The Long View
How will the global economic order change by 2050?

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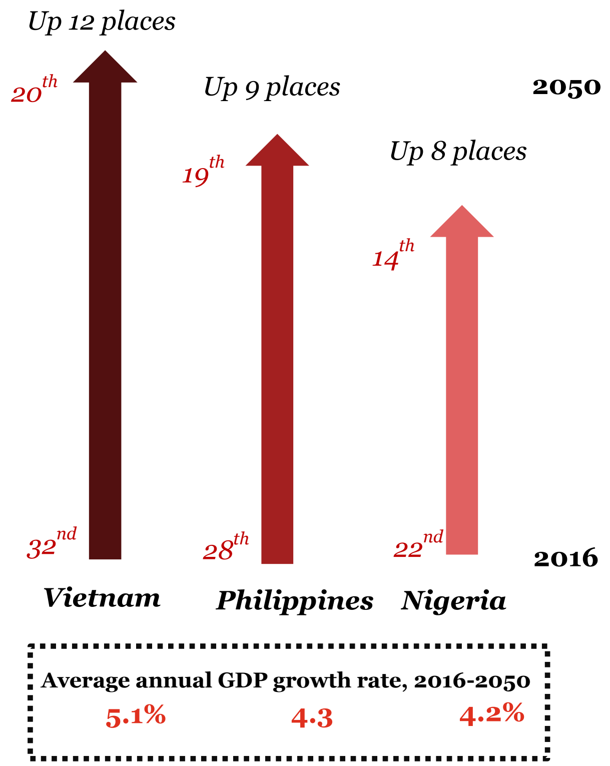
Emerging markets will dominate the world's top 10 economies in 2050 (GDP at PPPs)

	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

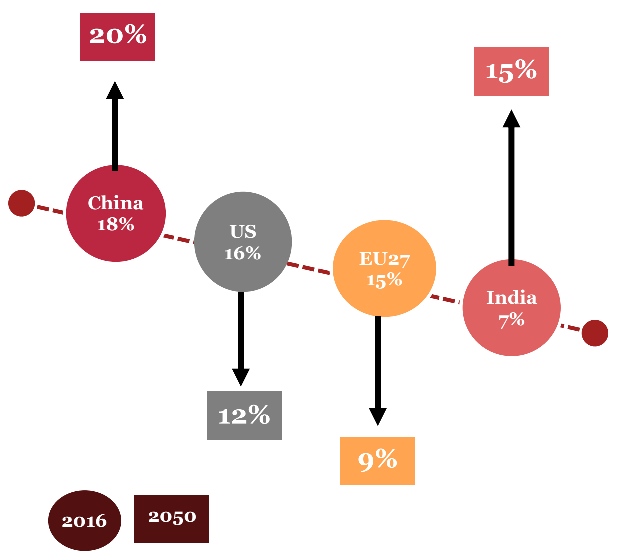
E7 economies G7 economies

Vietnam, the Philippines and Nigeria could make the greatest moves up the GDP at PPP rankings by 2050



The US and Europe will steadily lose ground to China and India

Share of world GDP (PPPs) from 2016 to 2050…



Sources: IMF for 2016 estimates, PwC analysis for projections to 2050

Global economic power will shift from the G7 to the E7 economies

In…

1995 E7 *were* ***half*** *the size of* G7

By…

2015 E7 *were around the* ***same*** *size as* G7

And in just 25 years…

2040 E7 *could be* ***double*** *the size of* G7

G7: US, UK, France, Germany, Japan, Canada and Italy
E7: China, India, Indonesia, Brazil, Russia, Mexico and Turkey

1. Summary: The world in 2050

Key findings

1. We project that the world economy could more than double in size by 2050, assuming broadly growth-friendly policies (including no sustained long-term retreat into protectionism) and no major global civilisation-threatening catastrophes.

2. Emerging markets will continue to be the growth engine of the global economy. By 2050, the E7 economies could have increased their share of world GDP from around 35% to almost 50%. China could be the largest economy in the world, accounting for around 20% of world GDP in 2050, with India in second place and Indonesia in fourth place (based on GDP at PPPs).

3. A number of other emerging markets will also take centre stage – Mexico could be larger than the UK and Germany by 2050 in PPP terms and six of the seven largest economies in the world could be emerging markets by that time.

