Firm-level heterogeneity in the impact of the COVID-19 pandemic

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We explore the heterogeneity across firms in the impact of and response to the COVID-19 shock using a survey conducted in November 2020 matched to balance-sheet information on firm characteristics. According to our results, the impact of the COVID-19 shock was larger in the case of small, young and less productive firms located in urban areas. Moreover, these firms resorted relatively more to public-guaranteed loans, tax deferrals, and furlough schemes (ERTEs). More indebted companies, which were not hit relatively harder by the shock, also perceived public-guaranteed loans as very useful. Firms consider that uncertainty represents a key hindrance to the recovery while the announcement of the effectiveness of the Pfizer vaccine on November 9th 2020 increased significantly firms' subjective recovery expectations.

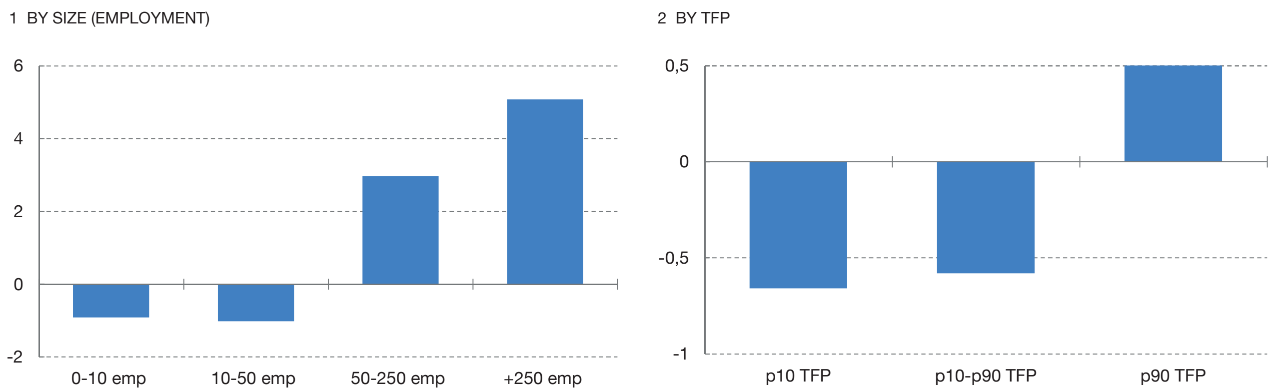
The COVID-19 crisis represents a shock of unprecedented magnitude, with two additional features that are worth highlighting. First, this crisis has had a very asymmetric impact across sectors, regions, workers and firms (Puy and Rawdanowicz, 2021; Bloom et al. 2021; Crossley et al., 2021). Second, the economic policy response has generally been swift and resolute, which has contributed to mitigating its adverse economic effects (Thygesen, 2021), and firms adopted measures to mitigate the disruptive effects on their activity (IFC, 2021).

We present new evidence from Spain on the asymmetric impact of the COVID-19 crisis across different dimensions and the responses of firms to the shock. Our paper exploits the information provided by the new Banco de España Business Activity Survey (EBAE in Spanish) in order to shed light on these issues. The EBAE survey was launched in November 2020 and 4,004 valid responses were received. A unique feature of this survey is that it can be matched to Balance Sheet Data allowing to investigate the impact of the shock depending on firms' ex-ante characteristics, such as productivity, size or age.

THE IMPACT OF THE COVID-19 SHOCK ACROSS FIRMS

To analyze the type of firms most impacted by the COVID-19 shock, we investigate which firm characteristics correlate with the fall in activity at the firm level, once we control for sectoral differences. First, firm size is a key variable to explain the severity of the effects of the pandemic in firms´ turnover. Chart 1, Panel A shows the changes in turnover for different size brackets in deviations from the average

Chart 1
HETEROGENEITY OF THE IMPACT OF THE COVID-19 ON TURNOVER



NOTE: Average year on year percentage change in turnover, by firm size (employees - Panel A) and productivity (TFP – Panel B), as deviations from the industry mean.

change in the sector. Smaller firms suffered a steeper decline in their activity in 2020 than larger firms. In particular, turnover fell by 1.3 pp more than the sector mean at firms with fewer than ten employees, while at larger firms it was 4.4 pp higher. The likeliest explanation for these differences is the greater vulnerability of small firms to shocks. Chart 1, Panel B shows that less productive firms suffered a larger decrease in turnover. This result may be suggestive evidence of cleansing effects, typically associated to crisis episodes, so this crisis may potentially trigger a productivity-enhancing process of resource reallocation within firms.

FIRM-LEVEL RESPONSES AND POLICY MEASURES IN THE WAKE OF THE COVID-19 SHOCK

Firm-level heterogeneity in the way companies responded to the COVID-19 shock was also remarkable. Our results show that firms were able to absorb part of the shock and they did not fully translate the decrease in turnover to employment[1], although employment fell more in those firms with a higher share of temporary workers. Once we control for the size of the shock and other firm-level characteristics, higher TFP firms showed a larger absorption capacity showing a lower pass-through of the turnover fall to employment.

Regarding the degree of uptake of the main policy measures, Public guaranteed loans (ICO loans) were the policy measure deemed as more useful, with nearly 43% of respondents stating it was very helpful to deal with the COVID-19 shock, followed by furlough schemes (ERTEs- 29%), tax deferrals (24%) and renegotiation of rental payments (21%). Those firms more severely hit by the COVID shock, measured by their decrease in turnover, used all these policy tools more intensively, especially ERTEs.

But there is also high degree of heterogeneity in the usefulness of policy measures declared by the firms across different dimensions. After controlling for firm characteristics, ERTEs were deemed as especially useful for medium-sized firms (10-250 employees), less productive and urban firms. It is notable that we do not find that firms with a higher share of temporary workers perceived ERTEs as more useful for them. Loans with public guarantees were perceived as more useful for less productive, younger, lower cash buffers and more indebted companies. Overall, we find that the policies implemented in order to mitigate the impact of the shock have been more widely used by smaller and less productive firms, with a larger share of temporary workers, high debts levels and low cash buffers, although we find substantial heterogeneity depending on the measure.

Finally, we can use the unexpected announcement of the effectiveness of the Pfizer vaccine on November 9th as a natural experiment to compare the recovery expectations of firms that filled the survey before and after that date. We observe that the share of firms expecting full recovery by the end of 2021 increased by nearly 25% after the vaccine announcement. These differences are significant when accounting for firm's characteristics within the same sector-region pair and remain robust when only considering responses the three days immediately before and after the announcement. This finding points to the importance of forward guidance by public policies, to the extent possible, offering a predictable environment to economic agents allowing them to long-term planning.

1 In particular, 38 % and 63 % of firms declared a decrease in employment and turnover respectively.

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