WORLD BANK GROUP
Development Economics | Global Indicators

Global Indicators Briefs No. 1

The Evolving Effect of COVID-19 on the Private Sector

Nona Karalashvili and Domenico Viganola

This brief provides a descriptive analysis of the evolving effect of the COVID-19 pandemic on the private sector of 40 countries. It focuses on the essential aspects of business operations: namely, firms' survival, production of goods and services, and jobs. Firms have suffered massive demand and supply shocks, affecting nearly all sectors. These shocks and the consequent drop in revenues have dried up firms' cash flows, depleting their working capital and putting the private sector under considerable financial distress. This brief also examines the effect of the pandemic on firms' liquidity, providing general assessments of the variation of these effects by country income level and firm characteristics. Firms in lower-income countries seem to have been hit harder across several measures, such as declines in sales and the incidence of overdue financial obligations. Within countries, small and medium-sized enterprises (SMEs) with 5 to 99 employees seem to have fared more poorly than large firms. While some signs of a recovery in terms of sales and capacity utilization are emerging, the recovery is fragile, as it bypasses important aspects such as liquidity and job creation. For a full post-pandemic recovery, it is important that sound businesses that are facing a temporary liquidity problem survive, and the workforce rebounds.

Survey of Businesses across 40 Countries

With the COVID-19 pandemic ongoing, research into its impacts is still relatively limited but growing fast, although often focused on one or few countries, e.g. Bartik et al. (2020), Crane et al. (2020) for the United States, Dev and Sengupta (2020) for India, and Adams-Prassl et al. (2020) for the United Kingdom, the United States, and Germany. This brief covers 40 countries, providing descriptive and comprehensive assessments, using data from the Follow-up Surveys to the World Bank Enterprise Surveys (WBES), described in detail in box 1. A more detailed analysis of some of the issues discussed in this brief and using cross-country data can be found in e.g. Apedo-Amah et al. (2020), and Muzi et al. (2021).

The Effect of COVID-19 on Firm Closures

The WBES COVID-19 Follow-up Surveys include data from the last WBES administered before the pandemic, allowing estimates to be made of firms' exit rates during the crisis, for each country (Aga and Francis 2017). Two different measures of firm exit are used: (1) confirmed exits since the pandemic was declared; and (2) assumed exits. The first measure is more conservative, given that it refers to firms that have directly reported having permanently closed after the pandemic was declared by the World Health Organization (WHO): that is, March 2020 or later. In addition to firms whose permanent closure has been confirmed, the second measure includes firms that have not been possible to trace—or even to find a working line of communication—and therefore have been assumed to have closed. These include firms that could not be contacted having exhausted all attempts using all communication lines, but exclude firms with a working answering machine or fax line.

Overall, 2.6 percent of firms have been confirmed to have permanently closed since the onset of the pandemic, while 16.8 percent have been assumed to have permanently closed (figure 1). This average masks a considerable cross-country variation. As expected, the assumed exit rates are higher than the confirmed exit rates given the difficulties of contacting business owners and managers imposed by the nature of the pandemic, but the two measures yield consistent patterns by sector. Confirmed exit rates are higher for relatively small firms, and the retail and services sectors compared to manufacturing, with confirmed or assumed exit rates higher in the relatively low-income countries.

Temporary closures have been widespread. Since the onset of COVID-19, almost half of private firms have had to put their operations on hold, partly due to the

Affiliations: *Nona Karalashvili, World Bank Enterprise Analysis Unit. Domenico Viganola, World Bank Enterprise Analysis Unit. For correspondence: nkaralashvili@worldbank.org, dviganola@worldbank.org.*
Acknowledgements: *We are grateful to Jorge Luis Rodriguez Meza, David C. Francis, and Mohammad Amin for helpful comments, and Nancy Morrison for excellent editorial assistance.*

Box 1 Firm-level Data Collected during the COVID-19 Pandemic from Representative Samples

The World Bank Enterprise Survey (WBES) COVID-19 Follow-up Surveys were conducted with firms that had recently completed the WBES before the onset of the pandemic. In the Follow-up Surveys, a total of 35,496 firms across 40 countries were interviewed between May 2020 and March 2021, with 26 countries covered in two rounds of surveys, approximately three months apart. Table B1.1 summarizes the coverage. Cross-country comparisons should be treated with due caution, given that the surveys were conducted at different points of time in different countries.

