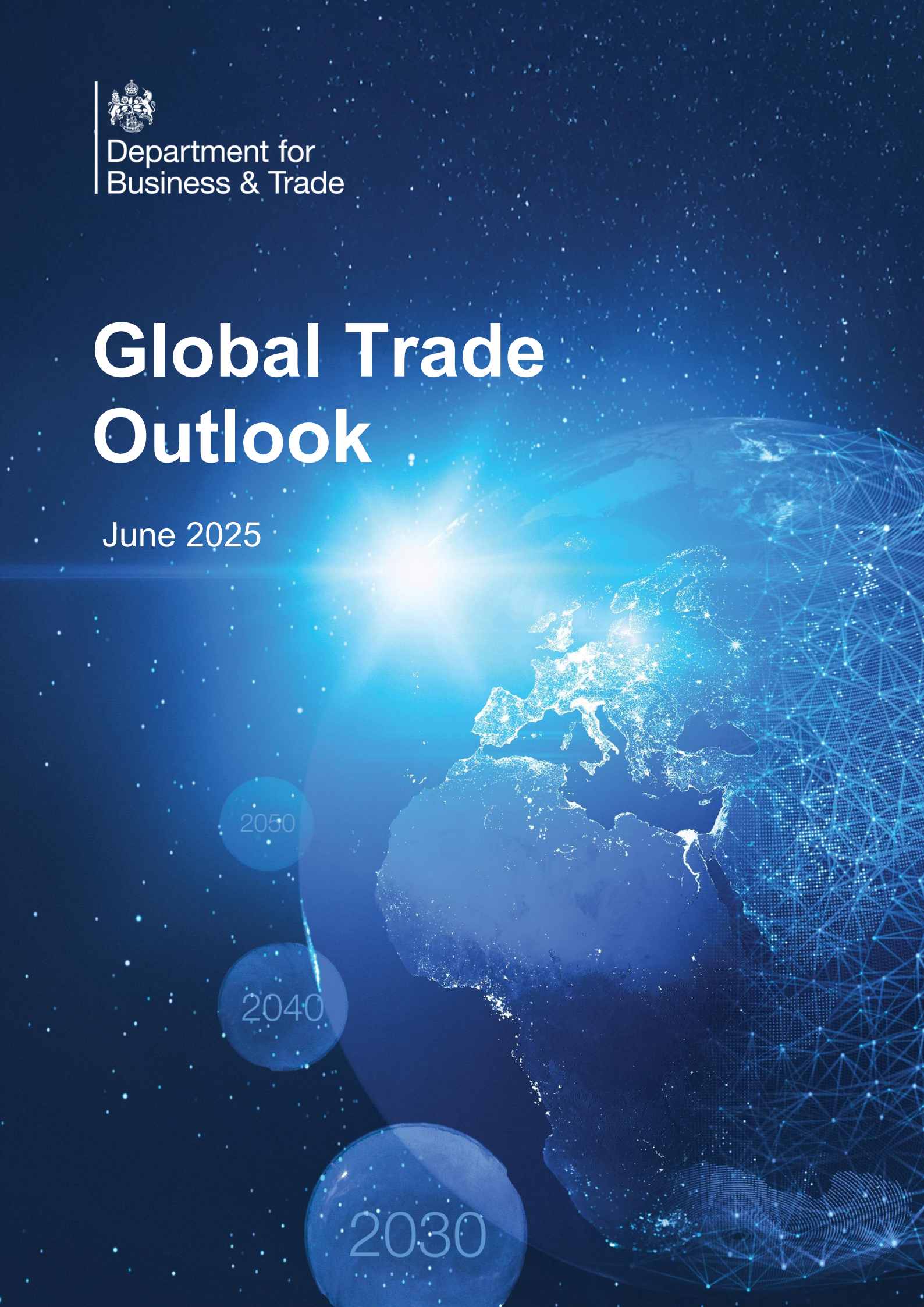
Department for Business & Trade

Global Trade Outlook

June 2025



CONTENTS

GLOBAL ECONOMIC TRENDS

GLOBAL TRADE TRENDS

EMERGING TRENDS

ANALYTICAL APPROACH

ANNEXES

FOREWORD

This edition of the Global Trade Outlook was written during a period of significant uncertainty. Global trade is entering a new phase, where geopolitical, geoeconomic and technological shocks are reshaping the international order.

The recent shocks felt by the world trading system have further complicated the global trade landscape. At the same time, the UK's trade prospects have been lifted by securing a free trade agreement with India, establishing the US UK Economic Prosperity Deal (EPD), and the new Strategic Partnership with the EU. This moment of rapid change is a challenging context to undertake the types of forecasting found in the Global Trade Outlook but it is also exactly the moment that calls for the far sighted policy analysis it offers.

If our Trade Strategy is, in part, a guide for how we will approach trade during this period of uncertainty, then the Global Trade Outlook is our reflection of what certainties remain and what they mean for growth. While the global economy is always shaped by short term shocks and shifts, the long term outlook is more fundamentally a product of people, technology and global connectivity which we seek to capture in this edition of the Outlook.

Compared to today, the global economy the Outlook foresees in 2050 is populated by 1.5 billion additional people, with demographic dividends in some countries sitting alongside ageing and shrinking populations in others. It is an economy in which technological progress lifts economies, and trade helps spread the best ideas widely for the benefit of all. And it is an economy in which growth is increasingly widely spread, helping emerging economies catch up with wealthier nations, creating opportunities that lift living standards globally.

But it is also a global economy in which the old assumptions of consistently high trade and economic growth may no longer hold, which nevertheless belies a wealth of individual high growth opportunities. Such a world calls for trade policy that helps connect UK exporters with the many opportunities that remain, by carefully targeting the markets, consumers and sectors that can best drive growth in the UK.

It is important to note that while the Outlook considers the medium term impact of some recently implemented trade tariffs on growth, it cannot do so for long term projections. With uncertainty so high, and with many of the changes not yet reflected in the data, there isn't a solid enough basis on which to base assumptions about the impact of current trade policy in 2050. However, DBT is committed to providing timely and accurate analysis to ensure that our stakeholders have access to the most relevant information to navigate the evolving global trade landscape.

The GTO aims to support UK businesses to make informed decisions in an uncertain world, helping them to navigate a global landscape still rich with opportunities for growth. Seizing these opportunities will be key to delivering our number one mission of economic growth, which will fund our public services, enable investment in our hospitals and schools, and raise living standards for everyone. We will closely monitor how changes in the global trade landscape play out over time and are committed to publishing further updates if the findings in this report shift substantially.

Rt Hon Douglas Alexander MP

PREFACE

The Department for Business and Trade s Global Trade Outlook explores the long term trends that will shape the global economy and international trade in the coming decades.

This third edition of the Global Trade Outlook has been updated to reflect economic developments since 2023. As in previous editions, the Outlook sets out the broad contours of how global GDP and trade could evolve out to 2050 (Chapters 1 & 2), while also exploring the complexities that could reshape the pathway sketched in the Outlook (Chapter 3).

Focusing on the longer term, the Outlook incorporates the uncertainties in the short term by aligning the 2024 2030 projections with the International Monetary Fund s April 2025 World Economic Outlook forecasts. These include estimates of the impact of recent tariff changes on growth. In addition, all UK projections are consistent with the independent Office for Budget Responsibility's March 2025 forecasts in the near term and draw on the May 2024 long term economic determinants in the long term.

This edition has been written during a period of significant global economic and policy uncertainty. While the Outlook occasionally reflects on these uncertainties including through the medium term inclusion of IMF projections the core forecast does not make judgements about the long term impact of immediate policy or shocks on the global economy. Instead, it produces a baseline projection of how the economy may develop if recent trends continue. This projection provides insights into the direction in which core economic variables are pushing the global economy, but it does not reflect the full complexity of what the future holds.

The Outlook has been produced to help inform policymakers and strategists and contribute to the wider debate about the future of trade including around the likely challenges and opportunities that the world may face in the years to come. However, it is just one source among many. The Department for Business and Trade continues to draw on a wide range of analysis and information when formulating its strategy.

EXECUTIVE SUMMARY

Economic Outlook

Trade Outlook

Global growth is expected to slow progressively over the *Outlook*, as maturing emerging markets. slowing population growth and rising uncertainty weight on growth prospects.

Global trade is expected to break with the exponential growth of recent decades, to enter a period of slower, but sustained growth; complicated by a threatened fragmentation among key markets.

Emerging markets will claim a growing share of global GDP, with the most rapid growth centred on South Asia and Africa; but Europe, the US and China will remain key pillars of the global economy.

Europe will remain the world s largest market, even as emerging market growth and shifting value chains diversify global trade, and offer growth opportunities that significantly exceed slowing overall trade growth.

Services sectors are expected to top global growth, with key tradeable services like media and the digital economy leading the pack; even as the strong outlook for construction underpins resilient growth in foundational sectors.

Advanced manufacturing will remain the most traded global sector, while services sectors continue to experience rapid growth; as rising import demand in priority sectors lifts global exports prospects for UK Industrial Strategy firms

By the end of the projection, most of the largest markets will have reached peak population, as stalling population growth weighs on economic growth in Europe and Asia Pacific, but drives a rapid expansion in Africa.

The emergence of over a billion new high income consumers, primarily concentrated in China and South Asia, will offer rich prospects for exporters, as a diversifying global footprint is increasingly important to reach top potential customers

The UK is expected to retain its position as the 6th largest economy, even as rapid growth in emerging markets sees the UK s share of global GDP decline. Services centric global growth and rising high income consumers will play to UK strengths and drive growth.

The UK is expected to remain a leading trading nation, as exporters benefit from close relationships with some of the world s fastest growing markets. While Europe will remain the largest destination for UK goods, export destinations are expected to diversify, as growth spreads across regions.

1 Global Economic Trends

GLOBAL GROWTH

Global GDP is projected to stabilise at an average of 2.6% annual growth through 2030, then slow to 2.4% in the 2030s and 2.0% in the 2040s. By 2050, the global economy is expected to triple in size to $333 trillion, though this is slightly lower than previous forecasts due to improved inflation expectations.

TARIFF UNCERTAINTY

Evolving trade policies and tariff measures may shift growth expectations. While medium-term projections (to 2030) factor in some tariff impacts, long-term projections (2031–2050) do not, though lingering effects remain.

REGIONAL DYNAMICS

North America is expected to remain the largest economic region, while Europe remains the world's largest import market. Asia's centre of growth is expected to shift from China to India and other emerging markets, while Africa's demographic boom could drive high growth if job creation can keep pace with population growth.

SECTORAL TRENDS

Services will dominate global GDP, with their share projected to rise from 75% in 2023 to 79% in 2050. Emerging markets will gain larger shares in tradeable services, while foundational sectors like construction and chemicals remain resilient.

UK OUTLOOK

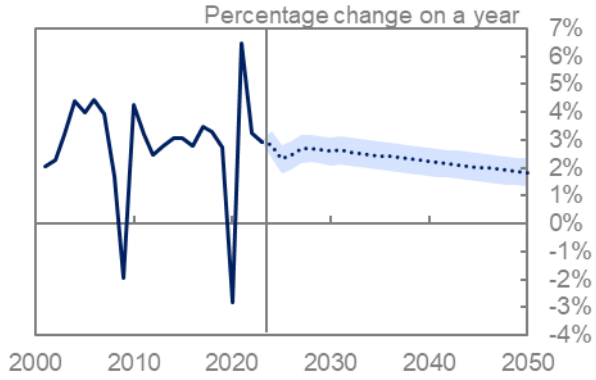
The UK is projected to remain the 6th largest economy, with an average annual growth of 1.8% from 2023 to 2050. Growth in the global economy will be a key driver of UK growth, however growth weighted by the UK's trade patterns is slower than global growth, suggesting that deepening ties with faster-growing emerging markets could drive local growth.

Global GDP is expected to stabilise in the 2020s, and slow over future decades – but uncertainty dominates the outlook

- **The global economic outlook is clouded by significant uncertainty**, primarily due to recent threats to raise trade barriers. While the final impact of these changes remains unknown, they will likely shift growth from what is projected in the Outlook. Although the Outlook cannot predict future policies, it provides valuable insights into how fundamental economic forces like population and productivity will shape the evolving global economy.
- **Near-term global growth is expected to be negatively impacted by the threat of rising trade barriers, averaging 2.6% per year for the remainder of the decade**. The 2024-2030 projections, in this report are conditioned on the IMF's April 2025 forecasts, which predict an initial sharp slowdown from trade restrictions giving way to stabilising growth of 2.7% by 2029. These projections reflect on tariffs announced prior to 4 April, but not any subsequent changes, including recently announced agreements by the UK with India, the United States and the European Union.
- **Growth is then expected to slow to a relatively steady rate, averaging 2.4% in the 2030s and 2.0% in the 2040s** (Figure 1). These forecasts demonstrate global activity settling into a new trend as different structural forces, such as productivity and population challenges, affect regions uniquely. As with all macroeconomic projections, these results are subject to wide bands of uncertainty both from upside surprises (e.g. if technological progress accelerates) and downside risks (e.g. if further economic shocks materialise). Some of these uncertainties are discussed in Chapter 3 of the Outlook.
- **The global economy in 2050 is expected to be worth more than triple its present value**. In dollar terms, it is projected to be worth $333 trillion in 2050, up from $105 trillion in 2023. This figure is marginally lower than projected in the previous Global Trade Outlook, despite stronger anticipated real-term growth, and is primarily due to the improved near-term inflation outlook, which makes growth appear slower in nominal terms.

Global economic growth is expected to slow in the 2030s and 2040s

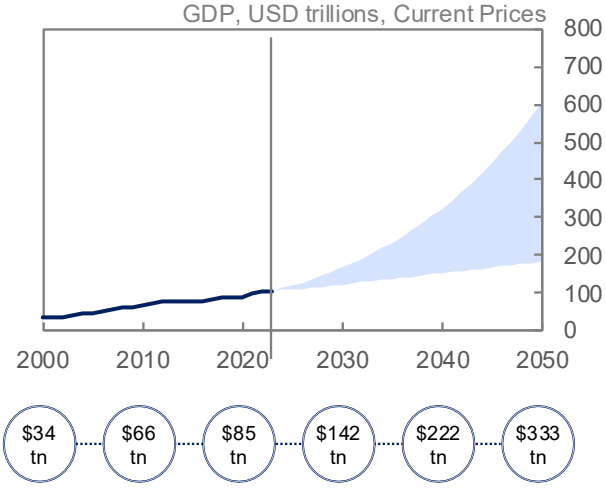
Figure 1: Global GDP growth in real terms



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details
Notes: Data refer to real GDP growth for the world economy in 2023 prices converted using time-varying exchange rates – not Purchasing Power Parity (PPP). The uncertainty band represents one standard deviation around growth projection based on 2001-2019 GDP outturns.

In dollar terms, global GDP is expected to more than triple between 2024 and 2050

Figure 2: Global GDP in nominal terms



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details
Notes: Data refer to nominal GDP (inclusive of inflation and converted using time-varying exchange rates). The uncertainty bands represent one standard deviation around nominal GDP growth outturns for the 2001-2019 period

An escalation in tariff tensions would significantly change the Outlook

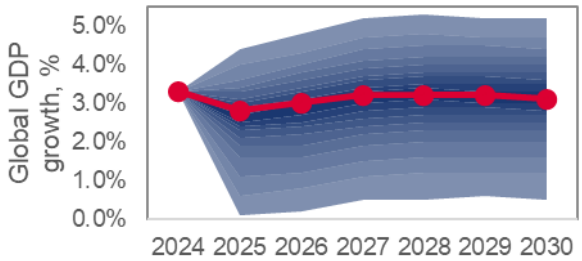
- **The Global Trade Outlook primarily reflects on long-term determinants of growth, such as population size and productivity**. Historically, these factors have been key to shaping the global economy, but the way in which the impact of these factors spread around the world is defined by global economic relations like trade and foreign investment. In the assumptions of the Outlook, innovation in the US lifts Chinese productivity, while China's large and skilled workforce provides a flow of affordable goods to US consumers. This mode of connected growth underpins the economic logic behind the Outlook.

- **These assumptions are now being tested by an increased risk of fragmentation in global trade**. Recent US tariff announcements mark a fundamental change in how the global trading system has been operating. In the Outlook, the US's size and strong growth outlook see the country accounting for 12% of global imports in 2050, however changes in trade policy by influential markets can introduce uncertainty into growth projections across interconnected economies.

- **The impact of new tariffs is only partially considered in the Outlook**. Medium-term projections (2024 – 2030) are drawn from the IMF's World Economic Outlook and incorporate tariff impacts. [1] The long-term projections (2031–2050) do not explicitly account for tariff impacts. Instead, they are applied to the updated 2030 baseline, which already reflects medium-term disruptions. This mixed approach allows for an evaluation of the impact of tariffs without prematurely assuming the tariffs or their effects will remain the same in the long-term.

The Outlook mirrors the wide bands of uncertainty seen in the IMF's forecast

Figure 3: Uncertainty bands in the IMF's global GDP projections[2]



Sources: IMF World Economic Outlook April 2025.

- **Even the medium-term impact of tariffs is extremely uncertain**. Reflecting this uncertainty, the IMF's April 2025 World Economic Outlook published both a reference forecast and two alternative scenarios based on differing mixes of trade policy. In the reference forecast, which forms the basis the Outlook's medium-term projections to 2030, the impact of tariff announcements made between 1 February and 4 April are included, but subsequent changes are not. This means that the Outlook does not consider more recent changes in tariff regimes, e.g. the securing of the US-UK Economic Prosperity Deal (EPD), the UK-India Free Trade Agreement, the ramping-up and subsequent postponement of China-US tariffs, and a wide range of additional movements in the policy landscape. While these developments are important, the Outlook does not speculate on their potential impact on the forecast. As a result, while the Outlook follows the IMF's downgrading of growth expectations for 2025 and 2026 by a cumulative 0.8%, exceptionally high uncertainty could see growth exceed or fail to meet these expectations.

[1] IMF World Economic Outlook April 2025.

[2] Notes: The red line represents the WEO's reference forecast. The shaded blue area represents the 90% confidence band for estimated global GDP growth forecasts from 2024-2030, with each shade of blue representing a 5% probability interval around the reference forecast. These are derived by identifying economic shocks underlying historical data which are then fed back through the IMF's forecasting model to generate risk distributions, which essentially provide a range of possible outcomes based on the historical shocks. These outcomes are then adjusted to align with the IMF's Global Financial Stability Report (GFSR) from April 2025 to ensure consistency with the latest economic risk assessments.

WHAT DRIVES GROWTH IN THE OUTLOOK?

As with any modelling exercise, projections in the Outlook do not consider every possible determinant of economic growth, focusing instead on interactions between a few core factors. In the Outlook, four key factors determine how a country will grow. First is the size of the population and how it grows over time. Second is productivity, including the underlying investment in capital that helps realise that productivity. Third is trade, including the spillover impact of growth in the markets that are traded with. Fourth is inflation, including its subsequent impact on exchange rates.

Some additional judgements are added to this mix, including using IMF forecasts in the short-term (up until 2030), using external expert judgements for sector projections, and making manual adjustments to address anomalies in the results.

HOW ARE INFLATION AND EXCHANGE RATES TREATED IN THE OUTLOOK?

The Outlook is primarily designed to return projections of GDP and trade. But building these projections requires making important intermediate projections of inflation and exchange rates, both of which have been key factors in recent economic performance. This means that high levels of inflation, and substantial changes in interest rates - both of which have been seen in recent years - can have a fundamental impact on the economy to 2050 projected in the Outlook. For example, even if real GDP growth trends are steady, certain figures may see some volatility in nominal terms (accounting for inflation) or US dollar terms (accounting for exchange rates).

The Outlook estimates inflation and exchange rates using some simplified assumptions. Inflation is assumed to move progressively from its current level to the target set by each country's Central Bank, while also being influenced by inflation imported through trade. Exchange rates are assumed to adjust in such a way as to keep prices in-line with global markets, meaning that US Dollar exchange rates depreciate if inflation is higher than in the US. In both cases, these assumptions follow modelling best-practise, but they are simplifications over the much more complex way global prices and financial markets tend to operate. As a result of both these modelling assumptions and the recent real-world strength of the Dollar, many exchange rates differ from previous editions of the Outlook, and partially explain changes in global rankings and the rate of growth in US Dollar terms.

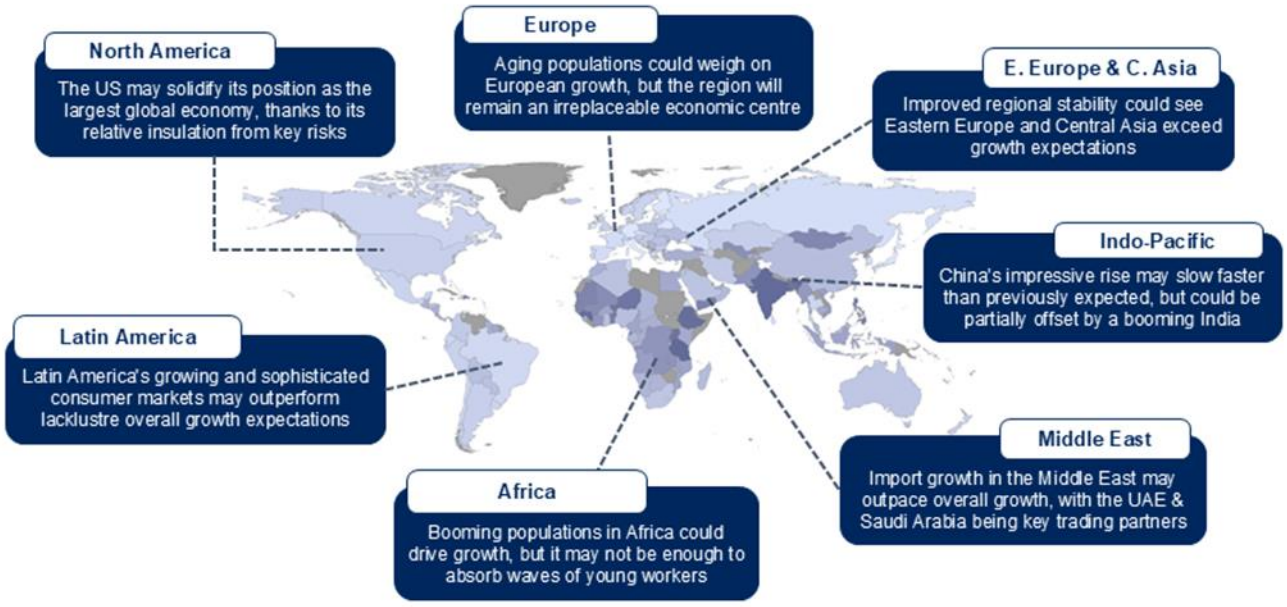
FULL INFORMATION ON HOW THE OUTLOOK IS CONSTRUCTED IS AVAILABLE IN CHAPTER 4

Slower global growth masks significant regional variation, with strong opportunities around the world

- **In a global economy that remains integrated, every region of the world will offer significant opportunities.** North America is expected to experience strong growth, as it avoids the population and productivity challenges encountered elsewhere. Europe is projected to face a weaker growth outlook, but is expected to remain the largest global import market, and will remain especially important for UK exporters. Asia is expected to benefit from standout growth from India and a new generation of fast-growing emerging markets, while increasingly sophisticated consumer markets in countries like China could offer rich opportunities for exporters. Africa is projected to see growth super-charged by a unique demographic dividend, that could see the continent dominate growth in working age populations. Both Latin America and the Middle East may defy slower headline growth to still deliver strong growth in imports and consumer markets, while Eastern Europe & Central Asia could see a step-change in growth if regional stability improves. Many factors could change these regional dynamics, and the Outlook only reflects on the impact of key macroeconomic factors, remaining agnostic on other sources of change, such as the policy choices made by markets in each region.

While headline growth slows, growth opportunities remain around the world

Figure 4: Overview of key regional opportunities

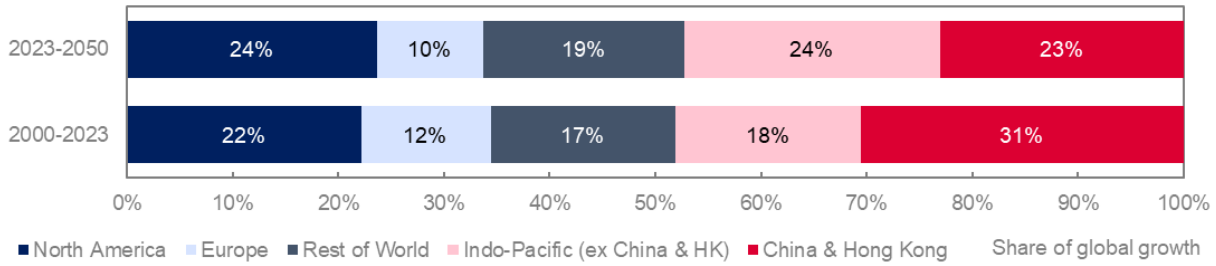


Source: DBT's Global Trade Outlook modelling
Note: Shading represents real GDP growth between 2023 and 2050. Indo-Pacific refers to three regions: Asia Pacific, China & Hong Kong, and South Asia.

- **The Indo-Pacific region is the largest contributor to global growth, as emerging markets take-up a growing share of global GDP.** Between 2000 and 2023, the Indo-Pacific accounted for almost half of global growth, with China & Hong Kong alone contributing close to a third. This region is expected to continue to drive global growth but large emerging markets outside of China will take on greater importance. While China is still expected to contribute significantly to global growth, the country's share of global growth is expected to decline from the highs of recent history. However, South Asia's growth acceleration – particularly in countries with large youthful populations – could help offset some of China's slowing.

China's declining share of global growth is expected to be partially offset by rising growth in the rest of the Indo-Pacific

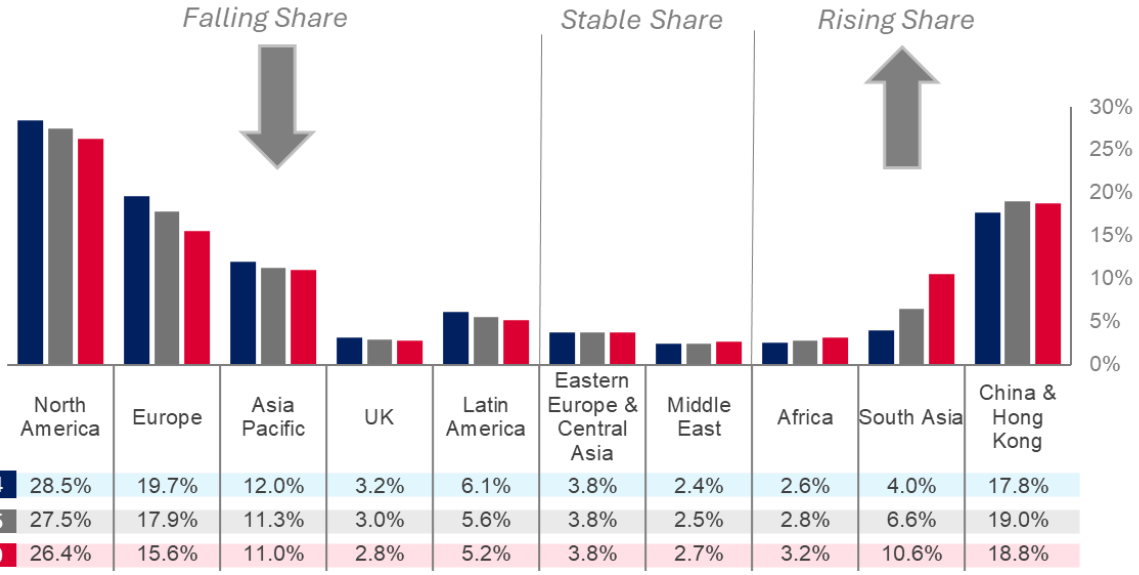
Figure 5: Regional drivers of global economic growth in real terms, share of global growth



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details. Notes: Figures show the contribution of different regions to global GDP growth in real terms (expressed in constant 2023 prices and exchange rates).

As most regions see stable or declining shares, South Asia's share of global GDP will more than double

Figure 6: Regional shares of global GDP, in nominal US dollars



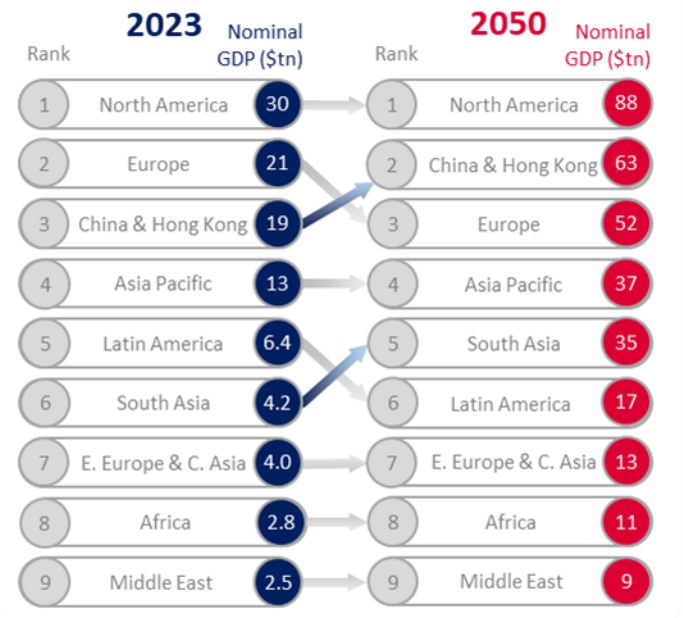
	North America	Europe	Asia Pacific	UK	Latin America	Eastern Europe & Central Asia	Middle East	Africa	South Asia	China & Hong Kong
2024	28.5%	19.7%	12.0%	3.2%	6.1%	3.8%	2.4%	2.6%	4.0%	17.8%
2035	27.5%	17.9%	11.3%	3.0%	5.6%	3.8%	2.5%	2.8%	6.6%	19.0%
2050	26.4%	15.6%	11.0%	2.8%	5.2%	3.8%	2.7%	3.2%	10.6%	18.8%

Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details. Notes: Data refer to nominal GDP (inclusive of inflation and converted using time-varying exchange rates).

- **While China's rise continues, North America is expected to remain the largest region, economically**. Despite a weaker growth outlook, China is expected to leapfrog Europe to become the second largest region by 2030, while South Asia is projected to overtake Latin America to become the 5th largest region. In contrast, advanced economies are expected to experience slower but more stable growth. North America is projected to maintain its position as the largest regional economy. Between 2023 and 2050, the region is projected to almost triple in nominal terms. Low growth is expected to continue in Europe, as populations age and shrink. But the sheer scale of the market means it will continue to be central to global economic activity.

China & Hong-Kong and South Asia will rise up the ranks by 2050, but North America is set to remain the largest region by GDP

Figure 7: Regional rankings in nominal US dollars

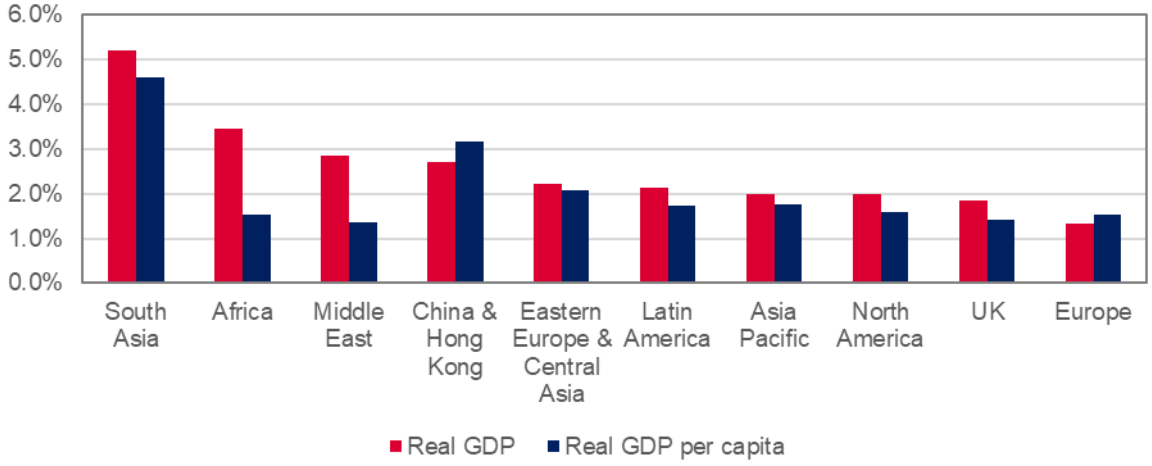


Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.
Notes: Data refer to nominal GDP (inclusive of inflation and converted using time-varying exchange rates)

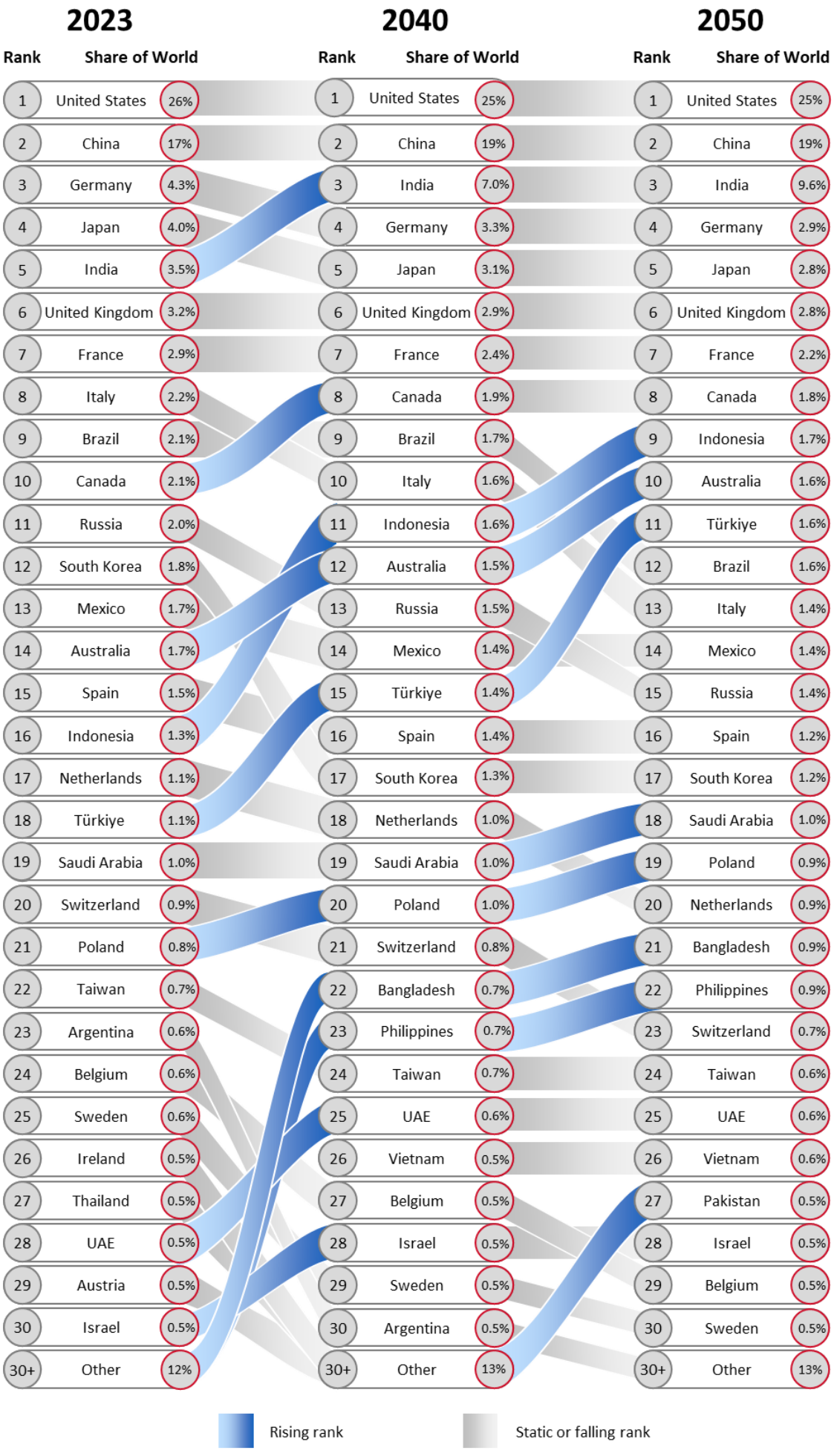
- **The rise of South Asia and China is expected to result in meaningful changes in living standards.** While nominal growth indicates the scale of expansion across regions, per capita growth reveals how this growth translates into living standards. South Asia and China are expected to see strong growth in GDP per capita, with annual growth of 4.6% and 3.2% respectively between 2023 and 2050. In contrast, Africa is forecast to be the fastest growing region after South Asia, with total GDP growing by 3.4% a year. However per capita growth is much weaker at just 1.5%, as population growth offsets much of the economic gains. Advanced economies such as Europe and North America are expected to see slower overall expansion — around 2% a year in real terms — but this will translate into steady, sustained increases in living standards of 1.5% a year.

