can our performance management and development processes ensure that we are effectively utilising and retaining experienced employees?
- Given the increasing bargaining power of employees in a tight labour market, how do we ensure our compensation and benefits packages remain competitive and meet evolving employee expectations?
- While the report debunks the idea of distinct generations, it acknowledges a shift in the 'social contract' and rising employee expectations. How can we better understand these evolving expectations (e.g., for flexible work) and adapt our reward and benefits offerings accordingly?
- Considering the increasing prevalence of hybrid working, how do we adapt our performance management processes to effectively measure and reward contributions in flexible work arrangements?
- The report suggests that the power dynamic in the workplace is shifting towards employees. How might this influence our approach to performance feedback, disciplinary actions, and overall employee relations?

SECTION 4: **TECHNOLOGY**

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- As AI becomes more prevalent, how do we need to rethink job roles, required skills, and consequently, our job evaluation and compensation structures?
- With the rise of Generative AI being adopted by employees outside formal IT implementations, how can we ensure performance management accurately reflects individual contributions when AI tools are being used?
- The report discusses the potential for AI to redesign jobs. How can performance and reward teams be involved in these redesign processes to ensure fair and motivating outcomes?
- How do we measure and reward the development and effective utilisation of AI skills within our workforce?
- Given the ongoing debate about the actual productivity impact of AI, how can we develop metrics to assess the return on investment in AI technologies and the contribution of employees in leveraging them for productivity gains?
- Considering the potential for Agentic AI and Quantum AI in the future, how should we begin to anticipate the potential impact on job roles and the skills we will need to reward?

SECTION 5: **CONCLUSIONS AND ACTIONS**

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- The report emphasises the need to build resilience in the face of volatile geopolitical events. How can performance and reward teams contribute to this by incentivising adaptability and a global mindset?
- Given the imperative to improve performance despite economic stagnation, how can our reward strategies focus on efficiency, innovation, and value creation in a low-growth environment?
- To effectively recruit and retain talent amidst labour shortages, how can we ensure our total reward packages are attractive, competitive, and aligned with the evolving expectations of the workforce?
- When maximising the gains from technology, what performance metrics and reward systems can encourage the effective adoption and integration of new technologies while mitigating potential risks?
- To support the structuring of organisations and shifting culture, how can performance and reward systems reinforce desired behaviours, collaboration, and a focus on continuous improvement?
- The report suggests a need for geopolitical expertise within organisations. How might this evolving skill set be valued and rewarded within our compensation framework?
- Considering the importance of 'organisational capital' in leveraging technology for productivity gains, how can our performance management processes recognise and reward contributions to building and managing effective organisations?
- When developing a workforce strategy, how can performance and reward data and insights inform decisions about talent acquisition, development, and retention in the face of demographic shifts and skills gaps?
- The report highlights the importance of questioning managers' assumptions to remove barriers to employment. How can performance and reward teams work with managers to ensure equitable performance evaluations and reward decisions across diverse employee groups?

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APPENDIX 2

GENERATIVE VS DISCRIMINATIVE AI

Parameters	Generative AI	Discriminative AI
Definition	Learns both the data and the relationship between inputs and labels modelling the entire data structure	Focuses only on the relationship between inputs and labels to make predictions
Objective	It is used to create a new set of data with the help of given prompt	It is used majorly in classifying data or predict the outcomes of the problem statement
Model Examples	GANs, VAEs, Transformer-based language models like stable diffusion	Logistic Regression, SVM, Decision Trees, Neural Networks
Output	Generates new samples (e.g. images, text, video, audio)	Provides labels or classifications for input data
Use Cases	Content creation, data synthesis, artistic generation	Image recognition, spam detection, sentiment analysis
Data Generation	It is capable to creating synthetic data	Not designed for data generation
Pattern Recognition	Learns to replicate data patterns and structures	Learns to recognise and classify existing data patterns
Model Complexity	More complex and time-consuming because it models the entire data structure	Simpler and faster as it only focuses on separating classes
Strength	Great for unsupervised learning and tasks where generating new data is required	Works best for classification or prediction tasks in supervised learning
Robustness	May produce unrealistic or low-quality samples	Typically robust in classifying input data accurately

Source: GeeksforGeeks

REFERENCES

AP News. 28 August 2024. ***Ford Joins Growing List of Companies Changing Diversity Policies After Conservative Pressure.*** https://apnews.com/article/ford-diversity-inclusion-policy-changes-87b6699276dd940ea7d045ef845c45e4

Atkinson, S. 2 May 2024. ***Ipsos Generations Report 2024: Are we Prepared for Population Decline?*** https://www.ipsos.com/en/ipsos-generations-report-2024-are-we-prepared-population-decline

Bank for International Settlements. 22 October 2024. ***Risks Facing the Global Economy.*** https://www.parcentre.com/wp-content/uploads/2025/03/Risks-Facing-the-Global-Economy.pdf

Beattie, A. 3 February 2025. ***Trump's Cataclysmic Damage is Going Way Beyond Tariffs.*** https://www.ft.com/content/c26b417d-549e-49f1-9478-7c381b4ad226

