After-Effects of the COVID-19 Pandemic: Prospects for Medium-Term Economic Damage

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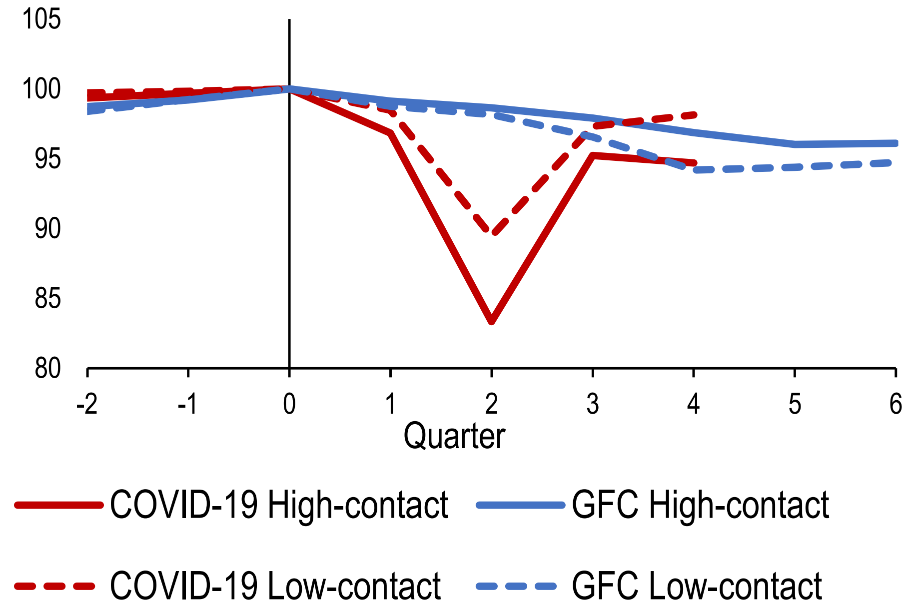
A unique crisis

- COVID-19 pandemic led to unique recession:
  - Severe, output declined three times as much as in GFC, in half the time
  - Global, but differential impacts within and across countries
  - Great uncertainty about recovery path

Value Added during Recessions, by Sector Group
(Index, last prerecession quarter = 100)



Sources: Organisation for Economic Co-operation and Development; US Bureau of Economic Analysis; and IMF staff calculations.

- This chapter tackles the following questions:

1. Lessons from past on prospects for scarring, and channels through which it occurs?
2. Importance of sectoral spillovers in propagating shocks to the broader economy?
3. Implications of COVID-19 crisis for medium-term outlook and divergence?

Channels of scarring

- Scarring: persistent damage to supply potential from job losses and firm bankruptcies, and resulting loss of economic ties in production and distribution networks

TFP	• loss of firm-specific know-how due to bankruptcies • obstacles to resource reallocation • reduction in technology adoption and innovation
Capital	• delayed or reduced investment during the crisis • debt overhang, uncertainty, and tighter financial conditions after the recession
Labor	• discouraged unemployed exit labor force • education interruptions affect long-term human capital accumulation

