April 21, 2021

Vaccination as a factor for an uneven recovery

The world's leading economies will recover differently following across-the-board GDP declines

- **The overall GDP loss strongly correlated with the strictness of counter-pandemic measures.** This is true for the majority of countries, which together represent 81% of global GDP and 62% of the world's population, bar some exceptions. On average, lockdowns and restrictive measures resulted in 7.1 pp of GDP contraction, with variations depending on countries' economic structures and the severity of quarantine measures.

- **Among the most affected sectors were transport, construction, mining, and services.** Less affected were retail and manufacturing, which rebounded to a varying extent during the second half of 2020.

- **The majority of countries imposed quarantine measures in a coordinated manner.** Coronavirus-related restrictions were in place during almost all of 2020 in major economies, reaching their lowest point in summer and then bouncing back to a higher level in terms of severity when the second wave of COVID-19 began in autumn. During the first wave, April was the month with the strictest quarantine measures in most of the countries.

- **Vaccination programs are likely to be implemented in an uneven manner and with harmful implications for the economies.** A third global wave of the coronavirus pandemic is quite possible, and it may be more harmful for countries which have a slower pace of vaccination and are further away from reaching herd immunity. The different pace of vaccination globally may delay the formation of herd immunity in some countries, making future economic recovery and budget consolidation highly uneven.

ACRA and Golden Credit Rating plan to publish a number of joint research papers covering the impact of the COVID-19 pandemic on economic activity and public finance. This is the first paper of the series. See also our joint research papers on the structure of the Russian and Chinese bond markets (Parts 1, 2, 3).

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Overall GDP loss strongly correlated with the strictness of the counter-pandemic measures with few exceptions

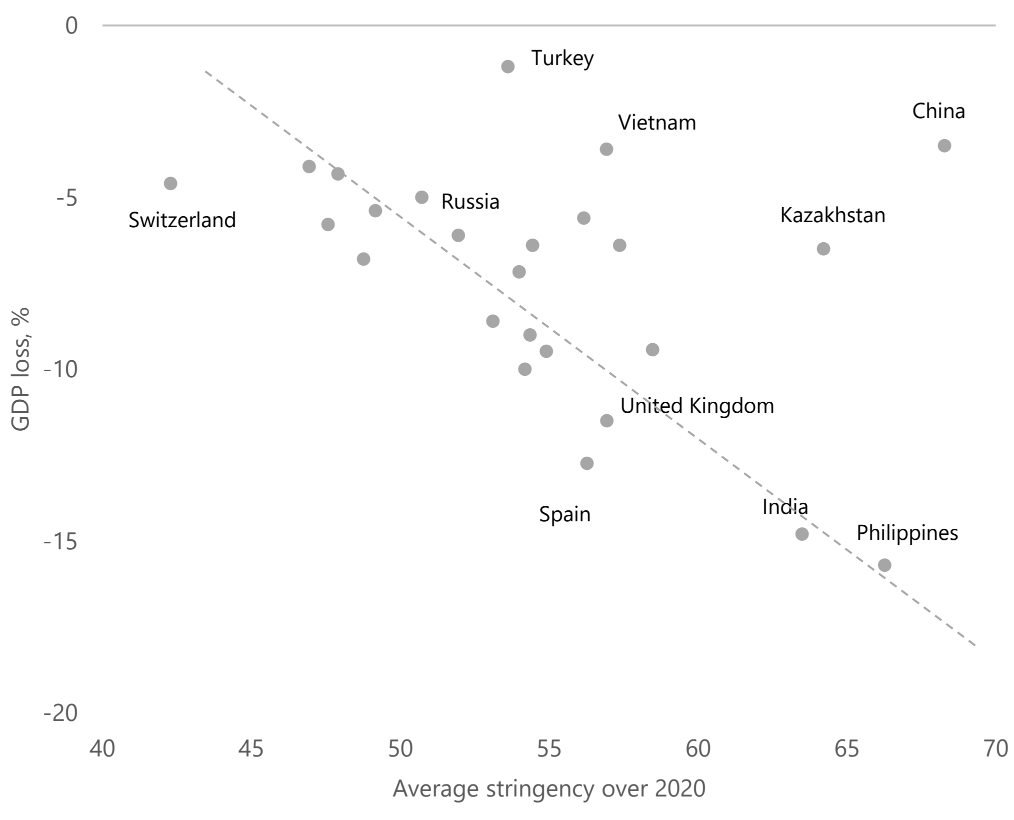
The unique feature of the 2020 crisis is a single factor that explains the severity of GDP loss in the majority of countries globally, bar some exceptions. This factor is the restrictive measures designed to tackle the spread of COVID-19 that had a significant negative impact on almost all economic sectors.

