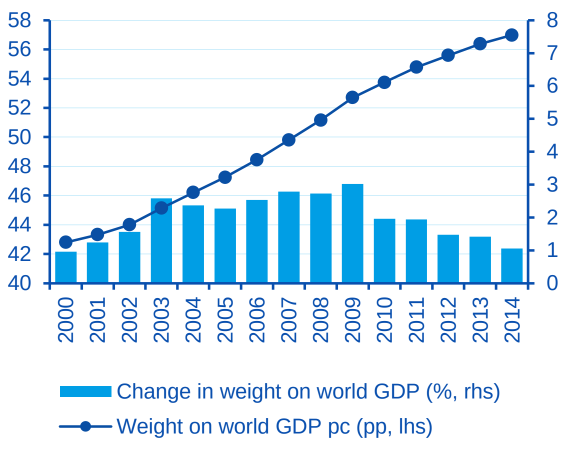
3 GDP per capita and growth: the middle-income trap hypothesis

After the last economic crisis, the worst and longest-lasting since World War II[2], **the economic growth scenario is moderately favourable in the short term.** World growth is above 3%, close to its historical average since 1980 (3.5%), although still far from the average of the ten years prior to the 2008-09 crisis (4.2%). GDP recovery is still slow in the bulk of the DMs, which are still *deleveraging* after the sharp rises in debt registered in the previous expansion phase; and the EMs are having to deal with the change in China's growth model in a context of lower commodity prices.

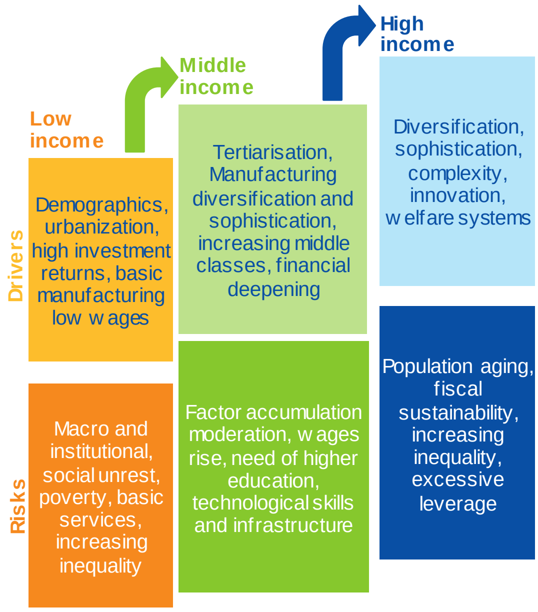
The correction in growth since 2008 has been both in the advanced economies[3], the focus of the crisis, and in the emerging and developing economies; although the latter represented more than half of global GDP in 2008, their weight has increased more slowly since then (Figure 3.1). Between 2000 and 2007, these countries were growing at an annual average rate of 6.6% (representing around 70% of global growth), while between 2008 and 2013 growth decelerated to an annual average of 5.4%. Given that, in general, it was not these economies that originated the financial crisis in 2008 and that they had registered more momentum in the previous years, it is **possible that the slowdown in growth is not only cyclical,** but that they have reached income levels that have put them in the so-called **middle-income trap.[4]**.

