The Economic Effects of the COVID-19 Pandemic

Philosophy, Economics and Politics: Current Debates

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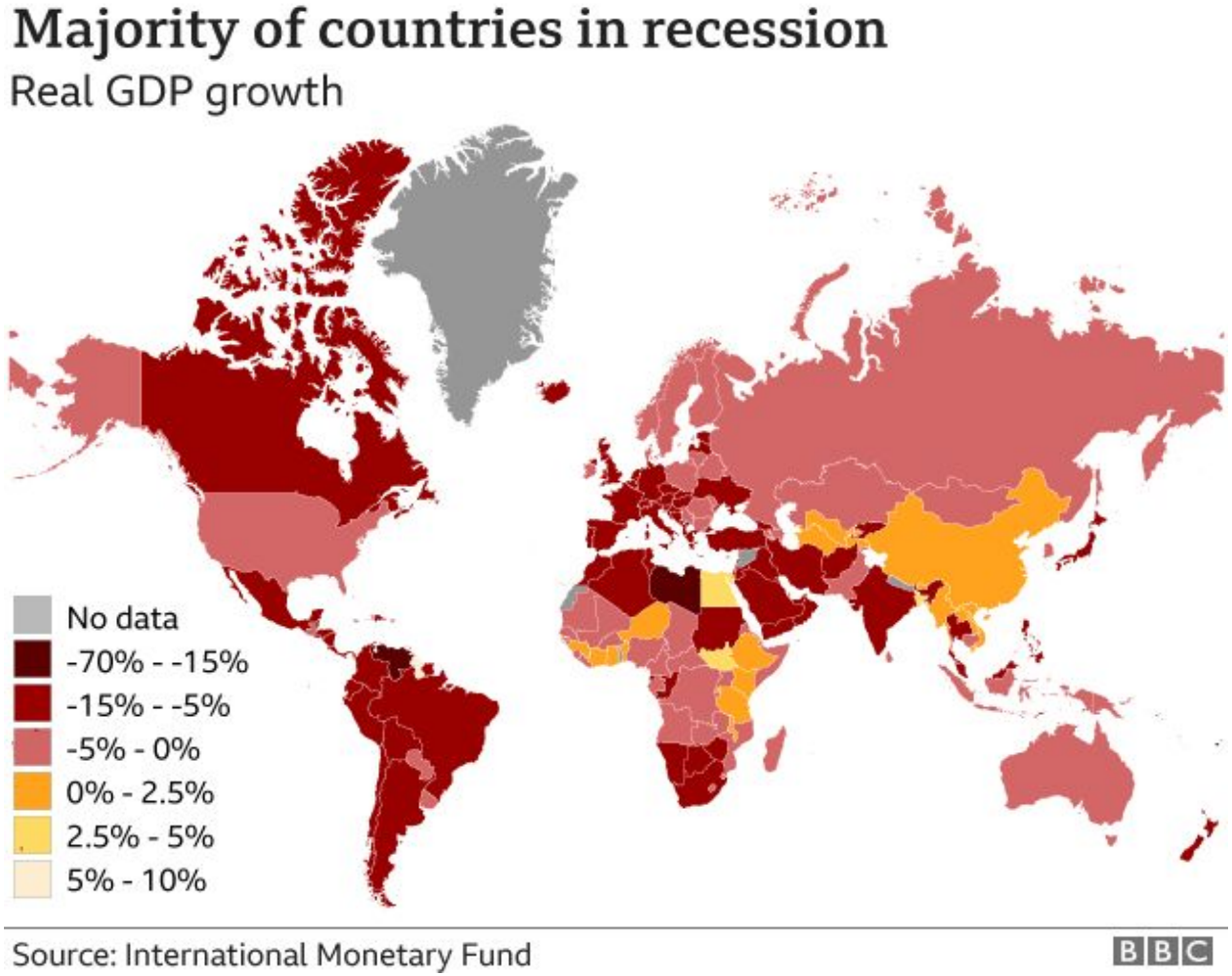
Introduction

Measures adopted to mitigate the outbreak of the pandemic caused severe economic downturn.

1. Main facts
2. What worked?
3. Who is affected at most?
4. Long-term effects of pandemics

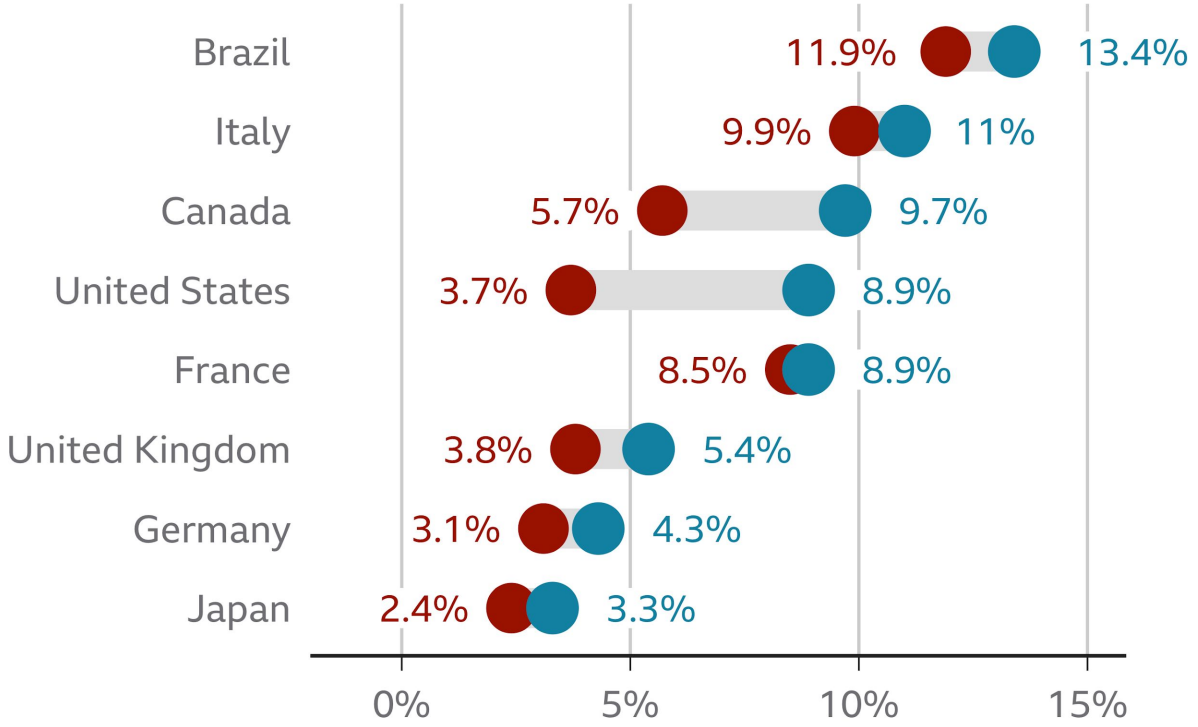
Main facts


Majority of countries in recession
Real GDP growth
No data
-70% - -15%
-15% - -5%
-5% - 0%
0% - 2.5%
2.5% - 5%
5% - 10%
Source: International Monetary Fund
BBC

