

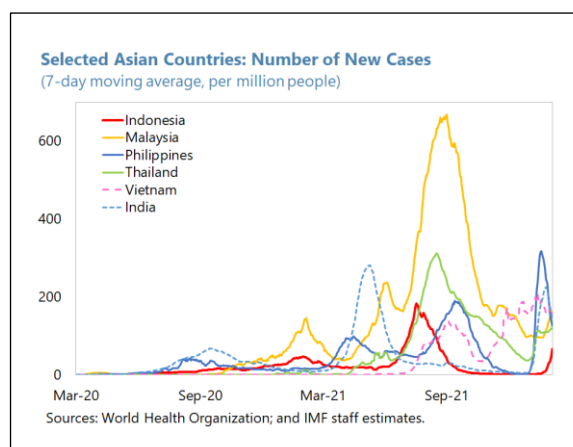
THE PANDEMIC AND ITS SCARRING EFFECTS IN INDONESIA¹

The pandemic triggered the first recession in Indonesia in more than 20 years. Its impact has been large and very heterogeneous across both economic sectors and provinces. Looking ahead, the international evidence highlights that recessions are often associated with scarring or hysteresis—in the sense that the level of output often does not recover back to the pre-recession trend. However, there is also evidence, including from past recessions in Indonesia, that pre-recession policy buffers and financial resilience are associated with reduced scarring, and that well-structured and paced structural reforms as well as targeted active policy actions can help to offset scarring.

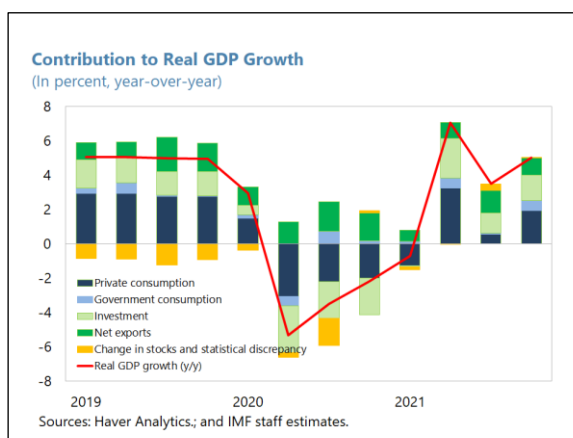
A. Introduction

1. The COVID-19 pandemic and the associated measures to contain it have severely affected the Indonesian economy.

After many years of strong growth of around 5 percent per year, output contracted by 2.1 percent in 2020 and is estimated to have expanded by about 3.2 percent in 2021. COVID-19 was first detected in Indonesia in March 2020 and quickly prompted far-reaching mobility restrictions to suppress the spread of the virus, taking a significant toll on economic activity. Indonesia has seen several waves of COVID-19 infections over the course of the pandemic, most recently in mid-2021 when the COVID-19 Delta variant spread rapidly across South Asia (chart).

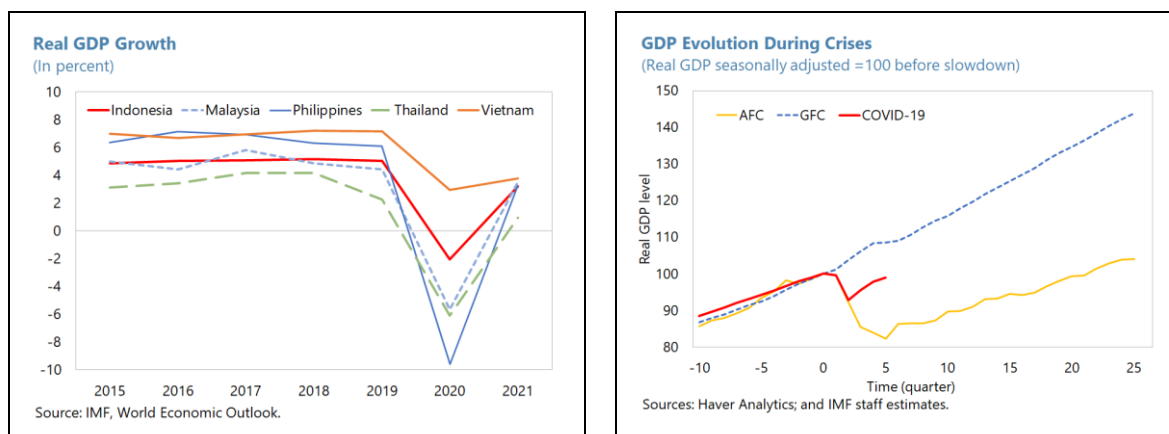


2. Like in many other countries, the most severe impact on economic activity occurred in the early phase of the pandemic, when testing was limited and measures to curb the spread of infections were relatively less targeted. Indeed, output contracted by nearly 8 percentage points during 2020Q1–Q2 (Text figure). The recovery began swiftly with a strong rebound in 2020Q3, which saw output rise by 3 percent q/q s.a. The pace of economic recovery slowed from 2020Q4 onwards, held back by additional waves in early 2021 and especially by the Delta variant wave in mid-2021.



¹ Prepared by Eugenio Cerutti, Robin Koepke, and Rani Setyodewanti (all APD).

3. Indonesia's contraction in real GDP during the COVID-19 recession was smaller than in most ASEAN peer countries (left chart below). This favorable performance was likely helped by less severe social and mobility restrictions, which allowed parts of the economy to remain open for business even as the COVID-19 situation escalated. That said, the COVID-19 recession was still the most severe disruption to the Indonesian economy in over 20 years. Output losses relative to pre-crisis trends exceeded those during the Global Financial Crisis by a wide margin, but they were still substantially smaller than those during the Asian crisis (right chart below).



