

# Factors explaining emerging economies' growth slowdown

K. Buysse  
E. Vincent

## Introduction

Over the past decade, emerging market economies have staged a period of impressive growth. As a result, their share in world GDP (expressed in purchasing power parity terms) grew from 32 % in 2000 to 44 % in 2014, whereas that of advanced economies declined from 59 % to 46 % over the same period. Concurrently, the one-directional influence of advanced economies has been gradually diminishing, suggesting that the interdependence between emerging markets and advanced economies is becoming increasingly two-sided (Buelens, 2013). The sharp losses on advanced economy equity markets in mid-August on doubts about the strength of the Chinese economy provide additional signs of that interdependence changing.

In recent years, however, growth in emerging markets has slowed substantially on average and is also projected to remain sluggish for the foreseeable future. While cyclical factors – including, among others, tighter external financial conditions and weak global demand – play a role in this process, some of the slowdown seems to reflect lower potential growth and is thus more permanent in nature. As emerging markets now account for a bigger part of the global economy, a more protracted slowdown will have more serious ramifications than in the past. Some argue that it may even contribute to a so-called “new mediocre”, a period of moderate growth rates for the world economy.

The aim of this article is to highlight several structural factors that can explain the synchronised slowdown of emerging markets as well as the more muted growth forecasts. These factors are not identical for all regions, but they are operating simultaneously. After a short look at some stylised

facts about emerging markets' past growth performance and the spillovers to the rest of the world, the article starts with a section on the rebalancing of growth in China, the largest and fastest-growing emerging market economy over the past decades. The gradual drop in its impressive growth rates since 2011 is already having a substantial impact on both other emerging market and advanced economies. The recent slump in commodity prices, for example, is in part the result of developments in China, which has become one of the world's biggest consumers of metals and oil. The next section then looks at the consequences of the excessive build-up of private sector leverage in Central and Eastern European countries in the run-up to the crisis. Notwithstanding the specificities of the credit cycle boom and bust in this region, emerging market countries in other regions where debt has continued to accumulate in recent years might be confronted with similar challenges in future. The subsequent section studies trends in global value chains, which seem to have stopped growing longer, contributing to a deceleration of trade growth compared to GDP growth. The article then continues by looking at two factors that will play out in the more medium term, i.e. the middle-income trap – a sustained period of low growth following a period of high growth, largely attributable to a slowdown in productivity growth – and the gradual disappearance of the demographic dividend in some emerging market countries. The final section concludes.

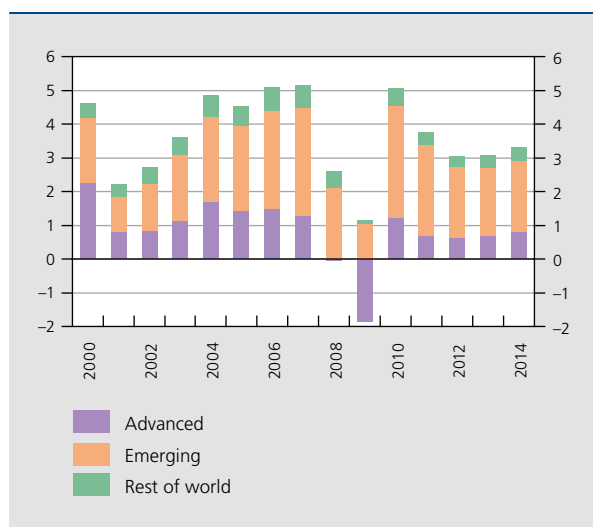
## 1. Some stylised facts

As a result of their impressive growth rates during the past decade, emerging markets' share in the global economy has increased by more than 10 percentage points

since 2000. For many consecutive years, they have also made the largest contribution to global growth (see graph 1). At the peaks of their impressive growth trajectory in 2007 and 2010, emerging markets' contribution to global growth amounted to roughly 3.3 percentage points or 2 percentage points above that of advanced economies. Emerging markets' outperformance of advanced economies has been especially remarkable in the aftermath of the crisis. The Chinese government implemented a fiscal and monetary stimulus programme on an unseen scale which also boosted commodity prices. Along with easy macroeconomic policies in many other emerging economies and abundant global liquidity, this led to a spectacular recovery of growth in emerging countries. Their quick rebound from the global financial crisis led to the overly optimistic view that emerging markets were "decoupling" <sup>(1)</sup> from advanced economies.

Since 2011 however, activity in emerging markets has been gradually slowing down. The turning point appears to have been the decision by the Chinese government to scale back its stimulus programme amidst signs of emerging vulnerabilities at a time when demand in advanced economies had not yet recovered. Unlike previous episodes, this slowdown does not seem to have been triggered by any specific crisis event, such as the Asian crisis in 1998, the dot com crisis in 2001 or the global financial crisis in 2007. Moreover, the current slowdown is characterised by its gradual and highly synchronised nature, hitting almost all emerging markets simultaneously (see graph 2).

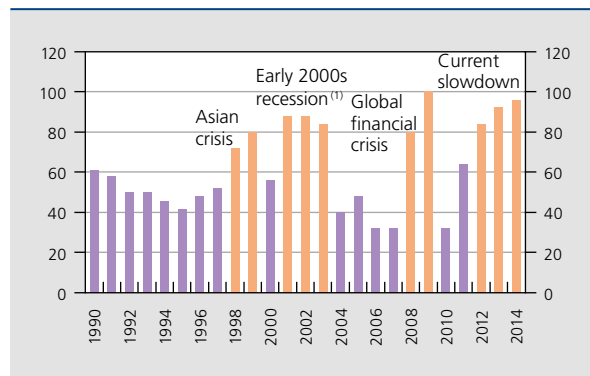
**CHART 1** CONTRIBUTION OF EMERGING ECONOMIES TO GLOBAL GROWTH  
(in %)



Source : IMF.

**CHART 2** SYNCHRONISED SLOWDOWN IN EMERGING ECONOMIES

(percentage of emerging economies with real GDP growth slowdowns)



Source : IMF Spillover Report (2014).

Orange bars indicate that more than 70 % of sample countries experienced a growth slowdown.

(1) Encompasses the dot com bubble, the 9/11 attacks and the crises in Argentina, Brazil and Turkey

As structural factors are playing a role alongside more cyclical elements, growth is projected to remain lower over the medium term. These projections are associated with downward revisions of potential growth. For example, the IMF (2015d) has estimated that potential growth in the six major emerging economies (Brazil, China, India, Russia, Turkey and Mexico) declined on average from 7.5 % in 2006-2007 to 5.5 % in 2013-2014.

Given the increasing share of emerging markets in the global economy over the last decade, a persistent slowdown in emerging market growth could have significant implications for the rest of the world. If a growth slowdown were to be confined to a few more vulnerable emerging markets, the impact on global growth is likely to remain contained. A more broad-based slowdown, however, as we are currently witnessing, is likely to have a more significant impact.

Both the IMF and the OECD have analysed the likely impact on advanced countries of a given slowdown in emerging markets. According to an IMF analysis from 2014, a 1 percent growth shock in emerging markets would reduce advanced economies' growth by 0.2 of a percentage point over a year. A study by the OECD (2014) found that, for each slowdown in non-OECD growth of 2 percentage points, growth in high-income countries (i.e. a selection of OECD countries) would be

(1) See for example "Resilience in emerging market and developing economies : will it last?", World Economic Outlook 2012, chapter 4, and "Uncoupling Asia: Myth and reality", Asian Development Bank (2007), Asian Development Outlook.

negatively affected by around two-thirds of a percentage point on average.

Developments in China, one of the main growth engines among emerging markets over the last decade, have a particularly significant impact on both emerging and advanced economies. The effects of the rebalancing of the Chinese economy towards slower, but more sustainable growth, are indeed already being felt, impacting negatively on growth in its main trading partners and in commodity markets.

A slowdown in emerging markets affects other economies through different channels. As global trade integration has deepened, this is a first channel through which important spillovers occur. The current weakness in global trade is to a significant extent the result of the slowdown in emerging markets, including the drop in demand from China. According to an analysis by the OECD, for most high-income countries, gross exports to individual emerging markets account for less than 2% of GDP. Gross exports to non-OECD economies as a whole account for

almost 20% of GDP for a number of open high-income countries, such as Belgium or the Netherlands, and 7-10% for manufacturing exporters like Germany, Italy and Japan.