Main facts

World economies struggling with rising unemployment

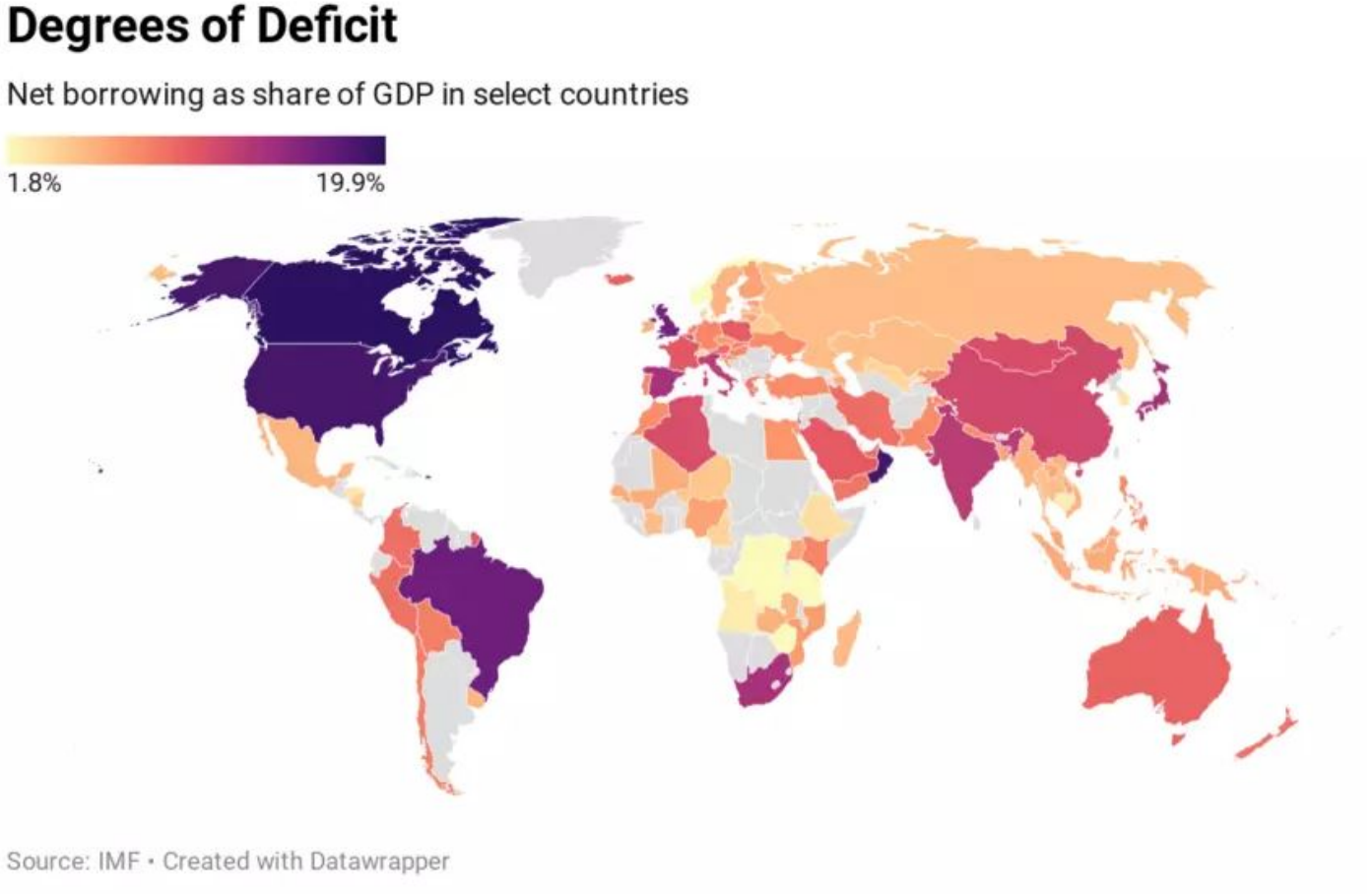
Yearly unemployment rate change, **2019** and **2020** compared



Source: International Monetary Fund

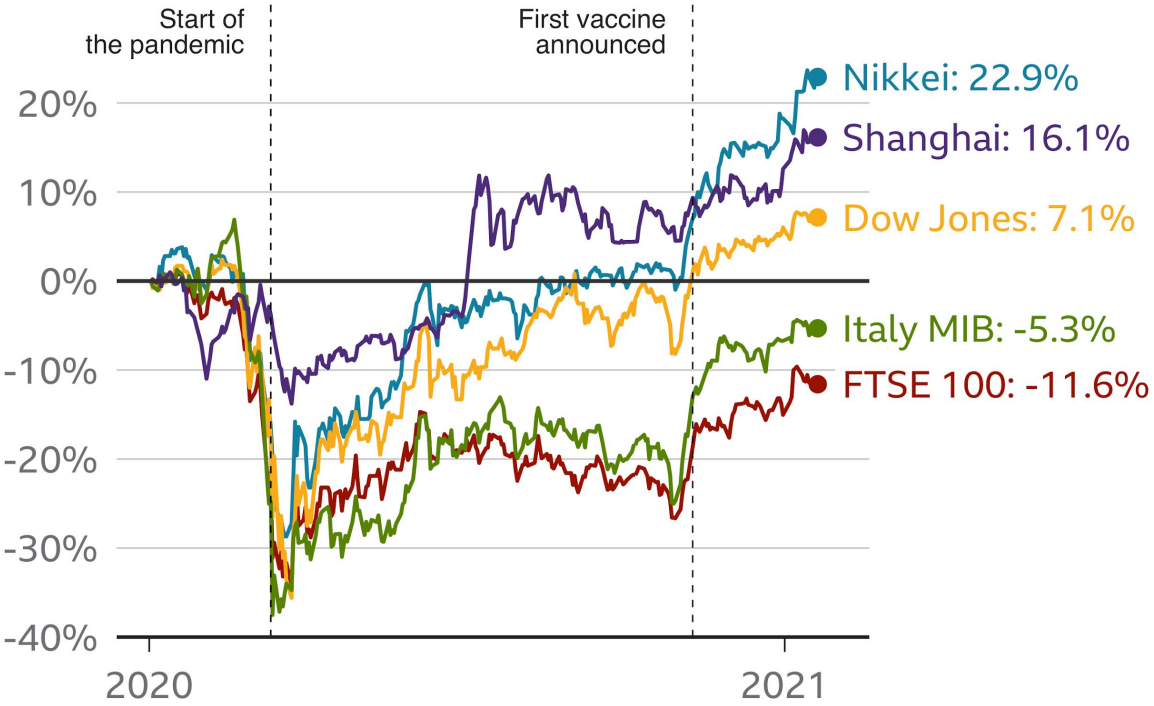
BBC

Main facts


Degrees of Deficit
Net borrowing as share of GDP in select countries
1.8%
19.9%
Source: IMF • Created with Datawrapper

Main facts

The impact of coronavirus on stock markets since the start of the outbreak



Source: Bloomberg, 24 January 2021, 00:01 GMT

BBC

Main facts

Consensual view - IMF WEO, April 2020, Ch. 1

“Necessary measures to reduce contagion and protect lives will take a short-term toll on economic activity but should also be seen as an important investment in long-term human and economic health.

The immediate priority is to contain the fallout from the COVID-19 outbreak, especially by increasing health care expenditures to strengthen the capacity and resources of the health care sector while adopting measures that reduce contagion.

Economic policies will also need to cushion the impact of the decline in activity on people, firms, and the financial system; reduce persistent scarring effects from the unavoidable severe slowdown; and ensure that the economic recovery can begin quickly once the pandemic fades.”