The WBES are firm-level surveys of a representative sample of the nonagricultural, nonextractive, and formal private sector with five or more employees. Survey weights are applied to obtain population estimates. When data are aggregated across countries, only the latest rounds of surveys are used, and survey weights are rescaled so that each country is weighted equally. All the firm-level WBES and follow-up data are publicly available on the Enterprise Survey (ES) data portal: https://login.enterprisesurveys.org.

Table B1.1. WBES Follow-Up Survey Data Used in this Brief

	Countries	Surveys	Obs.	Fieldwork range
Low-income	5	5	1,205	06-2020/01-2021
Lower-middle-income	8	15	8,202	05-2020/02-2021
Upper-middle-income	12	16	8,663	06-2020/03-2021
High-income	15	30	17,426	05-2020/02-2021
Total	40	66	35,496	

Source: World Bank Enterprise Survey (WBES) Follow-up COVID-19 Surveys.
Note: Obs. = observations.

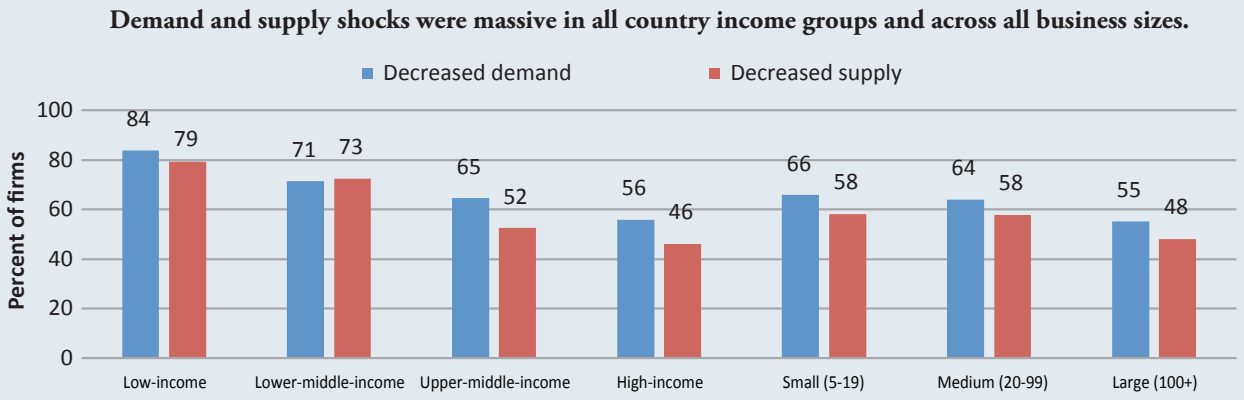
restrictions imposed by national and local governments. Rates of temporary closure are lower for larger firms, manufacturers, and firms located in higher-income countries, suggesting greater adaptability to the conditions imposed by the pandemic. The average duration of temporary closures is around 10.4 weeks. This period is fairly stable across different firm types and countries at different income levels.

The WBES Follow-up Survey on COVID-19 reveals that 30 percent of the firms confirmed to be permanently closed were optimistic about the possibility of re-entering the market at some point in the future. Although SMEs were more likely to have permanently closed since the onset of the pandemic, they were also more likely to state the intention of reopening. This is consistent with the idea that SMEs have lower entry and exit costs, are generally

Figure 1 Firms that Have Been Confirmed or Are Assumed to Be Permanently Closed since the COVID-19 Pandemic Was Declared

Source: World Bank Enterprise Survey (WBES) Follow-up Surveys on COVID-19.
Note: The figure covers the period from March 2020, when the World Health Organization declared the COVID-19 pandemic, to March 2021. Small, medium, and large designations of firm size refer to the number of employees.

