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The World in 2050: How will the global economic order change?

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1. Summary

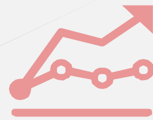
The World in 2050: 5 key messages

1

The world economy

The world **economy could more than double in size by 2050**, assuming broadly growth-friendly policies and no global catastrophes.

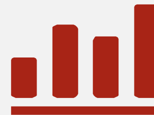
2



Shifts in global economic power

The E7 could account for c.50% of world GDP by 2050, up from 35% today. Emerging economies could be six of the largest seven economies in the world by 2050

3



Drivers of global growth

Emerging economies will drive global growth. Vietnam, India and Bangladesh could be three of the fastest growing larger economies over this period.

4

Policy implications

To realise this potential, governments need to implement structural reforms to improve macroeconomic stability, diversify their economies and develop more effective institutions.

5

Business implications

Rising incomes in emerging markets will **open up great opportunities for businesses with sufficiently flexible and patient strategies** for these fast evolving markets.

2. Projected relative size of economies

How have we modelled long-term GDP trends?

- **Our model ignores short-term cyclical variations, focusing instead on long-term supply side fundamentals.**
- We assume no major global catastrophes or political shifts that cut economies off from the flow of new technologies and ideas.
- **We take the US as representing the 'global frontier' in terms of technology and productivity that other economies seek to catch up with over time**. US labour productivity growth is assumed to grow at a trend rate of 1.5% per annum.
- We use a robust model where GDP is driven by **four main supply-side factors**, using a Cobb-Douglas production function that is a standard approach in the academic economic literature and widely used by the IMF, OECD and others in long-term growth studies.

Working-age population growth	**Investment in human capital (education levels)**	**Investment in physical capital**	**Catch-up with US total factor productivity levels**

GDP in PPPs vs MERs

We focus on GDP at purchasing power parity (PPPs), but also include GDP at market exchange rates (MERs).

- The difference between GDP at PPP and MER estimates reflect that price levels in lower income countries are generally significantly lower than in advanced economies based on current market exchange rates.
- This means emerging markets tend to have significantly higher GDP when measured at PPPs than at MERS.
- In the long-run, the difference between the two estimates should decline as faster emerging market growth pushes up price levels. This is a very gradual process, however, so full price convergence will still not be complete by 2050 in most emerging markets.

What has changed since our February 2015 report?

We have made two main changes to our model since 2015:

1. All historical data has been updated to reflect the latest available data. Our detailed assumptions on key model inputs have been revised to reflect actual trends over the past two years.
2. We have reduced the assumed US trend labour productivity growth rate from 2% to 1.5% per annum, reflecting accumulating evidence that potential growth has fallen in the US. This can be attributed to factors including the US's ageing population, a plateau of educational attainment and rising household and government deficits generating financial instability.

The shift in global economic power from the G7 to the seven largest emerging economies (the 'E7') will continue in the coming decades

1. In 1995, the E7 was only about half the size of the G7 in PPP terms. By 2015, the two groups were around the same size. **Looking ahead, the E7 could be around double the size of the G7 by 2040 (in PPP terms).**

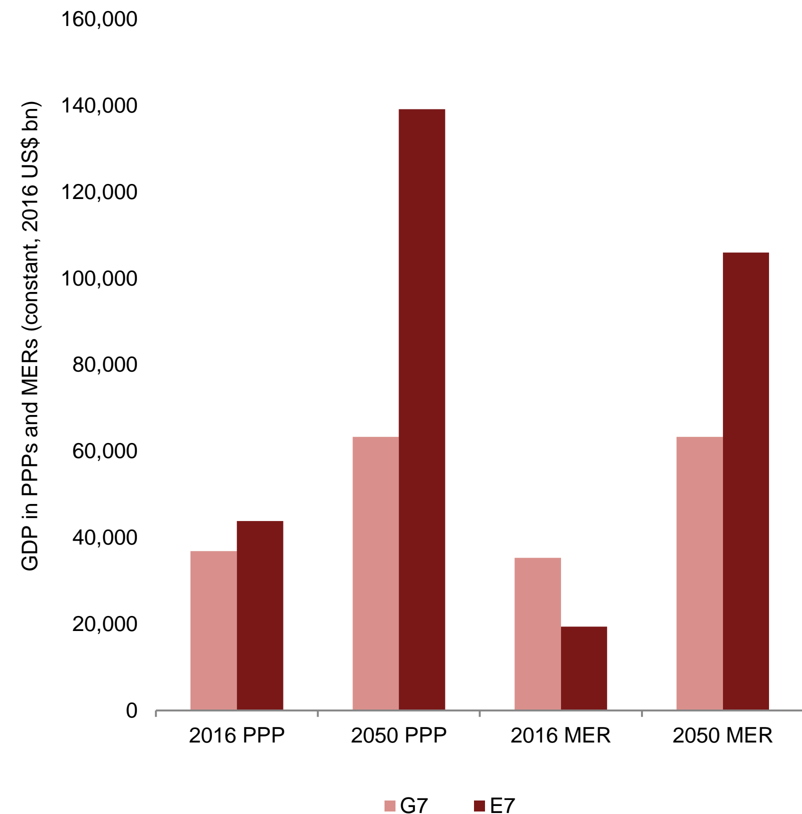
2. By 2050, we project that the G7's share of world GDP will fall to only around 20%, while the **E7 will increase their share to almost 50% of global GDP at PPPs by 2050**.

3. China is already the largest economy in PPP terms, having overtaken the US in 2014. **We project China could also be the largest economy in MER terms before 2030.**

4. India will also drive the shift in global economic power and could **overtake the US to be the world's second largest economy in PPP terms** by 2050.

5. Emerging economies are projected to dominate the list of the largest economies in the long run, with **Indonesia, Brazil, Russia and Mexico taking 4th to 7th places in 2050.**

Relative size of G7 and E7 economies in 2016 and 2050



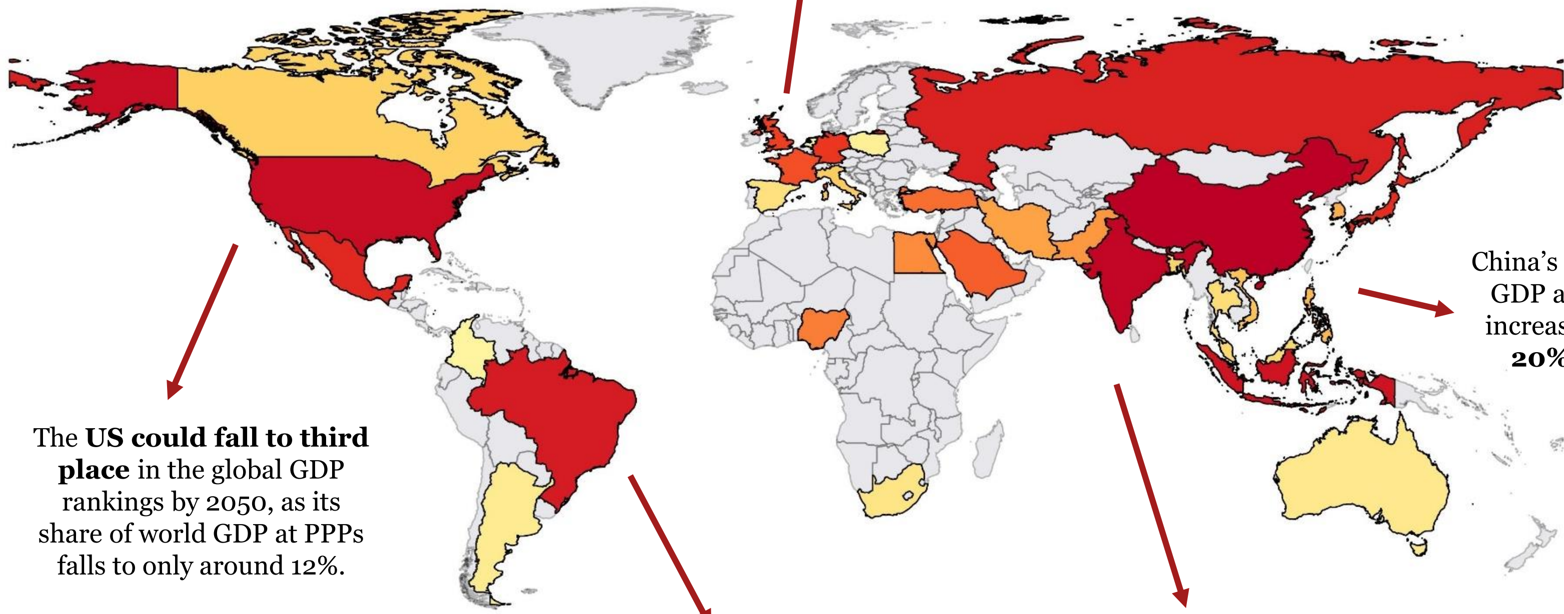
G7 = US, Japan, Germany, UK, France, Italy and Canada