Second, emerging markets, by now the largest commodity consumers, can have a significant impact on commodity prices. The current slowdown in emerging markets has been partly responsible for the sharp drop in commodity prices since mid-2014, with different effects on importers and exporters. Spillovers through the financial channel remain limited. Nevertheless, through confidence effects, financial turbulence in emerging markets may also raise investor risk aversion and thereby reduce asset prices in high-income countries.

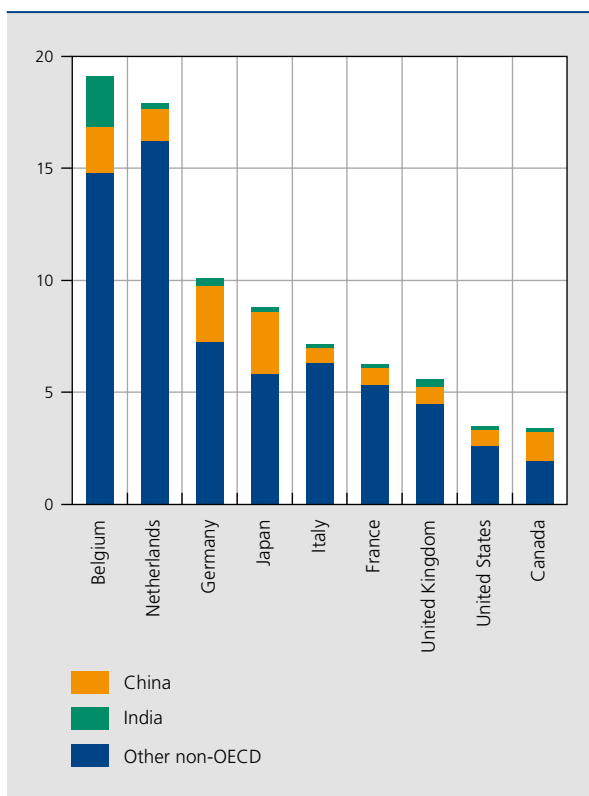
## 2. Rebalancing in China

Since 2011, China's growth performance has become more moderate. This section examines the factors behind this change and the spillovers to other economies.

China's impressive economic development over the past three decades has transformed it into the world's second largest economy after the US. Reliance on exports and investment in industry have driven growth, which was around 10% a year for almost 30 years until recently. However, doubts about the sustainability of this producer-based and export-led growth model have increased over time as deepening economic imbalances showed the limits to this growth strategy. These include a very high share of increasingly inefficient investment in GDP at the expense of consumption, reliance on state-owned enterprises with too small a private sector, a relatively underdeveloped services sector (in particular social services, health care, business and financial services), a tightly controlled financial sector, rising income inequality, an energy-intensive economic structure and mounting pressure on natural resources.

Despite growing doubts, an investment-driven strategy has been maintained and even reinforced by a massive fiscal and monetary stimulus in the aftermath of the global financial crisis in order to avoid a sharp growth deceleration due to the collapse of export markets. The measures have been implemented through local government and the predominantly state-owned banking sector, and resulted in a rapid expansion of investment in mainly infrastructure and real estate fuelled by strong credit growth. The programme was scaled down in subsequent years as it had induced a bubble in the property market, a build-up of leverage at local government and corporate level as well as the sudden emergence of a largely uncontrolled

**CHART 3** TRADE EXPOSURE OF SELECTED OECD COUNTRIES TO NON-OECD COUNTRIES  
(gross exports in % of GDP, 2013)



Source: OECD.

shadow banking sector. This exacerbated the imbalances and vulnerabilities associated with the old growth model.

As a consequence of these developments, a consensus has emerged among key Chinese government officials and international organisations that a transition towards more moderate but more balanced growth is necessary. With this objective in mind, China has embarked on a comprehensive third plenum<sup>(1)</sup> reform blueprint towards a new growth model. In this model, services sectors, innovative enterprises, infrastructure development and the green economy will provide the main engines for growth. The necessary resource reallocation will be achieved through greater reliance on markets, including more market-based pricing, the removal of barriers to entry in many sectors and a more level playing field for non-state-owned market players. Ample attention will also be given to improved social welfare as a way of boosting consumption and maintaining social harmony.

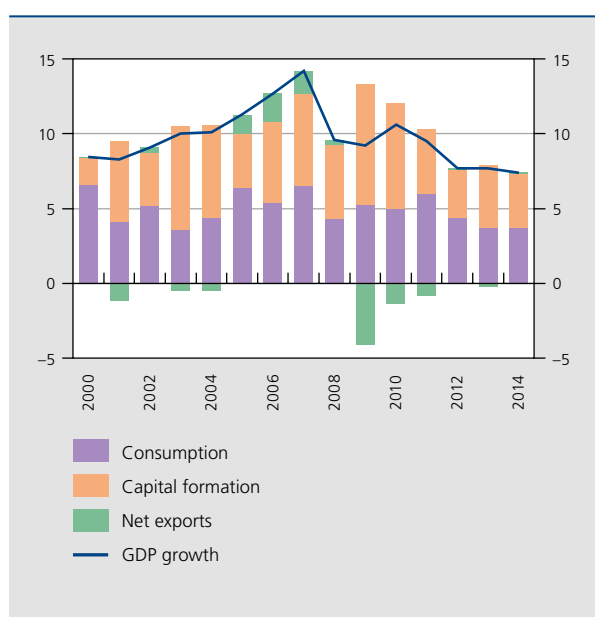
The evidence on progress made towards rebalancing the economy is mixed so far. Economic growth has been slowing down since 2011, largely because of the decelerating investment growth rate, whereas the consumption growth rate remains more or less stable at best. Roughly 80 % of total investment originates in three big sectors: the property sector (1/4), infrastructure investment (1/4) and manufacturing (1/3). There are signs of a slowdown in each of these areas, due to policy measures to tackle

vulnerabilities, excess capacity in several manufacturing sectors (heavy industry in particular) and in some segments of the housing market. But China's continued urbanisation process will ensure sustained demand for investment in housing and infrastructure.

In comparison with other emerging markets, demand in China is very clearly skewed towards investment at the expense of private consumption. The share of investment in GDP averaged 45 % in China between 2008 and 2014, against slightly more than 30 % in India and Indonesia and much lower values around 20% in the other major emerging economies. The figure for China is somewhat biased though, as it was the only country where the investment share rose during the period under consideration due to the already mentioned government response to the global financial crisis. The share of private consumption in GDP averaged only 36 % in China over the same period, against 50 % or more in the other emerging economies. One explanation for this is the high household savings rate in China, which remained around 25 % during this period and reflects the inadequacies of the social safety net as well as the demographic dividend (see section 7). Another factor explaining the low consumption share in GDP is the low household share in income. Tight capital controls ensure that these savings are channelled into investment. Measures to stimulate consumption in the form of higher minimum wages and the continued expansion of the social safety net have been taken, but are only gradually working their way through to consumption.

Another indicator of rebalancing is the trend in employment shares in the primary, secondary and tertiary sector. As expected, the employment share of agriculture declined steadily, and this has benefited both the manufacturing industries and the services sectors. However, a services employment share of about 40 % in 2014 is low by international standards, as it reaches 50 % or more in many emerging economies and 75 % or more in advanced economies. One factor holding back services sector development for a long time has been the undervalued exchange rate of the renminbi (Dorrucci *et al.*, 2013), which reinforces a country's specialisation in low-tech industries employing cheap labour and consequently also contributes to the low household share in income and to related weak consumption. Strong appreciation of its real effective exchange rate in recent years has nevertheless led the IMF to conclude in its latest Article IV consultation report that the renminbi is no longer undervalued. At

**CHART 4** DECOMPOSITION OF GDP GROWTH  
(in percentage points, unless otherwise indicated)



Source: CEIC.

(1) The third plenum is the third plenary session of the Communist Party's Central Committee in a five-year cycle, as the members of the Central Committee are chosen to serve a five-year term. The meeting is important because the new leadership presents its blueprint for economic and political reforms in the coming five years.

the same time, a shift in export structure towards more sophisticated exports and better paid jobs is also being observed. Other factors hindering services sector development include entry barriers and the above-mentioned weak consumption. The current primary sector employment share of 30% suggests that there is still scope for shifting rural labour into higher-productivity services sectors.