Mitigation policies

1. School and workplace closures
2. Cancellation of public events and gatherings
3. Stay-at-home restrictions
4. Face coverings
5. Restriction on travelling
6. Testing and contact tracing

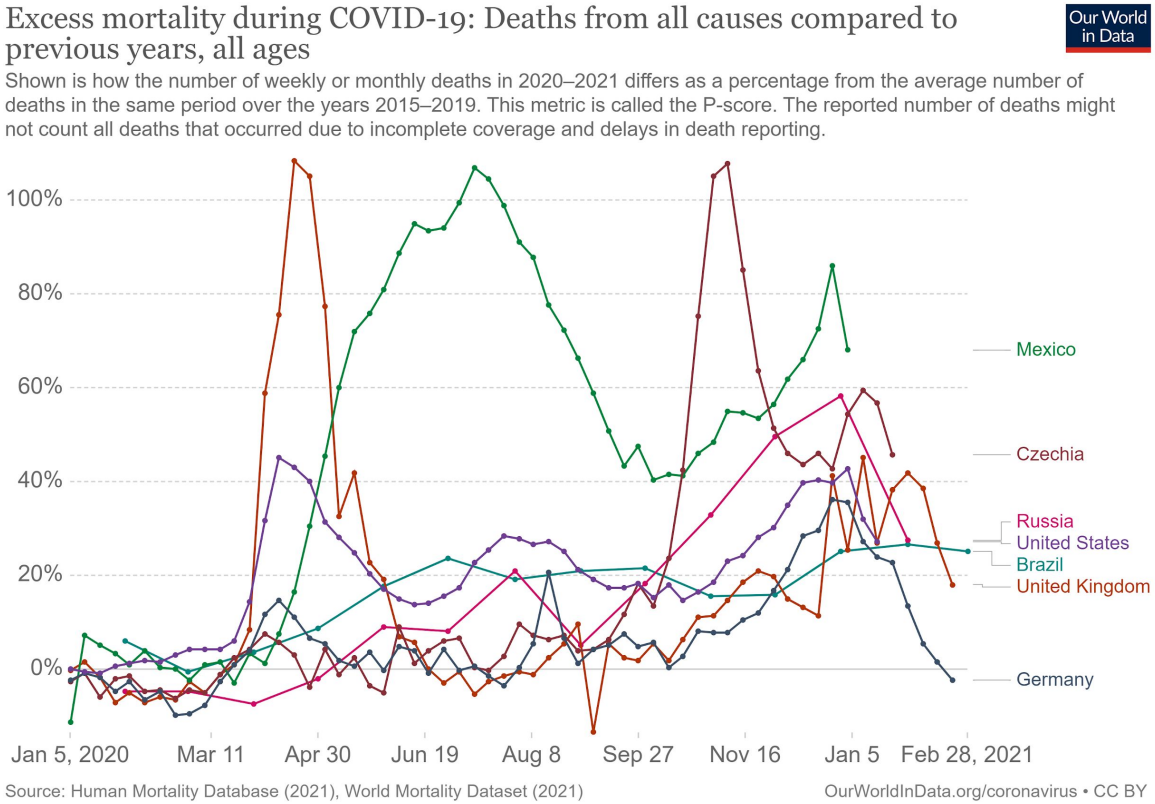
+ voluntary social distancing
+ debt relief and income support
+ liquidity injections by the central banks helped stock markets and the sovereigns.

Mitigation policies

Did those policies worked?

All countries experiences excesses of mortality.

Does it imply inefficiency of policies?



Mitigation policies

Did those policies worked?

Important: Necessary to compare with the “no policy intervention scenario”.

Brauner et al. (Science, 2021): *“Because countries deployed different combinations of interventions in different orders and with different outcomes, it is possible to disentangle the effect of individual interventions. We estimate the effectiveness of specific interventions with a Bayesian hierarchical model by linking intervention implementation dates to national case and death counts.”*

Data: chronological data on the implementation of several interventions in 41 countries between January and the end of May 2020

