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# Policies to Support Businesses through the COVID-19 Shock: A Firm Level Perspective

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*Relying on a novel dataset covering more than 120,000 firms in 60 countries, this paper contributes to the debate about policies to support businesses through the COVID-19 pandemic. While governments around the world have implemented a wide range of policy support measures, evidence on the reach of these policies, the alignment of measures with firm needs, and their targeting and effectiveness remains scarce. This paper provides the most comprehensive assessment to date of these issues, focusing primarily on developing economies. It shows that policy reach has been limited, especially for more vulnerable firms and countries, and identifies mismatches between policies provided and policies most sought. It also provides some indicative evidence regarding mistargeting of policies and their effectiveness in addressing liquidity constraints and preventing layoffs. This assessment provides some early guidance to policymakers on tailoring their COVID-19 business support packages and points to new directions in data and research efforts needed to guide policy responses to the current pandemic and future crises.*

JEL Codes: D22, L20, L25, O10

Keywords: COVID-19, firms, policies, uncertainty.

## Introduction

The economic impact of the COVID-19 pandemic has been severe and persistent. In 2020, the global economy is expected to experience its worst recession since the great depression of the 1930s with the highest share of countries experiencing contractions in per capita GDP since 1870 (WBG 2020).<sup>1</sup> Estimates by

The World Bank Research Observer

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doi: 10.1093/wbro/lkab001

36:41–66

[Apedo-Amah et al. \(2020\)](#) show that firm sales declined by more than 70 percent around the peak of the crisis (as measured by the steepest drop in Google Mobility) and have remained more than 40 percent below last year's levels even several months later. Two-thirds of firms have either fired employees, reduced worker hours or wages, or asked workers to take leave. More than half of micro and small businesses (those with fewer than 20 employees) are in arrears or expect to fall in arrears in the next six months. And while there is welcome news of vaccines and new treatments for COVID-19, these are unlikely to be available everywhere at once, meaning that the economic pain is likely to persist for some time.

In response to the crisis, governments around the world have relied on a wide range of policy measures to support firms and households. While these responses have been uneven across countries, they are unprecedented in their magnitude. Fiscal stimulus in high-income economies has reached 10 percent of GDP or more, with around 40 percent going to firm support. In developing countries, faced with more limited fiscal space, governments have allocated between 1 percent and 3 percent of GDP to this purpose, with about a quarter of this amount dedicated to supporting businesses. Irrespective of the amount of the resources invested, data on whether these are reaching the intended beneficiaries, addressing their needs, and helping firms adjust to COVID-19 are desperately needed to inform policy-making. This paper provides the first such assessment on a global scale.

Specifically, the paper utilizes a unique dataset covering more than 120,000 firms across 60 countries during the months April–September 2020 to present a set of novel, stylized facts on the policies implemented to support businesses from a firm-level perspective. It characterizes the beneficiaries of implemented policies, contrasts the policies implemented with ones that firms state are most important to them, identifies reasons for not accessing policy support, and links policies with firm performance, layoffs, expectations, and uncertainty. The paper also provides some initial indicative evidence about the targeting and effectiveness of policies.

Our main findings are grouped into four sets of stylized facts. First, we show that policy support has been especially limited for the most vulnerable firms and countries: micro firms are about half as likely to access support as large firms, and firms in high-income countries are about five times more likely to receive public support than firms in low-income countries. Second, we identify some mismatches between policies reported as most needed by firms and policies that firms are more likely to receive, particularly in upper-middle and high-income countries. Third, we document that targeting of initial policy responses was limited, and there was some *mistargeting*, with firms that did not experience a shock or sales drop benefiting from support and firms experiencing large negative shocks not having access to public support. Fourth, we find indicative evidence of effectiveness: our results show that policies such as credit and cash transfers appear to be helping firms address liquidity constraints, while receiving wage subsidies seems to be associated with lower probability of firing workers.

This paper contributes to several related strands of the literature. Recently published volumes such as [Baldwin and di Mauro \(2020\)](#) have reviewed the range of emerging policy responses to COVID-19 and provided advice on how policy frameworks should evolve—although most of the focus has been on high-income economies and China. Authors such as [Cororaton and Rosen \(2020\)](#), [Granja et al. \(2020\)](#), [De Marco \(2020\)](#), [Kozeniauskas, Moreira, and Santos \(2020\)](#), and [Cui, Hicks, and Norton \(2020\)](#) have focused on the reach and targeting of specific programs in China, Italy, Portugal, and the United States. Additionally, this paper contributes to the emerging literature by authors including [Chetty et al. \(2020\)](#), [Granja et al. \(2020\)](#), [Cui, Hicks, and Norton \(2020\)](#) that have provided some early evidence on the effectiveness of programs to help firms weather the impacts of the pandemic in the same countries, as well as previous studies such as [De Mel, McKenzie, and Woodruff \(2012\)](#) and [Bruhn \(2020\)](#) that focused on experimental and quasi-experimental evidence from previous crises in Sri Lanka and Mexico.

The rest of the paper is structured as follows. The next section presents the data. The following two sections present policies that have been announced, including evidence on access to policies, as well as policies that firms identify as more needed. Then we present evidence on mismatches between the demand and supply of policies, mistargeting, and barriers to accessing public support. Recognizing that the COVID-19 crisis has significantly altered firms' outlook and heightened uncertainty ([Altig et al. 2020](#)), the section that follows specifically focuses on the relationship between receiving policy support and firms' expectations and uncertainty. Lastly, we present some preliminary evidence about the effectiveness of different policies. The paper concludes with a discussion of policy implications and directions for future research.

## Data

We rely on data from the first wave of the Business Pulse Surveys (BPS) developed by the World Bank Group (WBG) to measure the impact of the COVID-19 pandemic on the private sector ([Apedo-Amah et al. 2020](#)), as well as the COVID-19 follow-up rounds of the World Bank Enterprise Surveys. This novel harmonized dataset offers the most comprehensive assessment of the short-term impact of the shock (from April through August of 2020). The sample includes more than 120,000 businesses in 60 low-, middle-, and high-income countries in the six regions where the WBG is present.<sup>2</sup> The sample covers micro, small, medium, and large businesses across all main sectors (agriculture, manufacturing, retail, and other services, including construction).

The questionnaire collects information on business performance through the COVID-19 shock on some critical economic dimensions: operating status of the business, sales, liquidity and insolvency, labor adjustments, firms' responses, and

expectations and uncertainty about the future (Apedo-Amah et al. 2020). Businesses were asked about their preferred mechanisms of support during the pandemic. We grouped these mechanisms in the following categories of policy instruments: monetary transfers, deferral of payments, access to finance, support with tax obligations, wage subsidies, and others.<sup>3</sup> Businesses were also surveyed on whether they received any of these mechanisms of support from local or national authorities, and if not, they were asked about the reasons why.<sup>4</sup> The dataset then offers a unique window into the private sector to assess both the need for policy and the availability of public support during the COVID-19 shock.