Economic growth is expected to translate to rising living standards in South Asia and China, but Africa and the Middle East will see far weaker per capita growth

Figure 8: Real GDP and GDP per capita growth by region



Source: DBT's Global Trade Outlook modelling and UN World Population Prospects, 2024. See Analytical Approach for further details.
Notes: Data refer to real GDP in current prices, expressed in USD (inclusive of inflation and converted using time-varying exchange rates)

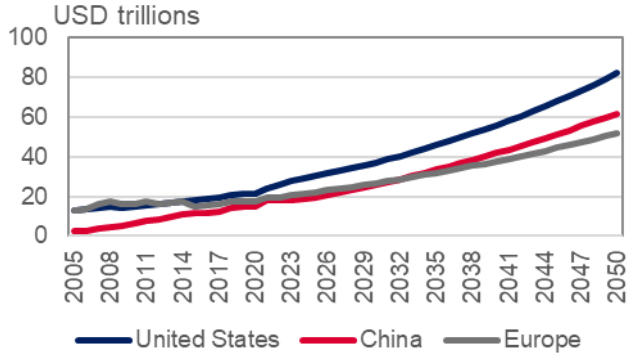

2023
Rank
Share of World
1 United States 26%
2 China 17%
3 Germany 4.3%
4 Japan 4.0%
5 India 3.5%
6 United Kingdom 3.2%
7 France 2.9%
8 Italy 2.2%
9 Brazil 2.1%
10 Canada 2.1%
11 Russia 2.0%
12 South Korea 1.8%
13 Mexico 1.7%
14 Australia 1.7%
15 Spain 1.5%
16 Indonesia 1.3%
17 Netherlands 1.1%
18 Türkiye 1.1%
19 Saudi Arabia 1.0%
20 Switzerland 0.9%
21 Poland 0.8%
22 Taiwan 0.7%
23 Argentina 0.6%
24 Belgium 0.6%
25 Sweden 0.6%
26 Ireland 0.5%
27 Thailand 0.5%
28 UAE 0.5%
29 Austria 0.5%
30 Israel 0.5%
30+ Other 12%
2040
Rank
Share of World
1 United States 25%
2 China 19%
3 India 7.0%
4 Germany 3.3%
5 Japan 3.1%
6 United Kingdom 2.9%
7 France 2.4%
8 Canada 1.9%
9 Brazil 1.7%
10 Italy 1.6%
11 Indonesia 1.6%
12 Australia 1.5%
13 Russia 1.5%
14 Mexico 1.4%
15 Türkiye 1.4%
16 Spain 1.4%
17 South Korea 1.3%
18 Netherlands 1.0%
19 Saudi Arabia 1.0%
20 Poland 1.0%
21 Switzerland 0.8%
22 Bangladesh 0.7%
23 Philippines 0.7%
24 Taiwan 0.7%
25 UAE 0.6%
26 Vietnam 0.5%
27 Belgium 0.5%
28 Israel 0.5%
29 Sweden 0.5%
30 Argentina 0.5%
30+ Other 13%
2050
Rank
Share of World
1 United States 25%
2 China 19%
3 India 9.6%
4 Germany 2.9%
5 Japan 2.8%
6 United Kingdom 2.8%
7 France 2.2%
8 Canada 1.8%
9 Indonesia 1.7%
10 Australia 1.6%
11 Türkiye 1.6%
12 Brazil 1.6%
13 Italy 1.4%
14 Mexico 1.4%
15 Russia 1.4%
16 Spain 1.2%
17 South Korea 1.2%
18 Saudi Arabia 1.0%
19 Poland 0.9%
20 Netherlands 0.9%
21 Bangladesh 0.9%
22 Philippines 0.9%
23 Switzerland 0.7%
24 Taiwan 0.6%
25 UAE 0.6%
26 Vietnam 0.6%
27 Pakistan 0.5%
28 Israel 0.5%
29 Belgium 0.5%
30 Sweden 0.5%
30+ Other 13%
Rising rank
Static or falling rank

A globally-connected US may solidify its position as the largest economy, but a turn away from trade would alter prospects

- **Not accounting for the long-term impact of tariff policy, the US looks set to cement its position as the world's largest economy.** North America's recovery from the pandemic has been strong, with US growth averaging 2.7% across 2022-24. This performance is the result of a combination of factors: including resilient private consumption, high business investment including in fast-growing digital sectors, and strong productivity growth – all creating a solid basis for future growth. While the IMF expects tariffs to weight on medium-term growth, between 2023 and 2050, growth is still expected to average 2.0%, the fastest of the G7, and well above the 1.5% averaged by other advanced economies. In contrast to previous projections, this accelerating growth is expected to see the US maintain its lead over China as the world's largest economy.

Strong economic growth leaves the US set to remain the largest economy out to 2050

Figure 9: Major markets nominal GDP (USD), 2005 - 2050

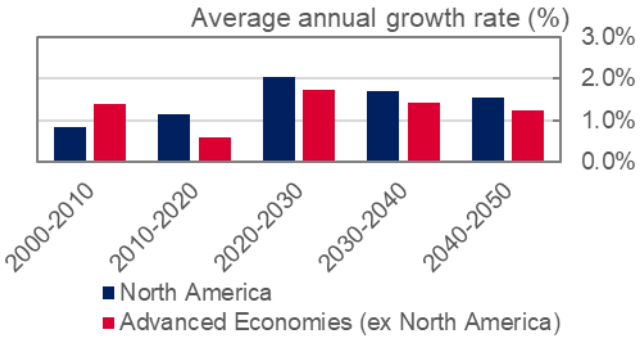


Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **US success in the Outlook is based on the assumption that the country remains globally connected.** In the policy-neutral long-term lens of the Outlook, US exports grow fastest to Canada, Mexico and China, which together account for a third of all export growth. The strong performance of the US reflects both its exposure to growth drivers, such as technology improvements, but also its relative insulation from headwinds such as changing demographics, which are still present but to a lesser extent than other regions. These factors drive growth that sees a tripling of US exports between 2023 and 2050, with exports in value terms growing by the second largest amount of any market.

The US may outperform major markets

Figure 10: GDP growth per capita in real terms



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **US economic uncertainty means that risks to the projections are tilted on the downside.** Most of the assumptions of the Outlook's projections for the United States, and North America more broadly, are fundamentally based on its openness to international trade as well as continuation of economic fundamentals which have fed its recent outperformance. However, beyond those reflected in the near term-forecasts, which are taken from the IMF WEO, the Outlook does not reflect existing uncertainty around US economic policy. This is not limited to trade policy – where a substantial move away by the US from the world economy would be expected to dent US activity and productivity – but wider issues such as how growing federal debt or pressures on long-term labour supply could impact the economy. Other uncertainties in the outlook are more positive – notably, the significant uptake of frontier technology could disproportionately benefit the US, given the country's strong positioning in key productivity-boosting technologies such as artificial intelligence. But with so much depending on critical trade policy decisions, it remains unclear the extent to which America's fundamental strengths will translate into the rapid growth expected by the Outlook.

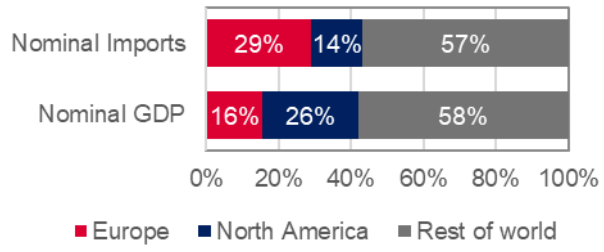
Ageing populations will weigh on European growth, but the region will remain an irreplaceable economic centre

- **Europe faced the brunt of the terms of trade shock stemming from the war in Ukraine, which slowed its recovery from the pandemic.** Europe was most directly exposed to the shock in global energy markets that followed Russia's invasion of Ukraine, with Eurozone headline annual inflation peaking at 10.6% in October 2022.[3] This has slowed the recovery across the region while presenting particular challenges for manufacturing-heavy economies, such as Germany.

- **While its recovery is now accelerating, Europe continues to face structural headwinds.** Real GDP growth is expected to average 1.4% for the remainder of the 2020s and 1.5% throughout the 2030s, before slowing to 1.2% over the 2040s. The long-term outlook is shaped by an ageing population and weak productivity growth, and beyond the projection is expected to be influenced by tight debt conditions in a context of unprecedented spending pressures (on a range of areas, including defence, infrastructure, public services, and the green transition). Among the largest European economies, average growth until 2050 is expected to be highest for the Netherlands (1.6%), Spain (1.4%), and France (1.3%); although growth is expected to be stronger among markets in Eastern Europe.

Europe is set to remain the world's largest region for imports in 2050

Figure 11: Projected shares of GDP and imports in 2050, nominal US Dollars

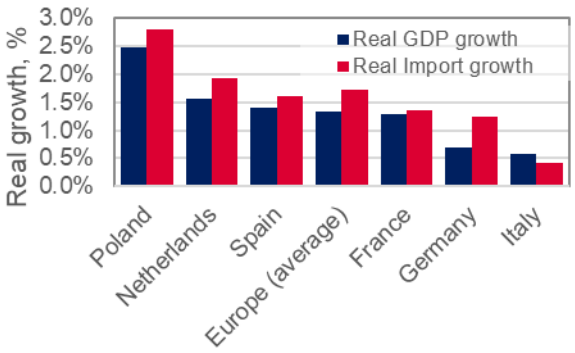


Source: DBT's Global Trade Outlook modelling. See Analytical
Approach for further details.

- **But the sheer scale of the market means it will continue to be central to global economic activity and trade, and will remain the UK's largest trading partner.** Europe is expected to make up over 15% of the global economy in 2050, with its traditional major economies (Germany, France, Italy and Spain) accounting for 8%. Europe is an irreplaceably large importer, and demand is expected to remain resilient across the forecast. Import growth is expected to outperform GDP growth, largely thanks to Europe's high trade openness and reliance on intra-EU supply chains. In 2050, European imports are projected to account for 29% of global imports, well ahead of the next largest regions in Asia Pacific (16%) and North America (14%).

Import growth is expected to outpace GDP growth in key European markets

Figure 12: European real growth projection between 2023 - 2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **The true outturn of Europe's activity will depend on the extent to which it can capitalise on opportunities to improve productivity.** In particular, long-term factors on the supply side of the economy – such as the ability to channel investment into high growth sectors, to maintain a large and highly-skilled labour force, and to retain global competitiveness amongst growing trade tensions – will be pivotal for European economies. Maintaining access to markets, including the US, will also be key for export-oriented markets like Germany.

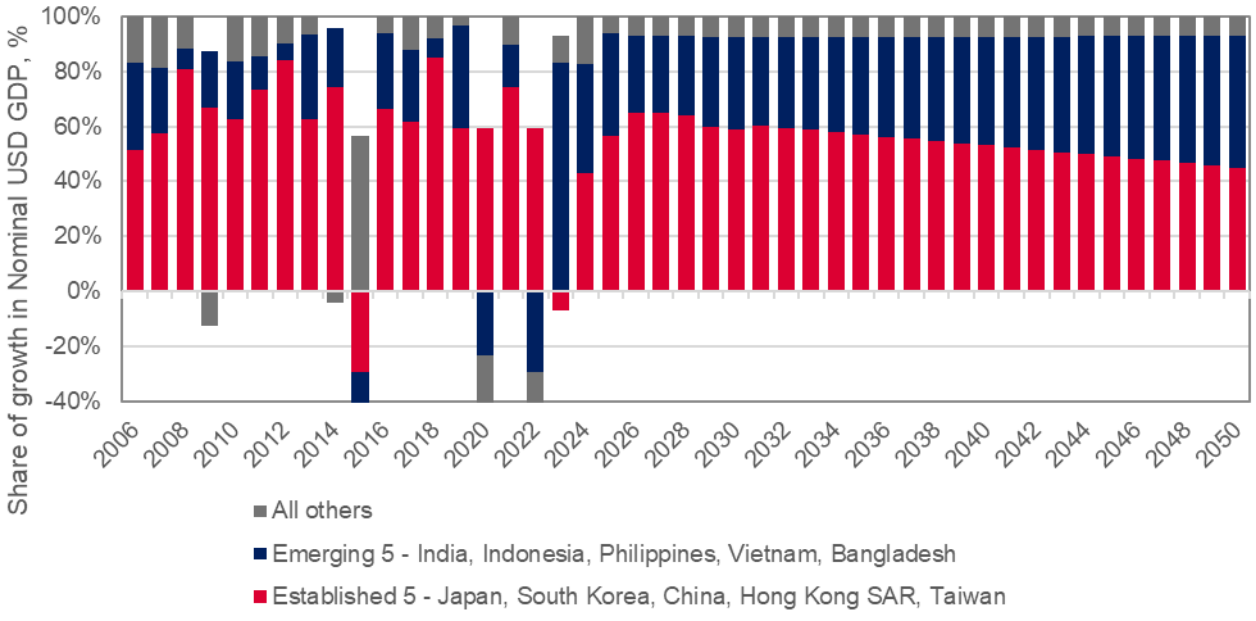
[3] Eurostat, "HICP - monthly data (annual rate of change)", https://doi.org/10.2908/PRC_HICP_MANR

China's growth will slow faster than previously expected, but will be partially offset by a bloc of markets led by a rising India

- **The global economic centre of gravity has already been shifting eastwards over recent decades, driven foremost by rapid growth in the Chinese economy.** Much like Japan in the decades post-World War II, China's rapid expansion this century has been characterised by a rapid increase in investment and deepened ties into global trade. Looking ahead, however, both China and Japan face renewed headwinds from ageing and shrinking populations and increasingly uncertain global trade conditions. Difficulties in transitioning to more consumption-centric growth models continue to expose the region to fluctuations in global trade demand and may dampen growth, but the region's strength in critical technologies like chip manufacturing and AI could boost growth prospects. Projections in the Outlook show growth in these countries slowing to an average of 2.8% for China and 0.7% for Japan until 2050.
- **India and the rest of South Asia's growth acceleration could help offset China's slowing.** In particular, the emergence of India as a regional growth engine reflects its advantageous demographics as well as its competitiveness in manufacturing and online business sectors. Having already become the most populous country in the world, continued population growth is expected to boost the Indian labour market further. Paired with strong productivity growth, which would see real GDP per capita also rise at an average of 5% per year during the forecast period, India's economy is projected to be the 3rd largest economy in the world by 2028. To sustain this high level of growth, India's economy will have to overcome a number of domestic challenges, including skills gaps, informality in the labour market, and external trade restrictions.

China's growth will slow faster than previously expected, but will be partially offset by a rising India and South Asia

Figure 13: Contribution to growth in the Indo-Pacific, 2005 – 2050



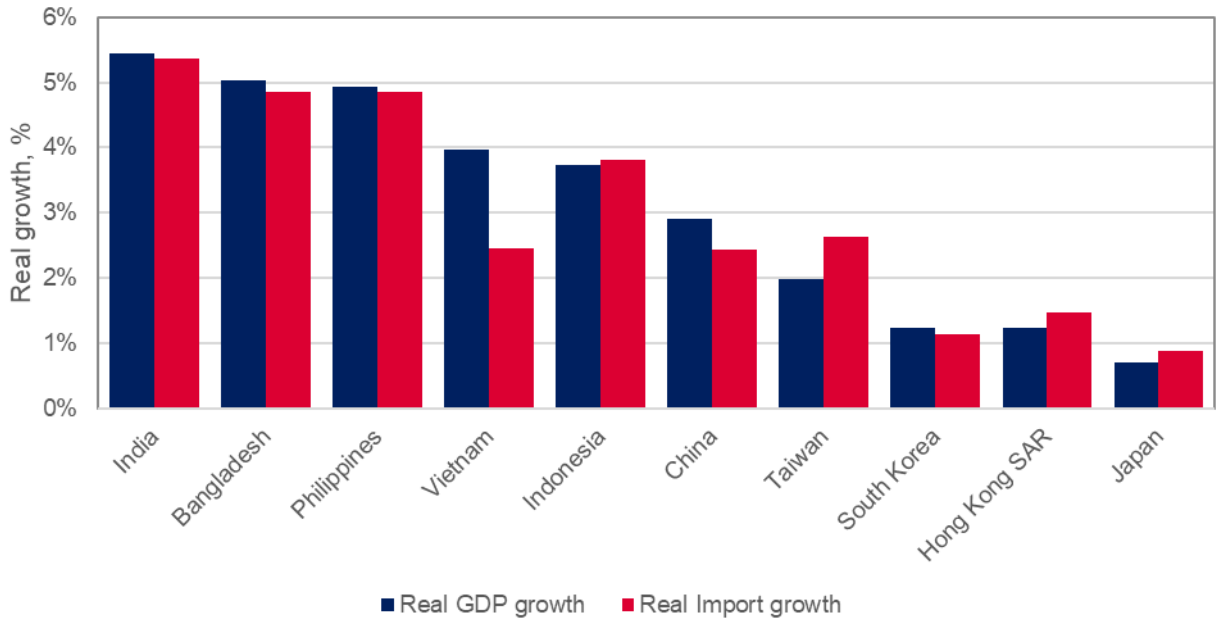
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **Other emerging Indo-Pacific economies – including Bangladesh, Indonesia, Vietnam and the Philippines – are also expected to take on a more prominent role in driving regional growth**. For these economies, growth is driven by a combination of demographics, productivity, and opportunities from shifting trade patterns. Although the extent to which these economies will benefit from the gains of new technologies, which may be more concentrated elsewhere, is uncertain, these countries are forecast to benefit from deepening trade integration within the region. Traditional growth centres may see more mixed fortunes, with the likes of South Korea struggling with expected declines in working age populations of 35% over the Outlook[4], but strong productivity performance may offset some of these concerns.

- **High levels of trade exposure could cloud the Outlook for the Indo-Pacific.** Within the region, risks are highest for Asia Pacific, where exports are valued at 40% of GDP. While the scale of export intensity is much lower for China & Hong Kong (20%) and South Asia (15%), in both cases exports play strategically important roles as enablers of domestic economic activity. In the April announcement of tariffs by the United States, tariffs were highest for key regional growth markets, being set at 46% for Vietnam and 32% for Indonesia. This complicates the Outlook for the region, given current projections expect that the US would be the third largest destination for exports from Asia Pacific and China & Hong Kong in 2050, and the largest destination for South Asian exports. Other risks to the outlook for Indo-Pacific economies are more varied, with the region being notably vulnerable to the effects of climate change, especially flooding, which has the potential to cause sudden disruptions to regional activity.

Emerging markets such as India, Bangladesh, the Philippines and Vietnam are expected to see strong growth out to 2050

Figure 14: Indo-Pacific real growth projection between 2023 - 2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

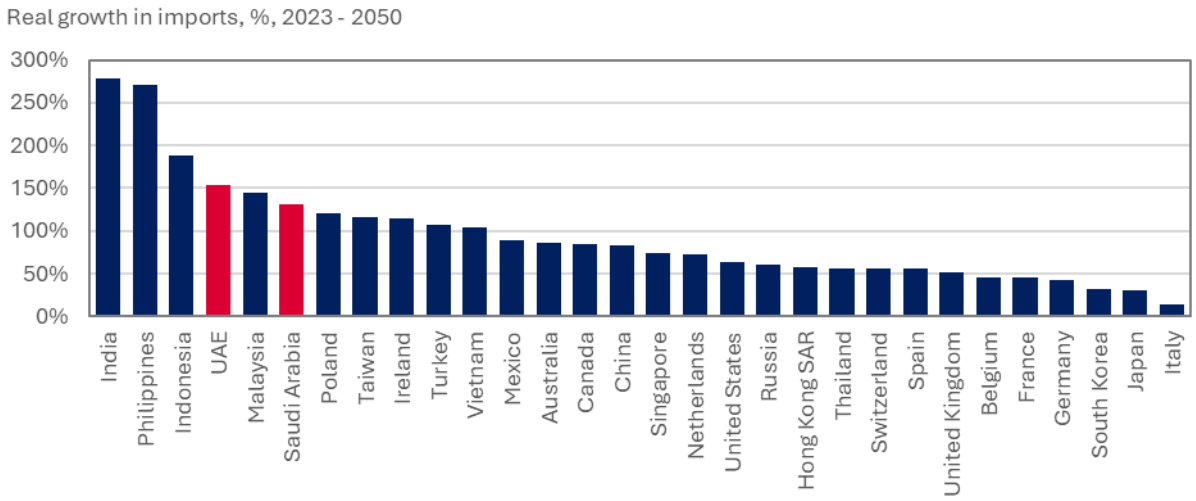
[4] United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

Consumers and imports in Latin America and the Middle East will outperform growth, while Eastern Europe and Central Asia may be boosted by improved stability

- **The Middle East's largest markets are expected to see rises in imports that exceed growth expectations.** The Middle East is expected to be the fourth best-performing region out to 2050, with average annual growth of 2.7%. But risks are weighted on the downside, with regional conflict, climate change, and the potential flattening out of oil demand all weighing on expectations. Despite this, larger regional markets are expected to see exceptionally fast import growth, with much of this centred on Gulf Cooperation Council markets, with the UAE and Saudi Arabia respectively seeing the 4th and 6th largest growth in imports over the forecast period – changes that could see both markets rise to the top 10 largest destinations for UK exporters. This import boom may be complemented by strong investment by key markets, both locally and abroad, reinforcing opportunities in the region. Uncertainties are high on the potential impact of monetary policy, with the projections assuming current pegged-exchange rate systems remain at their current level.
- **Latin America is expected to be the worst performing region among emerging markets but may still offer a large and growing consumer base**. Growth in the region is expected to average 2% over the forecast period, as underlying productivity challenges are coupled with the onset of early demographic declines in the largest regional markets, such as Brazil. The region has the second highest number of markets reaching peak populations over the forecast period (12, behind only Europe), and will reach those peaks earlier in their development than other markets, at around 60% of the GDP per capita of Europe and Asia Pacific at their population peaks. But despite these challenging dynamics, the region's large and sophisticated consumer markets are still expected to deliver some of the highest numbers of new high-income consumers[5], as those on the threshold shift into higher income brackets. While this growing consumer market won't be anything like the scale seen in the Indo-Pacific, it may still deliver more new high-income consumers than mature markets like Europe and North America.

The UAE and Saudi Arabia are expected to be standout import growth markets

Figure 15: Real import growth, 2023 - 2050, top 30 largest importers

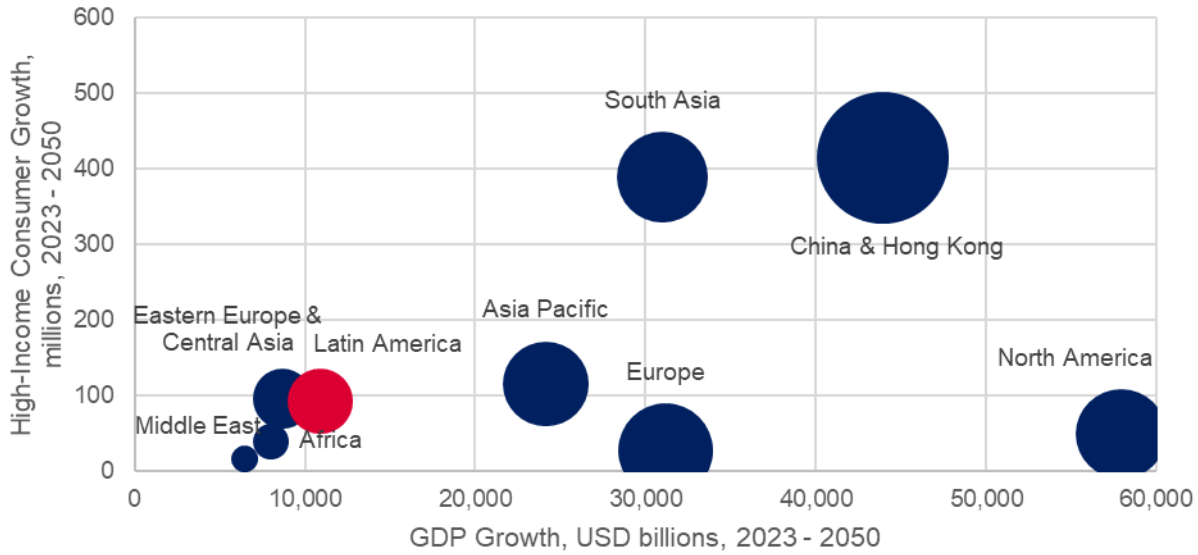


Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

[5] High-income consumers refer to those earning above the substantial buying-power threshold of $14,656 (in 2023 prices). These definitions do not align with other similar phrases, such as 'middle-income country'. More information on 'high-income consumers' can be found in Chapter 2.

Latin America's sophisticated consumer market may offer opportunities in spite of lacklustre growth

Figure 16: GDP vs High-Income Consumer Growth, 2023 – 2050



Note: Size of the bubble indicates total number of high-income consumers in 2050. High-income consumers refer to those earning above the substantial buying-power threshold of $14,656 (in 2023 prices).
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

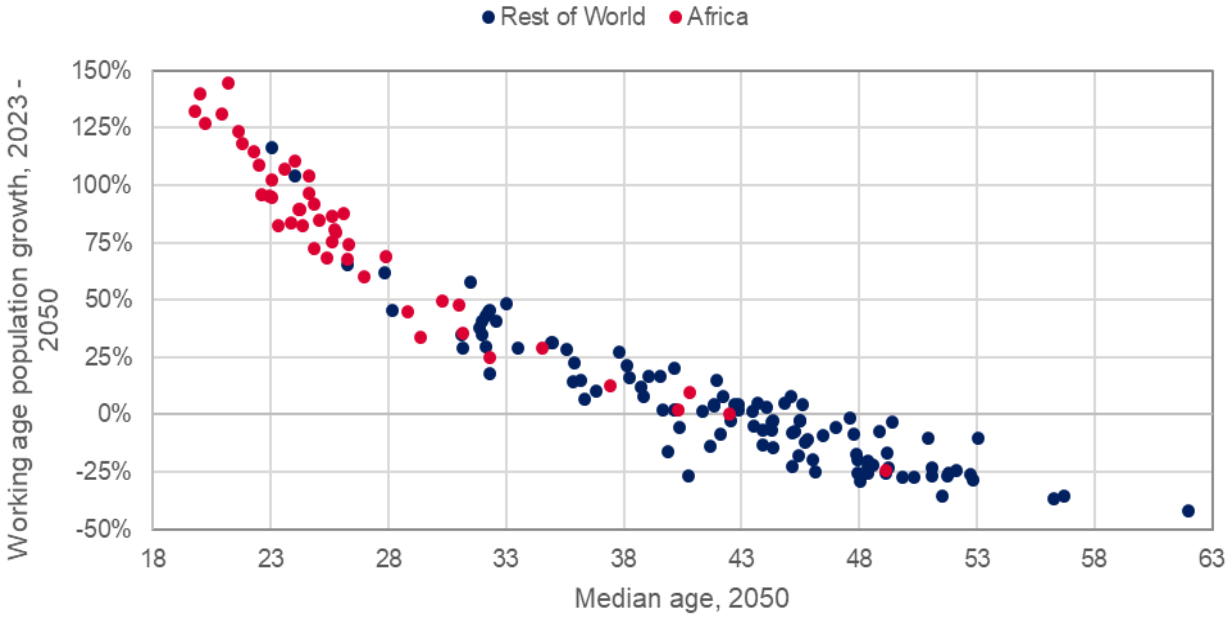
- **Eastern Europe and Central Asia have a mixed growth outlook that could be transformed by improved stability in the region.** The region is expected to grow at an average of 2.6% across the forecast period, maintaining a stable share of global GDP at an average of 3.8%. But the outlook for the region is highly uncertain, with recent growth being significantly disrupted by Russia's invasion of Ukraine, and by a period of very high inflation in Türkiye. This nascent recovery may not be fully captured by the Outlook's modelling and could see the region entering onto a higher growth pathway if improved stability and the de-escalation of conflicts continue to unlock significant growth potential.

Booming populations in Africa could drive growth, but it may not be enough to absorb waves of young workers

- **Demographic dividends will be key growth-drivers in some emerging markets, with the impact of growing populations being strongest in Africa.** African countries are forecast to account for 28 of the 30 fastest growing working age populations[6], with the region a distinct global outlier in its age demographics and rate of population growth. By 2050, Africa's working age population is expected to have expanded by around 80%, even as other regions see outright declines; and as a result, the continent will expand from 15% of the global working age population, to close to 25%.[7] This boom is projected to deliver the second highest growth rates of any region (behind South Asia), with real growth of around 3.6% in 2030, slowing to around 3.1% by 2040 – and marked by standout growth in major markets like Ethiopia.
- **But even with high growth, absorbing swelling populations will be a challenge.** African labour markets will have to create enough jobs to keep pace with a nearly 700 million people increase in working age populations[8], off an existing employment base of only around 500 million.[9] While the Outlook projects that all African markets will see a rise in real GDP per capita across the forecast period, and growth may be buoyed by deepening regional integration, uncertainty is high. Even a small negative deviation in the growth projection could see 27 African markets, representing around half of the continent's current population, facing declining real GDP per capita by 2050. With external research suggesting Africa faces a complex set of pressures – with trends like deeper regional integration and growing economic reforms driving growth, and trends like fiscal strains and geopolitical instability threatening growth – the payoff from the demographic dividend will remain uncertain, with global implications for growth and migration if risks overwhelm opportunities.

Africa's demographics are a global outlier, with a young and fast-growing working age population

Figure 17: Trends in Working Age populations and Median Age, 2023 – 2050



Source: UN World Population Prospects, 2024.

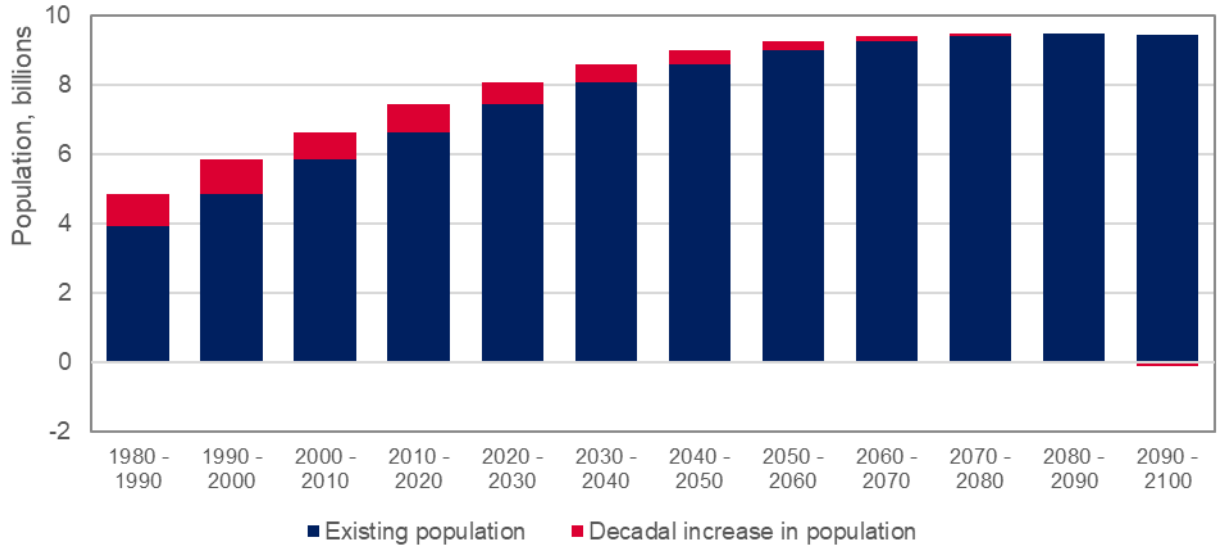
[6] UN, 2024. "World Population Prospects (Probabilistic Projections)"
[7] UN, 2024. "World Population Prospects (Probabilistic Projections)"
[8] UN, 2024. "World Population Prospects (Probabilistic Projections)"
[9] ILO, 2024. "Labour Force Statistics (LFS)"

Population growth is expected to diverge sharply between regions, with Africa and South Asia anchoring growth in an ageing world

- **The global population is expected to expand by 2 billion people by 2050,** acting as a significant driver of economic growth. But population growth is expected to continue to slow, following a long-running trend that will finally result in declining population growth from the 2030s onwards. This trend is expected to continue beyond the forecast, with global peak population expected to be reached in the 2080s.
- **Slowing population growth will create a drag on economic activity, with revised population forecasts an important factor in the growth outlook.** Revised UN projections suggest that by 2050, 190 million fewer people would have been born than previously expected. Eight markets – China, Ethiopia, the Philippines, Nigeria, Pakistan, Brazil, Niger and the DRC - have had their 2050 population projections revised down by more than 10 million people, with China seeing the most dramatic cuts of over 60 million people. These declining demographic trends have stark impacts for the global economy: 7 of the top 30 economies have already hit peak populations, with 8 more to follow by 2050. Even for those advanced economies projected to see continued population growth past 2050, such as the US and the UK, much of this stems from migration outweighing the effects of falling birth rates – a trend that is uncertain given evolving migration policies.
- **Africa and South Asia are expected to make up more than 80% of population growth to 2050, as regional growth patterns diverge sharply.** In a reversal of recent trends, Asia Pacific is expected to shift rapidly to shrinking populations, declining from a population peak of 2.3 billion people in 2029 to 2.2 billion people in 2050. By contrast, South Asia will see population growth of 270 million people by 2050, while Africa will expand by 840 million people over the same period. Europe and North America are expected to diverge, as population growth goes into decline across Europe, while growth continues in the United States.