This impact was mainly felt as a result of reduced consumption and supply, underpinned by self-isolation regimes as one of the major restrictive measures imposed on the population in many countries. Lower demand for consumer goods and services (apart from the essential ones) led to an output contraction among goods producers and service providers. As a result, contractors producing intermediate goods also saw lower demand.

In this research we will describe a sample of 27 countries which represents the top 10 economies in the world, top 10 in the EU, all the BRICS countries, top 10 in Asia, and some of the CIS. This sample of countries covers 81% of global GDP and 62% of global population.

GDP loss is defined as the difference between the real GDP growth rate forecasted by the IMF and the factual growth rate achieved in 2020.

Figure 1. There is a clear relationship between the average stringency of counter-pandemic measures over 2020 and GDP loss with few exceptions



Sources: national statistical offices, ACRA, Golden Credit Rating

For the majority of countries, economic losses were more or less consistent with the stringency of imposed quarantine measures (*Fig. 1*). However, there were some exceptions. Despite having comparably high severity of quarantine measures, four countries — China, Turkey, Vietnam and Kazakhstan — suffered much less economic losses than others, while Switzerland underwent a larger contraction.

We estimated the GDP loss associated with COVID restrictions in 2020 by comparing the difference between the factual (or at least estimated based on the first three quarters) real GDP growth rates for the countries considered in our analysis and the forecasts available before the date when quarantine measures were introduced.

Out of the four countries mentioned above, three — Vietnam (2.9%), China (2.3%) and Turkey (1.8%) — managed to maintain positive growth rates, but at a lower level than initially expected, while Kazakhstan's economy contracted by -2.6%. Economic expansion, though relatively modest, allowed the first three countries to narrow the gap between the GDP expected in early 2020 and the actual indicator.

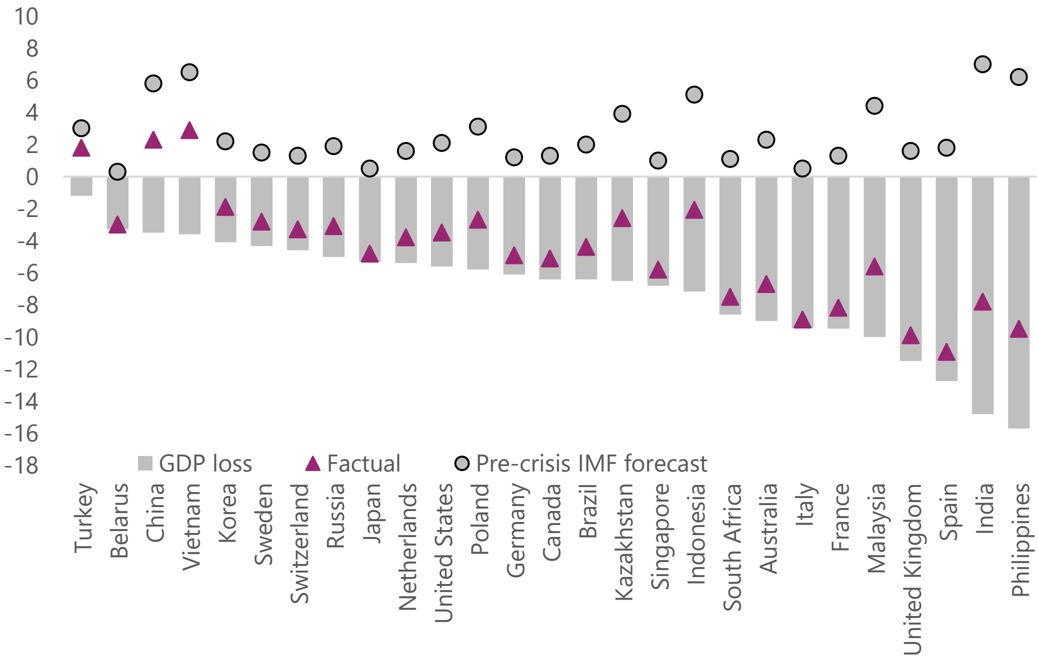
China managed to avoid a fall in GDP thanks to its highly effective containment of the spread of COVID-19, external demand for specific Chinese goods, fiscal stimuli aimed at infrastructure investments, and a developed e-commerce market. In Turkey, relatively cheap credit was massively infused into the economy. This was a countervailing factor for the quarantine measures. In the case of Vietnam, the effective containment of the pandemic's spread and growth in the manufacturing sector, additionally boosted by the free trade agreement which was signed with the EU in summer 2020, played an important role. The smaller losses of Kazakhstan can be explained by the growth in manufacturing industries caused in particular by opening new production facilities (e.g., the automotive sector), as well as the government's efforts to stimulate construction.

