

# Slowdown in productivity growth compounded by COVID-19

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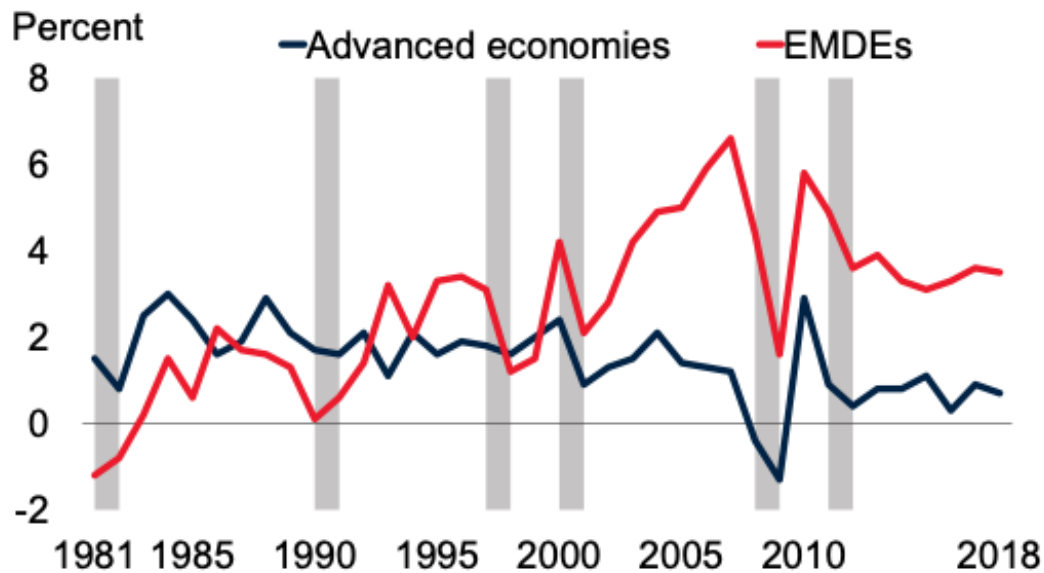
**Alistair Dieppe** 18 September 2020

Since the 2008 global financial crisis, improvements in many key correlates of productivity growth have slowed or gone into reverse, and labour reallocation to more productive sectors from less productive ones has also weakened. Furthermore, the pace of convergence of emerging market and developing economies to advanced-economy productivity levels has slowed. This column argues that the COVID-19 pandemic is likely to compound the slowdown, with profound implications for development outcomes. A comprehensive broad-based approach is necessary to rekindle productivity.

The COVID-19 pandemic is having a negative effect on economies around the world and is expected to lead to a decline in per capital income in about 90% of countries in 2020, the largest fraction in recorded economic history. Many millions will be tipped into poverty (Djankov and Panizza 2020, World Bank 2020). The pandemic is also likely to leave lasting scars through multiple channels, including lower investment, erosion of human capital due to unemployment and loss of schooling, and a possible retreat from global trade and supply linkages. These effects may lower productivity and limit the ability of economies to generate growth of real incomes in the long term.

Troublingly, the pandemic has occurred following a steep, broad-based slowdown in productivity growth after the 2007-09 global financial crisis which affected around 70% of advanced of advanced economies and emerging market and developing economies (EMDEs). In advanced economies, views were divided on whether the prolonged deceleration in productivity growth before the COVID-19 pandemic would continue. The innovations of recent decades, including digital technologies and automation of production processes, seem to have benefitted productivity growth less than those of the 20th century (Cowen 2011, Fernald 2015, Gordon 2016, Gordon and Sayed 2020). On the other hand, new digital technologies, such as artificial intelligence and other IT innovations, may soon feed through to productivity gains (Brynjolfsson et al. forthcoming, Cusolito and Maloney 2018).

