HSBC Global Research

Global Economics
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The World in 2050

From the Top 30 to the Top 100

A new economic world order is emerging at extraordinary speed.

This publication broadens our list of the world's top 30 economies to the top 100.

The underlying theme is that the economies we currently call "emerging" are going to power global growth over the next four decades.

Our update tells the story of the emergence of parts of Africa, the rise of some of the central Asian republics, as well as some startling advances for countries such as the Philippines and Peru.

By Karen Ward

Disclosures and Disclaimer This report must be read with the disclosures and analyst certifications in the Disclosure appendix, and with the Disclaimer, which forms part of it

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From the Top 30 to the Top 100

- Attention will increasingly turn to the 'new emergers' as the world economy undergoes a seismic shift
- Demographics to play a crucial role, helping parts of Africa finally emerge from economic obscurity

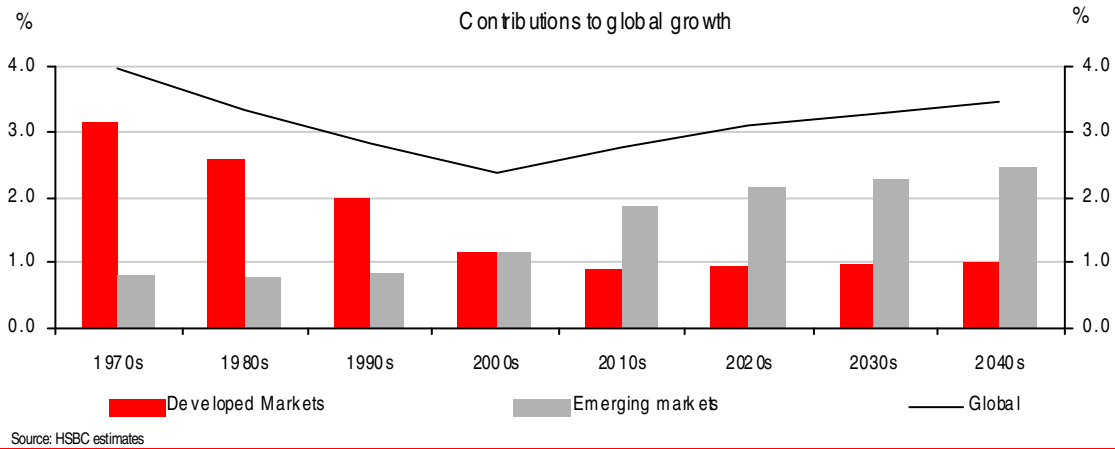
When we published '*The World in 2050*' a year ago (4 January 2011), we gave a projection for the Top 30 economies by size in 2050 from a pool of the largest 40 economies today. This update casts a wider net and seeks to identify the Top 100 economies by size. A larger universe increases competition for the Top 30 and allows us to consider the 'new emergers' in the coming decades.

Our ranking is based on an economy's current level of development and the factors that will determine whether it has the potential to catch up with more developed nations. These fundamentals include current income per capita, rule of law, democracy, education levels and demographic change, allowing us to project forward GDP to 2050. We assume that policymakers will continue to make progress in addressing economic flaws and that they avoid wars and remain open to global trade and capital. Of course, some of our bold assumptions may not turn out to be accurate. We highlight the following:

- The striking rise of the Philippines, which is set to become the world's sixteenth-largest economy, up 27 places from today.
- Peru could sustain average growth of 5.5% for four decades and jump 20 places to twenty-sixth. Chile is another star performer in Latin America.
- Massive demographic change: in 2050 there will be almost as many people in Nigeria as in the United States, and Ethiopia will have twice as many people as projected in the UK or Germany. The population of many African countries will double. Pakistan will have the sixth-largest population in the world. Even if some of these countries remain relatively poor on a per-capita basis, they could see a dramatic increase in the size of their economies thanks to population growth.
- By contrast, the Japanese working population looks set to contract by 37% and the Russian one by 31%. The eurozone faces similar problems with working population declines of 29% in Germany, 24% in Portugal, 23% in Italy and 11% in Spain, adding a whole new perspective to the sovereign debt crisis.

- It is not just about population. Ukraine is set to jump 19 places to fortieth because of its education system and rule of law, even though its population is set to fall to 36m from 45m.
- We divide the Top 100 into three categories: 1) fast growth – with expected average annual growth of more than 5%; 2) growth – with expected annual growth of between 3% and 5%; and 3) stable – those countries expected to expand less than 3% a year.
- We identify 26 **fast-growth** countries. They share a very low level of development but have made great progress in improving fundamentals. As they open themselves to the technology available elsewhere, they should enjoy many years of 'copy and paste' growth ahead. Besides China, India, the Philippines and Malaysia, this category includes Bangladesh, the central Asian countries of Uzbekistan, Kazakhstan and Turkmenistan, Peru and Ecuador in Latin America, and Egypt and Jordan in the Middle East.
- The **growth** category extends to 43 countries. It includes 11 Latin American countries such as Brazil, Argentina, Chile, El Salvador, Costa Rica and the Dominican Republic; Turkey, Romania and the Czech Republic in central and eastern Europe; as well as the war-ravaged Iraq and Yemen.
- Africa will finally start to emerge from economic obscurity. Five of our fast-growth countries come from Sub-Saharan Africa and three are in the growth category.
- Most of the economies in our '**stable'** group are in the developed world. The West is not getting poorer, but high levels of income per capita and weak demographics will limit growth. It is the small-population, ageing economies in Europe that are the big relative losers, seeing the biggest moves down the table.
- Our Top 30 list changes slightly. Our forecasts for the countries considered in the original document have not changed, but after expanding the pool of countries considered, Peru, the Philippines and Pakistan leapfrog into the Top 30. Pakistan makes it into the top league, less because of individual prosperity, than because of population size.
- This research strengthens the conclusions of the original report, which found that 19 of the top 30 economies will be countries that are currently 'emerging'. Our update shows that it is not just the likes of China and India that will be powering global growth over the next four decades. Countries as varied as Nigeria, Peru and the Philippines will also be playing a significant part.

1. Global growth will be powered by the emerging markets



Source: HSBC estimates

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Visual summary

2. Who will deliver the fastest growth en route to 2050? List order based on size of economy in 2050

Fast growth	Growth	Stable
China	Brazil	United States
India	Mexico	Japan
Philippines	Turkey	Germany
Egypt	Russia	United Kingdom
Malaysia	Indonesia	France
Peru	Argentina	Canada
Bangladesh	Saudi Arabia	Italy
Algeria	Thailand	South Korea
Ukraine	Iran	Spain
Vietnam	Colombia	Australia
Uzbekistan	Pakistan	Netherlands
Tanzania	Chile	Poland
Kazakhstan	Venezuela	Switzerland
Ecuador	Nigeria	South Africa
Ethiopia	Romania	Austria
Sri Lanka	Czech Republic	Sweden
Azerbaijan	Hungary	Belgium
Kenya	Kuwait	Singapore
Bolivia	Morocco	Greece
Jordan	Libya	Israel
Uganda	New Zealand	Ireland
Ghana	Dominican Republic	United Arab Emirates
Paraguay	Syria	Norway
Turkmenistan	Tunisia	Portugal
Honduras	Guatemala	Finland
Serbia	Lebanon	Denmark
	Slovak Republic	Cuba
	Oman	Qatar
	Angola	Uruguay
	Costa Rica	Luxembourg
	Belarus	Slovenia
	Iraq	
	Panama	
	Croatia	
	El Salvador	
	Cameroon	
	Bulgaria	
	Bahrain	
	Lithuania	
	Bosnia and Herzegovina	
	Latvia	
	Yemen	
	Cyprus	

Source: HSBC estimates

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3. The economic league table in 2050

		Size of economy in			Income per capita in				Population	
		2010	2050	Change in	2010	Rank	2050**	Rank	2010	2050
		Bn Constant 2000 USD	Bn Constant 2000, USD	rank	Constant 2000, USD		Constant 2000, USD		Mn	Mn
1	China*	3,511	25,334	2	2,579	63	17,759	54	1,362	1,426
2	United States	11,548	22,270	-1	36,354	6	55,134	8	318	404
3	India	960	8,165	5	790	88	5,060	86	1,214	1,614
4	Japan	5,008	6,429	-2	39,435	3	63,244	4	127	102
5	Germany	2,058	3,714	-1	25,083	18	52,683	10	82	71
6	United Kingdom	1,711	3,576	-1	27,646	11	49,412	14	62	72
7	Brazil	921	2,960	2	4,711	52	13,547	61	195	219
8	Mexico	688	2,810	5	6,217	42	21,793	47	111	129
9	France	1,496	2,750	-3	23,881	20	40,643	21	63	68
10	Canada	892	2,287	0	26,335	15	51,485	12	34	44
11	Italy	1,124	2,194	-4	18,703	23	38,445	23	60	57
12	Turkey	385	2,149	6	5,088	49	22,063	46	76	97
13	South Korea	798	2,056	-2	16,463	25	46,657	17	49	44
14	Spain	711	1,954	-2	15,699	26	38,111	24	45	51
15	Russia	412	1,878	2	2,934	58	16,174	56	140	116
16	Philippines	112	1,688	27	1,215	83	10,893	72	93	155
17	Indonesia	274	1,502	4	1,178	85	5,215	85	233	288
18	Australia	565	1,480	-4	26,244	16	51,523	11	22	29
19	Argentina	428	1,477	-2	10,517	33	29,001	38	41	51
20	Egypt	160	1,165	15	3,002	57	8,996	76	84	130
21	Malaysia	146	1,160	17	5,224	47	29,247	37	28	40
22	Saudi Arabia	258	1,128	1	9,833	34	25,845	43	26	44
23	Thailand	187	856	6	2,744	61	11,674	68	68	73
24	Netherlands	439	798	-9	26,376	14	45,839	18	17	17
25	Poland	250	786	-1	6,563	39	24,547	45	38	32
26	Peru	85	735	20	2,913	59	18,940	53	29	39
27	Iran	161	732	7	2,138	72	7,547	81	75	97
28	Colombia	142	725	12	3,052	56	11,530	69	46	63
29	Switzerland	294	711	-9	38,739	4	83,559	3	8	9
30	Pakistan	111	675	14	657	92	2,455	91	174	275
31	Bangladesh	78	673	17	482	95	3,461	89	149	194
32	Chile	103	592	12	6,083	43	29,513	36	17	20
33	Venezuela	158	558	2	5,438	46	13,268	63	29	42
34	Algeria	76	538	14	2,190	70	11,566	70	35	47
35	South Africa	187	529	-8	3,710	54	9,308	75	50	57
36	Austria	222	520	-11	26,455	13	61,124	6	8	9
37	Nigeria	78	515	9	506	94	1,323	98	158	390
38	Sweden	295	507	-20	31,778	8	47,941	15	9	11
39	Belgium	265	481	-18	24,758	19	41,842	20	11	11
40	Ukraine	45	462	19	987	86	12,818	65	45	36
41	Vietnam	59	451	11	674	91	4,335	88	88	104
42	Singapore	165	441	-11	34,110	7	84,405	2	5	5
43	Greece	161	424	-11	14,382	29	38,756	22	11	11
44	Israel	168	402	-14	21,806	22	37,731	25	7	11
45	Ireland	147	386	-9	27,965	10	61,363	5	5	6
46	Romania	56	377	9	2,596	62	20,357	51	21	19
47	United Arab Emirates	118	360	-6	25,607	17	29,651	35	8	12
48	Norway	199	352	-22	40,933	2	59,234	7	5	6
49	Czech Republic	76	342	0	7,225	38	32,153	32	10	11
50	Portugal	123	336	-10	11,588	31	35,863	28	11	9

Source: World Bank, UN population projections and HSBC estimates
Note: *China includes Hong Kong and Macao given full unification is planned for 2047 and 2049.
**Income per capita forecasts are not the cumulative sum of the forecasts for income per capita presented later in the document. This is because the GDP created by the working population must be shared between the population as a whole, not just the working population.