Switzerland's higher-than-expected losses explained by quarantine stringency in comparison to other countries in our sample can be attributed to the fact that it is a small open economy susceptible to external shocks. Nonetheless, when compared to other European states, who are its major trading partners, the GDP growth slump of this country is not as sharp.

We have estimated that the average GDP loss in 2020 caused by pandemic-related restrictions was 7.1 pp. This average conceals the extremes: there are some countries that managed to grow despite the economic damage done by COVID-19 as mentioned before, whereas others were hit much harder than the average (*Fig. 2*).

The most harm was inflicted on such countries as India (-14.8%), the Philippines (-15.7%), Spain (-12.7%), and the United Kingdom (-11.5%). These countries had the highest level of strictness of measures imposed out of the countries considered in our sample (*Fig. 1*).

Figure 2. The extent of GDP declines in 2020 were very different across countries



Sources: national statistical offices, ACRA, Golden Credit Rating

Fig. 3 describes the production index dynamics distribution using a candle bar chart. The crosses denote average values; lines within the rectangles denote median values; while the rectangles denote two medium quartiles in a distribution. Each circle represents a single country.

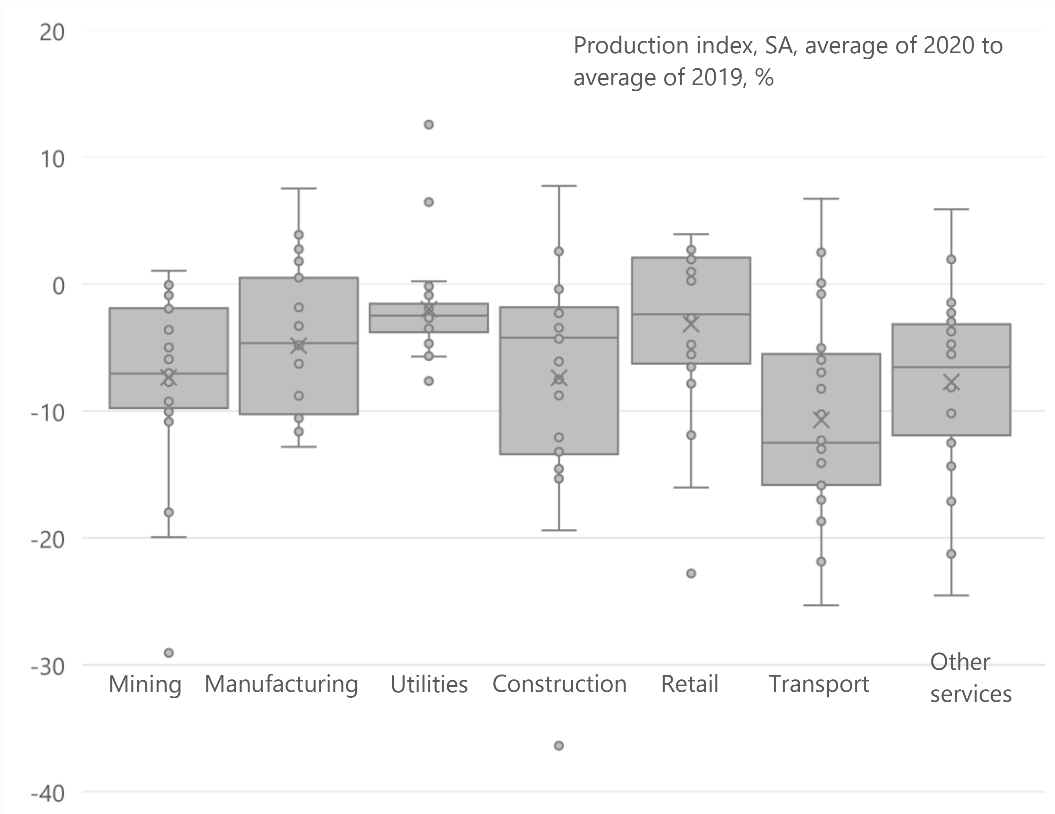
Overall, as can be seen in *Fig. 2*, Western European countries were hit by the pandemic early and therefore lived with the coronavirus's economic consequences for more of the year, which brought some of them to the upper side of the GDP loss spectra in 2020. In addition, they tended to apply strict quarantine measures, except Sweden with its no-quarantine policy in the first half of the year.

