

Fighting the Scarring Effects of COVID-19

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Abstract: The large fall in global output and massive job losses during the current pandemic is creating a socio-economic upheaval that is likely to persist over time. From previous crises we know that some of their effects are likely to leave permanent scars through what is known as hysteresis. This paper discusses how the concept of scarring or hysteresis is relevant for the current pandemic-induced economic crisis. We discuss channels through which these effects can become persistent and how fiscal and monetary policies can minimize their consequences and work to create a global economy that is more resilient, more equal and greener.

Keywords: hysteresis, scarring, inclusive recovery, labor market, economic policies, economic crisis, COVID-19, pandemic

Introduction

Since the first reported cluster of cases of COVID-19 in Wuhan on December 31, 2019,² there are close to 67 million reported cases worldwide and over 1.5 million deaths (as of December 7, 2020). There is no denying that the most important scarring effect of COVID-19 has been in lives lost or on the health of those who fell sick but survived the virus. As most economies went into lockdowns, demand for goods and services fell, taking a toll on both the output as well as jobs. Millions have lost their jobs and millions more are being pushed into poverty – the scars from such fallout will be felt for a long time. Moreover, the pandemic also revealed the existing vulnerabilities in labor markets due to increasing inequality as well as the link between the health of people and the planet. This gives us a chance to address the two systemic issues confronting the global economy today: inequality and climate change. Macroeconomic policies can help shift the global economy towards a more equitable and greener future.

Lockdowns saved many lives but put the global economy in an induced coma

Estimated GDP losses

Besides health, the pandemic has taken a large toll on the global economy. In October 2020, the IMF projected a partial recovery, mostly driven by China. It is natural to expect some bounce back as lockdowns are eased and after effective vaccines or therapies are developed. Even so, a loss in output of about 5 percent and 8 percent is projected for advanced and developing countries, respectively, in 2020. Cumulatively, output losses are projected to grow

¹ IMF; INSEAD; and UNESCAP and IMF, respectively. The views expressed in this paper are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF Management or carry the endorsement of the United Nations.

² <https://www.who.int/news/item/27-04-2020-who-timeline---covid-19>

from \$11 trillion through next year to \$28 trillion over the next five years (IMF, 2020a). These large losses are the result of the scars left by the crisis and it represents a setback to the pace of improvement in living standards, as the cumulative growth in per capita income is projected to fall by several percentage points for all country groups in the medium-term.

Job/hour losses

While the lockdowns have had a major impact on the economic output, the impact on the labor market has been significant. Fiscal packages helped preserve some of the losses, but could not save all the jobs or protect all working hours. According to ILO (2020a), on average, an estimated 12 percent of working hours per quarter or an equivalent of 1 billion full-time jobs have been lost globally in the first three quarters of 2020, with two-thirds of them in the Asia-Pacific region. The differential impact across sectors is quite stark this time around, as accommodation and food and other services sectors were hit the hardest. These sectors happen to employ more women. For instance, women account for 61 per cent of employment in arts and entertainment and other service workers, and for 54 per cent of employment in accommodation and food services (ILO, 2020b). Women also work in some labor-intensive segments of manufacturing, such as garments, which are vulnerable to job losses because of disruption to supply chains and falling consumer demand.

The impact on youth is likely to be even more drastic. Even before the crisis began, a total of 178 million young workers around the world, more than four in ten young people employed globally, were working in hard-hit sectors (ILO, 2020c), while more than 267 million young people were not in employment, education or training (NEET), including almost 68 million unemployed young people. Since then, over one in six youth surveyed has stopped working. These job losses for the youth will have a large scarring impact (discussed below).

The impact on youth will hinder human capital accumulation due to a large digital divide making it both hard to work from home as well as to continue distant learning. For instance, UNICEF-ITU³ estimate that two thirds of the world's school-age children – or 1.3 billion children aged 3 to 17 years old – and 63 percent of young people aged 15-24 – or 759 million – do not have internet connection in their homes. In 2019, some 87 per cent of people in developed countries used the Internet, compared with just 19 percent in the least developed countries. Such digital divides between the rich and the poor within and across countries is likely to exacerbate the existing inequalities.