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3. The economic league table in 2050 (continued)

		Size of economy in			Income per capita in				Population	
		2010 Bn Constant 2000 USD	2050 Bn Constant 2000 USD	Change in rank	2010 Constant 2000 USD	Rank	2050** Constant 2000 USD	Rank	2010 Mn	2050 Mn
51	Uzbekistan	25	314	22	893	87	8,859	77	27	35
52	Hungary	58	295	1	5,833	44	31,966	33	10	9
53	Tanzania	16	288	34	382	97	2,085	92	45	138
54	Kazakhstan	38	287	7	2,376	68	13,520	62	16	21
55	Kuwait	61	280	-4	23,072	21	54,183	9	3	5
56	Morocco	58	279	-2	1,781	75	7,110	82	32	39
57	Finland	145	270	-19	27,151	12	49,643	13	5	5
58	Denmark	172	265	-29	31,418	9	47,743	16	5	6
59	Libya	49	230	-2	7,692	37	26,182	42	6	9
60	New Zealand	64	214	-10	14,939	28	37,705	26	4	6
61	Dominican Republic	37	212	1	3,697	55	16,406	55	10	13
62	Ecuador	24	206	14	1,771	76	10,546	73	14	20
63	Ethiopia	17	196	23	201	100	1,352	97	83	145
64	Syria	28	181	2	1,397	78	5,470	84	20	33
65	Sri Lanka	25	175	7	1,233	81	7,558	80	21	23
66	Azerbaijan	20	168	14	2,303	69	14,482	59	9	12
67	Kenya	18	163	16	452	96	1,683	95	41	97
68	Tunisia	29	160	-3	2,805	60	12,686	66	10	13
69	Guatemala	26	152	1	1,858	73	4,826	87	14	32
70	Lebanon	27	148	-2	6,342	41	31,659	34	4	5
71	Bolivia	12	145	25	1,192	84	8,652	78	10	17
72	Slovak Republic	44	145	-12	8,042	36	27,639	39	5	5
73	Oman	30	138	-10	10,779	32	36,832	27	3	4
74	Angola	24	134	1	1,313	80	3,170	90	19	42
75	Costa Rica	23	124	3	5,043	50	20,588	50	5	6
76	Belarus	25	122	-2	2,556	65	15,207	57	10	8
77	Cuba	49	121	-19	4,370	53	12,202	67	11	10
78	Iraq	23	117	-1	743	89	1,410	96	32	83
79	Qatar	54	112	-23	38,466	5	43,027	19	2	3
80	Jordan	15	112	9	2,497	67	11,317	71	6	10
81	Uganda	12	111	14	366	98	1,179	99	33	94
82	Panama	20	110	-1	5,732	45	21,423	48	4	5
83	Croatia	28	105	-16	6,396	40	27,091	41	4	4
84	El Salvador	16	104	4	2,566	64	13,729	60	6	8
85	Ghana	8	100	22	343	99	2,035	94	24	49
86	Paraguay	9	99	17	1,432	77	9,587	74	6	10
87	Turkmenistan	9	97	15	1,827	74	14,659	58	5	7
88	Uruguay	30	93	-24	8,942	35	25,482	44	3	4
89	Honduras	10	82	11	1,380	79	6,337	83	8	13
90	Cameroon	14	79	1	694	90	2,048	93	20	38
91	Serbia	9	75	13	1,229	82	8,565	79	10	9
92	Bulgaria	19	72	-10	2,542	66	13,154	64	7	5
93	Luxembourg	26	68	-24	52,388	1	96,592	1	1	1
94	Slovenia	26	66	-23	12,577	30	32,971	31	2	2
95	Bahrain	13	61	-3	16,968	24	33,910	29	1	2
96	Lithuania	17	59	-12	5,154	48	20,955	49	3	3
97	Bosnia & Herzegovina	8	56	10	2,162	71	18,961	52	4	3
98	Latvia	11	52	0	4,973	51	27,143	40	2	2
99	Yemen	13	45	-8	565	93	731	100	24	62
100	Cyprus	12	45	-7	15,510	27	33,337	30	1	1

Source: World Bank, UN population projections and HSBC estimates
**Income per capita forecasts are not the cumulative sum of the forecasts for income per capita presented later in the document. This is because the GDP created by the working population must be shared between the population as a whole, not just the working population.

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Good foundations

- Our framework considers what stage of development each economy is at today…
- … and whether they have the potential and the fundamental characteristics necessary to catch up with the developed world
- Current growth rates play no role in these projections

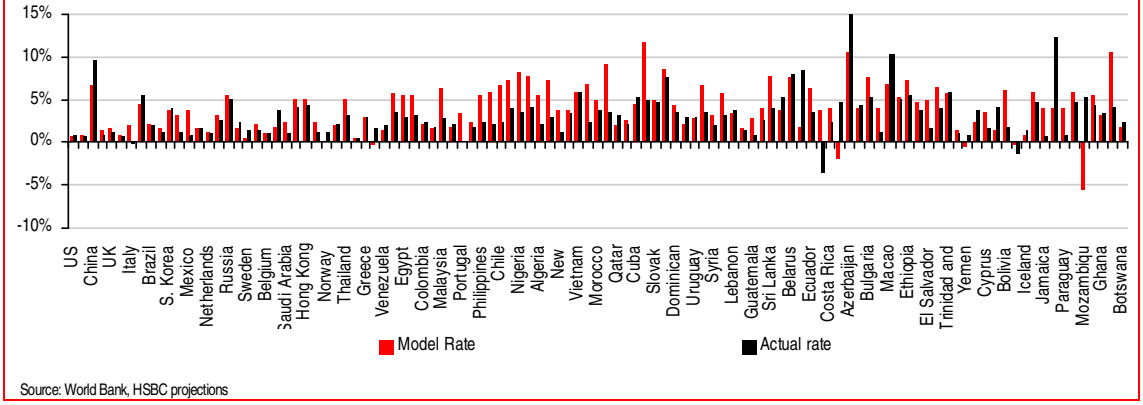
What makes economies grow?

Clearly, this is a question Western policymakers are grappling with right now. If we step away from the cyclicality, there are two ways economies can grow; either add more people to the production line via growth in the working population, or make each individual more productive.

Let us start by considering individual productivity. As in the original framework, we lean heavily on the empirical work of Harvard's Professor Robert Barro (full details of the model can be found in the Appendix). We back-tested the model on our extended sample of countries and are pleased with the actual outcome for growth relative to the projections in the period of 2000 to 2010 (Chart 4).

The first set of variables Professor Barro highlighted as crucial to driving growth in individual productivity are those that drive 'human capital' – health, education and fertility. The second set of variables determine the likelihood of fixed capital investment to equip workers with tools and technology. These are rule of law (which encompasses patent and property rights), government interference, democracy and monetary control (which is proxied by the inflation rate).

4. Model's back-test does a surprisingly good job given the vast array of countries considered

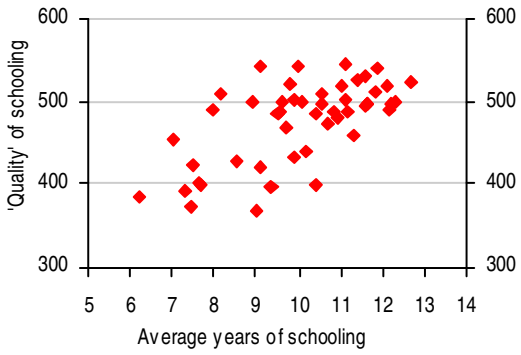


Source: World Bank, HSBC projections

Education

It is worth spending a moment discussing education, given its importance in the model. Whether individuals can adapt to the world's given technology, or even push the technology frontier out, depends on the level of education.

5. Quality of education is most important, but it is well correlated with time spent at school



Source: Barrolee dataset and PISA

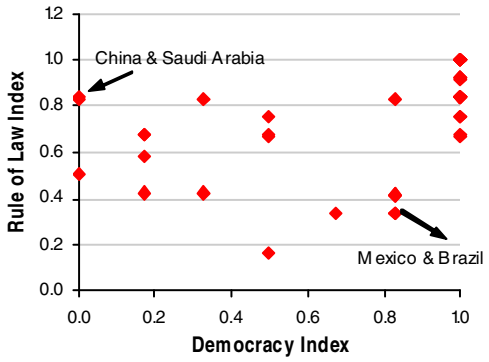
Owing to data availability, we focus on the number of years of schooling. This of course is not a perfect metric since we would really want to capture quality of education. PISA (Programme for International Student Assessment) is an international study that aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students in certain countries in reading, maths and scientific literacy.

This is plotted in Chart 5 alongside our measure of education. Quantity of schooling is a good but not perfect proxy for quality of education. For example, for nine and half years of education, the UK appears to do a much better job in gaining results, obtaining a PISA score of 500 against Argentina which, for a similar input, scores just 395. For reference, five of the top eight scoring countries on this survey are in Asia.

Democracy

Democracy is another variable worth discussing given its controversy. The success of democratic systems is most likely explained by the freedom of speech and creativity that leads to successful entrepreneurs. In addition, they provide checks and balances to ensure governments do not become excessively powerful, absorbing any improvement in the country's prosperity for their own benefit. Democracy, therefore, is highly correlated with our measure of rule of law (Chart 6).

6. Democracy does not always guarantee good rule of law



Source: Political Risk Services Freedom House Political Rights Index

But there are authoritarian regimes, such as China and Saudi Arabia, that have delivered a good 'rule of law'. In parts of Latin America, democracy has done little to improve rule of law. Even in highly democratic systems you can still see corruption.

Professor Barro's work actually showed that too much democracy was not necessarily a good thing for economic growth (of course, it may be the best model for social development). He found that at very high levels of democracy, income redistribution becomes a dominant force, which serves to restrain entrepreneurial endeavour. And democracy places a disproportionate weight on winning current votes, potentially at the expense of future votes and therefore can hinder the investment required for long-term development.

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Many years of 'copy and paste' growth left

The most potent recipe for growth is a country that scores highly on the fundamentals discussed but currently has low income per capita. These economies should deliver the highest growth in income per capita as they 'catch up' with those with similar fundamentals. Economies with poor governance and low education will remain stuck in this low-income trap. This has been the position a number of African nations have found themselves in for so long.

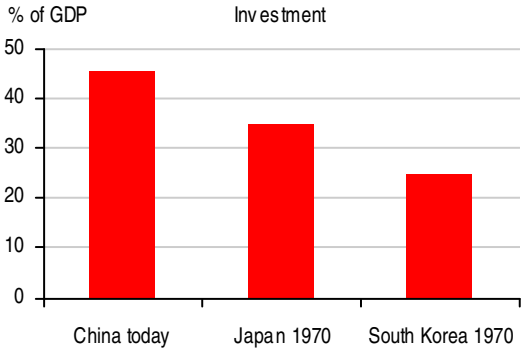
As economies become wealthier and technology more sophisticated, they will gradually lose the advantages of 'starting from behind'. The initial years of development could be described as 'copy and paste' growth, as countries open themselves up and adapt to the world's existing technologies. Of course, various 'iron curtains' meant that many economies did not open themselves up to either the new technologies created in the Western economies, or the world's supply of capital, until recently.

Once the 'copy and paste' growth is complete, countries will need to be sufficiently sophisticated to operate at the 'frontier', driving technological change. It is at this point that many economies struggle and get stuck in what is often known as the middle-income trap.

But many of the countries we are considering are still at such an extremely low level of development that there are years of this 'copy and paste' growth ahead.

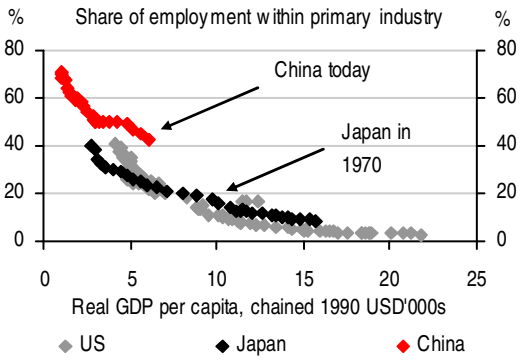
We think this is where many of the bears on China are wrong. One of the most commonly cited reasons for concern about China is the high rate of investment as a percentage of GDP. Many compare this rate of investment with the rates seen during the expansion of Asian 'tigers' in the 1970s and claim that it is too rapid and that China's policymakers must be pouring money into unproductive investment (Chart 7).

7. Comparing China today with Japan or Korea in the 1970s is unfair…



Source: World Bank

8. … because China is at a much lower level of development today than they were then



Source: World Bank

But the starting point of comparison is wrong because China's level of development today is so much lower than that of the Asian tigers before their rapid expansion (Chart 8). It is for this reason we believe the strong rate of investment is entirely justified – providing China with much-needed basic infrastructure.

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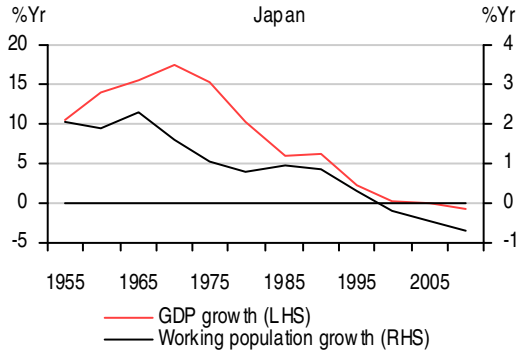
Demographic dividends

Using this model to establish how productive *each* individual will be, we must consider now *how many* individuals there will be.

They may not flash up on our Bloomberg screens once a month, but demographics are an extremely important driver of growth. There are two effects. First and most straightforward, it is generally easier to produce more stuff when you have more people on the production line. The second impact is a little more subtle and relates to the ratio of working population to total population. As Stephen King discusses in '*Losing control*' (2010, Yale University Press), when you have many 'producers' but not many 'dependents' the burden on producers, perhaps because of tax payments to support the elderly and young, are small and therefore the rewards for effort are great. Therefore, demographic burdens can in turn feed back to individual productivity.

9. Japan's demographic downturn will have played a key role in its economic malaise



Source: World Bank

Japan shows the economic perils of a declining working population only too well. While many put Japan's lost decades down to deleveraging following the build-up of debt in the 1980s, it seems likely that it had at least as much to do with the dramatic decline in working population growth over the past 50 years (Chart 9).

As the projections for working population stand, demographics alone could explain a large part of what are likely to be huge differences in economic performance in the coming years. Contrast Japan and Russia whose working populations will shrink by more than 1% per annum for the next four decades with Nigeria whose working population will rise by 3% per annum.

But as we have explained, population growth is not itself enough to guarantee growth. You need the other foundations to ensure jobs are created for these new entrants to the labour market. **So our projections for total GDP build up using our earlier forecasts for income per capita, based on the economic infrastructure and the number of 'capitas' - the change in working population.** As we will see, little progress is made in countries without the right 'economic infrastructure', even if their populations are growing.