East Asian countries on average were more successful in containing the spread of the coronavirus during the first months of the pandemic, which is reflected in their higher real GDP figures. Eastern European and CIS countries mostly lay in the middle of the spectra, reflecting both average success in containing the disease and economic structure differences compared to Western Europe, where the service sector occupies larger share.

As for economic activities, on average the most affected industries in 2020 compared to 2019 (*Fig. 3*) turned out to be transport (-10.7%), construction (-7.4%), mining (-7.4%), and services (-7.7%). Manufacturing and retail trade were also hit by the restrictive measures, but they managed to bounce back to a varying extent in different countries during the second half of 2020.

The major oil and gas exporters were hit by the measures imposed by the OPEC+ deal, in particular the curb on oil production starting from May 2020. The repercussions of the deal are reflected in mining sector data, the oil product manufacturing subsector, and the wholesale turnover numbers in these countries.

Figure 3. The transport sector on average suffered the most from quarantine measures imposed over 2020



Sources: national statistical offices, ACRA, Golden Credit Rating

The performance of the retail sector in 2020 reflects to a certain extent the severity of the quarantine measures. During the first wave, the countries with the strictest measures saw an almost 50% contraction in turnover, whereas the countries with an intermediate level of strictness in some cases saw single-digit or even no contraction. However, during the second wave the contraction in the sector was not as striking as during the first one.

Among other sectors, manufacturing was also susceptible to the restrictions. The countries that did not fit this pattern were those with unique manufacturing industry characteristics (for example, Singapore), where the major segments (e.g., biomedicine and pharmaceuticals) were basically unaffected by COVID-19. Nonetheless, during the second wave, most of the countries more or less restored their manufacturing activities, though the average figures for 2020 are still rather negative.

When summarizing available statistics we identified at least four structural features which could have pushed countries' potential economic losses caused by the COVID-19 pandemic above the average:

- Higher than average dependence on external tourism, as reflected in huge positive net external money flows from this activity in the balance of payments (e.g., Spain);
- Inadequate capacity of healthcare facilities or uneven access to medical services, which in most cases led to higher death rates and stricter and longer quarantines (e.g., the United Kingdom, Brazil, and Italy);
- Elevated share of investment-oriented goods produced within a country's manufacturing sector (e.g., Germany and Switzerland);
- Historically low share of online business in retail trade and financial services.

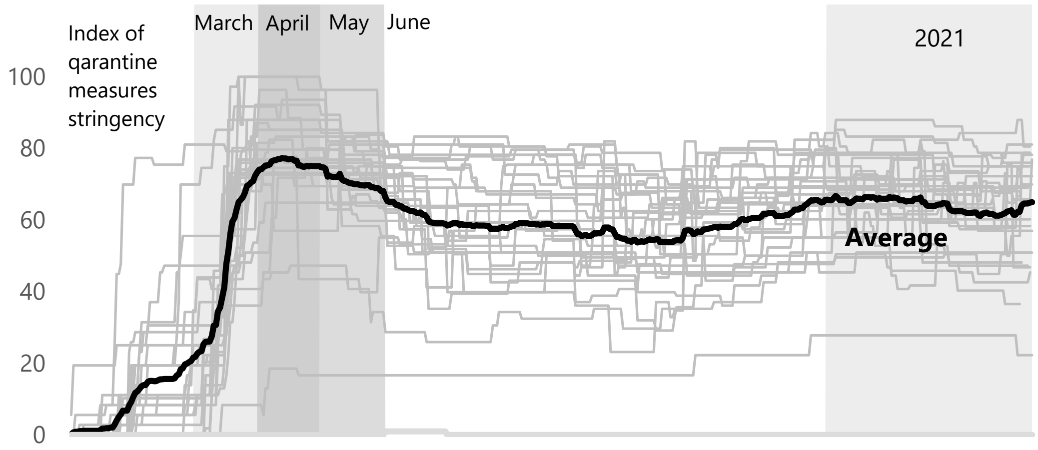
In some cases, potential losses were mitigated by successful policies, fortunate economic or export structure, or less political willingness to curb the pandemic.