E7 = China, India, Brazil, Russia, Indonesia, Mexico and Turkey

US and Europe will steadily lose ground relative to the Asian giants

Projected GDP (PPP terms) in 2050

Europe's share of the world economy at PPPs could **fall from around 15% to 9%** over the next 34 years.



China's share of world GDP at PPPs could increase to **around 20% by 2050.**

The **US could fall to third place** in the global GDP rankings by 2050, as its share of world GDP at PPPs falls to only around 12%.

Brazil and Mexico could be larger than Japan and Germany by 2050.

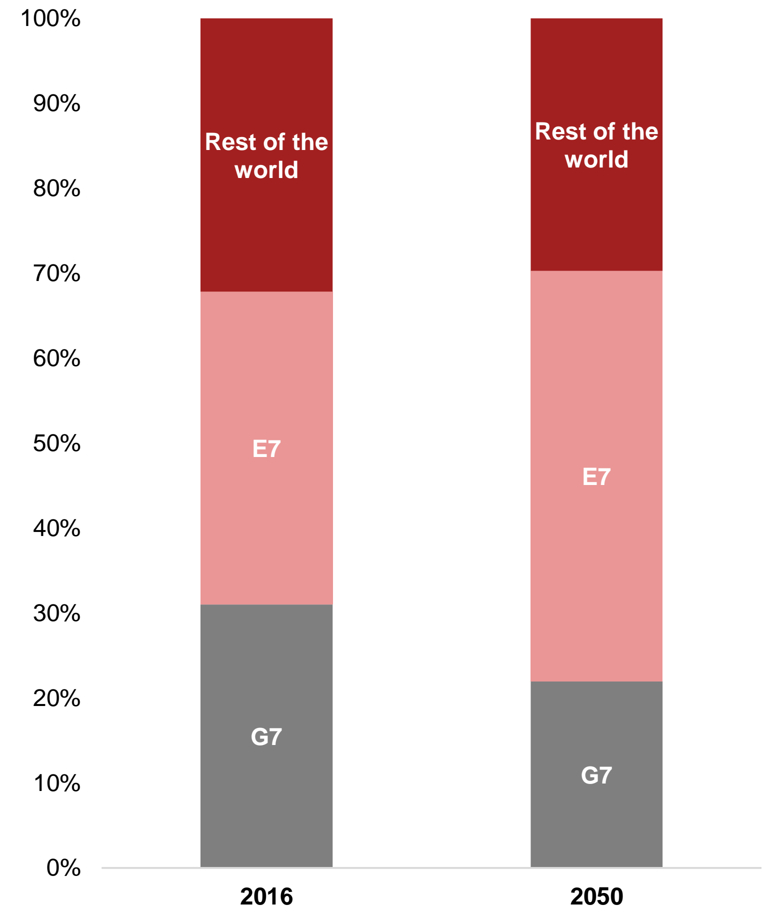
India could increase its share of world GDP at PPPs by 8 percentage points to 15% by 2050.

Emerging economies will dominate the list of the world's 10 largest economies and increase their share of world GDP to almost 50% by 2050

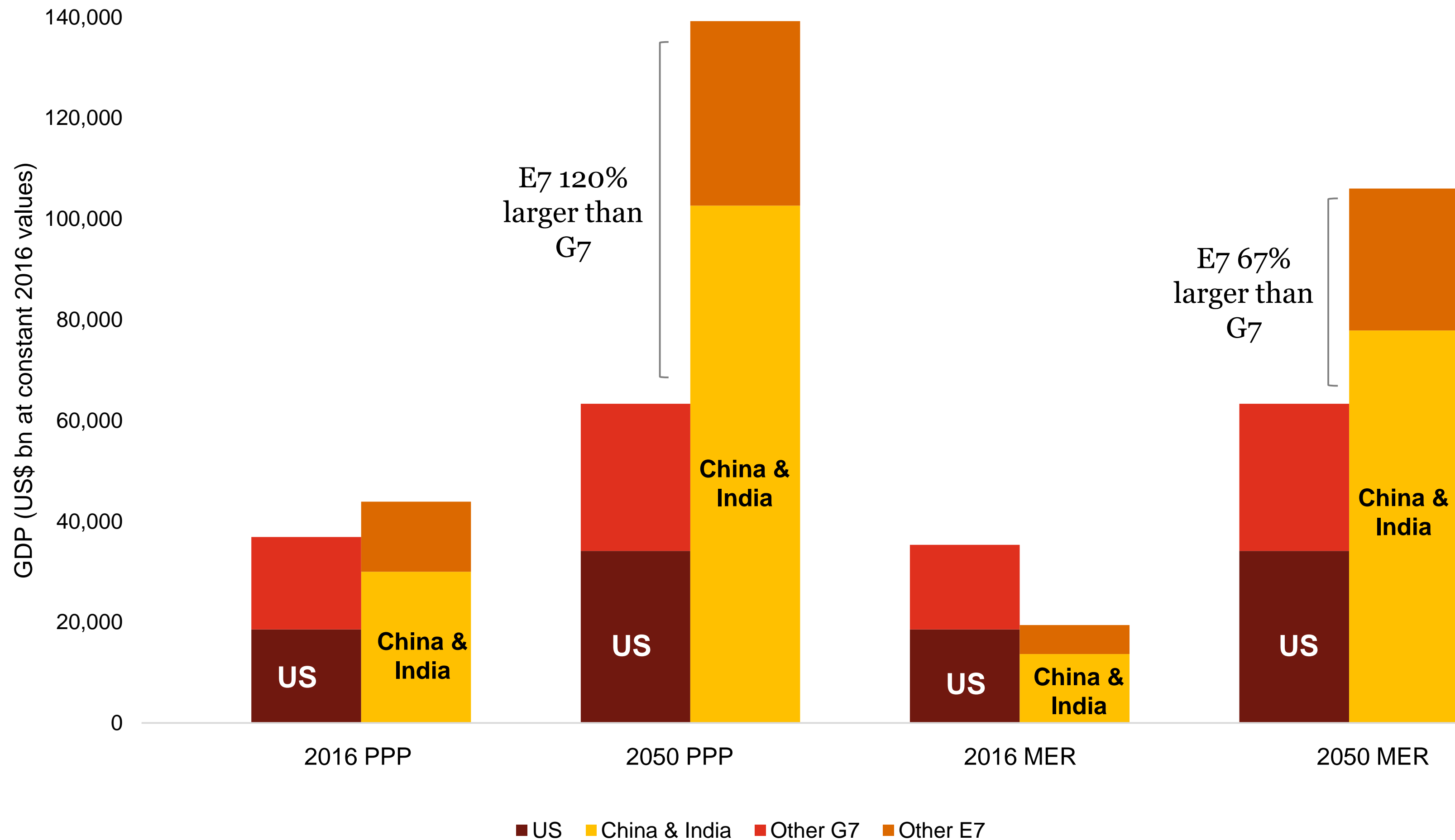
Rankings of GDP at PPPs

2016			2050
China	1	1	*China*
US	2	2	*India*
India	3	3	*US*
Japan	4	4	*Indonesia*
Germany	5	5	*Brazil*
Russia	6	6	*Russia*
Brazil	7	7	*Mexico*
Indonesia	8	8	*Japan*
UK	9	9	*Germany*
France	10	10	*UK*