4. The objective of this chapter is to analyze how the COVID-19 pandemic has affected economic activity in Indonesia in order to gauge the implications for scarring effects. To this end, the chapter first analyzes the nature of the impact of the pandemic across economic sectors and provinces in Indonesia. Then, it compares the impact of the pandemic associated recession with previous recessions in Indonesia and other countries. Following the literature, we define scarring or hysteresis as when the level of output does not recover back to the pre-recession trend.² Based on these analyses, we derive policy implications for reducing the expected scarring effects from the COVID-19 pandemic.

5. The empirical analysis suggests three main messages.

- First, it shows how multifaceted the COVID-19 shock has been for the Indonesian economy, hitting some sectors hard while leaving others unscathed, and even benefitting certain industries. While the health and communication sectors grew during the peak of the recession and gathered momentum as the economic recovery took hold, the transportation/storage sector and the hotel/restaurant sector has been lagging due to the mobility restrictions during the pandemic. The analysis also points toward large heterogeneity across provinces, which is only partially explained by differences in the sectoral composition of provincial economies. Differences in mobility dynamics as well as labor market conditions immediately before the pandemic are additional factors that explain the heterogeneity across provinces.

² The literature referred as hysteresis to what is today, during the COVID-19 pandemic, is being referred to as economic scarring. See Box 2 for more details on the definition of scarring used in this chapter.

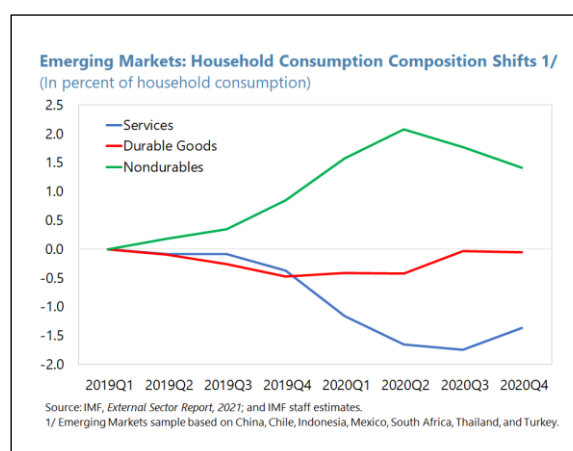
- Second, the historical study of recessions indicates that pre-recession policy buffers and financial resilience are important factors associated with reduced scarring. Indonesia's pre-pandemic fiscal buffers provided sizable fiscal policy space to mitigate the effects of the crisis on domestic demand while its financial resilience prevented a systemic banking crisis from occurring.
- Third, recessions provide opportunities to give further impetus to structural reforms. This has been especially so for emerging markets, including Indonesia in the past. Structural reforms as well as targeted policy actions (e.g., cash transfers to protect vulnerable workers; financial help to viable firms to cope with the pandemic and improve worker retention, retraining labor programs) can help Indonesia to offset scarring and even improve medium-term potential growth.

B. The Impact of the Pandemic Across Sectors and Provinces

A Disaggregated View

6. An important feature of the pandemic recession globally is its asymmetric impact across economic sectors.

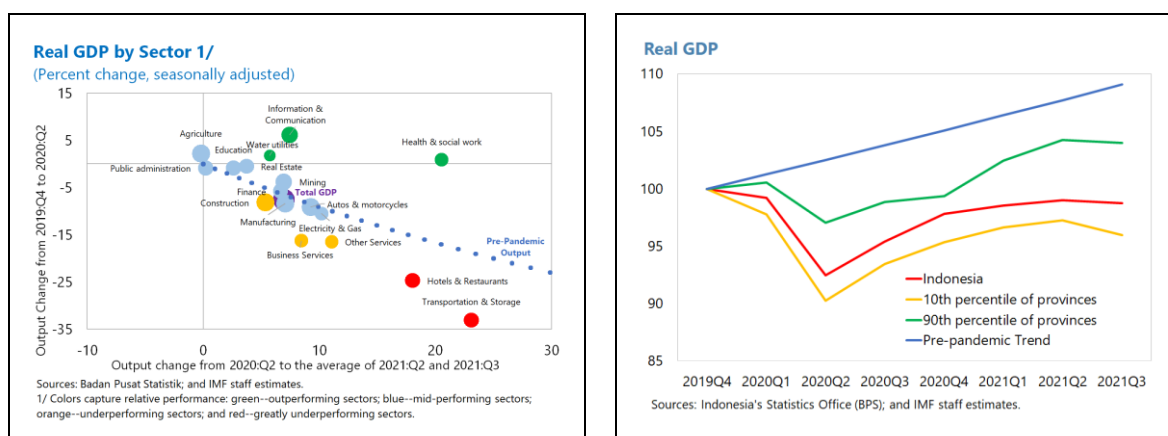
Generally speaking, sectors that depend on the presence or movement of people have been hit the hardest, while sectors in which activity is compatible with social distancing have been less affected, and in some cases even benefitted. Consistent with this general pattern, services sectors have seen greater adverse effects, while goods' sectors have been relatively more resilient (see chart). Primary sectors, such as agriculture and mining, were generally resilient to the pandemic because they require only limited physical interaction, even though they employ a sizeable portion of the labor force (Pasaribu and others, 2021).