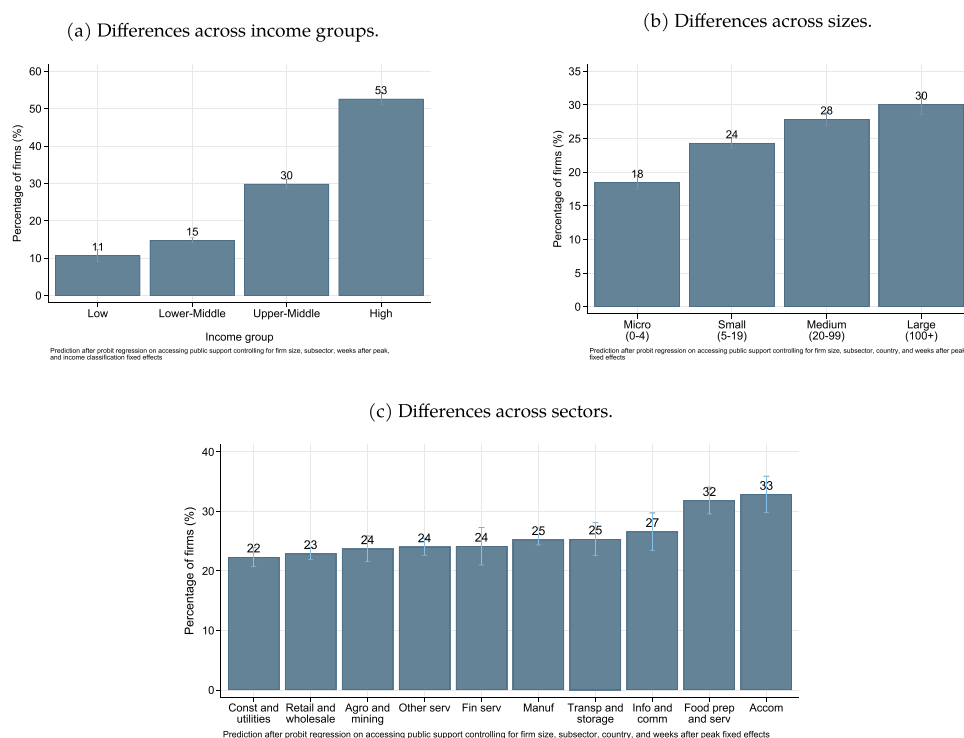
Given the variation in country samples and timing of the surveys, we follow Apedo-Amah et al. (2020) and introduce different controls in the analysis. Unless stated otherwise, we usually include in the analysis dummies for size, sector (i.e. 10 sectors), country, and the timing of the survey in terms of weeks relative to the peak of the COVID-19 shock.<sup>5</sup> To control for differences in the number of observations in each country sample, we weight our results using the inverse of the number of observations in each country, that is, in the spirit of traditional cross-country analysis, each country has the same weight in our analysis.

## The Supply and Access to Policy Support

To respond to the economic downturn caused by the COVID-19 pandemic, countries around the world have enacted a large suite of stabilization and recovery measures. According to the World Bank, governments across the world have implemented 1,600 measures directly aimed at supporting firms in 135 countries. More than three-quarters of these measures are concentrated in three categories: debt finance support, employment cost support, and tax support.<sup>6</sup> Debt finance support has been the most common, accounting for 37 percent of all policy measures adopted. Within this category, new lending under concessional terms accounts for 41 percent, followed by the deferral, restructuring, or rescheduling of payments (23 percent) and credit guarantees (13 percent). Employment support constitutes 22 percent of all measures that have been announced, with wage subsidies (42 percent) and support to self-employed individuals (21 percent) being the most common within this group. The third most common group of policy response measures is tax relief, representing one-fifth of all measures.<sup>7</sup>

Importantly, the type of policy responses varies systematically across countries. Low-income countries tend to use a less-diversified set of interventions, with debt finance and tax interventions accounting for more than 58 percent of all measures, and, rely less heavily on employment support. High-income countries rely less heavily on debt finance or tax relief (33 percent and 15 percent of all measures, respectively), but use employment support measures (34 percent) more frequently. More direct forms of income transfers, i.e. wage subsidies and direct monetary

**Figure 1.** Access to Public Support



Source: Authors' calculation.

Note: Average predicted probability from Probit estimations that control for income group, size, sector, and timing of the survey in panel a, and for country, size, sector, and timing of the survey in panels b and c. Computations use weights equal to the inverse of the number of observations in each country.

transfers, are more common among firms in richer countries. Such differences suggest that variations in governments' administrative capabilities, fiscal space, the extent of informality, financial sector development, and the reach of the tax system determine the policy toolkit available to governments in each country.<sup>8</sup>

Despite the plethora of measures launched around the globe, only one out of four firms had received any type of public support at the time we conducted the surveys. This means that the large majority of firms around the world have faced the economic shock due to the COVID-19 pandemic without any type of public support. Panel (a) in fig. 1 shows the probability of utilizing public support across countries by income group, controlling for the fact that the survey was implemented at different stages of the pandemic as well as for sector and size fixed effects. One important caveat is that different countries had a different supply of public support, therefore we should expect lower access in countries where public support policies implemented were

more limited. Still, the results show stark differences by income levels: the probability of receiving some public support is 11 percent in low-income countries, 15 percent in lower-middle-income countries, 30 percent in upper-middle-income countries, and 53 percent in high-income countries.

The likelihood of receiving public support is also increasing in firm size (panel (b) in [fig. 1](#)), and this likelihood varies between 18 percent for micro firms and 30 percent for large ones. When looking at sectors, we do observe higher likelihood of receiving public support in some of the most affected sectors of the lockdown, such as accommodation (33 percent) and food preparation services (32 percent) (panel (c) in [fig. 1](#)). Finally, as expected, formal firms are more likely to access public support, albeit the difference is neither large nor statistically significant.<sup>9</sup> While formal registration is needed for accessing some support programs, and utilization rates are low, informal firms are still able to access some support policies which highlights an effort by some governments to provide universal support to the pandemic.

[Table 1](#) breaks down access to policy into each group of programs and shows that there are significant differences across income levels in terms of what policies firms are more likely to have received. The likelihoods of receiving wage subsidies, access to finance, and payments deferrals dramatically increase with income, and high-income countries are significantly more likely to offer every policy, but especially wage subsidies. Tax reductions and deferrals are the most common types of policies benefiting firms in low-income countries, with 5 percent of firms having access to them. The second most commonly accessed type of support in low-income countries is access to finance, which is received with a probability of 2 percent. Similarly, the likelihoods of receiving access to finance, tax support, and wage subsidies significantly increase with the size of the firm, whereas there are no statistically significant differences across sizes for monetary transfers and payments deferrals.

One key difference in the composition of support policies utilized is between formal and informal firms ([table 1](#)). As expected, for the countries where we obtained information from informal firms, these are less likely to have utilized specific policy support, especially tax support, since depending on the measure of informality, most of these firms are not tax registered. On the other hand, informal firms have a probability of close to 5 percent and 3 percent of receiving monetary transfers and wage subsidies, respectively. This is consistent with views that suggest the use of cash transfers to target informal firms, given the difficulties in effectively obtaining information necessary for the targeting of other support policies.

## The Demand for Policy Support

While the previous section provided a granular view of the supply of policy support, this section analyzes the most demanded policy instruments and how the demand for policies varies across country income groups, firm size, formality status, sector,

**Table 1.** Specific Policies Received (Fraction of Businesses)

	Monetary transfer	Payments deferral	Access to credit	Tax support	Wage subsidies
Total	5.965	5.721	5.486	7.612	16.561
Low	0.651	0.836	2.335	5.265	0.527
Lower-middle	3.714	3.954	4.633	6.145	3.553
Upper-middle	3.177	5.140	5.132	5.428	18.448
High	13.258	11.160	7.794	13.218	36.782
Micro (0–4)	5.570	4.201	3.171	4.915	10.581
Small (5–19)	6.871	5.854	5.576	7.575	15.809
Medium (20–99)	5.079	6.054	6.750	8.493	18.900
Large (100+)	5.906	6.191	6.743	9.468	20.220
Formal	3.419	3.701	1.995	3.738	6.930
Informal	4.721	1.567	1.952	0.789	3.188
Agro. and mining	6.788	4.895	6.259	7.235	17.052
Manuf.	6.520	5.864	5.931	7.645	17.459
Const. and utilities	5.315	4.100	4.422	6.648	14.147
Retail and wholesale	4.861	5.055	4.752	7.055	14.404
Transp. and storage	6.743	5.744	6.178	7.099	16.607
Accom.	7.396	8.440	7.863	13.330	25.208
Food prep. and serv.	8.283	9.013	5.878	9.813	22.015
Info. and comm.	6.763	7.689	5.371	8.531	17.559
Fin. serv.	5.392	5.540	6.952	6.914	15.525
Other serv.	4.975	5.757	4.882	7.123	15.991
Demand shock	6.311	7.086	5.923	8.015	18.404
Production shock	6.303	5.671	6.921	7.432	16.608
Both	7.246	7.338	6.477	9.175	21.238
No shocks suffered	4.698	3.341	3.961	5.802	12.400
Non-exporter	6.022	6.789	5.584	8.091	19.546
Exporter	6.801	6.836	6.173	9.264	20.190

Source: Authors' calculation.