4. Meanwhile, the EU27 share of world GDP could be down to less than 10% by 2050, smaller than India.

5. We project Vietnam, India and Bangladesh to be three of the world's fastest growing economies over this period. UK growth has the potential to outpace the average rate in the EU27 after the transitional impact of Brexit has passed, although we project the fastest growing large EU economy to be Poland.

6. Today's advanced economies will continue to have higher average incomes, but emerging economies should make good progress towards closing this gap by 2050. This will open up great opportunities for businesses prepared to make long-term investments in these markets. But this will require patience to ride out the storms we have seen recently in economies like, for example, Brazil, Nigeria and Turkey, all of which still have considerable long-term economic potential based on our analysis.

7. To realise this growth potential, emerging market governments need to implement structural reforms to improve macroeconomic stability, diversify their economies away from undue reliance on natural resources (where this is currently the case), and develop more effective political and legal institutions.

1.1 Our approach

In this report, we present our latest long-term economic growth projections, providing an update to our 2015 results. We project GDP to 2050 for 32 of the largest economies in the world, which together currently account for around 85% of global GDP. We hope this analysis will be of interest to policymakers around the world, businesses making long-term investments, academics, students and economic commentators. These long-term growth projections will also feed into other PwC projects and reports.

Our analysis uses a robust long-term economic growth model from the academic literature that accounts in a rigorous way for projected trends in demographics, capital investment, education levels and technological progress to estimate potential long-term growth rates. We assume broadly growth-friendly (but not perfect) policies and no major civilisation-threatening global catastrophes (e.g. nuclear war, asteroid collisions) over the period to 2050. Technical details of our methodology are contained in Appendix A of the full report.

We are aiming to identify broad long-term trends, abstracting from short-term economic and political cycles. We are not claiming to be able to make precise forecasts of GDP in 2050, which is clearly not possible looking that far ahead, but we do believe it is possible to trace out the broad shape of economic power shifts over this period. We have also looked at the impact of a range of alternative assumptions on our long-term growth projections (see Section 2.4 of the full report).

Our modelling projections are summarised in this short report and set out in more detail in our full report, which also includes:

- commentaries on five emerging markets (China, Nigeria, Colombia, Turkey and Poland) from PwC senior economists or partners in these countries;
- interviews with three leading academics - Professor Marvin Zonis, Professor Branko Milanovic and Professor Michael Jacobides – on the uncertainties around our projections, the challenge of income inequality, the need for institutional reform and the implications of our analysis for business strategy; and
- summaries of a range of other PwC research and case study analysis to draw out the implications of the long-term global economic trends we project for public policy and business.

1.2 GDP projections to 2050

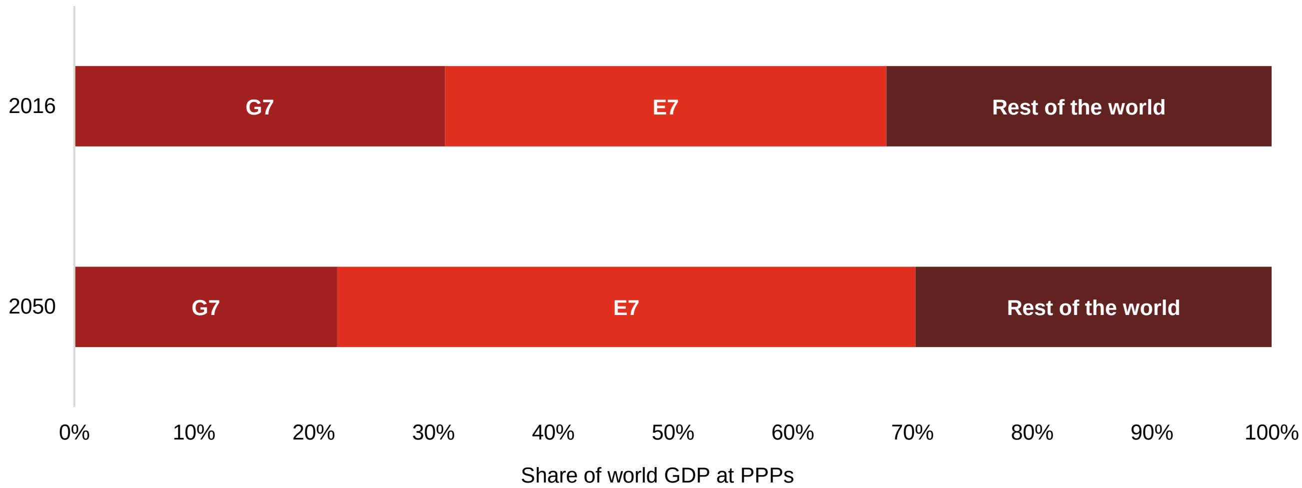
Global economic growth will be driven by emerging market economies, which will gradually increase their share of world GDP over time

We project that the world economy will roughly double in size by 2042, growing at an annual average rate of around 2.6% between 2016 and 2050.