Figure 3.1
Emerging and developing countries: weight in world GDP



Source: BBVA Research & IMF

Figure 3.2
Stages in economic development by level of income



Source: BBVA Research & IMF

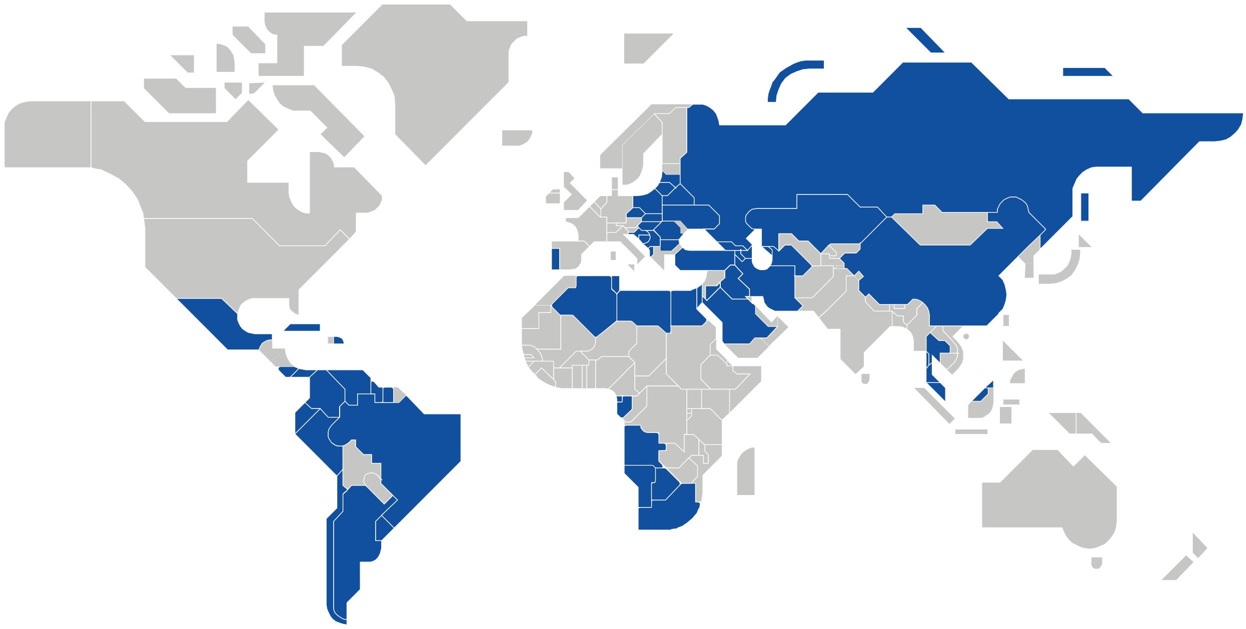
The middle-income trap is the idea that once economies have reached a certain level of development, they find it difficult to make any further progress. This is coherent with the existence of diminishing

2: For more detail, see BBVA Research Global. 4Q14 – Chapter 3: "This cycle is different". Available on: http://bit.ly/1zFhkyU
3: As per the IMF classification.
4: The middle-income trap was first mentioned in the World Bank report "An East Asian Renaissance: Ideas for Economic Growth".

marginal returns in terms of growth in the accumulation of productive factors, capital and labour; returns that thus have to come from efficiency improvements in the combination of resources, a process that takes a long time to complete and could lead to stagnation in the momentum of real convergence (Figure 3.2). If the middle-income trap idea is proved, it would affect the growth of these economies in the medium term, which would have negative implications for the outlook for global growth.

There is no single definition of middle-income countries. In our case, we have opted to use a relative reference. According to our classification[5], middle-income countries are those that have a certain per capita income (valued in terms of parity purchasing power) of between 10% and 50% of that of the US. According to this definition, in 2010 there were 73 countries considered as middle-income, comprising a diverse and unequal group, with Saudi Arabia at the top, with per capita income five times that of the poorest member of the group, Jordan (Figure 3.3).

Figure 3.3
Middle-income countries 2010 (per capita income = 10-50% that of the US)