7. These general asymmetric patterns also apply to Indonesia. As of 2021Q3, output in most goods sectors was back to or even above pre-pandemic output levels, while services sectors were lagging (left-hand side figure below). The hardest hit sectors were the transportation/storage sector and the hotel/restaurant sector, whose 2021Q3 levels of GDP were 19 percent and 14 percent below the pre-pandemic level, respectively. Other sectors with sustained output losses during the pandemic include business services and "other services" sectors. On the other end of the spectrum, sectors that appear to have gained momentum during the pandemic include the health & social work sector (which likely benefitted from additional healthcare needs) and the information & communication sector (which benefitted from the proliferation of remote work).

8. Economic performance has also varied widely at the provincial level in Indonesia. While all of Indonesia's 34 provinces except Papua saw output on a lower path than their pre-pandemic trends, some provinces have been much harder hit than others (right chart below). To some extent, the variation in provincial performance reflects the sectoral composition of provincial GDP. For

example, Bali has been the worst affected province, with 2021Q3 GDP down 16 percent from its pre-pandemic level, reflecting the important role of tourism for Bali's economy (see Appendix I). But even after accounting for variation in the sectoral composition of provincial GDP, there is significant variation in provincial output performance. For example, Papua witnessed much stronger growth during the pandemic than would be suggested by its sectoral GDP composition, reflecting faster growth for most economic sectors compared to the Indonesian average growth rates of those same sectors.



Empirical Analysis

9. In order to uncover the factors behind the heterogeneity in sectoral and provincial performance, a more formal analysis is needed. To this end, we construct a panel with quarterly GDP growth at the sector and provincial level and a range of explanatory variables—sectoral fixed effects, labor market conditions, and mobility changes across provinces (see Box 1 for regression details). The results are summarized in Table 1, which provides estimation details for each of the three time periods (pandemic, downturn, and recovery).³

- The **sectoral fixed effects** confirm the significant heterogeneity at the sectoral level across provinces, with transportation & storage and hotels & restaurants underperforming across provinces, as did the business services and “other services” sectors. In all four sectors, the underperformance is apparent in the estimations for the entire period of the pandemic (2019Q4 to 2021Q3) but is driven by the early phase of the pandemic, given that the sign of the estimated coefficient flips during the recovery. This is consistent with the pattern apparent in the above scatterplot, which showed these four sectors lagging in their level of output relative to their pre-pandemic level, even though they were among the fastest growing sectors during the recovery. These sectors can thus be thought of as “high beta” sectors with respect to the pandemic in the sense that they are particularly sensitive to changes in social restrictions and mobility. By contrast, the health & social work sector and the information & communication

³ Fixed effects are shown for each sector except for the agricultural sector, which has been among the least affected sectors by the pandemic (see Appendix I). That is, the sectoral fixed effects indicate how much each sector has been affected relative to the agricultural sector.

sector grew significantly across provinces. The regression results reveal that this outperformance is entirely attributable to the recovery period. This suggests that it took time in the early stage of the pandemic for the economy to shift resources to health and communication sectors. This delay may help explain why the first infection wave was so much more damaging to the economy than subsequent waves: By the time the second and third waves occurred, support from the health and social sector had been ramped up and information and communication technology had been expanded to allow for economic activity to function despite mobility restrictions.

- The **pre-pandemic level of sectoral employment** as a share of the provincial population can be thought of as a proxy for how concentrated economic activity is in particular sectors within each province. The estimated coefficient on this variable is negative during the downturn, but positive during the recovery. In other words, the greater concentration of activity in particular sectors is associated with a sharper downturn in economic activity. This finding may point to the challenges that large sectors have in adapting to the new realities of the pandemic, for example in terms of facilitating the reallocation of resources to activities that are compatible with health and safety protocols. The adverse effect of concentration is (partially) reversed during the recovery, when pressures to reallocate resources diminished.
- The **pre-pandemic level of labor force participation** can be thought of as an indicator of resource utilization, with low participation rates indicating there may be idle resources for the provincial economy to absorb. The findings indicate that low participation rates were associated with stronger growth during the recovery period, likely reflecting the absorption of idle labor as new opportunities opened up and pressure on financially constrained households rose. This interpretation would be consistent with the notion that the Indonesian economy exhibited a growing degree of adaptation and reallocation of resources as the pandemic progressed.
- The **pre-pandemic level of wages** has a negative association with growth over the course of the pandemic, although the effect is not statistically significant when looking at either the downturn or the recovery period individually. This relationship may in part reflect reallocation of labor from high-wage areas to low wage professions or subsistence farming due to job loss, including geographical reallocation to low-wage provinces as individuals returned to their hometowns (notably in the first year of the pandemic).
- The **mobility indicator** is a high frequency proxy for the severity of the pandemic (e.g., Putra and Arini, 2020; Gamtkitsulashvili and Plekhanov, 2021). The results show that an increase in residential mobility is associated with reduced growth, especially during the downturn phase of the pandemic (2020H1). This is consistent with the “stay-at-home-effect” described in the recent literature (e.g., Cali and Ryandiansyah, 2020; IMF, 2022 forthcoming). Provinces that suffered a greater increase in residential mobility tended to grow more slowly over the course of the pandemic, consistent with the notion that successful management of COVID-19 outbreaks helped reduce the economic toll of the pandemic.