High working-hour losses have translated into substantial losses in labor income. Estimates of labor income losses (before taking into account income support measures) suggest a global decline of 10.7 percent during the first three quarters of 2020 (compared with the

³ <https://www.unicef.org/turkey/en/press-releases/two-thirds-worlds-school-age-children-have-no-internet-access-home-new-unicef-itu>

corresponding period in 2019), which amounts to US\$3.5 trillion, or 5.5 percent of GDP for the first three quarters of 2019 (ILO, 2020a).

But to improve livelihoods, lockdowns were lifted only to see another wave of COVID-19 infections and deaths, among other reasons, due to lack of a first line of defense such as social distancing and a vaccine for the virus. This has created a lot of uncertainty. While lockdowns were an important factor leading to the recession, voluntary social distancing in response to rising infections also contributed very substantially to the economic contraction. Therefore, although easing lockdowns can lead to a partial recovery, economic activity is likely to remain subdued until health risks abate (IMF, 2020a).

Macroeconomic impact

The global recession also entails lower fiscal revenue. That, combined with higher public spending to respond to the crisis has lifted general government debt to a historic high, matched only by its level during WWII for advanced economies. Globally, and as of September 2020, fiscal stimulus to combat COVID-19 is at a staggering \$12 trillion, close to 12 percent of global GDP (IMF, 2020b). This support is evenly split between additional spending or forgone revenue, including temporary tax cuts, and liquidity support, including loans, guarantees, and capital injections by the public sector. In 2020, government deficits are set to surge by an average of 9 percent of GDP, and global public debt is projected to approach 100 percent of GDP, a record high.

According to the IMF (2020c), corporate vulnerability is rising. Firms borrowed during the shutdowns to maintain cash balances, but for many countries, corporate debt is now at the top of the range of the past decade. Although banks entered this crisis with reasonable buffers, some banking systems could suffer significant capital shortfalls if many firms and households are unable to repay their loans.

Socio-environmental impact

COVID-19 will have a long socio-environmental impact. Research shows that past pandemics have led to an increase in inequality relative to the pre-pandemic trend (Furceri, Loungani, Ostry and Pizzuto, 2020a). Triggered by labor market weaknesses, the rise in inequality is partly because of a decline in the employment ratio for lower educated people, while those with advanced educations were barely affected. Additionally, vulnerable groups are more likely to lose jobs, be forced into extreme poverty, and lack resources to support themselves during the crisis and recover, especially in the absence of a social protection system. This is likely to exacerbate old inequalities and vulnerabilities (Dosi, Fanti, and Virgillito, 2020).

As noted above, the loss of jobs, especially for workers in the informal sector and for women and youth, will push millions back into poverty. Even though prior to COVID-19 the

world was not on track to eliminate extreme poverty, the pandemic will push more than 71 million people into extreme poverty in 2020.⁴

On the positive side, the lockdowns, quarantines and border closures have reduced carbon emissions and improved the air quality across the world. However, this improvement in environment is likely to be temporary because over the last century, every major adverse economic shock has been followed by a strong and robust rebound in energy demand, and therefore a rebound in CO₂ emissions. Air pollution levels have already started to rise in cities where lockdowns have been lifted.

The scarring effects of COVID-19

Economic crises are caused by many types of events. From financial crises to political events or to a health crisis like COVID-19. Crises result in a large fall in activity as measured in terms of income or hours of work. As time passes, a recovery phase starts and we head back towards pre-crisis levels. But how long will it take to return to normal? And is it even possible to come back to the pre-crisis trend? There is plenty of empirical evidence that economic crises have long-lasting impact on the economy, as documented by many empirical studies (see Cerra, Fatás, and Saxena, 2020, for a review of the literature). This phenomenon is what is known as hysteresis. The state of the economy depends on its history and a deep crisis is likely to leave permanent scars on the economy. Previous pandemics have persistently damaged output by at least 3 percent (Ma, Rogers, and Zhou, 2020) and those episodes were much less severe than the current pandemic. Where are these scars typically coming from? Will the COVID-19 scars be different?