We expect this growth to be driven larely by emerging market and developing countries, with the E7 economies of Brazil, China, India, Indonesia, Mexico, Russia and Turkey growing at an annual average rate of almost 3.5% over the next 34 years, compared to just 1.6% for the advanced G7 nations of Canada, France, Germany, Italy, Japan, the UK and the US.

We will continue to see the shift in global economic power away from established advanced economies, especially those in Europe, towards emerging economies in Asia and elsewhere. As shown in Figure 1, the E7 could comprise almost 50% of world GDP by 2050, while the G7's share declines to only just over 20%.

Figure 1: Projected change in shares of world GDP from 2016 to 2050



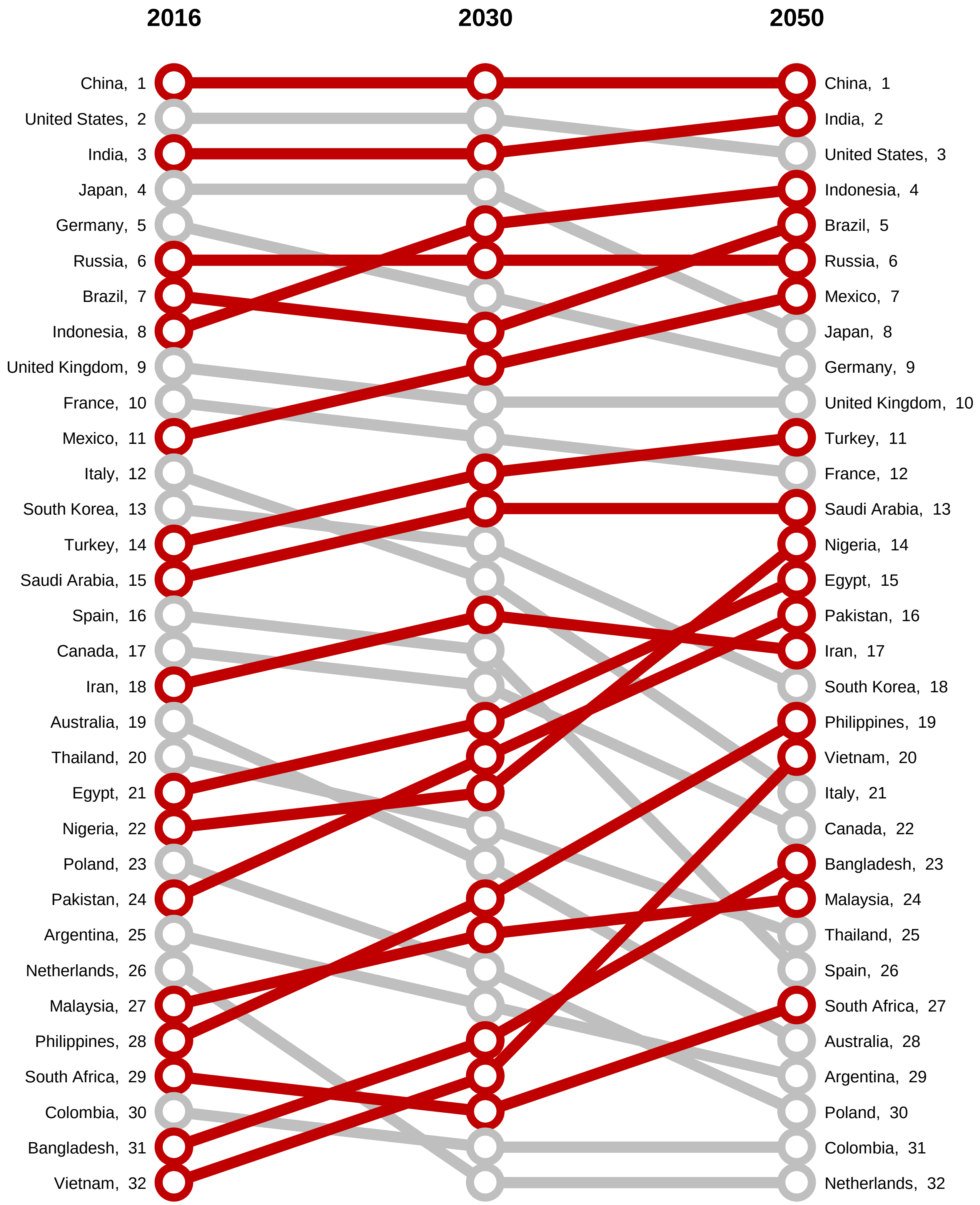
Sources: IMF for 2016 estimate, PwC projections for 2050