Note: Average predicted means from separate probits that control for country, size, sector, and timing of the survey. Computations use weights equal to the inverse of the number of observations in each country.

exporting status, and transmission channels, relying on the response to the question “What would be the most needed policies to support this business over the COVID-19 crisis?”

Overall, access to finance (which includes deferral of credit payments, suspension of interest payments, rollover of debt, access to new credit, and loans with subsidized rates) and tax reductions and deferrals (which includes fiscal exemptions and reductions and tax deferrals) are the most demanded policy instruments with close to 50 percent of businesses reporting these instruments as the most needed interventions (table 2). This is significantly larger than the share of firms reporting



**Table 2.** Most Preferred Policy Support (Fraction of Businesses)

	Monetary transfer	Payments deferral	Access to credit	Tax support	Wage subsidies
Total	30.040	23.543	49.456	46.734	23.892
Low	9.532	8.428	25.651	50.383	14.193
Lower-middle	29.803	26.017	59.156	46.069	16.640
Upper-middle	36.056	23.765	49.371	46.522	41.957
High	31.517	15.000	25.388	65.243	45.989
Micro (0–4)	34.168	25.200	47.365	41.739	17.161
Small (5–19)	30.729	23.977	50.599	46.553	24.756
Medium (20–99)	26.105	21.332	50.959	49.581	27.055
Large (100+)	24.253	21.916	48.421	53.757	31.001
Formal	43.626	27.010	55.269	44.916	22.841
Informal	59.119	29.206	60.567	26.455	18.852
Agro. and mining	33.567	18.850	52.105	37.534	21.015
Manuf.	30.004	22.943	49.853	46.396	24.767
Const. and utilities	29.123	19.987	51.468	46.507	21.819
Retail and wholesale	28.222	25.093	48.967	48.746	22.367
Transp. and storage	30.746	20.822	49.499	46.754	25.572
Accom.	31.316	22.411	47.170	48.565	31.553
Food prep. and serv.	33.494	31.475	49.438	45.881	23.616
Info. and comm.	29.824	24.831	47.785	52.061	22.110
Fin. serv.	24.784	20.917	48.691	50.096	21.854
Other serv.	30.624	26.760	47.686	46.270	26.130
Demand shock	28.152	22.717	42.857	48.686	22.388
Production shock	26.808	24.711	52.392	46.326	21.392
Both	29.717	24.936	48.808	48.856	25.615
No shocks suffered	27.255	22.075	46.389	46.816	20.283
Non-exporter	25.345	23.038	49.864	48.842	23.975
Exporter	25.335	21.970	47.707	50.215	27.404

Source: Authors' calculation.

Note: Average predicted means from separate probits that control for country, size, sector, and timing of the survey. Computations use weights equal to the inverse of the number of observations in each country.

other policy instruments as the most needed, such as payment deferrals (24 percent), monetary transfer (30 percent), and wage subsidies (24 percent).

Table 2 shows significant heterogeneity in terms of demand for policy instruments across income groups. The demand for wage subsidies significantly increases with the income level of the country. In contrast, the demands for monetary transfers, payments deferrals, and access to credit follow an inverted U shape with a higher demand in middle-income countries, whereas tax reductions and deferral follows a U shape and is indeed the most demanded policy in low- and high-income countries. There are also significant differences in terms of the demand for policy support across



firm size groups. Whereas the demands for tax reduction and deferrals and wage subsidies increase with size, the inverse is observed for monetary transfer, which is more likely among micro and small firms. Similarly, whereas the most demanded policy instruments for informal firms are monetary transfers and access to credit (with 60 percent probability of each being the most needed policy), the most demanded interventions for formal firms are access to credit and tax support. There is little heterogeneity in terms of demand for policy support across sectors, exporting status, or channels through which the shock was transmitted, such as demand or production shocks.

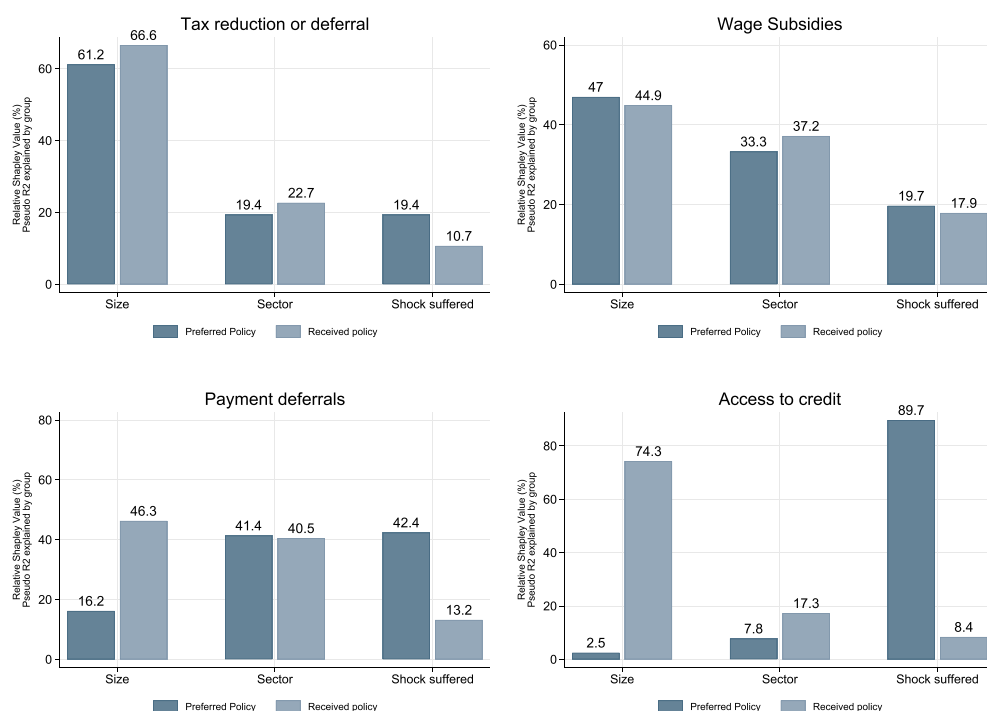
Despite the heterogeneity observed across groups, we observe some common patterns. Access to finance and tax reductions and deferrals are among the top priorities across firms from different groups, with the exception of informal firms. Moreover, the demand for wage subsidies tends to increase with countries' income level and firm size.

## Mismatch between Demand for and Supply of Public Support

Building on the previous sections, this section compares access to support with firms' stated preferences, that is, the potential mismatch between the demand for and access to these policies. Several elements can explain differences between policies demanded and policies received. First, some policies may not be available in the country due to fiscal constraints or preferences of the authorities. Second, firms may be discouraged from trying to access public support if application processes are too cumbersome or expensive, or if access is driven by opaque criteria and political connections. Third, there are fewer constraints to indicate policies that are preferred than policies that are received, which involves clear trade-offs in terms of budget.<sup>10</sup>

Our results show that, among firms in low-income countries, tax support is at the same time the most preferred and the most commonly received type of support policy (see tables 1 and 2).<sup>11</sup> Instead, when analyzing the responses of firms in lower-middle-income countries, there is some alignment with tax deductions and deferrals, but a clear mismatch in the main intervention demanded and offered: access to credit is the most preferred policy, but tax support is the main mechanism of support offered, although only to 6 percent of businesses.

For upper-middle-income countries there is some alignment for wage subsidies, which at the same time rank high in terms of preferences among the firms but also are very commonly used. However, we identify a mismatch for tax deductions and access to credit, which appear to rank high in terms of firms' preferences but low in terms of utilization or access. A similar picture emerges for high-income countries where there is a large mismatch between the demand for tax deferrals and access to these benefits, while there is a better alignment between the preference for wage subsidies and its utilization.

**Figure 2.** (Mis)match of Demand and Policies Received

Source: Authors' calculation.

Note: Results from Shapley-Owen decompositions showing the proportion of the R-squared (Pseudo R-squared) that is explained by different groups of variables in the Probit regression to identify the variables that contribute the most to explaining differences in both, preferences and access to policy. We first ran a Probit model with the dummy for each type of policy instrument (tax support, wage subsidies, payment deferral, and access to credit) as the dependent variable (as preferred or received), controlling for size, sector, shock reported by the firm (e.g. supply, demand, or both), and country. We then ran the Shapley decomposition to estimate the relative contribution of each regressor. We normalized the results to 1, after excluding the contribution of country fixed effects. Absolute values of Pseudo R-squared vary by regression. Computations use weights equal to the inverse of the number of observations in each country.