The labor market is one of the main channels through which hysteresis might happen. Recessions can reduce labor demand in the aggregate or it can change the composition of labor demand in terms of skill levels and regions. Job losses can translate into human capital decay over time. Long-term unemployment can translate into an increasing number of discouraged workers. And various labor market policies and institutions may impede the adjustment back to full employment and labor participation. This phenomenon is typically more pronounced during large crises. For example, the succession of two large crises in the 1970s raised unemployment in European countries to a level that persisted for many years (Blanchard and Summers, 1986). This is not purely a macroeconomic phenomenon as we also observe these scars at the individual level. Cohorts that enter the labor market during a recession suffer significant scars in terms of persistent declines in earnings lasting at least 10 years, as well as worse health and higher mortality rates (Schwandt and von Wachter, 2020).

A second obvious source of hysteresis is the slowdown of investment in capital, technology or R&D by firms. Recessions reduce incentives to invest and to undertake R&D

⁴ https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/07/E_Infographic_01.pdf

because of firms' expectations of low current or future demand (Gunn and Johri, 2011; Benigno and Fornaro, 2018). And impaired financial conditions can disrupt the supply of credit, which in turn hinders any form of investment (Duval, Hong, and Timmer, 2020). A prolonged period of low investment will permanently reduce productivity (Reifschneider, Wascher, and Wilcox, 2015). These effects will persist even if we witness a strong recovery after the crisis. The economy will recover but to a trend level of activity that is lower than the one we had before the crisis.

In the case of the COVID-19 crisis, many of these factors are likely to be in place and in some cases their effects could be larger. The decrease in employment during lockdowns has been larger and more sudden than in any previous crisis. As lockdowns and travel bans have been eased, the uncertainty surrounding the virus and the vaccine and the apprehension about person-to-person contact have kept economic activities to a bare minimum. In fact, lifting stay-at-home orders has not generated any noticeable rebound in job postings (IMF, 2020a). This is feeding a slow labor market recovery, leaving workers separated from their jobs for a longer period of time. And it is exactly these persistent and large job losses that can lead to hysteresis in employment. And the protracted period of inactivity is likely to cause the erosion of skills or the deterioration of job matches (Mauro and Syverson, 2020). In addition, this crisis has affected some sectors much more than others. For some of these sectors the return to normal is likely to take years, not months or quarters. It would not be unusual for some of the displaced workers to abandon the labor force leading to hysteresis.

Young workers and women are particularly vulnerable to the labor market impact of the crisis. Many young workers, especially women, could be "permanently scarred" to find a decent job. A higher share of female workers than male have been employed in the service sector and informality, have been greatly affected by the crisis (Georgieva et. al, 2020). Women have disproportionately borne the brunt of family care due to COVID health vulnerabilities and school shutdowns. In the United States, women have exited the labor force at four times the rate as men (NPR, 2020). A lower level of female labor force participation directly reduces the level of GDP and can also diminish economic growth and development (Duflo, 2012; Cuberes and Teignier, 2016).

This crisis has also been unique in its effects on schooling. This will likely reduce the pace of human capital accumulation, adversely impacting the growth rate of the economy's supply potential (Burgess and Sievertson, 2020). And, once again, these effects are likely to be much larger for certain groups of the population. School closures deprive all children and youth opportunities for growth and development, but this is especially true for under-privileged learners who tend to have fewer educational opportunities beyond school. Additionally, the digital divide means that only those privileged with internet access could continue, as discussed above. Some children or youth, especially those in financially distressed families, could permanently drop out when schools reopen.

The rise in sovereign and corporate debt increases the risk of future debt and financial crises. The scarring effect of financial crises on output has averaged between 5 percent and 15 percent of GDP depending on the type of crisis (Cerra and Saxena, 2008). A buildup in sovereign debt has often preceded recessions and periods of low economic growth and high unemployment (Reinhart and Rogoff, 2010). Financial crises have further eroded the incomes of the poor, raising inequality and poverty (Baldacci, Mello and Inchauste, 2002; De Haan and Sturm, 2017).

When it comes to effects on productivity, this crisis comes after a number of years of declining potential GDP growth in emerging economies. Given that these are the countries that are more likely to fall into a widespread financial crisis and that their governments have more limited ability to use fiscal policy, we might observe an acceleration of the previous trends towards declining productivity growth (World Bank, 2020; Dieppe, 2020).

