



Business Pulse Survey: Impact of COVID-19 on MSMEs in Bangladesh



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BUSINESS PULSE SURVEY:
IMPACT OF COVID-19 ON
MSMES IN BANGLADESH

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FOREWORD

The COVID-19 pandemic has dealt a devastating blow to businesses across the world, including Bangladesh. It has affected companies of all sizes and across all sectors, but smaller businesses—the micro, small, and medium enterprises—are particularly hard-hit.

These MSMEs are already precariously perched, vulnerable to all kinds of pressures. Even in normal conditions, they operate on slim margins and constantly face the risk of disruptions—and even closures—due to a variety of external and internal factors. The pandemic-driven global lockdowns have caused extreme distress to these businesses: their markets have dried up, cash flows have reduced to a trickle, jobs have been lost, and businesses have closed, with many doing so permanently.

MSMEs are the lifeline of Bangladesh's economy. According to available figures, 99 percent of non-farm enterprises fall into micro and small enterprises category. Yet, even before the pandemic, this important sector was starved of funds; the MSME sector had an estimated financing gap of \$2.8 billion. The pandemic has exacerbated the situation.

This Business Pulse Survey: Impact of COVID-19 on MSMEs in Bangladesh was undertaken to assess the impact of the pandemic on Bangladesh's medium, small, and micro businesses. The picture that emerges from it is quite grim. Around 83 percent of firms are making losses and 64 percent are temporarily closed. Across the sector, 94 percent of businesses have experienced sharp drops in sales. These business losses have choked cash flows, with 33 percent of firms saying they are unable to pay installments on existing loans.

The impact on jobs has been worse. MSMEs play a critical role in providing jobs. They employ 20.3 million Bangladeshis—around 20 percent of the country's adult population. Now, a staggering 37 percent of Bangladesh's workers have lost their jobs, temporarily or permanently, and 58 percent of firms have reduced their working hours. More jobs are in jeopardy as there is no end to the pandemic in clear sight. In this situation, urgent steps are needed to help businesses survive. The Government of Bangladesh has responded quickly and effectively by implementing stimulus packages and other policy measures to help MSMEs. But uptake till now has been slow. The survey revealed that 76 percent of firms were unaware of existing COVID-19 stimulus packages from any financial institutions. No doubt, as awareness increases, greater numbers of MSMEs will reach out for help.

Globally, IFC responded early to the crisis by setting up a facility of \$8 billion for fast-track financing to help distressed companies survive this economic catastrophe.

As a part of COVID-19 response in Bangladesh, IFC has supported clients and financial institutions by investing US\$75 million in working capital. In addition, IFC's advisory programs have provided technical assistance for repurposing production lines for personal protective equipment and facilitated industry dialogues on diversification in manufacturing.

This Report, which is also part of IFC's global response, will serve as an important tool for the Government of Bangladesh and financial institutions to make informed decisions on channeling funds to the areas with highest potential impact. We believe that it will help the country to effectively respond to this unprecedented and historical crisis, the likes of which the world has not seen before.

IFC stands ready to help the government and businesses of Bangladesh get through the pandemic and emerge stronger on the other side.



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International Finance Corporation



Rolf Behrndt,
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LIST OF ACRONYMS

Acronym	Definition
BPS	Business pulse survey
CAPI	Computer-assisted personal interview
CMSME	Cottage, micro, small, and medium enterprises
COVID	Corona virus disease
GDP	Gross domestic product
GEP	Global economic prospects
IFC	International Finance Corporation
IMF	International Monetary Found
MSME	Micro, small, and medium enterprise
OLS	Ordinary least squares
RCF	Rapid credit facility
SDG	Sustainable development goals
SME	Small and medium enterprise

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EXECUTIVE SUMMARY

The COVID-19 pandemic will go down as a watershed moment in the history of human civilisation. The World Bank in its report on Global Economic Prospects (GEP, June 2020) observed, “The COVID-19 global recession will be the deepest since the end of World War II, with the largest fraction of economies experiencing declines in per capita output since 1870.” Further, GEP noted, “Since 1870, the global economy has experienced 14 global recessions. Current projections imply that the COVID-19 global recession will be the fourth deepest in this period and the most severe since the end of World War II.” Global growth forecasts have been downwardly revised to negative 5.2 percent. The report also predicted Bangladesh’s GDP growth at 1.6 percent in 2020 and 1 percent in 2021, a significant dip from a rate that hovered around 8 percent over the previous two years. Unlike the Global Financial Crisis, which originated in the financial sector and gradually impacted the rest of the world’s economy, the COVID-19 pandemic has struck like a seismic event, stopping all economic activities at one go. While the pandemic is impacting businesses of all sizes, micro, small, and medium enterprises (MSMEs) are hit especially hard due to pre-existing vulnerabilities and their lower resilience. The MSME sector is a key driver of the national economy in Bangladesh.

