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ALLIANZ RESEARCH

# THE MIDDLE-INCOME TRAP: INEQUALITY ACROSS COUNTRIES AFTER COVID-19

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# EXECUTIVE SUMMARY



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- **In 2020, Covid-19 narrowed the prosperity gap between rich and poor countries as the former were at first the most affected. But over the medium and long run, its consequences could hit emerging markets harder.** Covid-19 will increase income inequality between richer and poorer countries since the latter have less policy room to mitigate the impact of the crisis and slower access to vaccines. In addition, the crisis may also have accelerated long-term structural trends that will not be favorable to many emerging economies: In the post-Covid-19 world, the comparative advantages of relatively cheap labor – on which the rise of emerging markets and the global middle-class was primarily based – would count for less. In this context, the path to high-income status could become longer and more difficult for these countries.
- **Which countries are most at risk of facing a middle-income trap?** To investigate the potential long-term scarring effects on per capita income, we look at the risk of a "middle-income trap", a situation in which countries that have rapidly transitioned from low-income to middle-income status fail to further catch up to high-income countries. Based on our pre-crisis and post-crisis long-term economic growth forecasts, we find that by 2029, Hungary, Romania and Latvia are likely to see their transition delayed by a few years, though their EU membership will prevent a descent into the middle-income trap. However, Kazakhstan, Panama and Seychelles will not move to high-income status during our forecast horizon. Somewhat surprisingly, Turkey and Russia could achieve high-income status in the medium run sooner than previously expected, likely due to crisis-related fiscal stimuli more than compensating for the initial growth slowdown, thus creating base effects that feed forward, or higher-than-previously-expected oil prices. That said, their long-term outlooks face considerable downside risks, including swings in commodity prices (Russia) and risks to balance of payments, currency and monetary policy (Turkey). Our analysis of long-term catch-up trends further identifies 10 countries (Argentina, Bulgaria, Colombia, Croatia, Greece, Laos, Nigeria, Slovakia, Trinidad & Tobago, Uruguay) that are or will be in the middle-income trap over 1950-2029 – with or without the Covid-19 crisis.
- **In this context, the insurance industry has an essential role to play in helping countries overcome the middle-income trap.** Many countries that have successfully transitioned to the high-income level have strong insurance markets, and this is no coincidence: Insurance markets contribute significantly to resilience, the crucial ability to cope with crises, thus making it easier for poorer countries to escape the middle-income trap. In this context, the insurance industry must help to close protection gaps by focusing on simpler products, risk prevention and building public-private partnerships – be it for risk protection or infrastructure investments. It's a fitting task to its corporate purpose.



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## **Countries at risk of falling into a middle-income trap after Covid-19**

# WILL COVID-19 WIDEN THE PROSPERITY GAP?

**In 2020, Covid-19 narrowed the prosperity gap between poorer and richer countries as advanced economies were the most affected at first. But over the medium and long run, its consequences could hit emerging markets harder.**

In the post-Covid-19 world, many emerging markets have less policy room to mitigate the impact of the crisis, as well as slower access to vaccines. Whereas the populations in richer countries can be expected to be largely immune in 2021 or early-2022 – and social interaction can be expected to return to normal to a large extent – this milestone is still a long way off for most other countries. Covid-19 will therefore continue to hold back economic development in some countries over the next two years. Added to this is fast-rising public debt, which restricts the scope for action, especially if interest rates start rising in the next few years. This would also place a disproportionate burden on poorer countries.

**In addition, Covid-19 may also have accelerated long-term structural trends that will not be favorable to many emerging economies.** Even before Covid-19, increasing **trade disputes** and growing protectionism were causing a slowdown in international

trade. After Covid-19, trade could be impacted by the shift towards sustainability and the logic of globally interconnected supply chains is increasingly being called into question: instead of maximum efficiency, resilience will become the yardstick. While the shortening of supply chains (with re- or near-shoring of production) is not likely to be significant in the medium run, this context does suggest that globalization will not expand further.

At the same time, Covid-19 has finally helped **digitalization** to make a breakthrough. Big data, artificial intelligence and connected automation will permanently change the world of work. The comparative advantages of relatively cheap labor – on which the rise of emerging markets and the global middle-class was primarily based in recent decades – would count for less in this new world.

A final long-term trend worth mentioning is the **green transformation**. The decarbonization of the global economy will lead to an investment boom – especially in the richer countries. At the same time, consumer demand in these countries will (and must) undergo a structural transformation (the cues are sustainability i.e., local producers, the

circular economy and the sharing economy). This will have an impact on the economic models of many emerging markets, whether they are suppliers of raw materials or producers of goods. The old business model – producing and shipping cheap consumer goods to the world – will not be the norm anymore.

**As a result, the path to high-income status could become longer and more difficult for emerging markets.** To investigate the potential long-term scarring effects on emerging markets with regard to per capita income, we take the perspective of the “middle-income trap” (see Box 1 for definition). We first identify countries that have escaped the middle-income trap over the past 25 years as well as some economies that have experienced an unexpected setback. We then analyze if Covid-19 has moved additional countries into the middle-income trap, if the transition period to the high-income status has been lengthened or if Covid-19 may have even led some high-income countries to fall back to middle-income status.