Table 1. Indonesia: Baseline Estimation Results for the Determinants of Real GDP Growth

	(1) Pandemic	(2) Downturn	(3) Recovery
Pre-pandemic level of employment	-0.002 (0.002)	-0.007 ** (0.003)	0.004 * (0.002)
Pre-pandemic level of labor force participation	-0.004 ** (0.002)	0.001 (0.002)	-0.006 *** (0.002)
Pre-pandemic level of wages	-0.032 ** (0.013)	-0.021 (0.021)	-0.003 (0.013)
Changes in residential mobility	-0.005 *** (0.001)	-0.006 ** (0.002)	-0.001 (0.001)
Sectors			
Mining sector	-0.033 (0.041)	-0.135 (0.052)	0.096 ** (0.043)
Manufacturing sector	0.012 (0.041)	-0.099 ** (0.044)	0.106 *** (0.032)
Electricity and gas sector	0.001 (0.042)	-0.135 ** (0.055)	0.130 *** (0.041)
Water utilities sector	0.099 (0.079)	-0.100 * (0.053)	0.194 ** (0.080)
Construction sector	-0.046 (0.034)	-0.187 *** (0.047)	0.136 *** (0.036)
Autos and motorcycles sector	-0.048 ** (0.021)	-0.149 *** (0.028)	0.098 *** (0.023)
Transportation and storage sector	-0.287 *** (0.048)	-0.498 *** (0.065)	0.206 *** (0.042)
Hotel and restaurant sector	-0.210 *** (0.046)	-0.407 *** (0.058)	0.192 *** (0.040)
Information and communication sector	0.102 ** (0.040)	-0.035 (0.054)	0.130 *** (0.039)
Finance sector	0.016 (0.038)	-0.143 *** (0.051)	0.153 *** (0.038)
Real estate sector	-0.013 (0.039)	-0.139 *** (0.052)	0.117 *** (0.039)
Business services sector	-0.150 *** (0.043)	-0.299 *** (0.062)	0.143 *** (0.041)
Public administration sector	-0.083 ** (0.035)	-0.101 ** (0.044)	0.013 (0.036)
Education sector	-0.035 (0.034)	-0.118 *** (0.044)	0.078 ** (0.033)
Health and social work sector	0.118 *** (0.041)	-0.096 * (0.052)	0.208 *** (0.040)
Other services sector	-0.176 *** (0.066)	-0.363 *** (0.135)	0.181 ** (0.080)
Adjusted R ²	0.32	0.32	0.09
Number of observations	569	569	569
Standard error of regression	0.16	0.18	0.15

Source: IMF staff estimates.

Box 1. Regression Specification

The estimated equation is:

$$Y_{ij} = \alpha + \beta_1 \cdot EMP_{ij} + \beta_2 \cdot LMC_j + \beta_3 \cdot HC_j + \beta_4 \cdot SP_j + \gamma_i + \varepsilon \quad (1)$$

Where Y is real GDP growth, α is a constant term, EMP is sectoral employment as a share of the population (by province), LMC is the indicator for labor market conditions, HC is the proxy for human capital, SP is the variable capturing the severity of the pandemic, γ captures fixed effects at the sectoral level, i is the sectoral subscript, j is the subscript for Indonesia's provinces, and ε is an error term.

To avoid distortions in seasonal factors during the pandemic, all GDP data are seasonally adjusted using pre-pandemic seasonal factors by applying the X12 method to data for 2010 through 2019Q4. We analyze cross sections for three periods: the period of the pandemic (output change from 2019Q4 to 2021Q3), the downturn (2019Q4 to 2020Q2) and the recovery (2020Q2 to 2021Q3). These three periods are defined so as to uncover variation in the economic factors linked to output changes over the course of the two main phases of the pandemic, while also considering the pandemic period as a whole.

The independent variables available at the provincial were initially grouped into three categories, from each of which one variable is included in the regression (variables used in the preferred specification are shown in italics):

- Group 1: Proxy for labor market conditions pre-pandemic (variables: *labor force participation*; unemployment rate).
- Group 2: Proxy for human capital pre-pandemic (variables: *wage level*; share of workers in informal sector; years of education; poverty rate).
- Group 3: Proxy for severity of pandemic (variables: residential mobility from *Google's Community Mobility Report*; COVID-19 cases per capita; COVID-19 deaths per capita). Each of the indicators in Group 3 is calculated as the change over the reference period.

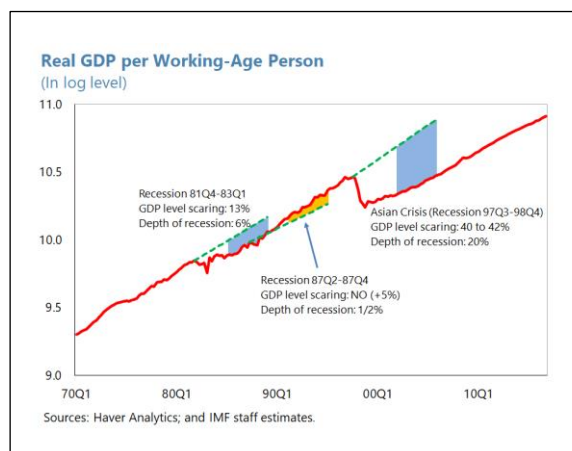
C. A Historical Perspective on Scarring

Previous Indonesian Recessions

10. Three Indonesian regressions are identified. While Indonesia had not experienced a recession in the two decades before the pandemic, it has experienced three recessions since the 1970s as shown in figure below (see Box 2 for the criteria used to identify recessions).

- **The 1981 recession:** It started in the last quarter of 1981 and lasted two quarters. It was linked to that year's abrupt decline in oil prices. The fall in the level of output vis-à-vis the pre-recession trend was about 13 percent.
- **The 1987 recession:** It lasted three quarters, covering 1987Q2 and 1987Q4, but it was relatively shallow, registering only about ½ percent fall in real GDP. This recession can be linked with the sharp decline in stock markets across the world, which started in the U.S. with Black Monday and was transmitted through the global financial system leading to the fall of the European and Asian stock markets. There was no scarring impact from this recession. GDP was above the pre-recession trend two years after the recession.