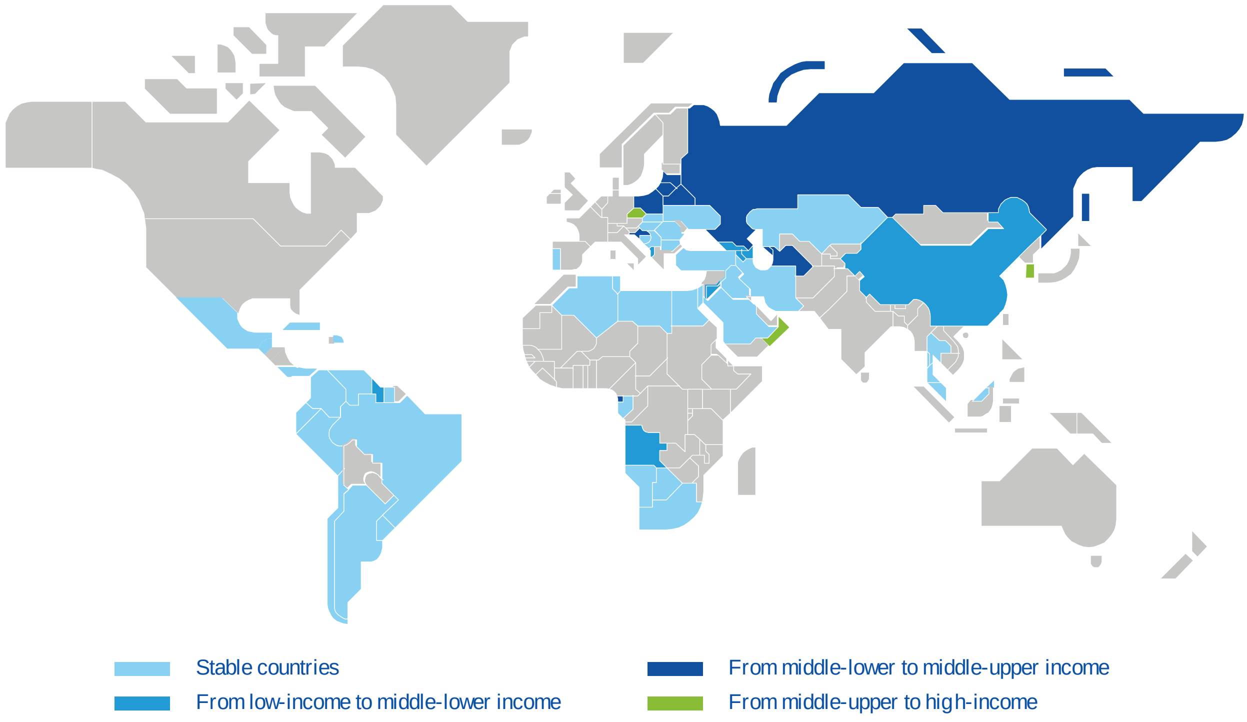
Source: BBVA Research based on Penn World Table

As can be seen in Figure 3.4, in the past decade there have been significant changes in the composition of the middle-income group of countries. The group now includes eight new entrants which in the 1990s were considered low-income (e.g. China), and four previously-included countries are now considered **high-income, including South Korea and the Czech Republic.** An additional aspect is the movements within the group, i.e. the countries that have progressed from middle-lower to middle-upper income[6]. There are eight countries in this category, including Russia, Poland, Croatia, Estonia and Lithuania.

The analysis of the shift in the components of this group thus leads us to conclude that in the past decade there have actually been countries that have moved onwards and upwards, which contradicts the middle-income trap hypothesis.

5: See Bulman, Eden, Nguyen, (2014), "Transitioning from Low-Income Growth to High-Income Growth", Policy Research Working Paper, The World Bank Working.
6: According to our classification, middle-lower income countries are those with a per capita income of between 10% and 30% of that of the US, while middle-upper income countries are those with per capita income of 30% to 50% of that of the US.

Figure 3.4
Changes in the group of middle-income countries (countries with per capita income of 10-50% of that of the US) (2000-10)

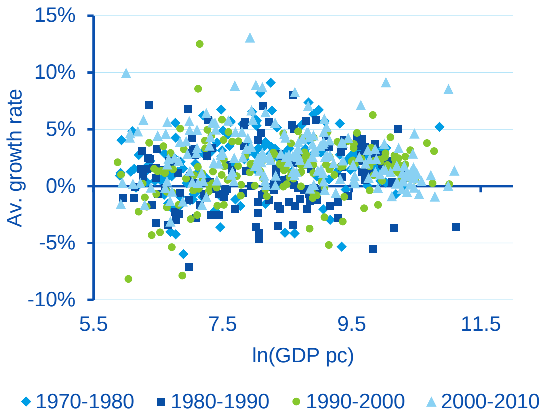


Source: BBVA Research Based on Penn World Table

To carry out a more general analysis of the relationship between the level of GDP and its growth, we constructed Figure 3.5, which shows the relationship between the level of GDP per capita at the beginning of a decade and its average growth over the course of the next ten years for a sample of 190 countries[7] since 1970. The countries with the higher per capita income (more to the right of the image) do not appear to present more moderate per capita GDP growth, i.e. that they are relatively lower, which should be the case in a middle-income trap. We reach a similar conclusion by making a decade-on-decade comparison, as shown in Figure 3.7. Thus the four quadrants of the above chart, which represent the detail by decade, infer no negative relationship between the level of income and growth, although the influence of the global cycle can be seen. **The average growth rates in each decade are different, while there are no significant differences between the growth rates of the economies in terms of their GDP per capita starting points.**