Share of world GDP at PPPs

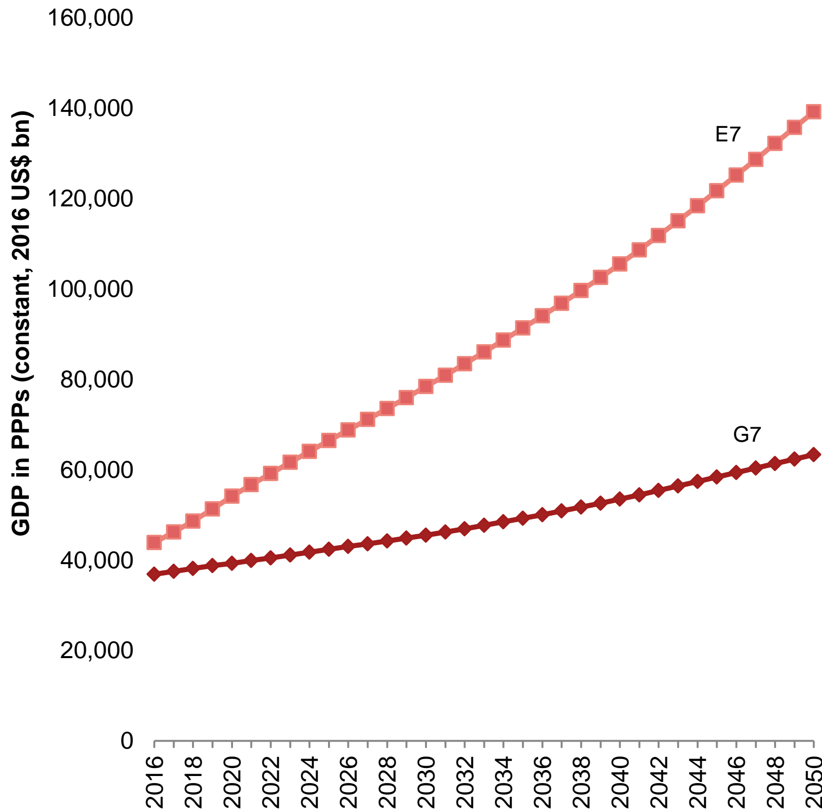


By 2050, the E7 are projected to be significantly larger than the G7 even at market exchange rates (MERs), driven primarily by the continued rise of China and India

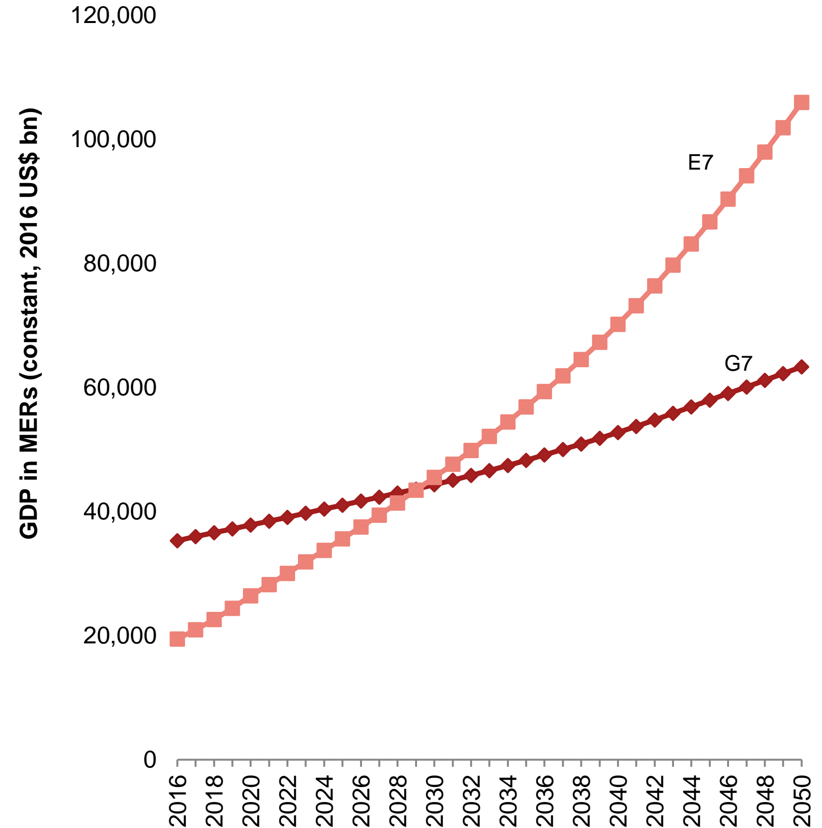


When looking at GDP in MER terms, the E7 still lags behind the G7 due to the E7's lower average price levels, but could overtake the G7 by 2030