Downward revisions to projections have further muted slowing population growth

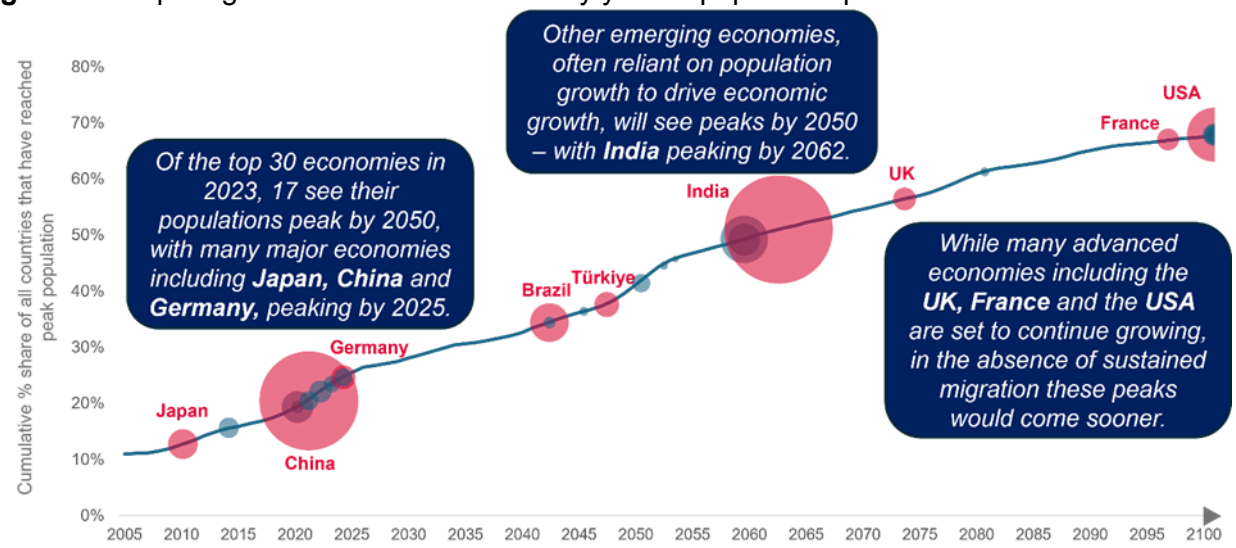
Figure 18: Changes in the world's population, 1980-2100



Note: This graph only shows population for countries covered by the Outlook.
Source: UN World Population Prospects, 2024.

Half of the top 30 largest economies are expected to reach peak population by 2050

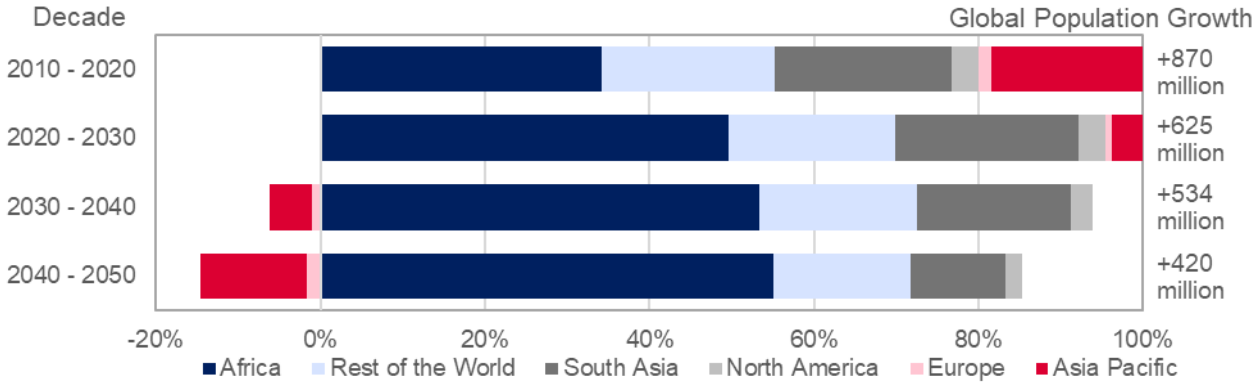
Figure 19: Top 30 global economies in 2023 by year of population peak



Source: UN World Population Prospects, 2024. Note: Bubbles scaled by countries' population at their peak

Population booms in Africa and South Asia are contrasted with population declines in Asia Pacific and Europe, as global population growth slows

Figure 20: Global population growth, by region

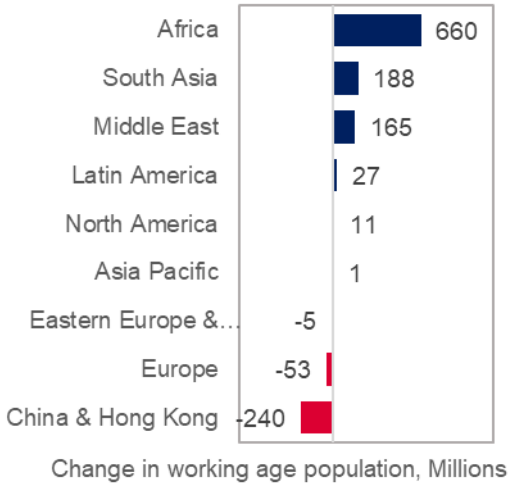


Source: UN World Population Prospects, 2024. Only markets included in GTO forecasts.

- **The population of the world is rapidly ageing, with the global median age tipping above 30 for the first time in 2021.** Across the forecast period, only one region – Africa – will maintain a median age below 30-years old: with a dramatic youth explosion having brought the median age to 19 in 2024, and only reaching 24 by 2050. In line with trends seen elsewhere, South Asia faces a similar trend but is further along in its trajectory – with a median age of 27 at the start of the forecast rising to 40 by 2050. By contrast, Europe and North America are both expected to have median ages above 40 by 2030. This divergent ageing trend will see the population of Africa and South Asia dominate growth in working age populations, while Europe and the rest of Asia (Asia Pacific and China & HK) grapple with declining workforces. These economic headwinds may be further exacerbated when combined with the other problems ageing populations bring, such as growing care spending drawn from a shrinking tax base.

Aging populations deepen the impact of declining populations

Figure 21: Growth in working age population, 2023 – 2050, by region



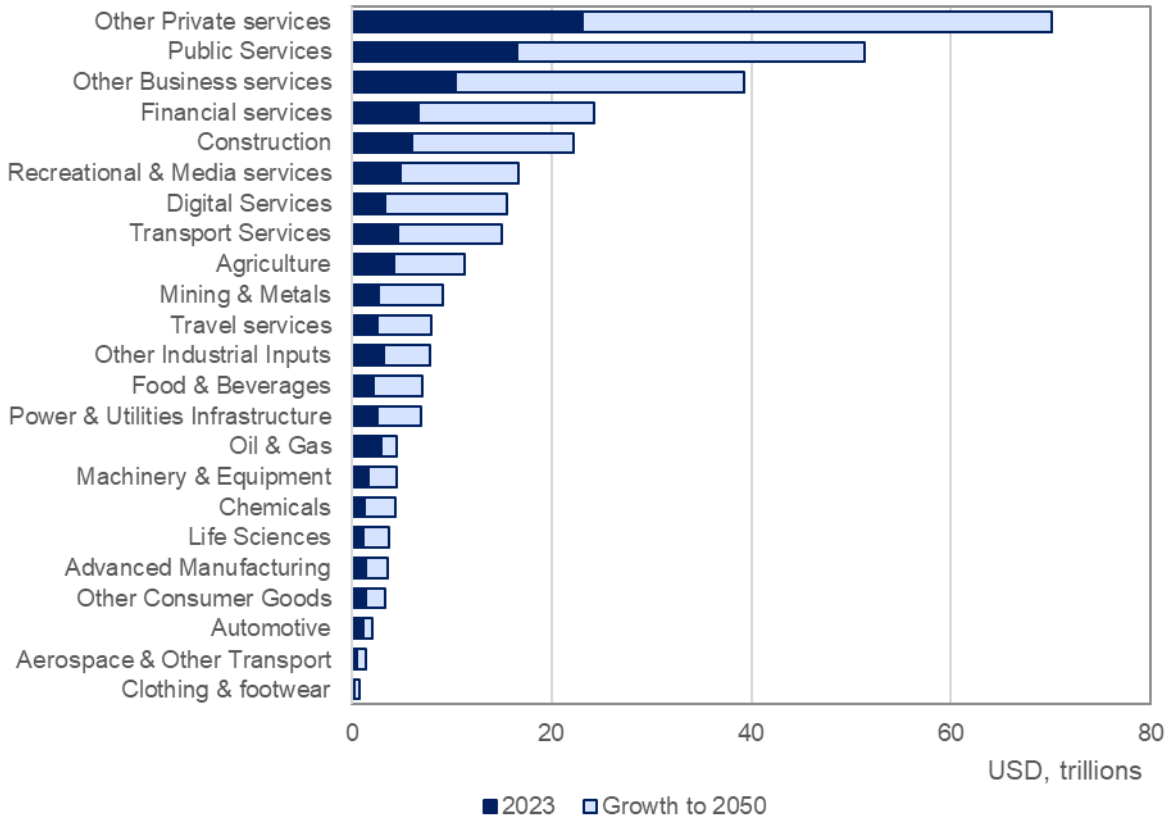
Source: UN World Population Prospects, 2024. Median estimate.

Services sectors will continue to rise and anchor global growth, even as foundational industries remain resilient

- **Services sectors will continue to cement their place as the largest share of global GDP**, increasing their share of global GDP from 75% in 2023 to 79% in 2050. While the largest portion of this growth will be in domestic-oriented services, value-added tradeable services like media, the digital economy and finance will continue to exhibit strong growth. Growth in these sectors will be most intense in emerging markets, which will see their share of global tradeable services rising from 35% to 45%, diversifying sectors traditionally dominated by advanced markets. Rapid innovation, most notably with AI potentially transforming delivery models for a number of services sectors, could shift this outlook and who benefits from it. Goods remain an important portion of most emerging market regions, but the continued growth of services' share of the global economy is a consistent trend across regions.
- **Growth in foundational sectors is expected to remain resilient.** Construction is the standout performer, seeing the third most rapid growth of any sector, and helping lift prospects for key industrial inputs like chemicals and metals. In part, this reflects the strong role of emerging markets in the projection's growth mix and these markets' growth-driven expansion in essential infrastructure; while the expected surge of investment associated with Net Zero may also boost overall growth prospects. More rapid growth in services and foundational sectors will see complex manufacturing sectors' shares decline as a mechanical result, but these sectors still see moderate growth – with the notable exception of the automotive and advanced manufacturing sectors, which grow considerably slower than the cross-sector average.

Domestic services sectors continue to dominate the composition of global GDP

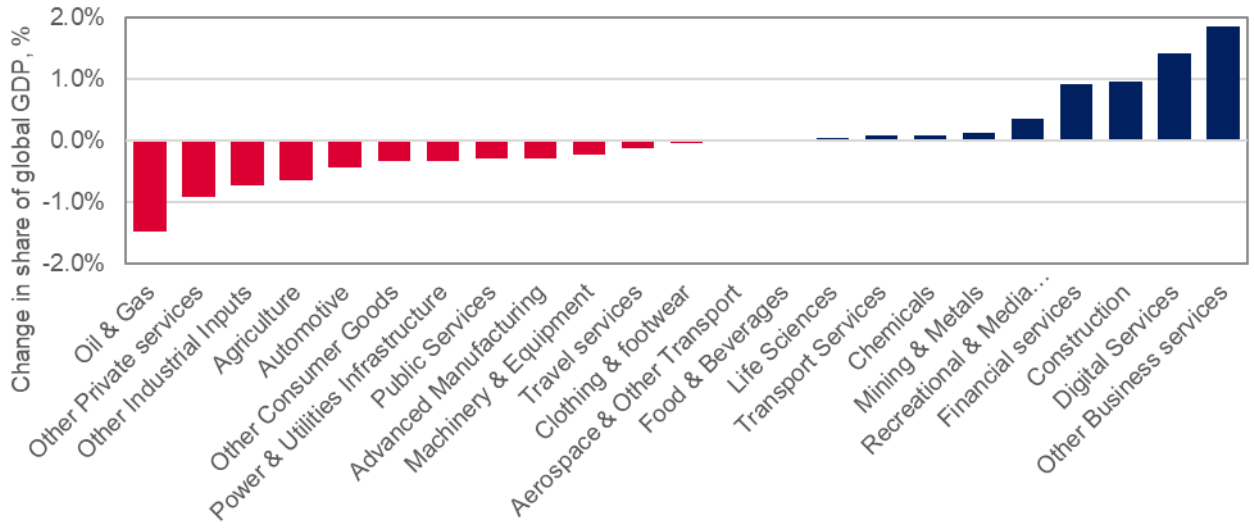
Figure 22: Global GDP by sector, 2023-2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

Advanced services and foundational sectors are expected to expand their share of global economic activity, while more complex manufacturing sees declines

Figure 23: Change in sectoral shares of global GDP, 2023 – 2050

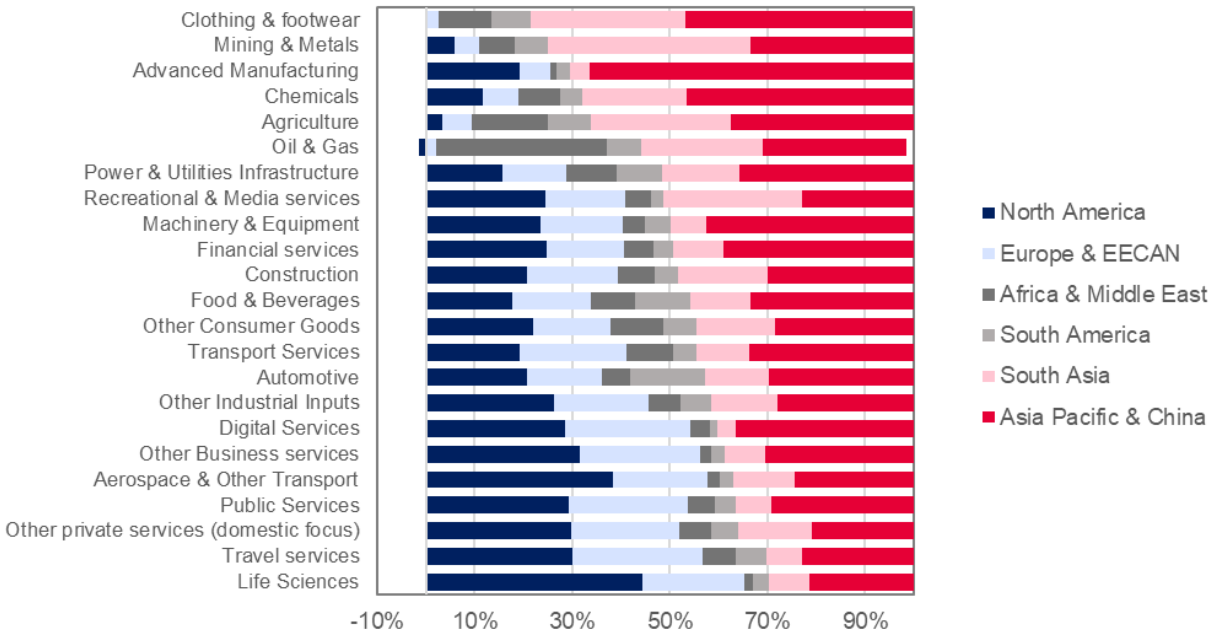


Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **Regional differences in sector specialisations remain notable across the forecast, but with emerging diversification.** Major emerging regions are projected to anchor growth in industrial and advanced manufacturing sectors, while advanced economies anchor growth in services sectors. But all major regions play a notable role in growth across sectors, with sectors like the creative industries and financial services being relatively evenly split across regions. Newer industries, like AI, increasingly feature strong performance across both advanced and emerging markets. Uncertainties remain on whether the current distribution of sectors remains viable in the face of pressures such as rising trade barriers and efforts by some emerging markets (notably China) to deepen domestic consumer markets.

While emerging markets continue to specialise in key industrial sectors, there are emerging strengths in areas like financial and media services

Figure 24: Share of growth in Sector GVA, by region, 2023 – 2050



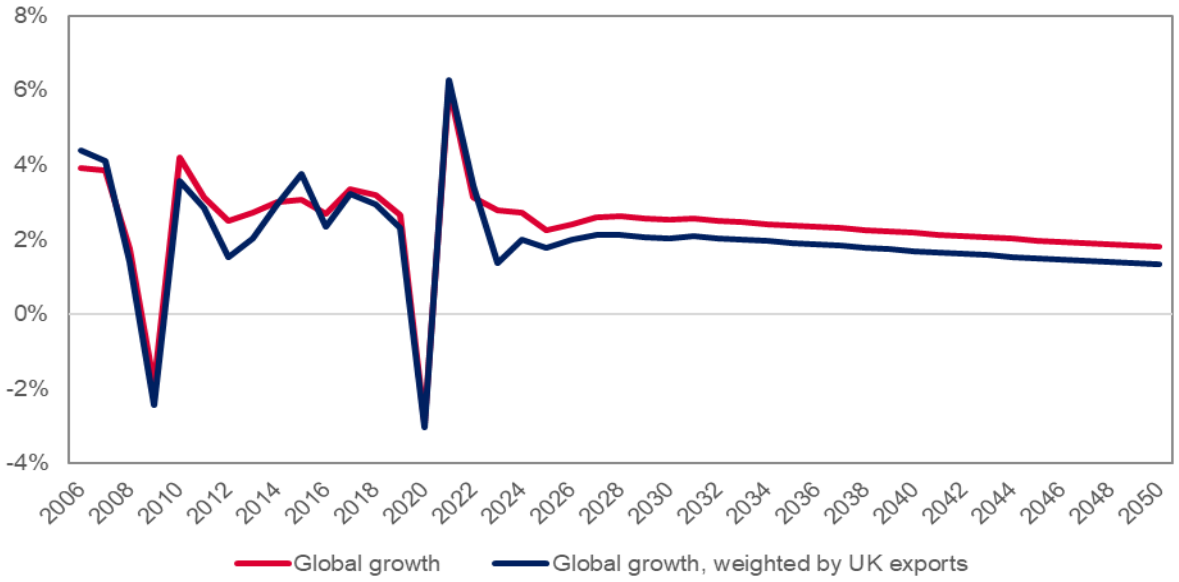
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.
Note: EECAN refers to Eastern Europe and Central Asia.

The UK is expected to maintain its position as the 6th largest economy, but slower global growth may weigh on UK growth

- **Growth in other markets suggests the UK will retain its position as the 6th largest economy**[10], but with the UK's share of global GDP declining marginally from 3.2% in 2023 to 2.8% in 2050. The Outlook does not construct forecasts for the UK and instead aligns with forecasts produced by the OBR. These project average annual growth in real terms of 1.8% between 2024 and 2050, contributing to a 65% expansion in GDP, which in turn contributes to a 44% increase in GDP per capita.
- **The UK is well connected with fast-growing markets, but global growth spillovers may wane.** When countries are weighted by their importance for UK exports, real global growth over the forecast period averages 1.8%, compared to 2.3% average global growth. This lower growth figure results from the UK's deeper connections with more mature advanced economies and may suggest the local impact of global growth could be boosted by deepening connectivity with fast-growing emerging markets. Growth in key UK export markets is projected to be lower than in recent trends, with UK export-weighted growth previously averaging 2.5% between 2010 and 2023, suggesting that future global growth may offer less of a growth impetus to the UK economy than in recent history.
- **Sector and income trends may play to UK strengths.** The Outlook suggests that global economic activity will be buoyed by the growth of high-income consumers (discussed in Section 2), who will help drive rising demand for services and high-value manufactures – offering growth in areas of UK specialisation. Accelerating growth in domestic services sectors in emerging markets – which increase their share of GDP to 72% in China and South Asia in 2050, up from 61% and 65% in 2024 respectively – may offer opportunities for partnerships by UK firms, while also potentially offering rising competition in key services export sectors.

The UK's robust trading relationships around the world will drive exports, but deepening connectivity to fast-growing emerging markets could accelerate growth

Figure 25: Real GDP growth, global vs UK-export weighted growth, 2006 - 2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

[10] UK projections are based on OBR forecasts available at the time of writing. Any subsequent updates to OBR UK long-term outlook or updates to IMF WEO outlook for other economies may change these projections and the UK's relative GDP rank. See Analytical approach (Chapter 4) for further information on how projections are reliant on OBR and IMF forecasts.

2 Global Trade Trends

GLOBAL GROWTH

Global trade is expected to grow over the forecast period, but at a slower pace than the historic highs in the 1990s and 2000s, settling into a range of between 1.4% and 2%. These gains will be impacted by the implementation of recently announced tariff measures and subsequent responses to them.

EMERGING MARKETS

Global trade continues to be dominated by four regions – Europe, North America, Asia Pacific and China - but with fast-moving new opportunities in smaller emerging markets. South Asia, Africa, and the Middle East are set to drive future import demand, while Europe and North America's shares decline. India, Vietnam, and Indonesia are expected to be standout growth engines.

REGIONAL VALUE CHAINS

In the absence of major new tariffs, the largest outright growth in exports is expected to be in trade within regions, but key linkages in global value chains could be reshaped by emerging trade policy. By 2050, the largest trading relationships will continue to be between countries that share economic activity across value chains

SERVICE DOMINANCE

Services will rise from 25% to 31% of global trade by 2050, led by construction, digital, business, and travel services; areas where the UK has strong comparative advantages. Advanced manufacturing will see the largest absolute growth by 2050, but services sectors will grow faster in percentage terms.

GREEN SHIFT

Oil & gas will fall from 10% to 5% of global trade by 2050, dropping from the second most traded sector to the 9th most traded, while green value chains and advanced manufacturing gain ground, aligning with Net Zero goals.

UK OUTLOOK

UK exports are projected to more than double by 2050, with standout growth in business services, life sciences, and digital sectors - especially in South Asia and Africa. Overall, the six Industrial Strategy sectors for which data is available are expected to see their global export opportunities expand by $10 trillion by 2035, offering an immense opportunity for growth.

Global trade growth is expected to hold steady in the medium-term and slow in the long-term, but uncertainty is extremely high

- **Global trade continues to be marked by a period of significant volatility.** While the legacy of COVID-19 is still the most notable feature of recent trends, a combination of geopolitical uncertainty, high prices and shifting trade policies saw a surprise decline in global import volumes in 2023. Recovery from these pressures has been relatively strong, and prior to recent tariff announcements both the IMF and the WTO expected global trade growth to return to levels above 3% from 2025. These nascent gains will be impacted by recently announced tariff measures and subsequent responses to them, which could see real import growth fall from 3.4% in 2024, to 2% in 2025 and 2.6% in 2026.
- **If fragmentation is avoided, trade is expected to grow over the forecast period, but at a slower pace than global GDP**. A growing global consumer market will help sustain real long-term growth in imports, which could settle at levels of between 2% and 3% (in real terms) in the 2030s, slowing gradually to 1.4% by the end of the forecast in 2050. Beyond concerns of rising market fragmentation, shocks such as extreme climate events or conflict could disrupt the outlook. On the upside, green value chains could benefit from coordinated investment in decarbonisation, while deepening integration in some regions could lower trade barriers.

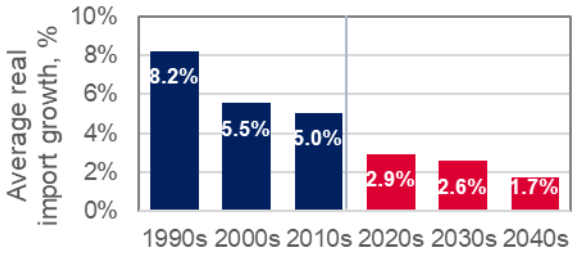
Global trade growth is expected to settle into a range of between 1.4% and 2%.

Figure 26: Real GDP & Import growth

Notes: GDP is calculated in real Local Currency Units (LCU) and then aggregated to global trends by weighting national growth by GDP in US Dollars. Imports follow the same approach. Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

Global imports see a significant slowdown from historic highs in the 1990s and 2000s

Figure 27: Avg. real import growth, by decade

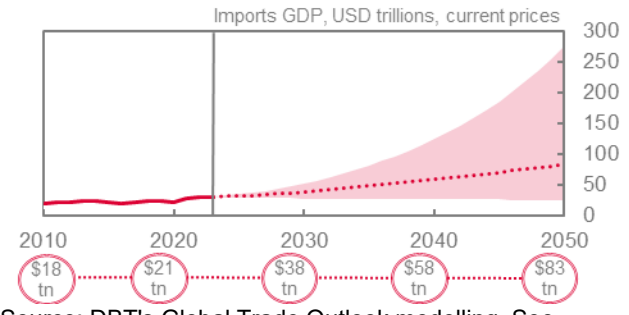


Notes: GDP is calculated in real Local Currency Units (LCU) and then aggregated to global trends by weighting national growth by GDP in US Dollars. Imports follow the same approach.
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **By 2050, global trade is expected to be worth USD 83 trillion, up from around USD 30 trillion in 2023**. By 2030, global imports could enter a period of slowing, but nevertheless positive, growth. This could see real imports expand by an annual average of 2.6% in the 2030s and 1.7% in the 2040s. While positive, this growth is still significantly below the trade boom of last few decades, which saw real annual import growth averaging 8% in the 1990s, and around 5% in the 2000s and 2010s. Slowing population growth and worse-than-expected conditions in key emerging markets, alongside changes to the methodology used to construct forecasts, mean import projections are significantly less positive than in previous editions of the GTO, with the global import market being 16% smaller than previously expected in 2050.

In dollar terms, global imports are expected to more than double by 2050

Figure 28: Import in Nominal USD, 2010 – 2050



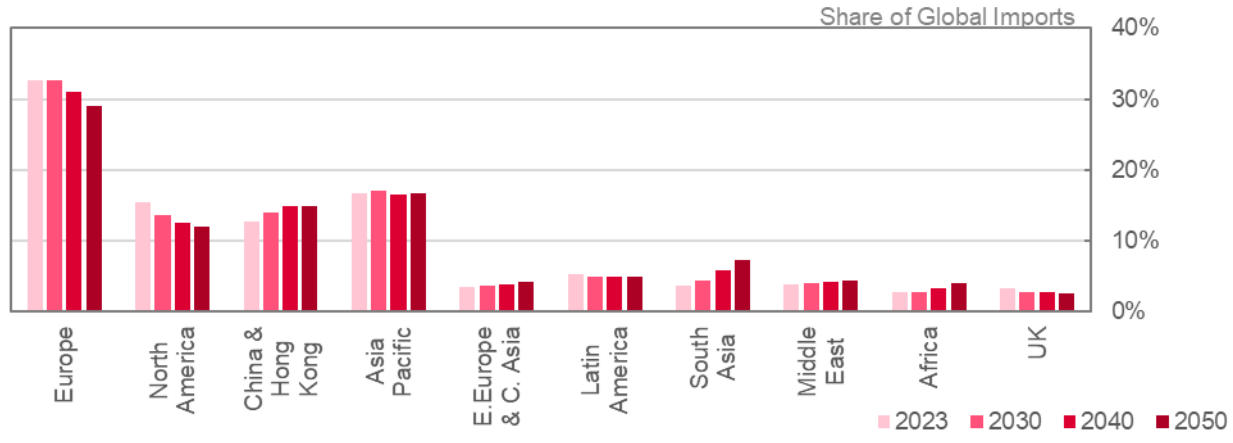
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

Imports are expected to remain clustered in the largest regions, but with fast-moving new opportunities in smaller emerging markets

- **Global trade continues to be dominated by four regions – Europe, North America, Asia Pacific and China.** In 2023, these four regions accounted for 78% of global imports and GDP. Europe alone accounted for 33% of world imports, highlighting the strength of trade integration and development of regional supply chains of intra-EU trade - with 37% of total EU trade consisting of intra-EU trade (in 2024). Similar integration drives trade in Asia Pacific, while both North America and China & Hong Kong benefit from the sheer scale of their markets, and their deep integration on either end of global value chains.
- **In the absence of major new barriers, trade growth out to 2035 is expected to be shored up by expanding trade between emerging-market economies, as well as the supportive upturn in investment and consumption growth in large economies**. However, this is not the case in all economies. Trade growth will be generally lower in advanced economies, particularly in Europe, but substantially higher in Asia Pacific and South Asia with a number of emerging-market economies such as India, Vietnam and Indonesia being strong drivers. China's share of global trade is projected to remain level at around 13%, consistent with growing challenges in the Chinese economy, such as a declining working-age population (which the UN expects to peak in 2027), ageing population and structural headwinds leading to slowing productivity growth.
- **By 2050, global import demand will continue to be driven by the same four regions, but with Europe and North America's share of global imports declining, to 29% and 14% respectively**. Reductions in the share of total imports by mature markets are forecast to be offset by growth in emerging regions like South Asia (whose share of imports more than doubles to 7.2%), the Middle East (increases by 1.5%), and Africa (increases by 1%).These shifts in long-term global import demand reflect higher GDP growth rates in developing countries and in particular Least Developed Countries (LDCs), reflecting income convergence. The GDP levels of developing economies converge towards those of developed economies as developing regions capitalise on technology transfers, inward investment, and relatively lower labour costs thereby allowing them to expand market shares in the global economy.

Europe will remain the single largest importer, but import growth in emerging markets will reduce its share of global imports

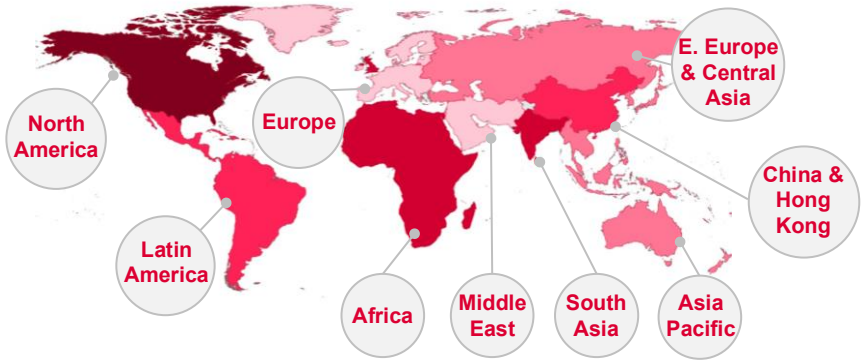
Figure 29: Share of global imports, 2023 - 2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

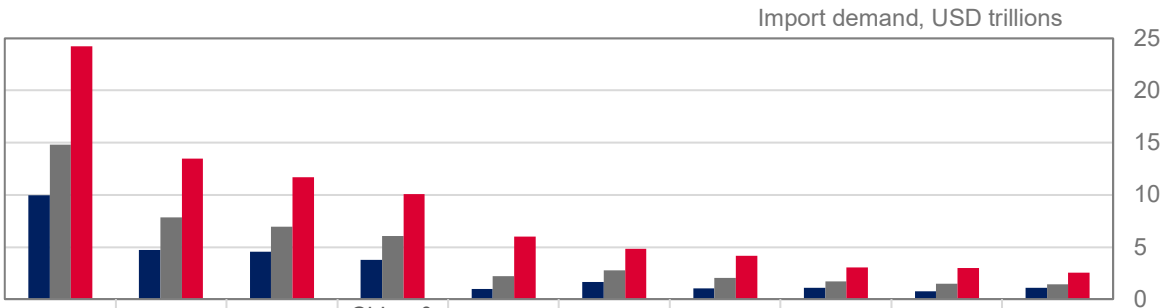
Each region will see rising demand for imports in the coming decades as economies grow. However, some regions will see greater demand for imports leading to shifts in tradimg patterns over time.

Regional trade trends



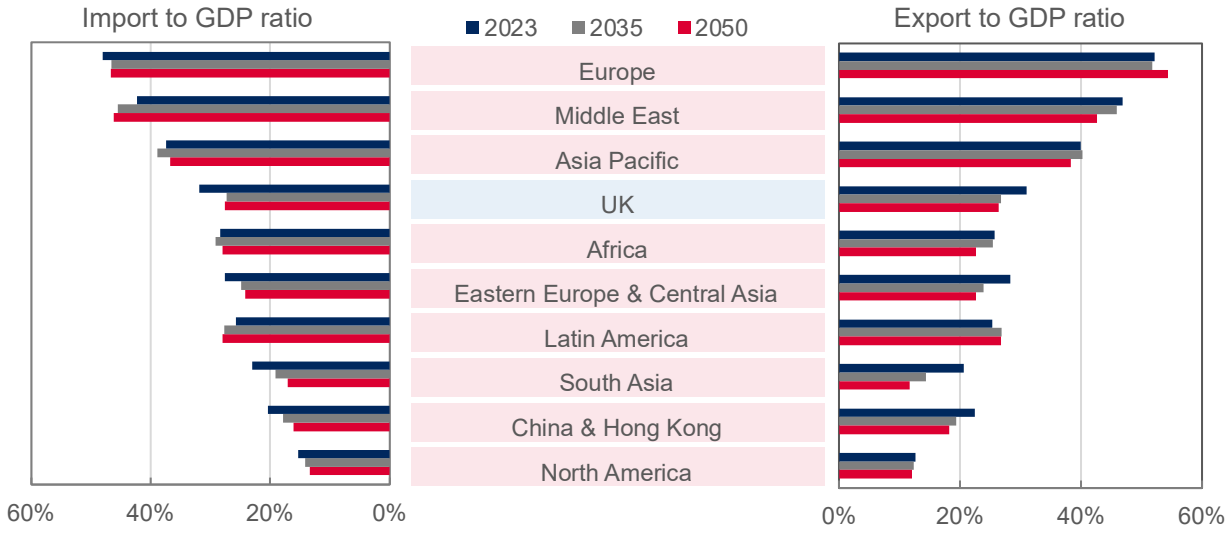
The 9 overseas regions of the world around which DBT organises its international operations.
Note: the UK is always treated separately from Europe in the *Outlook*.