https://science.sciencemag.org/content/371/6531/eabd9338

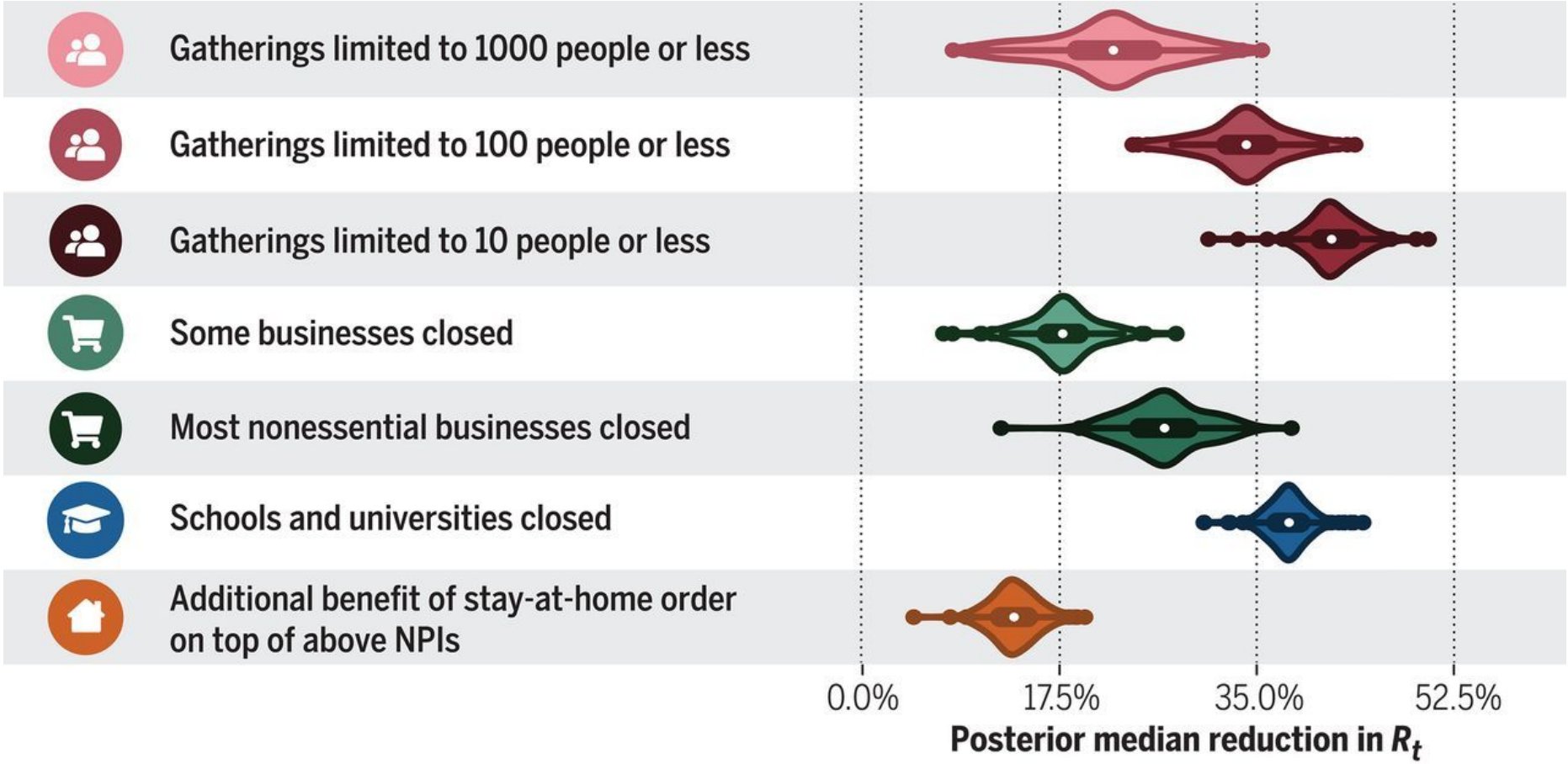
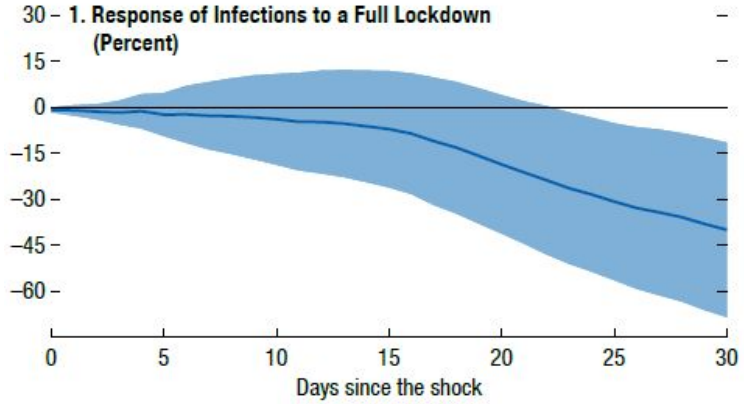
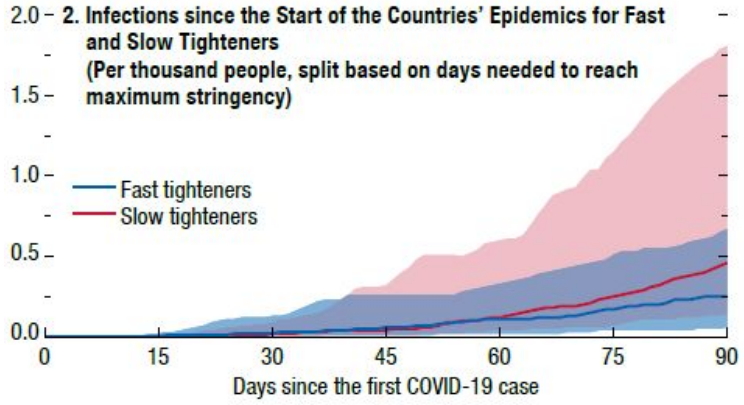
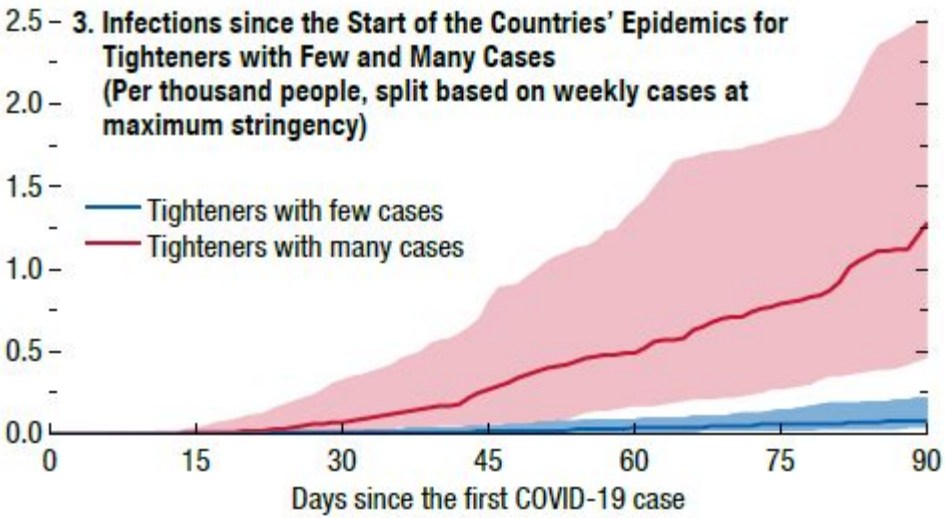

Gatherings limited to 1000 people or less
Gatherings limited to 100 people or less
Gatherings limited to 10 people or less
Some businesses closed
Most nonessential businesses closed
Schools and universities closed
Additional benefit of stay-at-home order on top of above NPIs
0.0%
17.5%
35.0%
52.5%
Posterior median reduction in R_t

Figure 2.7. The Impact of Lockdowns on COVID-19 Infections

Lockdowns are an effective tool to reduce infections, especially when they are implemented early in the epidemic.







Source: IMF staff calculations.
Note: See Online Annex 2.1 for data sources and country coverage. Panel 1 shows the response of infections to a full lockdown; panels 2 and 3 show the number of infections since the first COVID-19 case. The shaded area in panel 1 corresponds to 90 percent confidence intervals computed with Driscoll-Kraay standard errors; the shaded areas in panels 2 and 3 correspond to the interquartile range.

Mitigation policies

Where to get detailed data on COVID, government interventions and impact of restrictions? Our World In Data aggregates a lot of sources: https://ourworldindata.org/coronavirus

Excess mortality: https://ourworldindata.org/excess-mortality-covid

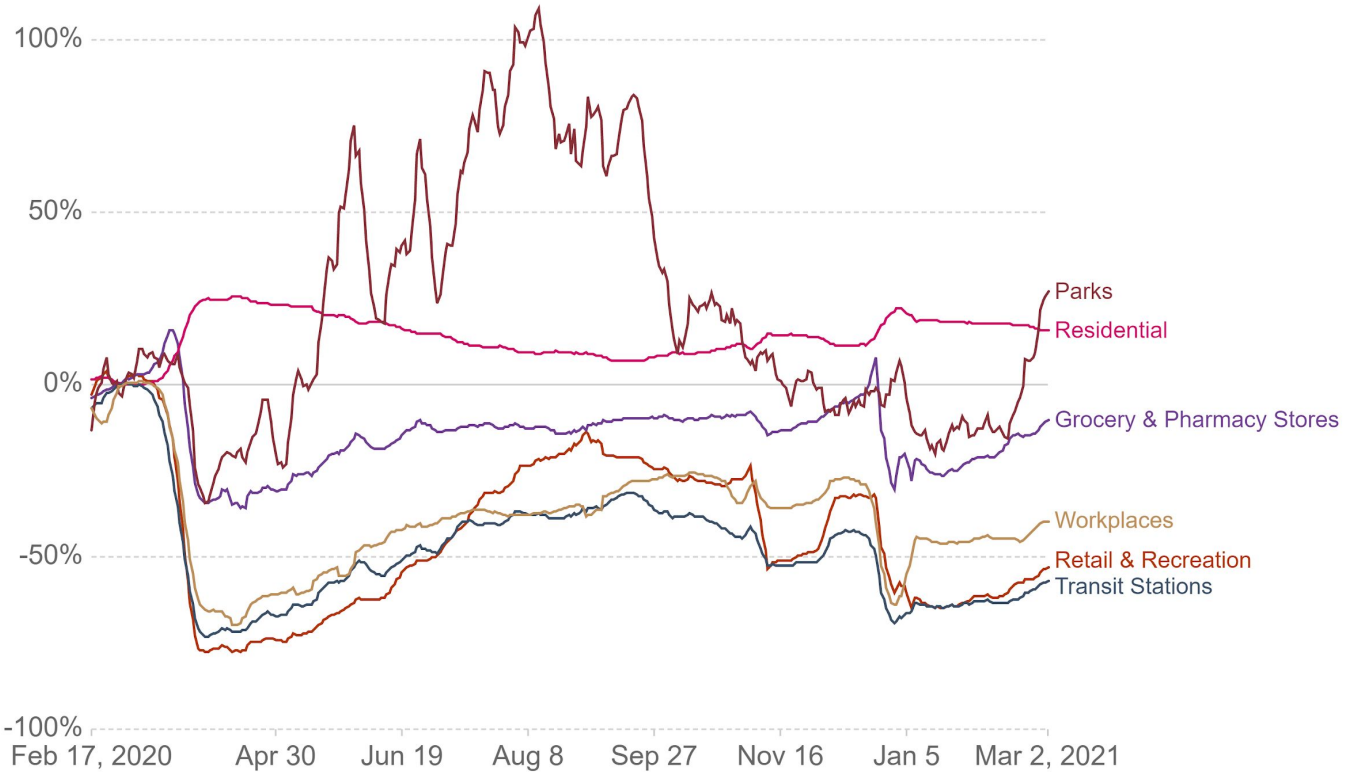
Policy responses: https://ourworldindata.org/policy-responses-covid (including their impacts on mobility measured by the Google Mobility Trends (https://ourworldindata.org/covid-google-mobility-trends).