In fact, China has already overtaken the US to become the world's largest economy in purchasing power parity (PPP) terms[1], while India currently stands in third place and is projected to overtake the US by 2050 in PPP terms. By 2050, France will no longer be among the world's ten largest economies on this basis, with the UK

[1] PPP estimates of GDP adjust for price level differences across countries, providing a better measure of the *volume* of goods and services produced by an economy as compared to GDP at current market exchange rates, which is a measure of *value*.

falling to 10th place, while Indonesia could rise to 4th place by 2050 (see Figure 2 and also Table 1 in Section 2 below). By 2050, six of the seven largest economies in the world could be today's emerging economies in PPP terms according to our projections.

Figure 2: **Projected GDP rankings (at PPPs)**



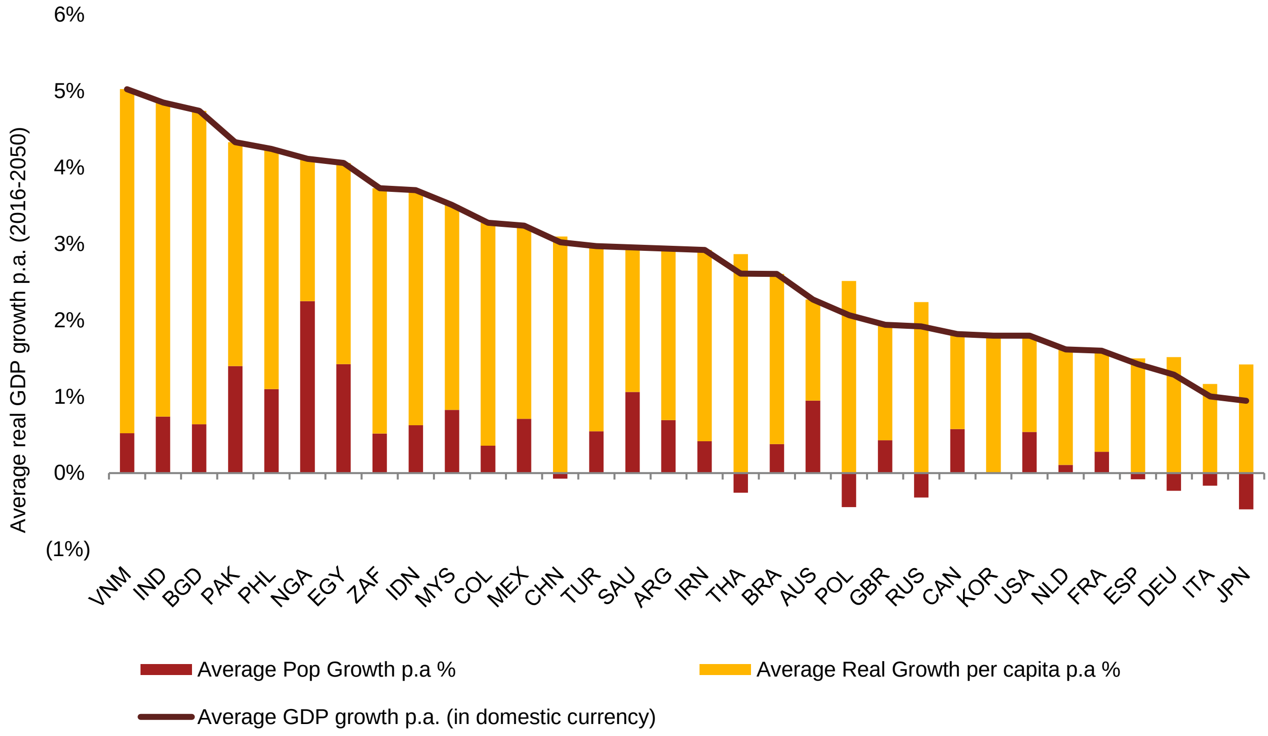
Sources: IMF for 2016 estimates (updated for Turkey due to recent major statistical revisions), PwC projections for 2030 and 2050

When looking at GDP measured at market exchange rates (MERs)[2], we do not see quite such a radical shift in global economic power, reflecting the lower average price levels in emerging economies. But China still emerges as the largest economy in the world before 2030 and India is clearly the third largest in the world by 2050, so there is still a considerable shift in economic power towards Asia in particular whichever measure we use.