Successful rebalancing of the Chinese economy is considered important in order to safeguard robust productivity growth in the medium term. The shift of the remaining labour reserves out of agriculture into services and from low-tech exports into higher-value-added exports will boost productivity growth. These shifts need to be accompanied by a continued transition from State to market and financial market liberalisation, both of which should encourage a more efficient allocation of resources. Under the no-rebalancing scenario, productivity growth is likely to be dragged down by a growing misallocation of resources, while high investment rates will provide less and less impetus to growth. This will also induce a further build-up of vulnerabilities, increasing the risk of a hard landing. But the very high investment ratio in China implies that rebalancing towards consumption-led growth will be accompanied by lower growth, especially in the near term because the pick-up in consumption growth will be more gradual. The stimulus for brisker consumption

growth must come from an expansion of the social safety network, the removal of discriminatory practices against domestic migrant workers (they make up one-third of total employment) and stronger nominal wage growth.

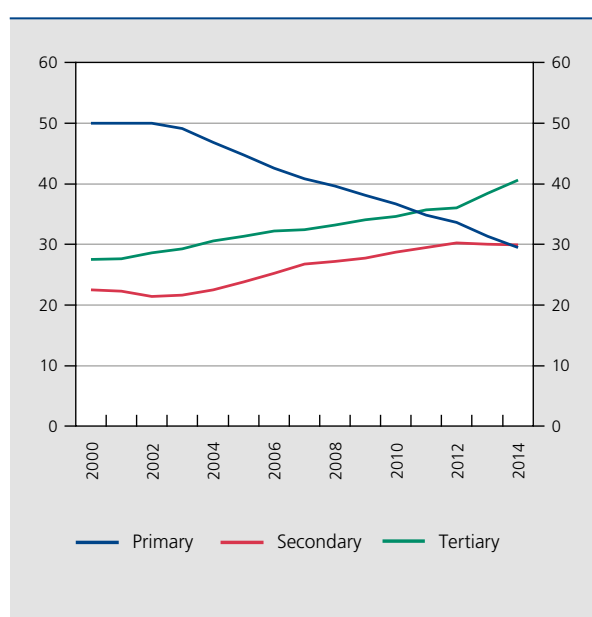
The slowdown of the Chinese economy due to lower investment has implications for the global economy well beyond its direct contribution to world growth. In particular, reduced investment in heavy industry and construction has contributed to the end of the commodity super cycle, which is the topic of the next section. China currently accounts for more than 60% of world imports of manganese, aluminium and iron ore (OECD, 2015), although demand for iron ore will be shored up somewhat by new railway construction projects. Its import share amounts to 40% for copper. Downward adjustments in heavy industry also affect energy (oil and coal) demand as these industries tend to be very energy-intensive. Not surprisingly, the largest exposures to China can be found among commodity exporters, especially New Zealand, Australia, Brazil, Chile, South Africa and Indonesia. A number of Asian countries such as Vietnam, Thailand, Taiwan and Korea are also heavily exposed through their exports of final goods to China.

### 3. The end of the commodities boom

The steep decline in commodity prices that started in the second half of last year against the background of a slowing Chinese economy is an important factor shaping the economic context for many emerging markets. While lower commodity prices provide a boost for commodity importing countries, growth forecasts for commodity exporters have been revised downwards. More particularly, the IMF 2015 growth forecasts for emerging markets heavily dependent on commodity exports (see countries depicted in graph 6) were trimmed by 1.7 percentage points on average between October 2014 and April 2015. Although significant declines in the prices of food and industrial commodities have been observed too, oil prices have shown the most remarkable movement, with prices dropping more than 55% since July 2014. Food and industrial commodities both fell by about 25% over the same period. The remainder of this section will focus on the effects of the fall in oil prices.

The collapse of oil prices directly affects growth in oil-exporting countries as they are faced with a negative terms of trade shock. Graph 6 illustrates that oil exports in many emerging market countries account for a significant share of their GDP. For those countries where oil export revenues accrue almost entirely to the government, as is the case in the Middle East for instance, fiscal positions

**CHART 5** EMPLOYMENT SHARE BY SECTOR  
(in % of total employment)



Source: CEIC.

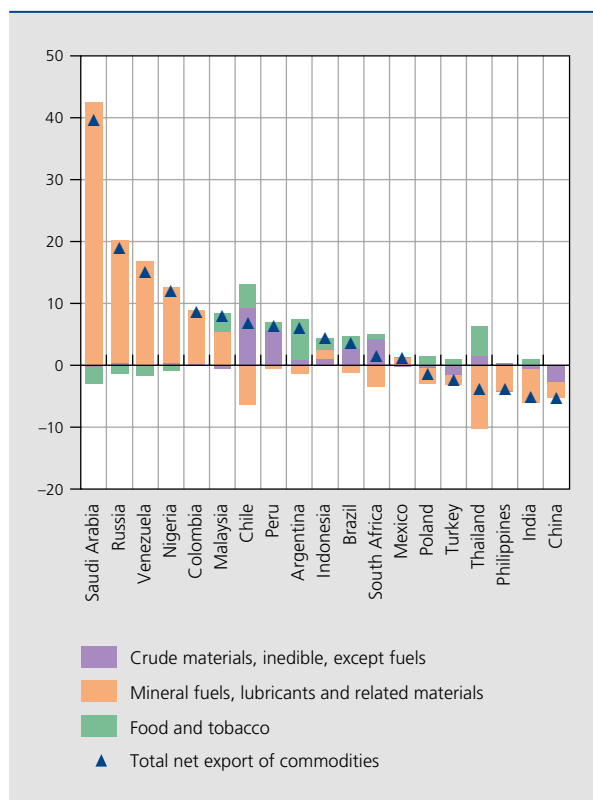
are hit too. Declining export and fiscal revenues, in turn, feed back into lower oil production and investment. Net oil importers, on the other hand, see their terms of trade improve. The extent to which lower oil prices benefit households and firms in these countries nevertheless depends on how big the price pass-through is. In many emerging market countries, administrative controls on energy prices actually limit the transmission to end users and hence, the positive effects on demand. If lower oil prices do feed through to domestic prices, households will see their disposable income rise, while firms can enjoy lower costs, boosting their profits and investment.

Both supply and demand factors have played a role in the fall in oil prices. Global demand for oil has declined to a significant extent on the back of weaker demand from major emerging economies. On the other hand, supply has risen steadily in recent years due to the increase in the production of non-conventional oil in the US, OPEC's decision from November 2014 not to lower its output accordingly and the faster-than-expected recovery of oil production in countries like Iraq and Libya.

While the outlook for oil and other commodity prices is inherently highly uncertain, a substantial part of the recent price drop is expected to have a large persistent component. On the one hand, while demand in many parts of the world will slowly pick up again along with the recovery of global economic activity, the recent relative weakness of emerging markets is dampening demand for commodities and is likely to continue to do so. The unprecedented rise in commodity prices during the 2000s was in fact largely the result of substantial increases in demand from fast-growing emerging markets, especially China. On the other hand, while oil production is expected to decline on the back of lower investment, output will take some time to adjust, given large existing capacity. The International Energy Agency therefore expects a surplus on the oil market to persist through 2016. In other words, oil prices are likely to return to higher levels, but only gradually.

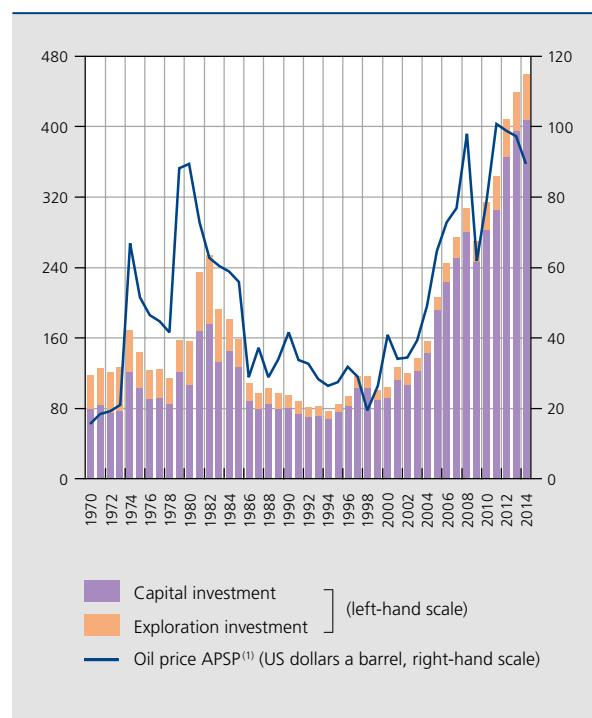
While lower oil prices are already negatively impacting growth in oil-exporting countries, a more persistent decline in oil prices is hitting investment in oil exploration and development too and, as such, also affects potential output and longer-term growth prospects

**CHART 6** NET EXPORT OF COMMODITIES IN A SELECTION OF EMERGING MARKETS  
(net exports as a share of 2014 GDP, in %)



Sources: UN Comtrade, IMF.