Debt relief and income support: https://ourworldindata.org/covid-income-support-debt-relief

How did the number of visitors change since the beginning of the pandemic?, United Kingdom

Our World in Data

This data shows how community movement in specific locations has changed relative to the period before the pandemic.



Source: Google COVID-19 Community Mobility Trends – Last updated 7 March, 16:00 (London time)

Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.

Who was affected at most?

The impacts are highly differentiated both across countries and within countries.

Health impacts most severe for the elderly, men and people with other comorbidities. Cross country differences largely driven by policy responses.

Economic impacts across countries: In the EU, what matters is the strictness of lockdown measures, share of tourism, and quality of governance. No role of public indebtedness "suggesting that that the European Central Bank's pandemic emergency purchase programme has been effective." (André Sapir, 2020, based on the data of the first wave, https://www.bruegel.org/wp-content/uploads/2020/09/PC-18-2020-22092020-final.pdf)

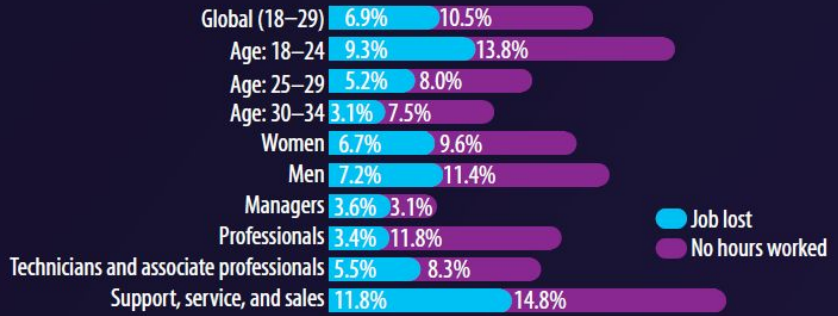
Who was affected at most?

Differences within countries.

As COVID-19 spread, so did a jobs crisis

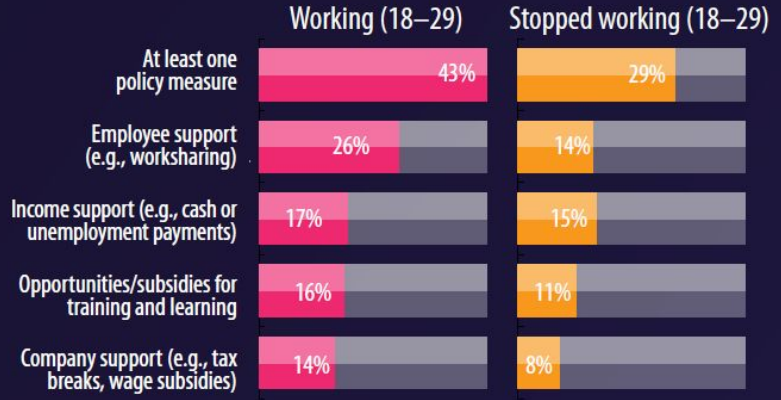
Not hiring

At the start of the pandemic, one in six young people aged 18–29 had either lost jobs or had work hours eliminated fully. Workers in service, support, and sales were especially affected.



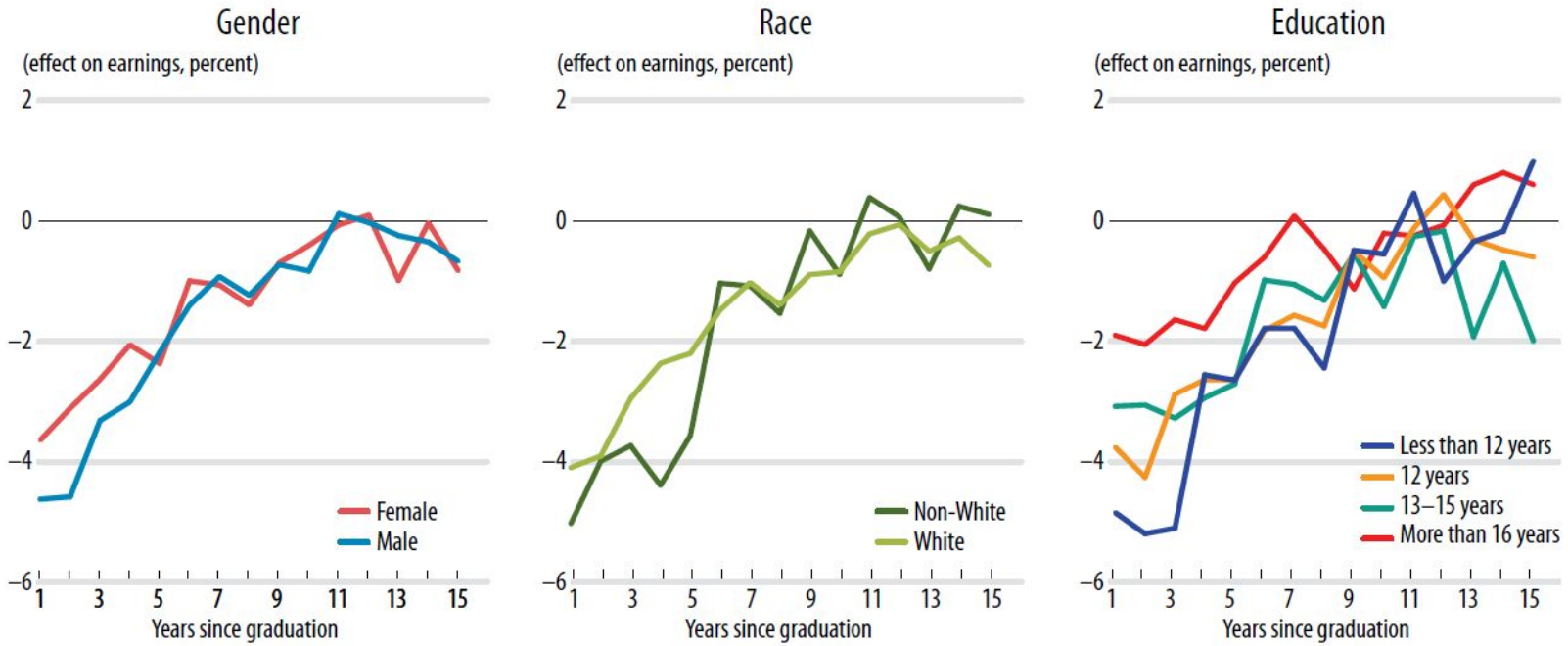
Government support…for some

Around the world, young people who stayed employed after the onset of the crisis more frequently benefited from government labor market policy measures than those youth who lost their jobs.