A global pandemic is such a unique non-economic shock that has challenged our perceptions of risk. It is likely that individuals and companies now put a much higher weight into the possibility of similar tail risk events in the future, in the same way that many revised upwards the probability of a future financial crisis after 2008. These changing beliefs can affect spending patterns in a way that alter the future path of GDP (Kozlowski, Veldkamp and Venkateswaran, 2020).

An additional factor that could generate hysteresis that is unique to this crisis is the potential impact on trade patterns and supply chains. During the period of lockdowns, we already witnessed how the dependence on global supply chains caused shortages of essential commodities across the globe. As economies reopen, companies are revisiting the design of supply chains in order to improve their resilience to such future crises. While that additional resilience could prove beneficial during the next crisis, in the near term it forces companies to invest in new designs of the supply chains and, in some cases, to rely on less efficient ones.

Scars could also affect our trust in political institutions and leaders. There is evidence that during pandemics individuals in their “impressionable years” (ages 18 to 25) change their views on these institutions, including public health ones. Low trust in public health officials can be very damaging to resolve the current crisis but it could also leave long-lasting scars in the ability of political leaders to deliver difficult reforms where support and trust is needed (Aksoy, Eichengreen and Saka, 2020).

We have highlighted in several paragraphs the potential effects of COVID-19 on inequality. This rise in inequality is another channel through which output scarring can take place. Increases in inequality are even more likely to happen in emerging markets where informal work and the absence of a support network could wipe out all the gains that we had seen since 2008 (Cugat and Narita, 2020; Furceri, Loungani and Ostry, 2020). In addition to all the direct scarring effects suffered by these groups of population, the increase in inequality could

also lead to a reduction of growth prospects in these countries (Ostry, Berg, and Tsangarides, 2014).

The sum of all these factors that are specific to the current crisis could add to an unusually large amount of scarring, as much as 12 percent of GDP in the medium term and 5-6 percent in the long term (Portes, 2020).

Policies can speed the recovery process and reduce scarring effects

Policies should be targeted to reduce the extent and persistence of the crisis. Research shows that economic policies that speed the recovery process can reduce scarring effects (Cerra, Panizza, and Saxena, 2013; Fatás and Summers, 2018; Jordà et al. 2020). When it comes to aggregate demand policies, fiscal or monetary, if used aggressively, they can make the recession shallower and shorter. In this vein, governments have responded to the current pandemic with an unprecedented \$12 trillion in discretionary fiscal stimulus, averaging 12 percent of GDP.⁵ The size of the stimulus packages has been particularly high in advanced countries.⁶ The stimulus has not only been large in size but it has been tailored to the specifics of a crisis caused by a lockdown. In particular, the objective was to keep workers attached to their jobs to facilitate a speedy recovery when lockdowns could be relaxed. For this reason, measures have included wage subsidies and job schemes, cash transfers and social benefits for households, as well as loans and equity injections for firms, among other measures. A number of countries have also put job retention schemes in place. The take up has been considerable, averaging one-quarter of employees. Many countries announced substantial loan guarantees for business, but that take-up has been uneven so far.

Similarly, to ensure that liquidity crunch does not become a solvency issue, central banks have continued to ease monetary conditions. Major central banks have expanded their balance sheets by \$7.5 trillion (as of October 2020). Policy rates and expectations, as well as sovereign yields, have declined in most advanced and emerging market economies.

Complementing these domestic actions, the international community, including the IMF, has also stepped up its support. Since the beginning of the pandemic, the IMF has provided emergency financing to 81 countries, committed over \$100 billion so far and has been working with 29 of the poorest countries for debt service relief.

While much has been done to fight the immediate impact of the virus, little attention is paid to how coronaviruses, which are zoonotic, are transmitted between animals and people. Due to urbanization, natural habitat for wildlife is shrinking, increasing humans' potential exposure to disease-causing pathogens. Indeed, 75 percent of all emerging infectious diseases come from

⁵ See Furceri, Loungani, Ostry and Pizzuto (2020b) for the role of fiscal policy in mitigating inequality after pandemics.

⁶ Indeed, the ILO estimates that the amount of resources that the low and lower-middle-income countries need to match the average level of stimulus relative to working-hour losses in high-income countries is around \$982 billion.

wildlife.⁷ To prevent future outbreaks, we must address the threats to ecosystems and wildlife, including habitat loss, illegal trade, pollution and climate change. Additionally, natural disasters linked to climate change also disproportionately affect poor people and poor countries.

