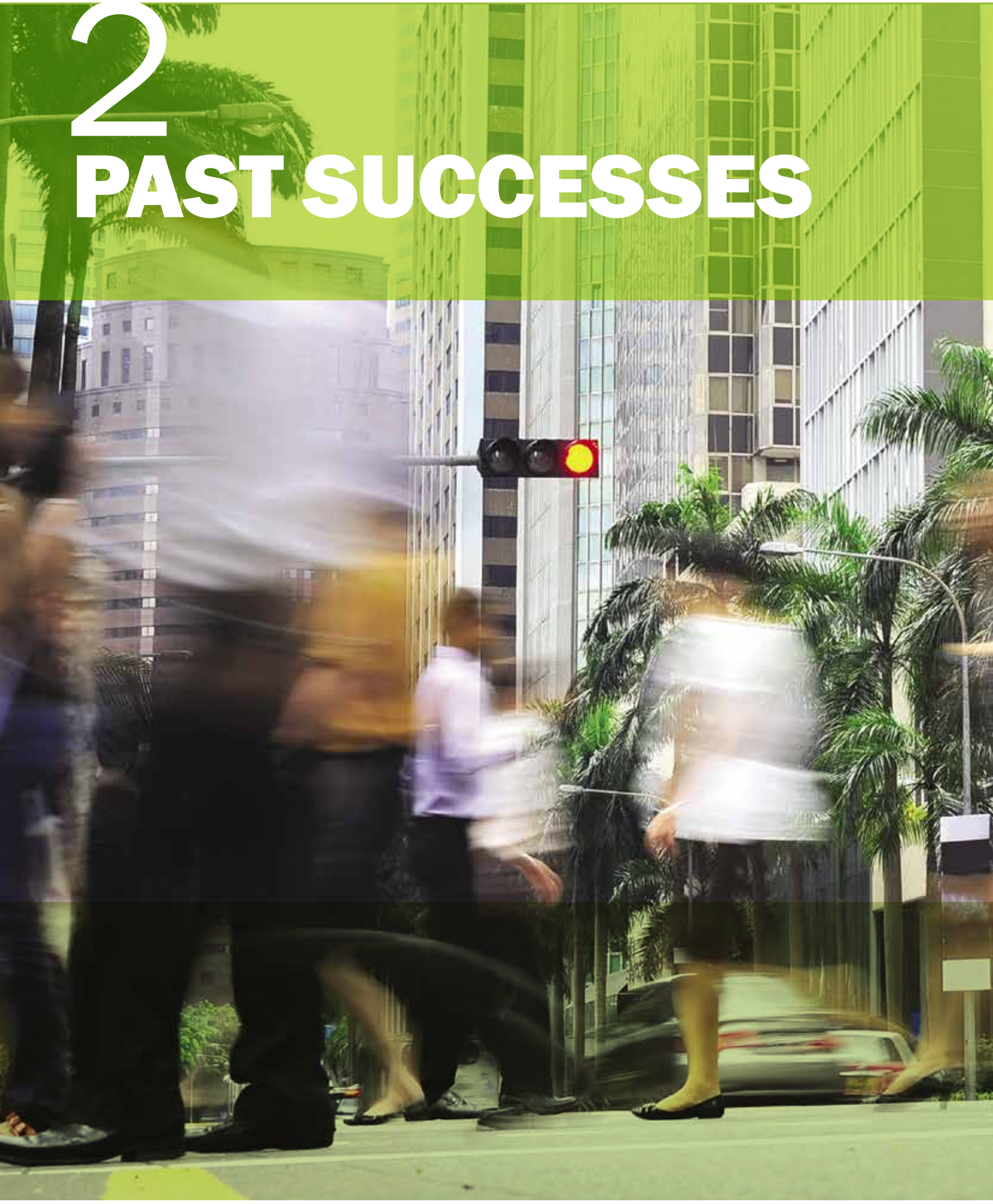
2 PAST SUCCESSES



Successful middle-income transitions, such as South Korea's, are relatively rare, but they are far more geographically diverse than commonly thought. The areas of comparative advantage on which middle-income economies have successfully capitalised range from export-oriented manufacturing to logistics, from tourism to finance and from knowledge-intensive services to natural resources. What all the fast-growing economies have in common, however, is a track record of improvements in governance, education and infrastructure that have supported high rates of investment. The focus of investment, in contrast, varies widely from economy to economy.