We will see a number of new emerging markets taking centre stage

By 2050, emerging economies such as Indonesia, Brazil and Mexico are likely to be larger than the UK and France, while Pakistan and Egypt could overtake Italy and Canada (on a PPP basis). In terms of growth, Vietnam, India and Bangladesh could be the fastest growing economies over the period to 2050, averaging growth of around 5% a year. Figure 3 shows the projected average annual GDP growth rate over the next 34 years for all of the 32 countries we modelled. Total GDP growth is also broken down into how much is attributable to population growth and how much to real GDP per capita growth.

Figure 3: Projected average real GDP growth p.a., 2016-2050



Source: PwC analysis based on UN population projections

Nigeria has the potential to be the fastest growing large African economy and could move up the GDP rankings from 22nd place to 14th by 2050. But Nigeria will only realise this potential if it can diversify its economy away from oil and strengthen its institutions and infrastructure. Colombia and Poland also exhibit great potential, and are projected to be the fastest growing large economies in their respective regions, Latin America and the EU (though Turkey is projected to grow faster within the wider European area).

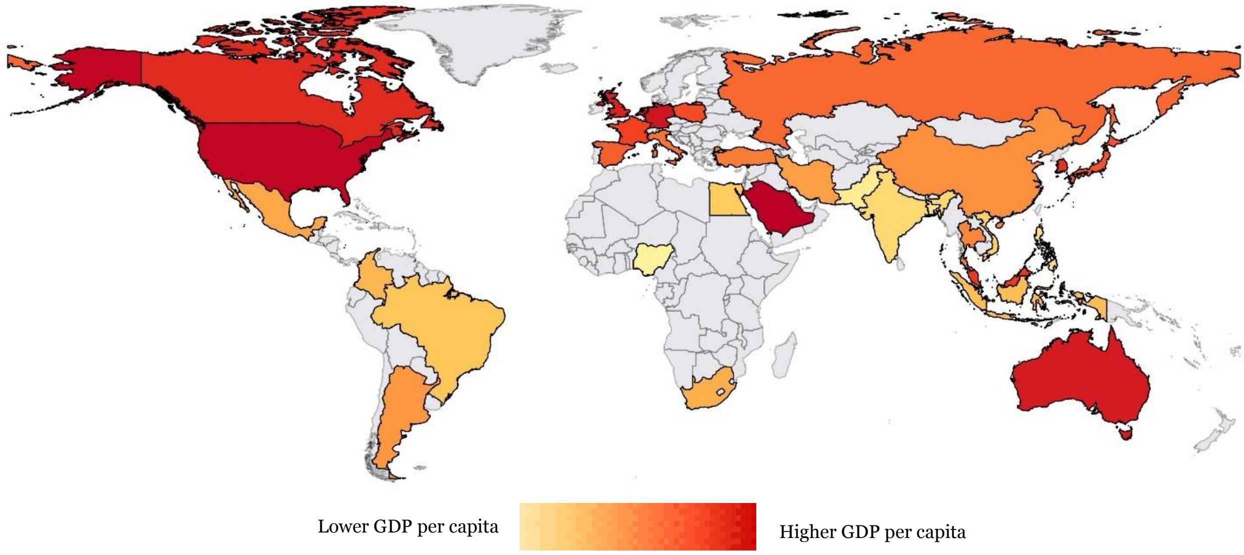
As Figure 3 shows, growth in many emerging economies will be supported by relatively fast-growing populations, boosting domestic demand and the size of the workforce. This will, however, need to be complemented with investment in education and an improvement in macroeconomic fundamentals to ensure there are sufficient jobs for growing numbers of young people in these countries.

[2] Our projections for GDP at MERs are set out in Table 3 in Section 2 below and in more detail in Appendix B of the full report.