To investigate further the mismatch between the demand for policy support and what was received, we implemented a decomposition exercise to understand what variables have higher power to explain the likelihood of firms demanding or receiving the support. First, we ran a probit model for each type of policy instrument, including tax support, wage subsidies, payment deferral, and access to credit, controlling for size group, sector of activity, shock reported by the firm (e.g. supply, demand, or both), and country fixed effects. We then ran a Shapley decomposition to estimate the relative contribution of each regressor variable, grouped by size, and type of the shock. Figure 2 shows the results of this decomposition exercise, which are normalized to 1, excluding the contribution of country fixed effects.<sup>12</sup>

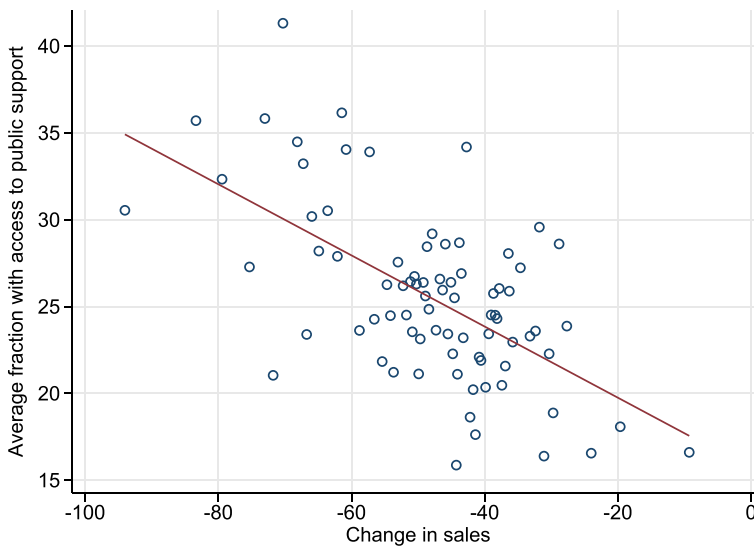
The mismatch between the demand for policies and policies received is particularly large for payment deferrals and access to credit. Overall, the results for received policies are consistent across the different instruments. Most of the variation on the likelihood of receiving public support associated with tax, wage subsidies, payment deferral, or access to credit, is explained by variation in size, followed by sector, and shock suffered. These results are also consistent with the fact that larger firms are more likely to receive support related to any of these instruments. A similar pattern is observed for demand for policy associated with tax support or wage subsidies. For both instruments, larger firms are more likely to report them as the most needed policy. Yet an inverted relationship is observed for access to credit and payment deferrals, where variations in the type of shock tend to have higher explanatory power for the demand for those instruments, followed by sector and size. This discrepancy is particularly relevant for access to credit.

## Targeting (*Mistargeting*) of Beneficiaries

While the literature on social protection and transfers has focused extensively on the importance of targeting (see e.g. [Hanna and Olken 2018](#)), evidence on private sector policies is more limited. [Barrios et al. \(2020\)](#) and [Elenev, Landvoigt, and Van Nieuwerburgh \(2020\)](#) provide a framework for assessing the optimal targeting of loans during the pandemic and its role in extending liquidity support for small versus larger firms. The importance of targeting loans towards firms that critically need liquidity is also highlighted in [Cororaton and Rosen \(2020\)](#) who examine the characteristics of firms that have benefited from the United States' Paycheck Protection Program (PPP).<sup>13</sup> Funds disbursed through the Coronavirus Aid, Relief, and Economic Security (CARES) Act's PPP did not flow to areas more adversely affected by the economic effects of the pandemic, as measured by declines in hours worked or business shutdowns, but most likely to less hard-hit businesses and locations ([Granja et al. 2020](#)). By comparison, the rollout of a similar program in Italy appears to have been effective in reaching the smaller firms and those in more adversely affected areas ([De Marco 2020](#)). In Portugal, policies related to debt moratorium, government credit lines, tax deferral, and subsidized paid furlough were accessed disproportionately by lower productivity firms as these were the hardest hit by the crisis ([Kozeniauskas, Moreira, and Santos 2020](#)). In China, although labor informality limited the extent of support to smaller firms, the regressive tax structure of social insurance contributions, and the greater labor intensity of small firms and sectors affected by COVID-19, still allowed tax breaks to deliver substantial benefits to vulnerable firms ([Cui, Hicks, and Norton 2020](#)).<sup>14</sup>

In this section, we explore the relationship between the type and magnitude of shock experienced by firms and their access to public support. While many of the support policies were designed as universal, and any firm regardless of how impacted

**Figure 3.** Correlation between Change in Sales and Access to Public Support across Sectors



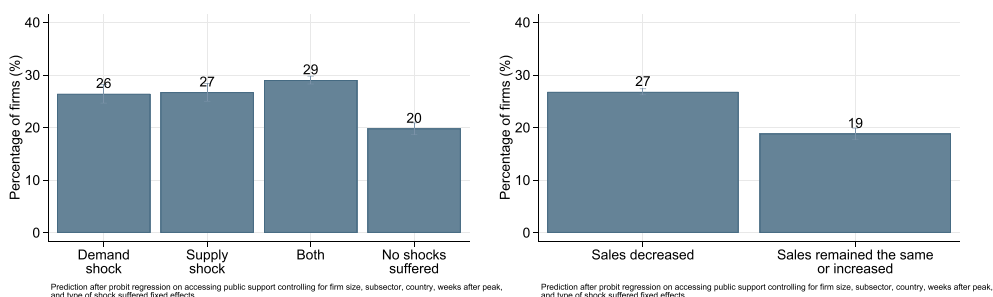
Source: Authors' calculation.

Note: For each sector in each country we compute the fraction of businesses with access to public support and the average change in sales. The figure is the binned scatterplot of this relationship after removing country fixed effects.

they have been could apply for support, it is important to measure whether support has benefited firms that did not need it—mismatching. Specifically, we describe mismatching as support that is going to firms that are not experiencing the pandemic shock. First, we use the information available on shocks and distinguish between firms that do not experience a demand shock (i.e. whether demand has decreased) or a supply shock (i.e. closed premises or labor or input shortages) and those that experience at least one of them. Second, we differentiate between firms that experience negative sales growth during the period and those that do not. Given that data were collected in most countries near the peak of the pandemic and sales referred to the level in the previous 30 days, there was little or no time for policies to have an immediate impact on sales (we explore the issue of policy effectiveness in more detail in the final section). As a result, our sales variable is more likely to represent the size of the demand shock experienced by the firm and to give an indication of the need of the firm for policy support.

Overall, we observe that firms that experience a larger shock in terms of sales are more likely to get support. Some of the sectors most affected by the pandemic, such as accommodation or food preparation, are also the ones with a higher likelihood of receiving policy support. Figure 3 confirms this result for all sectors plotting the correlation between average sector drop in sales and the probability of accessing policy. The negative slope is consistent with effective targeting.

**Figure 4.** Mistargeting on Shocks and Sales



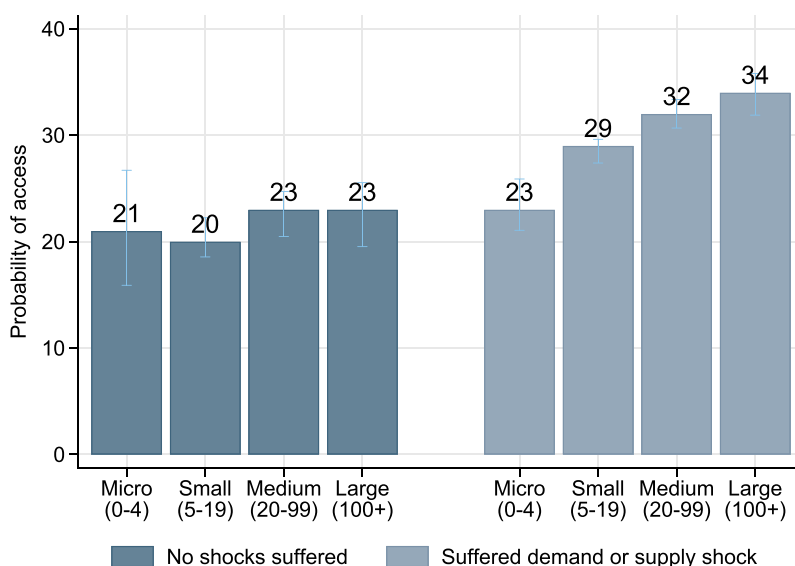
Source: Authors' calculation.