A brief history of the pandemic and the counter-pandemic measures

On March 11, 2020, the World Health Organization announced that COVID-19 is a pandemic. Over the next 10 days, the majority of countries actively introduced restrictive measures to curb its spread, since infection cases were reported in almost all of them. By March 20, in more than 100 countries these measures had reached the 50-point mark on the scale of the Oxford COVID-19 Government Response Tracker, indicating that a great deal of public gatherings had been banned, schools were closed, and travel was severely restricted. In mid-April the tracker climbed to around the 80-point mark on average, the highest point reached during the pandemic so far (*Fig. 4*).

From June 22 onwards an increasing number of countries started to relax their restrictive measures. However, a number of restrictive measures have been restored since October 2020 with the second wave of coronavirus arriving in most countries, though the severity of these measures was lower than during the first wave. Moreover, since the end of 2020 many European countries (such as Germany, the United Kingdom, and the Netherlands) have substantially increased quarantine-related restrictions, expecting a third wave of pandemic partly triggered by new strains of the virus.

Figure 4. Last April was the month with the strictest quarantine measures in most of the countries



Sources: Oxford COVID-19 Government Response Tracker, ACRA, Golden Credit Rating

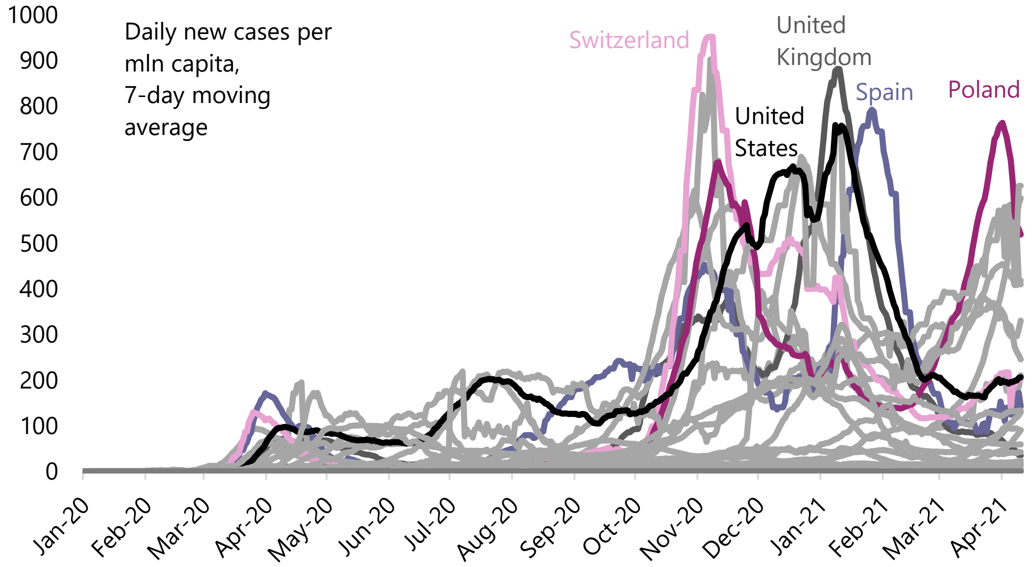
The vaccination process is likely to differentiate countries' economic recovery in 2021

Although the differences in COVID statistics across countries, in particular coverage of the population by various COVID-19 tests, make cross-country comparisons difficult, we believe that within each country the number of the registered cases approximately resembles the spread of the virus.

The number of cases increased dramatically during the second wave of the coronavirus pandemic from autumn 2020 to winter 2021. Among the countries affected the most were Switzerland, the United Kingdom, and Spain (*Fig. 5*). Nonetheless, the strictness of quarantine measures has been less severe compared to the first half of 2020 and has resulted in less damage to the economy, but at the expense of lower barriers to the spread of the pandemic.

Since February 2021, the number of new cases has considerably decreased, thus allowing us to assume that the second wave is likely to be almost over. However, a global third wave is quite likely in the near future because herd immunity worldwide is still weak due to the low rate of the vaccination process in many countries. As demonstrated by *Fig. 5*, a number of European countries (such as Poland, Sweden and France) are already experiencing the third wave of the coronavirus pandemic.