Today's advanced economies will continue to have higher average incomes, but by 2050 emerging economies should make good progress towards closing this gap

With the possible exception of Italy, all of the G7 will continue to sit above the E7 based on our rankings of GDP per capita in 2050. China achieves a middling rank by 2050, while India remains near the bottom, as illustrated in Map 1. India's GDP per capita trajectory over the next 34 years is markedly different to its overall GDP progression, illustrating that while strong population growth can be a key driver of GDP growth, it can also make it more challenging to boost average income levels.

Map 1: Projected real GDP per capita in 2050



Source: PwC analysis

The gap is closing, however. In 2016, US GDP per capita was around four times the size of China's and almost nine times that of India's. By 2050, these gaps are projected to narrow to around double China's and around three times India's, demonstrating long-term income convergence.

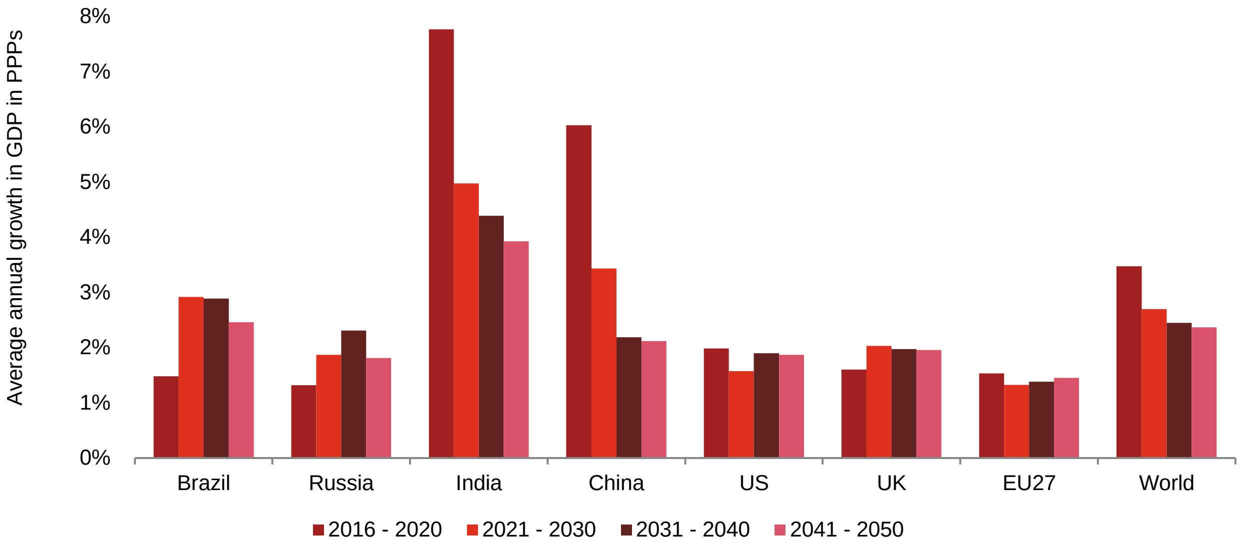
The world economy will slow down over time, with a marked moderation in growth rates after 2020

We project annual global economic growth to average around 3.5% over the next 4 years to 2020, slowing down to 2.7% for 2021-2030, 2.5% for the decade after that, and 2.4% for 2041-2050. This will occur as many advanced economies experience a marked decline in their working-age populations. At the same time, emerging market growth rates will moderate as these economies mature, which is consistent with academic research[3] on the tendency for growth rates to 'regress to the mean' in the long-run.

This is illustrated in Figure 4, with the growth rates of the largest emerging economies moderating over time to converge to around 2% in the very long run in line with the major advanced economies. India and Nigeria are the two of the main exceptions to this, with growth remaining higher for longer due to their lower initial average income levels providing greater scope for catch up growth.

[3] For example, see the analysis by Pritchett and Summers (2014) here: http://www.nber.org/papers/w20573

Figure 4: Projected growth profiles for larger economies



Source: PwC analysis

1.3 Challenges for policymakers in achieving sustainable long term growth

To realise their full economic potential, emerging market governments need to implement structural reforms to improve their macroeconomic stability, infrastructure and institutions

Our analysis shows the great potential that emerging economies have to grow and prosper over the coming decades. But to realise this potential in full, they must undertake sustained and effective investment in education, infrastructure and technology. Subdued global demand growth and a falling oil price over recent years have highlighted the importance of diversified economies for long-term sustainable growth. Underlying all of this is the need to develop political, economic, legal and social institutions in order to generate incentives for innovation and entrepreneurship, creating secure and reliable economies in which to do business.