Import market size



	Europe	Asia Pacific	North America	China & Hong Kong	South Asia	Latin America	Middle East	E.Europe & C.Asia	Africa	UK
2023	9.9	4.7	4.6	3.8	1.0	1.7	1.1	1.1	0.8	1.1
2035	14.8	7.8	6.9	6.1	2.2	2.8	2.0	1.7	1.5	1.5
2050	24.2	13.5	11.7	10.1	6.0	4.8	4.1	3.1	3.0	2.5

Trade intensity



In regions with regional trade agreements, such as the EU, import growth will be supported through the development and integration of regional value chains. By contrast, import intensity is expected to fall in regions dominated by large emerging markets (such as China and India) as their economies grow richer and can meet domestic demand through domestic production.

Within-region growth will continue to dominate exports, but key linkages in global value chains could be reshaped by trade policy

- **In the absence of major new tariffs, the largest outright growth in exports is expected to be in trade within regions.** Europe continues to be the exemplar of trade growth within its region, with the trade of goods between European markets expected to be by far the largest trading relationship in 2050. This deepening regional integration may similarly drive growth for Asia Pacific, which could increasingly expand regional trading relationships to more deeply integrate with South Asia. These within-region growth patterns often represent the functioning of value chains, with components crossing borders multiple times in the process of producing more complex products – and as a result demand outside of regions often underpins trade within regions. Of these external markets, the US continues to be a standout draw for exporters around the world and, assuming no major decoupling with global trade, import growth in the US would be expected to remain an important engine for the global growth that underpins value chains and binds together regional trade.

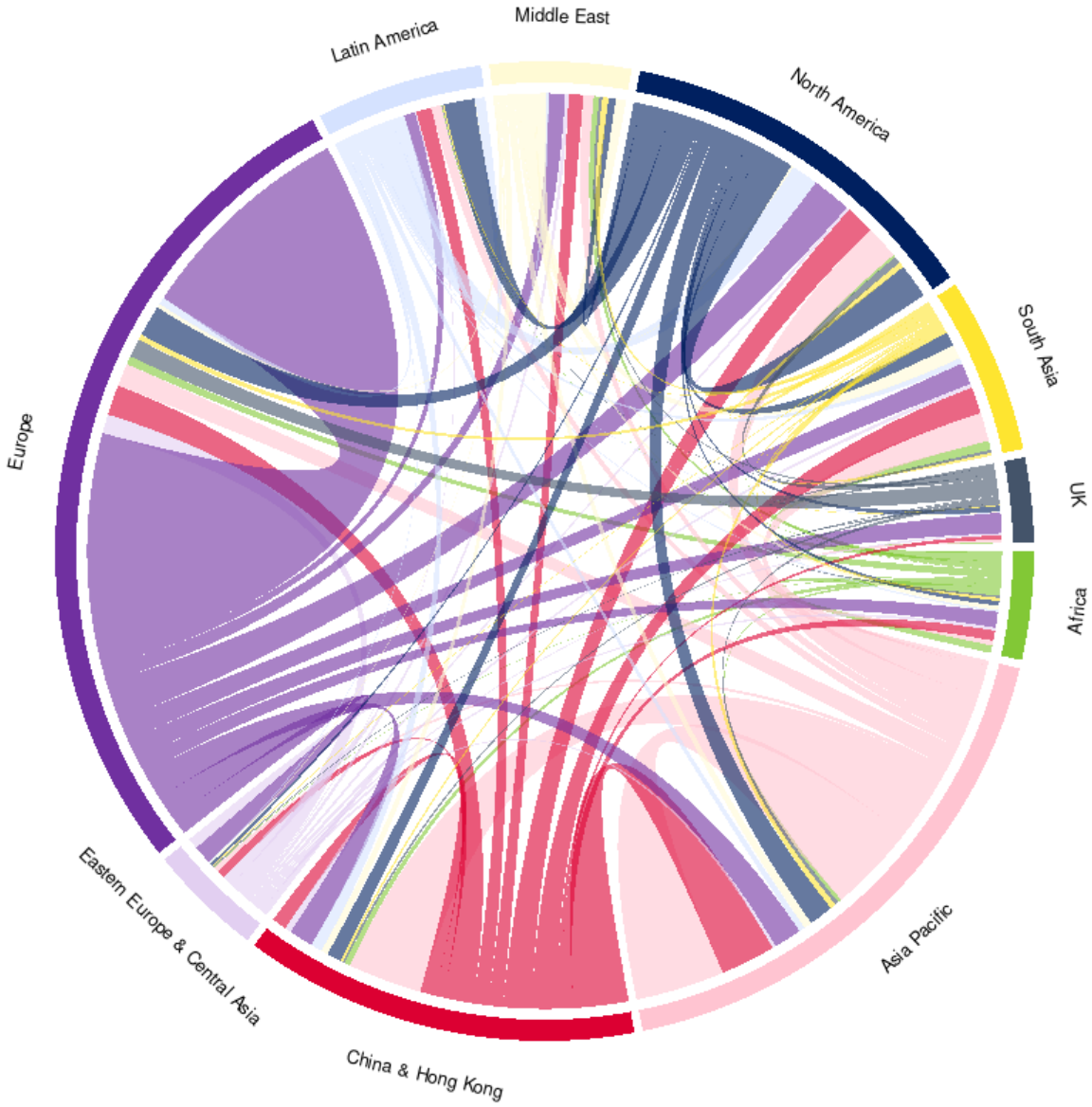
- **By 2050, the largest trading relationships will continue to be between countries that share economic activity across value chains.** In the *utlook's* baseline projections, this will see the US's relationship with the critical trio of China, Canada and Mexico being the largest overall trading partnerships; followed closely by China's relationships with Japan, Taiwan, Hong Kong, and key commodity suppliers like Australia. While economic pressures are pushing for a deepening of these relationships, many of these critical partnerships straddle significant geopolitical fault-lines – and schisms among the US and China, the US and its North American partners, and/or China and Taiwan could all shake the foundations of the world's most intensive trading relationships, disrupting global supply and growth, while potentially opening up opportunities in the reallocation of trade to other markets.

- **A deepening of trade deficits may aggravate fragmentation.** In the policy-neutral projections of the *Outlook*, a number of existing trade deficits are expected to deepen over the projection period, with the most notable being a doubling of the United States' trade deficit with China by 2050. Notably, India's trade deficit with China is expected to grow even faster, as a number of South Asia growth hubs see imports from key markets rising faster than exports, helping boost growth around the world while potentially weakening a commitment to openness in the region. These trade imbalances aggravate uncertainties in the projection, as they raise the prospect of trade policy barriers rising to attempt to address unfavourable balances of trade.

- **Most regions of the world will see the most rapid growth in their exports being driven by South Asia and Africa.** By 2050, the UK may see the most rapid rate of growth in exports to Africa, but the big winners in value terms will be the EU, China and Africa itself, with the latter group being helped along by deepening regional integration on the continent. China and the broader Asia Pacific region will be the largest beneficiaries of export growth to South Asia, as much of the region's growth will be closely integrated with the broader Asian productive cluster, but Europe will still see notable growth in exports to the region.

Trade within Europe and Asia Pacific remain major drivers of growth, as trade continues to flow along regional value chains.

Figure 30: Value of growth in bilateral trade between regions, 2023 - 2050



Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

WHAT DRIVES BILATERAL TRADE IN THE OUTLOOK?

Who countries trade with is determined by a wide range of factors. Improved competitiveness of a component produced in one country could see a supplier in another country lose out; while a rise in wages in one country might see wealthier consumers demand a product produced in another country. These changes in the structure of trade are essential to determining bilateral trade trends – but they are largely outside the estimates produced in the Outlook.

As a result, instead of comprehensively monitoring bilateral trade, the Outlook instead focuses on understanding the implications of our growth and trade projections for bilateral relationships. This is achieved by assuming countries keep buying a constant share of their imports from the same countries they currently source their imports from. But as countries grow at different rates, this consistent share of imports results in an evolving share of exports. As a result, the Outlook's export forecasts help understand where growth creates trade – but it can't provide insight on where relationships are changing, including as a result of rising tariff barriers.

WHAT DRIVES CONSUMER GROWTH IN THE OUTLOOK?

The wealth of a nation is most commonly measured by GDP per capita, which contextualises a country's wealth against how many people share in it. But with many of the fastest-growing markets featuring deep economic inequality, rapid growth doesn't necessarily translate into a wide consumer market. To contextualise the impact on consumer markets, the Outlook overlays our growth projections with the UNU-WIDER's World Inequality Database, to better understand how different parts of a country may benefit from growth.

The latest results in the World Inequality Database demonstrate some of these complexities. The database finds that inequality is highest in many of the fastest growing regions identified by the Outlook, notably in Africa and South Asia, potentially depressing the buying power of major growth centres. Inequality is found to be steadily increasing in advanced economies and in large emerging economies, even if at the global level, inequality has been held steady by many in fast-growing emerging markets entering the work force. More rapid growth in wealth inequality may have important implications for investment, potentially limiting the number of people who can drive growth in investment-based sectors like construction. And with inequalities within countries now often being more severe than inequalities between countries, exporters targeting wealthier clients may have to serve an increasingly growing number of markets, as their core customers are more distributed around the world.

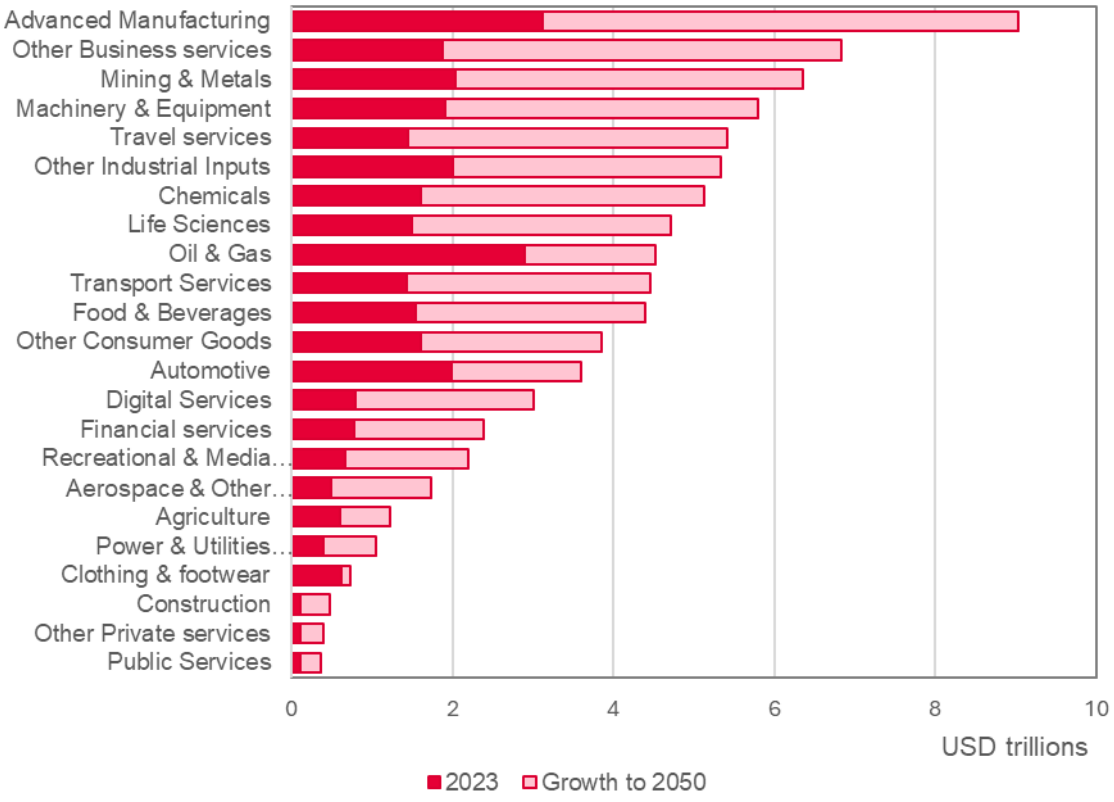
FULL INFORMATION ON HOW THE OUTLOOK IS CONSTRUCTED IS AVAILABLE IN CHAPTER 4

Rising trade in business services and consumer products will help offset strain on heavy industries

- **Key services sectors are expected to see the most rapid trade growth by 2050**, with services expanding their share of global trade from 25% today to 31% in 2050. Digital and business services will be standout performers in this growth story, with an increased global import share by 2.9%, offering strong complementarity with core areas of UK strength and key industrial strategy priorities. Travel and media services will similarly see notable growth; and, while still relatively small in value terms, construction services will see the outright fastest growth of any sector. While China and Africa will account for an increasing share of demand for business and digital services, the largest growth drivers will be Europe (46% of total growth to 2050) and Asia Pacific (11%).
- **Goods trade will be buoyed by rising global middle-income earners and resilient heavy industry**. Strong import growth in advanced manufacturing, mining and metals, and machinery & equipment indicates continued opportunities in industrial supply chains, while strong growth for life sciences and food & beverages indicates strong consumer opportunities. Advanced manufacturing is expected to remain the topmost traded sector by 2050 and see the largest growth in value terms across the forecast. By contrast, automotives may see a declining share of global imports, although a resurgence in interest in new energy vehicles could alter this trend.

Advanced manufacturing will see the largest absolute growth by 2050, but services sectors will grow faster in percentage terms

Figure 31: Global Sector Imports, Nominal USD, 2023 – 2050



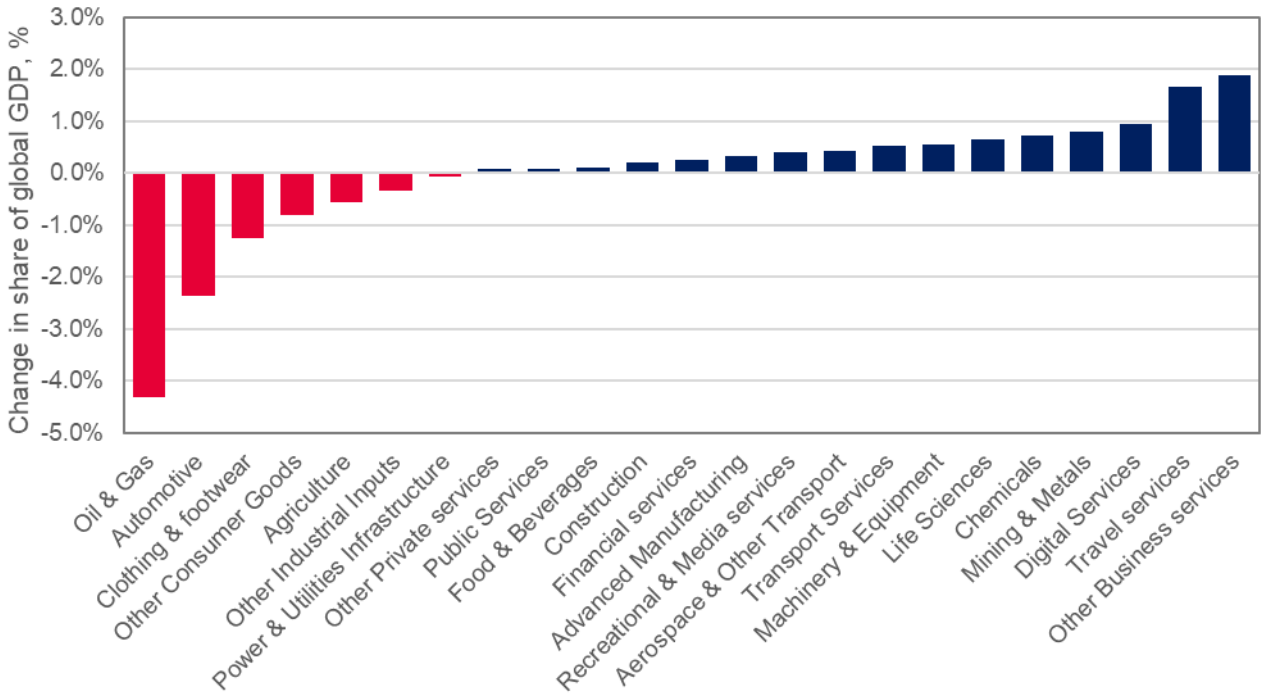
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **The journey to Net Zero will transform trade opportunities for many sectors,** most notably for the oil & gas sector, which **will** decline from 10% of global trade in 2023 to around 5% in 2050 – dropping from the second most traded sector to the 9th most traded. In the context of the projections, oil & gas trade doesn't decline outright, but rather experiences slow growth throughout the period that erodes the sector's share of global trade.

However, risks to this forecast are strongly on the downside, with the potential for more rapid declines. Other difficult-to-transition sectors, such as agriculture, automotives, and clothing & footwear, will similarly see eroding shares of global trade; although chemicals are expected to defy these trends and remain an essential traded product, as their broad applicability across a wide range of industries ensures prominence.

Anchor tradeable sectors, like oil & gas, will play a diminishing role in global trade, as services account for a larger share of total imports

Figure 32: Change in sectoral shares of global imports, 2023 – 2050



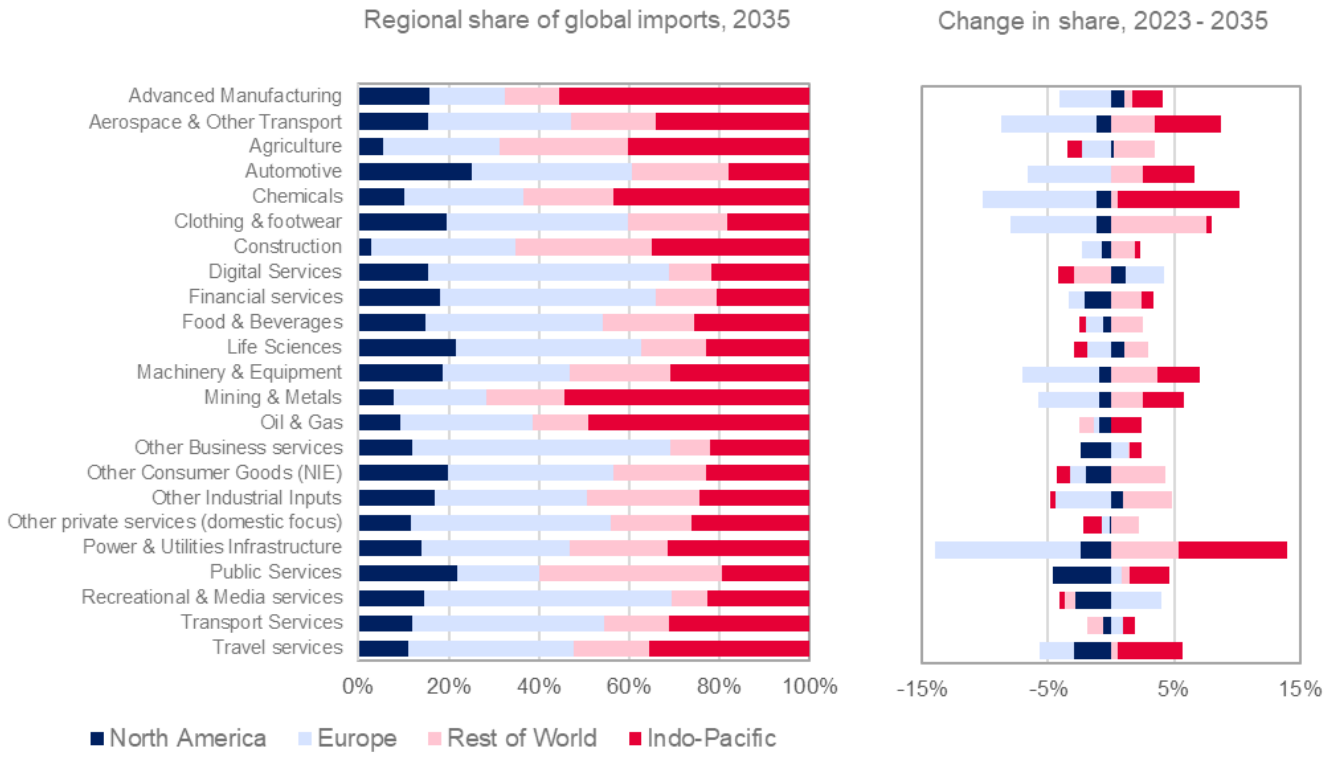
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

Emerging markets will anchor import growth in industrial commodities and consumer goods, while advanced economies will drive the services market

- **In general, Europe and the United States will remain anchor drivers of global import growth**, accounting for 41% of total import growth by 2050. But patterns of growth will largely be determined by the divergent economic positions of various regions. In the case of the EU and the US, a potential deepening of services markets will provide the impetus for growth in digital and business service imports, while the region will also anchor growth for more expensive consumer goods (like cars) and some specialist manufacturing components (like aerospace equipment).
- **Emerging markets will increasingly drive growth in Foundational sectors.** A rising number of High-Income consumers in emerging markets, which will swell from around 500 million people today to 1.7 billion people by 2050, will help underpin rapid growth in light consumer goods like food & beverages (104.8%) and clothing & footwear (21.8%). At the same time, high investment levels and a greater concentration of heavy industry in regions like the Indo-Pacific will see rising imports of metals & minerals, chemicals and construction services.
- **Despite the divergence, growth is increasingly broadly spread, and no region can be ignored.** The scale of developed markets means that even their relatively slower growth offers enormous opportunities; while the rapid pace of development in emerging markets offers a dynamic export space often characterised by less well-established global export competition, and thus more market space to succeed. Successful export growth will increasingly require maintaining a diverse regional export basket, in a global context increasingly characterised by regional and geoeconomic fragmentation.

Emerging regions will expand their share of global imports across almost every commodity, with the largest gains in industrial equipment and commodities

Figure 33: Sectoral shares of global imports by region in 2035, & expected change between 2023 and 2035



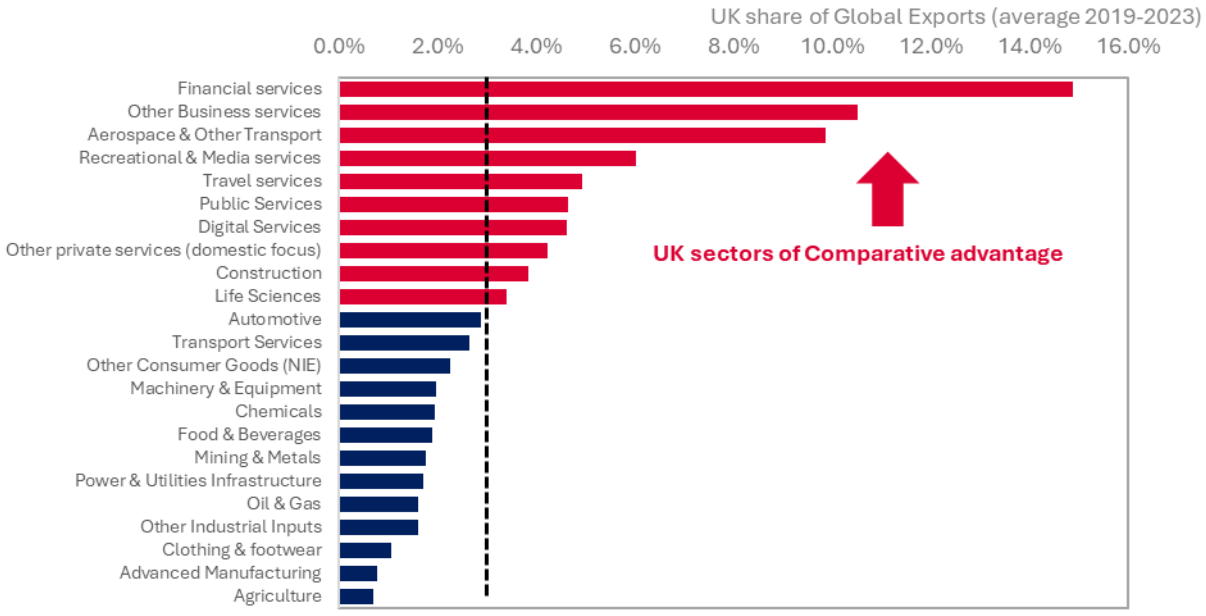
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

The structure of global trade growth is well aligned with UK sector specialisations

- **The UK has particularly strong specialisation in exporting services**¸ which populate the majority of UK sectors of comparative advantage, alongside some key high-value manufacturing sectors like aerospace. World import demand for the UK's specialist sectors is expected to double by 2035. Among the UK's specialist sectors, global demand is expected to expand significantly across the forecast for business services (113%), life sciences (115%), IP, media & recreation (141%), digital services (131%), aerospace (132%), and travel services (203%). The UK also has strengths in high value manufacturing sectors, including aerospace, life sciences and automotive.
- **Out to 2035, European import demand for high-value UK sectors will be driven by growth in business services ($1.6tn), machinery and equipment ($1tn) and travel services ($729bn).** The UK is well-positioned to capitalise on increased North American import demand largely driven by the US in Machinery and Equipment ($752bn) Life Sciences ($629bn) and Other Business Services ($573bn) whereas China will drive strong import demand in Advanced Manufacturing ($1.1tn) highlighting the importance of continued economic cooperation between the UK and three of its largest trading partners.

UK areas of comparative advantage include professional services and high-end manufacturing

Figure 34: UK sectors of comparative advantage, 2019 - 2023



Note: Excludes 2020 data, due to distortions from COVID-19.
Sources: UNCTAD Merchandise Trade Matrix (goods), UNCTAD Services Trade Matrix (services), and DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **Out to 2050, South Asia and Africa are set to drive drastic increases in import demand growth for sectors of high UK comparative advantage and GVA.** Travel services ($502bn projection for South Asia, £246bn for Africa), business services ($430bn for South Asia and $230bn for Africa) and life sciences ($258bn for South Asia and $183bn for Africa) will leave this growth; which on balance will reinforce a trend towards a rising share of services exports in global trade.[1]
- **UK strengths are more pronounced when considered in value-added terms,** due to the high services-content of goods exports. For UK manufacturers, using 2020 Trade in value-added data, services value-added content was 35.2% of gross exports, with the highest shares in Food and beverages (41.8%), Motor vehicles (40.7%) and Basic metals (37.2%).

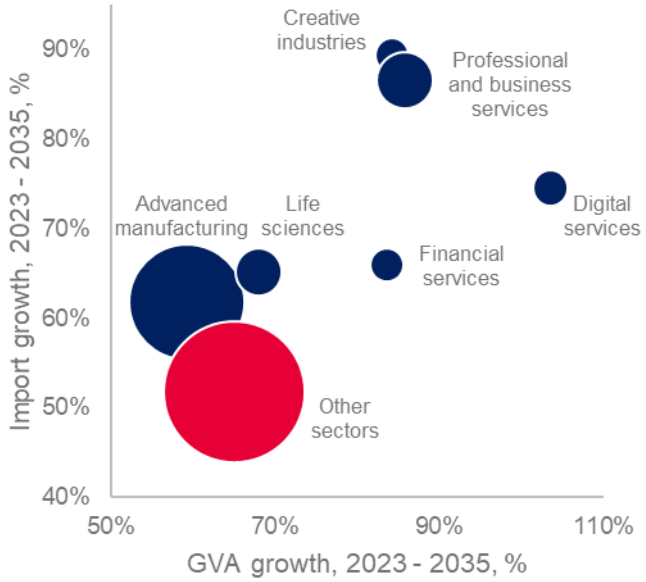
[1] WTO (2023): How will global trade patterns evolve in the long run?

Global demand for UK priority sectors is expected to triple by 2050

- **Industrial Strategy priority sectors are global sectors,** offering strong complementarity with areas of UK export success and global growth. When considering the key Industrial Strategy sectors, advanced manufacturing is expected to see the largest absolute growth by 2035; even as the greatest percentage gains are expected to fall to digital technologies, business services, and creative industries. Overall, the six Industrial Strategy sectors for which data is available are expected to see their global export opportunities expand by $10 trillion by 2035, offering an immense opportunity for growth.
- **While not as large in absolute terms, South Asia and Africa offer rich growth opportunities.** Industrial strategy sectors are expected to grow across regions, and traditional anchor markets like the US and Europe are expected to remain major destinations for UK exports. But emerging markets are expected to offer the most attractive growth opportunities across the board. South Asia, and India specifically, standout as major growth opportunities for Industrial Strategy sectors; while Africa is also a small but rapidly growing export destination. Both regions benefit from strong existing relationships with the UK and a shared language, both of which could be important leverage points for growth in IS services sectors.

All Industrial Strategy sectors offer above-average growth opportunities in percentage terms, while advanced manufacturing offers the largest opportunity in absolute terms

Figure 35: Global Import and GVA growth in select Industrial Strategy sectors, 2023 – 2035



Note: Bubble size indicates size of global import market in 2035 in nominal USD. Projections are not available for all of the UK's Industrial Strategy priority sectors (including Defence and Clean Energy industries). Data for Digital & Technologies only covers Digital sectors, and as such as the sector is marked as 'Digital services'. Definitions for Industrial Strategy sectors are approximations and do not align with formal definitions.

Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

South Asia, China, and Africa offer the most rapid import growth opportunities for Industrial Strategy sectors, but growth is expected to be widely spread across regions

Figure 36: Growth in nominal USD imports, by IS sector and region, 2023 – 2035 growth

Import growth, 2023 2035	Europe	Latin America	North America	E.Europe & C. Asia	China & HK	Middle East	Africa	Asia Pacific	South Asia
Life sciences	57%	82%	74%	55%	41%	115%	154%	71%	86%
Advanced manufacturing	28%	75%	57%	43%	88%	91%	118%	88%	112%
Digital services	87%	12%	89%	53%	78%	39%	39%	54%	93%
Financial services	60%	81%	49%	169%	71%	90%	122%	67%	130%
Non-IS sectors	46%	60%	42%	55%	38%	91%	75%	52%	134%
Creative industries	110%	49%	59%	97%	76%	67%	104%	75%	177%
Professional & business services	94%	61%	55%	154%	121%	93%	78%	61%	312%

Note: Projections are not available for all of the UK's Industrial Strategy priority sectors (including Defence and Clean Energy industries). Data for Digital & Technologies only covers Digital sectors, and as such as the sector is marked as 'Digital services'. Definitions for Industrial Strategy sectors are approximations and do not align with formal definitions.

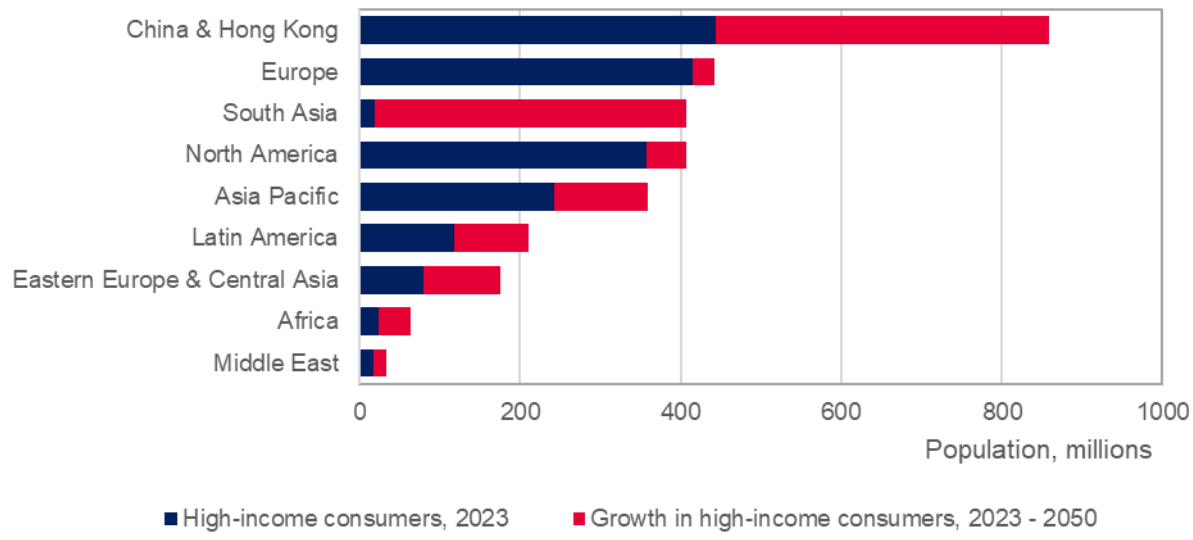
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

The distribution of gains from growth complicates the export opportunities offered by emerging economies

- **The UK's specialisatio i high-end manufacturing and services is well suited to a world of rising global levels of high-income consumers**. While growth offers opportunities on paper, it is most meaningful in countries in which growth drives real changes in the buying power of the population. Overlaying growth projections with data on the distribution of income allows some insights on how the consumer market may develop, and where high-value customers for UK exports may emerge. This population of high-income consumers – referring to those earning above the substantial buying-power threshold of $14,656 (in 2023 prices) – is expected to increase more rapidly than overall populations, offering growth opportunities even in cases where overall populations may be in decline.
- **South Asia is expected to be the leading region for growth of high-income consumers** (in percentage terms), with almost 380 million people potentially crossing the threshold by 2050. But despite this exceptional relative performance, the greatest overall gains will fall to China, where a near-doubling of an already exceptionally large middle-class population will see the total population of high-income consumers rise to over 850 million people – making for a consumer market that is larger than Europe and North America combined. Perhaps surprisingly, Latin America will defy relatively flat growth performance to see large increases of these consumers, as an additional 93 million cross the higher earning threshold, thanks largely to a substantial existing consumer base sitting just below this threshold.
- **Despite strong population growth, Africa and the Middle East will see less impressive growth in high-income consumers.** A combination of low growth in GDP-per-capita and persistently high inequality in some markets will see the two regions' high-income consumers grow by roughly 55 million people combined – well behind growth seen in other emerging markets. Mature economies in Europe and North America will also see limited growth of these consumers in both regions, of 27 and 50 million people respectively, which may prove a challenge to economies increasingly dependent on domestic consumption services that grow alongside local populations.