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Economic snakes and ladders

- Asia is the stand-out region – with a notable showing by the Philippines
- LATAM fares well with Peru emerging into the spotlight
- Other strong performers include Egypt, Nigeria, Turkey and Ukraine

The fine print

A few words on the technicalities and caveats of the framework before we get into the results.

As in the original report, we are working in constant price, constant 2000 USD exchange rate terms. Further appreciation of emerging market currencies against the USD will only extend the conclusions of the report.

The source of the data on economic infrastructure is contained in Table 10. To get to our base case projections, we consider two scenarios. The first assumes the 'economic infrastructure' is fixed at that evident today. But to constrain these economies on the assumption they will not make any further improvements would be unfair. For example, there is a clear trend that education standards across the emerging world are improving. We then consider a second scenario, in which we assume that over the next 40 years, all economies reach the 'optimal' economic infrastructure. This is the highest possible level of achievement from any of the countries in our sample.

The results of these two scenarios are shown in the Appendix. Our base-case scenario sits between these two options. Essentially, each country gets halfway to eliminating its imperfections.

10. Data description

Variable	Description	Source
Average years of male schooling	The average number of years spent in education by males in 2010 (for this extension, for many countries the distinction between male and female was not available, and we have therefore taken average education across gender). In addition, in a very limited number of countries the data was not available and therefore our regional specialists used their judgment to determine an appropriate proxy.	www.barrolee.com
Life expectancy	The life expectancy of total population in 2008; natural log taken.	World Bank
Fertility	The number of births per woman in 2008; natural log taken.	World Bank
Rule of law	An index between 0 and 1, which measures the attractiveness of the investment climate based on the level of law enforcement, contract sanctity and property rights. Data for 2009.	Political Risk Services International Country Risk Guide
Government consumption	Percentage of GDP accounted for by government consumption in 2008.	World Bank
Democracy index	Indicator of political rights, measures the right of all adults to vote and compete for public office and to have a decisive vote on public policies. Measured between 0 and 1 (full democracy).	Freedom House Political Rights Index
Inflation rate	CPI inflation (% year); average 2004-07.	World Bank

We are clearly assuming governments continue to improve the underlying economic infrastructure, implementing reform, increasing education and so forth, and remain friendly with their neighbours. Of course, this may turn out to be a rather Panglossian view of government behaviour. The two scenarios in the Appendix provide some guidance as to the sensitivity of the projections to this underlying assumption that governments continue to 'do the right thing'.

In addition, our model will not capture all the variables that dictate an economy's potential. There may be idiosyncratic factors that mean a country should feature more highly or, indeed, lower down our economic league table.

The variable that is most often debated is a country's endowment of natural resources. Surely a country with a rich array of natural resources should outperform those without? This may well be the case, but not always. We have often seen countries rich in natural resources suffer from 'Dutch disease'. This is a situation in which the capital inflows to exploit the domestic commodity industry put upward pressure on the domestic exchange rate which, in turn, damages other industrial areas. In addition, the presence of natural resources can also lead to an increase in corruption and so the benefits of the natural wealth do little for the population as a whole. Therefore, empirically it is not absolutely clear that those rich in natural resources should get a natural boost, so this is one variable we do not include and leave readers to assess whether, in their opinion, a country should feature higher in the table.

There are numerous other variables that fall in this list of needing further consideration, such as extreme religious fundamentalism and relations with the rest of the world (eg, Iran).

We should also highlight some potential caveats to the demographic projections we are using. These estimates, made by the UN, take into account current fertility rates and policy on retirement and migration.

But these working-age projections are subject to a considerable degree of uncertainty. The most tricky is disease, which could raise the mortality rate or, by contrast, medical breakthroughs, which could lower it. Immigration flows could also send these projections wildly off course, decreasing prospects for one part of the world while boosting prospects elsewhere. The changes we are highlighting in this document could give rise to a great migration, which has all sorts of implications for border frictions. The history of the US is a case in point. In the 1950s and early 60s there were demographic concerns about the US. But the 1965 Immigration and Naturalisation Act saw a huge new wave of migrants, which, coupled with a higher fertility rate among migrants, gave rise to a fresh demographic boost.

Government policy could also throw these projections wildly off course if incentives via the tax system manage successfully to lift or reduce the fertility rate.

Therefore, we emphasise this exercise is a starting point for considering the long-term outlook and should not be taken as our explicit forecast. Our regional economists will be able to provide more accurate near-term forecasts, taking into account factors the model is unable to capture and cyclical considerations.

HSBC

Developed world

Countries in the developed world might be considered to be at the technology 'frontier'. With income per capita already high, these economies do not get any 'catch up' boost so rely on the other variables in the model (education, rule of law, etc) for technological progress to deliver further gains in individual prosperity.

That said, there are still large variations across the developed world with real income per capita in Portugal at just over USD11.5k compared with USD37k in the US. Those with similar economic infrastructure to the US but with lower income per capita will therefore get a 'catch up' boost. This explains why the model provides higher income per capita forecasts for the likes of Spain and Greece (Table 12), which may seem implausible given their current difficulties.

12. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Developed world				
Australia	1.8%	2.0%	2.1%	2.2%
Austria	2.7%	2.6%	2.5%	2.4%
Belgium	1.2%	1.5%	1.9%	2.1%
Canada	1.9%	2.1%	2.2%	2.3%
Denmark	0.6%	1.1%	1.5%	1.8%
Finland	1.6%	1.8%	1.9%	2.1%
France	1.2%	1.5%	1.8%	2.1%
Germany	2.1%	2.2%	2.3%	2.4%
Greece	3.1%	3.0%	2.9%	2.9%
Ireland	1.9%	2.0%	2.0%	2.1%
Italy	1.6%	2.4%	2.5%	2.7%
Japan	1.3%	1.6%	1.9%	2.0%
Luxembourg	1.6%	1.6%	1.6%	1.7%
Netherlands	1.3%	1.6%	1.9%	2.1%
New Zealand	2.9%	2.7%	2.6%	2.6%
Norway	0.5%	1.1%	1.5%	1.7%
Portugal	3.2%	3.2%	3.2%	3.2%
Spain	2.4%	3.1%	3.0%	2.9%
Sweden	0.5%	1.1%	1.6%	1.9%
Switzerland	2.6%	2.4%	2.2%	2.1%
United Kingdom	1.4%	1.6%	1.8%	2.0%
United States	0.6%	1.1%	1.5%	1.8%
Developed world avg	**1.7%**	**2.0%**	**2.1%**	**2.2%**

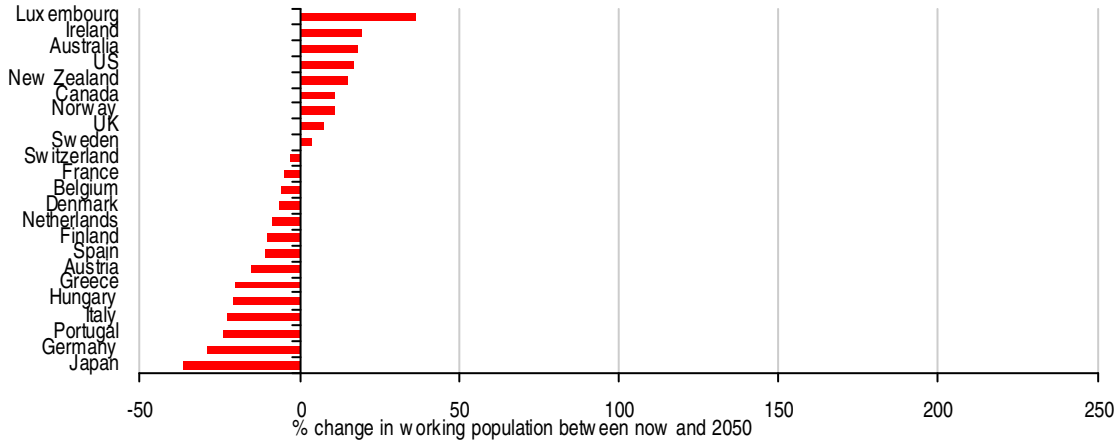
Source: HSBC estimates

11. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Developed world	*Real USD*	*Years*	*Years*	*Children*	*Index*	*Ratio to GDP*	*Index*	*Annual rate*
Australia	26,244	12.1	81	1.9	0.9	0.17	1.0	2.8%
Austria	26,445	9.5	80	1.4	1.0	0.18	1.0	2.0%
Belgium	24,758	10.5	80	1.8	0.8	0.23	1.0	2.1%
Canada	26,355	11.3	80	1.6	0.9	0.19	1.0	1.6%
Denmark	31,418	10.1	78	1.8	1.0	0.26	1.0	2.1%
Finland	27,151	10.0	79	1.8	1.0	0.22	1.0	2.2%
France	23,881	10.5	81	1.9	0.8	0.23	1.0	1.5%
Germany	25,083	11.8	80	1.3	0.8	0.18	1.0	1.7%
Greece	14,382	10.6	79	1.5	0.8	0.17	1.0	2.8%
Ireland	27,965	11.6	78	2.1	1.0	0.16	1.0	1.5%
Italy	18,703	9.5	81	1.4	0.7	0.20	1.0	2.0%
Japan	39,435	11.5	82	1.3	0.8	0.18	1.0	0.0%
Luxembourg	52,388	10.1	81	1.6	1.0	0.15	1.0	2.0%
Netherlands	26,376	11.0	80	1.7	1.0	0.25	1.0	1.8%
New Zealand	14,939	12.7	80	2.2	0.9	0.19	1.0	2.8%
Norway	40,933	12.2	80	1.9	1.0	0.20	1.0	2.2%
Portugal	11,588	8.0	79	1.4	0.8	0.20	1.0	1.5%
Spain	15,699	10.3	81	1.4	0.8	0.19	1.0	2.2%
Sweden	31,778	11.5	81	1.9	1.0	0.26	1.0	1.8%
Switzerland	38,739	9.9	82	1.4	0.8	0.11	1.0	0.9%
United Kingdom	27,646	9.6	79	1.9	0.9	0.21	1.0	2.6%
United States	36,364	12.2	78	2.1	0.8	0.16	1.0	2.1%
Developed world average	27,200	10.8	81	1.7	0.9	0.19	1.0	1.9%

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

13. Demographic change between now and 2050



Source: UN population projections

The major headwind to growth in much of the developed world stems from demographics. This is less of a problem for Australasia, North America, the UK and Ireland, which are all likely to see population growth in the coming decades. By contrast, the demographics in much of Europe are challenging, putting their debt problems into an even more worrying light. With debt levels rising, and the number of taxpayers falling, it becomes even harder to get the arithmetic to add up. Ironically, Germany is one of the few countries in the Eurozone not experiencing funding difficulties, but is in the worst structural situation so far as demographics are concerned.

Trying to get the debt arithmetic to add up for Europe is a straightforward task compared with Japan. Japan's gross debt to GDP now stands at more than 200% and the number of people paying taxes in the coming four decades will fall by 40%.

Adding the outlook for income per capita to the number of 'capitas', we see that with one exception, the developed world is not able to offer more than 3% growth. The lowest forecasts are for Japan, which fails to achieve more than 1% growth throughout the forecast horizon. By contrast, the highest performer is New Zealand.

14. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
Developed world				
Australia	2.4%	2.3%	2.5%	2.6%
Austria	2.7%	1.9%	1.9%	2.1%
Belgium	1.0%	1.2%	1.7%	2.1%
Canada	2.3%	2.1%	2.6%	2.5%
Denmark	0.5%	0.8%	1.1%	2.0%
Finland	1.1%	1.4%	1.9%	1.9%
France	1.1%	1.4%	1.6%	2.1%
Germany	1.7%	1.1%	1.4%	1.7%
Greece	2.9%	2.6%	2.2%	2.1%
Ireland	2.8%	2.8%	2.2%	1.9%
Italy	1.4%	1.9%	1.5%	2.1%
Japan	0.4%	0.9%	0.5%	0.8%
Luxembourg	2.8%	2.2%	2.3%	2.5%
Netherlands	1.1%	1.2%	1.5%	2.2%
New Zealand	3.4%	3.0%	2.9%	2.9%
Norway	0.9%	1.3%	1.5%	2.1%
Portugal	3.0%	2.6%	2.3%	2.2%
Spain	2.8%	2.9%	2.3%	2.2%
Sweden	0.4%	1.3%	1.7%	2.1%
Switzerland	2.6%	2.0%	2.0%	2.3%
United Kingdom	1.6%	1.7%	1.9%	2.2%
United States	1.1%	1.4%	1.9%	2.1%
Developed world avg	**1.8%**	**1.8%**	**1.9%**	**2.1%**

Source: HSBC estimates

HSBC

Asia

Many parts of Asia have extremely high standards of education and rule of law, Singapore and South Korea, of course being clear examples, which would explain why these economies have already seen such rapid increases in income per capita. Other countries in the region have made enormous progress in improving their economic infrastructure but are still reasonably poor and therefore have great potential to catch up. China's income per capita is currently just 7% that of the US. Adding up the annual projections shown in Table 16, we project China's income per capita to grow by more than 800% between now and 2050. This might seem an astonishing number. But keep in mind this base effect. Despite this rapid growth, in 2050, China's income per capita is still just 32% that of the US. We are only capturing part of China's development story here and the likelihood is that these numbers turn out to be too conservative, rather than too optimistic. The same is true of the Philippines, which looks set for a multi-decade run of strong growth.

16. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Asia				
Azerbaijan	6.1%	5.4%	4.8%	4.4%
Bangladesh	3.6%	4.4%	5.0%	5.5%
China	6.5%	5.7%	5.1%	4.6%
India	4.0%	4.5%	4.8%	5.1%
Indonesia	3.0%	3.7%	4.2%	4.7%
Kazakhstan	5.9%	5.2%	4.7%	4.3%
South Korea	3.7%	3.4%	3.1%	3.0%
Malaysia	5.4%	4.6%	4.1%	3.6%
Pakistan	1.5%	2.5%	3.5%	4.4%
Philippines	6.1%	5.6%	5.2%	4.8%
Singapore	3.6%	3.2%	2.7%	2.3%
Sri Lanka	5.2%	5.2%	5.0%	4.9%
Thailand	3.7%	4.0%	4.1%	4.2%
Turkmenistan	6.1%	5.5%	4.9%	4.5%
Uzbekistan	6.7%	6.0%	5.5%	5.1%
Vietnam	4.7%	4.9%	5.2%	5.5%
Asia average	**4.8%**	**4.6%**	**4.5%**	**4.4%**

Source: HSBC estimates

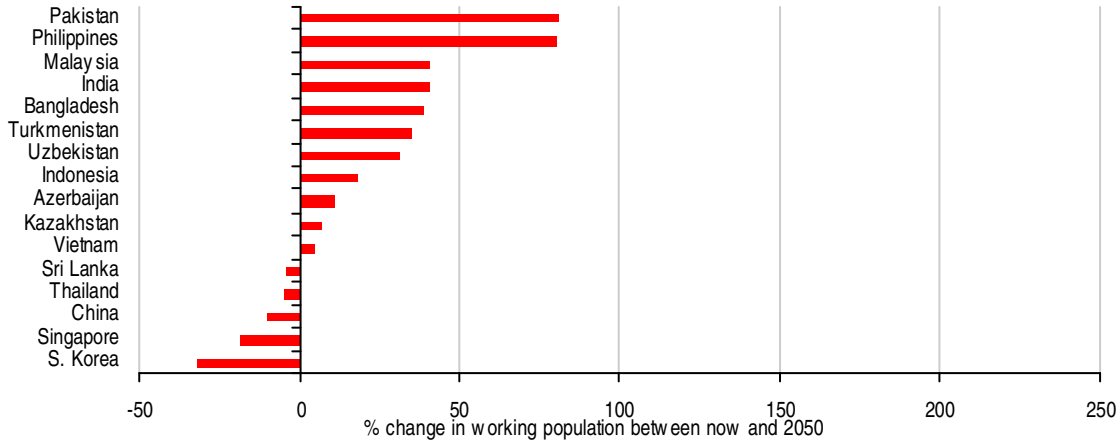
But being 'poor' is not enough to guarantee growth in income per capita. The projections for Pakistan demonstrate this. Because of low scores for schooling, life expectancy, rule of law and democracy, Pakistan has little potential for income per capita to grow near term, despite a low starting point. But given we assume governments will make progress on some of these flaws, so growth will start to pick up in countries such as Pakistan and Bangladesh.

15. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Asia	*Real USD*	*Years*	*Years*	*Children*	*Index*	*Ratio to GDP*	*Index*	*Annual rate*
Azerbaijan	2,303	10.4	70	2.3	0.6	0.10	0.2	12.9%
Bangladesh	482	5.8	66	2.3	0.4	0.06	0.3	7.8%
China	2,579	9.8	73	1.8	0.8	0.14	0.0	3.3%
India	790	6.7	63	2.7	0.7	0.10	0.8	8.5%
Indonesia	1,178	6.2	70	2.2	0.5	0.08	0.8	7.6%
Kazakhstan	2,376	10.4	66	2.5	0.7	0.11	0.2	11.7%
South Korea	16,463	11.8	79	1.2	0.8	0.15	0.8	3.3%
Malaysia	5,224	10.1	74	2.6	0.7	0.12	0.5	2.7%
Pakistan	657	5.6	67	4.0	0.5	0.09	0.2	13.8%
Philippines	1,215	9.0	72	3.1	0.4	0.10	0.5	5.1%
Singapore	34,110	9.1	80	1.3	0.8	0.10	0.3	3.1%
Sri Lanka	1,233	8.4	74	2.3	0.5	0.15	0.5	13.9%
Thailand	2,744	7.5	68	1.8	0.4	0.12	0.2	2.3%
Turkmenistan	1,827	10.4	65	2.5	0.7	0.09	0.0	7.8%
Uzbekistan	893	10.4	68	2.6	0.7	0.17	0.0	7.8%
Vietnam	674	6.4	74	2.1	0.7	0.06	0.0	12.8%
Asia average	4,220	8.4	71	2.3	0.6	0.11	0.3	7.8%

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

17. Demographic change between now and 2050



Source: UN population projections

From a demographic standpoint Asia is also a reasonably mixed bag – this is where the shine slightly comes off the China story since its one-child policy of yester years will start to see the working population decline from around 2020. Singapore and South Korea, while not enforced, have also seen a staggering decline in fertility rates in the past couple of decades, which will see their working populations also decline. Singapore has been exploring the possibility of reversing this trend through an aggressive immigration policy.

By contrast, other parts of Asia – India, Pakistan, the Philippines, Bangladesh and Malaysia – all have rapidly growing populations. In 2050, the population of Pakistan, at roughly 290m, will be just shy of four times the population of the UK.

Adding the forecasts for working population to those of income per capita, we get to projections for total GDP growth in Table 18. There are some truly remarkable hot spots in Asia. China continues to grow at a rapid pace, although the pace is expected to slow beyond 2020 as the demographic drag starts to hinder overall GDP growth. Nevertheless, we still expect average GDP growth of more than 5% per annum for the next 40 years. The star performer, however, is the Philippines where the combination of strong fundamentals and powerful demographics gives rise to an average growth rate of 7% for the coming 40 years. Central Asia is also interesting. Kazakhstan, Turkmenistan and Uzbekistan all perform extremely well in the context of this model, on the back of strong growth in a very well-educated population. The absence of democracy, however, prevents these economies reaching their full potential.

18. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
Asia				
Azerbaijan	7.0%	5.7%	5.0%	4.1%
Bangladesh	5.5%	5.5%	5.6%	5.5%
China	6.7%	5.5%	4.4%	4.1%
India	5.7%	5.6%	5.5%	5.2%
Indonesia	4.3%	4.3%	4.3%	4.5%
Kazakhstan	6.1%	5.8%	4.9%	4.0%
South Korea	3.7%	2.3%	1.8%	1.7%
Malaysia	7.1%	5.7%	4.7%	3.8%
Pakistan	4.0%	4.5%	4.9%	5.0%
Philippines	8.4%	7.3%	6.6%	5.8%
Singapore	3.7%	2.1%	2.0%	2.1%
Sri Lanka	5.4%	5.3%	4.9%	4.3%
Thailand	4.0%	3.8%	3.8%	4.0%
Turkmenistan	7.7%	6.4%	5.6%	4.5%
Uzbekistan	8.2%	6.9%	6.1%	5.0%
Vietnam	5.7%	5.3%	5.1%	4.8%
Asia average	5.8%	5.1%	4.7%	4.3%

Source: HSBC estimates

HSBC

Central and South America

The potential of economies in Latin America has been unleashed in recent decades as they have managed to tame the inflation that plagued their economies for much of the 1970s and 1980s (Table 19). It is remarkable to think that between 1986 and 1994 Brazil suffered several years of inflation of over 500%. Such has been the turnaround in its economic management that it is now imposing taxes on foreign investors to prevent capital inflows! Of course, we are assuming that inflation is prevented from ever creeping back into the system. Maintaining small governments and low levels of debt will surely help prevent these economies from returning to their old ways.

The level of schooling is high, although many of these economies score less highly on the metric of rule of law than parts of Asia. Greater efforts have been made recently, particularly in Brazil.

20. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Central and South America				
Argentina	2.4%	2.6%	2.7%	2.8%
Bolivia	5.6%	5.2%	4.9%	4.6%
Brazil	2.2%	2.7%	3.1%	3.5%
Chile	5.2%	4.5%	4.0%	3.7%
Colombia	3.0%	3.3%	3.6%	3.8%
Costa Rica	3.7%	3.7%	3.6%	3.6%
Cuba	2.3%	3.0%	3.4%	3.7%
Dominican Republic	3.6%	3.7%	3.7%	3.7%
Ecuador	4.9%	4.8%	4.7%	4.5%
El Salvador	3.9%	4.0%	4.1%	4.1%
Guatemala	0.8%	1.6%	2.4%	3.3%
Honduras	2.8%	3.3%	3.8%	4.2%
Mexico	2.1%	3.9%	3.7%	3.6%
Panama	3.5%	3.4%	3.4%	3.3%
Paraguay	4.8%	4.8%	4.6%	4.5%
Peru	5.4%	4.9%	4.5%	4.1%
Uruguay	2.5%	2.7%	2.8%	3.0%
Venezuela	1.4%	2.0%	2.5%	3.0%
Central and South American average	3.3%	3.6%	3.6%	3.7%

Source: HSBC estimates

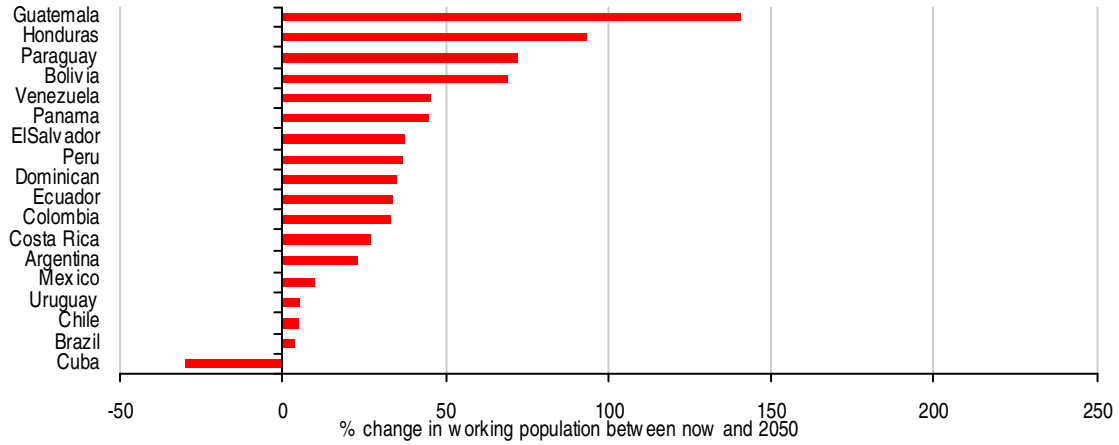
For these reasons, the forecasts for income per capita are not quite as high in many parts of Latin America as in Asia. Of course, as discussed earlier, we are not accounting for the region's rich endowment of natural resources.

19. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Central and South America	*Real USD*	*Years*	*Years*	*Children*	*Index*	*Ratio to GDP*	*Index*	*Annual rate*
Argentina	10,517	9.3	73	2.2	0.4	0.13	0.8	7.9%
Bolivia	1,192	9.9	66	3.5	0.4	0.14	0.7	8.7%
Brazil	4,711	7.6	72	1.9	0.3	0.20	0.8	4.7%
Chile	6,083	10.2	79	1.9	0.8	0.11	1.0	8.1%
Colombia	3,052	7.7	72	2.4	0.3	0.16	0.7	5.6%
Costa Rica	5,043	8.7	79	2.0	0.6	0.13	1.0	10.2%
Cuba	4,370	10.6	79	1.5	0.5	0.32	0.0	8.1%
Dominican Republic	3,697	7.4	73	2.6	0.4	0.07	0.8	6.0%
Ecuador	1,771	8.1	75	2.6	0.4	0.11	0.7	5.3%
El Salvador	2,566	8.0	71	2.3	0.3	0.09	0.8	4.1%
Guatemala	1,858	4.8	70	4.1	0.3	0.09	0.7	7.0%
Honduras	1,380	7.5	72	3.3	0.3	0.17	0.7	8.1%
Mexico	6,217	9.1	75	2.1	0.3	0.11	0.8	4.8%
Panama	5,732	9.6	76	2.5	0.5	0.11	1.0	5.1%
Paraguay	1,432	8.5	72	3.0	0.3	0.11	0.7	7.0%
Peru	2,913	9.0	73	2.6	0.6	0.09	0.8	3.5%
Uruguay	8,942	8.6	76	2.0	0.4	0.11	1.0	7.7%
Venezuela	5,438	7.0	73	2.5	0.2	0.12	0.5	26.2%
Central and South American average	**4,228**	**8.6**	**74**	**2.5**	**0.4**	**0.14**	**0.7**	**8.1%**

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

21. Demographic change between now and 2050



Source: UN population projections

The demographic outlook for much of Central South America is very strong, particularly in the smaller countries in the region. Of the larger economies, Colombia and Peru stand out for extremely high working population growth. Indeed, at present the populations of Spain and Colombia are very similar; but by 2050, the working population in Colombia could be 25% larger.

Adding the forecasts for income per capita to those of working population, we obtain forecasts for total GDP (Table 22). The star performer in the region is Peru, where the combination of strong fundamentals and strong population growth deliver average growth of 5.5% for the next 40 years. Chile also does very well, although demographics are not quite as favourable as those in Peru. Bolivia, Ecuador and Paraguay are also strong performers, although this is partly a reflection of their low starting point. They still lag much of the region in the economic foundations used in the model.

22. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
Central and South America				
Argentina	3.4%	3.3%	3.1%	2.7%
Bolivia	7.9%	6.9%	5.9%	5.2%
Brazil	3.3%	2.9%	2.9%	2.8%
Chile	5.9%	4.6%	4.0%	3.4%
Colombia	4.5%	4.2%	4.1%	4.0%
Costa Rica	5.1%	4.3%	4.1%	3.6%
Cuba	2.0%	2.2%	2.0%	2.9%
Dominican Republic	5.1%	4.6%	4.2%	3.9%
Ecuador	6.5%	5.7%	5.2%	4.6%
El Salvador	5.1%	5.0%	4.8%	4.5%
Guatemala	4.3%	4.5%	4.6%	4.6%
Honduras	5.6%	5.4%	5.3%	5.0%
Mexico	3.3%	4.4%	3.5%	3.1%
Panama	5.3%	4.6%	4.0%	3.7%
Paraguay	7.0%	6.4%	6.0%	5.2%
Peru	6.9%	6.0%	5.0%	4.2%
Uruguay	3.0%	2.9%	2.9%	2.8%
Venezuela	3.1%	3.2%	3.3%	3.3%
Central and South American average	**4.9%**	**4.5%**	**4.1%**	**3.9%**

Source: HSBC estimates

HSBC

Central and Eastern Europe

Central and Eastern European economies score less highly than many of the other emerging markets for inflation control and size of government.

But when projecting real income per capita, this is more than compensated for by the exceptional level of education, which, for most economies in the region, rivals that of the developed world. And yet while education rates are similar, the average income per capita in the Central and Eastern Europe block is just one fifth that of the developed world.

For this reason, in the context of this model, these economies have great scope to catch up in income per capita, and across the region the forecasts for income per capita growth are extremely high (Table 24).

24. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Central and Eastern Europe				
Belarus	5.9%	5.3%	4.8%	4.5%
Bosnia & Herzegovina	7.1%	6.3%	5.6%	5.1%
Bulgaria	4.8%	4.7%	4.5%	4.5%
Croatia	4.4%	4.2%	3.9%	3.8%
Cyprus	3.0%	2.9%	2.8%	2.8%
Czech Republic	5.3%	4.5%	4.0%	3.6%
Hungary	5.3%	5.1%	4.4%	4.0%
Latvia	5.6%	4.9%	4.4%	4.0%
Lithuania	4.3%	4.1%	3.9%	3.8%
Poland	4.0%	3.9%	3.8%	3.7%
Romania	6.7%	6.2%	5.4%	4.8%
Russia	5.1%	4.8%	4.6%	4.4%
Serbia	6.8%	6.2%	5.7%	5.3%
Slovak Republic	4.2%	3.9%	3.7%	3.5%
Slovenia	3.0%	3.0%	3.0%	3.0%
Turkey	4.0%	3.9%	3.8%	3.7%
Ukraine	8.9%	7.3%	6.3%	5.6%
CEE average	**5.2%**	**4.8%**	**4.4%**	**4.1%**

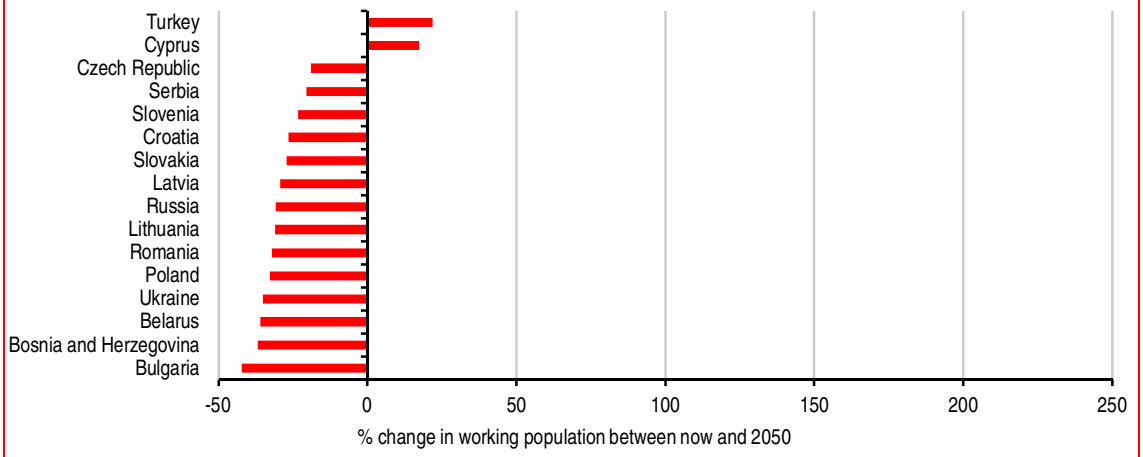
Source: HSBC estimates

23. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Central and Eastern Europe	Real USD	Years	Years	Children	Index	Ratio to GDP	Index	Annual rate
Belarus	2,556	11.3	71	1.4	0.7	0.19	0.0	12.1%
Bosnia and Herzegovina	2,162	10.0	75	1.2	0.8	0.22	0.5	2.9%
Bulgaria	2,542	9.9	73	1.5	0.4	0.17	1.0	7.8%
Croatia	6,396	9.0	76	1.5	0.8	0.19	0.8	3.8%
Cyprus	15,510	10.1	80	1.5	0.8	0.19	1.0	2.5%
Czech Republic	7,225	12.1	77	1.5	0.8	0.20	1.0	3.4%
Hungary	5,833	11.7	74	1.4	0.7	0.10	1.0	6.1%
Latvia	4,973	10.8	72	1.5	0.8	0.17	0.8	9.7%
Lithuania	5,154	10.9	72	1.5	0.7	0.19	1.0	7.0%
Poland	6,563	9.9	76	1.4	0.8	0.19	1.0	3.5%
Romania	2,596	10.4	75	1.4	0.7	0.13	0.8	6.1%
Russia	2,934	9.7	67	1.5	0.7	0.17	0.2	11.6%
Serbia	1,229	10.0	74	1.3	0.6	0.20	1.0	9.0%
Slovak Republic	8,042	11.2	75	1.3	0.7	0.17	1.0	3.0%
Slovenia	12,577	8.9	79	1.5	0.8	0.17	1.0	3.4%
Turkey	5,088	7.0	71	2.1	0.8	0.13	0.5	8.5%
Ukraine	987	11.1	68	1.4	0.7	0.18	0.7	18.0%
CEE average	7,000	10.4	74	1.5	0.7	0.18	0.8	7.0%

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

25. Demographic change between now and 2050



Source: UN population projections

It is just as well individuals will prove so productive across the region because demographics are a major headwind (Chart 25). In vast swathes of the region, the workforce looks set to shrink dramatically. This is largely because of the extremely low level of fertility. As discussed previously, these forecasts for population growth are subject to considerable uncertainty. Indeed, in Russia last year an initiative was launched to try and increase the fertility rate with the incentive of land provided to couples producing a third child.

As things stand, these weak demographics take the shine slightly off the extremely strong growth in income per capita. Nevertheless, the forecasts for total GDP are still very impressive (Table 26). The Ukraine is the outperformer with average growth across the forecast horizon of 6%. Again, we have to remember this is coming from an extremely low base. But, nevertheless, we expect the size of the Ukrainian economy, in constant price, constant exchange rates, to increase tenfold by 2050.

Some of the smaller Eastern European countries – Romania, the Czech Republic and Serbia – all do extremely well, particularly in the coming decade before demographics prove to be more of a drag.

And as in the original report, we continue to believe Turkey has an extremely strong long-term story. The combination of strong fundamentals, and the one country in the region with good demographics, should see Turkey maintain a very respectable pace of growth throughout the forecast horizon.

26. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
Central and Eastern Europe				
Belarus	5.2%	4.3%	3.9%	3.0%
Bosnia & Herzegovina	6.7%	5.2%	4.4%	3.5%
Bulgaria	3.6%	3.7%	3.3%	2.8%
Croatia	3.8%	3.4%	3.3%	2.8%
Cyprus	3.7%	3.2%	3.3%	2.9%
Czech Republic	4.6%	4.4%	3.6%	2.7%
Hungary	4.7%	4.7%	3.9%	3.2%
Latvia	4.8%	4.2%	3.8%	2.9%
Lithuania	3.4%	3.0%	3.1%	2.9%
Poland	3.3%	3.2%	3.1%	2.1%
Romania	6.1%	5.7%	4.3%	3.5%
Russia	4.2%	4.0%	4.0%	3.3%
Serbia	6.5%	5.9%	5.1%	4.4%
Slovak Republic	3.7%	3.3%	3.0%	2.2%
Slovenia	2.5%	2.4%	2.4%	2.1%
Turkey	5.3%	4.7%	4.0%	3.5%
Ukraine	7.9%	6.3%	5.5%	4.2%
CEE average	**4.7%**	**4.2%**	**3.8%**	**3.1%**

Source: HSBC estimates

HSBC

Middle East and North Africa

Our framework is able to provide some explanation for the problems currently rocking many parts of MENA. High population growth, poor education and job prospects coupled with a lack of democracy are a concoction that may explain the social unrest seen during 2011. In the context of our model, these economies deliver average rates of growth in income per capita.

Being highly endowed with oil has managed to ensure that income per capita in many of these nations is already very high. This model will therefore penalise certain countries since it cannot explain the current level of income per capita with the variables it considers. So we need to take forecasts for economies such as Qatar with some pinch of salt. These economies may continue to grow at a rapid pace, despite any weakness in the fundamentals for which our model is accounting. But clearly this source of wealth, and the ability to spread it fairly across the population, is a major source of contention now and will continue to be in the future.

28. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Middle East and North Africa				
Algeria	4.2%	4.3%	4.3%	4.3%
Bahrain	3.4%	3.0%	2.8%	2.5%
Egypt	2.8%	4.0%	4.2%	4.3%
Iran	3.5%	3.5%	3.5%	3.5%
Iraq	-0.6%	0.9%	2.3%	3.7%
Israel	-0.3%	1.3%	1.7%	2.1%
Jordan	3.7%	3.7%	3.8%	3.8%
Kuwait	3.3%	3.0%	2.7%	2.4%
Lebanon	4.6%	4.2%	3.9%	3.6%
Libya	3.3%	2.7%	2.8%	2.9%
Morocco	3.1%	3.1%	3.7%	4.2%
Oman	2.4%	2.5%	2.5%	2.5%
Qatar	0.7%	1.0%	1.2%	1.4%
Saudi Arabia	2.0%	2.2%	2.4%	2.6%
Syria	2.2%	2.9%	3.5%	4.1%
Tunisia	4.0%	4.1%	4.2%	4.2%
United Arab Emirates	2.5%	2.3%	2.3%	2.2%
Yemen	-2.4%	-0.8%	1.0%	3.0%
MENA average	2.0%	2.4%	2.7%	3.0%

Source: HSBC estimates

27. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Middle East and North Africa	Real USD	Years	Years	Children	Index	Ratio to GDP	Index	Annual rate
Algeria	2,190	7.7	72	2.4	0.5	0.11	0.2	4.6%
Bahrain	16,968	9.6	76	2.3	0.8	0.14	0.3	3.2%
Egypt	3,002	8.8	70	2.9	0.6	0.11	0.2	13.1%
Iran	2,138	8.1	71	1.8	0.7	0.13	0.2	18.8%
Iraq	743	5.8	68	4.1	0.3	0.23	0.2	8.0%
Israel	21,806	11.3	81	2.9	0.7	0.25	1.0	2.8%
Jordan	2,497	9.2	73	3.5	0.7	0.23	0.3	6.5%
Kuwait	23,072	6.3	78	2.2	0.8	0.14	0.5	6.7%
Lebanon	6,342	9.2	72	1.8	0.7	0.15	0.3	1.2%
Libya	7,692	7.9	74	2.7	0.7	0.11	0.0	6.4%
Morocco	1,781	5.0	71	2.4	0.8	0.18	0.3	2.2%
Oman	10,779	9.2	76	3.0	0.8	0.19	0.2	7.3%
Qatar	38,466	7.5	76	2.4	0.8	0.22	0.2	8.0%
Saudi Arabia	9,833	10.3	73	3.1	0.8	0.22	0.0	6.4%
Syria	1,350	5.3	74	3.2	0.8	0.11	0.0	7.5%
Tunisia	2,805	7.3	74	2.1	0.8	0.14	0.0	4.0%
United Arab Emirates	25,607	9.5	78	1.9	0.7	0.11	0.2	6.4%
Yemen	565	3.7	63	5.2	0.3	0.16	0.3	10.2%
MENA average	11,158	7.7	73	2.9	0.7	0.17	0.3	7.9%

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

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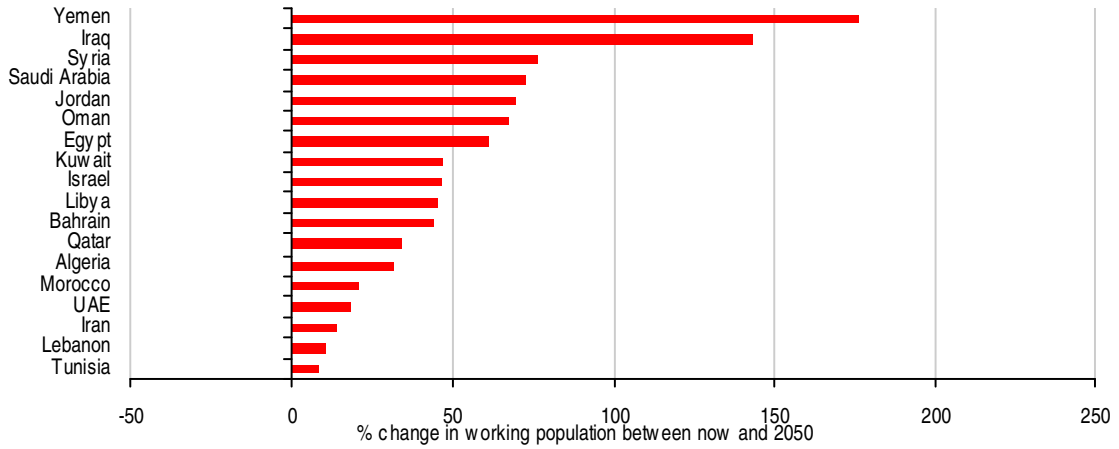
29. Demographic change between now and 2050



Source: UN population projections

The **Middle East** is one region where significant immigration flows make forecasting the size of the workforce difficult. We have seen in the past decade borders open and close according to ebbs and flows in demand. Nevertheless, indigenous population growth is strong across much of the region. But again we highlight that population growth is only a good thing for an economy if all the other foundations are strong. This will ensure that these new workers find jobs. If the other fundamentals are not there then young, unemployed individuals become frustrated, which can be a recipe for social unrest rather than progress.