- **The 1997 recession:** This was the result of the Asian financial crisis, covering seven quarters (from 1997Q3 to 1998Q4) and a fall in nominal GDP of up to 20 percent along with a systemic banking crisis. The fall in the level of output vis-à-vis the pre-recession trend was about 40 percent, the deepest recession since the 1970s.⁴



11. While the recessions of 1981 and 1997 display hysteresis/scarring, the 1987 recession does not.

The fact that the recession of 1987 does not display scarring is not only linked to its shallowness and short characteristics, but also, as can be appreciated in the figure above, that there was an increase in the GDP trend growth just after. This phenomenon could be linked with a series of structural economic reforms that accelerated in 1987. There was a broad deregulation of the economy process (Halim, 1988) as well as the starting of a trade liberalization process (Fane and Condon, 1996), which facilitated a rapid export led-growth process.

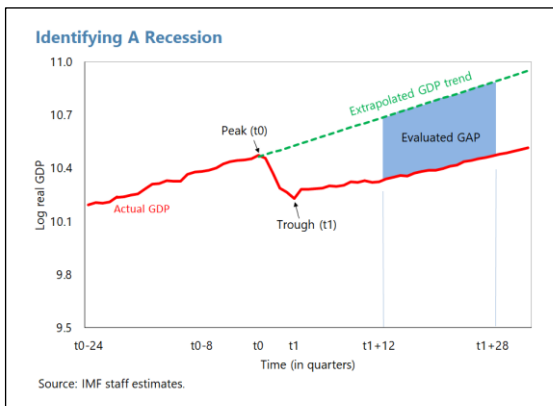
12. The documented uneven pace of recovery from the pandemic is symptomatic of persistent output losses that typically emerge after deep economic downturns, in Indonesia and elsewhere. The Article IV IMF staff projections for real GDP growth does not forecast a loss in medium-term growth rates, but a loss in the output level of about 6 percent in the medium term relative to the level envisaged in the January 2020 WEO.⁵ Other recent studies for Indonesia also highlight potential scarring effects. World Bank (2021) argues that the crisis could damage Indonesia's growth potential through lower investment, weak productivity growth, and loss in human capital. Learning from past experiences, Pritadrajati (2021) found long-term scarring effects due to unemployment and informal self-employment. The scarring effects were significant among senior workers who were unemployed, and among young workers who were self-employed.

⁴ The 1997 Asian crisis not only triggered significant economic scars but also drove policymakers to embark on major regulatory reforms to strengthen the resiliency of the country's financial system against future shocks. One of the reasons why Indonesia did not experience a recession during the 2007/2008 Global Financial Crisis was the strength of the financial sector.

⁵ The projected scarring is lower than the historical average among emerging markets that is discussed in the next section when analyzing the historical evidence.

Box 2. Methodology Used for Identifying Recessions and Quantifying Scarring Effects

Identifying a recession: A recessionary period or “recession” is traditionally viewed as a period during which the level of GDP—sometimes, but not always—monotonically contracts. To identify such periods, the non-parametric methodology of Harding and Pagan (2002, henceforth referred to as the “BBQ”) is applied to the log level of quarterly real GDP as compiled in Aslan and others (2019). Broadly speaking, the BBQ algorithm mathematically defines turning point events—peaks and troughs—as local maxima and minima in the level of a series given certain censoring rules. The settings for the traditional BBQ algorithm were set as follows: the symmetric window parameter was set to two quarters; the minimum length of the phase for both expansions and contractions was set to two quarters; the minimum complete length for a cycle (expansion plus contraction) was set to five quarters.



Quantifying the scarring effects: Following Blanchard, Cerutti, and Summers (2015), a two-step procedure was adopted using real GDP per working-age person (calculated as GDP over population of 16 to 64 years old). First, the pre-recession trend associated with each recessionary episode was determined. In calculating pre-recession trends, a number of factors are taken into consideration. The first, as noted in Martin, Munyan, and Wilson (2015), is that detrending tools cannot accommodate long-lasting deviations from trend, and so simple exponential trends are instead estimated recession-by-recession using nearby historical data. A second issue is how to account for the fact that the economy may have been in a boom—and thus above trend—before the recession started. Therefore, the two years before the peak from the computation of the trend are excluded.

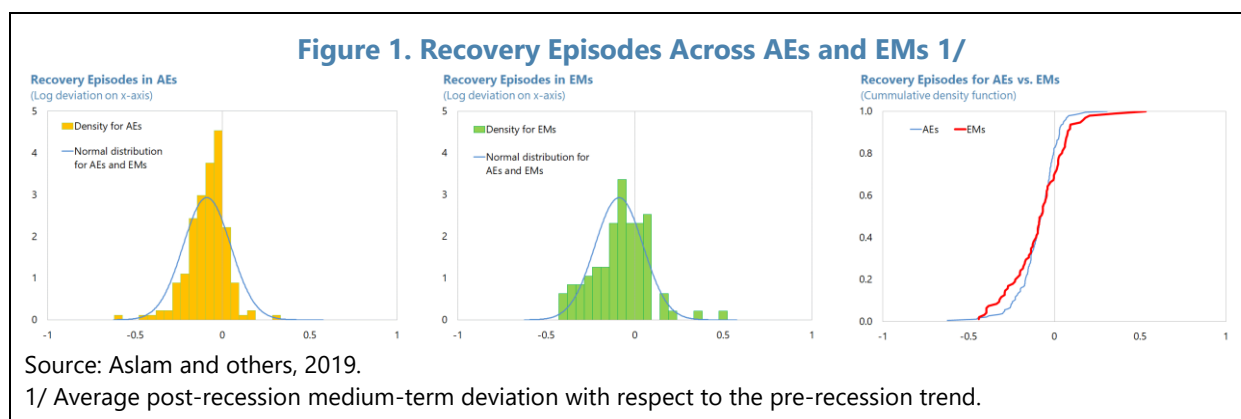
The second step, once the pre-recession trends have been calculated, is to determine to what extent the recession has damaged the economy by comparing the real GDP level following the subsequent recovery with the pre-recession trend. The window over which this post-recession output loss is measured is an average of 3 to 7 years after the trough of the recession.