**CHART 7** GLOBAL OIL INVESTMENT AND OIL PRICE  
(billions of constant 2010 US\$, unless otherwise indicated)



Sources: IMF April 2015 World Economic Outlook.

(1) APSP: average petroleum spot price; average of UK Brent, Dubai and West Texas Intermediate, equally weighted.



for oil exporters. Historically, there has been a strong correlation between developments in the oil price and global oil investment, as graph 7 below illustrates. Oil investment is actually already adapting to a context of lower oil prices, with major oil companies reportedly cutting back on investment plans. This confirms IMF (2015d) estimates on the basis of historical data that the impact of lower oil prices on investment is generally felt within one year.

Oil price volatility has also increased, reflecting uncertainties that could push prices either up or down. Uncertainties relate *inter alia* to increased geopolitical tensions in countries like Iraq and Libya, possible effects of the nuclear deal with Iran, OPEC's production strategy and future energy efficiency and substitution from oil to other energy sources. Higher uncertainty about the future course of oil prices may further reduce investment growth in the oil sector and could even limit investment growth in non-oil sectors that use oil intensively. The effect of uncertainty is compounded by the largely irreversible nature of investment, especially in the conventional oil sector (IMF, 2015d).

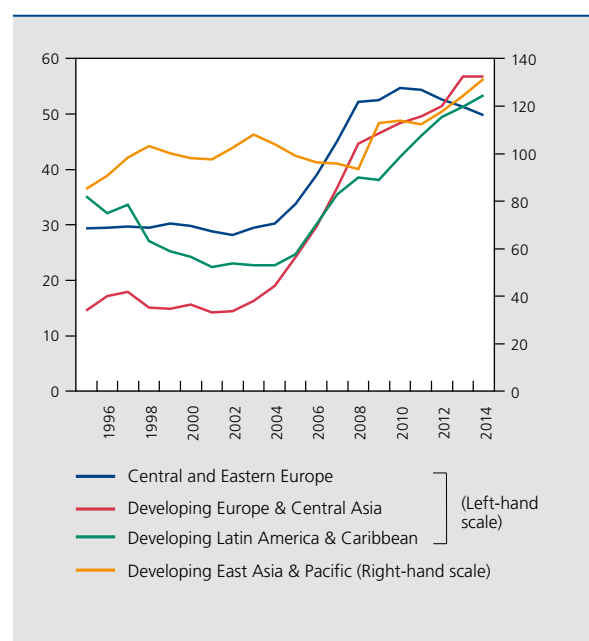
In those oil-exporting countries where oil revenues accrue largely to the government, fiscal positions are significantly affected, forcing governments to cut down on expenditure. Substantial buffers built up during the boom years should allow governments in many oil-exporting nations to avoid steep cuts in investment, thereby limiting the impact on longer-term growth. Countries that do not have sufficient buffers available will need to adapt spending more swiftly. More particularly, fiscal break-even prices for oil have risen significantly in those oil-exporting countries where government revenues were used to pay for large increases in expenditure when oil prices were high and rising. For those countries, the current fall in oil prices might be a reminder to undertake necessary reforms. More generally, in order to enhance their resilience to shocks, countries that are heavily reliant on exports of oil or other commodities would benefit from structural reforms aimed at diversifying their revenue base towards other, more stable sources of income. In order to limit the impact of the oil price drop on their economies, these countries would specifically benefit from diversifying the sectoral composition of growth and from investing in growth-enhancing areas such as education, health or infrastructure.

## 4. Leverage

Leverage is another factor affecting growth in emerging markets. In the run-up to the crisis, credit had been building up to a significant extent globally, including in many emerging markets (see graph 8). While the financial crisis temporarily slowed down credit growth, it continued building up in many regions afterwards, especially in Asia. In fact, a prolonged period of low interest rates in the aftermath of the crisis and investors' search for yield supported capital flows to emerging markets and lowered the cost of financing.

Nevertheless, in Central and Eastern Europe, private credit growth has, since the crisis, not resumed the robust upward trend it had been pursuing before. While the region had witnessed a remarkable build-up of credit during the 2000s – facilitated to a significant extent by cross-border loans from western European banks – the financial crisis triggered a sudden stop in external financing and domestic credit growth fell sharply from its pre-crisis highs. Falling income and asset prices, in particular the bursting of the housing price bubble, combined with higher risk premiums, made high levels of private debt unsustainable. In several countries, the debt overhang was exacerbated by the exchange rate depreciation, given that a significant share of corporate and household loans were

**CHART 8** DOMESTIC CREDIT TO THE PRIVATE SECTOR  
(in % of GDP)



Source: World Bank.

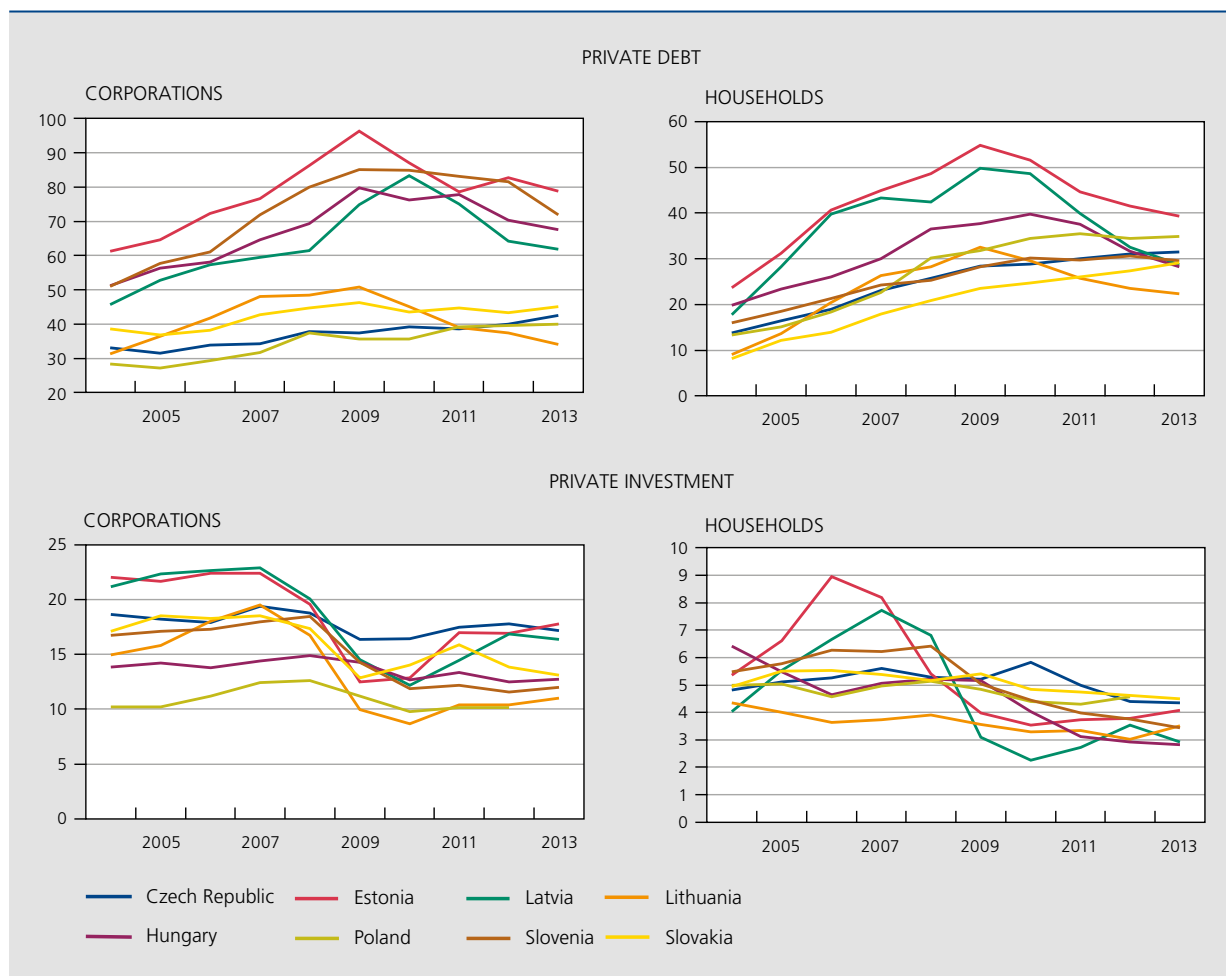
denominated in foreign currencies. In an effort to clean up their balance sheets, households and companies curtailed their borrowing. As credit ground to a halt, investment rates plunged across the region and have remained weak ever since (see graph 9). While these developments pushed the region into a deep recession, the lack of any pick-up in investment, especially productive corporate investment, is also having an impact on the region's longer-term growth prospects.

