

Competition and Firm Recovery Post-COVID-19

Dorothe Singer
Senior Economist
ECA Chief Economist Office

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Impact of COVID-19 on firms

- COVID-19 pandemic resulted in the deepest global recession since World War II
- Crises can result in:
 - “Creative destruction” (Schumpeter 1942; Caballero and Hammour 1994)
 - However, it is not obvious whether a pattern of creative destruction will emerge from the COVID-19 crisis:
 - Broad-based shock may simply result in widespread destruction (Bosio and others 2020; De Nicola and others 2021)
 - Crisis may reallocate activity to firms with greater market power or political connections, which could be detrimental to productivity growth. (Di Mauro and Syverson 2020)

The question of the impact of COVID-19 on firms and its implications for long-run economic growth is thus an empirical one. How did firms fare so far?

Questions

- How did COVID-19 affect firms' growth, employment, technological adaptation?
- Is there any evidence of creative destruction so far, with resources allocated to firms that are more productive?
- How does reallocation during the COVID-19 crisis compare with reallocation pre-crisis?
- How did the competition environment influence this reallocation?
- What type of firms received government support during the COVID-19 crisis? And what may the implications be for the recovery process?

Why focus on competition?

Competition is key to sustainable, long-term economic growth and associated with greater dynamism. It contributes to growth by:

- incentivizing firms to innovate and become more efficient (*productive efficiency*)
- shifting resources towards more efficient firms (*allocative efficiency*)
- forcing less efficient firms to exit, more efficient ones to grow, and new ones to enter (*market contestability/ creative destruction*)

COVID-19 has heightened concerns about limited competition – if smaller firms find it more difficult to adapt/receive less government support and thus are more likely to exit, concentration and dominance of large firms may increase and further limit competition, just when it is most needed to promote recovery.

Data

Data for ~8000 firms in 23 emerging markets and developing countries in Europe and Central Asia

- **World Bank's Enterprise Surveys (ES) COVID-19 Follow-up Surveys**
 - asks about firms' changes in performance compared to a year ago or since the start of the COVID-19 pandemic.
 - asks about government support received during the pandemic
- Matched it with **2019 ES** data
 - rich set of firm characteristics, including pre-COVID-19 labor productivity

Main measure of **competition environment**: market organization from the 2020 Bertelsmann Stiftung Transformation Index (BTI)

How did COVID-19 affect firms' growth, employment, and technological adaptation?

On average for the sample...

- Sales dropped by 24 percent
- Number of permanent full-time workers dropped by 13 percent
- 34 percent of the firms have decreased their number of workers since December 2019
- 26 percent reported that they anticipated falling into arrears on outstanding liabilities in the next six months
- To respond to the crisis
 - 28 percent of the firms started or increased online business activity
 - 34 percent of the firms started or increased remote work arrangements

Methodology

- **Firm Performance, Productivity, and Competition**

$$\begin{aligned} & \textit{Firm performance}_{ijk} \\ &= \beta_0 + \beta_1 \textit{Productivity}_{ijk} + \beta_2 \textit{Productivity}_{ijk} \times \textit{Competition}_k \\ &+ \beta_3 \textit{Firm Characteristics}_{ijk} + S_j + C_k + \varepsilon_{ijk} \end{aligned}$$

- **Government Assistance, Productivity, and Firm Characteristics**

$$\begin{aligned} & \textit{Government Assistance}_{ijk} \\ &= \beta_0 + \beta_1 \textit{Productivity}_{ijk} + \beta_2 \textit{Firm Characteristics}_{ijk} + S_j + C_k + \varepsilon_{ijk} \end{aligned}$$

Result 1: Reallocation from less productive to more productive firms during COVID-19

- Firms with high pre-crisis labor productivity experienced
 - smaller drops in sales and employment
 - less likely to anticipate falling into arrears
 - more likely to adapt to the crisis by increasing online activity and remote work.