Looking forward, the global economy faces a number of challenges to prosperous economic growth. Structural developments, such as ageing populations and climate change, require forward-thinking policy which equips the workforce to continue to make societal contributions later on in life and promotes sustainable development. Falling global trade growth, rising inequality and increasing geopolitical uncertainties are also intensifying the need to create diversified economies which create opportunities for everyone in a broad variety of industries (in both advanced and emerging economies).

These public policy issues are discussed in more detail in Section 4 of our full report, including contributions from leading PwC and external experts on these topics.

1.4 Opportunities for business – winning in emerging markets

Businesses need to adopt flexible, dynamic and patient strategies to navigate these rapidly evolving and maturing emerging markets

Emerging market development will create many opportunities for business. These will arise as these economies progress into new industries, engage with world markets and as their populations – which will also be more youthful on average than in advanced nations – get richer. As these emerging countries develop their institutions, fostering social stability and strengthening their macroeconomic fundamentals, they will become more attractive places to do business and live, attracting investment and talent.

These economies are rapidly evolving and often relatively volatile, however, so companies will need dynamic and flexible operating strategies to succeed in them. Businesses should be prepared to adjust their brand and market positions to suit differing and often more nuanced local preferences. An in-depth understanding of the local market, policy regimes and consumers will be crucial, which will often involve working with local partners.

Section 5 of our full report contains a number of examples of how international businesses have overcome challenges and ultimately been successful in combining their global best practices with flexible adaptation to local business and consumer environments in emerging markets such as China, India and Brazil. We also draw here on the extensive research of PwC's Growth Markets Centre[4].

One key message from this research is that international businesses and other investors need to be patient enough to ride out the short term economic and political ups and downs that will inevitably occur from time to time in emerging markets as they move towards maturity. But the projections in our report make clear that failure to engage with these markets means missing out on the bulk of the economic growth we expect to see in the world economy between now and 2050.

4 For full details of this research see: http://www.pwc.com/gx/en/issues/high-growth-markets.html

2. Key results tables

Table 1: Projected rankings of economies based on GDP at PPPs (in constant 2016 $bn)

GDP PPP rankings	2016 rankings		2030 rankings		2050 rankings	
	Country	GDP at PPP	Country	Projected GDP at PPP	Country	Projected GDP at PPP
1	China	21269	China	38008	China	58499
2	United States	18562	United States	23475	India	44128
3	India	8721	India	19511	United States	34102
4	Japan	4932	Japan	5606	Indonesia	10502
5	Germany	3979	Indonesia	5424	Brazil	7540
6	Russia	3745	Russia	4736	Russia	7131
7	Brazil	3135	Germany	4707	Mexico	6863
8	Indonesia	3028	Brazil	4439	Japan	6779
9	United Kingdom	2788	Mexico	3661	Germany	6138
10	France	2737	United Kingdom	3638	United Kingdom	5369
11	Mexico	2307	France	3377	Turkey	5184
12	Italy	2221	Turkey	2996	France	4705
13	South Korea	1929	Saudi Arabia	2755	Saudi Arabia	4694
14	Turkey	1906	South Korea	2651	Nigeria	4348
15	Saudi Arabia	1731	Italy	2541	Egypt	4333
16	Spain	1690	Iran	2354	Pakistan	4236
17	Canada	1674	Spain	2159	Iran	3900
18	Iran	1459	Canada	2141	South Korea	3539
19	Australia	1189	Egypt	2049	Philippines	3334
20	Thailand	1161	Pakistan	1868	Vietnam	3176
21	Egypt	1105	Nigeria	1794	Italy	3115
22	Nigeria	1089	Thailand	1732	Canada	3100
23	Poland	1052	Australia	1663	Bangladesh	3064
24	Pakistan	988	Philippines	1615	Malaysia	2815
25	Argentina	879	Malaysia	1506	Thailand	2782
26	Netherlands	866	Poland	1505	Spain	2732
27	Malaysia	864	Argentina	1342	South Africa	2570
28	Philippines	802	Bangladesh	1324	Australia	2564
29	South Africa	736	Vietnam	1303	Argentina	2365
30	Colombia	690	South Africa	1148	Poland	2103
31	Bangladesh	628	Colombia	1111	Colombia	2074
32	Vietnam	595	Netherlands	1080	Netherlands	1496

Sources: IMF for 2016 estimates, PwC projections for 2030 and 2050 using UN population projections (Note that Turkish GDP has been revised significantly upwards from the IMF estimate for 2016 due to revisions made subsequently by the Turkish statistical office)