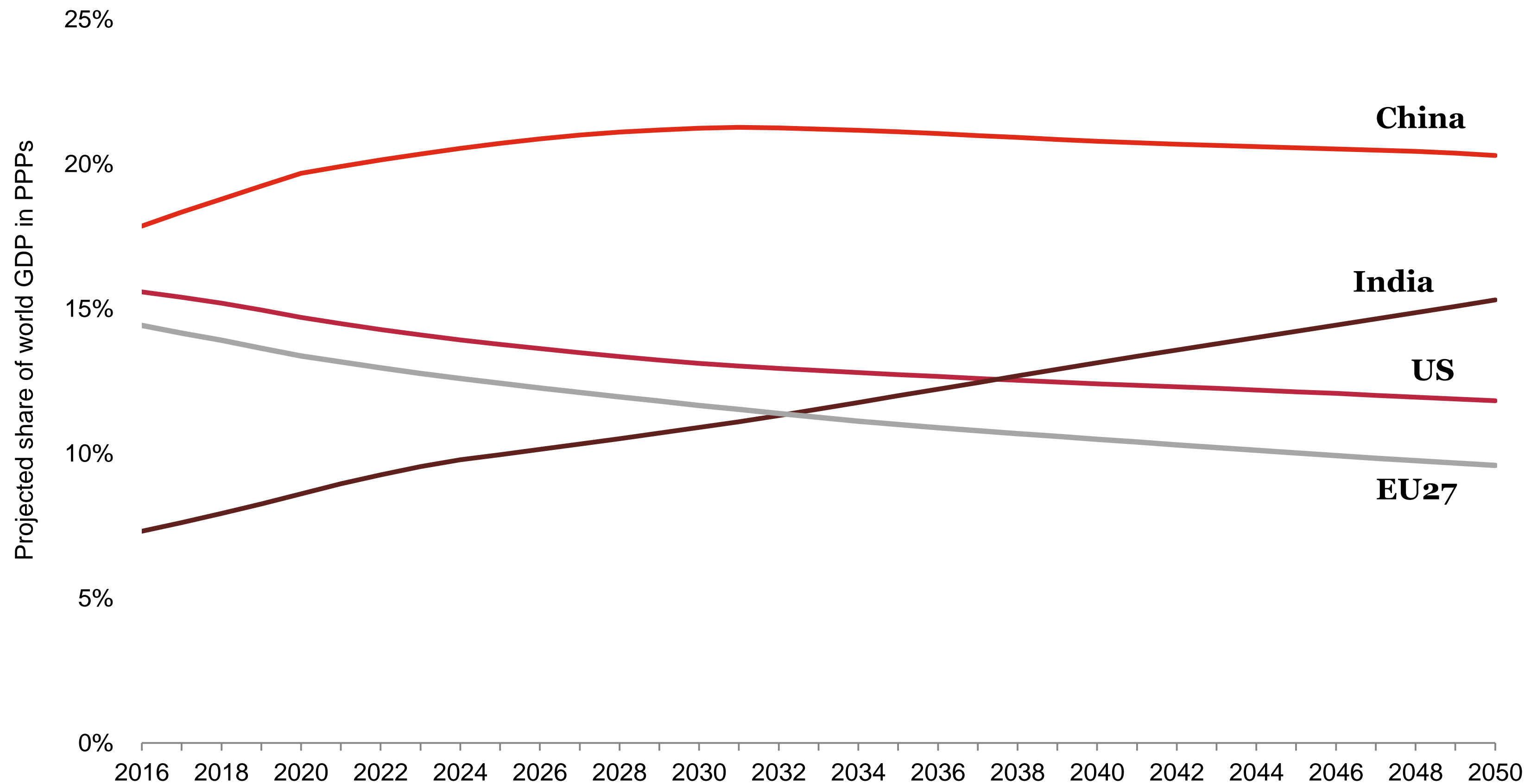
Projected growth paths in PPP terms



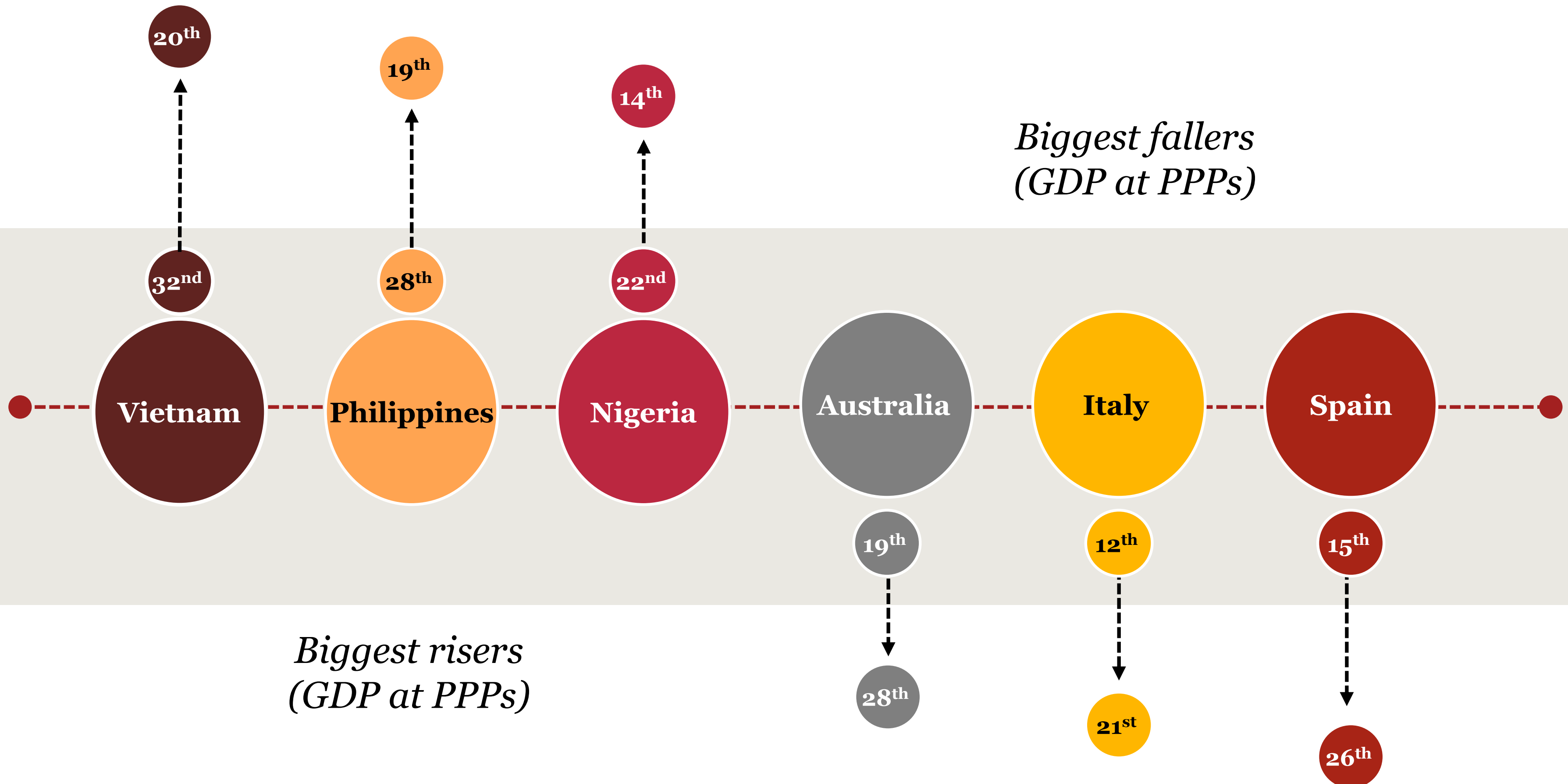
Projected growth paths in MER terms



The rise of China and, in the long run, India will gradually push down the US and EU27 shares of world GDP at PPPs (broadly similar trends are projected for GDP shares at MERs, but China and India are starting from lower levels on that measure)



We expect to see some other emerging markets take centre stage by 2050, although this depends on long-term progress on structural reforms



3. Projected real GDP growth rates

We expect the shifts in global economic power we have seen since 2000 to continue in most cases in future decades

1

Large emerging market economies will continue to be key drivers of global growth, as their lower initial levels of economic development provide more opportunities for catch-up with current advanced economies like the G7.

2

The top 15 fastest growing economies over the next 34 years will **all be developing and emerging market economies** according to our projections.

3

Vietnam, India and Bangladesh have the potential to be the fastest growing economies, with annual average growth of around 5% over the period to 2050, but Chinese growth will slow as its population ages and its economy matures.