	<i>Percentage change in sales</i>	<i>Percentage change in employment</i>	<i>Decreased employment</i>	<i>Anticipate falling into arrears</i>	<i>Increased online activity</i>	<i>Increased remote work</i>
Log(labor productivity)	4.138*** (0.547)	2.776*** (0.809)	-2.964*** (0.853)	-3.572*** (0.822)	0.443 (0.683)	3.402** (1.375)
Log(labor productivity)*BTI market organization	0.835** (0.364)	0.040 (0.530)	-1.722*** (0.450)	-1.200*** (0.402)	0.266 (0.334)	1.338* (0.655)
Constant	-75.127*** (6.028)	-53.345*** (9.875)	66.000*** (10.198)	79.258*** (10.357)	6.569 (7.059)	-40.074** (14.710)
R^2	0.136	0.117	0.069	0.110	0.108	0.183
Number of observations	7,851	6,860	7,855	7,497	8,168	8,078



Result 2: Relationship between productivity and firm growth was stronger during COVID-19 than before

Relationship between productivity and firm growth was stronger during COVID-19 than before the crisis (2017 to 2018), suggesting that creative destruction increased during COVID-19

	Percentage change in sales	Percentage change in employment
Panel A: Pre-COVID-19 (2017 to 2018)		
Log(labor productivity)	-4.568*** (0.876)	1.841*** (0.381)
Log(labor productivity)*BTI market organization	0.411 (0.500)	0.164 (0.243)
Constant	76.259*** (9.133)	6.602 (4.451)
R^2	0.096	0.109
Number of observations	7,223	6,522
Panel B: During COVID-19 (2019 to 2020/2021)		
Log(labor productivity)	4.540*** (0.579)	3.296*** (0.896)
Log(labor productivity)*BTI market organization	0.886** (0.376)	0.101 (0.504)
Constant	-80.242*** (5.932)	-57.451*** (8.968)
R^2	0.120	0.112
Number of observations	8,002	6,983

Source: Bruhn, Demirguc-Kunt, and Singer 2021

Result 3: Countries with a strong competition environment had more reallocation from less to more productive firms

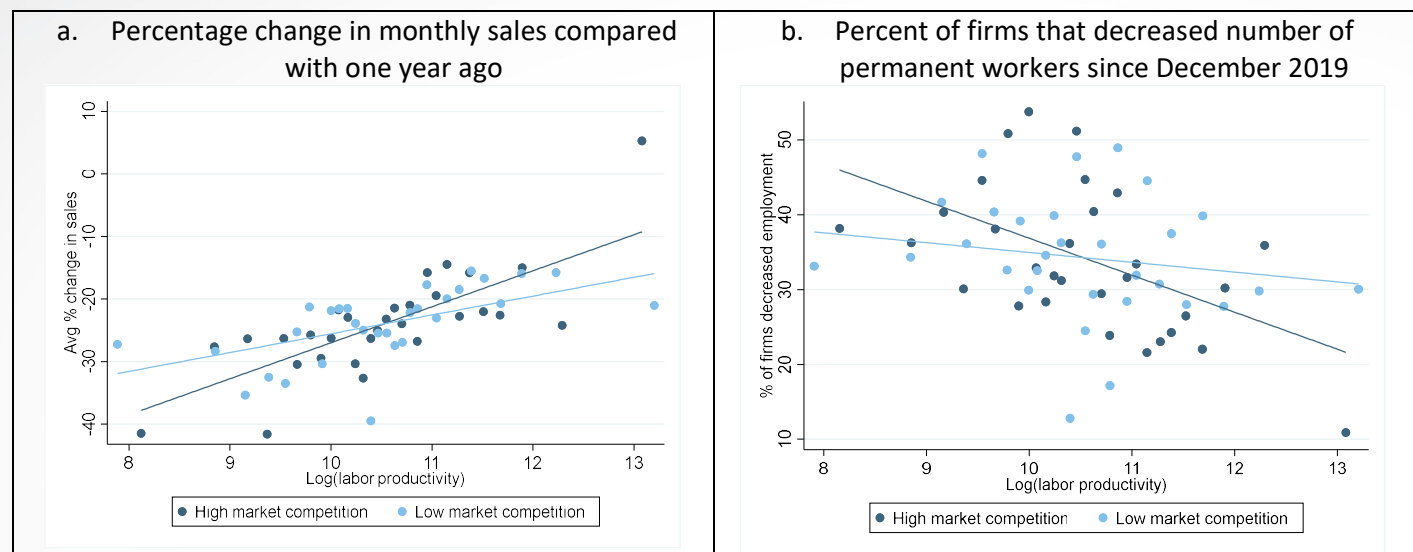
	<i>Percentage change in sales</i>	<i>Percentage change in employment</i>	<i>Decreased employment</i>	<i>Anticipate falling into arrears</i>	<i>Increased online activity</i>	<i>Increased remote work</i>
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Result 3(2): Countries with a strong competition environment had more reallocation from less to more productive firms