Contributing 25 percent to the country’s GDP,¹ MSMEs play a crucial role in income generation and resource utilization. According to the Economic Census and Enterprise Survey, both conducted in 2013, some 99 percent of all non-farm enterprises fall into the micro and small enterprises categories, providing employment to 20.3 million Bangladeshi workers.² But, despite playing a pivotal role as Bangladesh’s economic engine, MSMEs face several challenges, as presented in the figure below.³

“While the pandemic is impacting businesses of all sizes, micro, small, and medium enterprises (MSMEs) are hit especially hard due to pre-existing vulnerabilities and their lower resilience.”

1 <https://www.daily-sun.com/printversion/details/415431/2019/08/16/Role-of-micro-small-and-medium-enterprises-in-economic-dev>

2 Financing Solutions for Micro, Small, and Medium Enterprises (MSMEs) in Bangladesh

3 Women Entrepreneurs in SMEs: Bangladesh Perspective 2017 ; Financing Solutions for Micro, Small, and Medium Enterprises (MSMEs) in Bangladesh



These challenges are exacerbating as COVID-19 intensifies, which could result in a vicious economic downturn. Poor access to finance for MSMEs is already a fundamental challenge at the heart of the country’s financial and economic development; MSMEs in Bangladesh suffer from a \$2.8 billion financing gap.⁴ Supply chains and global value chains may also experience interruptions and further worsen the situation. Decreasing demand will further reduce the coffers of MSMEs, as working capital begins to decrease. This will result in their inability to pay salaries and could force them to lay off workers, driving up unemployment rates. It is vital to develop effective and prompt policy responses to safeguard the MSME sector from the adverse effects of COVID-19.

This report summarizes the findings from the COVID-19 Business Pulse Survey conducted through a sample survey of MSMEs in Bangladesh. In keeping with the spirit of the assignment, the study aims to inform IFC and policymakers in Bangladesh about the pulse of the small businesses as they cope with the COVID crisis. Specifically, the scope of work involved a rapid survey of 500 MSMEs to

collect and analyse quantitative and qualitative data, capturing the impact of COVID-19 crisis on MSMEs in the country.

The questionnaire comprised seven modules covering aspects like current status of operations, factors affecting operations, future outlook, and policy support required to set the stage for a lasting recovery. The survey also covered questions on adoption of adjustment mechanisms and on access to finance and credit. The survey was conducted over telephone from June 4 to 15 and responses recorded on a Computer-Assisted Personal Interview (CAPI) interface.⁵

The sample frame of MSME units for Bangladesh was prepared by collating MSME lists from various sources. The sample was drawn using a simple random sampling, ensuring proportionate allocation to two strata defined by “division” and “sector” of the MSMEs, respectively. Although the final sample size for this survey was 500, additional units were drawn to make up for non-responses. The response rate was 49 percent. In all, 1044 tele-calls were made of which 516 were successful.⁶

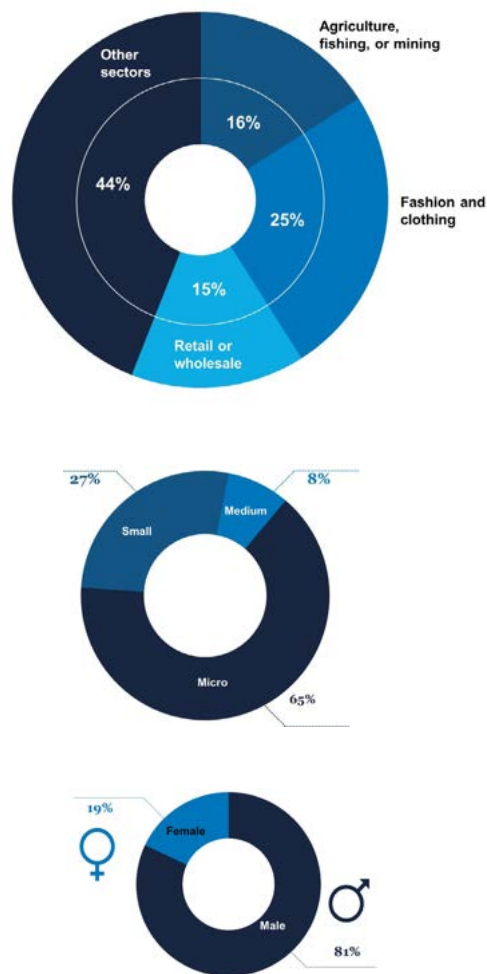
⁴ Financing Solutions for Micro, Small, and Medium Enterprises (MSMEs) in Bangladesh