Dismal decade and a half

The long-term hit to income for those starting work in a recession applies to men and women, Whites and non-Whites, and all levels of education.



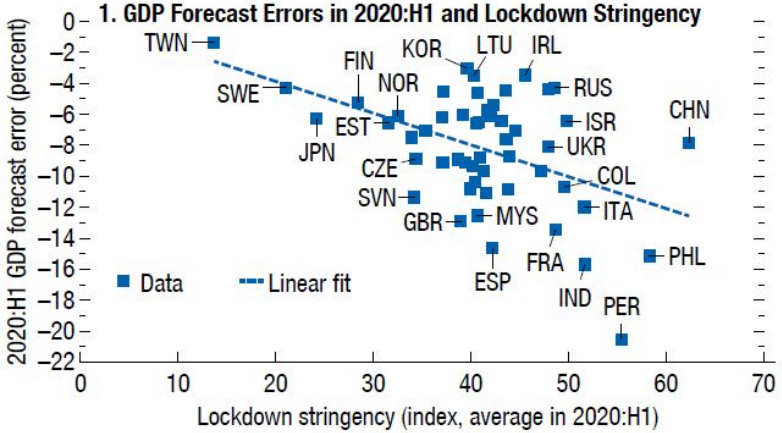
Source: Schwandt, H. and T. von Wachter. 2019. "Unlucky Cohorts: Estimating the Long-Term Effects of Entering the Labor Market in a Recession in Large Cross-sectional Data Sets." *Journal of Labor Economics* 37:S161-S198.

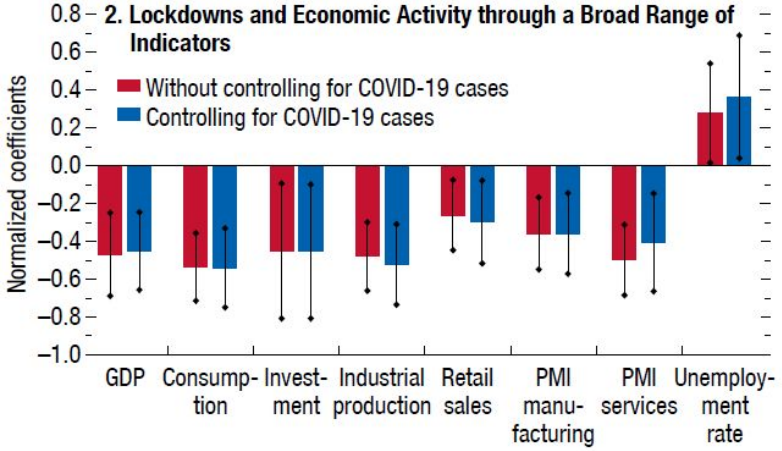
Note: Figures show the percent impact on earnings caused by a 1 percentage point increase in the unemployment rate at labor market entry.

Is there a trade-off between lockdowns and economic activity?

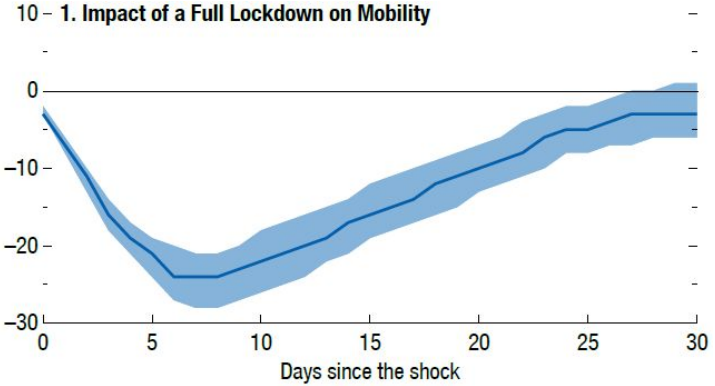
Figure 2.1. Lockdowns and Economic Activity

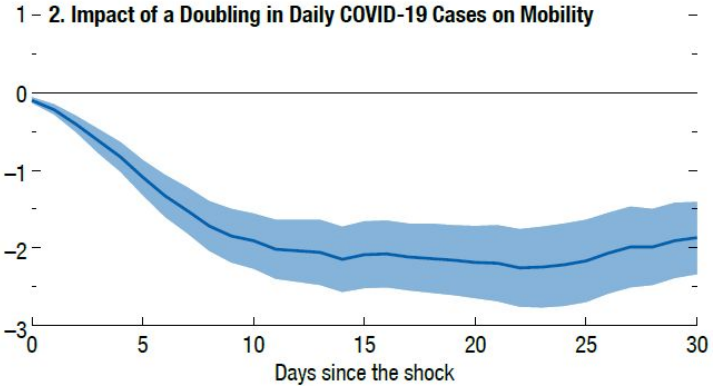
More stringent lockdowns are correlated with sharper economic contractions.