### Box 1: What is the “middle-income trap”?

Standard literature on economic growth suggests that less-developed economies will tend to grow faster to converge and catch up with developed economies. Yet, relatively few countries have reached high-income status, and income growth across many countries has been variable and volatile. In this context, the term “middle-income trap” refers to countries that have experienced strong growth and thus rapidly transitioned from low-income to middle-income status, but then failed to move beyond that income range to further catch up to high-income countries.

In empirical, quantitative analyses, a country is considered to be in the middle-income trap when it is not able to catch up over a long horizon with a benchmark high-income country – the US or any other advanced economy – in terms of per capita income in purchasing power parities (PPP). There are several approaches to assess the middle-income trap:

- The World Bank’s annually updated classification of all economies into Low, Lower Middle, Upper Middle and High Income countries can be used<sup>1</sup>. One pitfall of this approach is the use of the World Bank’s Atlas Method of GNI per capita, which does not provide a forward-looking vision.
- Another World Bank definition considers a country being in the middle-income trap if its per capita income remains in a certain range of US per capita income for several decades. The pitfalls of this approach are the arbitrary definitions of “several decades” and “certain range”. Regarding the latter, World Bank (2013) has used 5-40%, for example<sup>2</sup>.
- For our analysis, we chose to follow the definition introduced by Robertson/Ye (2013)<sup>3</sup>: For a country in a middle-income trap, the long-term forecast of per capita income relative to a wealthy reference country should be (i) time-invariant and (ii) lie within the middle-income band. In other words, a country in a middle-income trap is not catching up in relation to the reference country (usually the US). Technically the conditions (i) and (ii) imply that the difference in the log of income per capita in a middle-income country relative to the reference country is level-stationary. This can be tested with unit root tests (for more details see the methodology in the Appendix). While this approach also requires the definition of a middle-income band (or at least a threshold between middle- and high-income status), a definition of a time range is not needed. It is possible that a country catches up very slowly.

<sup>1</sup> See <http://data.worldbank.org/about/country-and-lending-groups>.

<sup>2</sup> See World Bank (2013), “China 2030: Building a Modern, Harmonious, and Creative Society”, p. 12.

<sup>3</sup> Robertson and Ye (2013), “On the Existence of a Middle Income Trap”, University of Western Australia Discussion Paper 13.12. See also Ye and Robertson (2016), “Identifying prisoners of the middle-income trap”, <https://voxeu.org/article/identifying-prisoners-middle-income-trap> (downloaded 9 November 2021).

# WHICH COUNTRIES ARE AT RISK OF FACING A MIDDLE-INCOME TRAP?

## Successful transitions and unexpected downward shifts in 1995-2019

In 1995, 28 out of our sample of 77 countries were classified as high-income economies, according to our methodology (see Appendix). By 2019, the number of high-income economies increased to 36. This net increase by eight reflects 15 successful upward transitions, three temporary downward shifts and four definitive downward shifts during this period.

## Successful transitions

Our analysis identifies 10 economies that successfully transitioned from middle-income to high-income levels during the period 1995-2019 (see Figure 1). Saudi Arabia and Bahrain moved up the income ladder in the early 2000s as then-rising oil prices boosted fiscal revenues and supported rapid economic growth. Meanwhile, South Korea, along with the other Asian Tigers<sup>4</sup>, is one of the few examples of successful industrialization leading to

wealth (more details in the last section of this paper). But most of the successful transitions to the high-income level since 1995 are found among EU member states, including Malta, Portugal<sup>5</sup> and five countries in Central and Eastern Europe.

**Figure 1: Economies that transitioned from middle-income to high-income level, 1995-2019**

Country	Year of transition to high-income economy	PPP real GDP per capita in % of US in 2019	Comment
Bahrain	2000	75%	
Czechia	2005	60%	Already HI in 1993-1996 but fell back to MI in its early years of transition from socialism
Estonia	2012	54%	
Lithuania	2018	52%	
Malta	2010	62%	
Poland	2019	51%	
Portugal	2017	51%	Already HI in 2006-2012 but fell back to MI in the wake of the Eurozone crisis
Saudi Arabia	2004	83%	
Slovenia	2005	54%	
South Korea	2001	67%	Already HI in 1995-1997 but fell back to MI in the wake of the Asian crisis

Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

<sup>4</sup>The other Asian Tigers are Hong Kong, Singapore and Taiwan, which transitioned to the high-income level before 1995.

<sup>5</sup>That said, Portugal is a special case: It first moved to the high-income level in 2006 but fell back to middle-income in 2013 in the wake of the Eurozone crisis. It moved up again in 2017 but fell again back in 2020 as the economy was hit hard by the Covid-19 crisis (PPP real GDP per capita declined from 51% to 49% of that of the US). Our current forecasts suggest that Portugal may re-join the high-income group in 2024, but the country appears to be trapped around the defined threshold between the two income levels.