Note: Average predicted percentage of firms that received public support from separate Probits that control for size, sector, country, timing of the survey, in addition to fixed effects for the type of shock reported (including no shock). In the left panel the types of shocks are demand shock, supply shock, both, or no shock, whereas in the right panel the types of shock are whether sales decreased or they increased or remained the same. Computations use weights equal to the inverse of the number of observations in each country. Percentage of firms with access to public support (%).

However, our results also show that a significant number of firms that did not experience any shock or sales drop as a result of the COVID-19 pandemic received public support. Figure 4 shows that while there is no significant difference in the probability of receiving public support for firms experiencing different types of shocks (26 percent for firms facing demand shocks only, 27 percent for firms facing supply shocks only, and 29 percent for firms facing both), there is a non-negligible positive likelihood of near 20 percent of receiving public support for firms that declared not having experienced any shock. Also, the probability of firms that experienced no change or an increase in sales of receiving government support is 19 percent, not far from the 27 percent for firms that experienced a reduction in sales. In addition, we also find evidence of firms in need of support that do not receive it. Controlling for firm size, sector, country, and severity of the crisis, the average drop in sales for those firms that receive support is  $-49$  percent compared to an also large  $-43$  percent for the group that does not receive any support.

The data suggest two main sources of mistargeting. A first source is related to access to support. [Apedo-Amah et al. \(2020\)](#) shows how smaller firms have been the most affected by the pandemic, but they have also been less likely to receive any support. Figure 5 shows that while for those firms that do not experience a drop in sales it is hard to find differences in the probability of access (around 20 percent), for those that experienced the shocks, large firms have a much larger probability of getting support.<sup>15</sup> This may be driven by barriers to access policy support,<sup>16</sup> which are likely to be more binding for smaller firms (see next section), but also raise some potential political economy issues ([Besley 2007](#)) on how support may be implemented.

**Figure 5.** Access, Impact on Sales, and Firm Size

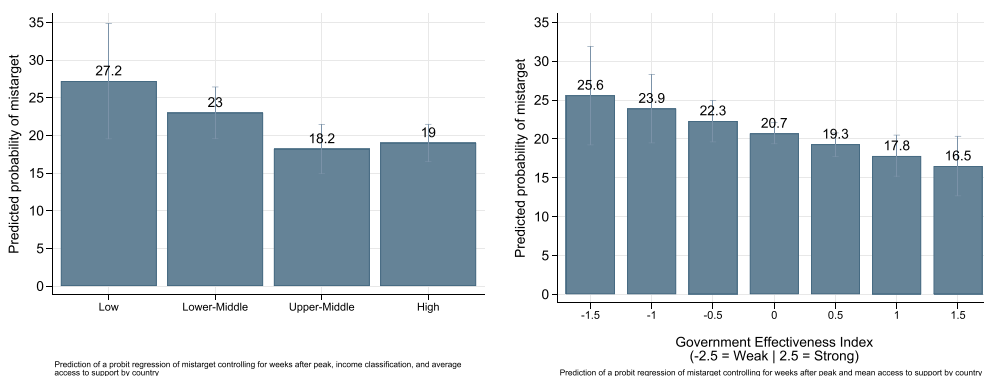


Source: Authors' calculation.

Note: Average predicted percentage of firms that received public support from a Probit that interacts size and sector with whether the business experienced a negative shock. The estimation also controls for timing of the survey and country. Computations use weights equal to the inverse of the number of observations in each country.

A second source of potential mistargeting has to do with government capacity and the ability of public agencies to target beneficiaries. Figure 6 shows the probability of mistargeting—this is the probability of providing support to a firm that did not experience a negative shock relative to a firm that did experience a negative shock—across different countries, divided by their level of income (left-hand panel) or the level of their governance (right-hand panel).<sup>17</sup> In order to control for the availability of support and a more universal approach followed in some countries, we use the share of firms that receive support in a country as an additional control. The results suggest that low-income countries are more likely to experience mistargeting. Figure S1.4 in the Online Appendix confirms this result, since the drop in sales in low-income countries is larger for the group without any support (−43 percent versus −36 percent), while in high-income countries firms that received support experienced much larger drops in sales (−34 percent) than those that did not get support (−21 percent). One channel through which this mistargeting may occur is low implementation capacity and lack of good governance. The right-hand panel in fig. 6 shows that mistargeting is decreasing in the quality of governance.<sup>18</sup> Summing up, while those firms that experience a more negative impact of the pandemic are more likely to receive support, there is some evidence that in the immediate aftermath of the pandemic crisis, governments have also supported a significant number of

**Figure 6.** Mistargeting by Income Groups and Levels of Governance Quality



Source: Authors' calculation.

Note: Average predicted percentage of firms that could have been mistargeted from separate Probit estimations. The dependent variable is whether the business reports receiving public support but does not report a shock. The estimations control for timing of the survey and average access to public support in the country. In the left panel we also control for income groups; in the right panel we control instead for the Government Effectiveness Index. Computations use weights equal to the inverse of the number of observations in each country.

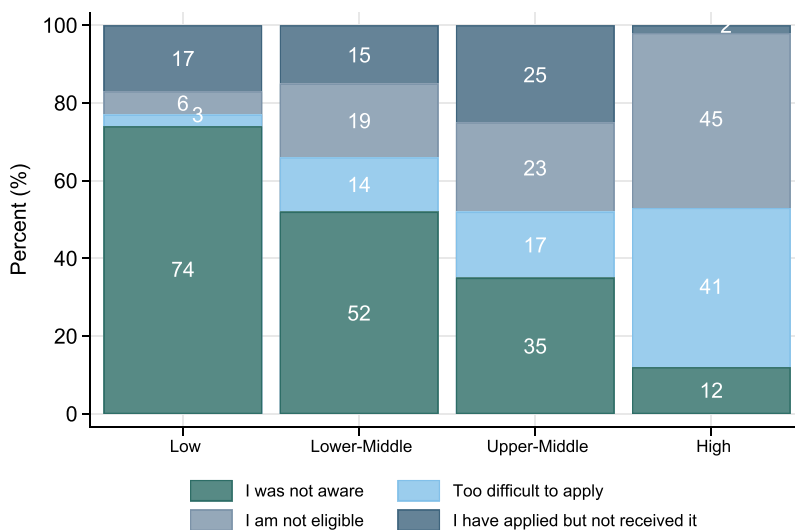
firms that did not experience any negative shock. This mistargeting is consistent with the fact that many policies were implemented very quickly and targeting was not a big concern or was too costly in the minds of policy makers, who mostly worried about the costs of inaction. But it is also explained by barriers to access and lack of implementation capacity. Going forward, as the crisis continues and puts pressure on limited fiscal resources, better and more careful targeting of beneficiaries and monitoring the access to policy support is critical.

## Barriers to Accessing Public Support: Lack of Awareness

It is important to understand why a large number of firms have been unable to access policy support measures announced and implemented in response to the crisis thus far. The majority of firms refer to lack of awareness as the main reason for not receiving government support. There are, however, important differences across countries at different levels of per capita income. Controlling for other observable characteristics, there is an inverse relationship between the share of firms that report lack of awareness for being unable to access government support and the income classification of countries. This share ranges from 74 percent in low-income countries, 52 percent in lower-middle-income countries, 35 percent in upper-middle-income countries, to 12 percent in high-income countries (fig. 7). In high-income countries, 45 percent of firms cite ineligibility while 41 percent cite difficulty in applying as the reason for not receiving government support thus far.



**Figure 7.** Reasons for Not Receiving Public Support across Income Group



Margins after multinomial logit controlling for firm size, subsector, weeks after peak, and income classification, fixed effects

Source: Authors' calculation.