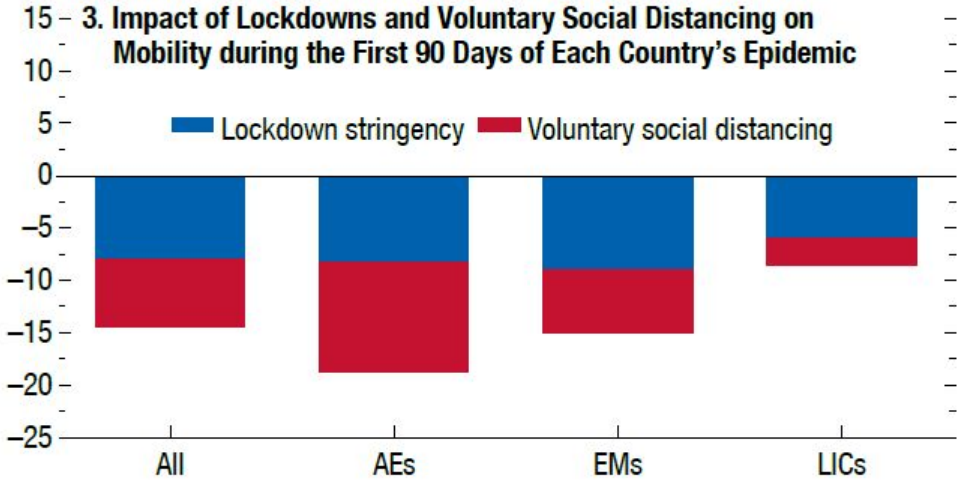




On the trade-off





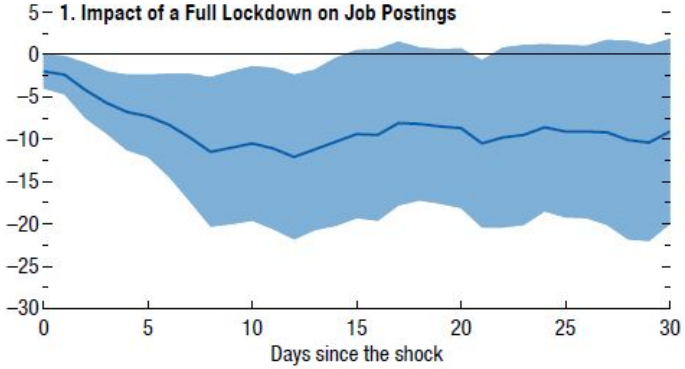


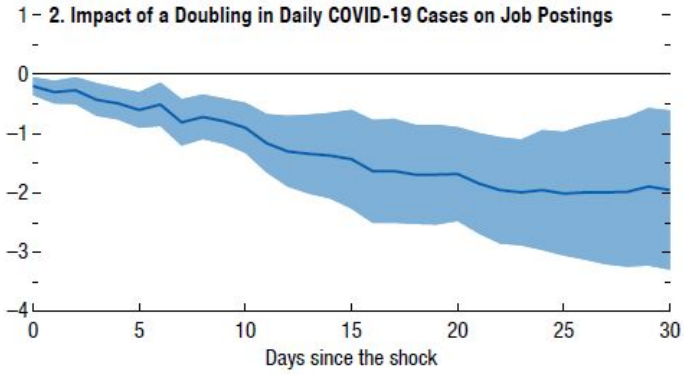
Source: IMF staff calculations.
Note: The shaded areas in panels 1 and 2 correspond to 90 percent confidence intervals computed with standard errors clustered at the country level. In panel 3, the first 90 days of the epidemic vary across countries as they are counted since the first COVID-19 case in each country. See Online Annex 2.1 for data sources and country coverage. AEs = advanced economies; EMs = emerging markets; LICs = low-income countries.

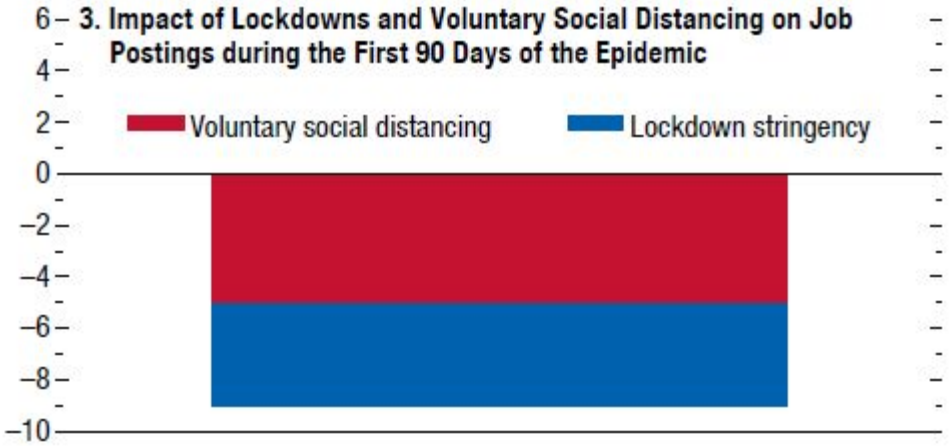
Figure 2.4. The Impact of Lockdowns and Voluntary Social Distancing on Job Postings

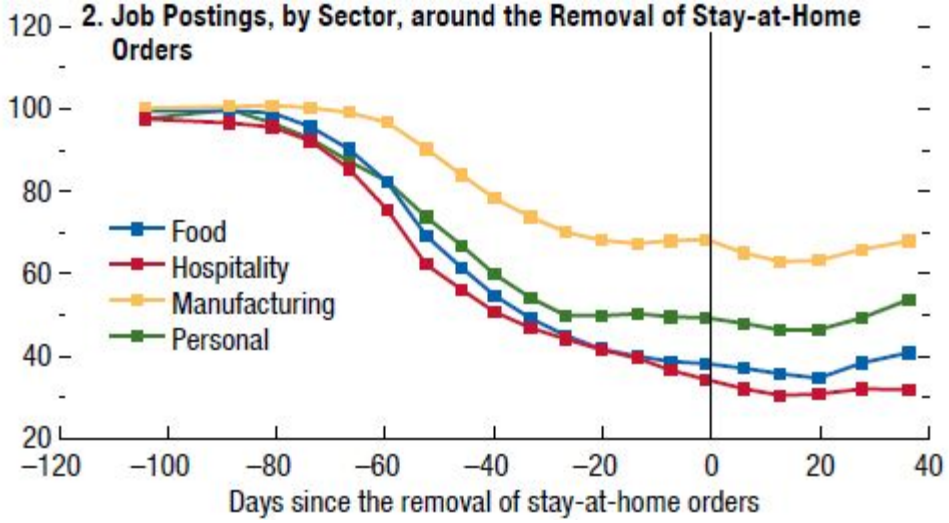
(Percent)

Lockdowns and voluntary social distancing have a substantial negative impact on job postings.









Is there a trade-off between lockdowns and economic activity? Summary of the evidence

Voluntary social distancing has had a more important role than lockdowns: Most importantly Chetty, Friedman, Hendren and Stepner (2020): people's mobility and economic activity in the United States contracted even before lockdowns. https://fairmodel.econ.yale.edu/ec438/chetty1.pdf

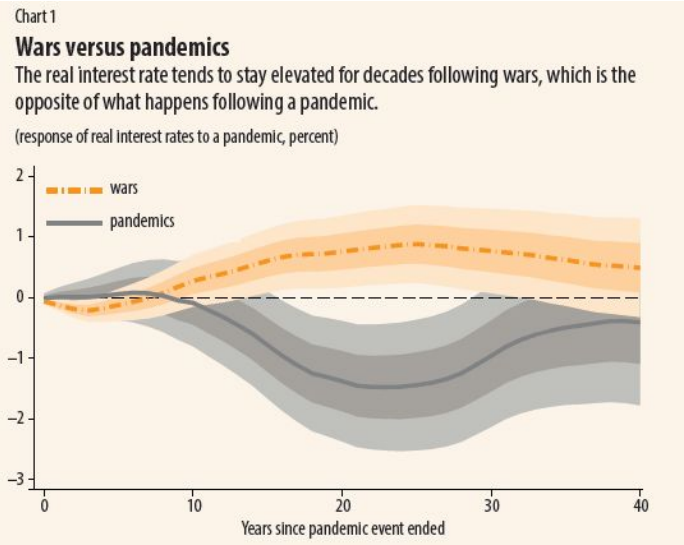
- lifting lockdowns led to a limited rebound in mobility and economic activity.

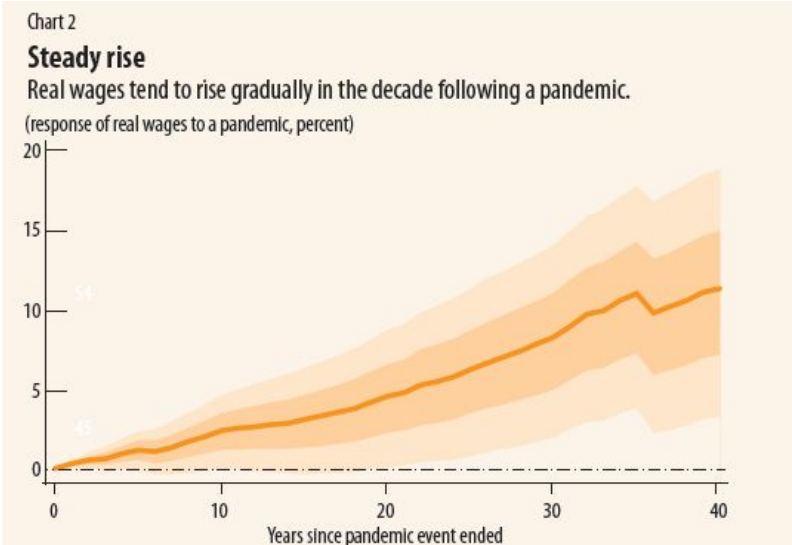
The case of Sweden: despite avoiding strict lockdown measures, the country has experienced similar declines in mobility and economic activities compared with comparable countries (Andersen, Hansen, Johannesen and Sheridan, 2020, Pandemic, Shutdown and Consumer Spending: Lessons from Scandinavian Policy Responses to COVID-19; Conyon, He and Thomsen, 2020, use difference-in-differences models and show that Swedish policy led to more deaths).