⁵ SurveyCTO was used as the survey platform.

⁶ A response rate of 1:5 was observed during the pilot survey.

The final 500 surveyed MSMEs are distributed⁷ across all eight divisions of Bangladesh and across 12 distinct sectors. In the sample, fashion and clothing (n=126), agriculture, fishing, or mining (n=77), retail or wholesale (n=77) are the top three sectors in terms of number of observations. Thus, the analysis in the report is stratified across four sectors: the three sectors mentioned above and other sectors, which contains all other sectors. In terms of size, the surveyed MSMEs were divided into three categories of size: micro, small, and medium, depending upon the number of fulltime workers in the firms.⁸ 65 percent of the surveyed MSMEs were micro firms with less than five fulltime workers. Additionally, of the surveyed MSMEs, 90 were women-owned, representing 19 percent of the sample.⁹

At the time of the survey, around 79 percent of the firms had managed to remain open. The remaining 21 percent were temporarily closed, either due to own choice or due to the existing restrictions. It is worth mentioning that none of the surveyed firms were permanently closed. Across different categories of firms grouped by their size, at least 67 percent of firms managed to stay open with a majority partially open. The proportion of closure¹⁰ was relatively lower for the micro firms (15 percent) compared to small and medium firms. In terms of sector, firms belonging to fashion and clothing sector were affected the most with highest percentage of closures (37 percent). As the majority of firms from the retail or wholesale sector deal in essential goods, more than 90 percent could stay open and continue business. Further, firms



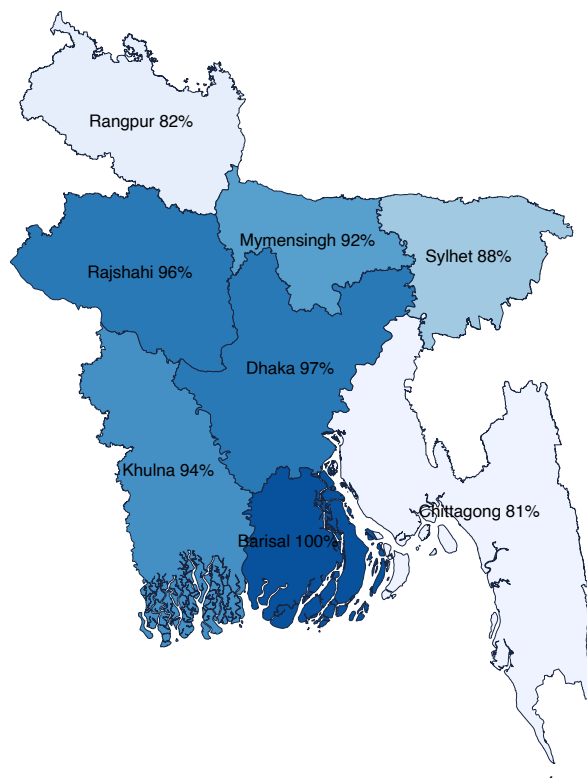
located in urban areas reported higher proportion of closures than those in rural areas.