South Asia is a standout growth region for high-income consumers, but the scale of the Chinese market is immense

Figure 37: Growth in high-income consumers, 2023 - 2050



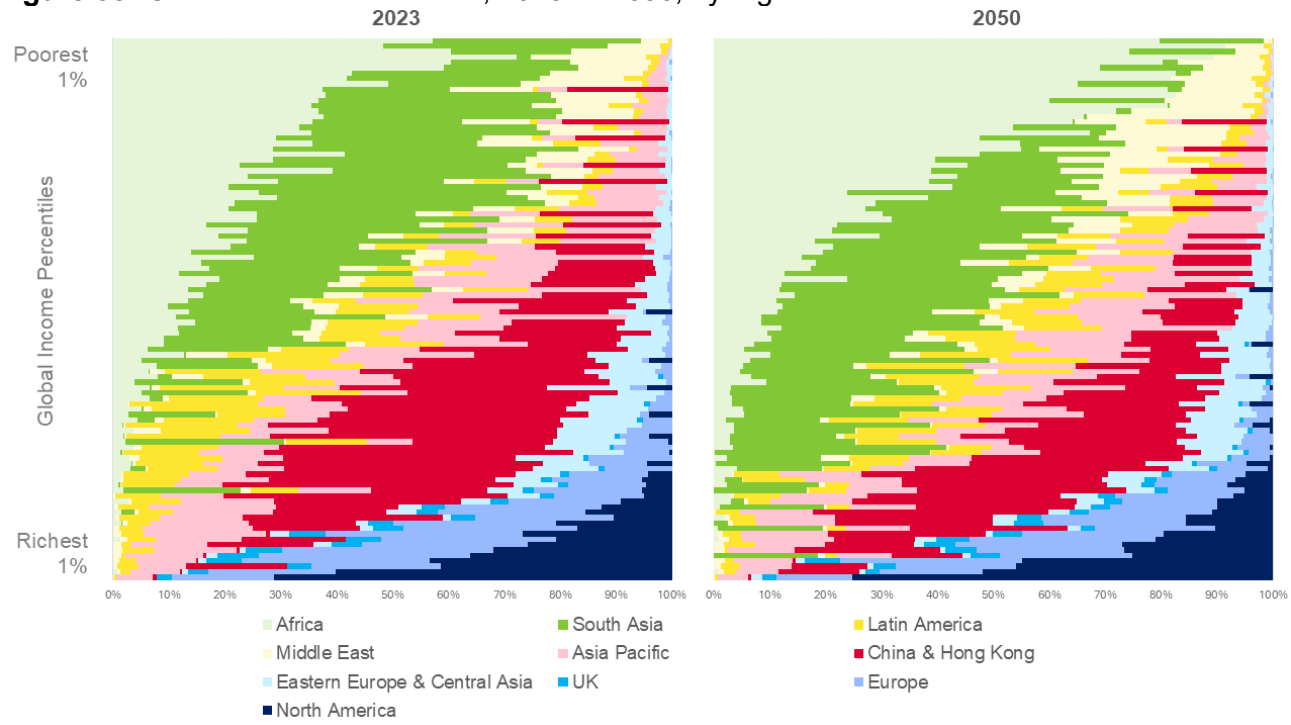
Sources: UN World Population Prospects, 2024. UNU-WIDER World Income Inequality Database (WIID), 2024, and DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **Combined, these trends will see a transformation of the global distribution of income**. While advanced markets, like the US and Europe, continue to dominate the upper reaches of the global income distribution, increasingly large numbers of people from Asia Pacific and China move into higher earning percentiles. While South Asia's growth still leaves many on lower relative incomes, the region's population shifts notably up the global income distribution, with a large emerging group of middle-income earners.

- **Urbanisation rates may slow as more markets mature, but will remain a key driver in Africa.** Continued growth in urban populations is expected for regions across the world, but the exceptionally rapid rates of emerging market urbanisation seen in the 2000s will give way to more steady growth, as key regions like Asia Pacific and Latin America reach the peaks of their urban booms.[2] Tracking population growth, urbanisation will remain strong in Africa, South Asia and the Middle East, and cities may offer an anchor entry point for UK companies to position themselves in long-term growth markets.

Rising emerging markets are expected to diversify the upper reaches of the global income distribution, offering more widely distributed clients for exporters

Figure 38: Global income distribution, 2023 vs 2050, by region



Sources: UN World Population Prospects, 2024. UNU-WIDER World Income Inequality Database (WIID), and DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

[2] UN World Urbanization Prospects (2018)

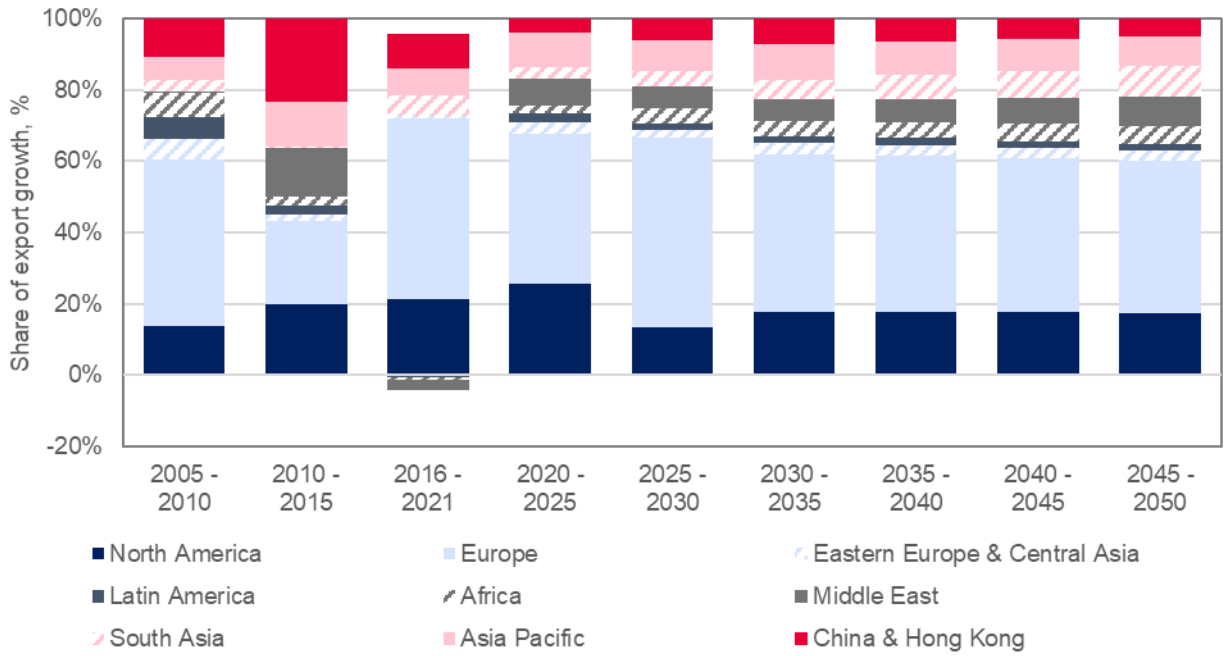
The UK is projected to remain a major trading nation, with nominal exports more than doubling by 2050

- **The UK's share of global exports is expected to decline marginally over the *Outlook*, falling from 3.5% in 2023 to 2.9% in 2050.** But much of this decline is due to rapid growth in large emerging markets, and the UK's nominal exports in Dollar-terms are still expected to grow 228% by 2050 – offering significant opportunities for UK firms. Despite this growth, the UK is projected to fall from the 4th largest exporter in 2023 to the 8th largest exporter in 2050, as India rises to be the 4th largest market, and France, the Netherlands, and Singapore pull marginally ahead. The UK is still expected to remain a major global market, with the 5th largest imports by 2050.

- **UK export markets are expected to diversify, even as Europe remains the most important market.** By 2050, Europe is expected to account for 43% of UK exports, down from 52% in 2023, but still by far the most important market for UK exporters (well ahead of North America, at 20%). The main cause of this shift is the rapid growth in demand in emerging markets, with the largest growing importance for South Asia (rising from 2% of exports in 2024, to nearly 5% in 2050) and the Middle East (from 4% to 6%). Export growth will build off these patterns, with Europe expected to be firmly the largest source of export growth throughout the projection, but with a growing role for emerging markets as drivers of growth.

While Europe is expected to remain by far the largest UK export market, emerging markets will make up increasingly larger shares

Figure 39: Share of UK export growth, 2005 – 2050



Note: The period 2016 – 2021 is used in place of 2015 – 2020 to avoid noise stemming from the shocks around COVID-19.
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **Most UK export growth is expected to be driven by a deepening of relationships with existing major partners.** Exports to the US and Switzerland could grow fastest over the projection period, followed by India and, and with major EU markets populating much of the remainder of the top ten growth markets.

With most growth building off a strong existing base, the structure of the UK's top export markets is not expected to shift radically. The biggest changes are expected to be the rising importance of major markets in the Middle East, with the United Arab Emirates and Saudi Arabia potentially being the 8th and 10th fastest growing export destinations

3 Emerging Trends

Significant global uncertainty could see a number of trends shift the projections contained in the *Outlook*

- **Across the world, various emerging trends could significantly disrupt the global economy and international trade,** and change the projections set out in the previous chapters. Here we illustrate how the manifestation of some of these emerging trends could work their way through the main variables of the model to impact the global economy. The six potentially disruptive forces assessed are geoeconomic fragmentation, climate and ecological breakdown, rapid digital and automation advances, heightened risk of conflict, migratory pressures, and the Net Zero transition.

- **The emerging trends in this chapter carry a high degree of uncertainty around their full economic impact.** Although the impacts of these trends are inherently hard to predict, they tend to work their way through economies in two main ways: "shifts" and "shocks". Shifts and shocks can have both positive and negative impacts on economic output and international trade. Shifts are continual and dynamic trends that impact economies and international trade gradually. Shocks are unpredictable "one-off" events that quickly spread through economies with a more immediate impact than shifts. The significance of a shock for the long-term outlook depends on the size and persistence of its impact. Some shocks can be large but transient, while others, such as the Global Financial Crisis, can lead to permanent economic scarring and losses that are not recovered.

Figure 40: Overview of emerging trends and their implications for the *Outlook*

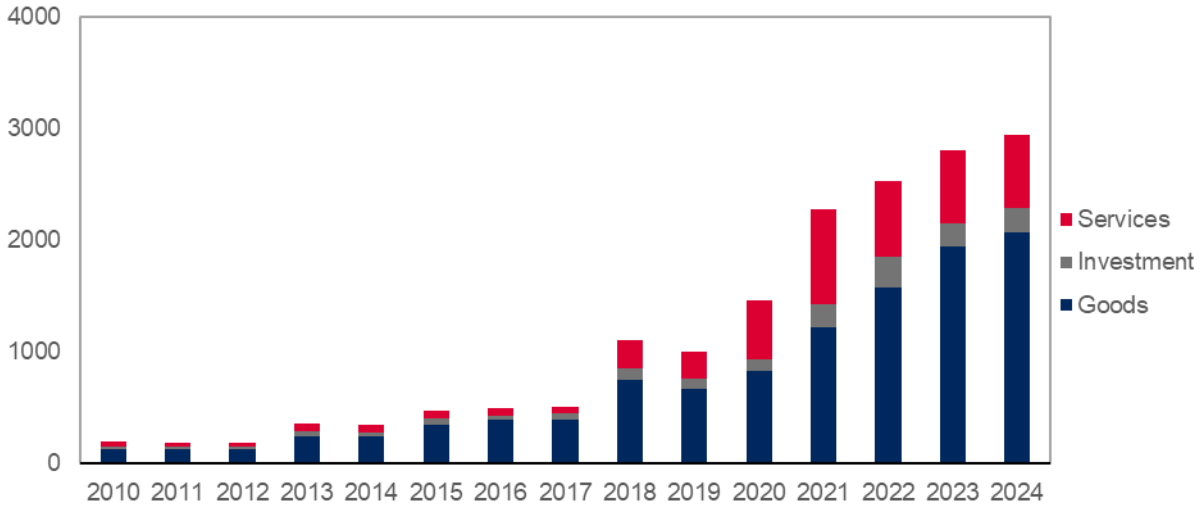
	Geoeconomic fragmentation	Climate and ecological breakdown	Rapid digital and automation advances	Heightened risk of conflict	Migratory pressures	Net Zero transition
What is the risk?	The global economic system divides into poles	Rising temperatures trigger severe weather events	Frontier digital technologies rapidly accelerate	Flashpoints across the globe escalate and interact	Climate change, conflict, instability drive migration	Global imbalances in decarbonisation deepen
How does it shift the *Outlook*	A weakened trade outlook weighs on growth, and shifts growth expectations between regions	Vulnerable markets and sectors see slowing growth, and climate migration shifts population expectations	Rising productivity, accelerates growth; while potentially deepening regional and consumer inequalities	Fast-growing regions with high risks of conflict fail to match expectations, weakening global growth	The distribution of growth shifts as migration either widens or closes stark global gaps in population growth	Net Zero fuels rising investment and productivity gains for some sectors, even as others see diminishing growth

Tensions between nations increase the risk of fragmentation in the global economic system

- **Divisions in trade policy that significantly redirect or reduce trade flows can create a drag on overall productivity and economic output.** The decoupling of economic links between countries through tariffs, export controls, and other interventions directly increases the costs of trade and puts downward pressure on its growth. For example, following the previous imposition of tariffs on China by the US in 2018, averaging 21% over 5 years, Chinese share of total US imports fell from 24% in 2018 to 17% in 2023.[1] Ongoing trade and investment restrictions can additionally dampen global growth through less efficient allocation of production and by limiting the spread of technology and ideas. Modelling suggests the longer-term cost of severe trade fragmentation alone could be up to almost 7% of global output; when adding technological decoupling, projections suggest that some countries could see losses of up to 12% of GDP.[2]
- **The ongoing growth of global trade restrictions and impasse in the World Trade Organisation (WTO) indicate changing values and rising tensions within the global trading system.** New trade restrictions increased eightfold from 2014 to 2024, and trade measures proposed in the first half of 2025 bring tariff increases many times above recent history.[3] This decade-long increase in trade restrictions has also seen deeper fragmentation, such as technology decoupling, disrupted capital flows, and migration restrictions, alongside a WTO which is increasingly struggling to resolve disputes.[4] [5] Challenges in multilateral cooperation in trade are indicative of a wider trend, where the rise of rival economic powers creates an increasingly competitive environment, potentially spurring major economies to deepen interventions to protect domestic sectors.

The number of new trade restrictions has increased eightfold in the decade up to 2024

Figure 41: Number of global trade restrictions that remain in force, 2010-2024



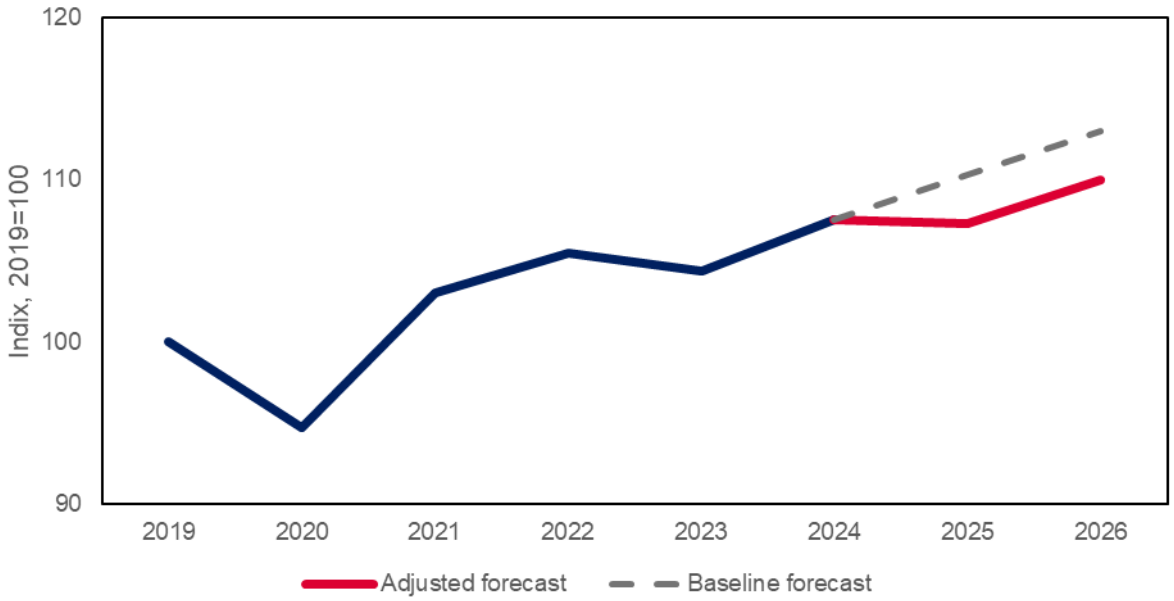
Note: Only includes restrictions that remain in force as of 31 Dec 2024, displayed by year of implementation,
Source: Global Trade Alert

[1] United Nations Trade and Development (UNCTAD) Data Hub (2025)
[2] IMF (2023). "Geoeconomic Fragmentation and the Future of Multilateralism"
[3] Global Trade Alert (2025)
[4] IMF (2024). "Geopolitics and its Impact on Global Trade and the Dollar"
[5] WTO Dispute settlement activity (2024)

- **Revised trade estimates following recent trade policy announcements highlight the sensitivity of trade flows to policy changes.** The announcement of US tariffs on 2 April 2025 has introduced short-term uncertainty in the global trading environment, spurring market volatility and business uncertainty which has led to downward revisions of growth for 2025.[6] The WTO estimates that with broader US tariffs remaining at 10%, growth in global goods trade would fall by 2.7 percentage points in 2025 to a 0.2% decline but then rebound to 2.5% growth in 2026.[7]

Tariffs and the uncertainty surrounding them have a direct impact on trade expectations.

Figure 42: WTO estimates of global goods trade, baseline vs. impact of US universal 10% Tariffs



Source: WTO historical trade data and WTO secretariat forecast estimates

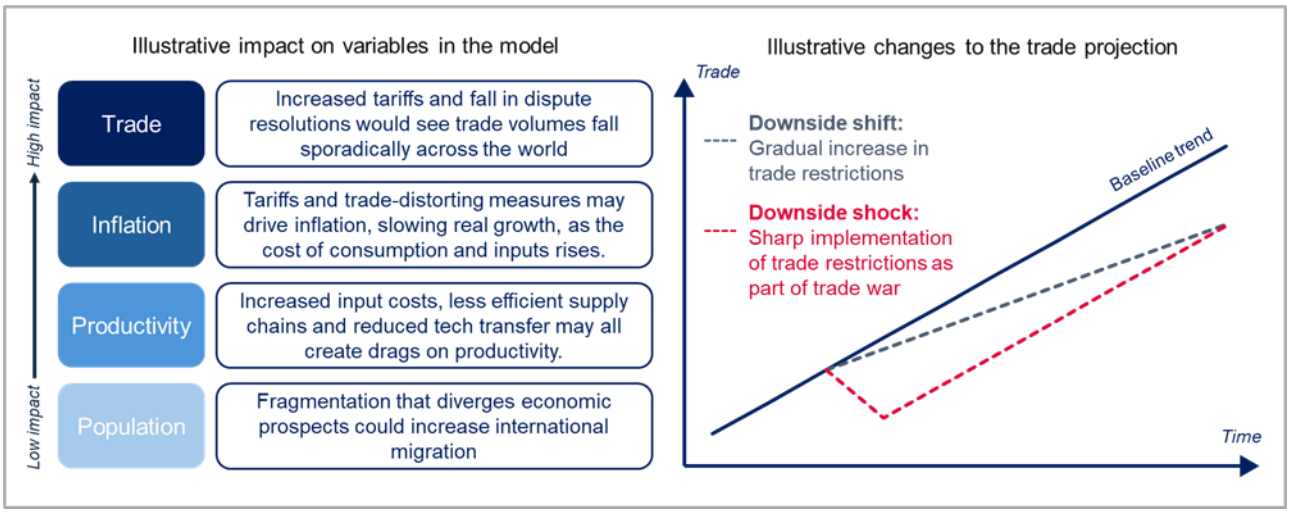
- **If global trade restrictions escalate, the long-term impact on international trade and economic growth could be considerable.** Given the deep integration of the global economy, trade remains an integral source of growth for both advanced and emerging economies. A scenario of retaliatory tariffs between competing economic blocs could see fragmentation of global supply chains with major impacts on growth. For instance, estimates by the WTO suggest that full-scale decoupling between the US and China could "lower global real GDP by 7% in the long-term".[8] There is also potential for a wide range of further trade interventions by 2050 – as disagreements over trade policy between even like-minded economies emerge – highlighting the possibility of further escalation leading to more severe economic impact.[9]

- **Increased global economic competition may continue to drive incentives for strategic trade restrictions.** The rise in economic power of countries with differing economic models, and increasing willingness of countries to strike bilateral deals, may see economic tensions rise – as the capability of the multilateral system to resolve disputes is increasingly put under strain.[10]

[6] IMF World Economic Outlook (2025)
[7] WTO Trade Forecasts (2025)
[8] WTO Director General Ngoni Okonjo-Iweala (2025), comments to the FT
[9] US Cabinet comments (2025), BBC
[10] Ministry of Defence (2024). "Global Strategic Trends Out to 2055

Geoeconomic fragmentation would impact the model most through trade and productivity, and the scale of the impact would depend on the severity and speed of trade restrictions

Figure 43: Impact of geoeconomic fragmentation on the model and trade projections



Rising temperatures look set to trigger an increase in the frequency and severity of extreme weather events, compounded by ecological breakdown

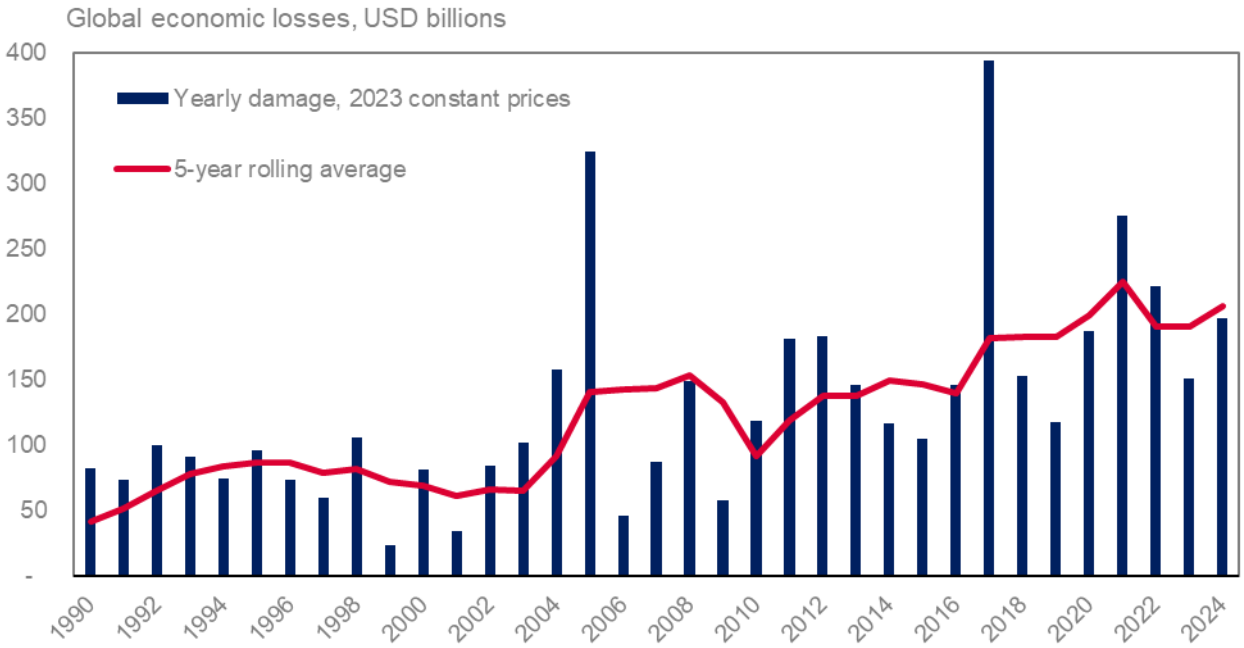
- **Severe climate events and nature loss are highly disruptive to international trade and economic output in regions most vulnerable to natural disasters.** In global trade, more frequent and severe climate shocks pose serious risks to maritime shipping (which accounts for 80% of global trade volumes[11]), international supply chains, and infrastructure. For example, restrictions similar to those seen in the 2024 drought in the Panama Canal could add an estimated $1.1 billion to global shipping costs.[12] Sustained increases in natural disasters also encourage businesses to move supply chains to less vulnerable regions to offset higher costs and uncertainty, potentially prioritising resilience over efficiency. Climate-related events directly affect economic output, with some sectors and activities impacted more severely. Extreme heat is likely to dramatically reduce productivity or pause work altogether in temperature-exposed industries like construction and agriculture; whilst storms, floods and wildfires can disrupt almost all aspects of economic activity.[13] [14] Furthermore, the impact of climate change and human activity on global ecology presents a deeper risk to economic output, with 55% of the world's GDP either highly or moderately dependent on nature.[15] Consequently, these extreme climate events could cause financial dislocation for affected countries and financial infrastructure consequences for advanced economies as they spend on mitigation.

- **Economic losses from climate shocks have tripled in the last two decades, from both the direct costs of events and economic activity that is disrupted.** There is a clear upward trend in the economic impact of extreme weather, but some years suffer notably higher losses from severe climate events.[16] Hurricane Katrina in 2005 and the 2017 Atlantic hurricane season produced the highest weather-related economic losses seen this century. These types of events are also becoming more frequent, for example, heat waves that happened only once every 50 years are now happening roughly once a decade.[17] Climate change also means the frequency of outbreaks of emerging infectious diseases are likely to increase, as extreme changes in temperature, rainfall, humidity, and air pollution progressively create the conditions where pathogens can live, multiply, and potentially spread.[18]

[11] UNCTAD, Review of Maritime Transport (2025)
[12] McKinsey & Company (2024) “How could Panama Canal restrictions affect supply chains?”
[13] Caroline Freund et al. (2023) “Natural Disasters and the Reshaping of Global Value Chains”
[14] London School of Economics Grantham Research Institute on Climate Change and the Environment (2023). “How does climate change impact on international trade?”
[15] PWC Centre for Nature Positive Business (2023)
[16] Centre for Research on the Epidemiology of Disasters – International Disaster Database
[17] Intergovernmental Panel on Climate Change (2021). “Sixth Assessment Report”
[18] Hongyan Liao et al. (2024). “Climate change, its impact on emerging infectious diseases and new technologies to combat the challenge”

Global economic losses from extreme weather events have surpassed $100 billion every year in the last decade, compared to only twice in the 1990s

Figure 44: Global economic losses from extreme weather events, 1990-2024



Source: Centre for Research on the Epidemiology of Disasters – International Disaster Database

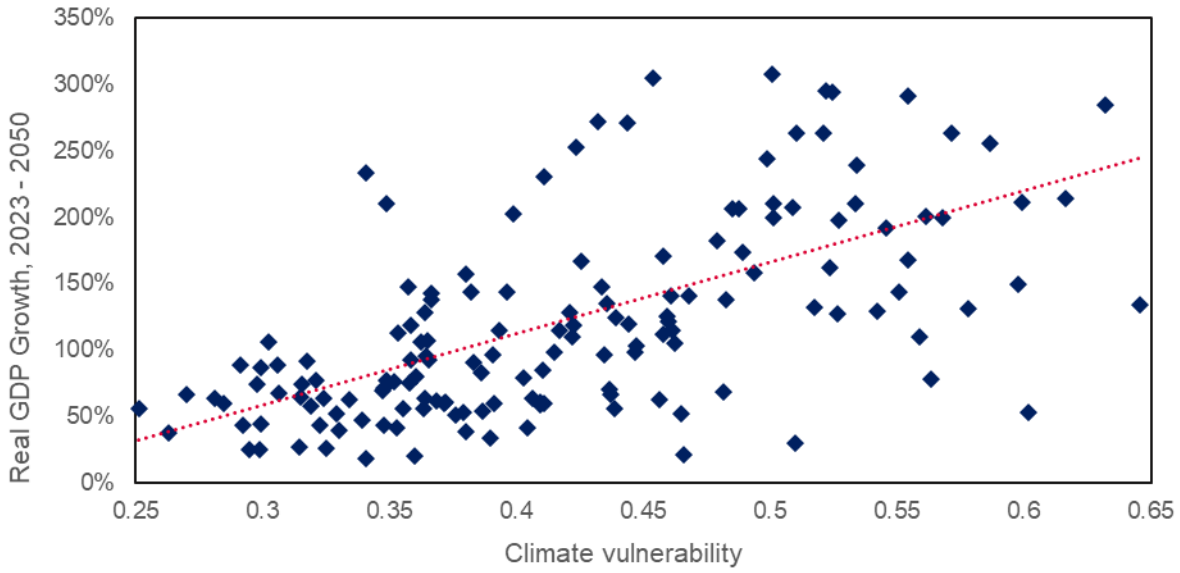
- **As global temperatures continue to rise, an increase in the frequency, severity and permanent impact of climate-related natural disasters and biodiversity loss looks evermore likely.** The World Meteorological Organization (WMO) confirmed that 2024 was the warmest year on record, with the top ten warmest years ever recorded all from this past decade in an extraordinary streak of record-breaking temperatures.[19] This increases the likelihood of more frequent and severe climate-related events, with extreme weather events increasing by almost two-thirds in the last twenty years compared to the previous two-decades.[20] Warming of between 1.5 and 2 degrees Celsius also make tipping points more likely – such as melting of the Arctic permafrost and collapse of the Gulf Stream, leading to potentially catastrophic effects that could have a systemic impact on the global economy.[21]

Nature loss is already taking place on an unprecedented level and is impacting land, freshwater and ocean species. The expanding and intensified use of land for farming, increasing overfishing and expanding cities, will continue to be major contributors to this.[22] Crucially, the impact of climate and ecological change will vary significantly between countries and regions. Some of the least economically developed countries are projected some of strongest economic growth out to 2050, but these also tend to be those expected to experience the greatest effects of a warming planet, potentially hampering these rates of growth.

[19] World Meteorological Organization press release (2025). "WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level"
[20] Centre for Research on the Epidemiology of Disasters: International Disaster Database (2025)
[21] David I. Armstrong McKay et al. (2022) "Exceeding 1.5°C global warming could trigger multiple climate tipping points"
[22] Ministry of Defence (2024). "Global Strategic Trends Out to 2055"

Climate risks are higher in markets the Outlook expects to experience higher economic growth, increasing the risk that climate shocks could derail global growth

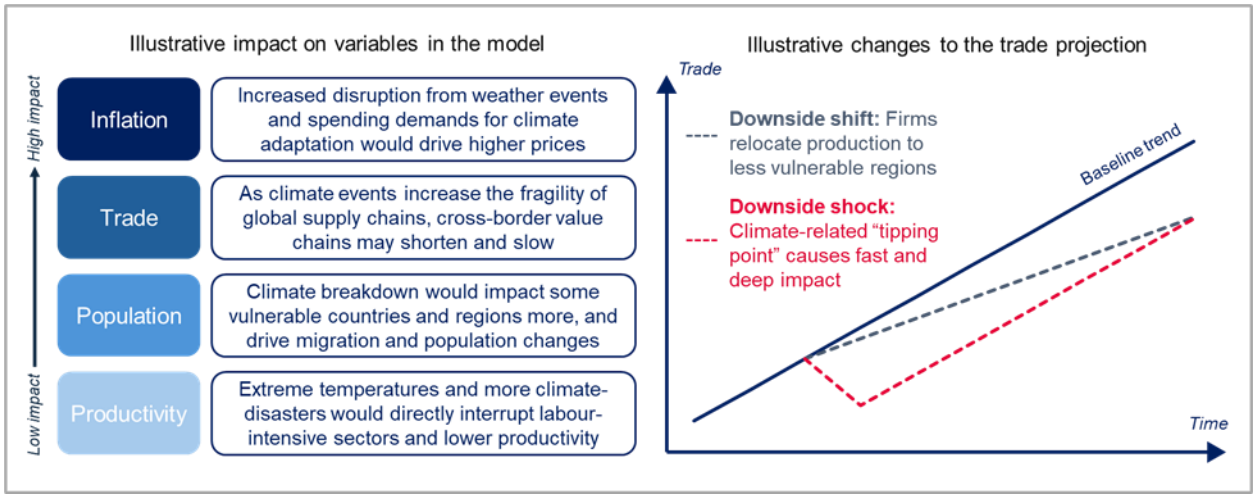
Figure 45: Growth expectation vs climate vulnerability



Note: Climate vulnerability is a composite measure in which a higher value indicates increased exposure to climate risks. The authors of the index describe it as measuring "…a country's exposure, sensitivity and capacity to adapt to the negative effects of climate change. ND-GAIN measures overall vulnerability by considering six life-supporting sectors – food, water, health, ecosystem service, human habitat, and infrastructure."
Source: DBT's Global Trade Outlook modelling. See Analytical Approach for further details. Notre Dame Global Adaptation Initiative Country Index (ND-GAIN). (2025). University of Notre Dame.