Medium-term output losses across recession types

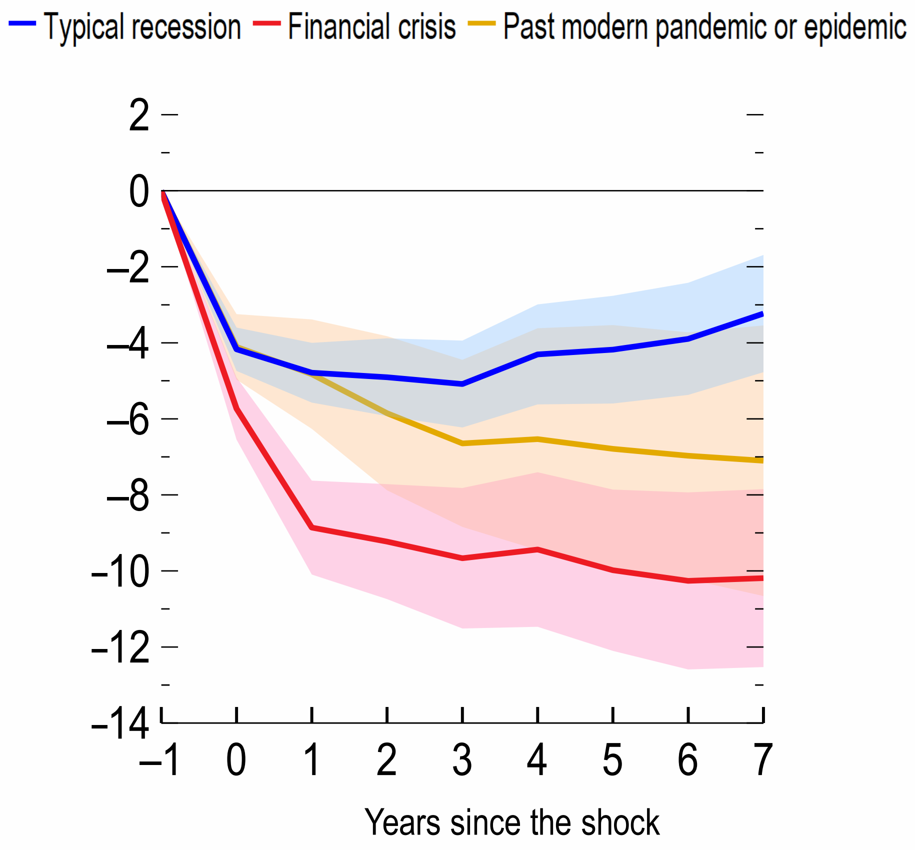
- Estimate impact of about 600 recessions in 115 countries, from 1957-2019
  - Pandemics, financial crises, and other

- Local projection method with standard macroeconomic control variables

1. There are permanent output losses, on average, after all types of recessions

2. The greatest scarring has occurred following financial crises

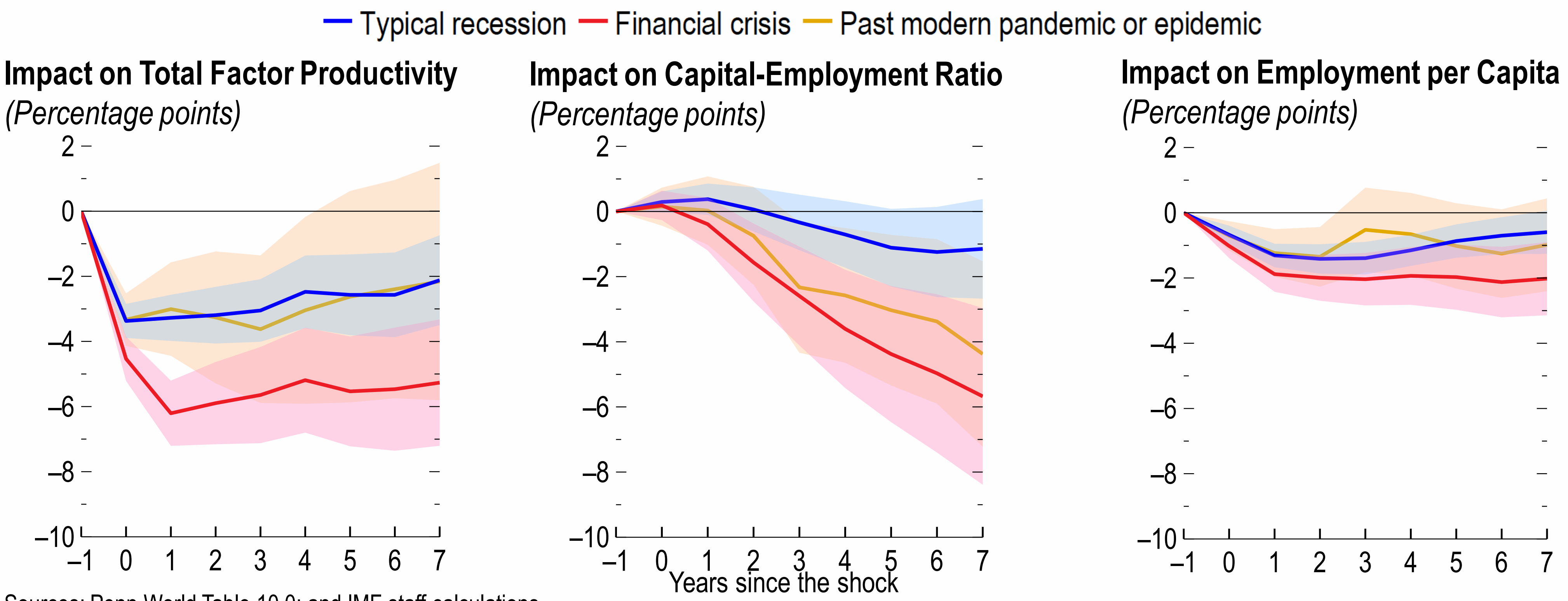
Impact on Real GDP per Capita
(Percentage points)