Important differences between the countries in the region nonetheless exist. Overall, the largest debt reductions since the crisis can be observed in the countries that were faced with the highest build-up of leverage beforehand, as was the case in the Baltic countries or Hungary for example. While the Baltics have since the start of the crisis also experienced the sharpest drop in

investment, they were the ones showing the first signs of a recovery of fixed capital formation. In this regard, some have argued that the Baltics were able to adjust faster due to their more flexible institutions and to strong trade and financial links with countries that were less affected by the crisis, namely the Nordic countries (IMF, 2015b). In most other countries in the region, investment remains sluggish.

The gradual recovery of the region in the aftermath of the crisis has been essentially creditless, with constraining factors on both the demand and supply side holding back the resumption in lending. The slowdown in credit and investment demand is partly a natural consequence of the general decline in aggregate demand in the economy in the aftermath of the crisis. Nevertheless, the creditless recovery is also a sign of more structural

**CHART 9** PRIVATE SECTOR DEBT AND INVESTMENT IN A SELECTION OF CENTRAL AND EASTERN EUROPEAN COUNTRIES  
(in % of GDP)



Source : Eurostat.



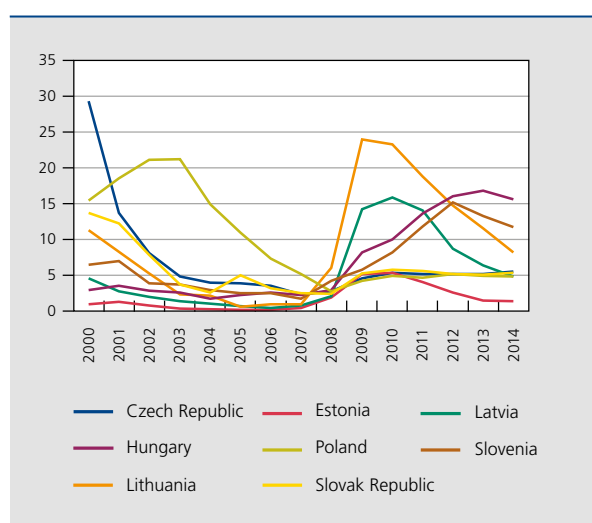
problems facing the region, with the high private sector debt overhang continuing to weigh on credit demand and investment for some time to come. Banks, on the other hand, are not supplying credit. The deterioration of the external funding environment<sup>(1)</sup>, as well as bad portfolio quality – banks in some countries are still carrying a high stock of non-performing loans on their balance sheets (see graph 10) – and poor profitability are impairing banks’ ability and willingness to resume lending.

The fact that structural factors are playing a role in holding back investment complicates policy-making. For instance, the easing of monetary conditions will not necessarily induce higher borrowing as households and companies are focused on deleveraging and banks are burdened with several constraints. The region would benefit from NPL write-downs and measures that render the insolvency framework more efficient. At present, corporate insolvency legislation is considered weak in many countries in Central and Eastern Europe, while personal insolvency frameworks are sometimes non-existent (World Bank Doing Business, 2014). Given the sharp rise in post-crisis insolvencies in many Central and Eastern European countries, several of them have in the meantime started reforming or refining their insolvency regimes. In some of the most badly affected countries, direct government intervention has been used to tackle the problems related to high private sector debt levels. Hungary is probably one of the most illustrative examples

in this regard. To reduce the stock of household foreign currency loans, the Hungarian government passed legislation (effective on 1 February 2015) converting all foreign-currency-denominated mortgages – which accounted for almost 70 % of the retail loan portfolio – to forint loans. The government had already launched several support schemes before to tackle the problems of foreign-currency loans, but these had failed to target fully the most vulnerable debtors and significantly increased moral hazard.

Finally, it should be recalled that the challenge of deleveraging is compounded by other problems, facing emerging markets more generally. First, their public, banking and non-financial private sector balance sheets have become more integrated over the past decade, which magnifies the problem and importance of deleveraging. In that regard, the IMF has noted that large-scale repair of corporate balance sheets complicates deleveraging efforts of households, with negative feedback effects on firms. In fact, as firms cut back investment and fire workers, they depress household income, which weakens household debt metrics. This lowers consumption, in turn further weakening firms’ balance sheets. When both corporates and households are faced with high debt levels, as is the case in Central and Eastern Europe, the situation is even more painful. Second, as illustrated in section 7 of this article, unfavourable demographics have the potential to slow growth as well, making it even more difficult to escape the negative debt dynamics. Finally, there is a risk of a vicious circle between debt overhang and deleveraging: debt overhang implies slower growth, which makes deleveraging more difficult, feeding back into continued slow growth. Structural reforms are essential to escape this vicious circle.

**CHART 10** BANK NON-PERFORMING LOANS TO TOTAL GROSS LOANS  
(in %)



Source: World Bank.

Notwithstanding the specificities of the credit cycle boom and bust in Central and Eastern Europe, emerging market countries in other regions might be confronted with similar challenges in future. Tightening external financing conditions and slower domestic growth might expose vulnerabilities that have been building up in those emerging market economies where debt has continued to accumulate in recent years. As graph 8 illustrates, other emerging market regions, and Asia in particular, have witnessed a continued rise in credit after the financial crisis, partly the result of the rebound in capital inflows over 2010-2012. The largest emerging market economies (Brazil, China, India and Russia) seem to have reached the later stage of the credit cycle, which is marked by deteriorating asset

(1) The “Vienna” Initiative, launched in January 2009, brought together all the relevant public and private sector stakeholders of EU-based cross-border banks active in emerging Europe to provide a forum for decision-making and coordination, helping to avoid a massive and sudden deleveraging by cross-border bank groups in emerging Europe.

quality, increased leverage and asset prices which have reached their peak (IMF, 2014c).

## 5. Global value chains

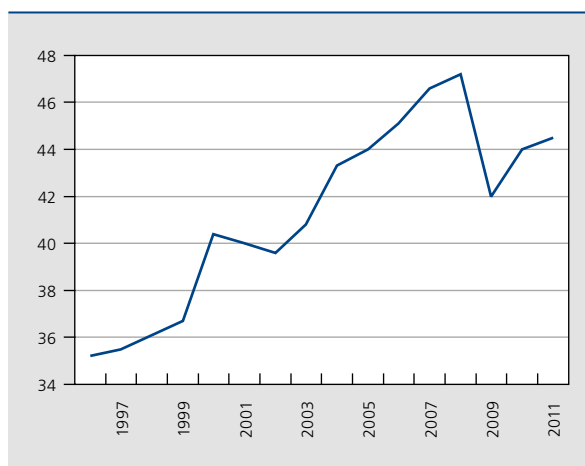
Some argue that one of the factors contributing to the emerging markets' growth slowdown is the changing pattern in global value chains (GVC). The concept of GVCs refers to the division of the production of goods and services into linked stages of production scattered across different entities and increasingly across international borders in order to optimise differences in comparative advantages between countries. The rapid growth and complexity of international GVCs observed since the late 1980s has been facilitated by technological developments, falling transport costs and a reduction in trade barriers.

Participation in GVCs allows a country to specialise in tasks and parts of goods and services instead of finished products. This more granular specialisation in tasks allows for stronger productivity effects in exporting firms and sectors than final goods specialisation. In addition, GVC participation enables low- and middle-income countries to move into industries with a higher technology content through their specialisation in low-skilled tasks such as assembly, and to benefit from economies of scale through trade as well as from greater diversification.