Climate and ecological breakdown could impact the model across all four main variables, but the direct effect of disruption from climate events would likely be felt strongest in inflation and trade

Figure 46: Impact of climate and ecological breakdown on the model and trade projections



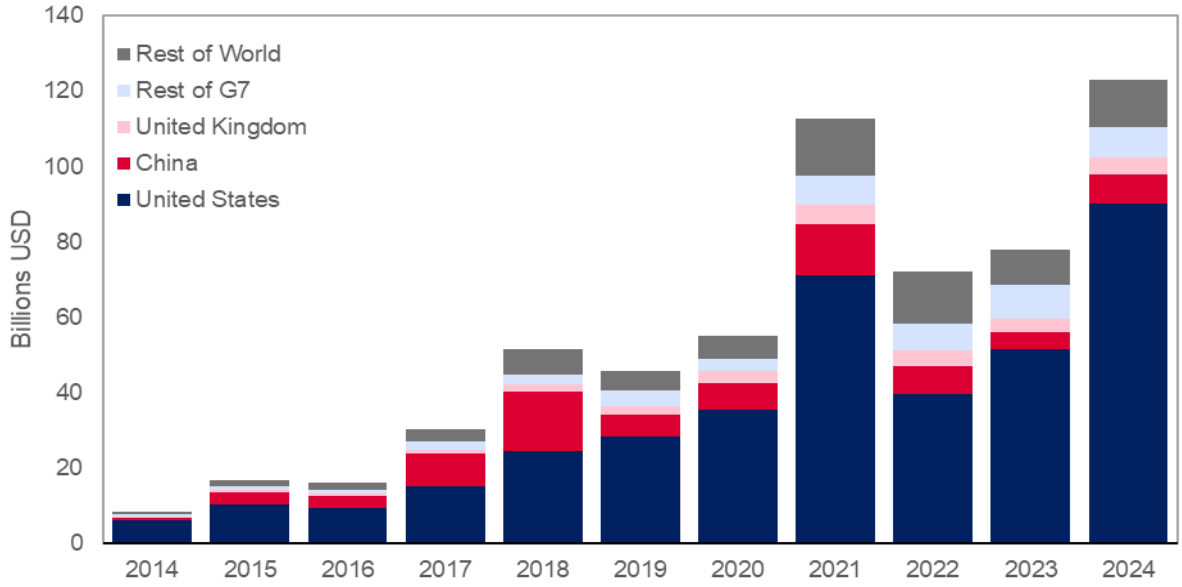
Rapid acceleration of digital and automation technologies could drive a shift in global productivity

- **Technological innovation is a main driver of productivity growth in advanced and emerging markets and can lead to shifts in economic output and trading patterns**. The 'information-communications technology (ICT) revolution' during the mid-1990s to the mid-2000s is often lauded as signalling a new era of economic growth for the US. During this period, the average annual rate of labour productivity growth in the US private sector almost doubled from 1.54% per year from 1977-95 to 2.89% during 1995-2005, principally driven by ICT-intensive firms producing services and computer hardware.[23]

The relationship between tech innovation and international trade offers a mixed picture. OECD estimates that a 10% increase in digital connectivity between two countries raises goods trade by almost 2% and services trade by over 3%.[24] By contrast, automating technologies such as additive manufacturing (3D printing) and advanced robotics can reduce the incentive to offshore production to countries with low labour costs; and go to countries with the infrastructure to support capital intensive production, including lower energy costs. McKinsey estimates that shifting production closer to centres of demand could reduce global goods trade by 5-10% by 2030.[25]

Venture capital investment into companies developing and utilising AI technology peaked in 2024 at $123 billion globally, of which $90 billion was firms based in the US

Figure 47: Venture capital investment into artificial intelligence tech companies, 2014-2024



Source: Dealroom.co, data retrieved 7th March 2025

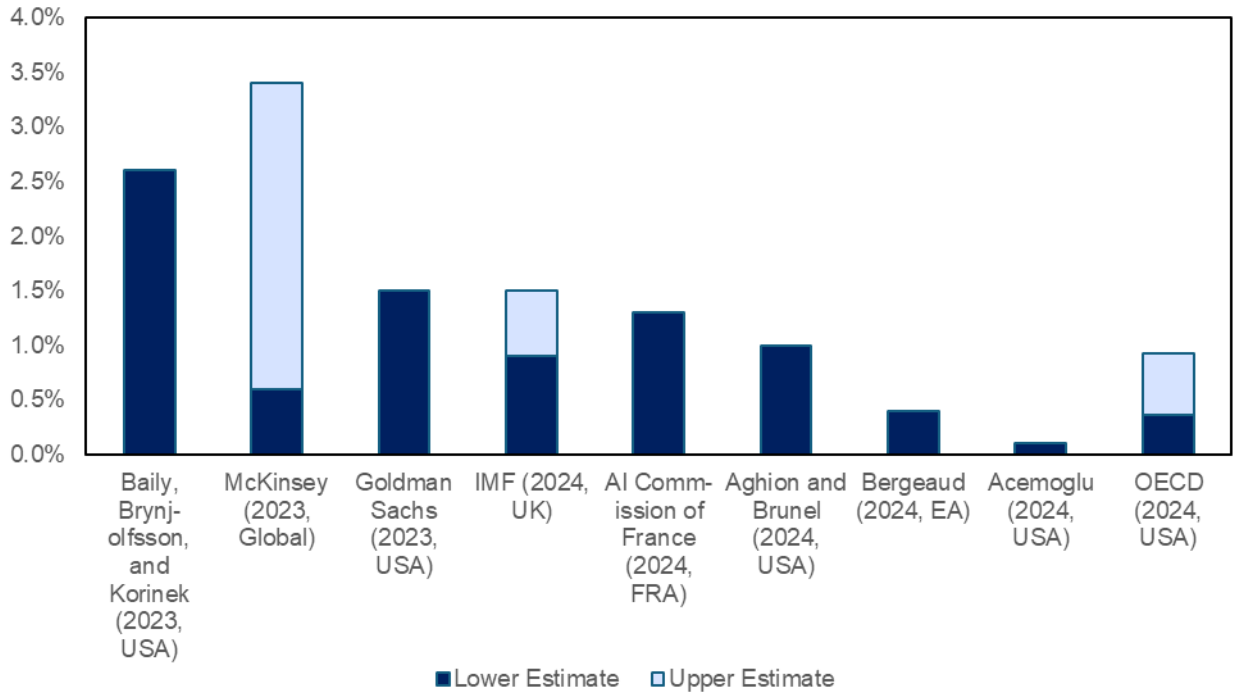
- **A boost in investment in emerging technologies since the COVID-19 pandemic, notably artificial intelligence (AI), has delivered significant breakthroughs in capability and adoption.** Improvements in advanced semiconductors, huge investment in AI models and its convergence with areas such as advanced robotics have resulted in systems that equal humans across a range of cognitive and physical capabilities. In 2023, it was reported that machines developed the equivalent capabilities to humans in 'predictive reasoning' – the process of using

[23] Hassan Sayed & Robert J. Gordon (2020) "Transatlantic Technologies: The Role of ICT in the Evolution of U.S. and European Productivity Growth"
[24] OECD (2019) "Trade in the Digital Era"
[25] McKinsey Global Institute (2019) "Globalization in transition: The future of trade and value chains"

evidence and past information to make predictions about future events.[26] Notably, 2024 saw an exceptional peak in venture capital investment into AI technology companies, at $123 billion globally – surpassing the previous peak of $112 billion in 2021.[27] Large firms are also adopting AI at record pace. In 2024, McKinsey reported that 72% of global organisations had adopted any applications of AI compared to 55% in 2023; for generative AI use is up to 65% from 33%.[28]

Divergent views exist around the macro-level productivity gains from AI between academia, corporate investors and global institutions

Figure 48: Predicted increase in annual labour productivity growth over 10-years due to AI



Source: OECD Artificial Intelligence Papers (2024 working paper).

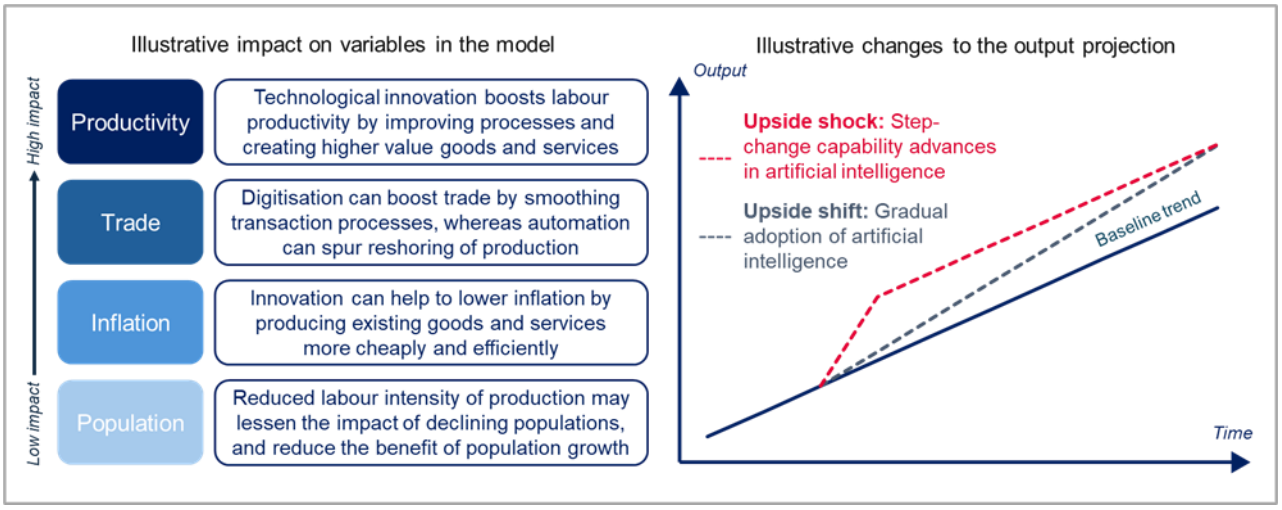
- **As corporations and governments in major powers continue to develop AI and its advanced applications, the plausibility of a structural shift to the global economy increases.** AI has become a focal point for competition between nations and firms – as the expected returns to those that can harness its capabilities grows. Administrations in the US, China and Europe have multibillion dollar AI initiatives either implemented or in the pipeline, and positions on regulation are shifting. However, the macro impact of AI is uncertain and there are a wide range of estimates of potential productivity growth.

The IMF projects between a 0.9 to 1.5 percentage point boost in annual labour productivity growth, and the OECD from 0.4 to 0.9 – whereas McKinsey estimates between 0.6 and 3.4 percentage points. Considering the impact on trade, the WTO estimates that under an optimistic scenario of evenly adopted AI leading to high productivity growth, cumulative real global trade growth could be boosted by almost 14 percentage points out to 2040. In contrast, under an uneven AI adoption and therefore mixed productivity growth scenario, trade is boosted by just under 7 percentage points.

[26] Kiela et al. (2023). "Test scores of AI systems on various capabilities relative to human performance"
[27] Dealroom.co: Data retrieved 7th March 2025
[28] Quantum Black AI by McKinsey (2024). "The state of AI in early 2024: Gen AI adoption spikes and starts to generate value"

Rapid digital and automation advances would have the most substantial impact on the model through changes to productivity, although with huge uncertainty around scale and speed

Figure 49: Impact of rapid technological advances on the model and economic projections

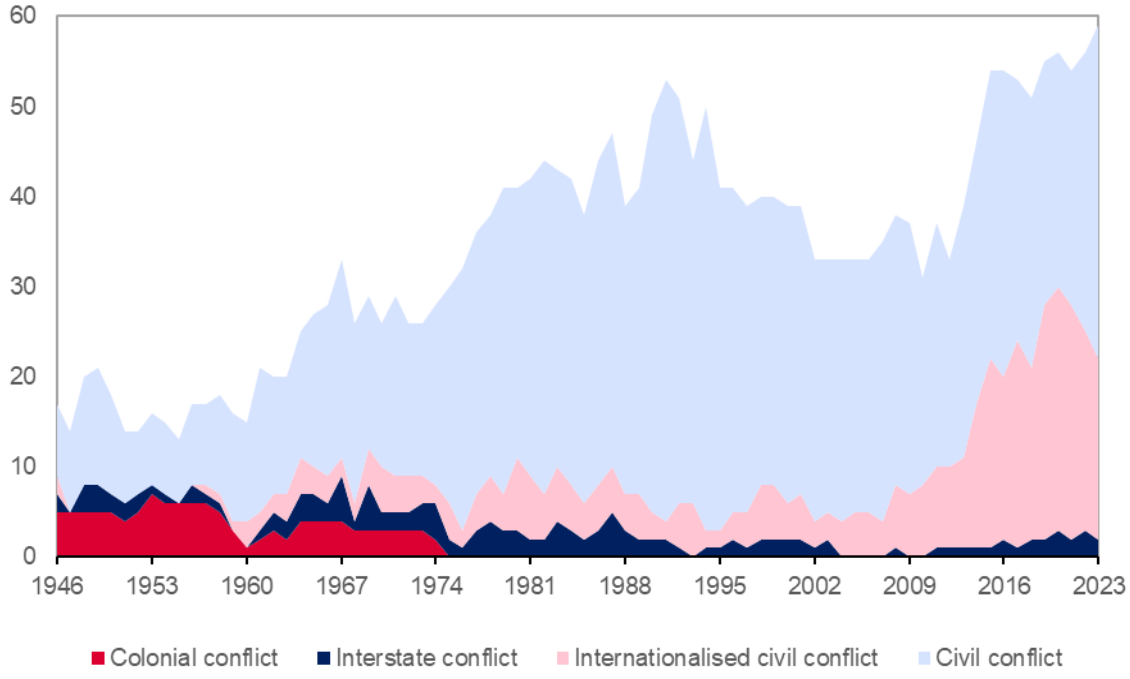


Flashpoints across the globe could potentially interact and escalate

- **Conflict can have large and persistent effects on global trade and economic output.** These effects are particularly devastating for the countries directly impacted, but can also cause wider disruption to trade if the countries concerned are major importers or exporters and/or play a critical role in supply chains. Direct disruption from conflict can suspend shipping routes, destabilise key commodity prices, and limit the production of goods and services in a country or region.
- **The number of state-based armed conflicts around the globe in 2023 was the highest since the Second World War.** Over the last decade, the most significant increase in the number of conflicts has come from those considered internationalised civil conflicts (where foreign actors support one or more parties in a civil conflict). This number has hovered between 16 and 27 since 2013, having never surpassed 10 before this: and with more actors involved, civil conflicts are now longer lasting and more difficult to resolve.[29]

The number of state-based conflicts globally reached 58 in 2023, the highest since 1945, with internationalised civil conflicts a key driver of this

Figure 50: Number of state-based armed conflicts by conflict type



Source: Uppsala Conflict Data Program & Peace Research Institute Oslo (2023). Armed conflict dataset

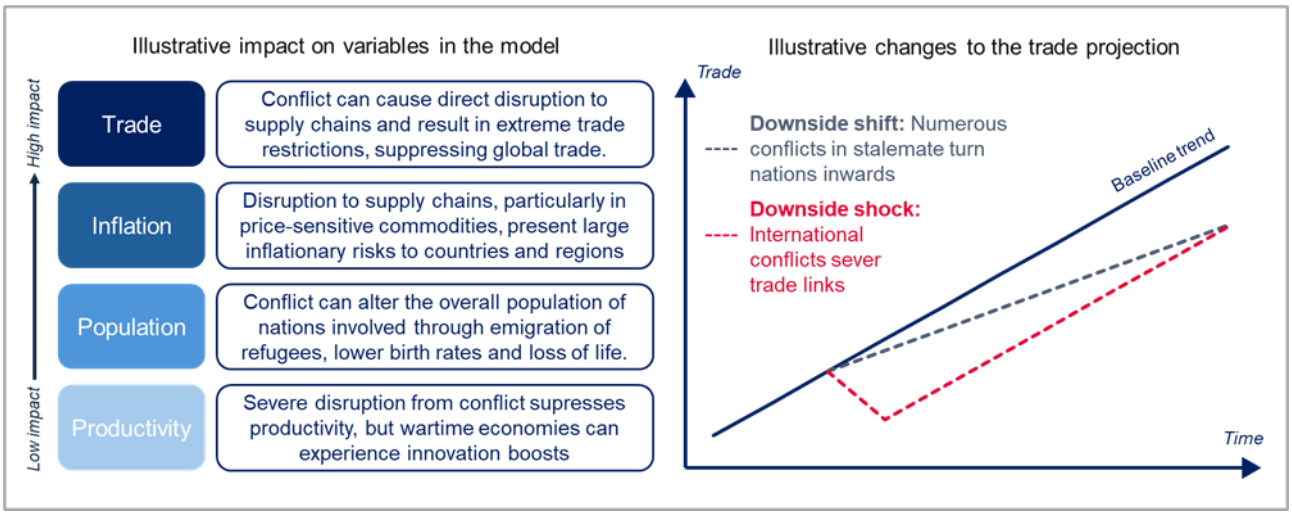
[29] *The Economist*, 17 April 2023, "The world's deadliest war last year wasn't in Ukraine"

- **Conflicts and security tensions across the world could potentially escalate and interact.** The global security landscape is likely to become increasingly crowded, with the emergence of a growing number of empowered state and non-state actors. A more crowded arena could lead to greater fragmentation, and more conflicts becoming internationalised as external actors seek to exert their influence.

While the international system has always been competitive, an increasing blurring of the boundaries between diplomatic, information, military and economic levers of power makes conflict more interconnected and complex. This complexity risks undermining institutions and frameworks intended to prevent escalation into conflict, which primarily cover more distinct remits.[30]

Conflict would impact the model across all four main variables in the regions and countries most affected, with spillovers to the global economy greatest through international trade and inflation

Figure 51: Impact of heightened risk of conflict on the model and trade projections



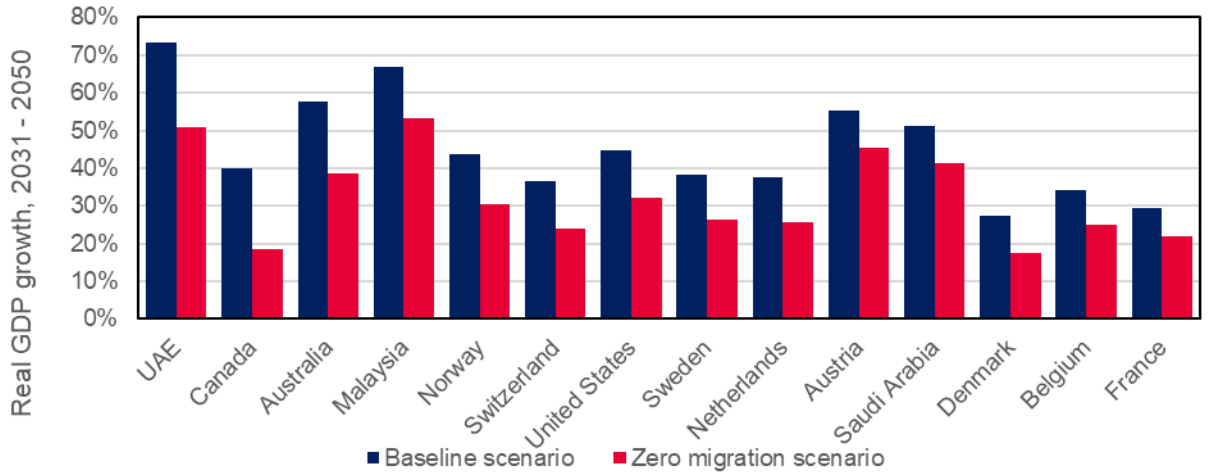
[30] Ministry of Defence (2024). "Global Strategic Trends Out to 2055"

Climate change, conflict and unstable domestic politics are likely to put pressure on large groups of people to migrate

- **Migration can lead to population changes that fundamentally change the economic outlook for a country.** With birth rates falling below the replacement rate in many advanced economies, particularly in Europe, immigration will increasingly be the main factor propping up overall population levels and preventing declines in the number of workers.[31] Additionally, in general, the IMF finds that immigrants to advanced economies increase output and productivity both in the short and medium term: where a 1 percentage point increase in immigrants as a share of overall employment boosts total output by almost 1 percent by the fifth year. This is explained by native and immigrant workers bringing diverse and complementary sets of skills to the labour market. Furthermore, migrants to advanced economies are more likely to be economically active than the native population.[32] However, evidence suggests that inflows of lower-skilled migrants can distort the labour market in some roles and sectors, potentially placing downward pressure on wages – which can also shift the focus of firms away from measures to increase productivity.[33]

Population is a key driver of growth in the Outlook's modelling, and as a result changes in migration mechanically result in altered growth expectations.

Figure 52: Real GDP growth, 2023 – 2050, baseline vs zero-migration scenario



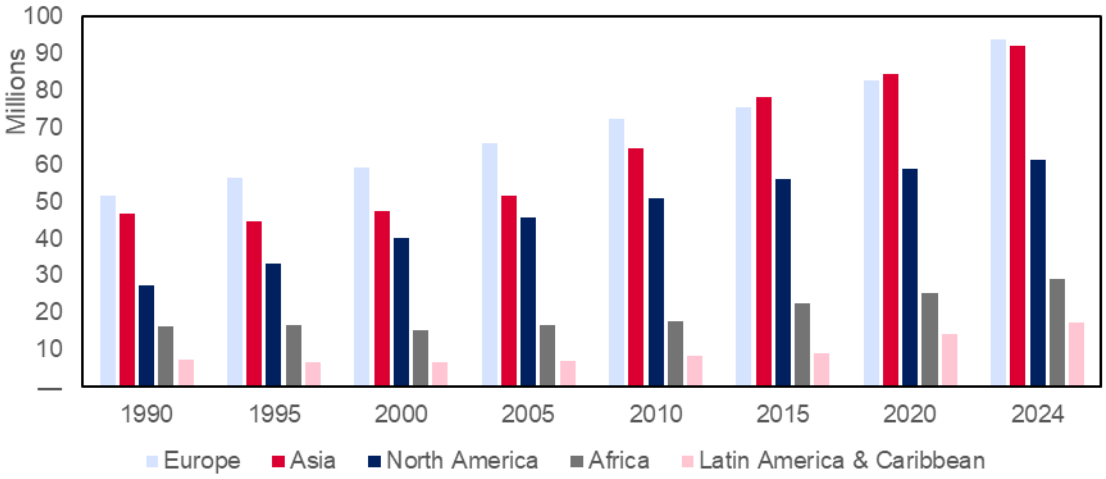
Note: Results reflect running projections using standard UN population forecasts, versus running the same with population forecasts that exclude migration.
Sources: DBT's Global Trade Outlook modelling. See Analytical Approach for further details.

- **The number of international migrants has almost doubled in the past three and a half decades, with North America, Asia and Europe seeing the greatest increases.** The number of people globally that live in a country they were not born in has almost doubled since 1990, from just under 154 million to over 304 million in 2024. As a share of the world's population, this is an increase from 2.9% to 3.7%. However, the destination of migrants is not spread evenly across regions or countries. While Asia has seen the greatest absolute increase in number of migrants due to large populations, immigrants still only represent 1.9% of the total. Meanwhile, in Europe and North America, substantial overall increases in migration also show as a share of total population. From 1990 to 2024, the share of North America's population that are migrants increased from 9.8% to 15.9%, and in Europe this has grown from 7.1% to 12.6%.[34]

[31] UN (2024), "World Population Prospects (Probabilistic Projections)"
[32] IMF (2023). "The Macroeconomic Effects of Large Immigration Waves"
[33] Home Office (2025) "Restoring control over the immigration system"
[34] United Nations Department of Economic and Social Affairs. International Migrant Stock dataset (2024)

The total global stock of migrants increased from just under 154 million in 1990 to over 304 million in 2024, with Europe, Asia and North America seeing the greatest uplifts

Figure 53: Number of international migrants by total migrant stock, by world region

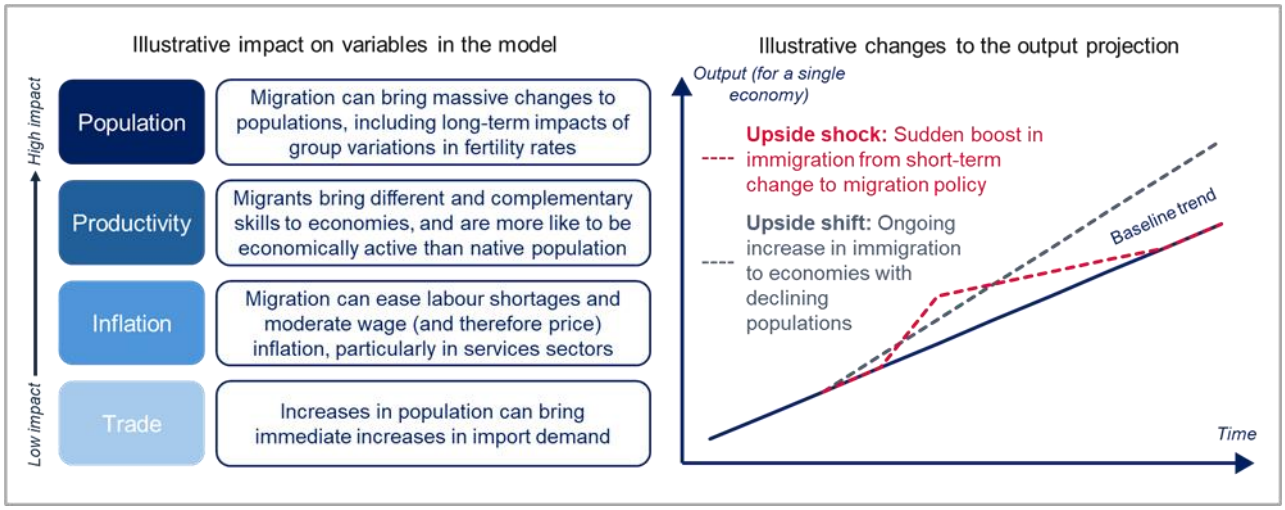


Source: United Nations Department of Economic and Social Affairs. International Migrant Stock dataset

- **International migration could be a defining global feature of the coming decades if climate change and conflict make everyday life challenging in vulnerable regions.** Climate change and ecological breakdown are likely to drive migration at unprecedented levels in the coming decades, as far-ranging and permanent changes to regional environments increase food insecurity and societal destabilisation. Furthermore, a more complex security landscape can increase the threat of conflict in some regions, leading to potentially huge waves of migration.[35] Diverging demographics between world regions and countries, particularly the significant youth bulge in countries in Africa and South Asia, could also be a vast driver of migration if these countries are unable to provide adequate education, skills, training and employment opportunities: a risk elevated by growing automation.[36]

Migration would have the greatest impact on the model through population changes to economies, altering the projections for both migrant destination and source countries

Figure 54: Impact of migration on the model and economic projections



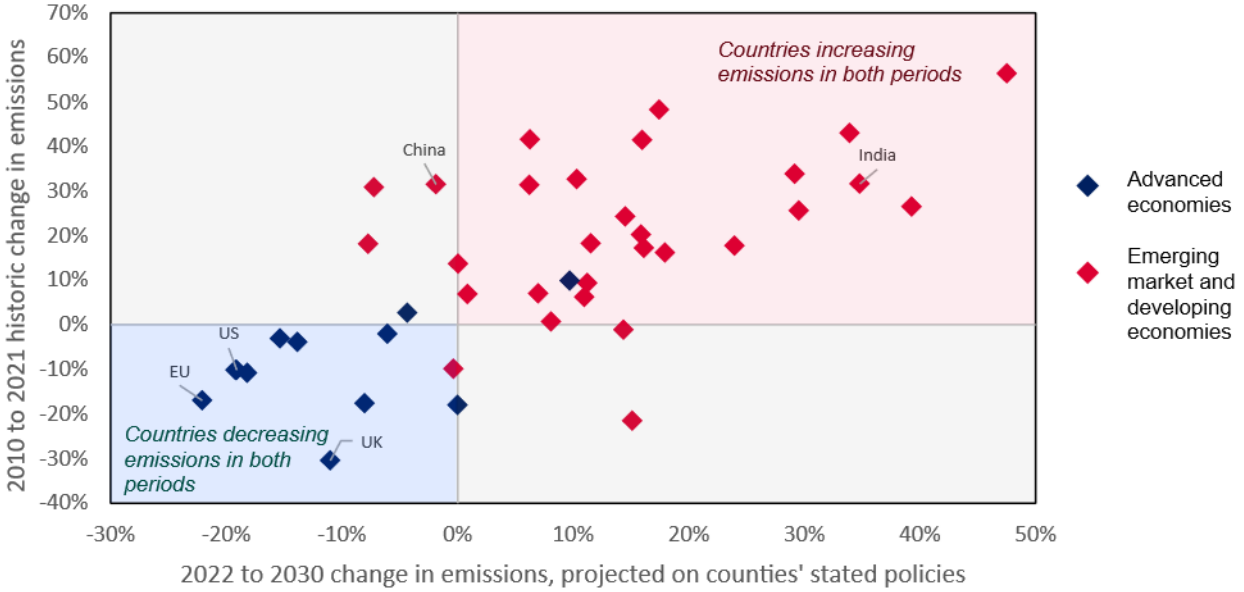
[35] Crippa et al., Conflict as a cause of migration, *Oxford Economic Papers*, Volume 77, Issue 2, Apr. 2025
[36] Ministry of Defence (2024). "Global Strategic Trends Out to 2055"

Divided domestic politics look set to drive an uneven path to global decarbonisation

- **Green industries and energy require a very different mix of inputs to existing industries – altering trade patterns significantly.** Countries decarbonising their economies require different resources, components and goods to those used in fossil-fuel powered energy and carbon intensive industries. New materials and minerals required for the green transition (like cobalt and lithium) are found in different locations to oil and gas reserves, so the pathway to Net Zero could dramatically reshape global trade – particularly as around 40% of maritime trade volume is currently fossil fuel related.[37] In addition, the Net Zero transition will bring forward a competitive challenge for countries and businesses that are reliant on the exports of fossil fuels and carbon intensive goods. This is most pertinent where economies seek to decarbonise their international supply chains by introducing binding border mechanisms.
- **Countries' current ambitions to achieve Net Zero vary, as do the stated policies against this goal.** Most major economies have a target in place to reach Net Zero. However, there is a large variation in the comprehensiveness of these targets, accountability for reaching them, and the target year of achieving the goal. Stated policies around renewable energy production and the electrification of transport and industry can be used to project how countries' emissions will change in the future, and the difference between countries is stark. Several are expected to show substantial increases in emissions out to 2030, and these are generally the same countries in which emissions grew the most in the decade to 2021.[38] These tend to be – but are not exclusively – emerging market economies, where increasing emissions can be a byproduct of rapid industrialisation.

While a group of major greenhouse gas emitting countries reduced their emissions from 2010 to 2021 and will further do so from 2022 to 2030, most nations see increases across both time periods

Figure 55: Country change in greenhouse gas emissions, historic and projected



Source: Climate Action Tracker - Country Emissions Analysis dataset (2025)
Note: (historic = 2010 to 2021, projected = 2022 to 2030). EU displayed as single datapoint in chart.

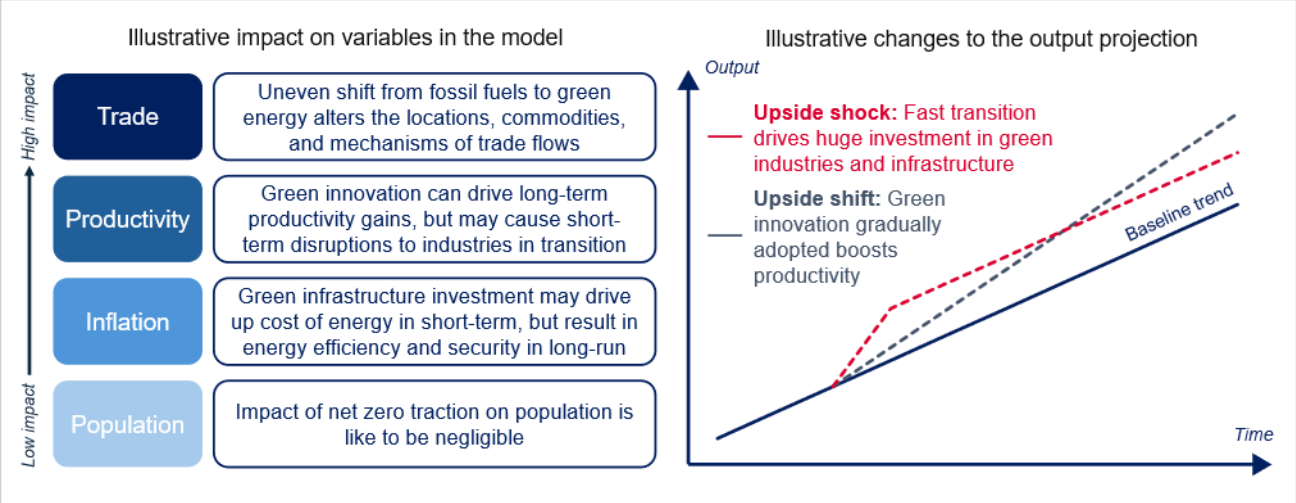
[37] United Nations Centre for Trade and Development Statistics (2025)
[38] Climate Action Tracker (2025)

- **Domestic political cycles and challenges on agreement at international fora mean that global progress on decarbonisation will likely be uneven.** Public sentiment in support of greater climate action has consistently strengthened over the last five years globally.[39] However, climate action and Net Zero policy is increasingly subject to political contestation in many countries, especially advanced economies.[40] Despite some important progress, securing agreement on climate action at international level has also become increasingly polarised relative to previous years.[41]

Different stages of economic development and subsequent policies will remain a key driver of regional variation in fossil fuel consumption. For example, emerging market economies in East and South Asia may remain significant users of fossil fuels to beyond 2050, whilst also seeing significant growth in renewables.[42]

The Net Zero transition will likely have the most direct impact on trade out of the variables in the model, as decarbonisation alters flows of energy and industrial inputs

Figure 56: Impact of Net Zero transition on the model and economic projections



[39] United Nations Development Programme (2024). "Peoples' Climate Vote"
[40] Peterson Institute for International Economics (2024 working paper) "Populist opposition is threatening progress on climate change"
[41] UK Parliament House of Commons Library (2024). "What was agreed at COP29?"
[42] Ministry of Defence (2024). "Global Strategic Trends Out to 2055"

4 Analytical Approach

The Global Supply Model

- **In the Outlook, the projections of the long-term growth rates for key macroeconomic variables are based on the DBT's Global Supply Model (GSM).** Up until 2030, the projections are in line with the Office for Budget Responsibility (OBR) projections for the UK and in line with the IMF World Economic Outlook (WEO) for all other economies. A detailed overview of the modelling approach can be found in the Technical Annex.

- **The Global Supply Model (GSM) is a semi-structural macroeconomic model that is used to produce the long-term macroeconomic projections for exports, imports and GDP that underpin the Global Trade Outlook**. The GSM was developed to improve on the previous GTO methodology. The key aims were to derive the projections in a consistent and unified framework that accounts for the general equilibrium effects and to expand the set of macroeconomic variables of interest (such as investment, bilateral trade or capital stock).The advantage of using the GSM over the previous approach of a suite of separate models (DBT, 2023) is greater internal consistency thanks to a single and unified modelling framework. This means that, for instance, the export projections are aligned with the respective country-specific production levels.

- **The GSM projections are aligned with the OBR forecast for the United Kingdom and the World Economic Outlook (IMF, 2025) for other countries up to 2030.** From 2030 onwards, the projections are derived by combining model insights with any relevant information contained in medium-term external projections. In this version of the Outlook, forecasters conditioned our long-term projections on the medium-term outlook as per IMF's October 2024 WEO. This provided a basis to set out our long-term 2050 projections, avoiding the distortions related to the recent tariff announcements. This policy-neutral long-term outlook was then converted to a set of growth rates, and applied to the most recent available medium-term outlook, namely the updated IMF WEO projections published in April 2025. This approach allows us to capture the potential tariff impacts in the medium-term, without making judgements on their long-term persistence. However, it may at times mean the transition from the medium-term outlook (ending in 2030) and the long-term outlook (2031) features a short-lived step-change in growth rates.

- **The projections use several other external data sources to inform historical trends in the model,** from institutions such as the World Bank, the UN, the World Trade Organisation, and the OECD. Projections for population and population growth are exogenous and taken from the UN principal projections. More detail on data sources can be found in the Model setup and data section below. Variables which are not covered by either the WEO, the UN or the OBR are projected by the model.

- **These improvements mean that the new model is better equipped to accurately represent cross-country interdependencies and the complexities of global trade dynamics**. It represents methodological advancements aimed at providing a more robust framework as compared to the previous, simpler, approach. However, it does not mean that the current GTO projections are more certain: the uncertainties around fundamentals and potential shifts and shocks that might materialise by 2050 are likely to remain high, irrespectively of the modelling approach.