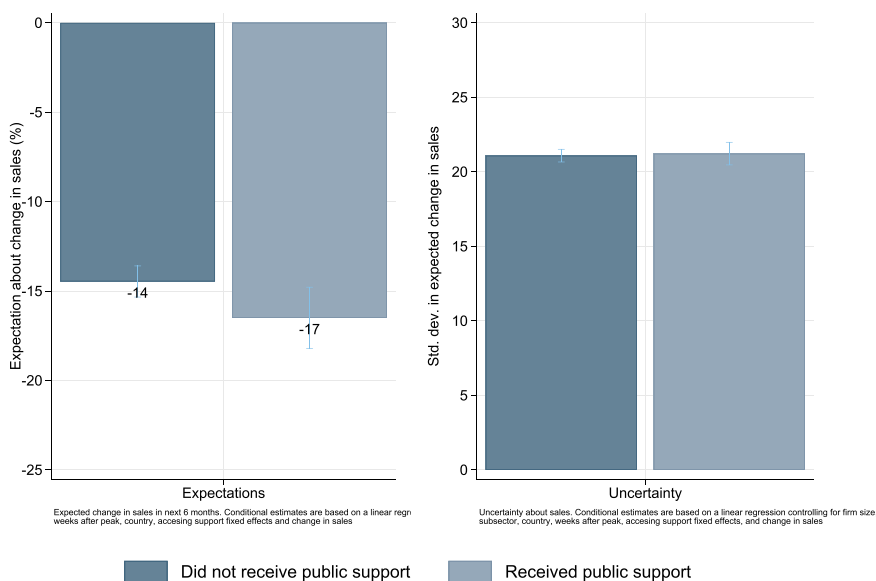
Note: Average predicted fraction of businesses in each reason for not receiving public support from a Multinomial logit that controls for size, sector, timing of the survey, and income group. Computations use weights equal to the inverse of the number of observations in each country.

The lack of awareness is somewhat lower in larger firms, but is the main reason for firms being unable to access government support programs in each size category—58 percent of micro firms, 54 percent of small firms, 52 percent of medium-sized firms, and 48 percent of large firms (see the supplementary online appendix). Strikingly, there is little evidence to suggest that awareness of government support programs has increased since the peak of the crisis. Controlling for firm size, sector, and country, approximately 56 percent of firms report lack of awareness for being unable to access government support 1 week after the peak crisis, but this remained unchanged even 16 weeks after the crisis, albeit with some fluctuations (see the supplementary online appendix).

## Policy Interventions, Expectations, and Uncertainty

One of the most important effects of the COVID-19 crisis was its unexpectedness, which significantly altered firms' expectations and uncertainty (Lukas Buchheim and Link 2020; Altig et al. 2020; Stephany et al. 2020). This issue is particularly relevant because it is informative for current and future policy decisions that need to understand the likely forward-looking scenarios facing businesses facing large

**Figure 8.** Expectations and Uncertainty about Sales Growth in Next Six Months



Source: Authors' calculation.

Note: Average predicted means from separate linear regressions that control for size, sector, country, timing of the survey, reported change in sales, and whether the business reports receiving public support. In the left panel the dependent variable is the expected sales growth the coming 6 months; in the right panel the dependent variable is the uncertainty of the prediction. Computations use weights equal to the inverse of the number of observations in each country.

negative shocks. For this reason, this section discusses how receiving different policies is correlated with future expectations and uncertainty.

### *Policy Interventions and Expectations*

The survey shows that across the board firms are expecting to sell less. In low-income countries, firms expect a decline in sales of about a third over the six months after the survey (compared to the same time period last year) and about a fifth to a quarter in lower-middle-income countries.<sup>19</sup> In addition, between a third and a half of firms expect to fall in arrears in the coming six months or are already in arrears.

There is no robust and clear relationship between overall government support and the expectations about future revenues at firm level. The data suggest that there are few differences in terms of revenue expectations between firms that received government support and those that did not. Averaging across countries, firms without government support report an expected drop of 16 percent, while firms with government support expect a decline of 14 percent (fig. 8), but this difference falls within the confidence interval. When controlling for observable characteristics such

as size, sector, and country, firms that have received government support expect lower sales than those that did not receive support, but these differences fall within the confidence intervals and are statistically insignificant. Since sales are to a large extent driven by demand and given that many policies are focused on covering acute cash shortfalls, we can expect government support to play only a small role in increasing sales, at least in the short term.

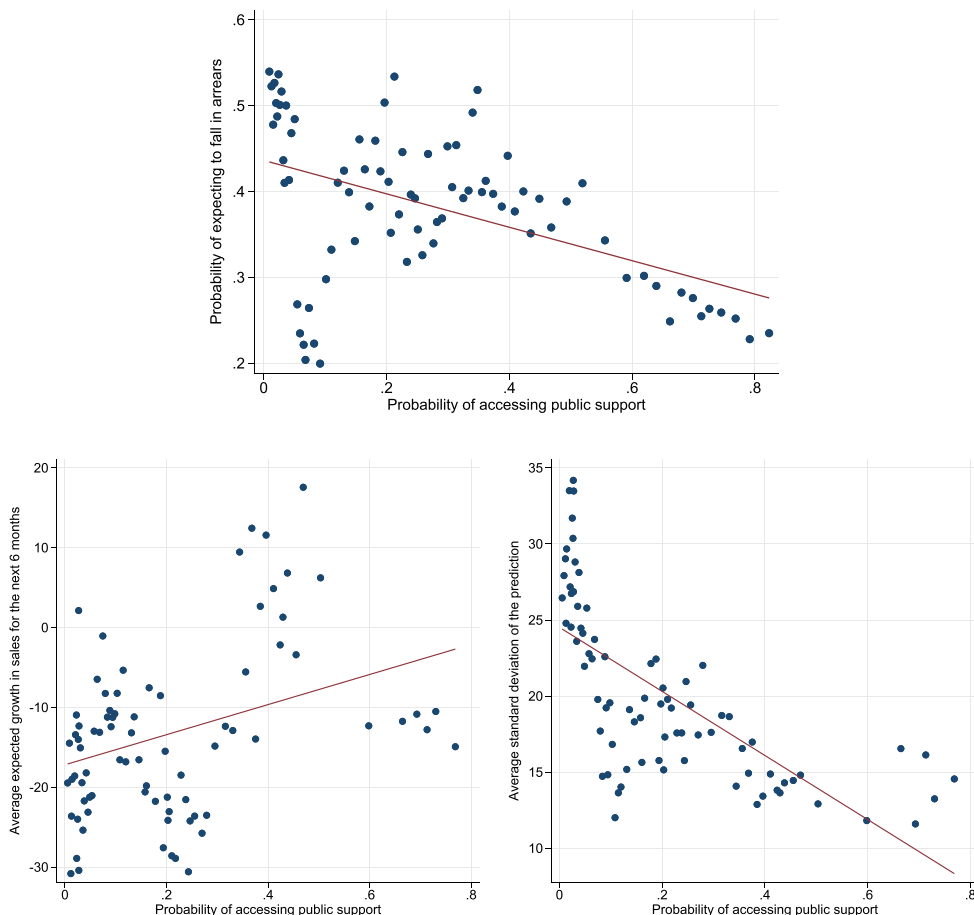
There is a stronger relationship between government support and expectations around insolvency. Using the predicted likelihood of whether a firm has access to support programs as a measure of the probability that a firm can access public support, [fig. 9](#) shows that firms that are more likely to access government support are also those that report being less likely in arrears or expecting to fall in arrears. This relationship is robust to controlling for the change in sales experienced by the firm during the previous 30 days, indicating that having access to government support could play a key role in helping firms avoid insolvency even after taking into account the drop in sales experienced.