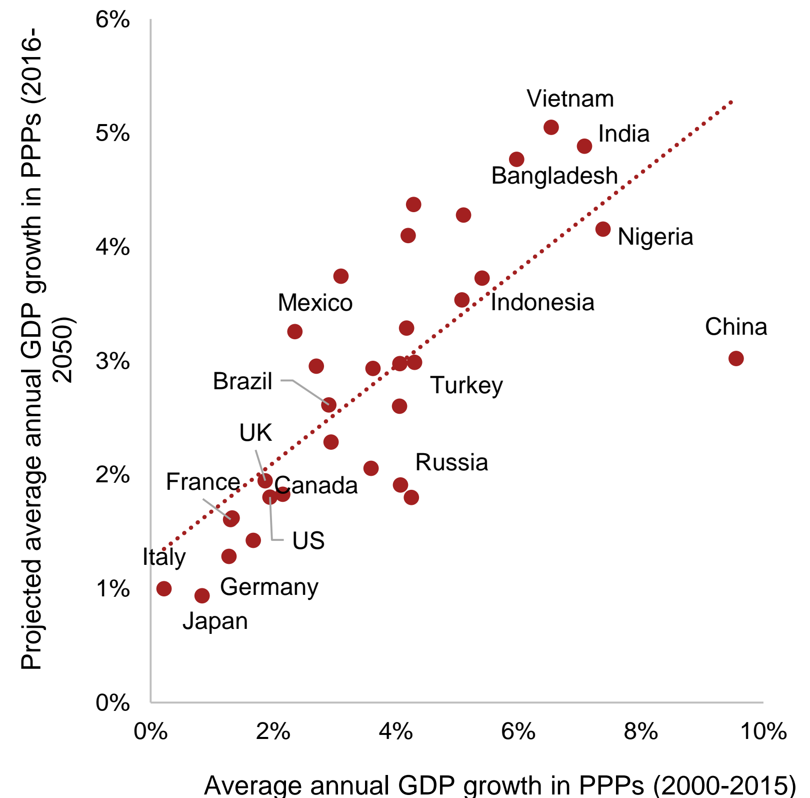
4

E7 growth could average around 3.5% per annum between 2016 and 2050, compared to c.1.5% for the G7.

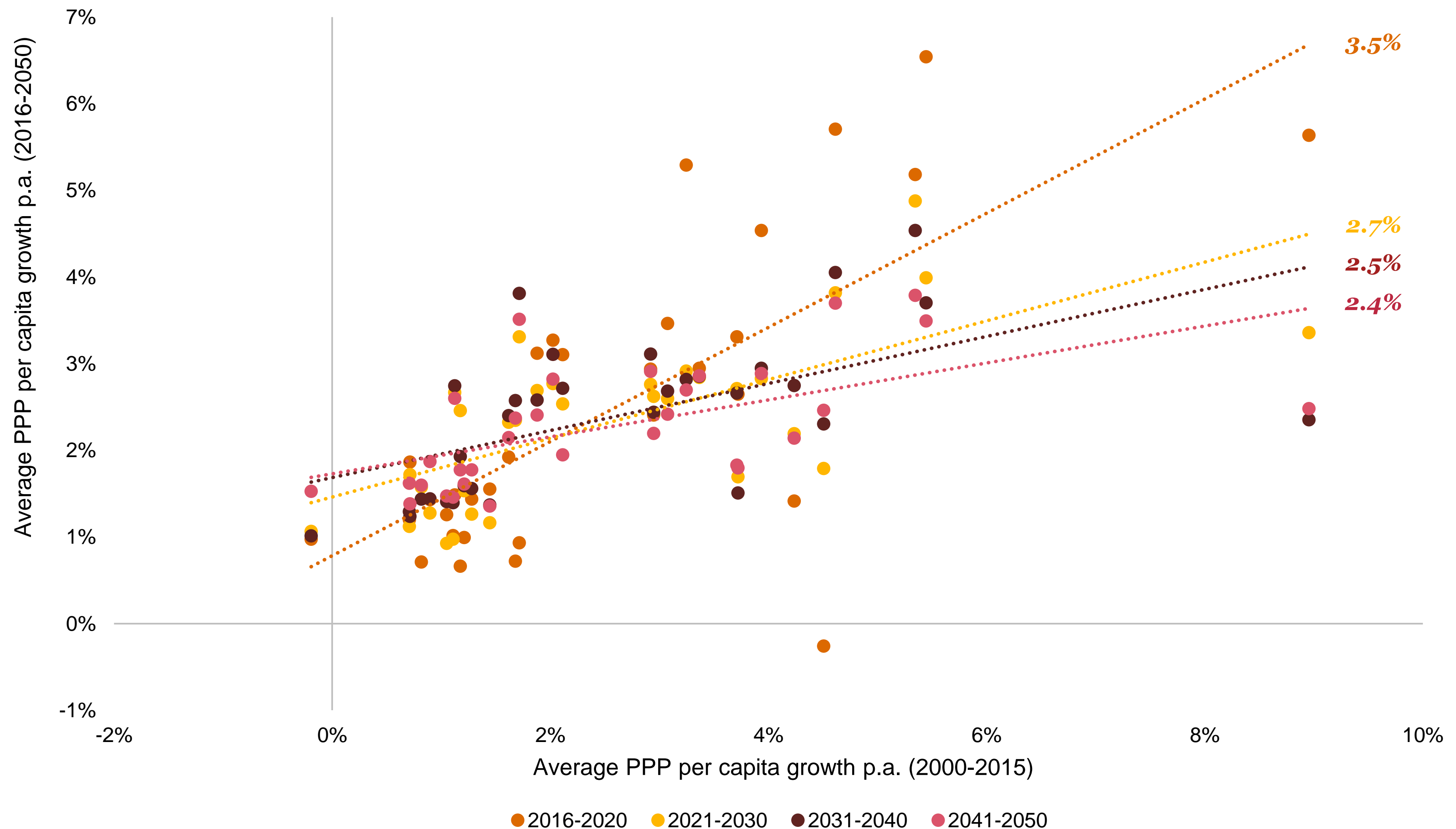
5

Population growth will be a key driver of GDP growth in many emerging markets, such as Nigeria, Pakistan and India. But a key challenge will be too **create enough jobs in these economies for their young people**.

Correlation between historical and projected GDP growth at PPPs



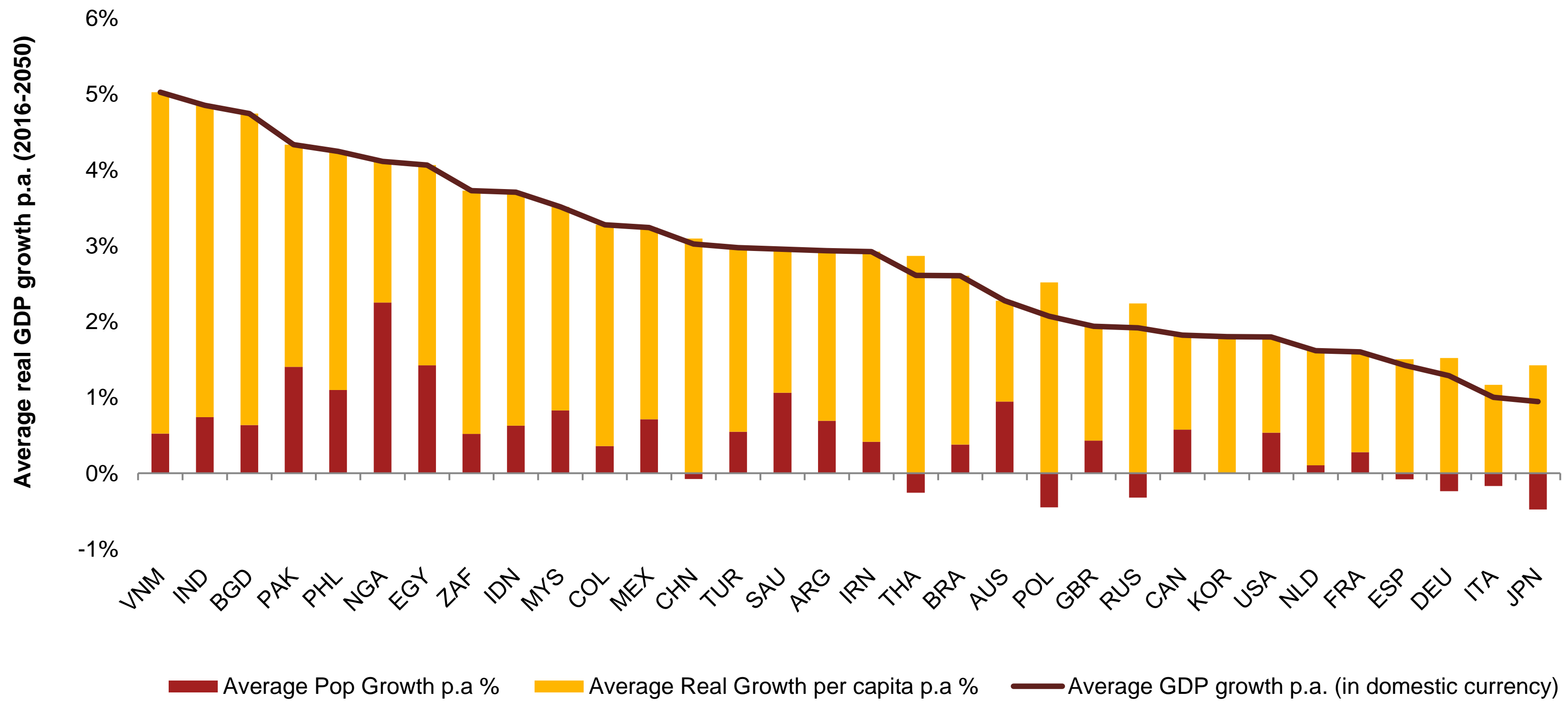
Annual global economic growth is projected to average around 2.6% over the next 34 years, slowing down over time as emerging markets mature and populations age in advanced and some emerging economies (e.g. China)