Model Setup and Data

- **The GSM model covers 156 countries, which account for 97 per cent of world population and 99 per cent of world GDP (Figure 62).** The model uses a system of equations grounded in economic theory and empirical analysis to generate time series projections. Whenever needed, these projections can be adjusted in line with additional evidence and judgement for each variable and country.
- **As a supply-side model, the GSM focuses on factors such as productivity, labour and capital, and does not incorporate consumer behaviour or spending patterns.** Each country has its own unique model for economic growth, using a Cobb-Douglas production function incorporating capital, labour and total factor productivity (TFP). In terms of trade projections, as a starting point, each country trades with each other based on the existing historical trade relationships as represented in UNCTAD for merchandise trade and as in WTO-OECD Balanced Trade in Services for services. As the model solves, trade flows are adjusted in line with changes in relative prices and relative market size of each country. The model uses a bilateral trade matrix to track the import and export flows between countries. This system changes over time, with data for these predictions and trade relationships extending over the projection horizon.
- The model assumes that TFP in all countries will eventually converge to the level of the productivity leader, assumed to be the United States. For the current forecast, we assumed US productivity to be set as an average of the Congressional Budget Office (official neutral forecaster) and the Fed Federal Open Market Committee forecasts, equal to 0.86% TFP growth and implying 1.7% GDP growth by 2050. Furthermore, inflation converges in every country to the country's inflation target, if there is a target value. For countries with pegged currencies, the inflation target follows the inflation target of the anchor currency. For floating currencies with no official inflation target, we set the target equal to the 2029 inflation from the WEO. Exchange rates converge to purchasing-power parity, population and population growth are treated as exogenous variables in the model. All variables are projected on an annual basis.

Figure 57: Country coverage of the Global Supply Model

Notes: The following countries are not included in the model - Andorra, Cuba, Fiji, Micronesia, Iraq, Kyrgyzstan, Kiribati, North Korea, Kuwait, Laos, Lebanon, Liechtenstein, Liberia, Libya, Monaco, Montenegro, Marshall Islands, Macedonia (FYROM), Nepal, Nauru, Niue, Papua New Guinea, Palestinian Territories, Qatar, Solomon Islands, Sudan, San Marino, Somalia, Syria, Timor-Leste, Turkmenistan, Tonga, Trinidad and Tobago, Tuvalu, Vatican City, Venezuela, Vanuatu, Samoa, Zimbabwe

- **The historical data sources used in the model include** output, inflation, and trade deflators from IMF WEO (October 2024) [IMF WEO]; exchange rates from World Bank data (November 2024) [WB ER]; population figures from UN Population projections (July 2024) [UN POP]; trade data from UNCTAD for goods (November 2024) [UNCTAD] and BaTiS for services (March 2024) [BaTIS]; sectoral trade shares from Oxford Economics Global Industry Model; inflation targets from Central Bank news [CB News], capital and investment from IMF Investment and Capital Stock data [IMF ICSD]; and income distribution data from UNU-WIDER's World Income Inequality database [WIID]. The projections presented in this report use nominal terms for GDP levels and real terms for growth rates. Real GDP by country is expressed in local currency units (LCU).
- **Compared to other general equilibrium multi-country models** like the International Monetary Fund's 'Flexible System of Global Models' (FSGM) or the European Central Bank's ECB-Global, the GSM includes more countries, but with each country block containing less detail to keep the model tractable. For example, the model focuses on aggregate supply but ignores the drivers of aggregate demand. The model does not account for unemployment, and short-term economic fluctuations are seen as temporary productivity changes rather than changes in the factors of production. It is suitable for long-term analysis but cannot offer insights on the business cycle dynamics.
- **In contrast to trade models such as Computable General Equilibrium (CGE) models** (e.g. Hertel, 1997), the GSM does not provide detailed sectoral insights (see detail in Sectoral and Consumer income projections section) and is better suited to analyse the evolution of macroeconomic variables across countries and over time. For instance, it computes time series of price deflators for both trade and GDP, enabling the study of inflation shocks and their propagation.
- **The UK projections do not include any judgements on the UK outlook as they are based on the OBR** medium-term forecasts and are drawing on the OBR long-term projections out to 2050. The conditioning on OBR forecast in the medium term is purposely neutral and, as such, the UK outlook should be interpreted as a baseline against which new policies or changes in direction could be assessed against. As with any forecast, the OBR's forecast is subject to a high degree of uncertainty.
- **The OBR produce two sets of forecasts – detailed medium-term forecasts out to 2029 and a long-term projection for a more limited set of variables out to 2050.** Our projections rely on the latest available medium-term OBR forecast: UK GDP projections published in March 2025. The long-term forecast used to inform the UK projections is from May 2024.[1]
- **For our nominal GDP projections, we project forward the OBR expectations regarding the pound exchange rate.** To maintain continuity between the OBR's long-term determinants and the recently updated short-term forecast, we have made minimal adjustments to the OBR-implied nominal long-term GDP projections for the UK. These adjustments account for trend growth as per the long-term projections from Autumn 2025, while aligning with the GDP levels in the latest medium-term projections.
- **The OBR does not produce long-term forecasts for UK trade**. Our trade projections assume no inherent change to trade patterns for the UK beyond 2029, with trade determined by the OBR's GDP long-term outlook and changes in the global trade projections outside the UK.
- **UK exports are determined by projected import demand based on the current trading patterns.** That is, the UK forecasts do not account for new policies such as new FTAs, new export promotion efforts, or global changes beyond those assumed by the GSM model. Nor would it take into the development of new trading relationships more generally until factored into OBR assumptions. Imports are driven by historic relationships between domestic demand, relative prices, and export demand.

[1] OBR has published the updated set of UK long-term projections on the 19th June 2025. This is not reflected in our modelling.

Sectoral and Consumer Income Projections

- **The report includes additional estimates for sector growth and trade, and for consumer income levels.** These estimates use core macroeconomic projections from the GSM but are produced separately and outside of the model. In both cases, these model extensions have significantly higher uncertainty than the core GSM projections, due to a combination of a more simplified methodology, and the inherently high volatility in the economic outcomes at the level of sectors or consumers groups.
- **Sectoral growth projections** are constructed using external data from Oxford Economics' Global Industry Model, which provides a historic database of industry structures for 77 markets, and a forward-looking set of projections that are used in conditioning the sector outlook.
- **This dataset provides coverage for countries making up approximately 96.7% of global GDP and 96.1% of global trade.** For countries not included in this group, their industry structure is based on the average of five proxy country structures identified by matching the trade structure of the missing country. The subsequent dataset is then applied to growth projections produced by the GSM to estimate sector-level growth that is consistent with the macroeconomic growth outlook.
- **Sectoral trade projections** are constructed using data from UNCTAD's Mercantile Trade Statistics for goods and the UN and WTO's Balanced Trade in Services (BATIS) dataset for services. Both are selected for consistency with the GSM. Historic data is used to identify trade intensities relative to the size of local industries for each sector, proxied by a ratio of each local industry size to imports. This ratio is applied to the sectoral growth projections (described above) to arrive at an initial estimate of global import values.
- **These initial sectoral import shares are then applied to the GSM import projections** to produce sector-level import projections consistent with aggregated trade projections in the *Outlook*. In both cases, data is restructured from its original form to the GTO's 23 sectors. Mappings between these categories are included in Annex 1 for NACE, SITC and EBOPS, which are respectively the original formats for GDP data, goods trade data, and services trade data[2]. In some cases, these sectors are mapped onwards to industrial strategy sectors, and this mapping is also in Annex 1.
- **Consumer income growth projections are developed by combining GSM GDP projections with income inequality data from UNU-WIDER's World Income Inequality Database (WIID).** The WIID provides income share estimates by decile and percentile, which are used to determine the distribution of GDP earnings among different groups within a country. This approach results in a dataset that shows the estimated average earnings per decile or percentile for each country over the projection period.
- **This dataset is primarily used in the Outlook to estimate the number of people likely to earn above specific thresholds.** These thresholds are consistent with the last edition of the GTO: earners above $13,205 are classified as High-Income Consumers, and earners above $46,381 (both in 2021 US Dollars) are classified as Very High-Income Consumers. These thresholds are adjusted for inflation using the US GDP deflator. A major limitation of these estimates is their reliance on nominal US Dollar values, which would yield different results if adjusted for purchasing power parity. However, the current approach closely aligns with the considerations an exporter might make, assessing the global economy from the perspective of the USD buying power of potential clients

[2] Note that the GTO's definition of industrial strategy sectors is broad and may include subsectors outside of the final industrial strategy. This definition does not align with formal definitions of the sectors used elsewhere and should not be compared to figures using these definitions.

5 Annexes

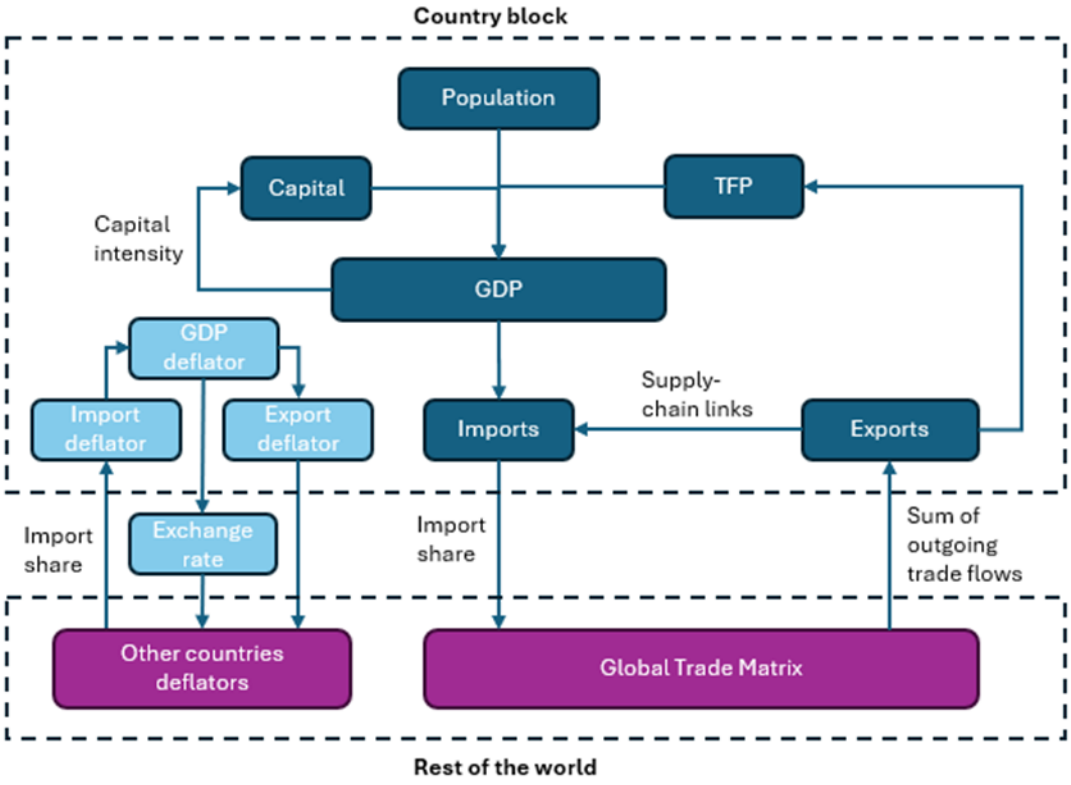
Technical Annex

- **The Global Supply Model (GSM)** is a semi-structural macroeconomic model that is used to produce the long-term macroeconomic projections for exports, imports and GDP that underpin the Global Trade Outlook.
- **The GSM was developed in DBT to improve on the previous GTO methodology.** The key aims were to derive the projections in a consistent and unified framework that accounts for general equilibrium effects and to expand the set of macroeconomic variables of interest (such as investment, bilateral trade or capital stock).The advantage of using the GSM over the previous approach of a suite of separate models (DBT, 2023) is greater internal consistency thanks to a single and unified modelling framework. This means that, for instance, the export projections are aligned with the respective country-specific production levels.
- **The GSM model covers 156 countries, which account for 97 per cent of world population and 99 per cent of world GDP.** The model uses a system of equations grounded in economic theory and empirical analysis to generate time series projections. Whenever needed, these projections can be adjusted in line with additional evidence and judgement for each variable and country.
- **As a supply-side model, the GSM focuses on factors such as productivity, labour and capital**, and does not incorporate consumer behaviour or spending patterns. Each country has its own unique model for economic growth, using a Cobb-Douglas production function incorporating capital, labour[1] and total factor productivity (TFP).
- **In terms of trade projections, as a starting point, each country trades with each other based on the existing historical trade relationships.** As the model solves, trade flows are adjusted in line with changes in relative prices and relative market size of each country. The model uses a bilateral trade matrix to track the import and export flows between countries.
- **The model is based on an assumption that TFP in all countries will eventually converge to the level of the productivity leader,** assumed to be the United States. For the current forecast, we assume US productivity to be set as an average of the Congressional Budget Office and the Federal Open Market Committee forecasts, equal to 0.86% TFP growth and implying 1.7% GDP growth by 2050[2].
- **Furthermore, inflation is assumed to converge in every country to the country's inflation target**, if there is a target value. For countries with pegged currencies, the inflation target follows the inflation target of the anchor currency. For floating currencies with no official inflation target, we set the target equal to the 2029 inflation from the WEO. Exchange rates converge to purchasing-power parity, whereas population and population growth are treated as exogenous variables in the model. All variables are projected on an annual basis.

[1] Our production function uses total population in place of labour force. The advantage of using total population rather than working age population or number of hours worked is that it allows us to compute directly GDP per capita for a large sample of countries.
[2] This average was used because it offers a balanced perspective between the projections used by the CBO and the Fed FOMC.

- **Compared to other general equilibrium multi-country models like the International Monetary Fund's 'Flexible System of Global Models' (FSGM) or the European Central Bank's ECB-Global,** the GSM includes more countries, but with each country block containing less detail to keep the model tractable. For example, the model focuses on aggregate supply but ignores the drivers of aggregate demand.
- **The model does not account for unemployment**, and short-term economic fluctuations are seen as temporary productivity changes rather than changes in the factors of production. It is therefore suitable for long-term analysis but cannot offer insights on the business cycle dynamics.
- **In contrast to trade models such as Computable General Equilibrium (CGE) models** (e.g. Hertel, 1997[3]), the GSM does not provide detailed sectoral insights (see detail in *Sectoral and Consumer income projections* section) and is better suited to analyse the evolution of macroeconomic variables across countries and over time. For instance, it computes time series of price deflators for both trade and GDP, enabling the study of inflation shocks and their propagation.

Figure 58: Economic linkages in the Global Supply Model



[3] Detailed information on the CGE model developed by GTAP can be found at https://www.gtap.agecon.purdue.edu/models/cge_gtap_n.asp

Model Data and Key Equations

Model Data

To obtain a single and consistent database for the country-level data we combine a variety of publicly available data from different sources. The key historical data sources used in the model include:

- **International Monetary Fund World Economic Outlook** (October 2024: IMF WEO) for data on output, inflation, and trade deflators
- **International Monetary Fund Investment and Capital Stock Database** (IMF ICSD) for capital stock and investment figures
- **World Bank Exchange Rate Database** (November 2024, WB ER) for official exchange rate data
- **United Nations World Population Prospects** (July 2024, UN POP) for demographic and population statistics
- **United Nations Conference on Trade and Development Statistics** (November 2024, UNCTAD) for international goods trade data
- **Balanced Trade in Services Database** (March 2024, BaTIS) for bilateral trade in services
- **Oxford Economics Global Industry Model** database for sectoral trade share estimates
- **Central Bank News Database** (CB News) for official inflation targets
- **United Nations University World Institute for Development Economics Research** – World Income Inequality Database (WIID) for income distribution metrics

The projections presented in this report use nominal GDP for levels and real GDP for growth rates. Real GDP by country is expressed in local currency units (LCU).

Key Model Equations

In the equations below, for simplicity and clarity of the exposition, we omit time indices when not essential.

- **Output:** Output is determined by a Cobb-Douglas function with the factors of production being labour (L) and total capital (KR). The residual A_t represents the total factor productivity. Labour is proxied by total population. Population is exogenous and there is no unemployment in the model. We set the output elasticity of labour to 0.33, consistent with literature e.g. (Vollrath, 2021).

$$YR_t = Y_0 e^{\ln A_t} KR^{\alpha} L^{1-\alpha} \quad (1)$$

- **Capital:** Total capital combines public, private and public-private partnership data:

$$KR = KRG + KRP + KRPPP \quad (2)$$

  Where KR denotes the total capital stock in constant local currency, and KRG, KRP and KRPPP denote the capital stock of the public sector, the private sector and public-private partnerships respectively. For simplicity, we assume that investment is a constant share of output (k2). Total capital is assumed to depreciate at a rate k1. Therefore, total capital will evolve over time accordingly to the equation (3):

$$KR_{t+1} = (1 - k_1)KR_t + \left(1 - \frac{k_1}{2}\right) k_2 YR_t + \epsilon_{KR} \quad (3)$$

- **Total factor productivity (TFP):** Given that there is no unemployment in this model, TFP (A_t) is a key variable explaining the dynamics in the economy. TFP represents here the instantaneous productivity of factors, not the trend or *potential* productivity. In the short-term, productivity adjusts to trade and competitiveness shocks. In the long-run, productivity catches up to the frontier represented by the US. Equation (4) describes the growth in TFP (A_t):

$$\Delta \ln A_t = \gamma_0 + \gamma_1 \Delta \ln A_{t-1} + \gamma_2 \Delta \ln XR_t + \gamma_3 \ln \frac{A_{t-1} ER_{t-1}^{\alpha-1}}{A_{t-1}[leader] ER_{t-1}\,[leader]^{\alpha-1}} + \epsilon_A \quad (4)$$

Where γ_0 is a constant, γ_1 parametrises the impact of growth of the past period TFP and γ_2 is the elasticity to changes in foreign demand (proxied by real exports, XR_t). The long run parameter γ_3 is the speed of convergence to the technological frontier. ER_t is the dollar exchange rate.

- **Exchange Rate**: Projecting exchange rates is inherently difficult. The primary theories include the random walk hypothesis, purchasing power parity (PPP), uncovered interest rate parity, and econometric estimation using explanatory variables such as terms of trade, current account balance, net foreign assets, and productivity. In this context, we employ an equation derived from PPP. According to pure PPP, the price of an identical basket of products should remain constant across countries. However, due to differences in product comparability between nations, measuring the exchange rate at PPP is challenging. This model assumes that the change in the exchange rate from one period to the next is equivalent to the relative change in the GDP deflator as set out in the equation (5):

$$\frac{ER_t}{ER_{t-1}} = 1 + \frac{\sum_{€} \frac{PY_t}{100} YR_{t-1}}{\sum_{€} \frac{PY_{t-1}}{100} YR_{t-1}} - \frac{PY_t[leader]}{PY_{t-1}[leader]} + \epsilon_{ER} \quad (5)$$

PY_t is the GDP deflator and YR_t is real GDP. Where countries are in a currency union, we use the GDP weighted average inflation in the union instead of the country GDP deflator.

- **International Trade**: In the model imports are a function of income (GDP), exports (through supply-chain effects) and an error-correction term. In the long run, import intensity is a function of price competitiveness. This is summarised in equation (6):

$$\Delta \ln MR_t = \delta_0 + \delta_1 \Delta \ln YR_t + \delta_2 \Delta \ln XR_t + \delta_3 \left[\ln \frac{MR_{t-1}}{YR_{t-1}} - \delta_4 \ln \frac{PM_{t-1}}{PY_{t-1}} \right] + \epsilon_{MR} \quad (6)$$

Imports are split by their country of origin according to an import shares ($\Gamma_{i,j}$) in the trade matrix and the ultimate USD value of trade from country *i* to country *j* ($BTR_{i \to j}$) is determined as per equation (7):

$$BTR_{i \to j} = \Gamma_{i,j} \frac{MR[j] \cdot PM[j]}{100\, ER[j]} \quad (7)$$

Where MR_t is real imports and PM_t is the import deflator.

Exports are the sum of outgoing trade flows:

$$XR[i] = \frac{100}{PX[i]} ER[i] \sum_j BTR_{i \to j} \cdot e^{\epsilon_{XR}} \quad (8)$$

- **We rely on two main datasets for our trade data:** UNCTAD for goods and Balanced Trade in Services (BaTIS) for services, aggregating them into a single measure of trade flows. In the model the bilateral trade matrix requires the data to be balanced (i.e. the reported imports from country i to country j need to exactly match the reported exports from country i to country j).

- **While BATiS data is balanced, we need to adjust UNCTAD trade data for goods to obtain a balanced dataset.** In line with the best practice, we give priority to the data reported by the importer. It is more likely to be reliable, since the importer country collects tax revenue and therefore, arguably, has the incentives to report more accurately.

- **In some cases, imported reporter data is missing**. In those cases, we backfill it by assuming that the share of imports from one country of origin is the same as in the closest year with non-missing data. The exhaustive decision rule applied to goods trade data is summarised in Table 1. We need to fill missing data in several more variables other than trade; please see the details of this process is the section '*Back-casting missing data values'* below.

Table 1: Trade data source rule used to obtain balanced goods trade data.

Trade data source rule		
Importer	Exporter	Value used
Present	Any	Importer
Absent	Present	Exporter
Absent	Absent	Null

- **Price system:** The equations (9) to (11) below summarise the prices system in the model. It is structured so that domestic prices are influenced by external price shocks while maintaining alignment with long-term inflation targets (labelled as INFT in the equations). For countries with pegged currencies, the inflation target follows the inflation target of the anchor currency. For floating currencies with no official inflation target, we set the target equal to the 2029 inflation from the WEO. For countries that share a common currency – like the Euro Area – the gap to the inflation target is calculated at the union level, not at the country level. That way the central bank targets average inflation across the union, even if individual countries can experience heterogenous imported inflation shocks. This is summarised in equation (9). Equation (10) describes import prices: they are the weighted average of export prices according to the country of origin. Finally, export prices inflation only depends on domestic price inflation - this can be interpreted as each country exporting only one good, as summarised in equation (11).

$$\Delta \ln PY_t = \beta_0 INFT + \beta_1 \Delta \ln PY_{t-1} + (1 - \beta_0 - \beta_1)\Delta \ln PM_t + \epsilon_{PY} \quad (9)$$

$$\Delta \ln PM[i]_t = \Delta \ln ER[i]_t \sum_j \frac{\Gamma_{j,i}}{\sum_k \Gamma_{k,i}} (\Delta \ln PX[j]_t - \Delta \ln ER[j]_t) \quad (10)$$

$$\Delta \ln PX_t = \Delta \ln PY_t \quad (11)$$

Back-casting missing data values

- **The complete data required by the model is available for 146 countries.** In order to expand the country coverage as wide as possible we explore backfilling the missing historical data for some country-year-variable observations whenever judged possible. For example, if the GDP deflator is not available for year t but exists for year t-1, the value at time t can be backfilled by applying the equation for the GDP deflator at time t, exploiting the information from t-1. However, if the entire time-series for a variable within a country is missing, that country will be omitted in whole.
- **Through back-casting process, an extra 10 countries can be added**, increasing the total of the model coverage from 146 to 156 economies.

Parametrisation and estimation

- **Estimation is done equation by equation.** We use a constrained estimation methodology where the bounds are imposed to be plus/minus one standard deviation around the average of the unconstrained estimation. The error-correction equations are estimated using a 2-stage least squares method.
- **A common challenge for economic models that contain many countries is that some of the countries do not have enough historical data observation.** This is usually the case for smaller countries which have started collecting economic data only recently. When it is the case in our estimation, we assume that such a country equation can be proxied by a default country, which we proxy by taking the average of the estimated coefficients of the unconstrained estimation for all the other countries. In an extreme case when a country does not have enough data to estimate any of its equations, then it is assumed to be fully proxied by such 'a default' country.
- **Some standard parameters in the model are calibrated from the literature.** For example, the elasticity of capital to output is set at 0.33.

Quality Assurance

- **The Global Supply Model has been developed in the Department of Business and Trade (formerly Department for International Trade)** and, as any modelling tool, is subject to continuous development and improvements. During its development it has been presented at seminars at other government departments and at the Bank of England, benefitting from valuable feedback. It has also been presented to analysts across the Government Economic Service at the Government Economic Service Annual Conference. External peer-review of the model in planned for the near future.
- **Key improvements of this model in comparison to the analytical framework used to derived past Global Trade Outlook projections mean that the new model is better equipped to accurately represent cross-country interdependencies and the complexities of global trade dynamics.** It represents methodological advancements aimed at providing a more robust framework as compared to the previous, simpler, approach. However, it does not mean that the current set of projections is more certain: the uncertainties around the fundamentals and potential shifts and shocks that might materialise by 2050 are likely to remain high, irrespectively of the modelling approach.

GDP Projections

	2023		2035		2050		Growth: 2023-35				Growth: 2035-50			
	Nominal GDP ($bn)	Share of world GDP	Nominal GDP ($bn)	Share of world GDP	Nominal GDP ($bn)	Share of world GDP	In real terms		In nominal terms		In real terms		In nominal terms	
							Per Year	Cumulative	Per Year	Cumulative	Per Year	Cumulative	Per Year	Cumulative
World	**105067**	***100.0 %***	**178425**	***100.0 %***	**333042**	***100.0 %***	**2.6%**	***35.9%***	**4.5%**	***69.8%***	**2.1%**	***36.9%***	**4.2%**	***217.0%***
Africa	2755	2.6%	5052	2.8%	10728	3.2%	3.9%	59.4%	5.2%	83.4%	3.2%	59.2%	5.1%	112.4%
Asia Pacific	12588	12.0%	20141	11.3%	36726	11.0%	2.3%	31.0%	4.0%	60.0%	1.9%	32.3%	4.1%	82.3%
China & Hong Kong	18651	17.8%	33989	19.0%	62573	18.8%	3.8%	53.7%	5.1%	82.2%	2.1%	36.5%	4.2%	84.1%
Eastern Europe & Central Asia	3964	3.8%	6816	3.8%	12654	3.8%	2.8%	37.6%	4.6%	71.9%	2.1%	36.8%	4.2%	85.7%
Europe	20679	19.7%	31869	17.9%	51864	15.6%	1.4%	19.2%	3.7%	54.1%	1.3%	20.8%	3.3%	62.7%
Latin America	6441	6.1%	9987	5.6%	17313	5.2%	2.3%	30.9%	3.7%	55.0%	1.7%	29.1%	3.7%	73.4%
Middle East	2532	2.4%	4475	2.5%	8995	2.7%	3.1%	47.3%	4.9%	76.7%	2.8%	50.4%	4.8%	101.0%
North America	29894	28.5%	49077	27.5%	87798	26.4%	2.2%	28.4%	4.2%	64.2%	1.9%	32.7%	4.0%	78.9%
South Asia	4183	4.0%	11693	6.6%	35153	10.6%	6.3%	102.5%	8.9%	179.5%	4.6%	95.4%	7.6%	200.6%
UK	3379	3.2%	5327	3.0%	9238	2.8%	1.6%	22.5%	3.9%	57.6%	1.9%	32.4%	3.7%	73.4%
Individual Economies														
Afghanistan	17	0.0%	52	0.0%	165	0.0%	9.1%	139.0%	9.6%	201.2%	5.9%	137.8%	8.0%	218.3%
Albania	23	0.0%	47	0.0%	81	0.0%	3.8%	45.1%	6.0%	101.4%	1.7%	28.5%	3.7%	72.7%
Algeria	248	0.2%	366	0.2%	703	0.2%	3.4%	39.7%	3.3%	47.7%	2.4%	43.6%	4.4%	92.1%
Angola	110	0.1%	181	0.1%	432	0.1%	4.3%	52.4%	4.2%	64.5%	4.1%	82.0%	6.0%	139.0%
Antigua and Barbuda	2	0.0%	4	0.0%	8	0.0%	3.9%	46.0%	5.8%	96.3%	2.8%	51.9%	4.9%	104.5%
Argentina	646	0.6%	921	0.5%	1491	0.4%	2.9%	33.5%	3.0%	42.7%	1.4%	22.6%	3.3%	61.9%
Armenia	24	0.0%	43	0.0%	76	0.0%	4.9%	61.7%	5.0%	78.6%	1.8%	31.0%	3.8%	75.6%
Australia	1742	1.7%	2742	1.5%	5322	1.6%	2.7%	30.2%	3.8%	57.4%	2.4%	42.5%	4.5%	94.1%
Austria	513	0.5%	796	0.4%	1505	0.5%	1.8%	19.2%	3.7%	55.2%	2.3%	39.8%	4.3%	89.2%
Azerbaijan	72	0.1%	122	0.1%	198	0.1%	2.9%	33.5%	4.4%	67.8%	1.3%	21.7%	3.3%	62.7%
Bahrain	46	0.0%	76	0.0%	146	0.0%	3.4%	39.4%	4.2%	63.8%	2.4%	42.2%	4.5%	92.6%
Bangladesh	452	0.4%	1121	0.6%	2959	0.9%	7.2%	100.0%	7.9%	148.4%	4.2%	86.5%	6.7%	163.9%
Barbados	7	0.0%	12	0.0%	20	0.0%	2.6%	29.4%	4.6%	72.4%	1.6%	26.8%	3.6%	70.6%
Belarus	72	0.1%	102	0.1%	146	0.0%	1.8%	19.0%	2.9%	41.4%	0.5%	8.0%	2.5%	44.2%
Belgium	645	0.6%	949	0.5%	1601	0.5%	1.6%	17.6%	3.3%	47.1%	1.5%	25.5%	3.5%	68.7%
Belize	3	0.0%	6	0.0%	11	0.0%	3.9%	46.0%	5.0%	80.4%	2.6%	45.9%	4.5%	94.4%
Benin	20	0.0%	47	0.0%	118	0.0%	6.9%	95.6%	7.4%	136.7%	4.2%	86.2%	6.4%	153.2%
Bhutan	3	0.0%	7	0.0%	14	0.0%	5.8%	75.7%	7.8%	145.5%	2.6%	47.6%	4.6%	97.5%
Bolivia	45	0.0%	78	0.0%	152	0.0%	3.2%	36.6%	4.6%	71.9%	2.5%	45.1%	4.5%	94.6%
Bosnia and Herzegovina	28	0.0%	46	0.0%	80	0.0%	3.2%	37.5%	4.3%	65.7%	1.7%	29.7%	3.8%	74.8%
Botswana	19	0.0%	37	0.0%	76	0.0%	3.4%	39.7%	5.6%	93.0%	2.8%	51.0%	4.8%	102.1%
Brazil	2191	2.1%	3180	1.8%	5177	1.6%	2.4%	27.0%	3.2%	45.1%	1.3%	21.4%	3.3%	62.8%
Brunei	15	0.0%	24	0.0%	40	0.0%	2.8%	31.4%	4.1%	62.1%	1.3%	21.2%	3.3%	63.5%
Bulgaria	102	0.1%	187	0.1%	330	0.1%	3.0%	34.7%	5.1%	82.3%	1.8%	31.1%	3.9%	76.8%
Burkina Faso	21	0.0%	51	0.0%	109	0.0%	5.1%	64.2%	7.7%	143.1%	3.1%	57.5%	5.1%	112.1%
Burundi	4	0.0%	14	0.0%	30	0.0%	4.0%	47.5%	10.5 %	229.9%	3.3%	62.3%	5.2%	114.2%
Cambodia	43	0.0%	93	0.1%	192	0.1%	5.0%	63.5%	6.6%	115.1%	2.9%	53.2%	4.9%	106.2%
Cameroon	49	0.0%	105	0.1%	197	0.1%	5.0%	62.9%	6.5%	112.4%	3.1%	58.6%	4.3%	88.5%
Canada	2173	2.1%	3399	1.9%	5928	1.8%	2.1%	22.9%	3.8%	56.4%	1.7%	29.3%	3.8%	74.4%
Cape Verde	3	0.0%	6	0.0%	19	0.0%	7.1%	98.9%	7.4%	135.0%	5.7%	130.4%	7.9%	211.0%
Central African Republic	3	0.0%	5	0.0%	10	0.0%	3.9%	46.1%	6.2%	106.3%	3.1%	58.2%	4.3%	88.1%
Chad	18	0.0%	31	0.0%	61	0.0%	3.5%	40.8%	4.4%	67.6%	3.1%	57.1%	4.6%	97.7%
Chile	336	0.3%	516	0.3%	852	0.3%	2.6%	29.6%	3.7%	53.8%	1.4%	22.7%	3.4%	65.0%
China	18270	17.4%	33358	18.7%	61649	18.5%	4.4%	54.3%	5.1%	82.6%	2.1%	37.1%	4.2%	84.8%
Colombia	366	0.3%	666	0.4%	1196	0.4%	3.0%	34.7%	5.1%	81.9%	1.9%	33.6%	4.0%	79.6%
Comoros	1	0.0%	3	0.0%	7	0.0%	4.9%	60.9%	6.4%	111.2%	3.9%	76.4%	5.9%	137.8%
Congo	14	0.0%	32	0.0%	108	0.0%	4.1%	49.4%	7.2%	129.1%	3.0%	56.3%	8.3%	231.7%
Congo (Democratic Republic)	64	0.1%	152	0.1%	350	0.1%	6.0%	79.2%	7.4%	135.3%	3.7%	71.2%	5.7%	130.9%
Costa Rica	87	0.1%	184	0.1%	389	0.1%	4.5%	55.9%	6.5%	112.6%	3.1%	57.4%	5.1%	111.6%
Croatia	84	0.1%	147	0.1%	215	0.1%	2.5%	28.4%	4.7%	73.7%	0.6%	9.7%	2.6%	46.7%
Cyprus	34	0.0%	61	0.0%	115	0.0%	3.4%	40.1%	5.0%	80.5%	2.3%	39.6%	4.3%	87.5%
Czechia	343	0.3%	514	0.3%	787	0.2%	1.8%	19.9%	3.4%	49.7%	0.9%	13.7%	2.9%	53.3%