Figure 2 Demand and Supply Shocks during the Pandemic



Source: World Bank Enterprise Survey (WBES) Follow-up Surveys on COVID-19.
Note: The figure covers 40 countries. Small, medium, and large designations of firm size refer to the number of employees.

more flexible, and perhaps are even more resilient than larger firms, at least in their intentions to bounce back from adversity (Applegate and Lampert 2021).

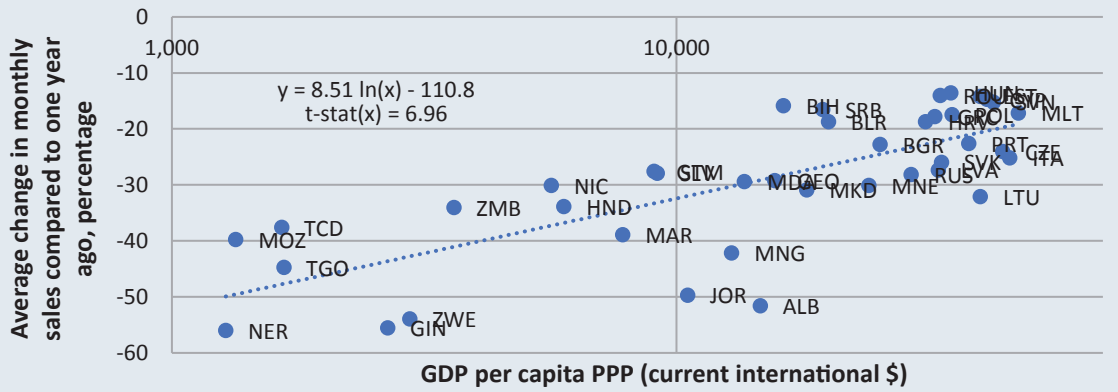
Widespread and Deep Shocks to Demand and Supply

The pandemic triggered massive demand and supply shocks, penetrating all parts of the world and nearly all sectors (figure 2). The latest rounds of the surveys indicate that around two-thirds (64.6 percent) of businesses experienced decreased demand for products or services compared to the same month one year ago, on average, with the share varying from 37.6 percent in Estonia (Round-2, Feb-2021) to 95.8 percent in Guinea (Jun-2020). Similarly, on average, around 57.5 percent of businesses experienced a decreased supply of inputs compared to one year ago, varying from 24.8 percent in Montenegro (Feb-2021) to 93.3 percent in Guinea. Both these shocks were felt considerably less by large firms (those employing 100 or more workers) (consistent with Adian et. al. 2020); by firms in higher-income countries (consistent with Hu and Zhang 2021); and, for the demand shock, by foreign-owned firms. Among the 26 countries where two rounds of the WBES Follow-Up Surveys have been implemented, 15 have seen a strong (though far from full) rebound on this measure of demand shock, with the important exceptions of Latvia, Lithuania, and the Slovak Republic, where the indicator has deteriorated over time (the remaining 8 countries show no discernable change across the survey rounds). Interestingly, fewer countries are seeing a rebound of supply (11 countries, all with a rebound of demand), with the same 3 countries (Latvia, Lithuania, Slovak Republic) and the Czech Republic showing deterioration. This suggests that firms in some countries may be forced to work through bottlenecks of supply chains.