Sources: Penn World Table 10.0; and IMF staff calculations.
Note: The solid lines represent the estimated cumulative impulse response functions and shaded areas represent 90 percent confidence intervals. Past modern pandemics and epidemics include Hong Kong flu, SARS, H1N1, MERS, Ebola, and Zika.

Channels of medium-term output losses

- In typical recessions, losses in GDP per capita mainly through persistently weaker TFP
- In financial crises, losses through all TFP, capital-to-worker ratio, and employment

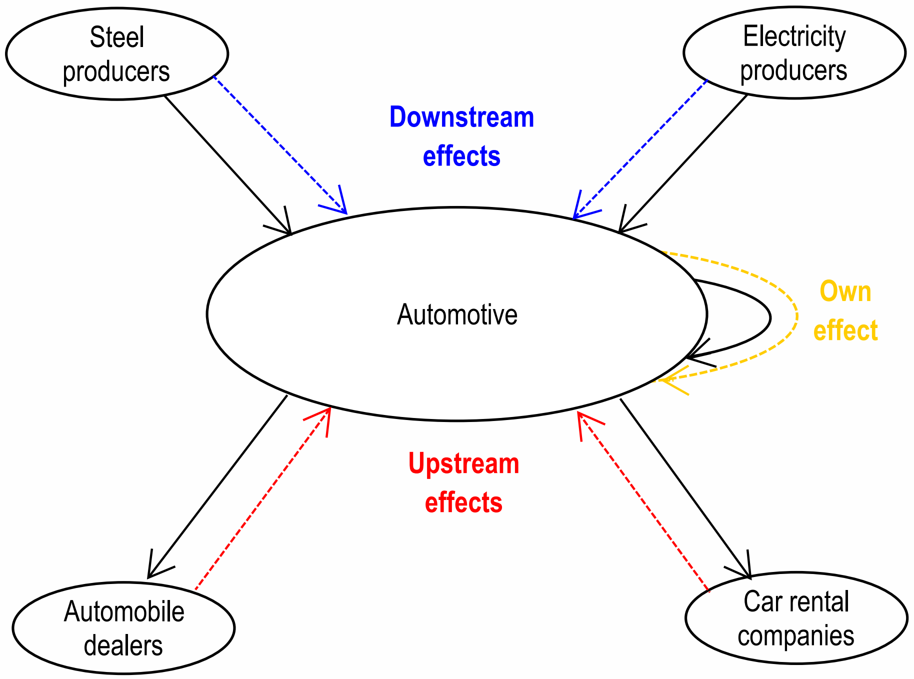


Sources: Penn World Table 10.0; and IMF staff calculations.
Note: The solid lines represent the estimated cumulative impulse response functions and shaded areas represent 90 percent confidence intervals. Past modern pandemics and epidemics include Hong Kong flu, SARS, H1N1, MERS, Ebola, and Zika.

Economic shocks: the sectoral dimension

- Regression analysis to quantify size and persistence of effects of past shocks on sectoral outcomes
  - 43 countries, 30 sectors, from 1995 to 2014
- Compare effect of shocks originated:
  - In the same sector
  - In other sectors, domestic and foreign
- Analyze different shocks
  1. SUPPLY: sectoral TFP changes
  2. DEMAND: sectoral government spending changes
- We find large spillover effects from both shock types

Own and Spillover Effects



Source: IMF staff.
Note: Solid, black arrows correspond to (net) trade flows. Dashed, colored arrows correspond to shocks and their resulting effects on the focal sector (automotive).