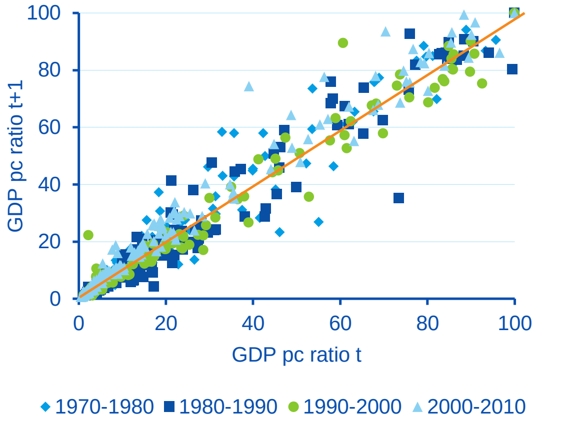
7: Due to the lack of availability of data at the beginning of the sample it is not possible to include all 190 countries. However, these have been included as data has become available.

Figure 3.5
GDP per capita, growth vs. initial level per decade
Sample of 190 countries, 1970-2010



Source: BBVA Research based on Penn World Table

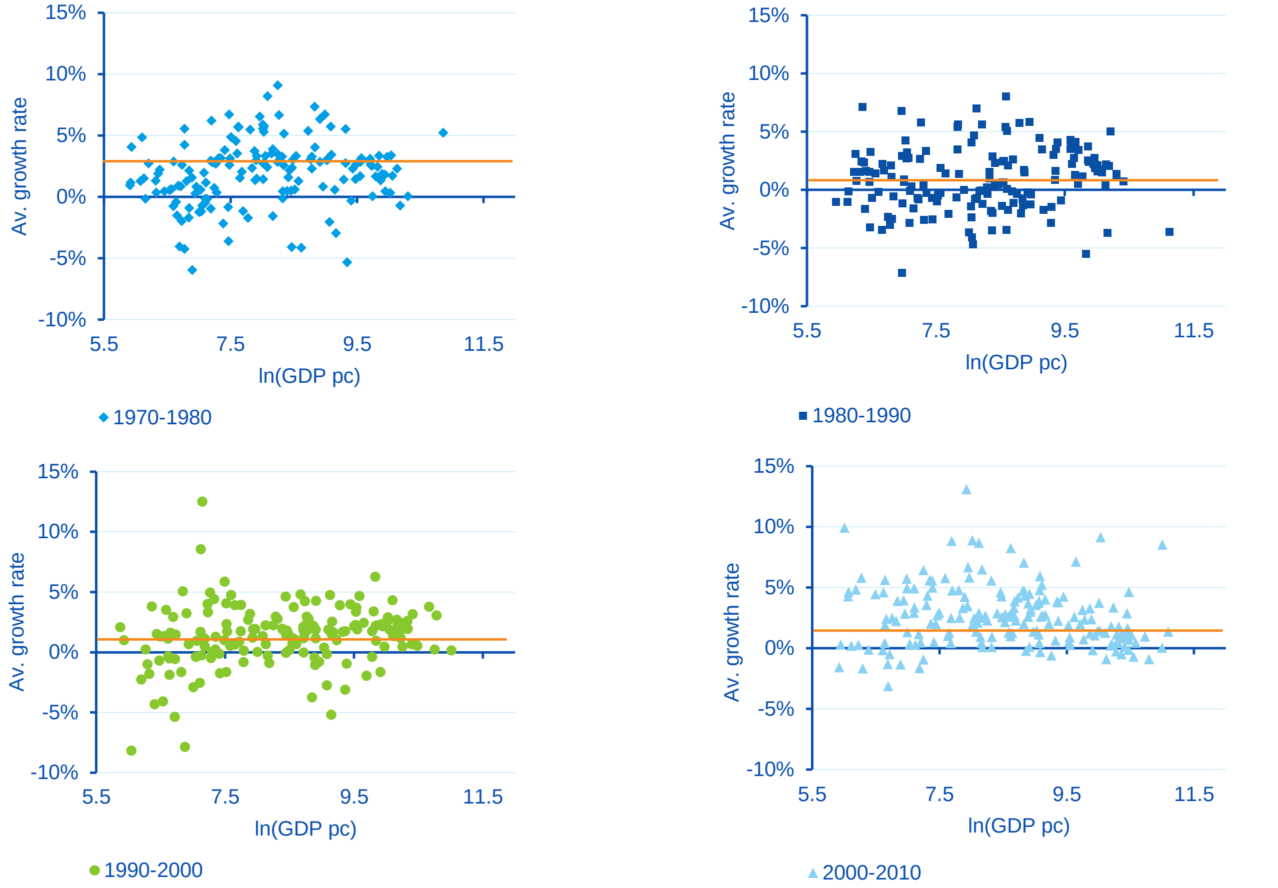
Figure 3.6
GDP per capita ratio vs. US.
Sample of 190 countries, 1970-2010