Long-term effects of pandemics

Òscar Jordà, Sanjay R. Singh, and Alan M. Taylor in “The Long Economic Hangover of Pandemics” (2020) studied the aftermath of 15 pandemics of the past.

The mechanism similar to the predictions of the neoclassical growth model: L ↓ and thus K/L ↑ => rebalancing of relative returns => long-run real interest rate decreases, on average by 1.5 % percentage points over 20 years; and real wages increased.





Long-term effects of pandemics

However, Jordà, Singh, and Taylor raise several points why the developments can be different now: COVID-19 affects primarily the elderly, who are no longer in the labor force and tend to save relatively more than the young—a big difference from past centuries, when people had shorter life expectancies. Then, aggressive counter-pandemic fiscal expansion will further boost public debt, reducing the national saving rate and possibly putting upward pressure on real interest rates.

+ Challenges from the Industry 4.0

But - Potentially large impact on human capital: lower amount/quality of education for several cohorts + unfavourable conditions on the labour market can have long-run impacts on careers, life-time income and overall life satisfaction.

Sources:

IMF Finance&Development 12/20 and 6/20; IMF WEO 04 and 10/2020

Overview of the evidence of the COVID measures in World Economic Outlook, Chapter 2: The Great Lockdown: Dissecting the Economic Effects, Box 2.1
https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020

Additional papers briefly summarized in the "Additional slides".

More detailed data: https://www.destatis.de/Europa/EN/Topic/COVID-19/COVID-19-article.html

Web sources

https://www.bbc.com/news/business-51706225
https://www.weforum.org/agenda/2020/11/covid-19-has-countries-borrowing-money-just-about-as-quickly-as-they-can-print-it/

Additional slides
Summaries of *a few* papers

Deb, Furceri, Ostry, Tawk: The Economic Effects of COVID-19 Containment Measures (IMF WP 20/158)

Using real-time data on flights, NO2 emissions, energy consumption, mobility indices etc., the authors aim to identify the economic costs of containment measures.

Methodology: Local projections (= trajectories of estimated coefficients γ_h from regressions of the form $y_{i,t+h} = \mu_i + \gamma_h \text{containment}_{i,t} + \delta_h X_{i,t} + u_{i,t+h}$ for h = 0 - 30 days after the containment)

Result 1: Impact large, approximately equivalent to 15 % of industrial production

Result 2: Fiscal and monetary policy can mitigate some of the costs.

Result 3: Easing of containment measures led to pick up in economic activity, but the effect was lower than the effect of containment measures.

Using similar data, Demirgüç-Kunt, Lokshin and Torre (WB WP 9257) have shown that the sooner the containment efforts start, the better, i.e., lower GDP loss and lower mortality.

Baker, Bloom, Davis, Terry: Covid-induced economic uncertainty. (NBER WP 26983, 04/2020)

Aim of the paper is to provide a very early estimate of the overall impact of the COVID-19 pandemic on economic performance.

Data: The authors use the news-based index of economic policy uncertainty as an operating channel of the pandemic. The index is believed to be forward-looking.

Methodology: VAR-IV model by Baker, Bloom and Terry (2020)

Prediction: Year-on-year GDP is supposed to fall by 11 % as of 2020Q4, with confidence interval extending to 20 % (at the end of 2020, the real GDP was down by 2.4 % in comparison to 2019, but in 2020Q2, it had been -9 %.)

"The exercise says that about half of the forecasted output contraction reflects a negative effect of COVID-induced uncertainty."

Barro, Ursúa, Weng. The Coronavirus and the Great Influenza Pandemic: Lessons from Spanish Flu... (NBER WP 26866, 04/2020)

Aim of the paper is to provide an early estimate of the overall impact of the COVID-19 pandemic on economic performance based on an informal assessment of the impact of the Spanish Flu pandemic during the 1918-1920.

The flu pandemic lead to deaths of 40 million people, 2.1 % of world population…

… and to an economic decline on average between 6 and 8 %.

Also, the short-term rates of return decreased.

Chetty, Friedman, Hendren, Stepner and the Opportunity Insights Team: The Economic Impacts of COVID-19 (09/2020)

Aim of the paper: Study the mechanisms through which the pandemic affected the economy.

Data: Anonymized micro data from private companies on consumer spending, business revenues, employment… Data publicly available at https://tracktherecovery.org/ .

Result 1: High-income individuals reduced spending already in mid March, mainly in areas with high infection rates. This reduction of spending lead to sharp decrease of business revenues and an increase of unemployment.

Result 2: V-shaped recovery for high-wage workers, slow recovery for low-wage workers.

Result 3: Stimulus payments increased consumption of low-income households but not employment in highly affected sectors => social insurance would have been better than one-off stimulus.

Chudik, Pesaran, Rebucci: Voluntary and mandatory social distancing. (NBER WP 27039, 04/2020)

Authors modify the standard Suspectible-Infected-Recovered (SIR) model of epidemic of a possibility of different degrees of compulsory and voluntary social distancing.

Social distancing proves to be very effective, but costly in terms of employment loss.

Voluntary self-isolation driven by individuals' risk perceptions not very effective: it starts too late, close to the peak of the epidemics, and has little or no impact on the curve.

Costs of social distancing can be decreased if self-isolation targeted towards those who likely spread the infection (= if contact tracing works)

Dell'Ariccia, Mauro, Spilimbergo and Zettelmeyer: Economic policies for the COVID-19 War

Policy recommendations for the acute phase of the pandemic

Policy options

Policies in support of households, businesses, and the financial sector involve a mix of liquidity and solvency measures.

	LIQUIDITY	SOLVENCY
HOUSEHOLDS	Suspension of mortgage payments, student loans	Cash transfers
	Tax and social security contribution deferrals	Unemployment insurance
		Meal vouchers for students who are away from school
BUSINESSES	Extension of loan maturities	Equity injections
	Tax and social security contribution deferrals	Subsidies for maintaining employment
	Purchase of commercial paper and bonds	Direct subsidies based on past sales (tax based)
	Direct credit provisions by central bank	
	Credit guarantees	
FINANCIAL SECTOR	Liquidity provision for financial intermediaries	Equity injections
	Actions to preserve market liquidity	Government guarantees

Note: Liquidity measures include loans or payment deferrals.
Solvency measures include transfers, payment waivers, and non-refundable goods or services

Bargain, Aminjonov: Trust and compliance to public health policies in times of COVID-19 (Journal of Public Economics, Dec 2020)

Aim of the paper: Investigate determinants of compliance with containment policies using mobility data at regional level in Europe. Focus on the role of trust and social cohesion.

Methodology: Double-difference approach around the time of lock-down announcements.

Result 1: High trust regions decreased mobility significantly more than low-trust regions.

Result 2: The effect of policy stringency is also more pronounced in high-trust regions.

Result 3: Low levels of mutual trust and social cohesion have dramatic consequences when compliance is required for collective survival.