

Predicting COVID-19's Long-Term Effects Using Past Pandemics

Despite vaccine successes, the end of the COVID-19 pandemic remains unclear. While strict public health measures alongside lower fatality rates for the younger population may have mitigated the impacts on potential output in the long-term, issues such as the deskilling and demoralization of unemployed workers and delayed bankruptcies following the eventual withdrawal of governmental support, risk potential deep and persistent economic scarring. Past pandemics may hold the key to predicting the long-term economic effects of COVID-19.

Given the similarities between the current pandemic and the 1918 Spanish Flu, namely the fast transmission of a respiratory disease and the use of non-pharmaceutical containment (Karlsson et al., 2014)), the outcomes of COVID-19 may be comparable to those of the Spanish Flu. If so, global historic data suggests negative short-term declines in real income but no long-term effects, apart from lowered average worker quality (Carillo & Jappelli, 2020; Dahl et al., 2020; Karlsson et al., 2014). This parallels concerns of future productivity loss due to educational disruptions faced during school closures. The loss of even one-third of a school year for the current cohort of students could lead to a 2.6% decline in a country's GDP over the remainder of the century (Hanushek & Woessmann, 2020). However, factors such as poor data availability and confounding events like WWI may mean the Spanish Flu is not perfectly comparable to COVID-19 after all.

Accounting for these limitations, a review of 19 major pandemics, each with a death toll above 100,000 deaths, suggests pandemics have negative long-term economic effects (Jordà et al., 2020). The primary metric, the real natural rate of interest, is found to reach its lowest point after 20 years of a pandemic ending, and the authors suggest it takes 40 years for the rate to return to the expected levels (Jordà et al., 2020). This corroborates expectations that despite

savings increasing globally, the economic uncertainty dampens investment appetite (Dossche & Zlaranos, 2020). COVID-19 may also cause a scarring of beliefs, whereby people over-estimate the odds of another globally-devastating pandemic and therefore become more risk-averse. This could lead to a potential output loss of 188% of annual GDP by 2060 in America alone (Kozlowski et al., 2020). The depressed investment would limit capital accumulation and thus complementary labor demand, resulting in negative implications for per capita income.

Debt sustainability is another area of concern. Countries incapable of servicing their debt, in particular emerging economies, where interest rates may increase more rapidly due to creditors' default concerns (Chudik et al., 2020), are at risk of significant long-term falls in investment. This may permanently reduce potential output. The predicted decline may, however, be attenuated if the death toll is relatively small, as predicted for this pandemic with the infection fatality rate (probability of death following an infection) standing at only 0.2 – 0.5% (Ioannidis, 2021; Jordà et al., 2020; Streeck et al., 2020). To counter, aggressive fiscal expansionary policy may boost public debt and exert upward pressure on the natural interest rate, thereby decreasing the national savings rate.

On the other hand, some studies suggest that a pandemic may be associated with positive long-term economic growth. Based on US 1918 Spanish Flu data, contrarian studies have suggested that there may be up to a 0.65% increase in real per capita income per extra death per thousand (Brainerd & Siegler, 2003). While these studies are rigorous and account for confounders such as composition of output, their conclusions are still limited by the unreliability of historical forecasts and country-specific factors. Nonetheless, they highlight that empirical analyses do not solely suggest long-term negative effects arising from COVID-19.

There are conflicting predictions of COVID-19's long-term effects; however, such a fundamental shock is unlikely to have limited or no effects.

In the short run, a robust global public health response with a comprehensive international vaccine rollout is critical. Global vaccination inequity increases the likelihood of vaccine-resistant mutants arising. Vaccine nationalism must not be allowed to be a precursor to deglobalization pressures.

COVID is here to stay. Therefore, we must achieve morally-acceptable infection rates, in line with other common infectious diseases (e.g., influenza), while limiting long-term economic uncertainty and costs. Multi-faceted demand-side, supply-side and confidence-restoring policies are required. This will only be possible with the global coordination of macroeconomic policies alongside support from supranational institutions (e.g., the World Bank) to address issues such as the financing of debt burdens of developing economies to ensure no one is left behind.

The COVID-19 pandemic has been termed the 'Great Reset,' as it presents an opportunity today to rebuild society in an innovative, equitable and sustainable manner. Failure to leverage this opportunity may fundamentally change the course of human prosperity for the worse.

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