

## OPINION PIECE

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## The economic case for global vaccinations

Rolling out a vaccine to stop the spread of a global pandemic does not come cheap. Billions of dollars have been spent on developing drugs and putting in place a programme to get those drugs into people's arms. But amid the uneven distribution of vaccines – with poorer countries lagging far behind richer nations – another concern presents itself: the economic cost of not vaccinating everyone.

My colleagues and I sought to find out and measure the impact of uneven vaccination distribution on the global economy. To do this, we analysed 35 industries – such as services and manufacturing – in 65 countries, and examined how they were economically linked through trade and production networks in 2019, before the pandemic hit. For example, the construction sector in the United States relies on steel imported from Brazil; American auto manufacturers need glass and tyres that come from countries in Asia; and so forth. We then used data on COVID-19 infections for each country to demonstrate how all countries will lose out if the coronavirus crisis were to disrupt global trade, curbing shipments of steel, glass and other exports. The more a sector relies on people working in close proximity to produce goods, the more disruption there will be to that sector due to higher infections.

Our results showed that even if wealthier nations had been fully vaccinated by the middle of 2021 and developing countries had managed to vaccinate only half of their populations, the global economic loss would have amounted to around US \$4 trillion, and the United States, Canada, Europe and Japan would have shouldered almost half this burden, a whopping 48 per cent.

Our research underscores that no economy is an island, and it is in rich countries' direct economic interests to ensure that poorer nations are also fully vaccinated. Widespread vaccinations in wealthier nations will certainly help domestic businesses such as restaurants, gyms and other services, but industries such as the automobile industry, construction and retail, that depend on imports of materials, parts and supplies from developing economies, will continue to suffer from the lack or delay, caused by the pandemic, of supplies produced in developing economies.

Our estimates have been made weekly throughout 2021, on the assumption that prices will not adjust enough. When prices rise and these bottlenecks in global supply chains are smoothed out by the end of 2021, then losses will stop, but they will already have

been incurred in 2021.

In addition, as long as people are not vaccinated in the poorer countries of the world, exporting industries in rich countries will not fully recover because the continuing pandemic in developing economies reduces the demand for products from advanced economies. A full global economic recovery will only come when vaccines are made available worldwide and every economy recovers from the pandemic. We have already had a glimpse of the scenario modelled by our work, with uneven worldwide recoveries for the first six months of 2021.

It is primarily a humanitarian responsibility to produce and distribute vaccines to the whole world. Our results also highlight that this is not simply an act of charity, but an act of economic rationality from the perspective of advanced economies, by returning high returns to their investments in initiatives such as COVAX that aims to produce and distribute more vaccines to the rest of the world. This implies that global policy coordination of the supply of vaccines across the world is in the economic interest of all regions.