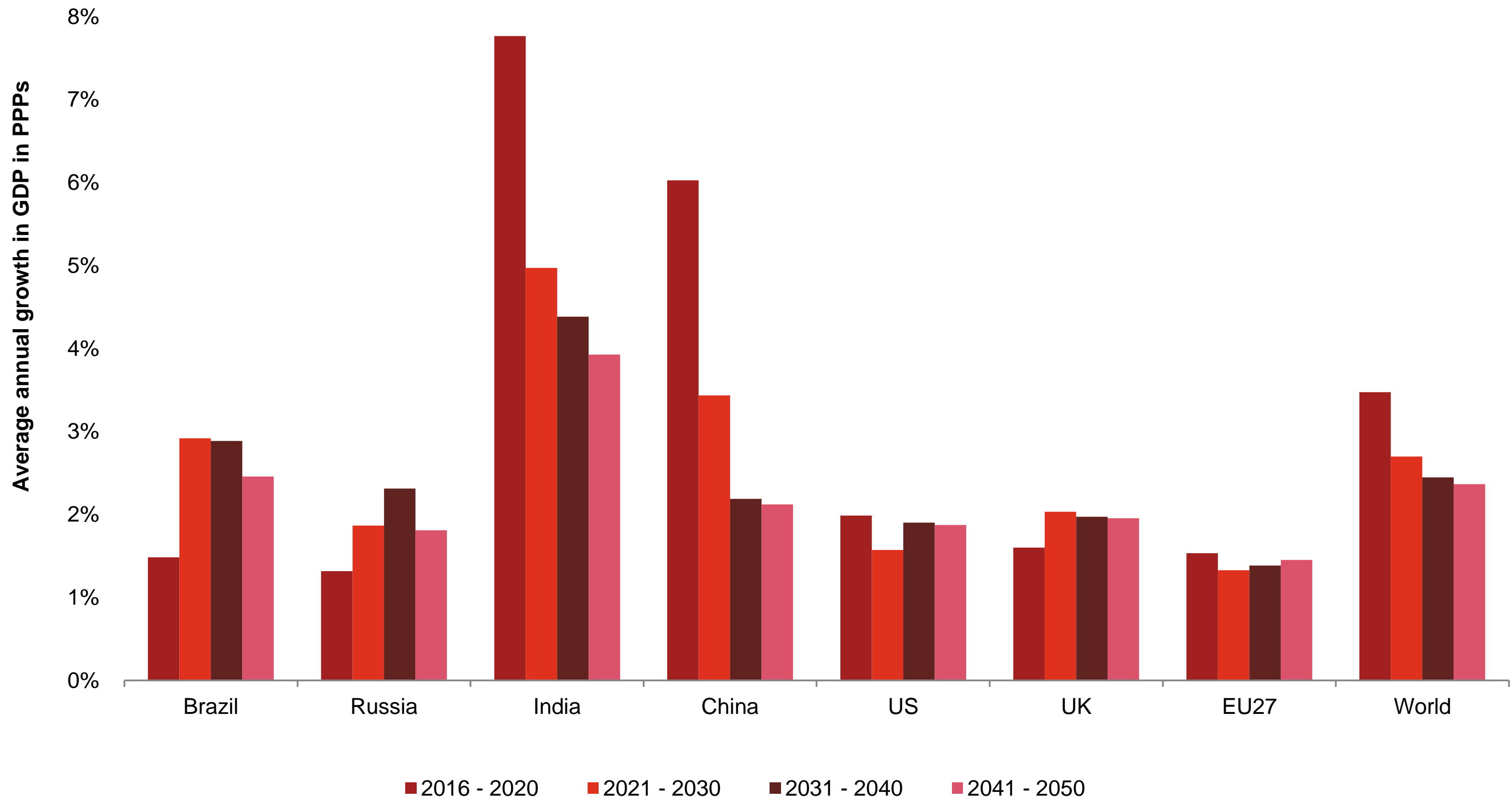
Population growth will support growth in most emerging markets, but ageing populations could be a drag on growth in advanced economies and emerging markets like China and Russia (unless people work for longer)

Real GDP growth broken down into:

1. **Average population growth; and**
2. **Average growth in GDP per capita, which is closely related to labour productivity growth**



China and India are projected to continue their current strong growth rates to at least 2020, before slowing down progressively in later decades as they mature (as happened to Japan, South Korea and other earlier emerging economies in previous decades)



4. Projected average income levels

Average incomes are likely to remain lower in emerging markets than the G7 even in 2050, but they should close a significant amount of the gap by then (e.g. China's average real income level in 2050 similar to UK today)

1 With the possible exception of Italy, all of the **G7 continue to sit above the E7 in terms of GDP per capita** in 2050. Russian average income is projected to be broadly on par with Italy by that time.