International Evidence

13. There have been studies about how recessions can affect economic output. In general terms, scarring or hysteresis captures several channels by which a recession can impact future economic activity, in the sense that the level of output often does not recover back to the pre-recession trend. First, a particularly destructive/long-lasting recession can force a reallocation of resources. For workers, the more time spent out of work, the more their skills may decline—job losses may also occur disproportionately in higher skill (productivity) sectors. In addition, a portion of the capital stock may become obsolete. Second, subdued or uncertain growth prospects cause firms to reduce investment, including in intangible assets, which can both reduce the capital stock and depress productivity growth. On this front, Aghion and others (2010) show that tight credit constraints, which often arise following financial crises, imply procyclical investment in intangible assets. Using firm-level data in France, Aghion and others (2012) show that while research and

development spending plummets in recessions, its increase during subsequent upturns is not proportional. Both findings can help explain why recessions can have hysteresis effects.

14. An analysis of past recessions offers useful lessons for the current experience. In the rest of this section, we rely on the calculations of Aslan and others (2019) for a sample of 23 advanced economies (AE) and 27 Emerging Markets (EM) during the period 1960Q4-2016Q4. Their analysis shows that even accounting for shallower recessions, which are often less related to large supply shocks (e.g., banking crisis and/or oil price shocks), the presence of scarring or hysteresis in both AEs and EMs is clear. As shown in the left and center charts of Figure 1 below, the average experience of EMs following recessions is remarkably similar to the ones experienced by AEs. Across the 255 recession-and-recovery episodes in their sample, 82 percent of recessions in AEs exhibit scarring/hysteresis, compared to 69 percent in EMs. Relative to the pre-recession trend, the average output loss is 8.8 percent in AEs, compared to 6.8 percent in EMs. Nonetheless, the distribution of outcomes is more varied in EMs. Although some recovery episodes are above the pre-recession trend, there are more outcomes in the left tail of the distribution denoting very weak recoveries. This is also visible in the right chart of the Figure 1 below, when comparing the cumulative density functions.



15. Post-recession recoveries are influenced by structural factors, especially in EMs. Recession characteristics and economic circumstances have similar effects in both country groups, suggesting that recoveries and recessions in EMs are not so different from those in AEs, on average. However, post-recession experiences are somewhat more varied in EMs—the tails of the distribution of recovery outcomes are fatter. Aslan and others (2019) find that stronger recoveries are linked to improvements in the quality of institutions, especially in EMs, in their panel study of the post-recession periods. The fact that EMs are the ones that could benefit more from structural reforms could explain the larger right-tail mass in EMs compared with AEs shown in the Figure 1. This is suggestive of a greater impact of structural reforms in EM countries than in AEs, given there is often more room for improvements and space for cross-country convergency dynamics in EMs.

16. Recessions which coincide with banking crises tend to be deeper and longer lasting. The estimates show that even once the length of recession is controlled for, recoveries still tend to be much weaker following recessions that feature banking crises, and the results are very similar for both AE and EMs. If a recession is associated with a banking crisis, the average post-recession

output loss increases by about 4.8 percentage points, with no discernable EM-specific difference in impact. This result finds ample support in the literature—for example, Cecchetti, Kohler, and Upper (2009) show that there are several elements of financial crises which have lasting effects on the real economy and tend to give rise to hysteresis. First, funding costs are driven up (higher spreads for corporate/household borrowing, relative to benchmark rates; lower equity prices) and credit availability is likely to be reduced, as banks and other financial institutions look to shore up balance sheets. Next, firms' and households' net worth will generally decline, owing to lower equity and property prices, increasing adverse-selection problems for lenders and weakening creditworthiness for households. Finally, confidence effects reduce firm and household spending, given heightened uncertainty about future revenue/income prospects. Each of these conspires to reduce investment and consumption activity. Aghion and others (2010, 2012) provide evidence on the negative effect of credit constraints on investment in intangible assets, which also speaks to the prevalence of hysteresis following financial crises. More generally, a number of other studies also find that output losses and recession durations are larger/longer following banking crises (e.g., Caldara and others, 2016; Jorda and others, 2011 and 2013; and Reinhart and Rogoff, 2009) and that recoveries are notably weaker thereafter (e.g., Cecchetti and others, 2009; and Teulings and Zubanov, 2014).

D. Policy Recommendations

17. The analysis in this chapter highlights the magnitude and the heterogeneity of the impact of the pandemic in Indonesia. It triggered the first recession in 20 years, and while it has impacted some sectors (e.g., transportation & storage and hotels & restaurants) more severely than others initially, there are still significant differences across provinces, which go beyond different sectoral compositions and related with labor market differences as well as the impact of the pandemic on mobility.