Drops in sales — perhaps most direct materialization of demand and supply shocks — have also been widespread and deep, showing similar patterns. The latest rounds of the surveys indicate that, on average, around 70.0 percent of businesses have experienced decreased monthly sales compared to the same month one year ago, varying from 40.4 percent in Hungary (Round-2, Jan/Feb-2021) to 97 percent in Guinea (Jun-2020). The change in sales has averaged -29.1 percent, with the same two countries at the extremes, with average change of -13.6 percent in Hungary and -56 percent in Guinea. The incidence of decline in sales, as well as the average change in monthly sales, varies sharply with the income level of the country. That is, lower-income countries have a worse sales profile than higher-income countries (figure 3). This pattern differs from the patterns reported in some of the early research (such as Goldberg and Reed 2020) that suggested a smaller health impact of the pandemic in lower-income countries, but is consistent with later analysis (such as Liang et al. 2020). Notably, foreign-owned firms were considerably and statistically significantly less likely to have experienced decreased sales, and saw a lower drop in sales, on average. A look at the evolution of sales in countries with two rounds of surveys offers some hope. Of the 26 countries with two rounds of the surveys, 12 are showing a statistically significant rebound in sales, though still far from a full recovery; 10 show no sign of change; and the same 4 European countries mentioned previously (Latvia, Lithuania, Slovak Republic, the Czech Republic) have suffered a deepening drop in sales. Perhaps predictably, capacity utilization (measured for manufacturing firms), as well as the share of firms that decreased total hours worked, follow the same pattern as the demand and supply shocks and sales. These patterns appear comparable across aggregated sectors of manufacturing, retail, and other services, suggesting a near ubiquity of the impact of the pandemic.

Figure 3 Changes in Monthly Sales during the Pandemic

Average change in monthly sales is around -29 percent, and it increases as GDP per capita increases.



Source: World Bank Enterprise Survey (WBES) Follow-up Surveys on COVID-19; World Bank World Development Indicators.
Note: The figure covers 39 countries. The dotted line represents the logarithmic trendline for the relation between county-level average change in monthly sales and GDP per capita. The figure uses International Organization of Standardization (ISO) country codes. PPP = purchasing power parity.

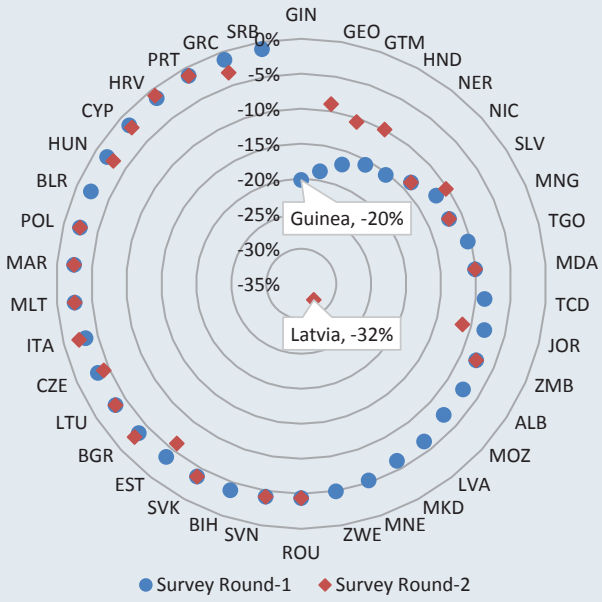
The Effect of COVID-19 on Firms' Permanent Workforce

Adjustments to the workforce were probably among the most difficult choices faced by businesses. On average, among surviving firms, a staggering 36.5 percent of firms decreased their total number of permanent workers (compared to December 2019), varying from 15.9 percent in Chad (Jun-2020) to 66.0 percent in Latvia (Round-2, Feb-2021). Firms on average reduced the size of their permanent workforce by 6.7 percent, with a considerable cross-country variation, as illustrated in figure 4. Large firms (employing 100 or more workers) were less likely than SMEs to have decreased their total number of permanent workers (33 percent vs. 37 percent). While the share of firms that decreased their permanent workforce is roughly similar across higher-income and lower-income countries, the average percentage decline in the workforce is much higher in low-income countries than in high-income countries (12.3 percent vs. 5.1 percent). Almost half of the WBES Follow-up Surveys also collected information about changes in salaries or benefits. Firms in higher-income countries were less likely to have reduced salaries or benefits due to the pandemic than firms in lower-middle-income countries (11.7 percent vs. 33.5 percent). Moreover, a lower proportion of workers experienced a reduction in salaries in higher-income countries, further highlighting the gaping disparities in income that the crisis may be exacerbating across the world.