Overall, there are lots of caveats to bear in mind with regards to how this model might not accurately capture the outlook for parts of the Middle East. In particular, we think this framework is underestimating the potential of Israel and Qatar.

Nevertheless, the model does conform to our high expectations for long-term growth in Egypt and Saudi Arabia, despite some of the near-term challenges. Similarly, the outlook looks extremely robust for Bahrain, Jordan and the United Arab Emirates.

30. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
MENA				
Algeria	5.6%	5.4%	4.9%	4.1%
Bahrain	5.7%	4.2%	3.0%	2.7%
Egypt	4.7%	5.6%	5.2%	4.8%
Iran	4.5%	4.4%	3.8%	2.8%
Iraq	3.4%	3.7%	4.2%	5.2%
Israel	1.1%	2.5%	2.5%	2.7%
Jordan	5.9%	5.8%	4.8%	4.2%
Kuwait	5.4%	4.4%	3.1%	2.6%
Lebanon	5.7%	4.5%	4.0%	3.3%
Libya	5.3%	4.3%	3.4%	2.7%
Morocco	4.2%	3.9%	4.0%	3.9%
Oman	4.8%	4.1%	3.7%	3.0%
Qatar	2.1%	2.1%	1.8%	1.3%
Saudi Arabia	4.5%	3.9%	3.5%	3.2%
Syria	4.3%	5.3%	4.8%	4.6%
Tunisia	4.9%	4.6%	4.3%	3.6%
United Arab Emirates	4.7%	3.5%	2.2%	0.9%
Yemen	1.4%	2.5%	3.7%	4.8%
MENA average	**4.2%**	**4.0%**	**3.6%**	**3.3%**

Source: HSBC estimates

HSBC

Sub-Saharan Africa

Africa has sadly been the lost continent for many decades and many parts of the region are still riddled with corruption, civil war and disease. Indeed, comparing the averages today for Africa to those of Asia is disheartening: Life expectancy of just 58 versus 71 in Asia and schooling of just 6.4 years compared with 8.4 in Asia are important drawbacks. In addition, inflation and a total lack of democracy is a major problem for some countries.

Average real income per capita in Africa is just 7% that of the US with people in many countries living on less than a dollar a day. But, again, being 'poor', or at a low level of development, is not enough to guarantee growth, and for certain countries in the region our model does not predict that income per capita will rise significantly in the decade ahead. Countries such as Angola and Uganda appear stuck in the poverty trap. But by assuming governments will improve these economic flaws, we show the potential for change; only time will tell whether governments are able to deliver on this.

32. Model projections for income per capita

	2010-20	2020-30	2030-40	2040-50
Africa				
Angola	-0.3%	1.0%	2.1%	3.2%
Cameroon	0.6%	1.8%	2.9%	4.0%
Ethiopia	2.0%	3.2%	4.3%	5.3%
Ghana	3.1%	3.9%	4.6%	5.2%
Kenya	1.5%	2.6%	3.6%	4.5%
Nigeria	0.9%	2.1%	3.2%	4.2%
South Africa	1.1%	1.9%	2.6%	3.3%
Tanzania	3.6%	4.2%	4.6%	5.0%
Uganda	-0.1%	1.3%	2.7%	4.1%
Africa average	2.1%	2.8%	3.5%	4.2%

Source: HSBC estimates

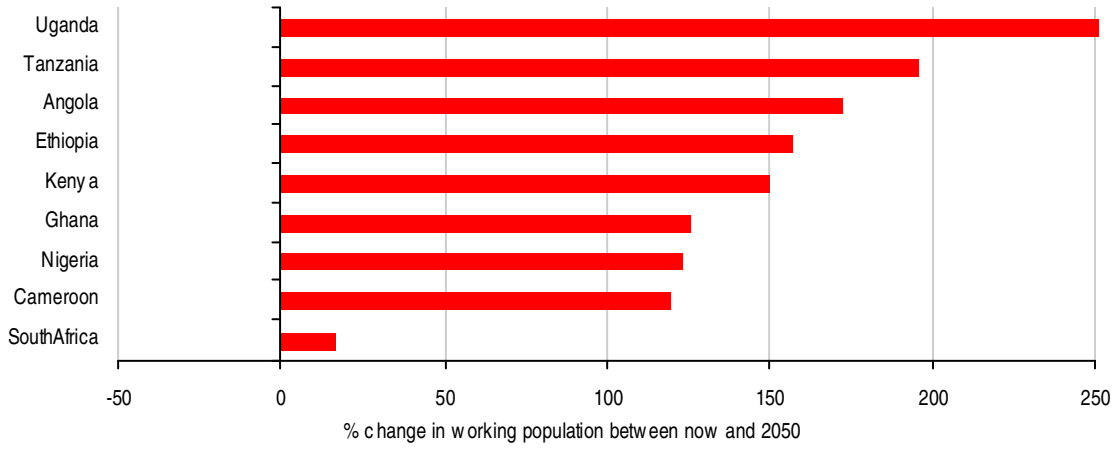
Nevertheless, there are bright spots where already improvements have been made and the countries may be turning a corner. The model predicts strongest growth in income per capita for Tanzania and Ghana, although again we are coming from such an extraordinarily low base.

31. The 'economic infrastructure' today

	GDP per capita	Average years male schooling	Life expectancy	Fertility (average children per person)	Rule of law	Government consumption	Democracy index	Inflation rate
Africa								
Angola	1,313	7.3	47	5.8	0.5	0.18	0.2	12.8%
Cameroon	694	6.1	51	4.6	0.3	0.10	0.2	3.1%
Ethiopia	201	6.1	55	5.3	0.8	0.10	0.3	23.4%
Ghana	343	7.8	57	4.0	0.4	0.12	1.0	15.5%
Kenya	452	7.3	54	4.9	0.3	0.18	0.5	15.1%
Nigeria	506	7.3	48	5.7	0.3	0.18	0.5	9.5%
South Africa	3,710	8.6	51	2.5	0.4	0.19	0.8	8.6%
Tanzania	382	7.3	56	5.6	0.8	0.16	0.5	9.8%
Uganda	366	5.4	53	6.3	0.6	0.13	0.3	10.4%
Africa average	**1,643**	**6.4**	**58**	**4.2**	**0.5**	**0.14**	**0.4**	**9.2%**

Source: www.barrolee.com, World Bank, Political Risk Services International Country Risk Guide, Freedom House Political Rights Index

33. Demographic change between now and 2050



Source: UN population projections

But the demographic story is extremely strong in **Africa** (Chart 33). Indeed, half the increase in the world's population over the next 40 years will be in Africa.

For those countries that have at least reasonable prospects for individual prosperity, this should give rise to strong growth in total GDP (Table 34). Again, we are coming from a low base.

Nigeria deserves a special mention. The rapid population growth in Nigeria means that by 2050, its population will be almost as large as that of the United States. The potential of this country is huge if the government does manage to deliver the change that belies these projections.

Tanzania is also worth highlighting. Again, rapid growth in the population will see it reach almost 140m in 2050 – almost twice that of the projection in either the UK or Germany. Given that the fundamentals are already looking in reasonably good shape, we could see an explosion in growth in this economy. Again, we are coming from a low base – income per capita at the moment in Tanzania in real terms is just USD382. We project this will rise to only USD2,085 by 2050, but given the growth in the population, this would still equate to a 1,700% increase in the size of the economy!

Ethiopia, so often making the headlines for poverty and famine, appears to be making progress. Indeed, last year, Ethiopia was one of the fastest growing economies in the world delivering more than 10% GDP growth. We forecast strong growth to continue, although again even in 2050 we see income per capita at just 2% that of the US.

34. Model projections for total GDP

	2010-20	2020-30	2030-40	2040-50
Africa				
Angola	3.3%	4.0%	4.8%	5.3%
Cameroon	3.3%	4.4%	4.9%	5.4%
Ethiopia	5.5%	6.3%	6.7%	7.0%
Ghana	5.9%	6.5%	6.6%	6.8%
Kenya	4.6%	5.8%	6.0%	6.3%
Nigeria	3.8%	4.8%	5.2%	5.6%
South Africa	1.6%	2.4%	3.1%	3.5%
Tanzania	7.0%	7.8%	7.6%	7.4%
Uganda	4.3%	5.6%	6.3%	6.8%
Africa average	4.6%	5.1%	5.2%	5.3%

Source: HSBC estimates

HSBC

Conclusions and risks

- 'Rapid growth' is expected by those with a low starting point but strong fundamentals – the Philippines, Egypt, Peru and Ukraine
- 'Growth' economies have strong prospects but a higher starting point. Mexico, Turkey, Saudi Arabia and Nigeria stand out
- A 'stable' group, largely the developed world, has more limited potential for growth

Putting it all together

Considering all these economies, we can separate them into the following three groups (Table 35):

Fast growth – >5% average growth to 2050

The fast-growth economies are those that are at a low level of development but which have sufficiently strong underlying fundamentals so that they catch up with more developed economies with similarly strong fundamentals.

We have already discussed China and India, which sit firmly at the top of this group. Elsewhere in Asia, the Philippines, Malaysia, Bangladesh and Vietnam all look very strong.

In Latin America, Peru is the star performer in the region, given it starts from a lower level of development than some of its counterparts in the region coupled with strong demographics. Many of the smaller CEEMEA economies also sit here, particularly those with fantastic rates of education and a good rule of law, despite poor demographics. In the Middle East, despite near-term uncertainty, we think Egypt has good long-term prospects.

Growth – 3% < growth <5%

The 'growth' group are also set to outperform many of the developed world economies. In Asia, we highlight Indonesia and Thailand within this group and Pakistan owing to the sheer size of working population. Latin America dominates this group of 'growth' countries. Brazil, Colombia and Mexico look very strong and remain firmly in our group of Top 30 economies in 2050.

Stable – growth <3%

The stable group of countries offer more limited growth prospects. These largely include the high-growth, ageing economies in the developed world, of which Europe fares particularly badly. As discussed, growth in Israel, Qatar and UAE may be underestimated in this model.

35. Which countries will deliver the fastest growth en route to 2050? List ordered based on size of economy in 2050

Fast growth	Growth	Stable
China	Brazil	United States
India	Mexico	Japan
Philippines	Turkey	Germany
Egypt	Russia	United Kingdom
Malaysia	Indonesia	France
Peru	Argentina	Canada
Bangladesh	Saudi Arabia	Italy
Algeria	Thailand	South Korea
Ukraine	Iran	Spain
Vietnam	Colombia	Australia
Uzbekistan	Pakistan	Netherlands
Tanzania	Chile	Poland
Kazakhstan	Venezuela	Switzerland
Ecuador	Nigeria	South Africa
Ethiopia	Romania	Austria
Sri Lanka	Czech Republic	Sweden
Azerbaijan	Hungary	Belgium
Kenya	Kuwait	Singapore
Bolivia	Morocco	Greece
Jordan	Libya	Israel
Uganda	New Zealand	Ireland
Ghana	Dominican Republic	United Arab Emirates
Paraguay	Syria	Norway
Turkmenistan	Tunisia	Portugal
Honduras	Guatemala	Finland
Serbia	Lebanon	Denmark
	Slovak Republic	Cuba
	Oman	Qatar
	Angola	Uruguay
	Costa Rica	Luxembourg
	Belarus	Slovenia
	Iraq	
	Panama	
	Croatia	
	El Salvador	
	Cameroon	
	Bulgaria	
	Bahrain	
	Lithuania	
	Bosnia and Herzegovina	
	Latvia	
	Yemen	
	Cyprus	

Source: HSBC estimates

Rose-tinted spectacles?

We openly admit that behind these projections we assume governments build on their recent progress and remain solely focused on increasing the living standards for their populations. Of course, this may be an overly glossy way of viewing the world, and we conclude there are a number of reasons our 'World in 2050' could turn out a little different. We consider the main culprits below.