There are significant differences between regions and countries in the extent to which they participate in GVCs which can largely be explained by differences in structural characteristics. In an empirical study on developing countries, Kowalski *et al.* (2015) found the following key determinants for GVC participation: (1) market size, (2) level of development, (3) industrial structure with a higher share of manufacturing acting as a plus, and (4) location as GVCs are organised around large manufacturing hubs so there is a premium to being closer to the main manufacturing hubs in North America, Europe and Asia. As a consequence, South East Asia, emerging Europe and Mexico have benefited most from the integration into GVCs organised around the central hubs of respectively China, Germany and North America. In addition, trade and other policies can play a significant role, in particular low import tariffs (both at home and faced in export markets), regional trade agreements, inward FDI openness, logistic capabilities and the quality of infrastructure and institutions.

The development of GVCs has supported world trade growth in the last 20 years. The growing international fragmentation of production has resulted in an increase in back-and-forth trade in components and parts for

**CHART 11** SHARE OF GVC-RELATED TRADE IN WORLD TRADE  
(in %)



Source: Borin and Mancini (2015) based on OECD-WTO TIVA database.

processing and re-exports. This boosted world trade elasticity in the pre-crisis period due to the difference in measures, as trade is usually measured in gross terms, whereas GDP is measured in value-added terms. Gross trade also grew more rapidly than its value-added equivalent, which filters out "double counting" of imported inputs used in the production of exports. The gap between the gross and the value-added measures of trade should reflect the level of outsourced inputs in total world trade and can therefore also be used as a proxy for measuring the GVC related component of trade (Borin and Mancini, 2015; Constantinescu, Mattoo and Ruta, 2015). Figure 11 shows the evolution of the ratio of GVC-related trade to gross trade, with a rise corresponding to an expansion of international GVC and vice versa.

The share of GVC trade in total trade grew from approximately 36% in 1996 to 47% in 2008, with a temporary mild reversal during the crisis years 2001 and 2002. But it plummeted during the global financial crisis, suggesting there were interruptions in the international supply chains due to the crisis. These might be related to the difficulties in obtaining trade credit at the height of the recession. GVC-related trade has not (yet) fully recovered its pre-crisis value. This is one indication that the process of international fragmentation of production may have slowed down or reversed. Further evidence is provided by the elasticity of trade. It has in fact been noted by the various international organisations that this elasticity has declined since the global financial crisis. Using quarterly data, the ECB (2015) estimated the ratio of world trade growth to global GDP growth at 2.2 for the period

1995Q2 to 2007Q4, and 1.1 for the period 2011Q3 to 2014Q3. Similarly, Borin and Mancini (2015) computed the average elasticity of world trade based on annual data for the periods 1996-2000, 2001-2005 and 2006-2011 and found respectively values of 2.06, 1.45 and 1.13. In a next step, the elasticities in each period were broken down into a component related to the GVC contribution to trade and a residual component. It was found that the elasticity of GVC-related trade declined from 0.45 to 0.33 and further to 0.04 in the 3 consecutive periods. Finally, Dhyne and Duprez (2015) measured the length of the production chains for Belgium, the advanced economies and the emerging economies separately. They found evidence of a shortening of the production chains in recent years, which affected emerging economies in particular.

Part of the explanation for the levelling off in the expansion of GVCs may be related to the changing patterns in Chinese trade. China's rise as a major exporter has been spectacular, with its export market share going up from 2% in 1990 to 13% in 2013. China rapidly became the assembly line of the Asian value chain, importing components and services from Japan, Korea, Taiwan, Thailand, Malaysia and more recently Vietnam and Cambodia. The imported components in turn often embody value added produced in third countries. But throughout the 2000s, China upgraded its exports and took an increasingly larger share of value added in the GVCs, as evidenced by the falling share of imports of components and parts in China's merchandise exports from its peak of 60% in the mid-1990s to its current level of around 35% (Constantinescu, Mattoo and Ruta, 2015). China's changing trade specialisation offers both opportunities and challenges. Its gradual exit from labour-intensive goods such as clothing has already created opportunities for low-income Asia (e.g. Bangladesh, Vietnam, Cambodia). But its import-substituting strategies are also limiting opportunities for other middle-income countries with similar specialisations.

In general, if the expansion of GVC integration was associated with stronger productivity performance in some emerging countries, then this boost to productivity is likely to disappear with the stagnation of GVCs, in particular in those emerging economies that integrated successfully into value chains but are now finding it more difficult to move up the value chain.

## 6. The middle-income trap

The slowdown currently observed in many emerging countries is actually a recurring phenomenon in economic history. International experience over a longer

period of time does show that is quite common for emerging and developing countries to undergo a sustained period of low growth after several years of strong growth. This phenomenon can occur at different per capita income levels but is most often observed in middle-income countries (defined as the range \$2 000 – \$15 000 of GDP per capita in PPP in Aiyar *et al.* (2013)). As a consequence, these countries fail to achieve a period of sustained improvements in per capita income that is long enough for them to join the selective club of high-income countries. Instead, their per capita income levels stagnate or fall back, causing them to stay in the middle-income bracket for an extended period of time. This observation is commonly referred to as the "middle-income trap".

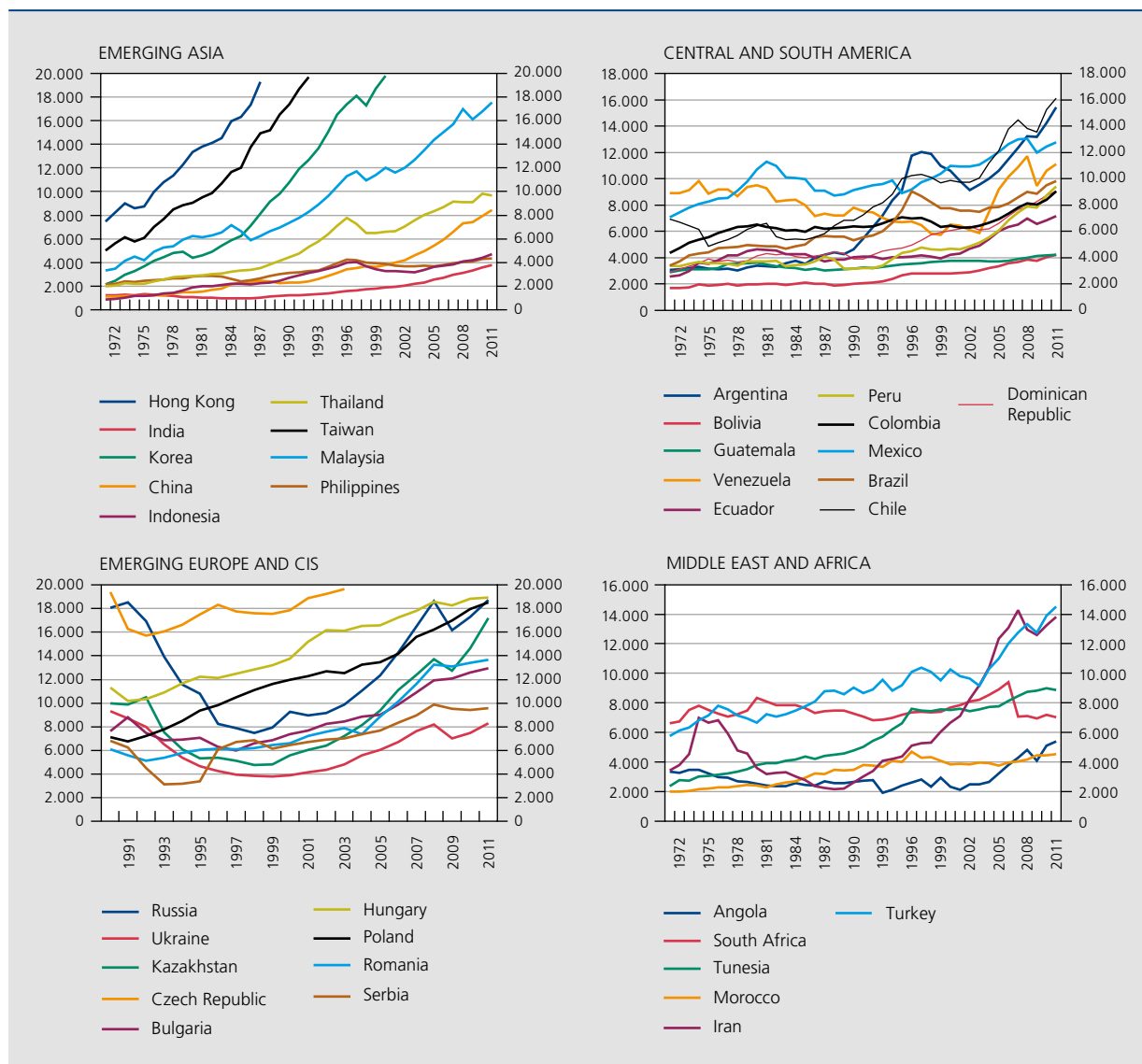
Growth slowdowns in middle-income countries are often associated with weakening or even negative productivity growth (OECD 2014, Ferranini, Zweglich and Hummels 2012). During the transition from a low-income to a middle-income economy, productivity is boosted by shifting labour from lower to higher productivity sectors (e.g. from agriculture to manufacturing or services, from the countryside to urban areas). This shift continues to be an important factor in middle-income countries as long as labour reserves last (e.g. India and Indonesia). During this take-off phase, developing countries also benefit from low labour costs, inducing a foreign-investment-led development of export industries, as well as rapid capital accumulation and transfers of technology. But, at some point, these drivers weaken and labour becomes more expensive, implying that the focus needs to turn increasingly to productivity gains within sectors resulting from shifts into higher-value-added production through innovation and industrial upgrading. Many countries find this much harder to achieve, explaining why they get stuck in the middle-income trap.