For the European countries, joining the EU is the overriding reason behind these developments (more details in the last section of the paper). But it is also worth looking more closely at the role of insurance markets, especially in the recent past with its numerous crises – from the Asian Crisis to the Great Financial Crisis to the Covid-19 crisis.

To escape the middle-income trap, one characteristic is becoming increasingly important: resilience, i.e. the ability to bounce back quickly after crises, to quickly return to the old or even a higher growth path. Social resilience has many facets: macroeconomic aspects such as monetary and fiscal policy play just as much a role as institutional ones, e.g. the design of labor markets. There is also the microeconomic dimension at the company and household level. Even before the Covid-19 crisis, the Swiss Re Institute, together with the London School of Economics, attempted to measure the resilience of individual economies using an economic measure<sup>6</sup>. Unsurprisingly, this reveals the important role that insurance markets play for resilience<sup>7</sup>.

In the context of the middle-income trap, two functions of insurance markets are likely to be of particular importance. The first is the response to natural disasters, which also have long-term negative consequences, especially for poorer countries. Several studies show that higher insurance penetration is associated with significantly faster recovery and lower long-term consequences. Insurance benefits play a role here, as does the fact that the existence of insurance significantly facilitates ac-

cess to credit. In addition, efficient pricing of risks supports better adaptation to disasters<sup>8</sup>.

On the other hand, the asset side is relevant. Life insurance providers are significant financial intermediaries and thus an important source of long-term capital that enables investment in higher productivity, both at the macro and micro levels. Moreover, the long-term nature of life insurance leads to the stabilization of capital markets, even and especially in times of financial crises. In the words of the European Central Bank: "[...] the ICPF sector [insurance corporations and pension funds] was a stabilizing factor within the financial sector during the crisis [...]"<sup>9</sup>

The bottom line: Developed insurance markets contribute significantly to societal resilience through different channels, thus making it easier for poorer countries to escape the middle-income trap. But of course, they are not a sufficient condition for this, at most a necessary one.

In this context, it's worthwhile to note that the two large Eastern European countries Poland and Czechia have another thing in common besides joining the EU: they are the two countries with the highest insurance penetration<sup>10</sup> in the region. In the period from 1995 to 2019, it was significantly higher than the regional average of 2.1% in each case: 1.1pp on average in the case of Czechia and 0.9pp in the case of Poland. South Korea also had a significantly higher insurance penetration than its regional peers, exceeding the regional average by a whopping 4.7pp on average (the re-

gion, however, also includes much poorer countries such as the Philippines and Vietnam). However, this cannot be observed in the case of Portugal, where insurance penetration was slightly below the Western European level on average.

### Unexpected downward shifts

Four economies in our sample of 77 first moved up to the high-income level and later experienced a drop to the middle-income group and remained there until 2019 (see Figure 2). Greece already became a high-income country in 1998 but its economic output and incomes dropped dramatically in 2011 when it triggered the Eurozone crisis; a return to high-income status is unlikely over the next decade. Oman, Russia and Trinidad & Tobago have in common a heavy reliance on the hydrocarbon sector. As such, their economies were adversely affected by the prolonged period of lower oil (and gas) prices that began in the second half of 2014, resulting in recessions and markedly declining incomes. In Russia, the oil price slump combined with the implementation of Western sanctions over the Russia-Ukraine crisis led to a currency crisis in 2014-2015, which further hit PPP income.

These four countries falling back from high-income to middle-income level as well as the cases of South Korea, Czechia and Portugal, which temporarily fell back during 1995-2019, suggest that regional, global or local crises and events can break the trajectory of per capita income growth and lead to a setback in countries' income classification.

<sup>6</sup> See Swiss Re Institute (2019), "Indexing resilience: a primer for insurance markets and economies", sigma No 5/2019.

<sup>7</sup> For a general overview on the insurance-growth nexus see R. Lester (2014), "Insurance and inclusive growth", WPS 6943, World Bank.

<sup>8</sup> See for example G. v. Peter et al. (2011), "Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes", working paper 394, BIS; or C. Kousky (2019), "The role of natural disaster insurance in recovery and risk reduction", Vol. 11, Annual Review of Resource Economics.

<sup>9</sup> In: ECB (2011), "Financial integration in Europe", p. 46, ECB.

<sup>10</sup> Life and P&C premiums in percent of GDP.

**Figure 2:** Economies that fell back from the high-income to the middle-income level, 1995-2019

Country	Year of transition to high-income economy	Year of fall-back to middle-income economy	PPP real GDP per capita in % of US in 2019	Reason for fall-back
Greece	1998	2011	43%	Eurozone crisis
Oman	2004	2019	49%	Impact of prolonged period of lower oil prices
Russia	2011	2014	46%	Impact of prolonged period of lower oil prices and lasting Western sanctions
Trinidad & Tobago	2006	2015	46%	Impact of prolonged period of lower oil and gas prices amid an overreliance on hydrocarbons

Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

### Looking ahead, Covid-19 is the source of some but not all struggles

Based on our pre-Covid-19 and post-Covid-19 long-term economic growth forecasts, we compare the pre- and post-crisis development paths of income per capita to understand the impact of the Covid-19 crisis on the middle-income trap. We find that by 2029:

- Six economies are likely to see their transition delayed by a few years – with three of them not moving to high-income status during our forecast horizon,
- and (somewhat surprisingly) two economies may see their transition brought forward.