There are no clear signs of a rebound in the permanent workforce so far. In almost all 26 countries where two rounds of the WBES Follow-up Surveys are available, the workforce figures in the second round are similar to those in the first round. Two countries (Latvia and Jordan) have undergone considerably deeper cuts compared to the previous rounds (see figure 4). If anything, the opposite seems to be occurring, with a statistically significantly higher share of firms across the rounds in almost all these countries reporting a decrease of

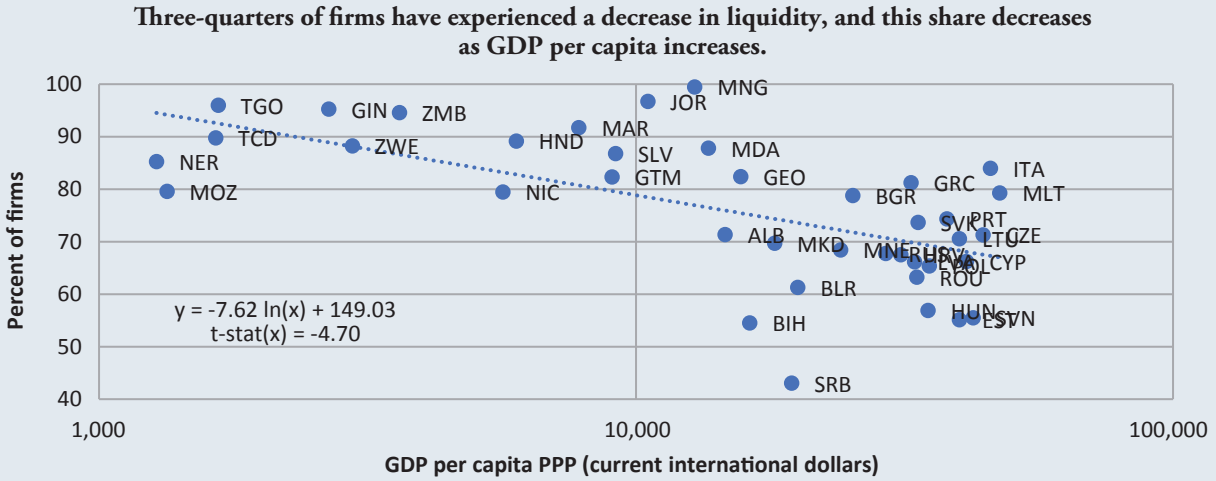
Figure 4 Average Percentage Change in Permanent Full-Time Workers since December 2019

Firms decreased their total number of permanent workers by nearly 7 percent, on average, with little or no recovery yet.



Source: WBES Follow-Up Surveys on COVID-19.
Note: The figure covers 38 countries. International Organization of Standardization (ISO) country codes are used.

Figure 5 Share of Firms Experiencing Decreased Liquidity since the Onset of the Pandemic



Source: World Bank Enterprise Survey (WBES) Follow-up Surveys on COVID-19.
Note: The figure covers 39 countries. The dotted line represents the logarithmic trendline for the relation between county-level average share of firms experiencing a decrease in liquidity and GDP per capita. International Organization of Standardization (ISO) country codes are used. PPP = purchasing power parity.

their total number of permanent workers since December 2019. This could partly be attributed to the nature of this crisis, with safety issues preventing people from going back to work. If this pattern continues in the near future, it may suggest a longer-than-transitory imprint of the pandemic on employment, especially when coupled with an increasing share of firms rebounding to the 2019 levels of their total hours worked per week, or overall capacity utilization (measured for manufacturing firms).

From Shocks to Financial Fragility

The unprecedented shocks and widespread fall in sales and therefore revenue have led to financial distress of the private sector, drying up firms' cash flow and depleting their working capital. What is the extent of the liquidity problem? Pooling the latest surveys in all the countries, 3 out of 4 firms have experienced a decrease in liquidity since the onset of the pandemic (see figure 5). Although cross-country variation is considerable, two main patterns emerge. First, small or medium firms have been more likely to suffer a decrease in liquidity than large ones (77.4 percent, 75.0 percent, and 68.1 percent, respectively). Second, firms in low-income and lower-middle-income countries have been more likely to suffer a decrease in liquidity than firms in upper-middle-income and high-income countries (89.1 percent, 89.6 percent, 70.5 percent, and 68.7 percent, respectively). On the other hand, differences are less marked across aggregated sectors of manufacturing, retail, and other services, in line with the finding that sales decreased consistently across these aggregated sectors.