Network effects amplified the COVID-19 shock

- Back-of-the envelope quantification of spillovers in first year of COVID-19 crisis, using past coefficients and actual shocks

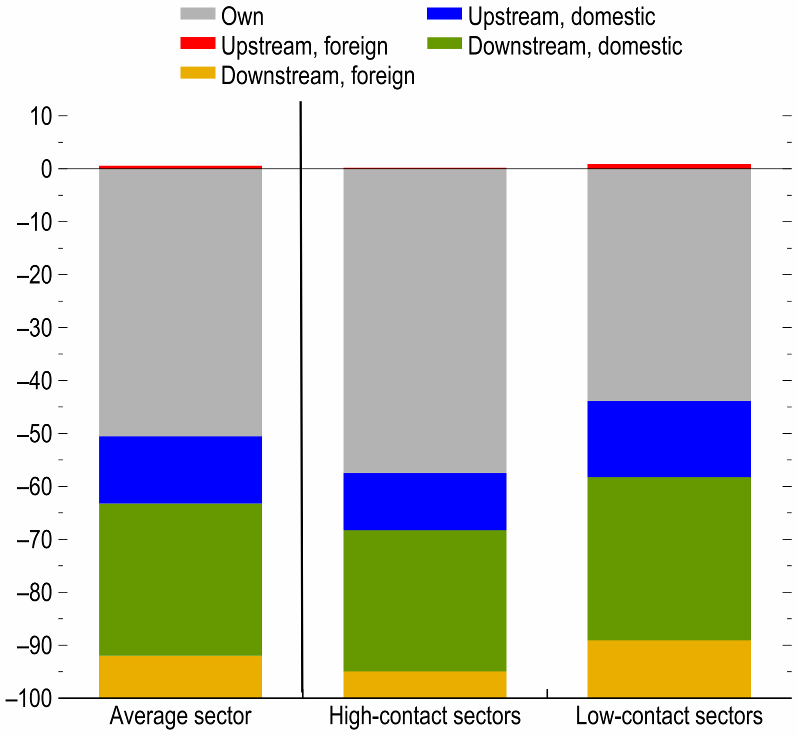
- We find:

  1. Sizable spillovers, up to half of decline in sectoral gross value added

  2. Downstream domestic spillovers from supply shocks dominate, limited role of foreign shocks

Relative Own and Spillover Effects from the COVID-19 Shock

(Percent contribution to the 2020 GVA decline)



Sources: World Input-Output Database; OECD Quarterly National Accounts; International Labor Organization; and IMF staff calculations.

Expected medium-term output losses

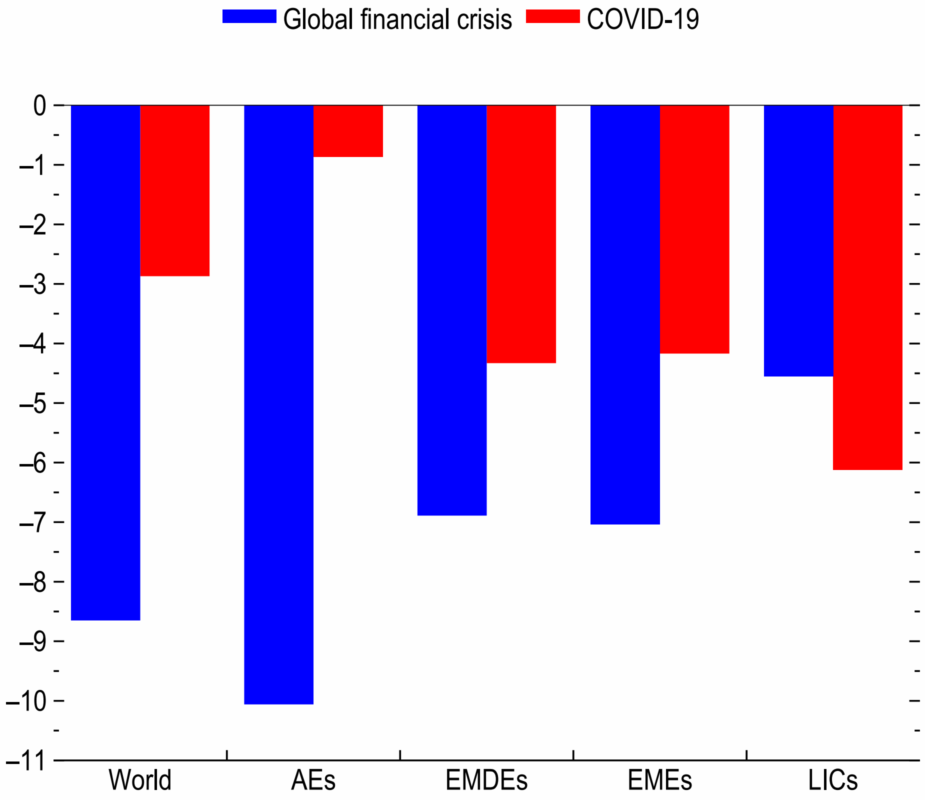
- Global output 3 percent lower in 2024 than expected pre-pandemic
  - Loss in GFC was around 8½ percent