Resource constraints

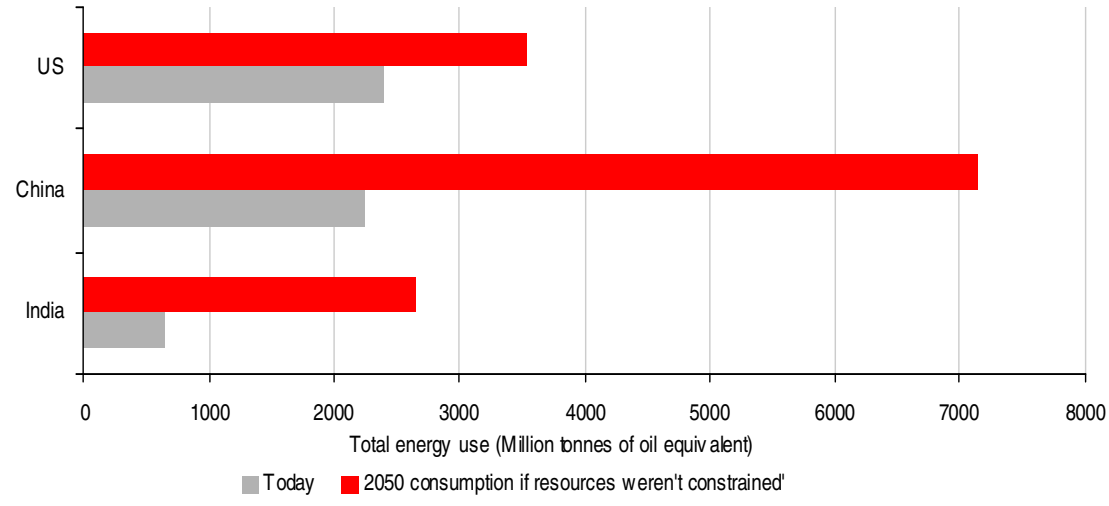
Our calculations have focused on the human potential of the world economy, paying no attention to the physical constraints of the world we live in, those that are becoming more evident by the day leading to upward pressure on many commodity prices.

In a follow-up report entitled *Energy in 2050* (22 March 2011), we mapped our GDP forecasts into energy forecasts. This exercise certainly gave rise to some fairly worrying numbers. Chart 36 shows the results for the top 3 economies we consider. If we were in a world of unlimited resources, consumption would explode as the emerging consumers start to develop a taste for cars and other energy-hungry domestic appliances. Clearly, for our 'World in 2050' to materialise, we need to change the way we use energy. What is comforting, however, is that even constraining ourselves to the technology that we know exists today, it is possible to find a solution that combines energy efficiency and a move towards more renewable sources of energy. But this does require major government and industrial foresight. Creating the incentives for all players to change is the biggest hurdle. Rising energy prices are the most obvious catalyst. It seems more likely change will occur to avoid the cost of high energy prices rather than a change for the greater good, or even for the potential benefit of children 40 years down the line.

The energy constraint may be another reason why the emerging world outperforms the cash-strapped West. Starting with a blank sheet of paper and having governments with borrowing capacity to deliver change may see these economies overcome these constraints more quickly than the cash-strapped West.

But our 'Energy in 2050' report also highlighted that climate change is a major concern. Indeed, it is much easier to overcome the energy constraint than it is to do so while meeting carbon emission

36. We need to use energy more efficiently to reach this potential



Source: HSBC estimates

targets. In that report, we provide a map of regions most vulnerable to climate change, which is another variable that should be taken into account when considering an economy's long-term future.

Omitted variables

We have already discussed that our model cannot capture all the variables that will dictate an economy's potential. We have used a one-size-fits-all model to provide a very clear and transparent framework for thinking about development. By starting to tinker with the projections based on judgment you essentially create a list based on opinion. Instead, we chose to leave the reader to consider idiosyncratic factors requiring further consideration that mean a country should feature more highly or, indeed, lower down our economic league table.

Cyclical fluctuations

Our model is a structural model that should determine the potential supply of the economy. There are cyclical factors that can cause economies to deviate from this long-term path. For example, it may be that the use of credit had taken the developed world above its sustainable path and the slow growth of the past few years is the readjustment to the long-term sustainable path. Similarly, many emerging economies in the past few years have been growing stronger than our projections and were encountering inflationary pressures and, thus, required policy action to return the pace of growth to something more sustainable.

Border barriers and war

The biggest danger is that the open borders, which have delivered so much prosperity, are closed. It is hard to see how such a wave of protectionism could benefit an individual economy, and certainly not the system as a whole. But politicians' motivation tends to be focused on the next election rather than long-term growth. As such, bad politics is a key risk to these projections. And of course, trade wars can be followed by real wars, which would obviously set this rather glossy outlook way off track. Civil wars are another potential risk in certain countries.

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A major shake-up in world order

This extension reinforces the findings from our original 2050 report. Plenty of places in the world look set to deliver very strong rates of growth. But they are not in the developed world, which faces both structural and cyclical headwinds. They are in the emerging world. You can see this in action by viewing the video, of which a snapshot is available on the following page.

In the original report, we highlighted the extraordinary prospects for the likes of China, India, Malaysia, Mexico, Colombia and Turkey. These economies themselves are still at an early stage of development and continue to offer fantastic growth prospects. But increasingly attention will turn to the 'new emergers'. Countries such as the Philippines, Peru and Nigeria all demonstrate some combination of favourable demographics and strong fundamentals that should see a significant rise in their economic size.

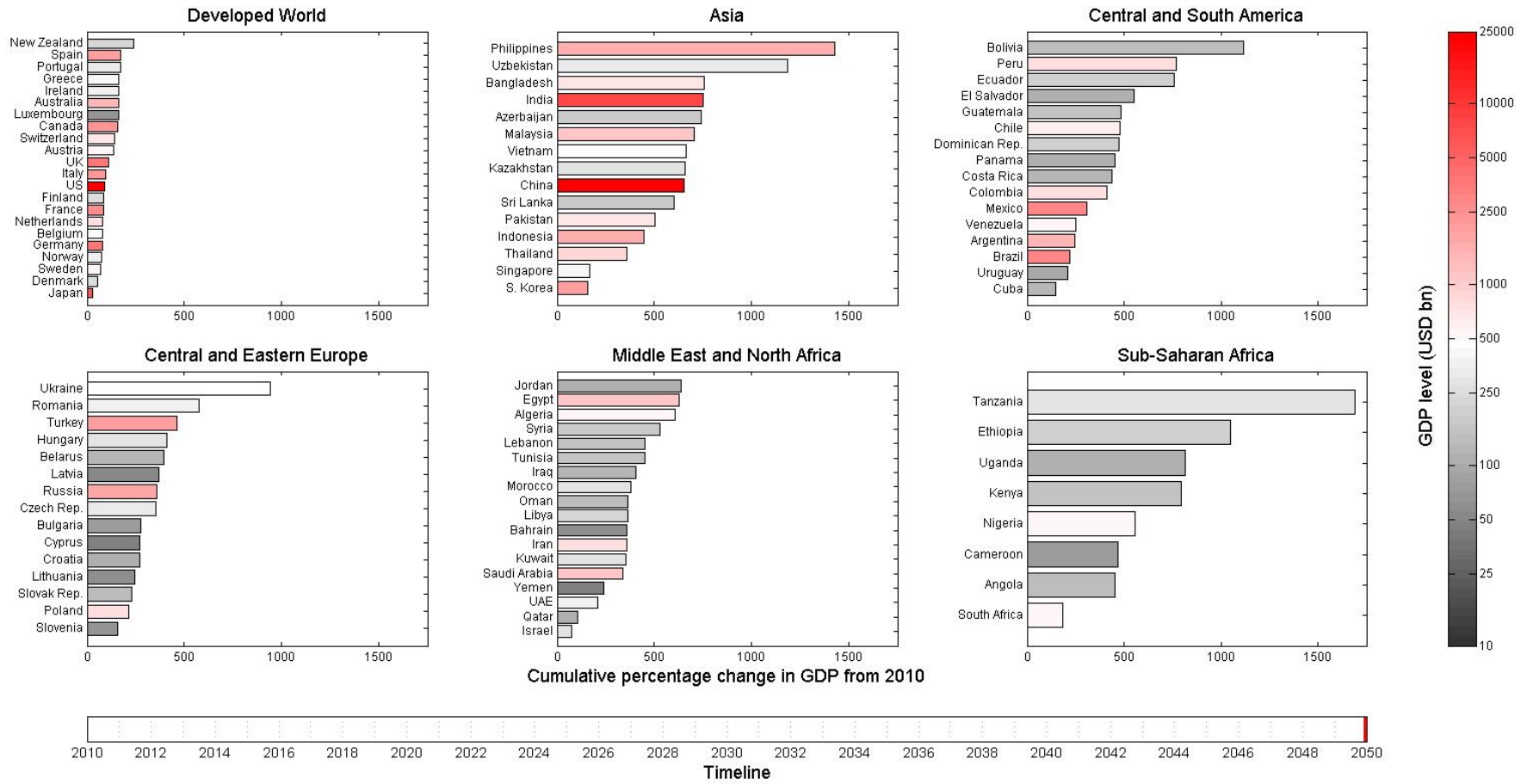
And so there are likely to be some major changes in the economic league table between now and 2050, with countries such as the Philippines jumping as many as 27 places (Table 37). The losers are the small population, ageing economies of Europe. Such change may seem remarkable but it is not abnormal. Table 38 ranks the economies by size today and shows how this rank has changed in the past four decades. China, India and South Korea have already shown excellent 'leap-frog ability'. The relative decline of countries in Europe that we forecast is an ongoing extension of a trend already in place.

37. Major change may seem unthinkable but such large shifts are common in history

	Order based on size of economy in 2010 (constant 2000 USD)	Rank change since 1970
1	United States	0
2	Japan	0
3	China*	14
4	Germany	-1
5	United Kingdom	-1
6	France	-1
7	Italy	-1
8	India	7
9	Brazil	0
10	Canada	-3
11	South Korea	12
12	Spain	-4
13	Mexico	-3
14	Australia	-2
15	Netherlands	-4
16	Argentina	-3
17	Russia	Not available
18	Turkey	2
19	Sweden	-5
20	Switzerland	Not available

Source: World Bank, HSBC

We conclude that the world has great potential to grow in the coming decades, but that growth will not stem from the developed world. The EM story is only just beginning. As the 'new emergers' come to the fore, emerging economies offer great potential to power the global economy to 2050.



We have created a video that tracks the growth in GDP across the various countries through time. The chart above shows the final frame of this video.

The length of the bars indicates the cumulative percentage increase in GDP for each country relative to 2010. The colour of the bars shows the level of GDP. So, for example, a long, red bar implies that a country has a large GDP and a high rate of GDP growth.

Visit **http://cache.cantos.com/flash/hsba-r061/GDP_growth_2050-WMV.wmv** to watch how the growth rates for the different countries change between 2010 and 2050.

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Appendix

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The model

Barro's growth model

A1. The model

Variable	Coefficients
Log GDP	-0.018
Male schooling	0.002
Log GDP * schooling	-0.004
Log life expectancy	0.044
Log fertility	-0.016
Government consumption ratio	-0.136
Rule of law index	0.029
Democracy index	0.090
Democracy index squared	-0.088
Inflation rate	-0.043

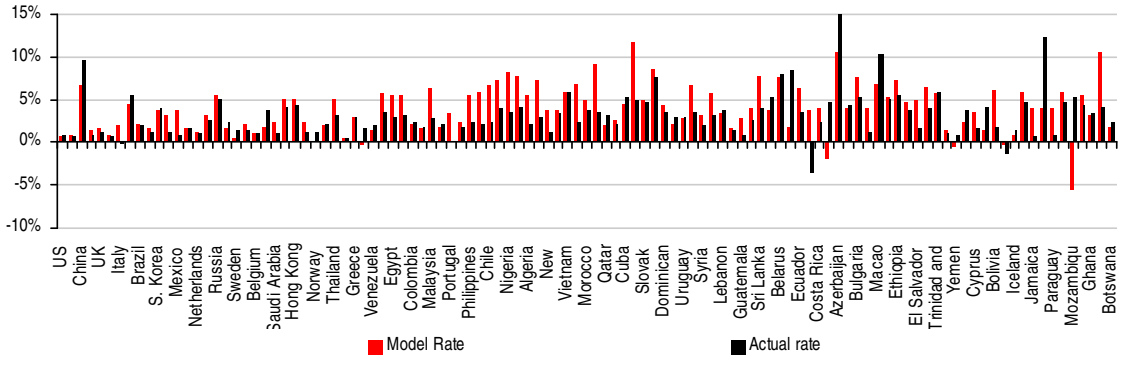
Source: Barro with HSBC adjustment to schooling

We made two amendments to Barro's original model. First, we lowered slightly the convergence rate, in line with more recent literature (see OECD 2001).

Second, it appeared that the original model was overstating the impact of education. In Barro's original model, an extra year of schooling raises GDP growth by 1.2ppt. Those with very high levels of education, such as Germany, were forecast to grow much more quickly than they achieved. And countries such as India with very low levels of education were barely forecast to grow at all. However, recalibrating the model to lower the impact of education produced remarkably accurate forecasts for such a simple model. The main areas of failure are in Asia where the region in the early part of the 2000-10 period was still recovering from the Asian crisis.

In the following tables we show the details of the two scenarios that we use to build up to our 'base case'. The first assumes that governments make no progress in improving their economic infrastructure. The second assumes that governments make complete progress, bring their economic infrastructure steadily up to those best in class in each category such as level of education. Our base case sits between these two scenarios. Essentially each country gets halfway to improving its imperfections.