18. Expected characteristics of the current recovery in Indonesia are in line with previous recessions, which also helps to highlight policy priorities. Following the international and domestic precedents, the expected level of scarring for the pandemic in 2025 is about 6 percent in the baseline scenario of the 2022 Article IV with respect to the pre-pandemic January 2020 WEO projections.⁶ This is in line with the reviewed empirical evidence in the literature that find that most recessions in both AEs and EMs exhibit scarring/hysteresis—in the sense that economic activity generally fails to return to its pre-recession trend. Nonetheless, the heterogeneity found across episodes in Indonesia and other EMs also indicates that there is room for policy action and that some pre-pandemic strengths in the Indonesian economy are important factors. The following three key policy priorities could be highlighted:

- *Financial sector resilience* is key to avoiding large scarring effects. Banking crises, both in AE and EM, have similar and very important impact on scarring. The fact that the Indonesian banking sector was in good financial shape pre-pandemic and the authorities' continuous efforts to strengthen supervision and regulation to preserve financial sector stability have mitigated the

⁶ In other words, Indonesia would need to grow at about 7 percent per year for at least 5 years to reach back to a pre-pandemic level trend that had imbedded about 5 percent growth per year.

impact of the pandemic associated recession. Going forward, preserving financial stability is key to avoiding deeper costs in the future.

- *The availability of fiscal space* before recessions is also important to diminish their impact. Not only could this be key to providing support to shore up financial resilience, but also for active policies during the recession. As shown in our sectoral and provincial analysis for Indonesia, some targeted policy support in hard-hit sectors and/or provinces could help the adjustments in those sectors by providing time and/or facilitating resource reallocation as much as possible. Active policies should be executed with a clear balance between costs and benefits and policy responses should be calibrated in light of evolving conditions.⁷
- *A successful and well-paced implementation of structural reforms* is essential for overcoming scarring in the medium to long term. As shown for Indonesia and other countries, recessions also provide opportunities for structural reforms. Indonesia has taken advantage of the pandemic in this sense, especially with the omnibus bill on job creation enacted last year. However, the implementation and complementarity of the reforms would be key. Market and labor reforms embedded in the omnibus bill could be further complemented with measures to enhance governance and address weak access to finance through financial deepening.⁸ The first steps enacted reforms aimed at increasing fiscal revenues as well as further reforms in this area (e.g., a broad medium-term revenue strategy that includes streamlining the business income tax structure, reducing special regimes and discretionary exemptions in the VAT system (see IMF Country Report No. 21/46 for details) would provide not only the needed medium-term finance for high-social-return spending priorities such as education, health and infrastructure, but also would help to improve the allocation of capital and labor for increased productivity.

⁷ Chapter 3 of the April 2021 WEO shows how job retention policies are extremely powerful at reducing scarring and mitigating the unequal impacts of a pandemic shock across workers, while reallocation policies supporting job creation can help ease the adjustment to the more permanent effects of the COVID-19 shock on the labor market.

⁸ Chapter 3 of the October 2019 WEO shows how reform in areas such as governance, domestic and external finance, trade, and labor and product markets could deliver sizable output gains in the medium term. The pace of implementation of labor reforms should also take into account the state of recovery since some measures could be counterproductive during the middle of recessions (see April 2016 WEO).

Appendix I. GDP by Sectors and Provinces

Figure 1. Indonesia: GDP by Sectors and Provinces

(Index 2009Q4 = 100; percentile based on 34 provinces)