- Expected impact less severe than GFC for advanced and emerging economies

- Largest losses expected for low-income countries

- Main reasons for divergence
  - Amount of policy support
  - Access to vaccines

Medium-term Output Losses
(Percent difference from precrisis forecast)



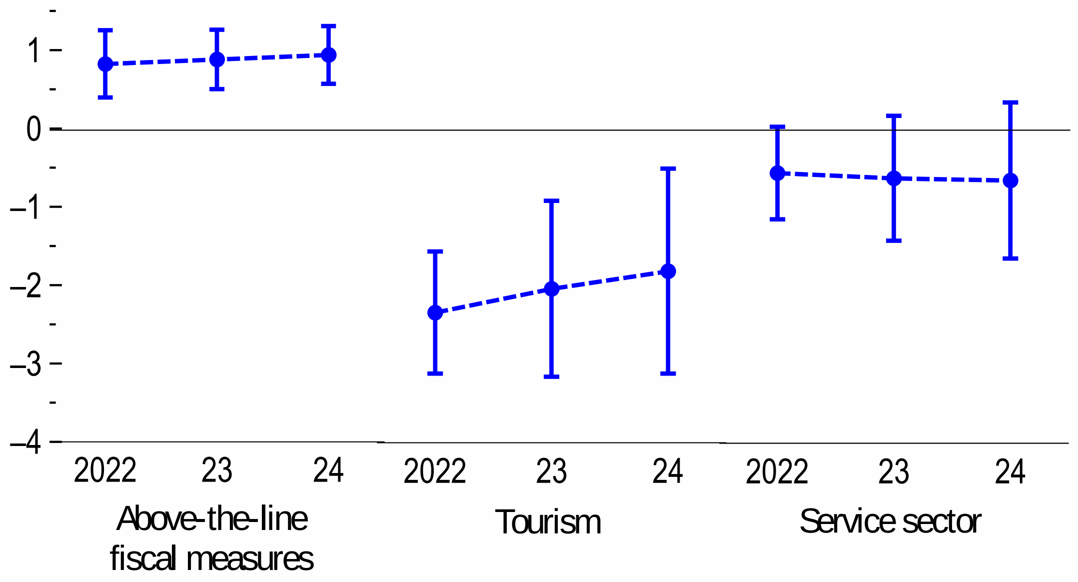
Source: IMF staff estimates.
Note: Bars show the percent difference in real GDP four years after the crisis and anticipated GDP for the same period prior to the crisis for the indicated group.

Correlates of expected medium-term output losses

- Medium-term output losses vary across countries:
  - Smaller losses for countries that implemented larger fiscal responses
  - Largest impacts for the most tourism-dependent economies
  - Economies with larger services sectors are also projected to experience more persistent output losses

- But large uncertainty remains

Expected Medium-Term Output Losses: Explanatory Factors
(Percentage points)



Sources: World Bank, *World Development Indicators*; World Travel and Tourism Council; and IMF staff calculations.
Notes: Chart shows point estimate and two standard error ranges for coefficients of a cross-sectional, cross-country regression of forecast revisions on explanatory variables.

Policies to limit persistent damage

- Important to avoid financial distress

- Tailor the response to the stage of the recovery:
  - Targeted support to affected sectors and workers while supply constraints last
  - Public investment can boost both supply and demand as constraints ease

- Fiscal space permitting, aim for a combined package of targeted support and public investment designed to:
  - Reversing setbacks to human capital accumulation and encouraging employment
  - Supporting productivity, including policies to facilitate resource reallocation
  - Boosting investment

World Economic Outlook
April 2021, Chapter 2

THANK YOU!