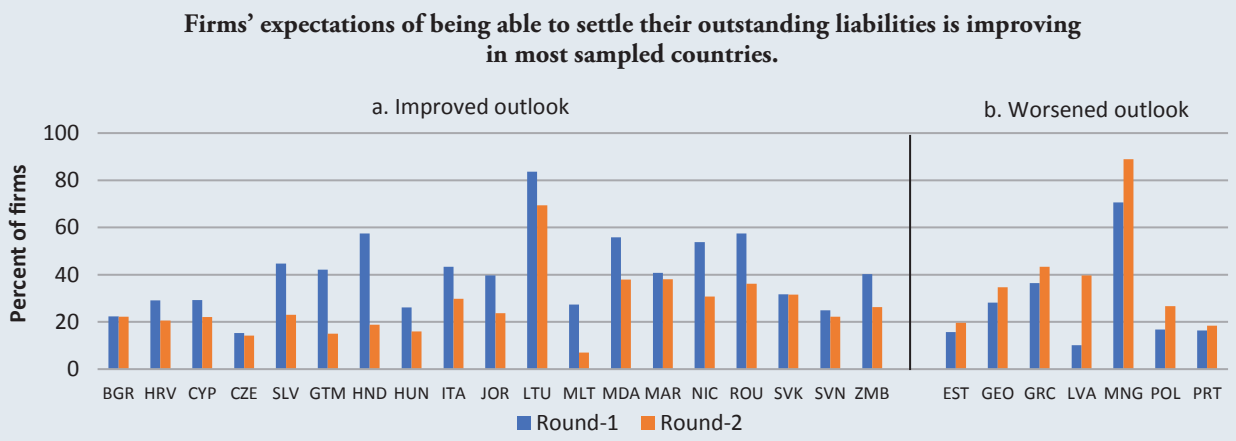
The majority of firms had to delay payments to financial and nonfinancial institutions. More than half of the surveyed firms have delayed payments for more than a week to their suppliers, landlords, or tax authorities since the onset of the pandemic. Around 20 percent of firms have been overdue on obligations to financial institutions. Looking at the set of countries that completed two rounds of surveys indicates how financial constraints have evolved since the onset of the pandemic. The share of firms delaying payments to nonfinancial institutions for more than one week increased substantially between the first and the second round of surveys in 20 out of the 25 countries for which data are available (with no discernable change in the rest). This suggests that firms continue to struggle financially even as some early signs of recovery are being felt on the demand side in some countries. The cumulative share of firms that have been overdue on obligations to financial institutions has also deteriorated in 12 out of 26 countries. There has been no discernable change across survey rounds in this indicator for the remaining 14 countries, perhaps suggesting some hope for the private sector's ability to fulfill their financial duties as economies gradually reopen.

Firms' financial outlook also offers another signal that some countries are moving toward recovery from the crisis induced by the pandemic. The data suggest an overall enhancement of firms' expectations of being able to settle their outstanding liabilities in the short term. Figure 6 shows that, for the majority of the countries where two rounds of the surveys are available, the share of firms expecting to fall in arrears in the six months following the interview decreased between the first and the second rounds, suggesting increased confidence of businesses from a financial perspective.