Bell, T. and Slaughter, H. 19 January 2024. ***Britain Isn't Post-Work.*** https://www.resolutionfoundation.org/comment/britain-isnt-post-work

Benedikt, F.C. and Osborne, M. 17 September 2013. ***The Future of Employment: How Susceptible Are Jobs to Computerisation?*** https://www.parcentre.com/wp-content/uploads/2025/03/The-Future-of-Employment.pdf

Beynon, S. 9 January 2025. ***Surge of Female Enlistments Helped Drive Army Success in Reaching 2024 Recruiting Goal.*** https://www.military.com/daily-news/2025/01/09/surge-of-female-enlistments-helped-drive-army-success-reaching-2024-recruiting-goal.html

Brynjolfsson, E., Hitt, L.M. and Yang, S. January 2022. ***Intangible Assets: Computers and Organizational Capital.*** https://www.researchgate.net/publication/236756449_Intangible_Assets_Computers_and_Organizational_Capital

Costanza, D.P., Rudolph, C.W. and Zacher, H. November 2023. ***Are Generations a Useful Concept?*** https://www.sciencedirect.com/science/article/pii/S0001691823002354

Coyle, D. November 2023. ***Why Isn't Digitalisation Improving Productivity Growth?*** https://www.parcentre.com/wp-content/uploads/2025/03/Why-isnt-Digitalisation-Improving-Productivity-Growth.pdf

Crofton, W. 3 December 2024. ***Why America's Economy is Soaring Ahead of Its Rivals.*** https://www.ft.com/content/1201f834-6407-4bb5-ac9d-18496ec2948b

Deccan Herald. 20 January 2025. ***Which Time Were You Lying?': The Great CEO Flip-flop Over Donald Trump Hits Davos.*** https://www.deccanherald.com/business/which-time-were-you-lying-the-great-ceo-flip-flop-over-donald-trump-hits-davos-3364121

D'Innocenzio, A. 26 November 2024. ***Walmart Becomes Latest — and Biggest — Company to Roll Back its DEI Policies.*** https://apnews.com/article/walmart-dei-inclusion-diversity-34b06922e60e5116fe198696201ce4d9

Draghi, M. 9 September 2024. ***The Draghi report: A competitiveness strategy for Europe (Part A).*** https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

The Economist. 10 July 2023. ***The Fight Over Working From Home Goes Global.*** https://www.economist.com/business/2023/07/10/the-fight-over-working-from-home-goes-global

The Economist. 22 January 2022. ***Economists are Revising Their Views on Robots and Jobs.*** https://www.economist.com/finance-and-economics/2022/01/22/economists-are-revising-their-views-on-robots-and-jobs

Elsner, M. 15 Jan 2025. ***These are the Biggest Risks we Face Now and in the Next 10 Years.*** World Economic Forum. https://www.weforum.org/stories/2025/01/global-risks-report-2025-bleak-predictions

Fernald, J. and Inklaar, R. April 2022. ***The UK Productivity Puzzle in an International Comparative Perspective.*** https://www.parcentre.com/wp-content/uploads/2025/03/The-UK-Productivity-Puzzle-in-an-International-Comparative-Perspective.pdf

The Financial Times. 9 January 2025. ***BlackRock Quits Climate Change Group in Latest Green Climbdown.*** https://www.ft.com/content/f0fb9841-db1d-442e-a757-1a1327497fb1

The Financial Times. ***Companies Drop DEI Targets From Bonus Plans on Pressure from Conservatives.*** https://www.ft.com/content/63ac21a5-9929-4bc3-9089-03299f023bcd

The Financial Times. 19 July 2022. ***The Investment Drought of the Past Two Decades is Catching Up With Us.*** https://www.ft.com/content/3a8731bc-aad3-42ca-b99e-b3a553974ccf

The Financial Times. 24 January 2025. ***How Small Chinese AI Start-up DeepSeek Shocked Silicon Valley.*** https://www.ft.com/content/747a7b11-dcba-4aa5-8d25-403f56216d7e

Fink, L. 2020. ***A Fundamental Reshaping of Finance.*** https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter

Free Thinking Economist. 22 December 2024. ***US Outperformance Isn't *All* About Tech.*** https://freethinkecon.wordpress.com/2024/12/11/us-outperformance-isnt-all-about-tech

Goldman Sachs. 25 June 2024. ***Global Macro Research. Gen AI: Too Much Spend, Too Little Benefit?*** https://www.parcentre.com/wp-content/uploads/2025/03/Gen-AI-Too-Much-Spend-Too-Little-Benefit.pdf

Gye, H. 10 February 2025. ***Disability Benefits Claims are About to get Quicker Using AI.*** https://inews.co.uk/news/politics/disability-benefits-claims-quicker-ai-3526934

International Monetary Fund. October 2024. ***A Recovery Short of Europe's Full Potential.*** https://www.imf.org/en/Publications/REO/EU/Issues/2024/10/24/regional-economic-outlook-Europe-october-2024