Figure 5. The second wave turned out to be much more intense in terms of cases, but the most recent dynamics suggest that it is almost over



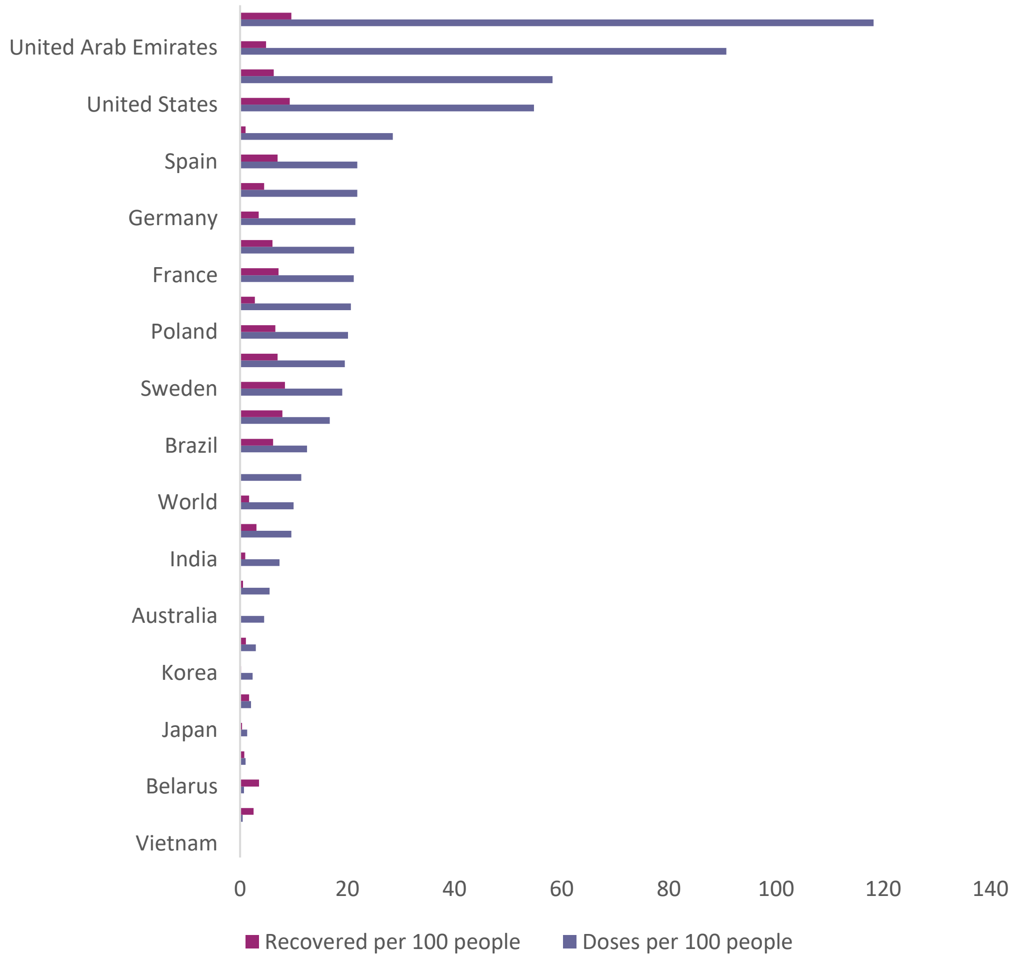
Sources: Our World in Data, ACRA, Golden Credit Rating

The vaccination process, which was launched in many countries at the onset of 2021, is not yet widespread enough to talk about the end of pandemic globally. The absolute frontrunners are Israel and the United Arab Emirates, where 118 and 91 doses per 100 people respectively have been administered as of April 10, 2021.

As of April 10, the United Kingdom and United States had managed to narrow the gap with the frontrunners with 58 doses and 55 doses per 100 people, respectively (*Fig. 6*). However, the average for the whole world is 10 doses per 100 people, which is far from sufficient to ensure the end of recurring lockdowns. The gap between the leaders and the average is primarily due to the speed of vaccination, which depends on peoples' trust in the vaccine(s) available in their countries, the size of population, and sufficiency of doses.

Figure 6. In our sample of countries the United Kingdom and United States are leading by number of doses of vaccine as of April 10, 2021

Israel and the United Arab Emirates are the clear leaders of the vaccination process, but they are not included in our sample.



Source: Our World in Data

Considering the speed of vaccination in the majority of countries, the probability of more severe waves of the pandemic (compared to the previous ones) cannot be excluded in the less vaccinated countries. Taking into account the striking difference in populations' resilience to the pandemic, we expect big diversity in the severity of quarantine measures and less coordination in the introduction of these measures globally in 2021. This may make economic recovery uneven this year. Henceforth, much depends on how fast the majority of countries are able to vaccinate their populations to curb the influence of the coronavirus on national economies.

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