Table 2: Breakdown of the components of average real GDP growth (2016-2050)

Country	Average population growth p.a.	Average real growth per capita p.a.	Average GDP growth p.a. (in domestic currency)
Vietnam	0.5%	4.5%	5.0%
India	0.7%	4.1%	4.9%
Bangladesh	0.6%	4.1%	4.8%
Pakistan	1.4%	2.9%	4.4%
Philippines	1.1%	3.1%	4.3%
Nigeria	2.3%	1.9%	4.2%
Egypt	1.4%	2.6%	4.1%
South Africa	0.5%	3.2%	3.7%
Indonesia	0.6%	3.1%	3.7%
Malaysia	0.8%	2.7%	3.5%
Colombia	0.4%	2.9%	3.3%
Mexico	0.7%	2.5%	3.3%
China	-0.1%	3.1%	3.0%
Turkey	0.5%	2.4%	3.0%
Saudi Arabia	1.1%	1.9%	3.0%
Argentina	0.7%	2.2%	2.9%
Iran	0.4%	2.5%	2.9%
Brazil	0.4%	2.2%	2.6%
Thailand	-0.3%	2.9%	2.6%
Australia	0.9%	1.3%	2.3%
Poland	-0.4%	2.5%	2.1%
United Kingdom	0.4%	1.5%	1.9%
Russia	-0.3%	2.2%	1.9%
Canada	0.6%	1.2%	1.8%
United States	0.5%	1.3%	1.8%
South Korea	0.0%	1.8%	1.8%
Netherlands	0.1%	1.5%	1.6%
France	0.3%	1.3%	1.6%
Spain	-0.1%	1.5%	1.4%
Germany	-0.2%	1.5%	1.3%
Italy	-0.2%	1.2%	1.0%
Japan	-0.5%	1.4%	0.9%

Source: PwC analysis (using UN population projections)

Table 3: GDP at MER rankings (at constant 2016 US$bn)

GDP at MER rankings	2016 rankings		2030 rankings		2050 rankings	
	Country	GDP at MER	Country	Projected GDP at MER	Country	Projected GDP at MER
1	United States	18562	China	26499	China	49853
2	China	11392	United States	23475	United States	34102
3	Japan	4730	India	7841	India	28021
4	Germany	3495	Japan	5468	Indonesia	7275
5	United Kingdom	2650	Germany	4347	Japan	6779
6	France	2488	United Kingdom	3530	Brazil	6532
7	India	2251	France	3186	Germany	6138
8	Italy	1852	Brazil	2969	Mexico	5563
9	Brazil	1770	Indonesia	2449	United Kingdom	5369
10	Canada	1532	Italy	2278	Russia	5127
11	South Korea	1404	South Korea	2278	France	4705
12	Russia	1268	Mexico	2143	Turkey	4087
13	Australia	1257	Russia	2111	South Korea	3539
14	Spain	1252	Canada	2030	Saudi Arabia	3495
15	Mexico	1064	Spain	1863	Nigeria	3282
16	Indonesia	941	Australia	1716	Italy	3115
17	Turkey	830	Turkey	1705	Canada	3100
18	Netherlands	770	Saudi Arabia	1407	Egypt	2990
19	Saudi Arabia	638	Poland	1015	Pakistan	2831
20	Argentina	542	Netherlands	1007	Spain	2732
21	Poland	467	Iran	1005	Iran	2586
22	Nigeria	415	Argentina	967	Australia	2564
23	Iran	412	Egypt	908	Philippines	2536
24	Thailand	391	Nigeria	875	Vietnam	2280
25	Egypt	340	Philippines	871	Bangladesh	2263
26	Philippines	312	Thailand	823	Poland	2103
27	Malaysia	303	Pakistan	776	Argentina	2103
28	Pakistan	284	Malaysia	744	Malaysia	2054
29	South Africa	280	Bangladesh	668	Thailand	1995
30	Colombia	274	Vietnam	624	South Africa	1939
31	Bangladesh	227	Colombia	586	Colombia	1591
32	Vietnam	200	South Africa	557	Netherlands	1496

Sources: IMF for 2016 estimates (updated for Turkey), PwC projections for 2030 and 2050 using UN population projections

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We also benefitted from contributions to the study from a wide range of other PwC and external experts, as listed in the full report, which is available from: http://www.pwc.com/world2050

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