➤

OVER THE VERY LONG TERM, ONLY

23

ECONOMIES HAVE MANAGED TO OUT-PERFORM THEIR PEERS, ON AVERAGE, BY AT LEAST ONE PERCENTAGE POINT PER ANNUM IN TERMS OF REAL OUTPUT AND REAL OUTPUT PER CAPITA

AZERBAIJAN HAS INCREASED ITS INCOME PER CAPITA AT PURCHASING POWER PARITY FROM

9%

OF THE US LEVEL IN THE MID-1990S TO AROUND ONE-THIRD OF THE US LEVEL TODAY

COUNTRIES' FORTUNES CAN DIVERGE RAPIDLY

Economies that sustain high rates of income growth over prolonged periods are few and far between. Consequently, rapid transitions from low levels of income per capita to middle and high levels of income per capita are rare. Some oft-quoted examples of successful middle-income transitions have been extensively studied. Singapore, for instance, had GDP per capita similar to that of Brazil and the Democratic Republic of the Congo in the 1960s, however, the three countries' income trajectories have diverged remarkably (see Chart 2.1). South Korea's transition is another noteworthy example, as we discuss in Box 2.2.

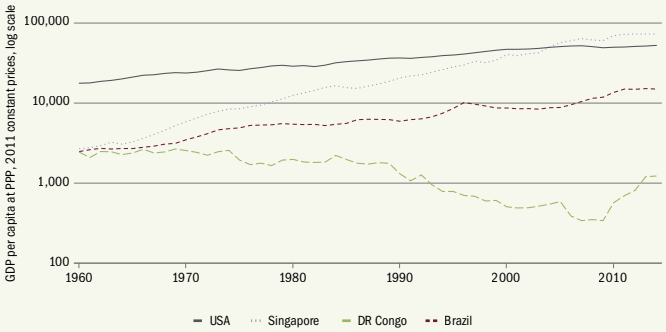
SUCCESSFUL MIDDLE-INCOME TRANSITIONS ARE RARE

Are successful middle-income transitions actually that rare, though? And are the performances of South Korea and Singapore really unique? To answer these questions, we need to compare the performance of economies across continents and over time, and under very different circumstances. One way to run such a comparison is to estimate a counterfactual rate of economic growth for every economy each year. This counterfactual performance can be defined as a weighted average of growth rates of economies with similar levels of GDP per capita, taking into account the population size of comparator economies.[1]

We can define the *relative performance* of an economy in a given year as the deviation of an economy's real output from the level that could be achieved by a "synthetic" comparator economy (that is, the weighted average of all similar economies). To calculate an economy's compound performance over several years, we can multiply its deviations from the growth rate achieved by its synthetic comparator in each year. For instance, if an economy achieved a relative performance of 2 per cent for eight years running, cumulatively, it would have out-performed its synthetic comparator by around 17 per cent. The analysis focuses on the long-term performance, going back as far as reliable GDP figures are available.

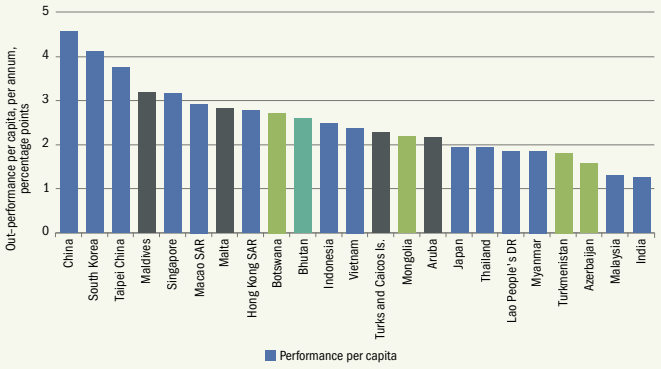
Over the long term (20 to 60 years), only 23 economies have managed to out-perform their peers by at least 1 percentage point per annum, on average, in terms of both real output and real output per capita (see Chart 2.2). More economies have consistently under-performed their peers by at least 1 percentage point a year in real output growth and per capita

CHART 2.1. Brazil, the Democratic Republic of the Congo and Singapore: strikingly divergent trajectories of income per capita



Source: Lee (2018) based on Penn World Tables 9.0.
Note: GDP per capita is measured in constant international prices at purchasing power parity.