**Figure 1** Advanced economy and EMDE productivity growth

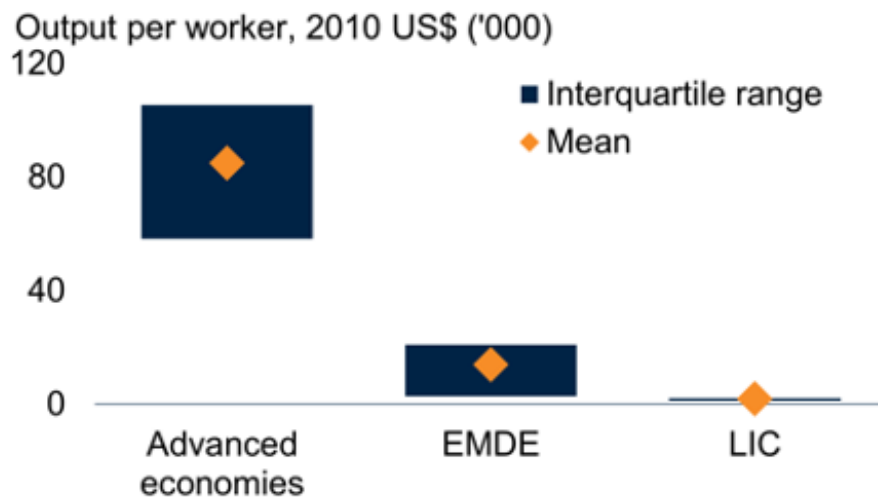


Source: Dieppe (2020)

Note: Productivity is defined as output per worker in U.S. dollars (at 2010 prices and exchange rates). Unweighted averages using annual data during 1981-2015. GDP weighted averages (at 2010 prices and exchange rates). Shaded regions indicate global recessions and slowdowns (1982, 1991, 1998, 2001, 2009 and 2012).

Meanwhile, in EMDEs, which have a history of recurring multi-year productivity growth surges and setbacks, the productivity growth deceleration after the global financial crisis was the steepest, longest, and broadest in recent decades (Dieppe 2020). Decelerating productivity growth has put at risk hard-won gains in terms of catch-up with advanced economies achieved prior to the 2007-09 global financial crisis. Labour productivity gaps with advanced economies remain substantial, with workers in the average EMDE producing less than one-fifth of the output of those in advanced economies. Labour productivity in low income countries was just 2% of the advanced-economy average over 2010-2018. Since the global financial crisis, the pace of EMDEs' convergence to advanced-economy productivity levels has slowed. At recent productivity growth rates, it would take more than a century to halve the productivity gap between EMDEs and advanced economies (Dieppe 2020). Moreover, the manufacturing and export-led approach to increasing productivity growth taken by EMDEs that converged rapidly to productivity levels in advanced economies prior to the global financial crisis may move further out of reach as automation increases and the world retreats from global value chains.

**Figure 2** Labour productivity by country group, 2010-18 average



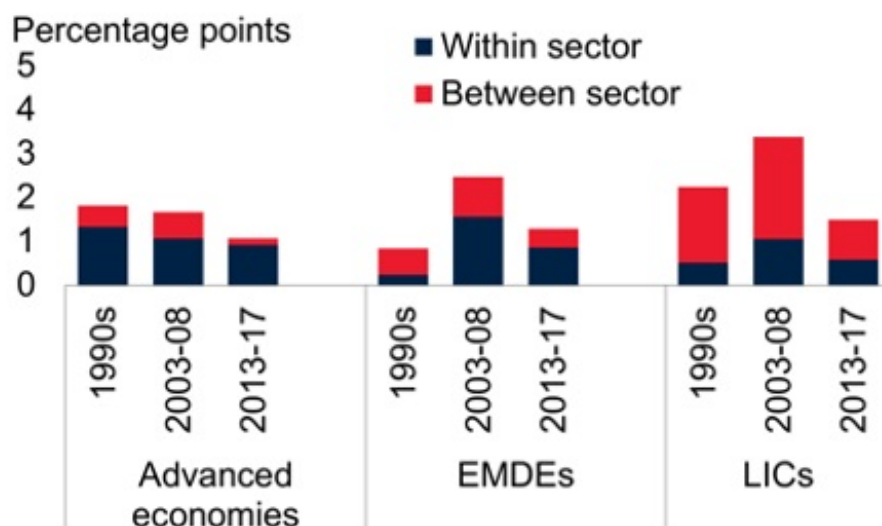
Source: Dieppe (2020)

Note: Productivity defined as output per worker in U.S. dollars (at 2010 prices and exchange rates). Based on 35 advanced economies and 126 EMDEs, of which 27 are LICs.

## Many sources of the productivity growth slowdown

There are multiple reasons for the global productivity growth slowdown. Estimates of the sources of labour productivity growth, based on the growth-accounting decomposition framework, suggest that the slowdown in EMDEs stemmed from both weaker investment and a deceleration in TFP growth, in approximately equal measures. Since the global financial crisis, improvements in many key correlates of productivity growth have slowed or gone into reverse. Working-age population growth has decelerated, educational attainment has stabilised, and the pace of expansion into more diverse and complex forms of production has lost momentum as the growth of global value chains stalled (Dieppe 2020). At the sectoral level, labour reallocation to more productive sectors from less productive ones has also weakened since the global financial crisis.