Source: BBVA Research based on Penn World Table

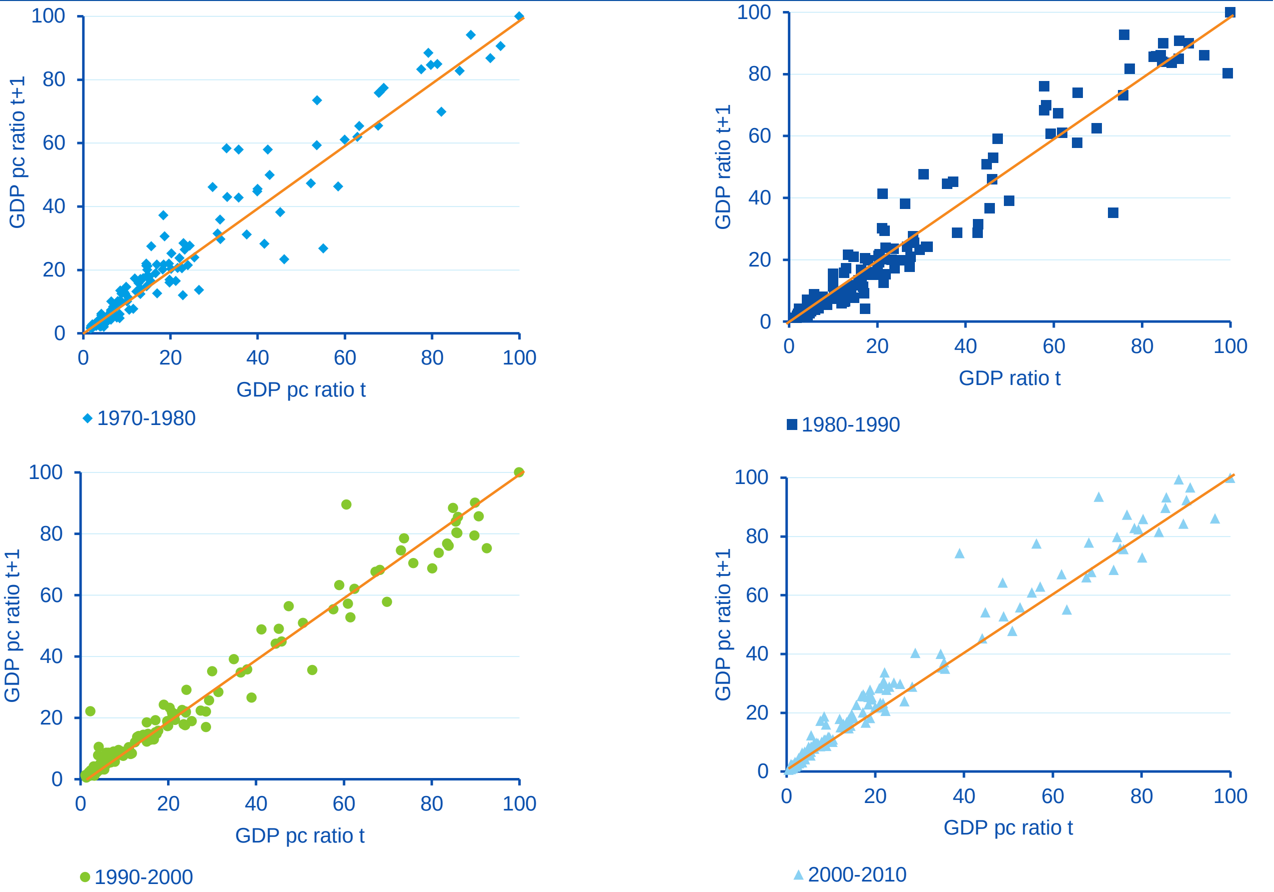
The conclusion that there is no middle-income trap and, in general, no trap at any level of income is sustained in an analysis of GDP per capita relative to the US. Figure 3.6 shows this ratio for each of the countries in the sample, both at the beginning of the decade (horizontal axis) and at the end (vertical axis). The distribution of the points around the bisector and at all levels of per capita GDP relative to the US shows that there is no in the process of convergence that is dependent on the point of departure. In the detail by decade (Figure 3.8), note the importance of the strength of the global cycle in the convergence of the economies.