CHART 2.2. Economies that have out-performed by 1 percentage point per annum in output and per capita output terms: geographically diverse



Source: Penn World Tables 9.0, IMF and authors' calculations.
Note: Out-performance is calculated relative to the growth achieved by a synthetic control. Synthetic control groups are based on GDP per capita and population and are updated each year. Different colours denote South-East Asian/East Asian economies, commodity-rich economies, small island economies and other economies. Countries with fewer than 20 years of data are not shown.

ARE SUCCESSFUL MIDDLE-INCOME TRANSITIONS ACTUALLY THAT RARE AND ARE THE PERFORMANCES OF SOUTH KOREA AND SINGAPORE REALLY UNIQUE?

[1] See Plekhanov and Stostad (2018) for a discussion of the methodology and its application.

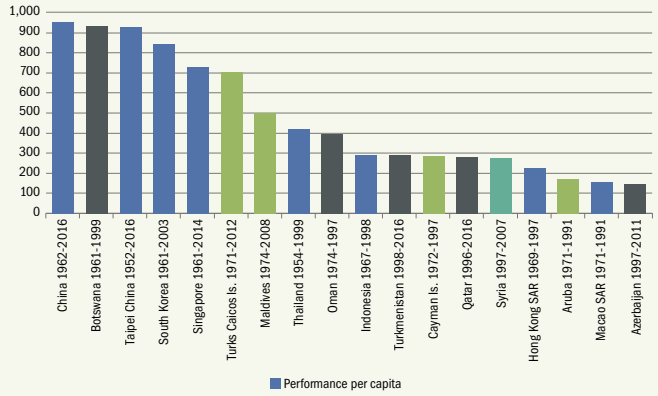
growth terms, with the under-performers more evenly spread across continents than the top performers (see Chart 2.1.1).

Commodity-rich economies feature almost equally among the consistent out-performers and under-performers. A presumption that commodity-rich economies should do better because of their large endowments of natural resources has given rise to the notion of the "resource curse". The existence of such a curse has been as hotly debated as the "middle-income trap" (see Box 2.1 for a discussion of Russia's relative performance in recent years).[2]

GEOGRAPHY OF TOP PERFORMERS IS MORE DIVERSE THAN COMMONLY THOUGHT

Having looked at average long-term performance, we take a closer look at long episodes of strong growth performance. Specifically, we examine spells lasting eight years or more in which an economy out-performed its comparator 90 per cent of the time by at least 1 percentage point a year. In other words, over a 20-year period, an economy must out-perform its generic comparator for at least 18 years and by at least 22 per cent in total.

CHART 2.3. Outstanding episodes of sustained growth out-performance: a wide geographical spread



Source: Plekhanov and Stostad (2018).
Note: Out-performance is calculated relative to the growth achieved by a synthetic control. Synthetic control groups are based on GDP per capita and population and are updated each year. Different colours denote South-East Asian/East Asian economies, commodity-rich economies, small island economies and other economies.

China tops the ranking of outstanding episodes of sustained growth (it has consistently out-performed comparator economies since 1962, by a total of 951 per cent), followed by Botswana (see Chart 2.3). Both countries have yet to join the ranks of high-income economies. South Korea features in the top five largest and longest episodes of exceptionally strong growth (see Box 2.2 for a brief discussion of its experience).

While the so-called Asian Tiger economies, including Singapore and Thailand, occupy many of the top spots when it comes to episodes of strong growth, the 18 economies that out-performed their comparators by 150 per cent or more in a single episode also include countries from Africa, the Caribbean, Central Asia and the Caucasus, the Indian Ocean and the Middle East.

In sum, whether we look at periods of sustained, exceptional growth or average out-performance in the long run, the geographic dispersion of the top performers is broader than commonly perceived. Countries from various continents with vastly different comparative advantages have out-performed expectations by 150 per cent or more by maintaining strong growth over a period of 20 to 40 years. The comparative advantages of these economies are as diverse as their locations. Some (mostly in East Asia and South-East Asia) have established strong export positions in manufacturing, while others have excelled in logistics, finance and knowledge-intensive services. A number of small island economies around the world have positioned themselves as top destinations for tourism or offshore finance, or both. Botswana, Oman and several other countries have succeeded in capitalising on their endowments of natural resources, primarily diamonds and oil.