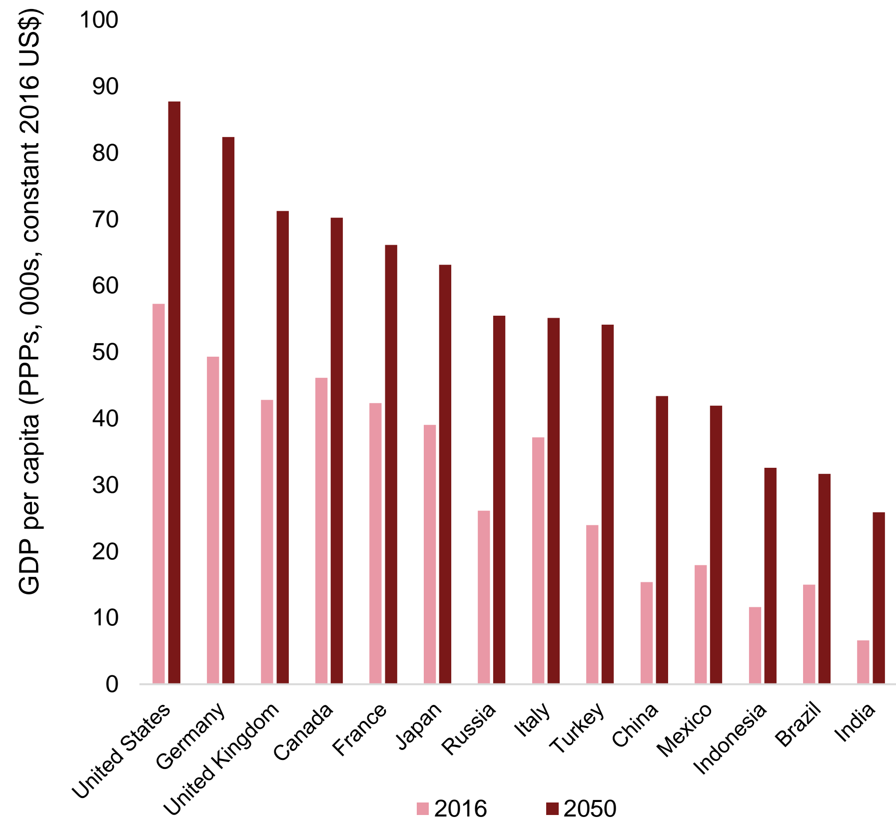
2 The largest economy in the world in 2050, **China, only achieves a middling rank** in terms of GDP per capita (but still similar to the UK's level today).

3 Despite overtaking the US by 2050 in total GDP at PPP terms, **India ranks only 28th of the 32 countries in our study in terms of GDP per capita in 2050.** India's average real income level then might be similar to that in Russia today.

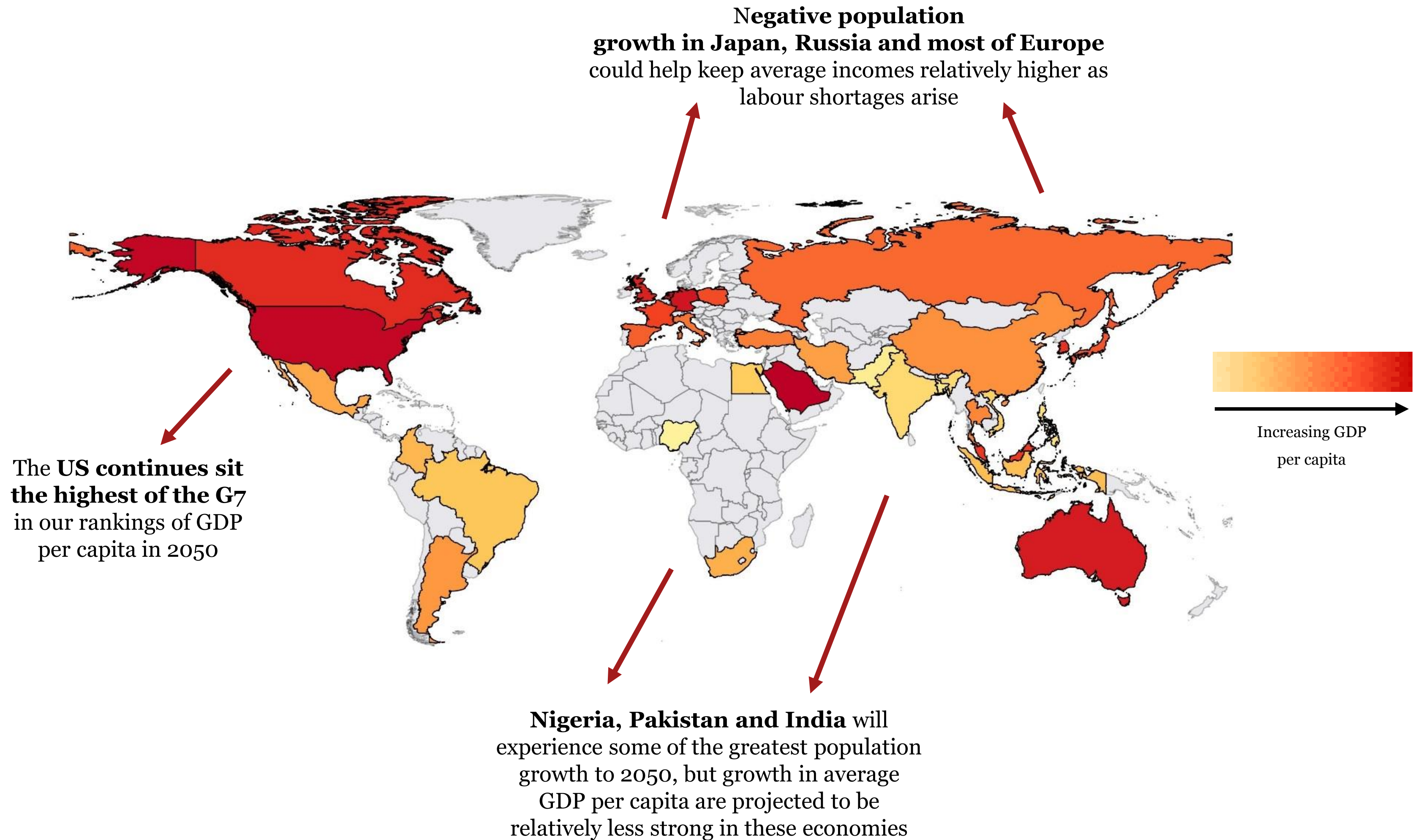
4 China and India are closing the gap with the top. In 2016, US GDP per capita was almost 9 times that of India's. **By 2050, it may be only around 3 times higher than in India (and twice Chinese levels).**

5 While population growth will be a key driver of GDP growth in emerging markets, it can have **partly offsetting effects** on average income growth., particularly if job creation is constrained.

GDP per capita is on the rise in the E7



In contrast to total GDP, we do not see such a marked shift towards Asia by 2050 in terms of relative levels of average GDP per capita



5. Risks to growth

A wide range of risks could see growth fall below projected potential rates, particularly if there is a widespread retreat from globalisation – although there could also be offsetting upside possibilities

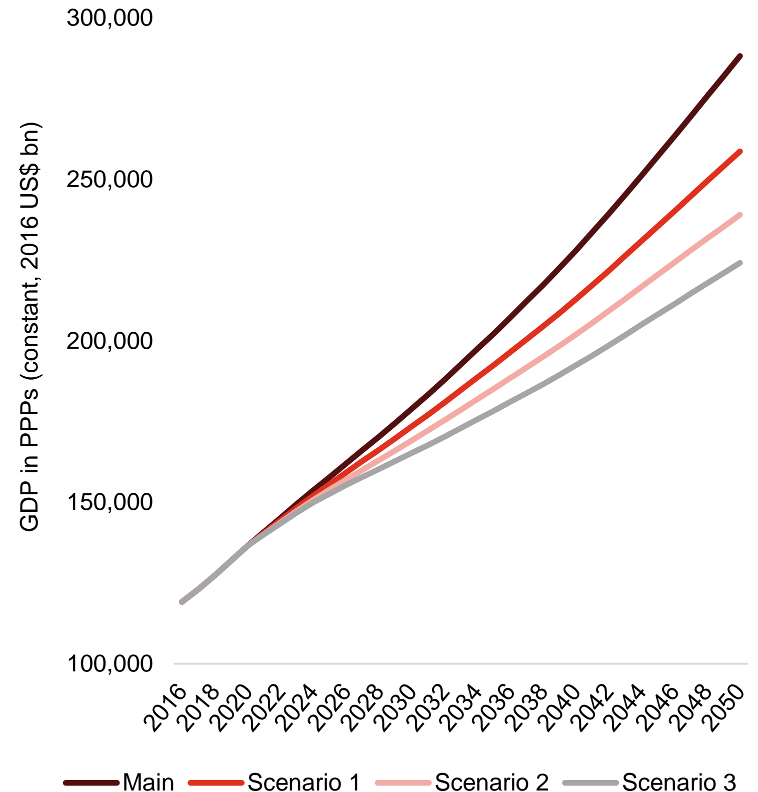
We consider three scenarios, each one building on the assumptions made in the previous one to create a cumulative set of three possible downside risks – however, there could also be upside possibilities for all three variables