Figure 12 illustrates the experience of several large emerging economies in all corners of the world during the period 1971-2011 (1990-2011 for emerging Europe and CIS). Countries included in the sample are those with a population of at least 10 million in 2011 (7.5 million for emerging Europe), and which had a per capita real GDP in PPP in the range of \$2 000 and \$15 000 for at least a part of this period.

As the figure illustrates, there have been a few countries which made the transition from the middle-income class to the high-income group after 1971. This has been the case for the first wave of Asian tigers (Taiwan, Korea and Hong Kong) as well as the Czech Republic, and more recently Hungary, Poland and Malaysia. The success of the East European countries can be attributed to EU

**CHART 12** HISTORICAL EVIDENCE ON THE MIDDLE-INCOME TRAP

(real GDP per capita in PPP, 2005 USD, chained)



Sources: Penn World Tables 8.1, own calculations.

(1) Purchasing Power Parity (PPP) is commonly used to compare standards of living across countries. PPPs are compiled by the International Comparison Program (ICP). To ensure comparability over time, a measure of real GDP (expenditure approach) is chosen which uses prices that are constant over time and fixed across countries. The calculations make use of the real GDP growth series from the national accounts and the ICP benchmarks from multiple years (2005 being the most recent benchmark).

accession, which facilitated real convergence through sustained productivity growth. In contrast, the countries of Central and South America, the Middle East and Africa, as well as the late starters from East Europe and the CIS, registered more modest improvements in their standards of living and they remained in the middle-income range.

Emerging Asia constitutes a heterogeneous group in terms of performance. With the possible exception of Malaysia, the second wave of Asian tigers (Thailand, Philippines, Indonesia) has not replicated the successes

of the first wave. Korea, Taiwan, Thailand and Malaysia have all relied successfully on multinational corporations to develop their export industries and to contribute to the growing sophistication of their exports through technology transfers, but Korea and Taiwan have been more successful in creating local technology firms which played an instrumental role in the domestic diffusion of technologies (Cherif and Hasanov, 2015). China's record has been impressive and comparable to the earlier Asian success stories, but it is still a middle-income country today. As discussed in the second section, a successful rebalancing

of the Chinese economy offers the best prospects for sustained productivity growth in the medium term, which appears necessary (though perhaps not sufficient) to avoid the middle-income trap. India is the most recent arrival in the middle-income group, and its take-off is not as spectacular as China's.

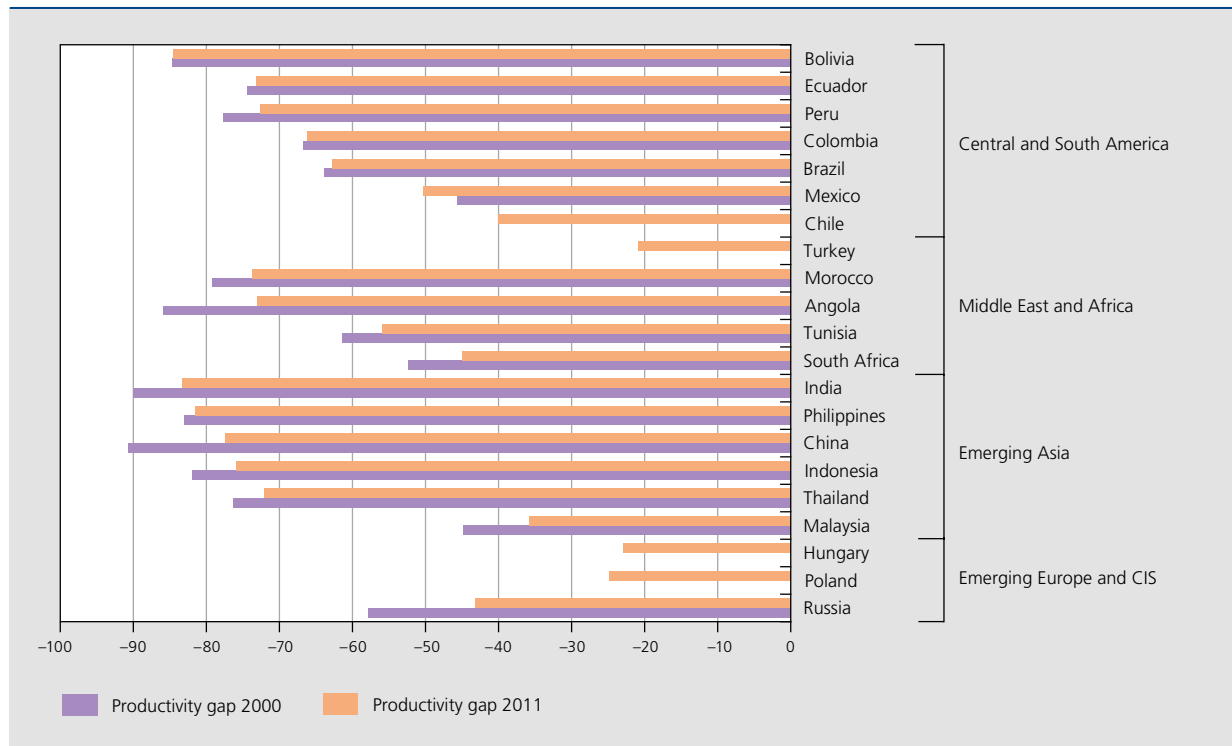
Emerging Europe and the CIS countries share a growth path which is characteristic for the countries that made a big-bang transition from a centrally planned economy to a market economy in 1990. This caused an immediate drop in living standards in the early years of economic restructuring, which was gradually recovered as growth resumed. These countries also benefited to varying degrees from a productivity boost associated with their integration into the world trade system, closure of unproductive state-owned enterprises, adoption of Western technologies and liberalisation of financial markets. However, the latter led to excesses, as reflected in the Russian crisis in 1998 and more recently the bursting of the credit boom in some of these countries (see section 4).

Finally, it also needs to be noted that many countries included in the sample are major oil and commodity

exporters. This is the case for all countries in Central and South America and the CIS, as well as Indonesia, Malaysia, South Africa, Angola and Iran. The observed improvements in their living standards during the last decade are linked to the oil and commodity price boom which has now ended. Experience seems to suggest that these countries are more at risk of falling into the middle-income trap. During commodity price booms, these countries experience wage increases, an expansion of the non-tradable goods and services sectors, strong export growth but also a reduction in their level of export diversification. At the end of the boom, they can no longer compete with low-income countries due to their higher wages, nor can they compete with high-income countries because they have not shifted into higher-value production. In addition, these countries are much less integrated into global value chains than some of the non-resource-based emerging economies.

The per capita income gap between emerging and advanced economies can be broken up into two components: one gap due to differences in labour use and another component reflecting the differences in labour productivity levels, the so-called productivity gap.

**CHART 13** LABOUR PRODUCTIVITY GAPS OF EMERGING ECONOMIES VIS-À-VIS OECD AVERAGE  
(Percentage gap with respect to OECD average in GDP per person employed; in PPP, constant 2011 international dollars)



Sources: OECD, own calculations.