### *Policy Interventions and Uncertainty*

Public policies can also play an important role in reducing the uncertainty faced by firms. This is a potentially important channel that could influence recovery because high degrees of uncertainty are likely to adversely affect firms' investments and incentives to innovate, by reducing the appetite for entrepreneurial risk taking (see e.g. [Bloom, Bond, and Van Reenen 2007](#)) and limiting jobs growth and reallocation. The survey provides some suggestive evidence that public policies could reduce uncertainty and improve growth expectations. The right-hand panel in [fig. 9](#) shows a negative correlation between the predicted probability that firms have access to public support programs and their uncertainty, measured as the average standard deviation of firms' sales prediction based on [Altig et al. \(2019\)](#). This cross-sectional correlation though may be driven by a lot of different factors, and as shown in [fig. 8](#) when controlling for size, country, sector, and timing of the survey (relative to the peak of the crisis) and the size of the experienced drop in sales, we find that uncertainty is no different between firms that received support versus those that did not.<sup>20</sup> While public policies may play an important role in reducing uncertainty towards the future it is possible that the large uncertainty associated with duration of the pandemic is at play during the COVID-19 crisis, which could explain our results. Applying to some of these policy support programs is costly and often complex, therefore firms that are more uncertain about the future could be more willing to incur these costs.

When digging further and breaking down the different types of policies, we confirm the results that uncertainty tends to be higher across firms receiving different types of support. However, these differences are not statistically significant as point estimates fall within the confidence intervals.<sup>21</sup>

**Figure 9.** Probability of Expecting to Fall into Arrears, Expectations and Uncertainty about Sales Growth, and Access to Public Support



Source: Authors' calculation.

Note: Average predicted probabilities from probits controlling for country, size, sector, and weeks before and after the peak of the mobility shock. Binned scatterplots.

## Preliminary Evidence on the Effectiveness of Policies

Despite the uniqueness of the current crisis, the impact of policy responses in past crises provides an important starting point to discuss the potential effectiveness of policies in the context of COVID-19. Fiscal stimulus in the form of temporary tax incentives for business investment has received some attention in the context of previous downturns (House and Shapiro 2008; Zwick Forthcoming). In the aftermath of the December 2004 tsunami, Sri Lankan firms that received grants recovered profit

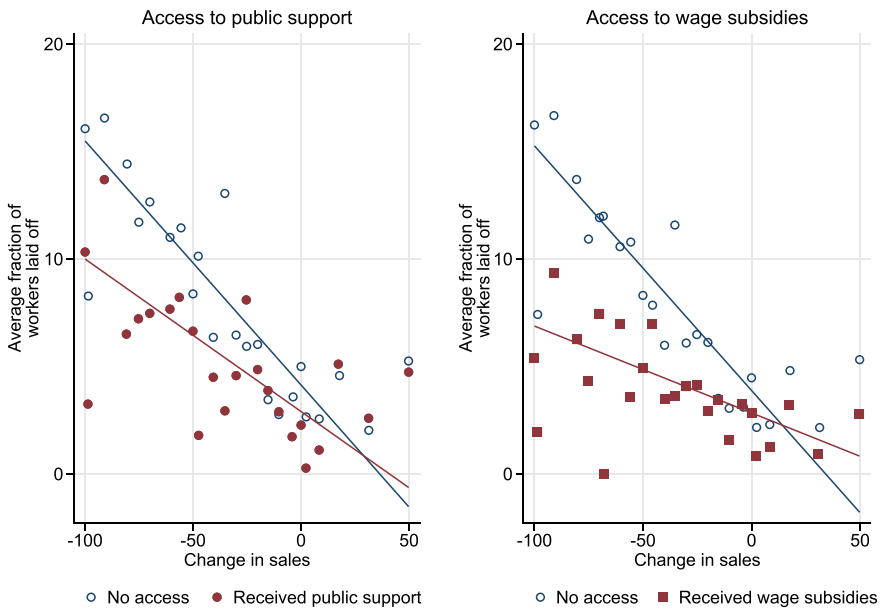
levels substantially faster than those that did not (De Mel, McKenzie, and Woodruff 2012). Similarly, in Mexico, firms that were offered wage subsidies conditional on retaining workers in the aftermath of the global financial crisis outperformed those that did not receive such benefits (Bruhn 2020).

Evidence on the effectiveness of policies during COVID-19 has so far been mixed. Cui, Hicks, and Norton (2020) and Chen et al. (2020) show that payroll tax mitigation and deferral of social insurance contributions in China bolstered the ability of firms to weather the economic downturn. However, Guerrieri et al. (2020) warn that in an economy where supply-side shocks directly influence aggregate demand and output, standard fiscal stimulus may be less effective than usual because the Keynesian multiplier feedback is muted due to shutdown of some sectors. Instead, monetary policy can have a magnified effect, by preventing firm exits and alleviating short-term liquidity constraints. Furthermore, studies have shown that financial support policies during COVID-19 have not been entirely effective in alleviating small and medium enterprises' cash constraints or encouraging the reopening of small businesses, potentially due to difficulties in accessing policy-oriented loans and misallocation of credit. This has been true in China (Chen et al. 2020) as well as in the United States' PPP program (Granja et al. 2020; Chetty et al. 2020). During the current crisis, traditional macroeconomic tools—stimulating aggregate demand or providing liquidity to businesses—may have diminished capacity to restore employment when activity is muted due to health concerns (Chetty et al. 2020).<sup>22</sup>

To begin exploring the effectiveness of policies in mitigating the adverse micro-level impacts of COVID-19, we first focus on the employment response. Figure 10 shows the elasticity of laying off workers to the change in sales for firms which received public support (red line and dots) versus those that did not (blue line and dots). The results suggest that public support was successful in reducing the number of workers laid off in response to a drop in sales. In the same figure, in the right-hand panel we show that these results are driven by one specific type of policy, i.e. wage subsidies.<sup>23</sup> We also find that these results are driven by the impact of policies implemented in upper-middle- and high-income countries<sup>24</sup> which is where the implementation of various forms of wage subsidies policies was more frequent.

Assessing rigorously the impact of policies is complex based on our cross-sectional data and the fact that a firm that has access to policy support cannot be considered exogenous. Given our available information, it is not easy to identify an instrument that would work for different types of policies. For this reason, we present here some descriptive evidence based on simple OLS regressions but try to compare firms that are as comparable as possible. Specifically, we compare firms that applied and received policy support with those that also applied but did not receive it. Additionally, we always control for country, sector, size, and time fixed effects, to make sure that we are narrowing our comparison to firms that are as similar as possible. We take these results as indicative evidence about the possible effect of policies while realizing we are not

**Figure 10.** Correlation between Fraction of Workers Fired and Change in Sales



Source: Authors' calculation.

Note: Binned scatterplots. Computations use weights equal to the inverse of the number of observations in each country.

identifying precisely their causal impact as our results may still be affected by a selection bias.

We focus on four firm-level outcomes of interest: some are outcomes that we expect could be directly affected by the policies (i.e. likelihood of laying off workers, expected future sales growth, likelihood of falling into arrears), while the remaining one could be at the same time affected by policy but also operates as a mechanism that in turn influences future firm-level outcomes (i.e. probability of investing in digital technology and solutions). The results are presented in table 3 where we separate our analysis for different groups of policies (each policy is separately analyzed in different columns). We observe that certain groups of policies appear to be more effective than others. Specifically, monetary transfers and access to credit, which may be relaxing short-term credit constraints and liquidity problems, are correlated with higher future expected sales growth, as well as with higher probability of investing in digital solutions. Wage subsidies, in line with our prior and its stated objectives, are negatively correlated with the probability that firms lay off workers, while they do not seem to significantly influence future sales or the likelihood of falling into arrears in the coming months. Tax support<sup>25</sup> only appears to be positively correlated with future expected sales growth, while it does not appear to influence the future

**Table 3.** Correlation between Access to Each Policy and Outcomes

	Monetary transfer	Payments deferral	Access to credit	Tax support	Wage subsidies
Lays off workers (pr.)	−0.059 (0.032)	0.070 (0.039)	−0.028 (0.029)	−0.013 (0.030)	−0.094*** (0.020)
Expects to fall in arrears (pr.)	−0.050 (0.049)	−0.047 (0.061)	0.004 (0.046)	−0.064 (0.044)	−0.018 (0.039)
Expected sales growth (pp)	11.462*** (2.275)	6.908 (3.953)	8.193*** (2.257)	9.001*** (2.657)	2.711 (1.479)
Inc. invest. digital sol (pr.)	0.153*** (0.035)	0.081 (0.042)	0.113*** (0.028)	0.006 (0.031)	0.026 (0.024)

Source: Authors' calculation.