A SHARED TRACK RECORD OF STRONG GOVERNANCE AND HIGH INVESTMENT LEVELS

For the most part, these economies share a track record of improvements in governance, education and infrastructure that have supported strong investment – although the focus of investment has varied considerably, according to the comparative advantages of the economy in question. The next section takes a systematic look at the determinants of episodes of sustained strong growth.

Although many of the economies featured in Chart 2.3 have exceeded threefold, or even tenfold, all reasonable expectations as to their per capita income growth, most of them have yet to complete their middle-income transitions, largely due to their very low starting levels of per capita income. For instance, Azerbaijan has increased its income per capita at purchasing power parity from around 9 per cent of the US level in the mid-1990s to around one-third of the US level today. For poor economies, the journey of per capita income convergence is necessarily a very long one.

[2] The term was coined by Auty (1994); see Guriev et al. (2012) for more.

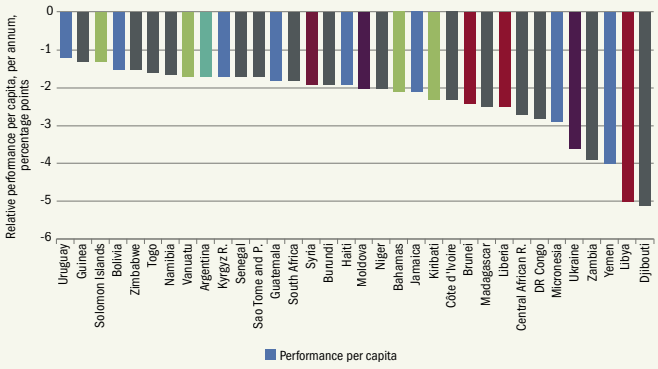
BOX 2.1. Relative economic performance of commodity-rich economies

Several episodes of exceptionally strong economic growth have been underpinned by commodity booms (indeed, commodities have played a significant role in five of the top 18 such episodes). On average, however, commodity dependence is not strongly associated with either a higher or lower probability of consistently outpacing one's peers. In part, this is down to the high volatility of commodity prices. It is also due to economies' varying ability to capitalise on their commodity fortunes: while diamond-rich Botswana is among the top performers over the long term, for example, diamond-rich but conflict-torn Liberia is one of the worst under-performers (see Chart 2.1.1). Both the lists of top performers and under-performers feature several major oil exporters.

The synthetic comparator method can be extended to assess the economic performance of a given commodity-rich economy (one where exports of commodities average at least 60 per cent of total exports) against the synthetic performance of similarly commodity-rich economies.

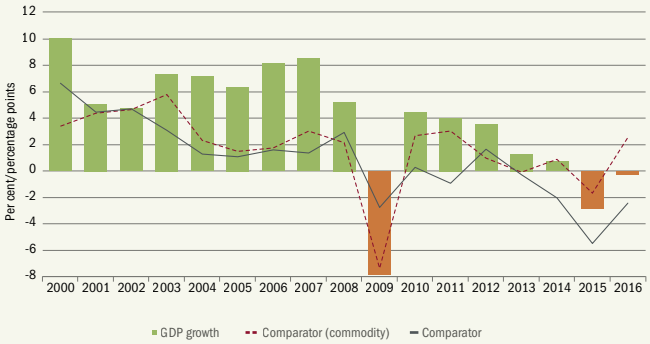
For instance, Russia, one of the world's top three oil exporters, posted a weaker performance than economies with similar GDP per capita from 2009 to 2016, but was broadly in line with comparable commodity exporters (see Chart 2.2.2) – perhaps with the exception of 2009, when its economy was hit particularly hard. Earlier in the 2000s, Russia's economy out-performed both its commodity-rich peers and commodity-poor ones. During that period, like many other countries in emerging Europe, Russia enjoyed improvements in total factor productivity, as it began to better utilise the wealth of physical and human capital it had inherited from central planning. This TFP convergence boosted economic growth beyond levels that oil prices, alone, would have predicted.