Denmark	407	0.4%	658	0.4%	1067	0.3%	2.2%	24.1%	4.1%	61.7%	1.2%	20.2%	3.3%	62.1%
Djibouti	4	0.0%	9	0.0%	20	0.0%	6.3%	84.7%	7.3%	132.6%	3.3%	61.8%	5.3%	118.1%
Dominica	1	0.0%	1	0.0%	2	0.0%	3.9%	46.9%	5.3%	85.8%	2.6%	47.9%	4.6%	97.2%
Dominican Republic	121	0.1%	256	0.1%	659	0.2%	6.1%	81.1%	6.5%	112.2%	4.4%	91.9%	6.5%	157.2%
Ecuador	121	0.1%	183	0.1%	299	0.1%	2.0%	22.3%	3.5%	50.8%	1.3%	21.6%	3.3%	63.9%
Egypt	394	0.4%	777	0.4%	1581	0.5%	5.0%	62.9%	5.8%	97.2%	2.8%	52.3%	4.9%	103.5%
El Salvador	34	0.0%	60	0.0%	117	0.0%	3.6%	42.4%	4.9%	77.1%	2.4%	43.6%	4.5%	94.6%
Equatorial Guinea	12	0.0%	22	0.0%	55	0.0%	3.7%	43.5%	4.8%	76.4%	5.3%	117.4%	6.4%	153.6%
Eritrea	2	0.0%	4	0.0%	6	0.0%	1.9%	20.3%	3.6%	53.0%	1.6%	27.1%	3.7%	71.4%
Estonia	41	0.0%	68	0.0%	105	0.0%	1.7%	18.9%	4.3%	65.2%	0.9%	14.7%	2.9%	53.9%
Eswatini	5	0.0%	9	0.0%	17	0.0%	4.2%	51.0%	5.3%	85.9%	2.5%	44.2%	4.5%	92.6%
Ethiopia	160	0.2%	332	0.2%	816	0.2%	8.0%	116.2%	6.3%	107.6%	4.3%	86.7%	6.2%	146.1%
Finland	295	0.3%	415	0.2%	609	0.2%	1.1%	12.0%	2.9%	40.8%	0.5%	8.4%	2.6%	46.5%
France	3057	2.9%	4460	2.5%	7359	2.2%	1.5%	16.0%	3.2%	45.9%	1.3%	22.2%	3.4%	65.0%
Gabon	20	0.0%	31	0.0%	60	0.0%	3.6%	42.9%	3.7%	55.5%	2.8%	52.1%	4.5%	93.5%
Georgia	31	0.0%	63	0.0%	141	0.0%	6.4%	85.9%	6.1%	103.6%	3.5%	67.8%	5.6%	125.5%
Germany	4527	4.3%	6434	3.6%	9636	2.9%	0.9%	9.6%	3.0%	42.1%	0.7%	10.7%	2.7%	49.8%
Ghana	81	0.1%	148	0.1%	262	0.1%	4.7%	58.6%	5.2%	83.2%	2.0%	34.1%	3.9%	77.6%
Greece	244	0.2%	383	0.2%	609	0.2%	2.0%	22.5%	3.8%	57.2%	1.2%	18.9%	3.1%	59.1%
Grenada	1	0.0%	2	0.0%	3	0.0%	2.8%	32.1%	4.3%	65.6%	0.8%	13.3%	2.9%	53.8%
Guatemala	104	0.1%	233	0.1%	465	0.1%	4.4%	54.1%	6.9%	122.7%	2.7%	49.2%	4.7%	99.9%
Guinea	23	0.0%	87	0.0%	204	0.1%	8.6%	127.4%	11.8 %	280.6%	3.8%	75.4%	5.9%	136.1%
Guinea-Bissau	2	0.0%	4	0.0%	11	0.0%	5.6%	72.5%	6.9%	122.7%	4.0%	80.9%	5.9%	137.7%
Guyana	17	0.0%	48	0.0%	75	0.0%	12.0 %	210.2%	9.1%	185.0%	0.3%	5.3%	3.0%	56.4%
Haiti	20	0.0%	51	0.0%	106	0.0%	0.7%	7.6%	8.4%	162.2%	1.3%	20.8%	4.9%	105.8%
Honduras	34	0.0%	63	0.0%	119	0.0%	3.9%	46.3%	5.2%	82.7%	2.4%	42.0%	4.4%	90.3%
Hong Kong SAR	381	0.4%	630	0.4%	924	0.3%	2.3%	25.8%	4.3%	65.4%	0.5%	8.4%	2.6%	46.6%
Hungary	214	0.2%	392	0.2%	670	0.2%	2.8%	31.4%	5.2%	83.0%	1.6%	27.1%	3.6%	70.9%
Iceland	31	0.0%	65	0.0%	117	0.0%	2.7%	30.1%	6.3%	107.7%	1.9%	33.4%	4.0%	79.7%
India	3638	3.5%	10382	5.8%	31907	9.6%	7.4%	104.6%	9.1%	185.3%	4.6%	97.6%	7.8%	207.3%
Indonesia	1371	1.3%	2746	1.5%	5815	1.7%	5.4%	68.5%	6.0%	100.3%	3.1%	57.3%	5.1%	111.8%
Iran	373	0.4%	613	0.3%	1099	0.3%	2.7%	30.6%	4.2%	64.4%	2.3%	41.5%	4.0%	79.3%
Ireland	552	0.5%	852	0.5%	1236	0.4%	2.0%	21.7%	3.7%	54.5%	0.6%	8.7%	2.5%	45.1%
Israel	512	0.5%	911	0.5%	1734	0.5%	3.4%	39.2%	4.9%	77.9%	2.3%	41.2%	4.4%	90.4%
Italy	2305	2.2%	3180	1.8%	4613	1.4%	0.8%	8.5%	2.7%	38.0%	0.5%	7.3%	2.5%	45.1%
Ivory Coast	80	0.1%	192	0.1%	415	0.1%	6.5%	87.6%	7.6%	141.7%	3.2%	60.2%	5.3%	115.8%
Japan	4213	4.0%	5865	3.3%	9435	2.8%	0.7%	7.7%	2.8%	39.2%	0.7%	11.2%	3.2%	60.9%
Jordan	51	0.0%	92	0.1%	175	0.1%	3.3%	37.8%	5.0%	79.6%	2.3%	41.6%	4.4%	90.9%
Kazakhstan	262	0.2%	515	0.3%	849	0.3%	3.6%	42.5%	5.8%	96.8%	1.4%	23.2%	3.4%	64.7%
Kenya	109	0.1%	211	0.1%	428	0.1%	5.2%	66.0%	5.7%	94.4%	2.8%	51.6%	4.8%	102.5%
Latvia	43	0.0%	73	0.0%	114	0.0%	2.7%	30.0%	4.6%	71.5%	1.2%	19.1%	3.0%	55.6%
Lesotho	2	0.0%	4	0.0%	6	0.0%	2.1%	23.1%	4.1%	61.7%	1.9%	32.8%	3.9%	77.7%
Lithuania	80	0.1%	145	0.1%	244	0.1%	3.2%	37.4%	5.1%	81.7%	1.5%	25.7%	3.5%	68.5%
Luxembourg	88	0.1%	146	0.1%	259	0.1%	2.5%	27.7%	4.4%	67.2%	1.8%	31.1%	3.9%	76.8%
Madagascar	16	0.0%	36	0.0%	67	0.0%	4.3%	52.8%	7.1%	128.5%	2.2%	38.4%	4.2%	85.6%
Malawi	13	0.0%	23	0.0%	50	0.0%	4.6%	56.1%	4.7%	73.4%	3.2%	60.4%	5.2%	114.3%
Malaysia	400	0.4%	777	0.4%	1543	0.5%	4.5%	55.9%	5.7%	94.4%	2.6%	47.2%	4.7%	98.6%
Maldives	7	0.0%	13	0.0%	22	0.0%	4.1%	49.1%	5.6%	91.8%	1.8%	30.7%	3.8%	76.1%
Mali	21	0.0%	45	0.0%	110	0.0%	5.8%	76.2%	6.6%	114.3%	4.0%	80.0%	6.1%	142.5%
Malta	22	0.0%	45	0.0%	84	0.0%	4.3%	53.0%	6.0%	100.9%	1.9%	32.0%	4.3%	88.2%
Mauritania	11	0.0%	20	0.0%	54	0.0%	5.7%	73.8%	5.6%	91.9%	4.5%	94.4%	6.6%	162.6%
Mauritius	14	0.0%	25	0.0%	37	0.0%	2.9%	32.7%	4.7%	74.0%	0.8%	13.2%	2.8%	51.8%
Mexico	1794	1.7%	2614	1.5%	4569	1.4%	2.1%	23.0%	3.2%	45.7%	1.8%	30.0%	3.8%	74.8%
Moldova	17	0.0%	37	0.0%	69	0.0%	4.0%	48.2%	6.9%	121.8%	2.2%	38.3%	4.2%	85.3%
Mongolia	20	0.0%	51	0.0%	123	0.0%	6.3%	83.6%	8.0%	152.5%	4.0%	80.3%	6.0%	140.3%
Morocco	144	0.1%	293	0.2%	612	0.2%	4.2%	51.6%	6.1%	103.1%	3.0%	54.7%	5.0%	108.6%
Mozambique	21	0.0%	48	0.0%	96	0.0%	5.5%	70.7%	7.1%	128.3%	2.7%	50.1%	4.7%	100.2%
Myanmar (Burma)	61	0.1%	138	0.1%	321	0.1%	4.5%	55.5%	6.9%	123.9%	3.8%	75.5%	5.8%	133.5%
Namibia	12	0.0%	23	0.0%	47	0.0%	3.9%	46.7%	5.3%	86.8%	2.8%	52.4%	4.9%	104.0%
Netherlands	1155	1.1%	1853	1.0%	3118	0.9%	2.0%	21.9%	4.0%	60.4%	1.6%	26.5%	3.5%	68.3%
NewZealand	253	0.2%	376	0.2%	675	0.2%	2.4%	26.4%	3.3%	48.3%	1.9%	33.2%	4.0%	79.6%
Nicaragua	18	0.0%	40	0.0%	83	0.0%	4.3%	51.9%	7.0%	126.2%	2.9%	53.3%	4.9%	105.5%
Niger	17	0.0%	47	0.0%	121	0.0%	7.4%	104.5%	8.9%	179.4%	4.4%	91.0%	6.5%	157.4%
Nigeria	364	0.3%	374	0.2%	715	0.2%	3.6%	42.7%	0.2%	2.7%	2.5%	44.5%	4.4%	91.3%
Norway	483	0.5%	727	0.4%	1299	0.4%	2.2%	24.6%	3.5%	50.5%	1.9%	32.2%	3.9%	78.7%
Oman	106	0.1%	171	0.1%	334	0.1%	3.9%	47.3%	4.1%	61.9%	2.5%	44.4%	4.5%	94.7%
Pakistan	338	0.3%	739	0.4%	1803	0.5%	5.0%	62.2%	6.7%	118.9%	4.1%	82.6%	6.1%	143.9%
Panama	83	0.1%	159	0.1%	307	0.1%	4.3%	52.2%	5.5%	90.5%	2.4%	43.4%	4.5%	93.3%
Paraguay	43	0.0%	74	0.0%	138	0.0%	3.8%	44.8%	4.6%	72.1%	2.2%	38.8%	4.2%	85.8%
Peru	267	0.3%	464	0.3%	790	0.2%	2.9%	32.9%	4.7%	73.6%	1.6%	26.3%	3.6%	70.1%
Philippines	437	0.4%	1125	0.6%	2892	0.9%	7.2%	99.9%	8.2%	157.3%	4.1%	82.2%	6.5%	157.2%
Poland	810	0.8%	1679	0.9%	3130	0.9%	3.6%	43.0%	6.3%	107.3%	2.2%	38.4%	4.2%	86.5%

Portugal	290	0.3%	469	0.3%	770	0.2%	2.1%	23.5%	4.1%	61.8%	1.3%	22.1%	3.4%	64.2%
Romania	351	0.3%	676	0.4%	1246	0.4%	3.4%	40.2%	5.6%	92.8%	2.1%	36.9%	4.2%	84.3%
Russia	2060	2.0%	2798	1.6%	4507	1.4%	1.7%	18.8%	2.6%	35.8%	1.2%	20.2%	3.2%	61.1%
Rwanda	14	0.0%	27	0.0%	60	0.0%	7.3%	102.7%	5.4%	88.6%	3.4%	64.9%	5.4%	120.4%
Sao Tome and Principe	1	0.0%	2	0.0%	4	0.0%	3.9%	47.1%	7.9%	149.3%	3.1%	57.9%	5.2%	113.8%
Saudi Arabia	1068	1.0%	1733	1.0%	3193	1.0%	3.5%	41.0%	4.1%	62.4%	2.1%	36.2%	4.2%	84.2%
Senegal	31	0.0%	68	0.0%	169	0.1%	6.4%	85.3%	6.8%	120.7%	4.2%	85.5%	6.3%	149.7%
Serbia	81	0.1%	175	0.1%	337	0.1%	4.6%	56.2%	6.6%	114.5%	2.4%	43.5%	4.5%	93.3%
Seychelles	2	0.0%	3	0.0%	6	0.0%	3.3%	39.0%	3.6%	52.7%	1.6%	27.4%	3.7%	71.5%
Sierra Leone	6	0.0%	14	0.0%	28	0.0%	5.0%	62.6%	6.6%	116.2%	2.8%	52.3%	4.8%	102.7%
Singapore	505	0.5%	834	0.5%	1265	0.4%	2.6%	29.2%	4.3%	65.1%	0.7%	11.8%	2.8%	51.6%
Slovakia	133	0.1%	227	0.1%	387	0.1%	2.6%	28.9%	4.6%	71.0%	1.6%	26.4%	3.6%	70.2%
Slovenia	69	0.1%	116	0.1%	197	0.1%	2.7%	30.3%	4.4%	68.3%	1.5%	24.5%	3.6%	69.2%
South Africa	381	0.4%	631	0.4%	1214	0.4%	2.6%	28.9%	4.3%	65.8%	2.5%	43.9%	4.5%	92.5%
South Korea	1839	1.8%	2544	1.4%	3932	1.2%	2.0%	21.3%	2.7%	38.3%	0.9%	14.6%	2.9%	54.6%
Spain	1621	1.5%	2607	1.5%	4119	1.2%	2.1%	23.1%	4.0%	60.9%	1.0%	16.9%	3.1%	58.0%
Sri Lanka	84	0.1%	169	0.1%	251	0.1%	2.8%	31.3%	6.0%	102.0%	0.7%	10.7%	2.7%	48.2%
St Kitts and Nevis	1	0.0%	2	0.0%	3	0.0%	2.9%	33.2%	4.4%	67.8%	1.9%	32.7%	4.0%	79.3%
St Lucia	2	0.0%	4	0.0%	6	0.0%	2.4%	27.1%	4.0%	60.1%	1.3%	21.0%	3.3%	63.3%
St Vincent	1	0.0%	2	0.0%	3	0.0%	3.1%	35.7%	4.7%	74.5%	1.4%	23.2%	3.4%	65.7%
Suriname	3	0.0%	14	0.0%	21	0.0%	8.8%	132.2%	12.5%	311.0%	0.6%	8.7%	2.6%	46.7%
Sweden	585	0.6%	920	0.5%	1598	0.5%	2.1%	23.2%	3.8%	57.1%	1.7%	28.9%	3.8%	73.8%
Switzerland	895	0.9%	1409	0.8%	2420	0.7%	1.9%	20.9%	3.9%	57.5%	1.6%	27.0%	3.7%	71.7%
Taiwan	757	0.7%	1194	0.7%	2035	0.6%	3.1%	35.2%	3.9%	57.6%	1.6%	26.2%	3.6%	70.5%
Tajikistan	12	0.0%	29	0.0%	57	0.0%	5.4%	69.4%	7.6%	140.6%	2.8%	50.6%	4.7%	100.5%
Tanzania	79	0.1%	196	0.1%	525	0.2%	7.2%	101.2%	7.8%	147.3%	4.8%	101.0%	6.8%	168.5%
Thailand	516	0.5%	783	0.4%	1314	0.4%	2.5%	27.9%	3.5%	51.7%	1.5%	24.5%	3.5%	67.9%
The Bahamas	14	0.0%	22	0.0%	38	0.0%	2.1%	23.3%	3.5%	51.3%	1.7%	28.4%	3.7%	73.1%
The Gambia	2	0.0%	5	0.0%	12	0.0%	5.8%	75.5%	7.0%	125.4%	3.4%	66.0%	5.5%	121.7%
Togo	9	0.0%	20	0.0%	52	0.0%	6.3%	85.1%	7.0%	124.1%	4.3%	87.6%	6.4%	153.9%
Tunisia	49	0.0%	74	0.0%	123	0.0%	1.7%	18.7%	3.6%	53.4%	1.5%	24.4%	3.4%	64.5%
Turkey	1130	1.1%	2381	1.3%	5199	1.6%	4.3%	52.7%	6.4%	110.7%	3.1%	57.0%	5.3%	118.3%
Uganda	52	0.0%	149	0.1%	372	0.1%	7.4%	103.4%	9.2%	186.9%	4.3%	86.9%	6.3%	149.8%
Ukraine	179	0.2%	389	0.2%	664	0.2%	5.0%	63.2%	6.7%	117.7%	1.6%	27.6%	3.6%	70.5%
United Arab Emirates	514	0.5%	962	0.5%	1981	0.6%	4.7%	58.5%	5.4%	87.2%	2.8%	51.8%	4.9%	105.8%
United Kingdom	3379	3.2%	5327	3.0%	9238	2.8%	2.0%	22.5%	3.9%	57.6%	1.9%	32.4%	3.7%	73.4%
United States	27721	26.4%	45677	25.6%	81870	24.6%	2.6%	28.8%	4.2%	64.8%	1.9%	32.9%	4.0%	79.2%
Uruguay	78	0.1%	128	0.1%	213	0.1%	2.7%	30.2%	4.2%	64.2%	1.5%	24.3%	3.4%	66.0%
Uzbekistan	103	0.1%	324	0.2%	694	0.2%	7.0%	96.9%	10.1%	215.8%	3.2%	60.5%	5.2%	114.3%
Vietnam	433	0.4%	900	0.5%	1943	0.6%	5.8%	76.1%	6.3%	108.0%	3.2%	60.3%	5.3%	115.8%
Yemen	19	0.0%	36	0.0%	99	0.0%	4.5%	54.6%	5.4%	87.7%	5.0%	106.6%	6.9%	172.4%
Zambia	28	0.0%	69	0.0%	153	0.0%	6.0%	78.9%	7.9%	149.3%	3.5%	67.9%	5.5%	123.0%

Note: High levels of variance in historic data or other complexities in the underlying data mean projections for the following markets are made with low-levels of confidence: El Salvador, Hong Kong, Iran, Kazakhstan, Mozambique, Myanmar, Sri Lanka, Suriname, Tunisia, Ukraine, and Yemen. Other markets not listed may also be impacted by similar issues. Data has been derived to fill gaps in available data for the following markets: Azerbaijan, Barbados, Guyana, Montenegro, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Serbia, Tajikistan, Uzbekistan, and Vietnam.

Sector definitions

SECTOR DEFINITIONS: GOODS SECTORS

Advanced Manufacturing

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
772	Apparatus for electrical circuits; board, panels	27.9	Batteries & fuel cells, capacitors & resistors
752	Automatic data processing machines, n.e.s.	26.2	Computers & office equipment
776	Cathode valves & tubes	26.1	Electronic components & boards
751	Office machines	27.1	Motors, generators & transformers
759	Parts, accessories for machines of groups 751, 752	26.3	Telecommunication equipment
763	Sound recorders or reproducers		
764	Telecommunication equipment, n.e.s.; & parts, n.e.s.		

Aerospace & Other Transport

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
792	Aircraft & associated equipment; spacecraft, etc.	30.3	Aerospace
714	Engines & motors, non-electric; parts, n.e.s.	30 less 30.3	Ships, rail, motorcycle & military vehicles
791	Railway vehicles & associated equipment		
793	Ships, boats & floating structures		

Agriculture

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
043	Barley, unmilled	01 to 03	Agriculture, forestry & fisheries
045	Cereals, unmilled (excluding wheat, rice, barley, maize)		
244	Cork, natural, raw & waste (incl. blocks, sheets)		
263	Cotton		
291	Crude animal materials, n.e.s.		
292	Crude vegetable materials, n.e.s.		
081	Feeding stuff for animals (no unmilled cereals)		
245	Fuel wood (excluding wood waste) and wood charcoal		
212	Furskins, raw, other than hides & skins of group 211		
211	Hides and skins (except furskins), raw		
264	Jute, other textile bast fibre, n.e.s., not spun; tow		
001	Live animals other than animals of division 03		
044	Maize (not including sweet corn), unmilled		
231	Natural rubber & similar gums, in primary forms		
223	Oil seeds & oleaginous fruits (incl. flour, n.e.s.)		
222	Oil seeds and oleaginous fruits (excluding flour)		
042	Rice		
261	Silk		
265	Vegetable textile fibres, not spun; waste of them		
041	Wheat (including spelt) and meslin, unmilled		
246	Wood in chips or particles and wood waste		
247	Wood in the rough or roughly squared		
268	Wool and other animal hair (incl. wool tops)		

SECTOR DEFINITIONS: GOODS SECTORS

Automotive

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
713	Internal combustion piston engines, parts, n.e.s.	29.1	Motor vehicles
782	Motor vehic. for transport of goods, special purpo.	29.2,29.3	Motor vehicle bodies & parts
781	Motor vehicles for the transport of persons		
785	Motorcycles & cycles		
784	Parts & accessories of vehicles of 722, 781, 782, 783		
783	Road motor vehicles, n.e.s.		
786	Trailers & semi-trailers		

Chemicals

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
512	Alcohols, phenols, halogenat., sulfonat., nitrat. der.	20.1	Basic chemicals & fertilisers
513	Carboxylic acids, anhydrides, halides, per.; derivati.	20.5	Explosives, glues & photographic
532	Dyeing & tanning extracts, synth. tanning materials	20.6	Man-made fibres
593	Explosives and pyrotechnic products	20.3	Paints, varnishes, coatings & ink
562	Fertilizers (other than those of group 272)	20.2	Pesticides & agrochemicals
511	Hydrocarbons, n.e.s., & halogenated, nitr. derivative		
522	Inorganic chemical elements, oxides & halogen salts		
591	Insectides & similar products, for retail sale		
523	Metallic salts & peroxysalts, of inorganic acids		
598	Miscellaneous chemical products, n.e.s.		
514	Nitrogen-function compounds		
515	Organo-inorganic, heterocycl. compounds, nucl. acids		
524	Other inorganic chemicals		
516	Other organic chemicals		
575	Other plastics, in primary forms		
533	Pigments, paints, varnishes and related materials		
574	Polyethers, epoxide resins; polycarbonat., polyesters		
571	Polymers of ethylene, in primary forms		
572	Polymers of styrene, in primary forms		
573	Polymers of vinyl chloride or halogenated olefins		
597	Prepared addit. for miner. oils; lubricat., de-icing		
525	Radio-actives and associated materials		
592	Starche, wheat gluten; albuminoidal substances; glues		
531	Synth. organic colouring matter & colouring lakes		
232	Synthetic rubber		
579	Waste, parings and scrap, of plastics		

SECTOR DEFINITIONS: GOODS SECTORS

Clothing and Footwear

SITC sub sector codes (for trade)

848	Articles of apparel, clothing access., excluding textile
845	Articles of apparel, of textile fabrics, n.e.s.
846	Clothing accessories, of textile fabrics
851	Footwear
613	Furskins, tanned or dressed, excluding those of 8483
841	Men's clothing of textile fabrics, not knitted
843	Men's or boy's clothing, of textile, knitted, croche.
842	Women's clothing, of textile fabrics
844	Women's clothing, of textile, knitted or crocheted

NACE sub sector codes (for GDP)

15	Leather goods
14	Wearing apparel & furs

Food & Beverages

SITC sub sector codes (for trade)

112	Alcoholic beverages
431	Animal or veg. oils & fats, processed, n.e.s.; mixt.
411	Animals oils and fats
025	Birds' eggs, and eggs' yolks; egg albumin
023	Butter and other fats and oils derived from milk
048	Cereal preparations, flour of fruits or vegetables
024	Cheese and curd
073	Chocolate, food preparations with cocoa, n.e.s.
072	Cocoa
071	Coffee and coffee substitutes
036	Crustaceans, mollusks and aquatic invertebrates
098	Edible products and preparations, n.e.s.
037	Fish, aqua. invertebrates, prepared, preserved, n.e.s.
035	Fish, dried, salted or in brine; smoked fish
034	Fish, fresh (live or dead), chilled or frozen
422	Fixed vegetable fats & oils, crude, refined, fract.
421	Fixed vegetable fats & oils, crude, refined, fractio.
059	Fruit and vegetable juices, unfermented, no spirit
058	Fruit, preserved, and fruit preparations (no juice)
057	Fruits and nuts (excluding oil nuts), fresh or dried
091	Margarine and shortening
046	Meal and flour of wheat and flour of meslin
011	Meat of bovine animals, fresh, chilled or frozen
017	Meat, edible meat offal, prepared, preserved, n.e.s.
016	Meat, edible meat offal, salted, dried; flours, meals
022	Milk, cream and milk products (excluding butter, cheese)
111	Non-alcoholic beverages, n.e.s.
047	Other cereal meals and flour
012	Other meat and edible meat offal
075	Spices
062	Sugar confectionery
061	Sugar, molasses and honey
074	Tea and mate
054	Vegetables
056	Vegetables, roots, tubers, prepared, preserved, n.e.s.

NACE sub sector codes (for GDP)

10	Food
11	Beverages

k

SECTOR DEFINITIONS: GOODS SECTORS

Life sciences

SITC sub sector codes (for trade)

774	Electro-diagnostic appa. for medical sciences, etc.
872	Instruments & appliances, n.e.s., for medical, etc.
874	Measuring, analysing & controlling apparatus, n.e.s.
542	Medicaments (incl. veterinary medicaments)
541	Medicinal and pharmaceutical products, excluding 542
873	Meters & counters, n.e.s.
871	Optical instruments & apparatus, n.e.s.

NACE sub sector codes (for GDP)

26.5,26.7,26.8	Measuring, testing, navigation & optical
26.6	Medical & Surgical equipment
21	Pharmaceuticals

Machinery & equipment

SITC sub sector codes (for trade)

721	Agricultural machinery (excluding tractors) & parts
723	Civil engineering & contractors' plant & equipment
778	Electrical machinery & apparatus, n.e.s.
773	Equipment for distributing electricity, n.e.s.
727	Food-processing machines (excluding domestic)
741	Heating & cooling equipment & parts thereof, n.e.s.
733	Mach.-tools for working metal, excluding removing mate.
731	Machine-tools working by removing material
744	Mechanical handling equipment, & parts, n.e.s.
737	Metalworking machinery (excludingmachine-tools) & parts
749	Non-electric parts & accessor. of machinery, n.e.s.
728	Other machinery for particular industries, n.e.s.
745	Other non-electr. machinery, tools & mechan. appar.
725	Paper mill, pulp mill machinery; paper articles man.
735	Parts, n.e.s., & accessories for machines of 731, 733
726	Printing & bookbinding machinery, & parts thereof
743	Pumps (excluding liquid), gas compressors & fans; centr.
742	Pumps for liquids
724	Textile & leather machinery, & parts thereof, n.e.s.
722	Tractors (excluding those of 71414 & 74415)

NACE sub sector codes (for GDP)

28.3	Agricultural machinery
27.2 to 27.4	Electric fittings and batteries
28.9	Equipment for mining, food & other industries
28.4	Machine tools
28.2	Ovens, lift/handling, HVAC & power tools
28.1	Turbines, engines, fluidics, pumps & gears

SECTOR DEFINITIONS: GOODS SECTORS

Mining and Metals

SITC sub sector codes (for trade)

684	Aluminium
285	Aluminium ores and concentrates (incl. alumina)
322	Briquettes, lignites and peat
321	Coal, whether or not pulverized, not agglomerated
325	Coke & semi-cokes of coal, lign., peat; retort carbon
682	Copper
283	Copper ores and concentrates; copper mattes, cemen
272	Crude fertilizers (excluding those of division 56)
282	Ferrous waste, scrape; remelting ingots, iron, steel
674	Flat-rolled prod., iron, non-alloy steel, coated, clad
673	Flat-rolled prod., iron, non-alloy steel, not coated
675	Flat-rolled products of alloy steel
672	Ingots, primary forms, of iron or steel; semi-finis.
676	Iron & steel bars, rods, angles, shapes & sections
281	Iron ore and concentrates
685	Lead
689	Miscellaneous no-ferrous base metals for metallur.
277	Natural abrasives, n.e.s. (incl. industri. diamonds)
683	Nickel
284	Nickel ores & concentrates; nickel mattes, etc.
288	Non-ferrous base metal waste and scrap, n.e.s.
289	Ores & concentrates of precious metals; waste, scrap
287	Ores and concentrates of base metals, n.e.s.
286	Ores and concentrates of uranium or thorium
278	Other crude minerals
667	Pearls, precious & semi-precious stones
671	Pig iron & spiegeleisen, sponge iron, powder & granu
677	Rails & railway track construction mat., iron, steel
681	Silver, platinum, other metals of the platinum group
273	Stone, sand and gravel
274	Sulphur and unroasted iron pyrites
687	Tin
679	Tubes, pipes & hollow profiles, fittings, iron, steel
678	Wire of iron or steel
686	Zinc

NACE sub sector codes (for GDP)

24.5	Castings
5	Extraction: Coal & lignite mining
24.1 to 24.3	Iron & steel
07 to 09	Metals mining, quarry & related svs.
24.4	Non-ferrous metals

SECTOR DEFINITIONS: GOODS SECTORS

Oil & gas

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
345	Coal gas, water gas & similar gases (ex hydrocar.)	19	Coke & refined petroleum products
342	Liquefied propane and butane	06	Extraction: Oil & natural gas
343	Natural gas, whether or not liquefied		
344	Petroleum gases, other gaseous hydrocarbons, n.e.s.		
334	Petroleum oils or bituminous minerals > 70 % oil		
333	Petroleum oils, oils from bitumin. materials, crude		
335	Residual petroleum products, n.e.s., related mater.		

Other consumer goods

SITC sub sector codes (for trade)		NACE sub sector codes (for GDP)	
893	Articles, n.e.s., of plastics	26.4	Consumer electronics
894	Baby carriages, toys, games & sporting goods	27.5	Domestic appliances
883	Cinematograph films, exposed & developed	31	Furniture manufacturing
882	Cinematographic & photographic supplies	32	Medical/dental, jewellery, music & games
696	Cutlery	18	Printing & recorded media
551	Essential oils, perfume & flavour materials	20.4	Soaps, polish & detergents
821	Furniture & parts	12	Tobacco
697	Household equipment of base metal, n.e.s.		
775	Household type equipment, electrical or not, n.e.s.		
897	Jewellery & articles of precious materia., n.e.s.		
898	Musical instruments, parts; records, tapes & similar		
895	Office & stationery supplies, n.e.s.		
884	Optical goods, n.e.s.		
553	Perfumery, cosmetics or toilet prepar. (excluding soaps)		
881	Photographic apparatus & equipment, n.e.s.		
892	Printed matter		
762	Radio-broadcast receivers, whether or not combined		
554	Soaps, cleansing and polishing preparations		
761	Television receivers, whether or not combined		
122	Tobacco, manufactured		
121	Tobacco, unmanufactured; tobacco refuse		
831	Travel goods, handbags & similar containers		
885	Watches & clocks		
896	Works of art, collectors' pieces & antiques		

SECTOR DEFINITIONS: GOODS SECTORS

Other industrial inputs

SITC sub sector codes (for trade)

747	Appliances for pipes, boiler shells, tanks, vats, etc.
891	Arms & ammunition
629	Articles of rubber, n.e.s.
746	Ball or roller bearings
662	Clay construction, refracto. construction materials
633	Cork manufactures
652	Cotton fabrics, woven
653	Fabrics, woven, of man-made fabrics
659	Floor coverings, etc.
664	Glass
665	Glassware
655	Knitted or crocheted fabrics, n.e.s.
611	Leather
813	Lighting fixtures & fittings, n.e.s.
661	Lime, cement, fabrica. constr. mat. (ex glass, clay)
658	Made-up articles, of textile materials, n.e.s.
699	Manufactures of base metal, n.e.s.
612	Manufactures of leather, n.e.s.; saddlery & harness
621	Materials of rubber (pastes, plates, sheets, etc.)
692	Metal containers for storage or transport
663	Mineral manufactures, n.e.s.
583	Monofilaments, of plastics, cross-section > 1mm
694	Nails, screws, nuts, bolts, rivets & the like, of metal
267	Other man-made fibres suitable for spinning
654	Other textile fabrics, woven
642	Paper & paperboard, cut to shape or size, articles
641	Paper and paperboard
582	Plates, sheets, films, foil & strip, of plastics
666	Pottery
811	Prefabricated buildings
251	Pulp and waste paper
625	Rubber tyres, tyre treads or flaps & inner tubes
812	Sanitary, plumbing, heating fixtures, fittings, n.e.s.
657	Special yarn, special textile fabrics & related
691	Structures & parts, n.e.s., of iron, steel, aluminium
266	Synthetic fibres suitable for spinning
651	Textile yarn
695	Tools for use in the hand or in machine
748	Transmis. shafts
581	Tubes, pipes and hoses of plastics
656	Tulles, trimmings, lace, ribbons & other small wares
634	Veneers, plywood, and other wood, worked, n.e.s.
693	Wire products (excluding electrical) and fencing grills
635	Wood manufacture, n.e.s.
248	Wood simply worked, and railway sleepers of wood
269	Worn clothing and other worn textile articles

NACE sub sector codes (for GDP)

23.5 to 23.9	Cement, plaster, abrasives & masonry
23.2 to 23.4	Ceramic, clay & refractory products
23.1	Glass
17	Pulp & paper
22	Rubber & plastics
25	Structural metal incl. tanks, boilers & weapons
13	Textiles
16	Wood & wood products

Power & utilities infrastructure

SITC sub sector codes (for trade)

351	Electric current
771	Electric power machinery, and parts thereof
718	Other power generating machinery & parts, n.e.s.
716	Rotating electric plant & parts thereof, n.e.s.
712	Steam turbines & other vapour turbin., parts, n.e.s.
711	Vapour generating boilers, auxiliary plant; parts

NACE sub sector codes (for GDP)

35.1	Electric power generation & distribution
35.2	Gas, steam, cooling, ice manufacture & 35.3 distribution
	Water, sewerage & waste management

SECTOR DEFINITIONS: SERVICE SECTORS

Construction services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
5	Construction	41 to 43	Construction

Digital services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
9	Telecommunications, computer, and info. services	61	Telecommunications
		62 to 63	IT Programming, consultancy & info. Services

Financial services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
6	Insurance and pension services	64 to 66	Financial services
7	Financial services		

Other Business services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
10	Other business services	69 to 82	R&D, leasing, legal, professional & maintenance services
		33	Repair & installation of machinery

Other private services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
2	Maintenance and repair services n.i.e.	45 to 47	Retail & wholesale distribution
		68	Real estate activities

Public services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
12	Government goods and services n.i.e.	85	Education
		86 to 88	Health care & social work
		84	Public administration, defence & social security

Recreational & media services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
11	Personal, cultural, and recreational services	90 to 99	Arts, recreation, unions, personal services
8	Charges for the use of intellectual property n.i.e.	58 to 60	Publishing & broadcasting activities

Transport services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
3	Transport	51	Air transport
		49	Land transport & transportation via pipelines
		52 to 53	Other transportation & storage services
		50	Water transport

SECTOR DEFINITIONS: SERVICES SECTORS

Travel services

EBOPS codes (for trade)		NACE sub sector codes (for GDP)	
4	Travel	55 to 56	Accommodation & catering

SECTOR DEFINITIONS: INDUSTRIAL STRATEGY SECTORS

Industrial Strategy sectors

Original GTO sector	Industrial Strategy sector
Advanced Manufacturing	Advanced manufacturing
Aerospace & Other Transport	Advanced manufacturing
Automotive	Advanced manufacturing
Recreational & Media services	Creative industries
Digital Services	Digital and technologies
Financial services	Financial services
Life Sciences	Life sciences
Other Business services	Professional and business services
Not included	Clean power
Not included	Defence