Note: Standard errors in parentheses. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

likelihood of falling into arrears, and accordingly does not appear to be successfully correlated with reducing the likelihood that liquidity constraints turn into solvency problems. Finally, payments deferral<sup>26</sup> seems to be the least effective of all the policies with some marginal effect and positive correlation with the likelihood of expanding the use of digital platforms.<sup>27</sup>

## Conclusion

Governments around the world responded to the deep economic impact of COVID-19 by rolling out more than 1,600 policy initiatives to support small and medium-sized businesses. While some learning from previous crises has proven useful in the initial response phase, policy makers and development practitioners have been faced with an acute lack of data and evidence on how to design and implement support policies. This lack of evidence is especially acute in developing countries. This paper addresses the gap by providing novel evidence using recently collected firm-level data covering more than 120,000 firms across 60 (mostly developing) countries.

The paper's results show that there are significant gaps to be addressed in order to improve the reach, targeting, and effectiveness of policy support. Smaller firms, especially those owned by women in sectors such as hospitality, are facing some of the largest declines in sales *and* the most limited access to policy support—raising concerns about widening inequality. Similarly, the likelihood of receiving support for firms in poor countries is several times less than for similar firms in high-income countries. While governments appear to have prioritized minimizing exclusion concerns over strict targeting in the earlier stages of the pandemic, this has resulted in a large number of firms benefiting from public assistance without having experienced any adverse COVID-19 shock—an issue that will demand more attention as fiscal



space becomes more constrained. Lastly, there is indicative evidence that some types of policies (i.e. direct liquidity injections or through credit and wage subsidies) have been successful in mitigating liquidity constraints and reducing layoffs—but much more rigorous analysis will be needed to provide more precise guidance to policy makers.

Going forward we see four main avenues for future research. First, it is desirable to understand better how firms manage to receive public support and the extent to which connections may explain access to public resources. Second, our results so far present some novel associations but we limited ourselves to mainly present conditional correlation. Future research, relying on additional data collection and stronger identification strategies, should address more carefully the question of the effect of receiving public support on subsequent firms' results. Third, some of the policies being implemented may have important spillover effects, especially when targeted firms play an important role in supply chains and production, which will be an important area for future work to identify the systemic effects of policies being enacted. Finally, going forward it will be important to address the issue of policy misallocation and the risk that policies being enacted may inhibit prospects for recovery and future growth because of insufficient or incorrect targeting.

## Notes

The authors thank Caroline Freund for her guidance and support of the Business Pulse Survey initiative. We gratefully acknowledge feedback and advice on the survey questionnaires from Nicholas Bloom, Francisco Campos, Ana Paula Cusolito, Mark Dutz, Caroline Freund, Jorge Meza, David McKenzie, Silvia Muzi, and Bilal Zia. Similarly, we are grateful to all colleagues and counterpart institutions that have supported the data collection (a complete list of all colleagues, collaborators and institutions that have been crucial in providing support during data collection is provided in the supplementary online appendix). We would especially like to thank Edgar Avalos for his outstanding research support, and Rodrigo Garcia Ayala, Tanay Balantrapu, Joao Belivaqua Basto, and Kyungmin Lee for their help through the data collection. Financial support from USAID, the World Bank, and the IFC is gratefully acknowledged. The views expressed in this article are solely those of the authors and do not necessarily reflect those of the World Bank, its Executive Directors, or the countries they represent. This is a preliminary draft. Do not cite without permission. A supplementary online appendix for this article can be found at *The World Bank Research Observer* website.

1. The World Bank forecasts that the global economy will contract by 5.2 percent in 2020 ([WBG 2020](#)).
2. The survey covers East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North-Africa (MNA), South Asia (SAR), and Sub-Saharan Africa (SSA). Among high-income countries, our dataset includes Cyprus, Greece, Italy, Poland, Romania, and Slovenia.
3. The menu of policies differed in some countries, but in most cases options can be harmonized in these categories.

4. The questions read as follows: 1. *What would be the most needed policies to support this business over the COVID-19 crisis? (Choose up to three)* Menu of options: monetary transfers, deferral of payments, access to finance, support with tax obligations, wage subsidies, and others. 2. *Since the outbreak of COVID-19, has this establishment received any national or local government measures issued in response to the crisis?* Menu of options: Yes, No. 3. *Did any of these measures involve any of the following? (Choose all that apply)* Menu of options: monetary transfers, deferral of payments, access to finance, support with tax obligations, wage subsidies, and others. 4. *What of the following options best describe the reason why this establishment did not receive any national or local government measures issued in response to the crisis?* Menu of options: I was not aware; Too difficult to apply; I am not eligible; I have applied but not received it; Other.
5. This is measured using country-level Google Mobility Data.
6. See World Bank, *Map of SME-Support Measures in Response to COVID-19*. Data and visualizations available at <https://bit.ly/2Self96>. Policy responses are classified in eight different categories: business advice, business climate, business cost support, debt finance support, demand support measures, employment cost support, other finance support, and tax relief. Database updated on 29 October 2020.
7. Primarily through rate reductions, credits, waivers, and/or deferrals of VAT, payroll, social security, and land taxes (48 percent of all tax support measures); similar benefits on corporate taxes have been used to a lesser degree (39 percent).
8. For additional discussions on observed policy responses see [Freund and Garcia Mora \(2020\)](#), [IMF \(2020\)](#), and [ILO \(2020\)](#).
9. The difference is 16 percent for formal firms versus 13 percent for informal firms. See the supplementary online appendix.
10. In the BPS questionnaire, we asked firms to indicate up to three preferred policies.
11. In this typology, tax support encompasses both tax exemptions or reductions and tax deferrals.
12. Absolute values of pseudo R-squared vary by regression. Shapley values do not indicate the direction of the effect, but rather identify which groupings of variables contribute the most to explaining differences in both preferences and access to policy.
13. Among the set of eligible firms, beneficiaries tended to have more employees, but fewer investment opportunities and cash holdings.
14. Targeting firms for support is problematic even during normal times ([Grover and Imbruno Forthcoming](#)) and the crisis accentuated this challenge further. In the United States, it has been found to be related to the significant heterogeneity across banks in terms of their capacity to disburse PPP funds ([Granja et al. 2020](#)) or the lack of awareness among small firms on the PPP program ([Humphries et al. 2020](#)) or bureaucratic hassles and difficulties establishing eligibility ([Bartik et al. 2020](#)).
15. Figure S1.5 in the Online Appendix shows the analogous figure using whether the firms experienced a drop in sales or not, with the same conclusions.
16. We refer here both to information barriers as well as to fixed costs of applying.
17. Quality of governance is measured following [Kaufmann, Kraay, and Mastruzzi \(2010\)](#).
18. The governance effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (see [Kaufmann, Kraay, and Mastruzzi 2010](#)).
19. These figures are higher than seen in high-income countries. For example, the Federal Reserve Bank of Atlanta' Survey of Business Uncertainty reports expected drops in sales of between 0 percent and 3 percent for March and April 2020.
20. This pattern is identical across countries with different income levels, as well as different firms sizes and sectors, as shown in our supplementary online appendix.
21. Results available upon request.
22. To help firms adjust and recover from the crisis, complementary investments may be needed to upgrade their capabilities and to mend broken supply chains. Some successful examples of firm upgrading programs include management consulting and technical skills training ([Bloom et al. 2013](#); [Iacovone, Maloney, and McKenzie 2019](#); [Anderson, Chandy, and Zia 2018](#)), while supplier development

and export promotion programs help alleviate information and networking frictions in accessing markets (Arráiz, Henríquez, and Stucchi 2013; Atkin, Khandelwal, and Osman 2017).

23. To confirm that these differences are statistically significant we estimated at the firm level the conditional elasticity (controlling for country, size, sector, and timing of the survey) of the share of workers laid off to change in sales and we find that this elasticity is significantly smaller (less negative) than the elasticity of firms that do not benefit from policy support at the 5 percent confidence interval.

24. These results are shown in fig. S1.3 in the supplementary online appendix.

25. Tax support includes fiscal exemptions and reductions, as well as tax deferrals.

26. This only refers to deferral of rent, mortgage, or utilities.

27. The interested reader will find a more detailed and granular breakdown of individual policies in table S1.1 from the supplementary online appendix.

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