### Delayed transitions to high-income status due to Covid-19

Three economies in Eastern Europe are likely to see their transition to high-income status delayed by Covid-19: Hungary, Latvia and Romania (see Figure 3). Though delayed, the still successful transition within our forecast horizon should be understood through the same lens as for the other Eastern European countries (mentioned earlier) that managed this development before 2019 (e.g. joining the EU). Indeed, Hungary, Latvia and Romania had income per capita broadly improving up until 2019 and were close to transitioning from the middle-income to the high-income group (see Figure 4 for Hungary) – Covid-19 is simply setting them back a few years.

We find three other economies whose development is delayed or even stalled in our forecast horizon: Kazakhstan, Panama and Seychelles. Kazakhstan may see a delayed transition rather than the lack of one as our pre-crisis forecasts suggested that it would reach high-income status in 2029 – i.e. at the very end of our forecast horizon. In any case, our projections suggest a notable amount of income per capita lost in the long run (see Figure 5) as structural and institutional weaknesses as well as a lack of competitiveness mean Kazakhstan is likely to suffer from scarring effects of the Covid-19 crisis. With regard to Seychelles and Panama, their long-term development may be hampered by the impact of Covid-19 on tourism and the historic agreement on a minimum corporate tax rate. These three countries are thus most at risk of being pushed into the middle-income trap by the Covid-19 crisis.

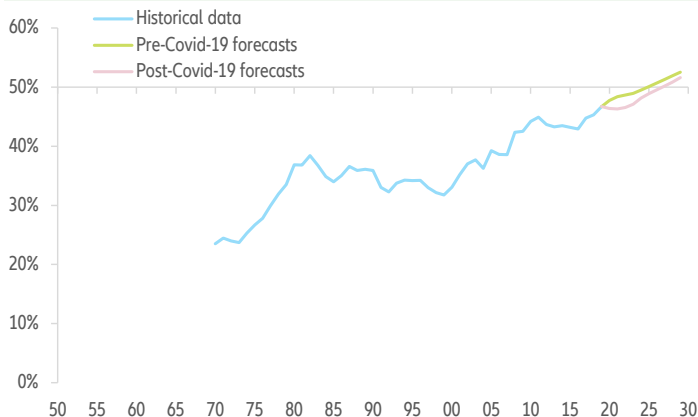
**Figure 3:** Economies with delayed or prevented transition to high-income status due to Covid-19

Country	Year of projected transition to high-income economy with...	
	...pre-Covid-19 growth forecasts	...post-Covid-19 growth forecasts
Latvia	2022	2025
Hungary	2025	2027
Romania	2026	2027
Panama	2021	no transition until 2029
Seychelles	2027	no transition until 2029
Kazakhstan	2029	no transition until 2029

Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

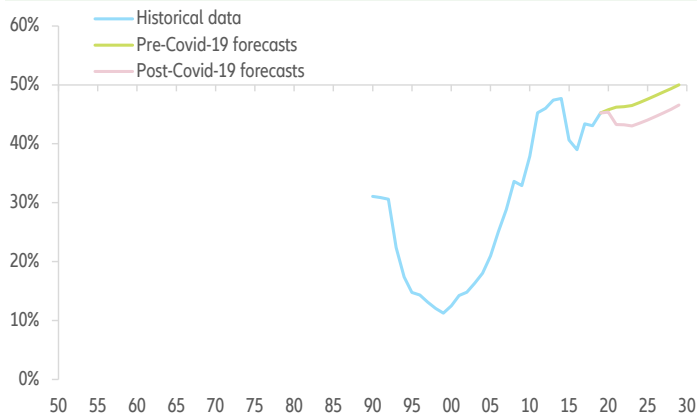


**Figure 4: Hungary real GDP per capita in PPP, as a share of the US**



Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

**Figure 5: Kazakhstan real GDP per capita in PPP, as a share of the US**



Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

**Unexpected transitions to high-income status caused by Covid-19**

Somewhat surprisingly, Russia and Turkey could benefit from the Covid-19 crisis by achieving high-income status in the medium run sooner than without the crisis (see Figures 6, 7 and 8). An explanation could be that the crisis-

related fiscal stimuli could more than compensate for the initial growth slow-down in 2020, thus creating base effects that feed forward. In the case of Russia, higher-than-previously-expected oil prices in 2021-2023 could also play a supportive role. That said, these positive surprises should probably