1. **Trend US labour productivity growth decreases** by a further 0.5 percentage points, from 1.5% to 1% per annum, representing a deceleration in global technological progress within the structure of our model

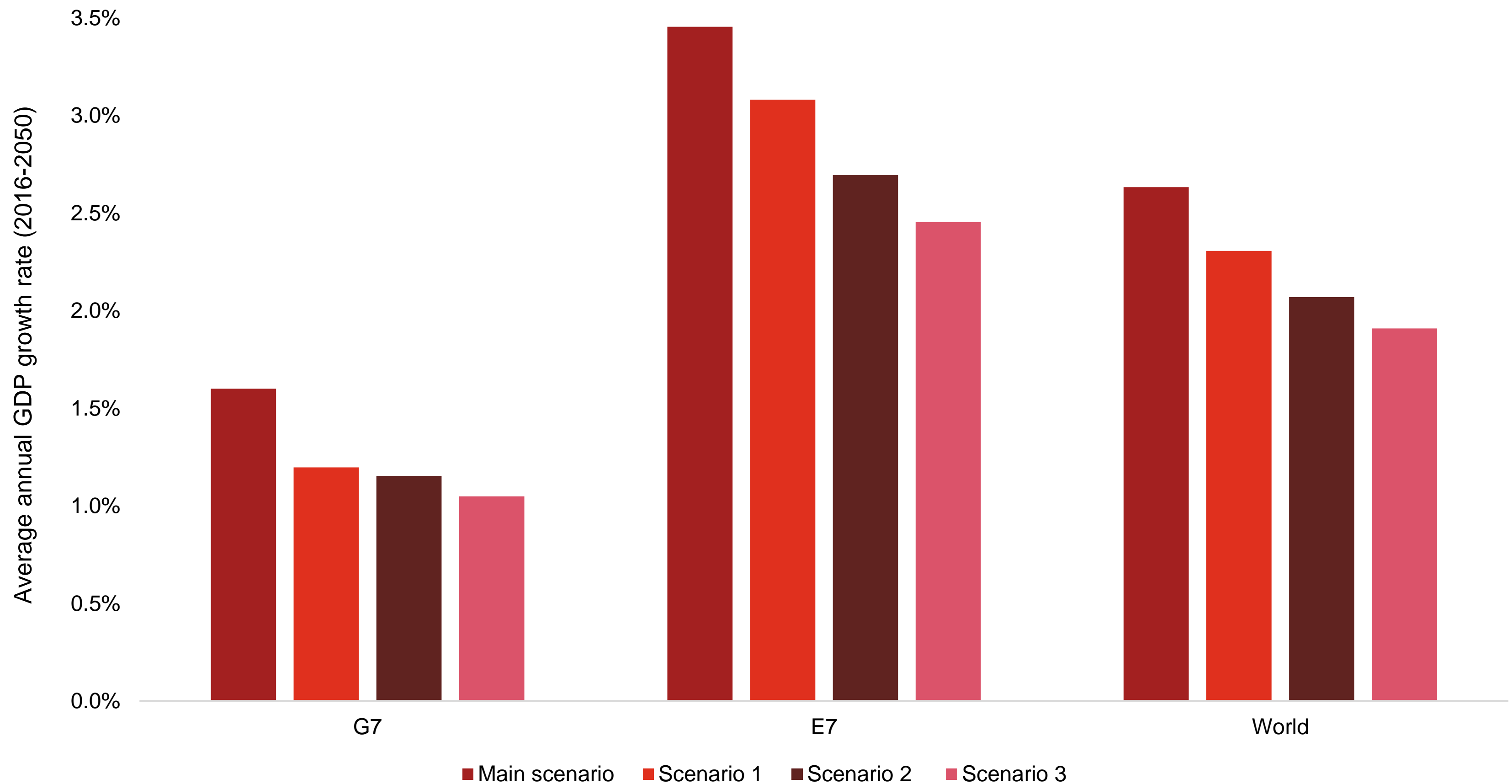
2. **Convergence speeds for total factor productivity (TFP) levels reduce by half** (e.g. due to rising protectionism) and trend annual US labour productivity growth decreases by 0.5 percentage points as in scenario 1

3. **Investment to GDP ratios decrease by a quarter**, convergence speeds (for TFP levels) decrease by half, and annual trend US labour productivity growth decreases by 0.5 percentage points.

For the most severe downside scenario (3), the size of the world economy in 2050 could be around 20% smaller than in our main scenario



Reducing US labour productivity has a larger impact on G7 growth, while the E7 are more sensitive to reduced TFP convergence speeds



6. Implications for public policy and business

Developing stable, high quality institutions will be critical to emerging markets realising their full economic potential. Businesses need to develop a global ecosystem of suppliers and partners across these markets.

For governments…

"I would particularly emphasise the critical importance of the quality of institutions in long-term economic success or failure. If we look at the rise of the West, growth was supported by political systems that invested in public goods (including health and education as well as physical infrastructure) and provided legal systems that protected property rights and provided a conducive environment for long-term business investment."

For businesses…

"There is no silver bullet, but it does put more of a premium than ever on having a business strategy that is dynamic enough to respond to both the opportunities and challenges that emerging markets present. For large companies this typically involves creating a global ecosystem of suppliers and partners to support development and marketing of products and services, focusing on capturing most of the value in their ecosystem."

- *Professor Michael G. Jacobides (LBS)*

Diversification, public sector reform and creating a business environment that encourages innovation will be critical to sustainable long-term growth

Views of senior PwC experts on China, Nigeria, Colombia, Poland and Turkey

"Looking ahead, **China** still has great potential for growth. Its urbanisation process is still at a relatively early stage, and its services sector has a lot of scope to catch up with economies like the US. Reform of state-owned enterprises, if properly handled, could shatter monopolies and create new business opportunities worth trillions of dollars."

- Allan Zhang, Chief Economist, PwC China

"**Nigeria's** potential advantages for future growth include a large consumer market, a strategic geographic location as a hub for Africa, and a young and entrepreneurial population. The first step in harnessing this opportunity requires deliberate efforts to improve value-adding activity in the non-oil economy, particularly in agriculture and services."

- Dr. Andrew S. Nevin, Chief Economist, PwC Nigeria

"Growth in **Colombia** over recent years has been driven by the financial services industry and the social services sector. The Colombian government has also been actively promoting the agribusiness sector, as well as the industrial manufacturing sector in order to promote long-term economic growth in light of falling commodity prices."

- Gustavo Fernando Dreispiel, Senior Partner, PwC Colombia

"**Poland's** new government announced a new programme of economic development aimed at gradually shifting the paradigm of economic development from wage competitiveness to innovation and international expansion of Polish companies."

- Mateusz Walewski, Senior Economist, PwC Poland

"If **Turkey** can overcome its short-term political uncertainties and focus its attention on reforms in all needed areas, the country can provide great long-term business opportunities with its favourable demographics and geopolitical position."

- Başar Yıldırım, Chief Economist, PwC Turkey

PwC contacts, services and insights

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