Model projections for the universe under consideration



Source: World Bank and HSBC estimates using Barro's amended model

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Scenario 1: Income per capita forecasts if governments make no progress in improving economic infrastructure

	2010-20	2020-30	2030-40	2040-50
Algeria	4.2%	3.8%	3.4%	3.0%
Angola	-0.3%	-0.2%	-0.2%	-0.2%
Argentina	2.5%	2.0%	1.6%	1.3%
Australia	1.9%	1.5%	1.3%	1.1%
Austria	2.7%	2.2%	1.8%	1.5%
Azerbaijan	6.1%	4.9%	3.9%	3.1%
Bahrain	3.4%	2.8%	2.3%	1.9%
Bangladesh	3.6%	3.5%	3.4%	3.3%
Belarus	5.9%	4.5%	3.5%	2.7%
Belgium	1.1%	1.0%	0.8%	0.7%
Bolivia	5.6%	4.6%	3.8%	3.1%
Bosnia and Herzegovina	7.1%	5.8%	4.8%	3.9%
Brazil	2.3%	1.8%	1.4%	1.1%
Bulgaria	4.8%	3.9%	3.2%	2.6%
Cameroon	0.6%	0.6%	0.5%	0.5%
Canada	1.9%	1.6%	1.4%	1.2%
Chile	5.2%	4.2%	3.4%	2.7%
China	6.6%	5.2%	4.3%	3.5%
Colombia	3.0%	2.5%	2.1%	1.7%
Costa Rica	3.7%	3.2%	2.7%	2.3%
Croatia	4.4%	3.7%	3.2%	2.7%
Cuba	2.5%	2.0%	1.6%	1.2%
Cyprus	3.0%	2.4%	1.9%	1.6%
Czech Republic	5.3%	3.9%	2.9%	2.1%
Denmark	0.6%	0.5%	0.4%	0.4%
Dominican Republic	3.6%	3.2%	2.9%	2.7%
Ecuador	4.9%	4.4%	3.8%	3.4%
Egypt	3.5%	4.0%	3.4%	2.9%
El Salvador	3.9%	3.4%	3.0%	2.7%
Ethiopia	2.0%	1.9%	1.8%	1.7%
Finland	1.5%	1.3%	1.1%	0.9%
France	1.2%	1.0%	0.8%	0.7%
Germany	2.1%	1.8%	1.5%	1.3%
Ghana	3.1%	2.7%	2.4%	2.2%
Greece	3.0%	2.6%	2.1%	1.7%
Guatemala	0.8%	0.8%	0.8%	0.8%
Honduras	2.8%	2.5%	2.3%	2.0%
Hungary	5.9%	4.4%	3.3%	2.5%
India	4.1%	3.5%	3.0%	2.6%
Indonesia	3.1%	2.6%	2.2%	1.8%
Iran	6.2%	5.2%	4.2%	3.5%
Iraq	-0.5%	-0.5%	-0.5%	-0.5%
Ireland	1.6%	1.7%	1.4%	1.2%
Israel	-0.1%	1.0%	0.9%	0.8%
Italy	2.1%	1.8%	1.4%	1.2%
Japan	1.2%	1.1%	1.0%	0.9%
Jordan	3.7%	3.1%	2.6%	2.2%
Kazakhstan	5.9%	4.7%	3.8%	3.0%
Kenya	1.5%	1.4%	1.3%	1.2%
Kuwait	3.4%	3.2%	3.0%	2.9%

Source: HSBC estimates

Scenario 1: Income per capita forecasts if governments make no progress in improving economic infrastructure (cont.)

	2010-20	2020-30	2030-40	2040-50
Latvia	5.6%	4.4%	3.4%	2.7%
Lebanon	4.6%	3.9%	3.3%	2.8%
Libya	2.7%	2.4%	2.1%	1.9%
Lithuania	4.3%	3.3%	2.6%	2.0%
Luxembourg	1.6%	1.3%	1.0%	0.8%
Malaysia	5.4%	4.4%	3.6%	2.9%
Mexico	3.6%	3.1%	2.6%	2.1%
Morocco	2.5%	2.5%	2.5%	2.5%
Netherlands	1.2%	1.1%	1.0%	0.8%
New Zealand	2.9%	2.1%	1.5%	1.0%
Nigeria	0.9%	0.8%	0.7%	0.7%
Norway	0.4%	0.6%	0.7%	0.6%
Oman	2.4%	2.1%	1.7%	1.5%
Pakistan	1.5%	1.5%	1.5%	1.4%
Panama	3.5%	2.9%	2.4%	2.0%
Paraguay	4.8%	4.2%	3.6%	3.2%
Peru	5.4%	4.6%	3.9%	3.3%
Philippines	6.1%	5.2%	4.4%	3.8%
Poland	4.1%	3.3%	2.7%	2.2%
Portugal	3.2%	2.9%	2.5%	2.2%
Qatar	0.9%	0.8%	0.7%	0.6%
Romania	7.1%	5.7%	4.6%	3.7%
Russia	5.1%	4.2%	3.5%	2.9%
S. Korea	3.9%	2.9%	2.4%	1.9%
Saudi Arabia	1.9%	1.6%	1.4%	1.1%
Serbia	6.8%	5.6%	4.5%	3.7%
Singapore	4.2%	3.2%	2.7%	2.3%
Slovak Republic	4.2%	3.2%	2.5%	1.9%
Slovenia	3.0%	2.6%	2.2%	1.9%
South Africa	1.1%	0.9%	0.7%	0.5%
Spain	2.9%	2.5%	2.0%	1.7%
Sri Lanka	5.2%	4.6%	4.0%	3.5%
Sweden	0.5%	0.6%	0.6%	0.6%
Switzerland	2.6%	2.1%	1.7%	1.4%
Syria	2.2%	2.2%	2.2%	2.1%
Tanzania	3.6%	3.2%	3.0%	2.7%
Thailand	3.8%	3.2%	2.7%	2.3%
Tunisia	4.0%	3.6%	3.3%	3.0%
Turkey	4.0%	3.4%	2.9%	2.5%
Turkmenistan	6.1%	4.9%	3.9%	3.1%
Uganda	-0.1%	-0.1%	-0.1%	-0.1%
UK	1.3%	1.1%	0.9%	0.7%
Ukraine	8.7%	6.8%	5.2%	4.1%
United Arab Emirates	2.5%	2.1%	1.7%	1.4%
Uruguay	2.5%	2.2%	1.9%	1.6%
US	0.5%	0.7%	0.7%	0.7%
Uzbekistan	6.7%	5.4%	4.3%	3.4%
Venezuela	1.4%	1.1%	0.8%	0.5%
Vietnam	4.4%	4.2%	3.9%	3.7%
Yemen	-2.4%	-2.5%	-2.6%	-2.7%

Source: HSBC estimates

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Scenario 2: Income per capita forecasts if governments make complete progress in improving economic infrastructure, catching up with best in class

	2010-20	2020-30	2030-40	2040-50
Algeria	4.2%	5.0%	5.6%	6.0%
Angola	-0.3%	2.4%	4.8%	6.9%
Argentina	2.5%	3.1%	3.7%	4.2%
Australia	1.9%	2.4%	2.8%	3.1%
Austria	2.7%	3.0%	3.2%	3.4%
Azerbaijan	6.1%	5.8%	5.6%	5.5%
Bahrain	3.4%	3.3%	3.2%	3.2%
Bangladesh	3.6%	5.6%	7.2%	8.5%
Belarus	5.9%	5.8%	5.9%	6.1%
Belgium	1.1%	2.1%	2.9%	3.5%
Bolivia	5.6%	5.8%	5.9%	6.1%
Bosnia and Herzegovina	7.1%	6.7%	6.4%	6.2%
Brazil	2.3%	3.5%	4.7%	5.7%
Bulgaria	4.8%	5.4%	5.8%	6.3%
Cameroon	0.6%	3.3%	5.8%	7.9%
Canada	1.9%	2.5%	3.0%	3.4%
Chile	5.2%	4.9%	4.6%	4.5%
China	6.6%	6.0%	5.8%	5.7%
Colombia	3.0%	4.1%	5.0%	5.8%
Costa Rica	3.7%	4.3%	4.7%	5.2%
Croatia	4.4%	4.6%	4.8%	5.0%
Cuba	2.5%	3.9%	5.0%	6.1%
Cyprus	3.0%	3.4%	3.7%	4.0%
Czech Republic	5.3%	4.9%	4.6%	4.6%
Denmark	0.6%	1.7%	2.6%	3.3%
Dominican Republic	3.6%	4.3%	4.8%	5.2%
Ecuador	4.9%	5.4%	5.8%	6.0%
Egypt	3.5%	3.8%	4.8%	5.6%
El Salvador	3.9%	4.7%	5.4%	5.9%
Ethiopia	2.0%	4.7%	7.2%	9.2%
Finland	1.5%	2.3%	2.8%	3.3%
France	1.2%	2.1%	2.8%	3.5%
Germany	2.1%	2.8%	3.2%	3.6%
Ghana	3.1%	5.2%	7.0%	8.4%
Greece	3.0%	3.5%	3.8%	4.1%
Guatemala	0.8%	2.8%	4.8%	6.5%
Honduras	2.8%	4.3%	5.6%	6.7%
Hungary	5.9%	5.3%	5.0%	4.9%
India	4.1%	5.4%	6.6%	7.4%
Indonesia	3.1%	4.8%	6.2%	7.4%
Iran	6.2%	6.1%	5.9%	5.9%
Iraq	-0.5%	2.6%	5.6%	8.3%
Ireland	1.6%	2.4%	2.7%	3.0%
Israel	-0.1%	1.4%	2.5%	3.4%
Italy	2.1%	2.9%	3.5%	4.0%
Japan	1.2%	2.1%	2.7%	3.2%
Jordan	3.7%	4.4%	5.0%	5.4%
Kazakhstan	5.9%	5.6%	5.5%	5.4%
Kenya	1.5%	4.1%	6.3%	8.2%
Kuwait	3.4%	3.2%	3.0%	2.8%

Source: HSBC estimates

Scenario 2: Income per capita forecasts if governments make complete progress in improving economic infrastructure, catching up with best in class (cont.)

	2010-20	2020-30	2030-40	2040-50
Latvia	5.6%	5.3%	5.1%	5.1%
Lebanon	4.6%	4.6%	4.6%	4.6%
Libya	2.7%	3.3%	3.9%	4.4%
Lithuania	4.3%	4.7%	5.0%	5.4%
Luxembourg	1.6%	1.9%	2.2%	2.5%
Malaysia	5.4%	4.9%	4.6%	4.3%
Mexico	3.6%	4.1%	4.5%	4.7%
Morocco	2.5%	4.2%	5.6%	6.8%
Netherlands	1.2%	2.2%	2.9%	3.5%
New Zealand	2.9%	3.2%	3.4%	3.6%
Nigeria	0.9%	3.6%	6.0%	8.0%
Norway	0.4%	1.6%	2.3%	2.8%
Oman	2.4%	2.9%	3.4%	3.8%
Pakistan	1.5%	3.9%	6.1%	7.9%
Panama	3.5%	4.0%	4.3%	4.7%
Paraguay	4.8%	5.4%	5.8%	6.1%
Peru	5.4%	5.3%	5.2%	5.2%
Philippines	6.1%	6.1%	6.1%	6.0%
Poland	4.1%	4.4%	4.8%	5.1%
Portugal	3.2%	3.7%	4.1%	4.5%
Qatar	0.9%	1.4%	2.0%	2.6%
Romania	7.1%	6.5%	6.1%	5.8%
Russia	5.1%	5.4%	5.7%	6.0%
S. Korea	3.9%	3.7%	3.9%	4.0%
Saudi Arabia	1.9%	2.8%	3.4%	4.0%
Serbia	6.8%	6.8%	6.8%	6.9%
Singapore	4.2%	3.0%	2.6%	2.3%
Slovak Republic	4.2%	4.4%	4.6%	4.9%
Slovenia	3.0%	3.5%	3.9%	4.3%
South Africa	1.1%	3.0%	4.6%	6.0%
Spain	2.9%	3.4%	3.7%	4.0%
Sri Lanka	5.2%	5.9%	6.3%	6.6%
Sweden	0.5%	1.7%	2.6%	3.3%
Switzerland	2.6%	2.6%	2.7%	2.7%
Syria	2.2%	4.0%	5.5%	6.8%
Tanzania	3.6%	5.2%	6.6%	7.7%
Thailand	3.8%	4.7%	5.5%	6.2%
Tunisia	4.0%	4.8%	5.4%	5.9%
Turkey	4.0%	4.4%	4.7%	4.9%
Turkmenistan	6.1%	5.9%	5.8%	5.7%
Uganda	-0.1%	3.0%	6.0%	8.7%
UK	1.3%	2.1%	2.7%	3.2%
Ukraine	8.7%	7.7%	7.1%	6.8%
United Arab Emirates	2.5%	2.7%	2.9%	3.0%
Uruguay	2.5%	3.3%	4.0%	4.6%
US	0.5%	1.7%	2.4%	2.9%
Uzbekistan	6.7%	6.6%	6.6%	6.6%
Venezuela	1.4%	2.9%	4.2%	5.3%
Vietnam	4.4%	5.9%	7.1%	7.9%
Yemen	-2.4%	1.3%	5.3%	9.1%

Source: HSBC estimates

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Notes

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Notes

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Disclosure appendix

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