Figure 3.7
GDP per capita, growth vs. initial level. Decade's evolution
Sample of 190 countries, 1970-2010



Source: BBVA Research based on Penn World Table

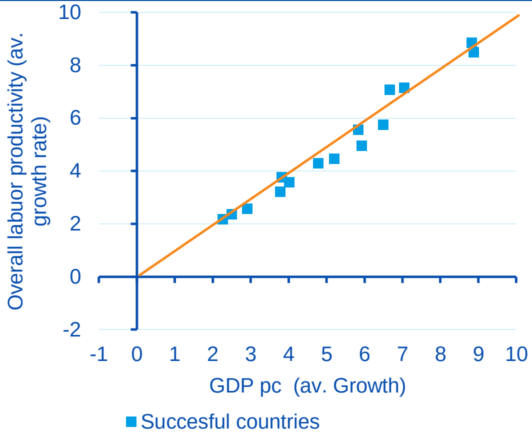
Figure 3.8
GDP per capita ratio vs. US detail per decade. Decade's evolution
Sample of 190 countries 1970-2010

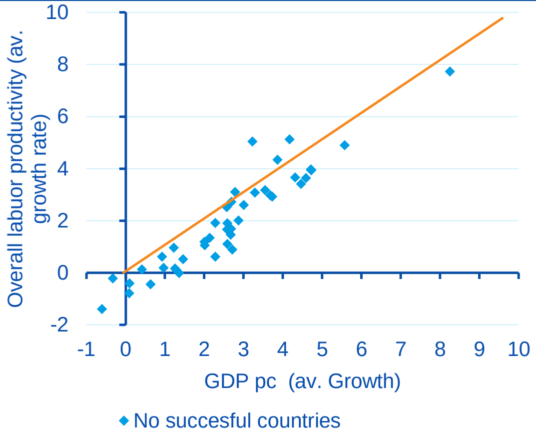


Source: BBVA Research based on Penn World Table

The non-existence of "traps" or patterns common to all economies depending on their level of income does not mean that there are no common characteristics between those that have achieved more successful real convergence processes. Note that the countries that have achieved stronger growth in their per capita income are those that have performed better in relative terms regarding the increase in their overall labour productivity (Chart 3.9). Depending on the extent to which productivity is related to the institutional framework, the productive structure and current economic policies, it is discretionary decisions in each country that the capacity to grow and converge in a sustainable manner with higher-income countries.

Figure 3.9
Average per capita GDP growth vs. apparent labour productivity, 2000-10. Successful countries[8]





Source: BBVA Research based on Penn World Table

8: Defined as those that advanced towards the following group in relation to their per capita income at the beginning of the decade.

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