Conclusion

This brief examines the evolving impact of COVID-19 on the private sector across 40 countries,

Figure 6 Percentage of Firms that Anticipate Falling in Arrears within Six Months from the Time of the Survey



Source: World Bank Enterprise Survey (WBES) Follow-up Surveys on COVID-19.
Note: The figure covers 26 countries from May 2020 to February 2021. International Organization of Standardization (ISO) country codes are used.

using a firm-level data from 66 surveys based on more than 35,000 interviews conducted with a representative sample of a large share of each country's private sector. The descriptive analysis of this data shows that SMEs, service providers, and firms in lower-income countries were hit harder by the pandemic. Importantly, many pressures faced by the private sector and depicted in this brief—including demand or supply shocks, drops in sales, and drops in liquidity—were simultaneous, forcing firms to make many difficult decisions, including reducing their permanent workforce. Cross-country variation is considerable (consistent with Loayza et al. 2020), perhaps influenced by differences in readiness or capacity to cope with crises across many areas. While the data show that some countries are already on their path to recovery, the signs of a rebound are still feeble. Large cross-country variation shows that there is substantial room for firms as well as governments to continue learning from one another, as we all look forward to a post–COVID-19 world.

References

Adams-Prassl, A., Boneva, T., Golin, M. and Rauh, C., 2020. Inequality in the impact of the coronavirus shock: Evidence from real time surveys. *Journal of Public Economics,* 189, p.104245.

Adian, I., Doumbia, D., Gregory, N., Ragoussis, A., Reddy, A. and Timmis, J., 2020. *Small and Medium Enterprises in the Pandemic: Impact, Responses and the Role of Development Finance.* The World Bank.

Aga, G. and Francis, D., 2017. As the market churns: productivity and firm exit in developing countries. *Small Business Economics, 49*(2), pp.379-403.

Alekseev, G., Amer, S., Gopal, M., Kuchler, T., Schneider, J.W., Stroebel, J. and Wernerfelt, N., 2020. The Effects of COVID-19 on US Small Businesses: Evidence from Owners, *Managers, and Employees. Managers, and Employees (September 10, 2020).*

Apedo-Amah, M.C., Avdiu, B., Cirera, X., Cruz, M., Davies, E., Grover, A., Iacovone, L., Kilinc, U., Medvedev, D., Maduko, F.O. and Poupakis, S., 2020. Unmasking the impact of covid-19 on businesses: firm level evidence from across the world.

Applegate, J.M. and Lampert, A., 2021. Firm size populations modeled through competition-colonization dynamics. *Journal of Evolutionary Economics, 31*(1), pp.91-116.

Bartik, A.W., Bertrand, M., Cullen, Z.B., Glaeser, E.L., Luca, M. and Stanton, C.T., 2020. *How are small businesses adjusting to COVID-19?* Early evidence from a survey (No. w26989). National Bureau of Economic Research.

Crane, L.D., Decker, R.A., Flaaen, A., Hamins-Puertolas, A. and Kurz, C., 2020. Business Exit During the COVID-19 Pandemic: Non-Traditional Measures in Historical Context.

Dev, S.M. and Sengupta, R., 2020. Covid-19: Impact on the Indian economy. *Indira Gandhi Institute of Development Research, Mumbai April.*

Goldberg, P.K. and Reed, T., 2020. The effects of the coronavirus pandemic in emerging market and developing economies: An optimistic preliminary account. *Brookings papers on economic activity, 2020*(2), pp.161-235.

Hu, S. and Zhang, Y., 2021. COVID-19 pandemic and firm performance: Cross-country evidence. *International Review of Economics & Finance,* 74, pp.365-372.

Liang, L.L., Tseng, C.H., Ho, H.J. and Wu, C.Y., 2020. Covid-19 mortality is negatively associated with test number and government effectiveness. *Scientific reports, 10*(1), pp.1-7.

Loayza, N.V., Sanghi, A., Shaharuddin, N. and Wuester, L., 2020. Recovery from the Pandemic Crisis. Research & Policy Brief No. 38, World Bank Group, Malaysia Hub.

Muzi, S., Jolevski, F., Ueda, K., Viganola, D., 2021. Productivity and Firm Exit during the COVID-19 Crisis : Cross-Country Evidence. Policy Research working paper; no. WPS 9671. World Bank Group.

World Bank. Various years. Enterprise Surveys. http://www.enterprisesurveys.org.

———. 2021. World Development Indicators. https://datacatalog.worldbank.org/dataset/world-development-indicators