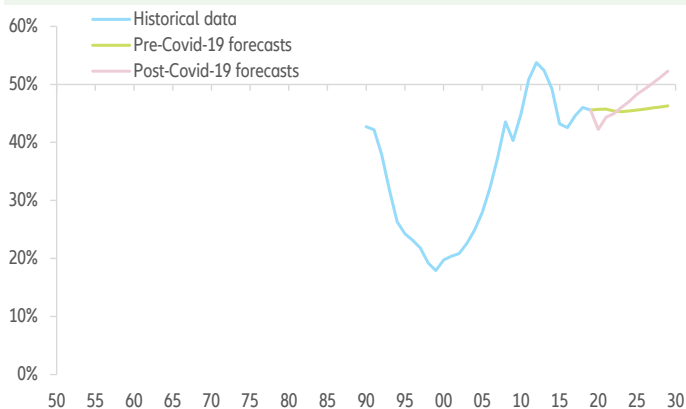
be taken with a grain of salt, given long-term outlooks that face considerable downside risks in both cases. Indeed, Russia is vulnerable to swings in commodity prices, while concerns regarding Turkey's balance of payments, currency and monetary policy could remain in the short to medium run.

**Figure 6: Economies with early transition to high-income status due to Covid-19**

Country	Year of projected transition to high-income economy with...	
	...pre-Covid-19 growth forecasts	...post-Covid-19 growth forecasts
Russia	after 2029	2027
Turkey	after 2029	2028

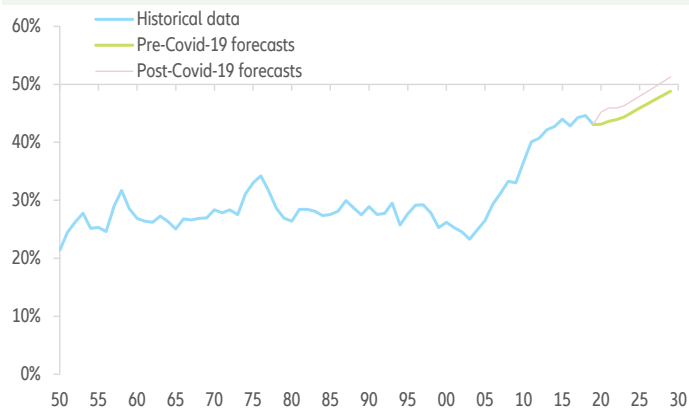
Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

**Figure 7: Russia real GDP per capita in PPP, as a share of the US**



Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

**Figure 8: Turkey real GDP per capita in PPP, as a share of the US**



Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

### Trapped middle-income economies, with or without Covid-19

While the previous analyses do look into the transition of economies from the middle-income to the high-income group, the fact that they are based mostly on the crossing of a threshold (50% of the US income per capita) means that the path of development is not taken into account. In the following section, we take into account whether a long-term trend of catching up exists as per Robertson/Ye (2013)<sup>11</sup> – the third definition of the middle-income trap outlined in Box 1. We thus perform stationarity tests on long-run time series (see the Appendix for details on the methodology) – ranging from 1950 (or as early as available) to 2029. We use our pre-Covid-19 and post-Covid-19 projections and differences in the lists of trapped middle-income econo-

mies derived from these tests help us understand the long-run impact of the Covid-19 crisis.

We find that 10 countries are or have been in the middle-income trap over 1950-2029 – with or without the Covid-19 crisis (see Figure 9). Among these, we find countries that have already been mentioned in this paper, such as Greece and Trinidad & Tobago. We find that they were previously among the economies that moved back from the high-income to the middle-income group before the Covid-19 crisis. Looking forward, the long-term path of income per capita does not show a catch-up with the US (see Figure 10 for Greece).

The reasons for being stuck in the middle-income trap are many, but again it is worth looking at the role of insurance markets. The two South American

countries Argentina and Colombia, for example, have significantly lower insurance penetration than the richest country in the region, Chile. On average over the past 25 years, the gap has been between 1.3pp (Argentina) and 1.7pp (Colombia). The situation is similar in the three Eastern European countries Bulgaria, Croatia and Slovakia. Compared with Czechia and Poland (unweighted average), insurance penetration was about half a percentage point lower in each case in the past. Here too, of course, the lower insurance penetration is by no means the only reason why these countries lag the regional "champions" – but the lower level of development of the insurance markets is one factor that can explain the higher susceptibility to crises and thus more volatile growth overall.