The OECD (2014) found that the episode of strong growth during the 2000s, resulting in some convergence of per capita GDP levels with OECD members, was partly linked to improvements in labour use (as measured by the number of persons employed as a ratio of total population), together with the recovery of the instability and crises of the 1990s. Much less has been achieved in terms of closing the large productivity gap vis-à-vis OECD countries, as figure 13 shows. If the pace of productivity growth observed between 2000 and 2011 is extrapolated into the future, convergence with advanced economies is likely to be a long-drawn-out process for many emerging economies.

Empirical studies shed some light on the important determinants of productivity growth and real convergence. Eichengreen, Park and Shin (2013) show that countries with a high share of population with secondary and tertiary education as well as a high share of high-technology exports are less likely to experience growth slowdowns at middle-income levels. In addition, they find that countries with high old-age dependency, high investment rates (that may translate into low future returns on capital) and undervalued real exchange rates (which provide a disincentive to move up the technology ladder) are more likely to get caught in the middle-income trap. Bulman, Eden and Nguyen (2012) come to similar conclusions and find that countries escaping the middle-income trap experienced rapid structural transformation from agriculture to industry, higher human capital and innovation, greater export orientation and macroeconomic stability. Also important is the creation of technologies by domestic firms (Cherif and Hasanov, 2015). The implications are that continued rapid growth in emerging economies will require pro-active policies that foster deep structural transformation and spawn new sectors (Rodrik, 2011). Governments can help by creating a conducive environment that includes key elements such as macroeconomic, political, and social stability, increased spending on R&D, adequate public investment in infrastructure and human capital, a well-functioning market and a favourable business climate, but that may not provide the magic bullet alone.

## 7. Demographic factors

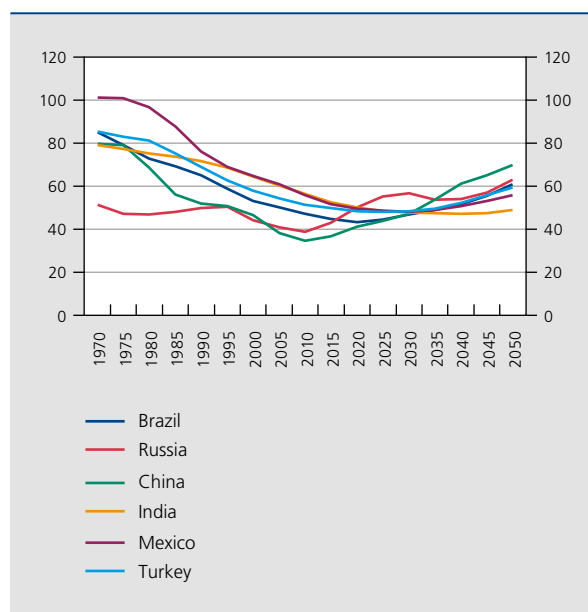
The transition from a low-income to a middle-income economy, where growth is boosted by shifting labour from lower to higher productivity sectors, is often accompanied by a demographic transition during which fertility rates fall and average life expectancy is extended. Before less abundant cohorts of population reach working age, there is a demographic window of opportunity when the labour

force continues to expand and the dependency ratio declines. The addition of labour inputs has the potential to accelerate growth further. This phenomenon is referred to as the “demographic dividend”, its size depending on the ability of an economy to absorb and productively employ the extra workers.

A lower dependency ratio also contributes to growth through the saving channel: to the extent that working people save and dependents do not, it raises the household saving rate. More savings will translate into a lower cost of capital, which is likely to boost investment rates and thereby reinforce the growth-enhancing effect of the demographic transition. Another positive impact could come from reduced pressure on government spending on dependents, but it will be smaller in emerging countries with small social safety nets.

All major emerging economies considered in figure 14 have benefited from a declining dependency ratio over the last decades. The case of China is quite spectacular and reflects the implementation of the one-child policy in addition to the natural drivers. It should also be mentioned that the demographic dividend has been a key element in the rise of the Asian tigers. While many emerging economies will continue to enjoy a demographic dividend for some time after 2015, Russia (and the entire region of the CIS and emerging Europe) and China begin to face

**CHART 14** DEMOGRAPHIC EVOLUTION IN SELECTED EMERGING MARKET ECONOMIES  
(total dependency ratio, prospects according to median scenario)



Source: UN World Population Prospects 2015 update.



ageing challenges. In China, it is estimated that the labour force will decline after 2015 and labour shortages are expected to appear around 2020. In contrast, India could benefit from a continued demographic dividend over the next two decades.

As mentioned in the previous section, empirical research has found that economic slowdowns are more likely in countries with high (old age) dependency rates. Population ageing affects the size of the labour force through effective retirement but also through the labour market participation rate of older people (age 55 – 64) which is lower than for people of prime age (age 25 to 54). As the number of retirees is replaced by a smaller number of new entrants, there is a risk of labour shortages arising which will push up wages. So there is a greater urgency to boost productivity growth sustainably through a shift to economic sectors with a higher technology content and through innovation in countries with ageing populations. It also underlines the necessity for China to successfully rebalance its economy, otherwise it will grow old before getting rich.

## Conclusion

With emerging markets accounting for almost as high a share of the world economy as advanced economies in 2014 and in view of the increasingly two-sided interdependence between both, the broadly-based growth slowdown in emerging economies is already having a significant impact on the world economy via trade links, commodity prices, financial markets and confidence effects. This article has highlighted a number of structural factors that have contributed to this slowdown. A major development is China's determination to move onto a more moderate and more balanced growth path since increasing imbalances and vulnerabilities had shown the limits of three decades of very rapid growth. China's rebalancing act has already produced negative spillover effects on trade partners and commodity-exporting countries. This adds to the second explanatory factor, namely the sharp fall in prices of many commodities, including oil, due to the interplay between weak global demand and large existing capacities, which is putting producing countries under pressure to cut back on investment and spending programmes. At the same time, some Central and Eastern European countries are struggling to recover from the bursting of the credit-fuelled business cycle bubble following the global financial crisis which was

immediately transmitted to the region via the dominant western European banks. Finally, the development of global value chains, a factor which contributed to the rise of some emerging markets, in particular China, East Asia, Eastern Europe and Mexico, appears to have halted or even gone into reverse.

The rather structural nature of these factors can also explain why the slowdown of growth in emerging markets is expected to be protracted. The rebalancing of the Chinese economy is a permanent feature, the slump in oil and commodity prices will most likely have a large persistent component and deleveraging takes time. Moreover, this article has shown that it is quite common for emerging economies to experience a long period of low growth after an extended period of brisk expansion. This so-called middle-income trap most often results from a failure to maintain sustained levels of productivity growth after the easy part of the convergence process through sectoral shifts and when productivity growth becomes more dependent on the adoption of new technologies and on innovation. The risk of getting caught in the middle-income trap will be exacerbated in the coming years by rapid population ageing in China and the CIS and Central and Eastern European countries.

Looking ahead, it appears that the power of emerging markets' engine of growth will get weaker. Predicting longer-term growth trends is nevertheless subject to many uncertainties. The transition towards a more balanced growth model in China may not always follow a smooth and predictable path, as the recent events of the past summer months indicate, and will cause ripples in the rest of the world. And while Central and Eastern Europe is still recovering from its debt overhang, other emerging markets are seemingly lagging behind in the cycle and still accumulating debt more rapidly than warranted by their growth performance. This makes them less resilient to external shocks. Against this background of a more moderate growth potential and rising vulnerabilities, the macroeconomic fundamentals of emerging markets no longer appear as solid as in the immediate aftermath of the global financial crisis. This has contributed to the recent change in market sentiment as reflected in the financial market turmoil and slowing capital flows to emerging market economies. Strengthening fundamentals and speeding up other reforms will be necessary in order to avoid falling into the middle-income trap and a return to the volatile years of the 1980s and 1990s.



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NCB	National central bank
NRP	National reform programme
NSFR	Net stable funding ratio
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of the Petroleum Exporting Countries
PMR	Product Market Regulation
PPP	Purchasing power parity
R&D	Research and development
SGP	Stability and Growth Pact
SME	Small and medium-sized enterprise
SP	Stability programme
SSM	Single supervisory mechanism
TFP	Total factor productivity
VAT	Value added tax
WIOD	World Input-Output Database
WTO	World Trade Organisation