CHART 2.1.1. Many of the economies that have under-performed by 1 percentage point per annum in terms of output and per capita output are commodity rich



Source: Penn World Tables 9.0, IMF and authors' calculations.
Note: Out-performance is calculated relative to the growth achieved by a synthetic control. Synthetic control groups are based on GDP per capita and population and are updated each year. Different colours denote economies in Latin America and the Caribbean, African economies, small island economies, commodity-rich economies, economies in the Middle East and other economies. Countries with fewer than 20 years of data are not shown.

CHART 2.1.2. Russia has out-performed similar commodity-rich economies



Source: Penn World Tables, IMF and authors' calculations.
Note: Comparators are limited to the economies where commodity exports average at least 60 per cent of total exports.

CHINA HAS CONSISTENTLY OUT-PERFORMED COMPARATOR ECONOMIES SINCE 1962, BY A TOTAL OF

951%

BOX 2.2. South Korea's performance

South Korea boasts one of the longest and strongest episodes of sustained growth out-performance in post-war history.[3] The country's period of robust growth started in the early 1960s and, by the mid-2000s, its output was around 9.5 times the level suggested by the growth trajectories of its peers. In recent years, South Korea's economic performance has remained strong, even though the economy does not routinely out-perform its comparators as before.

The first striking feature of South Korea's middle-income transition is its balanced growth trajectory. All factors – capital, labour, human capital and total factor productivity – have contributed strongly to the country's out-performance. The progress made in terms of human capital (measured by years of schooling) has been particularly impressive from an international perspective. During the country's early years of out-performance, TFP increased rapidly, facilitating the effective absorption of capital in the economy in later years (see Chart 2.2.1).

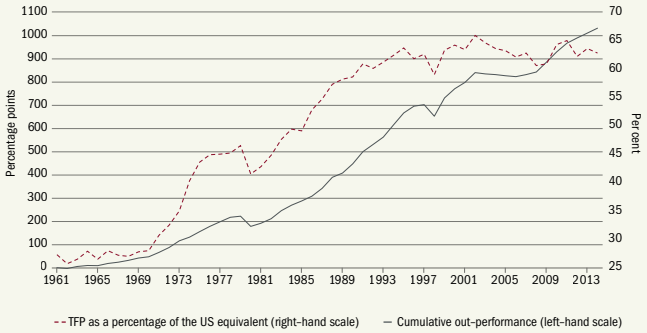
Investment in physical capital remained high throughout the episode – unlike in Japan, for instance, where it declined sharply. Investment was largely financed using domestic savings. Foreign direct investment (FDI) also played a role, but was, if anything, somewhat weaker than one might have expected. South Korea also invested heavily in infrastructure and has remained a global leader in terms of its average broadband connection speed.

Sectoral shifts in labour and capital – notably away from agriculture – also played an important role. Productivity improvements at sectoral level were something of a mixed bag, with productivity in the service sector rising only slowly. In the early 1960s, manufacturing exports were well below average for a country at South Korea's level of development, but they went on to make a significant contribution to growth.

South Korea's exports target a specific niche – the lower end of several high-tech sectors (such as computers, electronics and cars) – with relatively low unit values and high export volumes. Despite targeting the lower-unit-value segment of the market, South Korea had to make a gradual transition from the imitation and import of technology to innovation and the exporting of technology, facilitated by rapid increases in human capital.

South Korea's economy has not been immune to crises and was hit particularly hard in 1971, 1980, 1991 and 2008. On each occasion it recovered swiftly and, unlike most crisis-hit economies, maintained its high investment levels.[4] Today, South Korea's GDP per capita is around half that of the USA at market exchange rates and two-thirds that of the USA at purchasing power parity, with income convergence continuing.

CHART 2.2.1. Cumulative out-performance and total factor productivity growth went hand in hand in South Korea



Source: Penn World Tables, IMF and authors' calculations.

SOUTH KOREA BOASTS ONE OF THE LONGEST AND STRONGEST EPISODES OF SUSTAINED GROWTH OUT-PERFORMANCE IN POST-WAR HISTORY.

[3] This discussion of developments in South Korea is borrowed from EBRD (2017) and draws heavily on Lee (2016) and Eichengreen et al. (2012).

[4] See Hong and Tornell (2005).