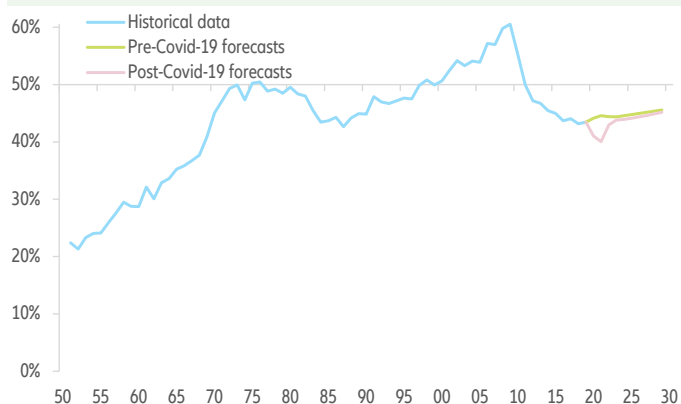
**Figure 9: Economies that have been or are currently in the middle-income trap**

Country	In the middle-income trap based on...	
	...pre-Covid-19 growth forecasts	...post-Covid-19 growth forecasts
Argentina	X	X
Bulgaria	X	X
Colombia	X	X
Croatia	X	X
Greece	X	X
Laos	X	X
Kazakhstan	-	X
Nigeria	X	X
Russia	X	-
Seychelles	-	X
Slovakia	X	X
Thailand	X	-
Trinidad & Tobago	X	X
Uruguay	X	X

Note: depending on definitions, Laos and Nigeria could be considered low-income rather than middle-income economies. Their being in this list thus means that they could be in a "low-income trap". In any case, it reflects the fact that their real income per capita have not been at some point (Laos prior to the 2000s) or are currently not (Nigeria) visibly catching up with that of the US.

Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

<sup>11</sup> See footnote 3

**Figure 10:** Greece real GDP per capita in PPP, as a share of the US

Sources: Penn World Table version 10.0, Euler Hermes, Allianz Research

The differences between the pre-Covid-19 and post-Covid-19 lists in Figure 9 (highlighted in red and green) mostly confirm previous results. In particular, we see that Kazakhstan and Seychelles had their development stalled by the

Covid-19 crisis, and it may have even pushed them into the middle-income trap, according to the stationary tests we ran. Conversely, we find that Russia and Thailand seem to have escaped the middle-income trap, thanks to the

Covid-19 crisis. In the case of Russia, this is in line with what we discussed previously (and is visible in Figure 7).

# WHAT DOES THIS MEAN FOR POLICYMAKERS AND (INSURANCE) BUSINESSES?

## **Back to the basics: economic development is all about labor, capital and productivity**

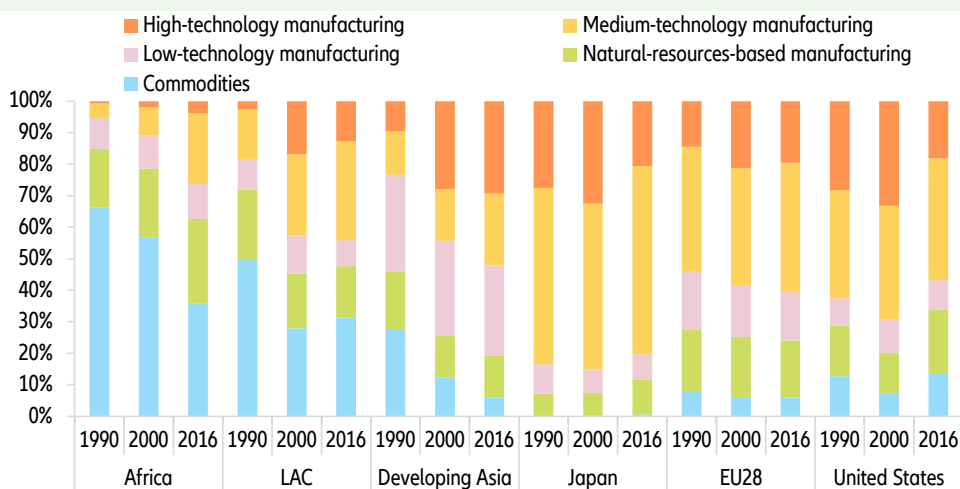
What lessons can we draw from the past? As mentioned earlier in this report, South Korea is one of a few examples of successful industrialization leading to an economy becoming advanced. This process first relied on a strong trade orientation supported by low-cost labor and measures favoring exports, as well as an improvement in the business environment and policies incentivizing efforts in innovation<sup>12</sup> later on. However, the early export-based development of South Korea may be hard to replicate in the current global environment. Export markets are now more complicated, competition is fiercer and protectionism tendencies are more frequent (although not widespread). To understand how economic development can be achieved, let's go back to the basics. There is extensive academic literature that breaks down long-term economic

development (growth potential) into three main factors: labor, capital and productivity. A growing labor force can understandably help push an economy's production higher. It can occur through supportive demographic trends or a rising urbanization rate as workers move from away from agriculture to higher value-added sectors such as manufacturing and services. Capital is another input for economic growth as machinery and equipment are necessary to enable production. Policymakers can guide an economy to boost the factors of labor and capital by increasing public spending in infrastructure and allowing for accommodative financing conditions to spur private investment, for example. That being said, economic development cannot indefinitely rely on raising inputs of labor and capital. As emerging economies progress, new investment in infrastructure is not necessary anymore, and aging populations that ultimately imply a declining labor force are often

observed (e.g. in South Korea and China). The third factor, productivity, is probably what makes the difference in terms of long run economic development.