Hence, going forward, all policies should work towards making economies resilient to shocks. This crisis highlights the need to improve health systems and social support more broadly, especially to protect the poor and less educated, as well as informal workers in developing countries. In principle, they should avoid K-shaped recoveries where certain segments of the population benefit at the expense of others and work towards greening the planet. In this respect, both fiscal and monetary policies can help create inclusive societies and green economies and improve their resilience.

On the *fiscal front*, massive investments are required in building resilience of people (health, education, nutrition) and planet (climate change mitigation, biodiversity). UNCTAD (2020) estimates an annual investment gap in developing countries of \$2.5 trillion to achieve the 2030 Agenda for Sustainable Development. Such public investment can have strong multiplier effects, especially during recessions and periods of high uncertainty (IMF, 2020b). To create space for such investments, fossil fuel subsidies need to be eliminated, which are considered regressive. In 2017, the world subsidized fossil fuels by \$5.2 trillion, equal to roughly 6.5 percent of global GDP. On the other hand, in 2019, the total new investment in renewable energy amounted to only about \$302 billion worldwide, even as it created about 11 million new direct or indirect jobs. Hence, the potential for moving away from fossil fuels towards renewables is huge and can be used to create more new permanent jobs. IMF (2020b) estimates that public investment on R&D, green electricity, and efficient buildings can generate twice as many jobs as spending on traditional infrastructure. However, the transition towards a green future will need to be managed well by ensuring country's energy stability and with social safety nets for those who lose out.

At the same time, efficiency of fiscal spending can be improved. In this respect, technology can help governments provide social support. For instance, government cash transfers to households have been aided by the rise in mobile money service providers over time, especially in Sub-Saharan Africa. Investing in digital connectivity can also increase private sector productivity and even help landlocked countries diversify their production and export bases. As we have seen, digitalization can facilitate the delivery of social assistance, among its other benefits. To take advantage of technological advancements and allow everyone to benefit, governments will need to ensure high quality education as well as retraining programs.

Such huge demands for investment funds need to go through the financial system. Hence, greening the financial system would ensure appropriate investments in sustainable development. Here, *central banks* can play a large role in creating both inclusive and green economies. To

⁷ UNEP: Working with the environment to protect people: Covid-19 Response, <https://www.unenvironment.org/resources/working-environment-protect-people-covid-19-response>

enhance inclusion, recent research shows that by including a measure of inequality (for instance, a small negative weight on consumption inequality) in the Taylor rule, a central bank can achieve a higher welfare than under optimal policy.⁸ In this regard, the Federal Reserve Bank’s shift in monetary policy stance in August 2020 to willingly tolerate higher inflation to help marginal sections of the labor market can aid in an inclusive recovery. As Governor Lael Brainard (2020) put it: *By pledging to provide accommodation until shortfalls from maximum employment have been eliminated and average inflation of 2 percent has been achieved, the new forward guidance will ensure that the recovery reaches those who have been disproportionately affected, leading to a broad-based and strong recovery. ... This strong support from monetary policy—if combined with additional targeted fiscal support—can turn a K-shaped recovery into a broad-based and inclusive recovery that delivers better outcomes overall.*

Dealing with climate change can also promote a strong and inclusive recovery. Central banks can join the Network for Greening the Financing System (NGFS), a voluntary group to help strengthen the global response required to meet the goals of the Paris agreement and to enhance the role of the financial system to manage risks and to mobilize capital for green and low-carbon investments in the broader context of environmentally sustainable development. The original 8 members include 2 from developing countries (Mexico and China). To move towards a green economy, the ECB is championing the cause as it is a member of the NGFS and will make sustainability-linked bonds eligible for central bank operations starting January 1, 2021⁹, which will provide incentives for such markets to grow.

In a nutshell, COVID-19 provides an opportunity to not just recover from this shock but to rebuild an economy that is resilient to future shocks. For that, the emphasis of macroeconomic policies needs to be on building inclusive societies and green economies.

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⁸ See Hansen, Lin, and Mano, 2020.

⁹ <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200922~482e4a5a90.en.html>

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