**Figure 3** Within- and between-sector contributions to productivity growth



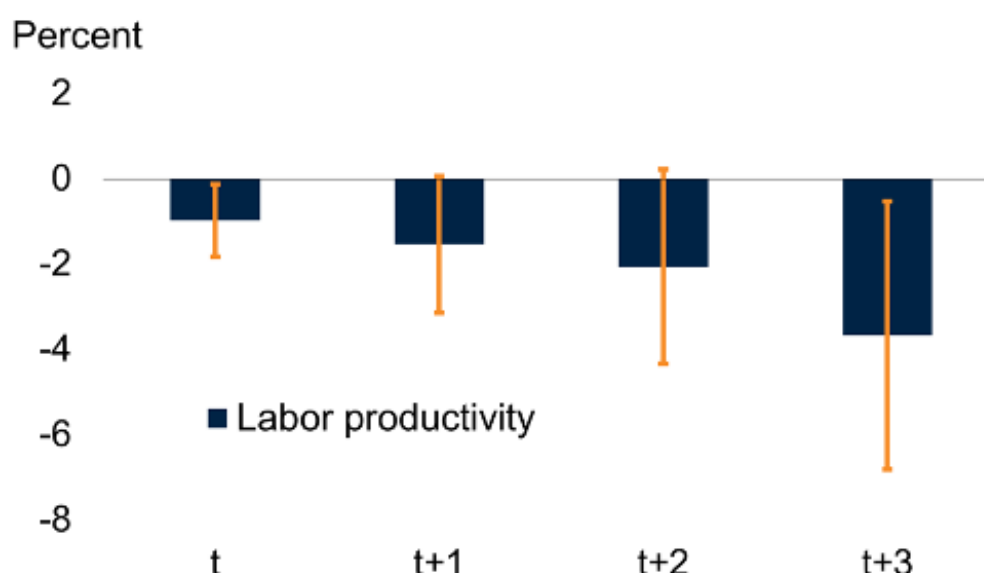
Source: Dieppe (2020)

*Note:* Productivity is defined as output per worker in U.S. dollars. GDP-weighted averages (at 2010 prices and exchange rates), unless otherwise noted. Median contribution based on 54 countries during 1975-95, 94 countries during 1995-99, and 103 countries during 2003-17.

## Protracted implications of COVID-19 for productivity

Over the past decade, the global economy has been buffeted by a series of shocks that undermined productivity growth, of which COVID-19 is only the latest. These shocks have compounded the erosion caused by an undercurrent of weakening fundamental drivers of productivity growth. Previous epidemics left lasting scars on labour productivity (Dieppe 2020, Ma et al. 2020). COVID-19 will likely compound the erosion caused by an undercurrent of weakening fundamental drivers of productivity growth (Djiofack et al. 2020). In addition to the health crisis from COVID-19, the uncertainty about the duration of the pandemic weighs on investment, as well as hindering trade; foreign direct investment and mobility restrictions may further slow the reallocation of workers away from low-productivity firms to higher-productivity ones.

**Figure 4** Effects of epidemics on labour productivity



*Source:* Dieppe (2020)

*Note:* Bars show the estimated impacts of the four most severe biological epidemics on labour productivity levels relative to non-affected EMDEs. The four epidemics considered are SARS (2002-03), MERS (2012), Ebola (2014-15), Zika (2015-16). Swine flu (2009), which coincided with the 2008-09 global financial crisis, is excluded to limit possible confounding effects. The sample includes 116 economies: 30 advanced economies, and 86 EMDEs.

## Profound implications for development outcomes

The COVID-19 pandemic is a once-in-a-century crisis that presents extraordinary challenges to policymakers around the world. In addition to the immediate challenges associated with the health and economic crises, formidable long-term developmental challenges will be magnified by the pandemic. Many questions remain about the impact of COVID-19 on prospects for global growth. The pandemic may encourage the

adoption of new technologies and accelerate the automation of production. However, policies are needed to ensure these productivity gains are not unevenly distributed. To rekindle productivity growth, a comprehensive approach is necessary to facilitate investment in physical and human capital, encourage reallocation of resources toward more productive sectors and enterprises, and foster firms' capabilities to reinvigorate technology adoption and innovation. Steps are also needed to limit the damage of adverse events. Countries with ample fiscal space and transparent governance are better able to provide reconstruction efforts, and to use them efficiently and in a timely manner as well as to support vulnerable sectors with policies that can boost long-term productivity growth. Well-designed policies and regulations concerning the prudent management of financial institutions, construction, and environmental protection can help reduce the likelihood and impact of adverse shocks.

*Authors' note: The views expressed in this column are those of the author and are not necessarily shared by the institutions to which they have been affiliated.*

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