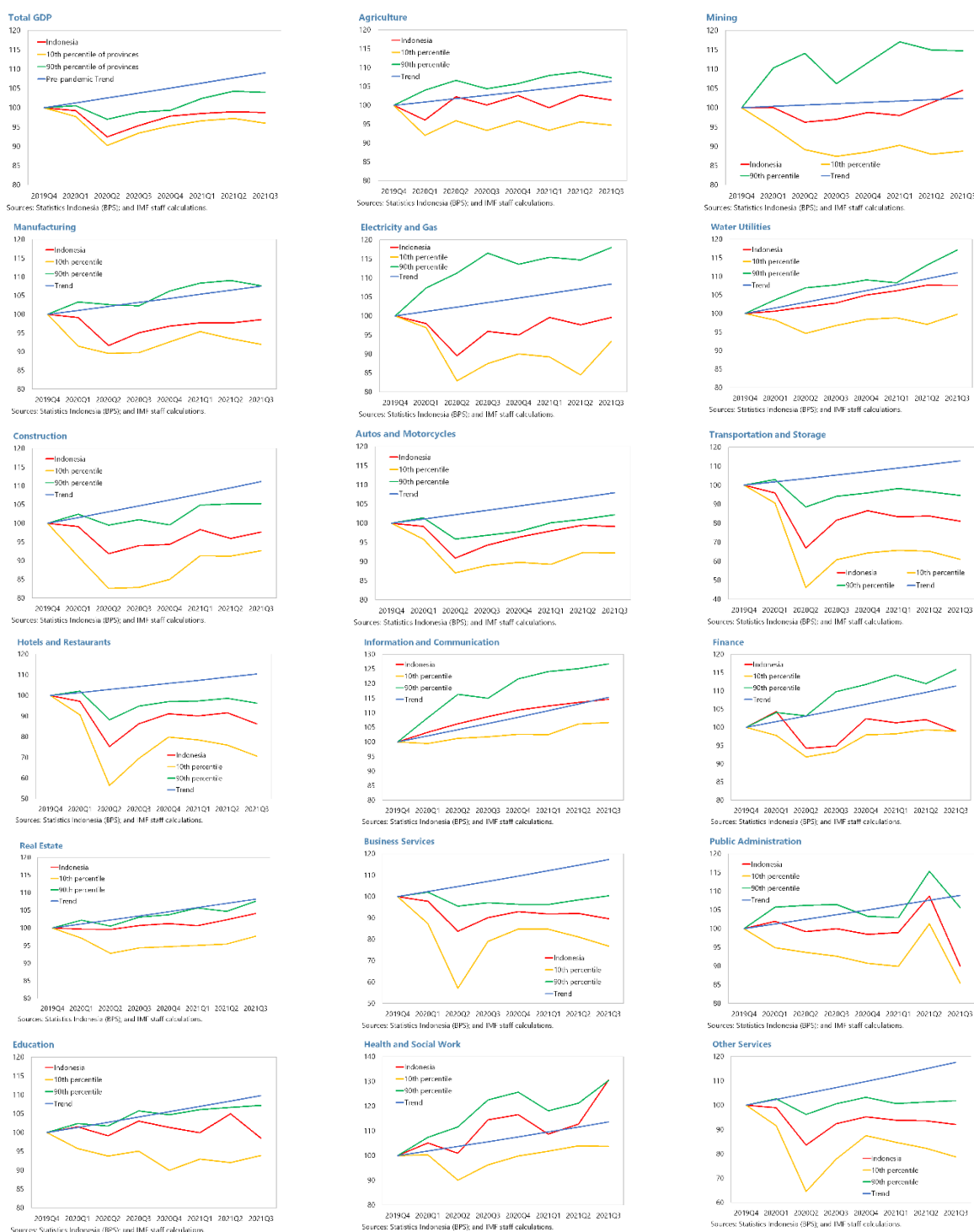
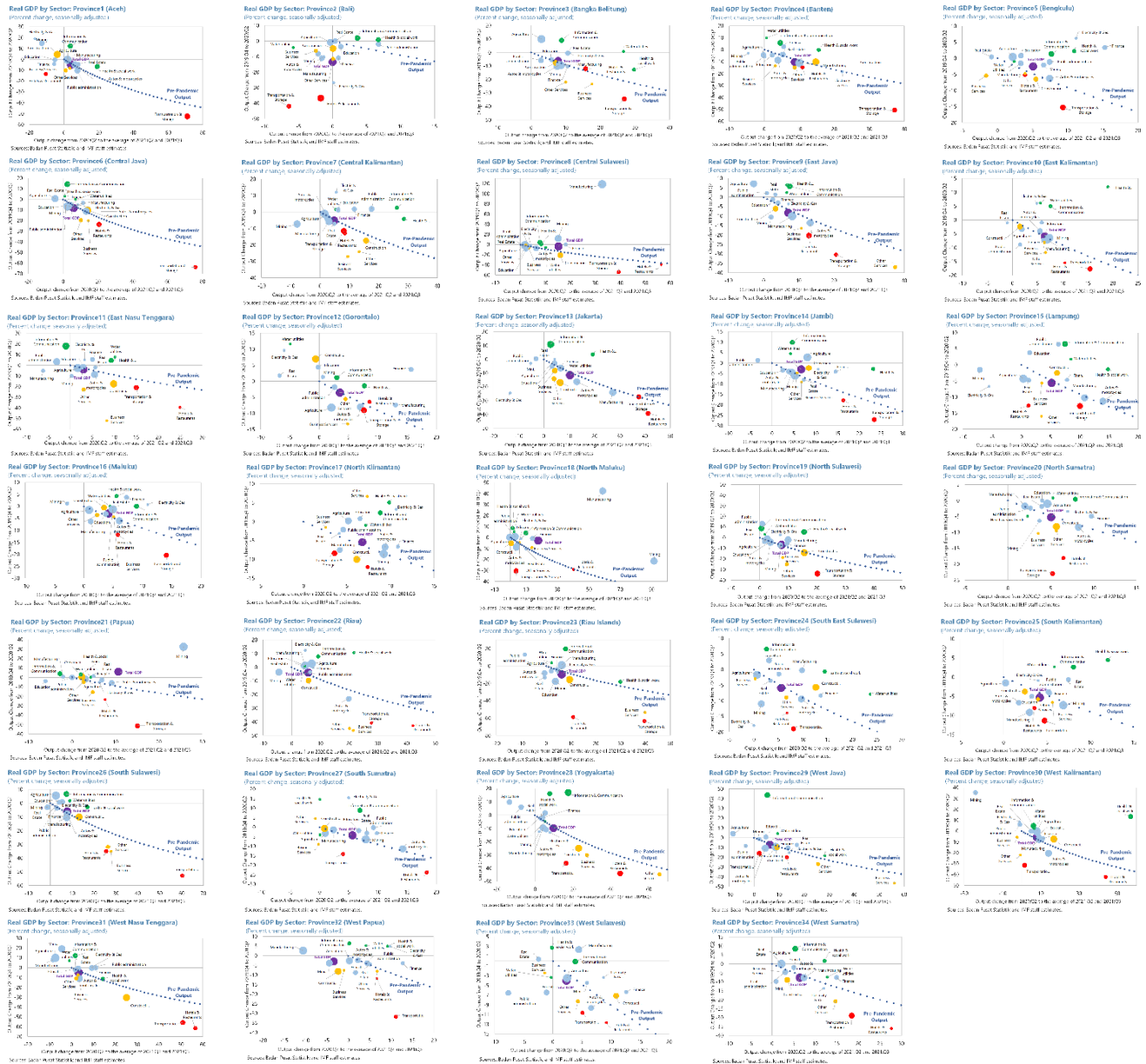


Figure 2. Indonesia: GDP by Provinces and Sectors



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