To improve productivity, policies to foster innovation are needed. That means boosting the domestic innovation potential by promoting research and development, improving the training of workers, putting in place tax breaks and subsidies to favor higher value-added sectors, while also attracting investment from developed economies that can enable technological spillovers. A higher level of technology in the manufacturing sector can help in boosting export competitiveness, which will become all the more important in a context of slower globalization. In this regard, we note that developing Asia, which exhibits fewer cases of middle-income traps, has an export structure broken down by technology level that is more similar to developed economies (see Figure 11).

<sup>12</sup> As of 2018, South Korea's spending in research and development relative to GDP was the second highest in the world (after Israel), at 4.5%, compared with 3.3% in Japan, 2.8% in the US and 2.1% in China.

**Figure 11: Export structure by technology level (% of total)**

Sources: OCDE, Euler Hermes, Allianz Research

### External commitment and regionalism

The success of new EU member countries in climbing up the income ladder suggests that external commitments to deep and wide structural and institutional reforms provide a good way for middle-income countries to catch-up with high-income ones. The EU membership process is forcing candidates to deal systematically with the improvement of political, business and investment environments. During that process and after joining the EU, a new member country then benefits from the strong integration in regional trade, the transfer of technology and innovation and reduced financing risks, for example. However, the retreats of Greece, and to a lesser extent Portugal, indicate that complacency with regard to the obtained institutional anchors needs to be avoided. This should also be a warning signal to Poland and Hungary, which are currently on a course of hoisting their anchors.

Could the success story of new EU member countries be a blueprint for middle-income countries in other regions? In theory, this would be a good

recommendation for policymakers in emerging markets elsewhere. In fact, the founders of some regional institutions such as ASEAN and APEC in Asia and Mercosur in Latin America intended to create common economic areas modeled on the EU. In practice, however, there appears to be little scope for any realization in the current world. APEC and ASEAN provide some anchoring for emerging markets in Asia but mainly with regard to deepening trade between the respective member economies. But beyond trade, significantly different political values and institutional norms as well as cross-national conflicts in the region will inhibit deeper integration and strong agreements that would speed up reforms sufficiently. Mercosur in Latin America, founded in 1991, has even achieved less to date: Recurring political instability in some member states and differing views on trade liberalization have stalled its progress.

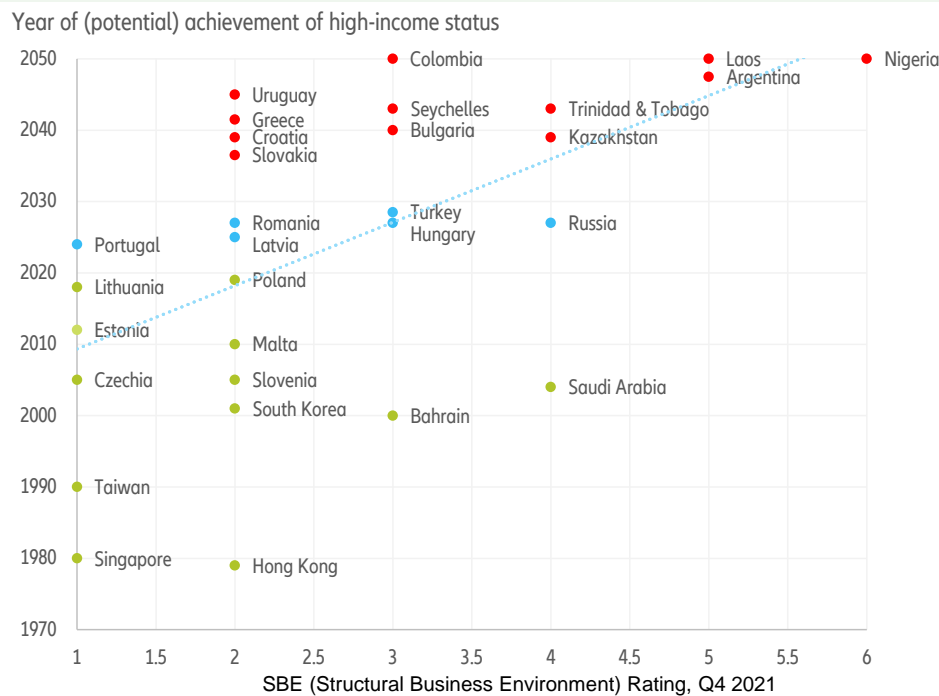
### Improving the business environment

Strong institutions and a favorable investment climate are important factors

that are beneficial in the process of escaping the middle-income trap. Figure 12 suggests that there is a correlation between Euler Hermes's proprietary Structural Business Environment (SBE) rating<sup>13</sup> and the income level of current and former middle-income economies. Those economies that transitioned from middle- to high-income status between 1979 and 2019 currently have and previously had an SBE Rating of 1, 2 or 3 at Euler Hermes, with the exception of Saudi Arabia<sup>14</sup>. Moreover, the countries we expect to join the high-income club between 2022 and 2029 also have an SBE Rating of 1, 2 or 3, except for Russia (SBE4). In contrast, many of those countries that are in the middle-income trap according to our analysis have a worse SBE Rating. As a result, governments of middle-income countries should also focus on enhancing the domestic regulatory and legal frameworks, reducing corruption and improving environmental sustainability in order to move their economies up the relative income ladder.