Korten, D. 1995. ***When Corporations Rule the World.*** https://en.wikipedia.org/wiki/When_Corporations_Rule_the_World

Library of Congress. ***Research Guides: Doing Consumer Research: A Resource Guide.*** https://guides.loc.gov/consumer-research/market-segments/generations

Lowe, S. 17 February 2025. ***Most Favoured Nation Is Dead.*** https://mostfavourednation.substack.com/p/most-favoured-nation-is-dead

Lui, T. 28 January 2025. ***DeepSeek: How a Small Chinese AI Company is Shaking Up US Tech Heavyweights.*** https://theconversation.com/deepseek-how-a-small-chinese-ai-company-is-shaking-up-us-tech-heavyweights-248434

Madgavkar, A., White, O., Smit, S., Bradley, C., Luby, R. and Neary, M. 26 June 2024. ***Help Wanted: Charting the Challenge of Tight Labor Markets in Advanced Economies.*** https://www.mckinsey.com/mgi/our-research/help-wanted-charting-the-challenge-of-tight-labor-markets-in-advanced-economies

Marcus, G. 31 January 2025. ***The 8 Things Most People Missed About DeepSeek.*** https://fortune.com/2025/01/31/deepseek-misconceptions-ai-chatbot-app-china

McKinsey Quarterly. ***A Proactive Approach to Geopolitics.*** https://www.mckinsey.com/quarterly/the-five-fifty/five-fifty-a-proactive-approach-to-geopolitics

Mischke, J., Bradley, C., Canal, M., White, O., Smit, S. and Georgieva, D. 27 March 2024. ***Investing in Productivity Growth.*** https://www.mckinsey.com/mgi/our-research/investing-in-productivity-growth

Mollick, E. 24 January 2012. ***People and Process, Suits and Innovators: the Role of Individuals in Firm Performance.*** https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.1958

OECD. 9 October 2023. ***The Midcareer Opportunity: Meeting the Challenges of an Ageing Workforce.*** https://www.oecd.org/en/publications/the-midcareer-opportunity_ed91b0c7-en.html

Office for National Statistics. 22 November 2024. ***Who are the Hybrid Workers?*** https://www.beta.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/whoarethehybridworkers/2024-11-11

Padavic-Callaghan, K. 9 December 2024. ***Is Google's New Willow Quantum Computer Really Such a Big Deal?*** https://www.newscientist.com/article/2459318-is-googles-new-willow-quantum-computer-really-such-a-big-deal

Parker, K. 22 May 2023. ***How Pew Research Center Will Report on Generations Moving Forward.*** https://www.pewresearch.org/short-reads/2023/05/22/how-pew-research-center-will-report-on-generations-moving-forward

Pollard, A. and Fontanella-Khan, J. ***New 'Anti-woke' ETF Makes Starbucks Its First Target.*** https://www.ft.com/content/f19c34b2-2eb0-40f4-a799-f5221413e9b2

The Productivity Institute. 27 March 2024. ***Should We Be Worried About Business Dynamism?*** https://www.productivity.ac.uk/news/should-we-be-worried-about-business-dynamism

Retkowsky, J., Hafermalz, E. and Huysman, M. September 2024. ***Managing a ChatGPT-empowered Workforce: Understanding Its Affordances and Side Effects.*** https://www.sciencedirect.com/science/article/pii/S0007681324000545

Rickli, J.M, and Lukacs, R. 1 July 2024. ***The Chief Geopolitical Officer: Guiding Business in a Polarised Global Era.*** https://www.gcsp.ch/publications/chief-geopolitical-officer-guiding-business-polarised-global-era

Rogers, T.N. 6 December 2024. ***'Crazy Ideology': US Companies Drop Diversity Efforts as Conservative Pressure Mounts.*** https://www.ft.com/content/e0064038-38cc-45e0-bf55-89f9d2f76f89

Thornhill, J. 9 January 2025. ***'Superintelligence' Will Take Time to Generate Super Returns.*** https://www.ft.com/content/557479b5-2513-441d-85c4-8acbc398e4b4

Tooze, A. 28 October 2022. ***Welcome to the World of the Polycrisis.*** https://www.ft.com/content/498398e7-11b1-494b-9cd3-6d669dc3de33

Va Reenen, J. and Yang, X. June 2024. ***Cracking the Productivity Code: An International Comparison of UK Productivity.*** https://www.parcentre.com/wp-content/uploads/2025/03/Cracking-the-Productivity-Code-An-International-Comparison-of-UK-Productivity.pdf

Waters, R. 28 February 2025. ***Quantum Computing is Struggling to Reach Its Silicon Moment.*** https://www.ft.com/content/bfe5fff4-3d78-4bea-9e31-da8ca1f77151

World Bank Group. 2024. ***Falling Long-Term Growth Prospects.*** https://www.worldbank.org/en/research/publication/long-term-growth-prospects

World Trade Organization. 11 December 2024. ***WTO Report Shows Increase in Trade Restrictions Against Backdrop of Unilateral Policies.*** https://www.wto.org/english/news_e/news24_e/trdev_11dec24_e.htm

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