In countries with high competition, firms in the 10th percentile of the pre-crisis labor productivity distribution experienced an 18 percentage point larger drop in sales than firms in the 90th percentile; this difference is only 10 percentage points in countries with low competition (figure 1a).

Similarly, in countries with high competition, firms in the 10th percentile of the labor productivity distribution were 15 percentage points more likely to decrease employment than firms in the 90th percentile. The corresponding differences in countries with low competition was 5 percentage points (figure 1b).



Source: Bruhn, Demirguc-Kunt, and Singer 2021

Result 4: More productive firms were *less* likely to receive any type of government support

- Many governments implemented broad support schemes to address the economic fall-out from the COVID-19 crisis
 - Half the firms in our sample reported receiving government support during the pandemic
- More productive firms were *less* likely to receive any type of government support
- Larger firms were more likely than smaller firms to receive some types of support, which could indicate support going to politically connected firms
- Support was provided to firms regardless of their pre-crisis level of innovation

	<i>Any type</i>	<i>Cash transfers</i>	<i>Payment deferrals</i>	<i>New credit</i>	<i>Fiscal relief</i>	<i>Wage subsidies</i>
Log(labor productivity)	-2.469*** (0.845)	-1.260** (0.562)	-0.583 (0.412)	0.219 (0.447)	-0.649 (0.422)	-2.900*** (0.855)
Constant	65.864*** (8.624)	26.743*** (6.368)	13.368*** (3.746)	1.198 (5.322)	11.977* (6.267)	61.401*** (9.777)
R^2	0.215	0.173	0.059	0.055	0.130	0.224
Number of observations	8,124	8,093	8,088	8,084	8,081	8,108



Conclusion

Our findings suggest that the COVID-19 crisis has resulted in “creative destruction”

- Economic activity was reallocated toward firms with higher pre-crisis labor productivity
- More productive firms were also more likely to adapt to the crisis, such as by increasing remote work
- Countries with a strong competition environment experienced more reallocation from less productive to more productive firms than countries with a weak competition environment

However, as of June 2021, even highly productive firms reported losses in sales and employees (although these were smaller in magnitude than for low-productivity firms). Thus, **the crisis will have a silver lining only if the release of resources by low-productivity firms is followed by increased growth in more productive firms during the recovery**

Government support measures may have adverse effects on competition and productivity growth since support went to less productive and larger firms, regardless of their pre-crisis innovation (> reignited concerns about propping up “zombie firms”)

As economies enter the economic recovery phase, it will be thus be important for policy makers to **phase out policy support measures** as soon as appropriate and focus on **fostering a competitive business environment** while continuing to protect vulnerable households. Such an environment is key to a strong recovery, resilience to future crises, and sustainable, long-term economic growth.



Thank you!

Paper:

[Bruhn, Miriam, Asli Demirguc-Kunt, and Dorothe Singer. 2021. "Competition and Firm Recovery Post-COVID-19." Policy Research Working Paper 9851, World Bank, Washington, DC.](#)

ECA Economic Update:

<http://www.worldbank.org/en/region/eca/publication/europe-and-central-asia-economic-update>

Europe and Central Asia Chief Economist web page:

<http://www.worldbank.org/en/region/eca/brief/office-of-the-chief-economist-europe-and-central-asia>

Contact: Dorothe Singer (dsinger@worldbank.org)