<sup>13</sup> The Structural Business Environment (SBE) Rating is one pillar (sub-component) of the Euler Hermes Country Risk Rating. It has six notches, from 1=best to 6=worst.

<sup>14</sup> Saudi Arabia, however, was a long time rated SBE3 and was only recently lowered to SBE4 upon the inclusion of "Environmental Sustainability" in the SBE Rating in 2020.

**Figure 12: Structural Business Environment rating vs. year of (potential) achievement of high-income status**

Note: The years of potential achievement of high-income status of the trapped countries (red dots) are only hypothetical for ease of illustration.

Sources: Euler Hermes, Allianz Research

### Closing protection gaps

Given the importance of insurance markets in strengthening societal resilience, promoting them can help to escape the middle-income trap. This is not least a task for insurers themselves – one that opens new business opportunities.

Despite progress in recent years, significant gaps in insurance coverage remain. Swiss Re puts the global protection gap in natural catastrophe, health and mortality at about USD1.2trn in premium equivalents; emerging markets account for about 60% of this<sup>15</sup>. Covid-19 and the associated increase in risk awareness as well as the pivot to sustainability (“building back better”) offer a unique opportunity to close at least part of this gap.

For the insurance industry, this leads to four strategic recommendations:

First, its products must become simpler, more affordable and more accessible. The digitalization push of the pandem-

ic lays the ground for this. For example, in the area of health: the “phygital” model is on the rise and offers the opportunity, especially in poorer countries, to make health services accessible to more people.

Second, advancing climate change and increasing cyber-attacks are bringing risk prevention to the fore. With the help of Big Data – for example in conjunction with the Internet of Things, the connection of control systems – and new technologies, risks can be predicted much better. This can be used to develop stand-alone risk-prevention business models.

Third, Covid-19 made it clear that we live in a world in which risks are constantly rising. This makes public-private partnerships necessary in many areas in order to build up adequate risk-protection schemes: It is not only in the case of a pandemic that purely private solutions are overwhelmed in their risk-bearing capacity. But the insurance

industry can contribute a lot to the efficiency and effectiveness of these schemes.

Fourth, the pivot to sustainability offers new investment opportunities with more stable returns. Especially for projects in poorer countries, public-private partnerships are a good option: for example, cooperation with multilateral development banks, in which public institutions contribute their greater risk-bearing capacity and the private sector its know-how. It’s a way to de-risk investments in middle-income countries to unleash private capital.

Helping to close protection gaps by focusing on simpler products, risk prevention and building public-private partnerships – be it for risk protection or infrastructure investments – the insurance industry can go a long way to help countries to escape the middle-income trap. It’s a fitting task to its corporate purpose.

<sup>15</sup> See Swiss Re Institute (2019), “Indexing resilience: a primer for insurance markets and economies”, sigma No 5/2019.

# APPENDIX: METHODOLOGY

For the long-term analysis of income per capita, we follow the approach of Robertson/Ye (2013)<sup>16</sup> within the following framework.

**The sample of countries** in our analysis comprises 77 economies:

- 41 were middle-income economies in 2019, defined as having an income per capita of less than 50% compared to the US.
- 36 were high-income economies in 2019.

**The reference country** is the US: Literature has shown that the average real GDP per capita growth rate in the US has been a relative steady +1.8% for over more than a century. In contrast, many European advanced economies experienced considerable catching-up for some time after World War II.

**Data:**

- We use real GDP per capita in constant 2017 international dollars and purchasing power parities (PPP) as the measure for income per capita.
- The timeframe of our data ranges from 1950 (or earliest available) until 2029:
  - Historical data come from the Penn World Table (version 10.0).
  - For the pre-Covid-19 scenario we use our forecasts (as of January 2020) for 2020-2029.
  - For the post-Covid-19 scenario we use our latest forecasts (as of September 2021) for 2021-2029.

**Two unit root tests** are applied:

- The first one is the usual Augmented Dickey-Fuller test, with the (usual) specification:

$$\Delta y_t = \alpha + \phi y_{t-1} + \varepsilon_t, \text{ with the null hypothesis } H_0: \phi = 0.$$

A middle-income country whose series rejects the null hypothesis is considered to be in the middle-income trap. If it fails to reject the null hypothesis, we move on to the second unit root test.

- This second test is the Zivot-Andrews test, which is a unit root test with one endogenous breakpoint in the intercept. A country whose series rejects the null of this second test is also considered to be in the middle-income trap.
- For each middle-income country, we apply the same statistical procedure that determines whether a country is in the middle-income trap to both series (both scenarios) and find out which countries yield conflicting results to understand the impact of the Covid-19 crisis.

<sup>16</sup> See footnote 3

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