In terms of employment, 70 percent of workers are in a vulnerable position as they are employed in businesses that are either temporarily closed or are partially open.¹¹ The impact on sales has been large and widespread; 94 percent of firms experienced a

7 Barisal-2 percent; Chattogram-8 percent; Dhaka-36 percent; Khulna-10 percent; Mymensingh-8 percent; Rajshahi-31 percent; Rangpur-4 percent; and Sylhet-2 percent.
 8 Micro-0 to 4; small-5 to 19; medium-20+.
 9 Of 500 firms covered in the survey, 90 were women-owned MSMEs and 393 were men-owned MSMEs. We interviewed senior staff from the remaining 17 units because the owner could not be located on the date of the survey.
 10 In this report, closure means temporary closure of business, not permanent closure.
 11 Partially-open firms refer to those firms that are unable to operate normally due to government regulations.

decline in sales 30 days before the survey relative to the same period in 2019. The estimated average change in sales was -52 percent. Further, the decline in sales for firms in the fashion and clothing and retail or wholesale sectors was significantly larger when compared to firms in agriculture, fishing or mining. In terms of employment, firms have adjusted by reducing working hours of their workers. 58 percent of surveyed firms reported reduction in working hours for at least one worker in the past 30 days before the survey. This resonates with the countrywide situation as firms could not operate fully due to the lockdown. In fact, 12 percent of the fulltime and part-time workers covered in the survey have undergone a reduction in their working hours. Further, 18 percent of the surveyed firms resorted to laying off workers; such job losses were estimated at 37 percent of the total employment covered in the survey. Although lifting of the nationwide lockdown may help some of these jobs to come back, most firms face uncertainty in their financial outlooks, which makes their workers vulnerable. Thus, it might be in the interest of both the economy and livelihoods to take steps to minimize disruptions.

In terms of operations being adversely affected at least 67 percent of surveyed firms are affected by shocks like reduction in hours worked and availability of inputs (supply-side shocks), reduction in demand (demand-side shocks), and decrease in cash flow and availability of financial services (liquidity shocks). These shocks have varied effects on different sectors of the economy. Businesses in agriculture, fishing, or mining are less likely to be affected by demand and supply shocks as compared to the other sectors, however, they are more likely to face disruptions in the availability of financial services.



Note: This map shows distribution of firms by decrease in sales in each division.

Under the current circumstances, firms that are currently open (fully or partially) reported that they can remain open for a median duration of about 12 weeks from the date of survey. Medium-sized firms exhibit better resilience in this regard, reporting a median value of at least 52 weeks. However, businesses in agriculture, fishing, or mining reported a survival span that was markedly lower, when compared to other sectors. Similarly, the survey suggests that businesses can continue to cover costs with cash available for a median duration of about 60 days. Here too, medium-sized firms reported an average survival span longer than micro and small firms.

Firms were also interviewed about their outlook for the future in terms of sales and employment. On average, the expected change in sales and employment over the next six months is negative; both being -12 percent. In addition, there is uncertainty about the growth of sales and employment—more for sales growth than for employment growth. Such a negative outlook and high uncertainty may potentially lead to loss of investor confidence in the sector, impeding future growth.

The onset of the pandemic and subsequent lockdowns have caused firms to expedite their move toward digital platforms. Adapting to the new normal, 9 percent of interviewed firms have increased or started using the internet, social media, specialized apps and other digital platforms in their daily business operations. Here, small and medium firms have fared better than micro firms with faster adoption of digital platforms and by changing their product mix. Moreover, around 5 percent of surveyed small and medium firms have invested in new equipment, software, or digital solutions in response to COVID-19. Lack of awareness of the benefits of technology, lack of funds, lack of infrastructure, concerns over privacy and data security, and inability to deploy technology due to lockdown could be some of the barriers to tech adoption among MSMEs in Bangladesh. Thus, appropriate policy action for MSMEs is suggested as technology upgradation may bolster the future growth of the sector.

With respect to credit and access to finance, 49 percent of micro firms reported they do not have sufficient liquidity to sustain their businesses for the next three months, compared to 40 percent and 33 percent of small and medium firms, respectively. However, a lesser percentage of women-owned MSMEs have a problem with insufficient liquidity, compared to men-owned

MSMEs, over the next three months. Overall, firms are in financial distress, as 83 percent reported to making losses over the 30-day period prior to the survey. The situation is graver for export-oriented firms; 96 percent reportedly made losses over 30-day period before the survey. Firms belonging to the fashion and clothing sector are facing a similar situation, with 92 percent reporting the same.

To recover from this crisis, cash transfer, access to new credit, and loans with subsidized interest rates were stated as the top three most-needed policy supports. Only 2 percent of surveyed firms received some kind of government support since the COVID-19 outbreak. A majority of firms cited lack of awareness about government policy measures as the reason for not availing any public support.

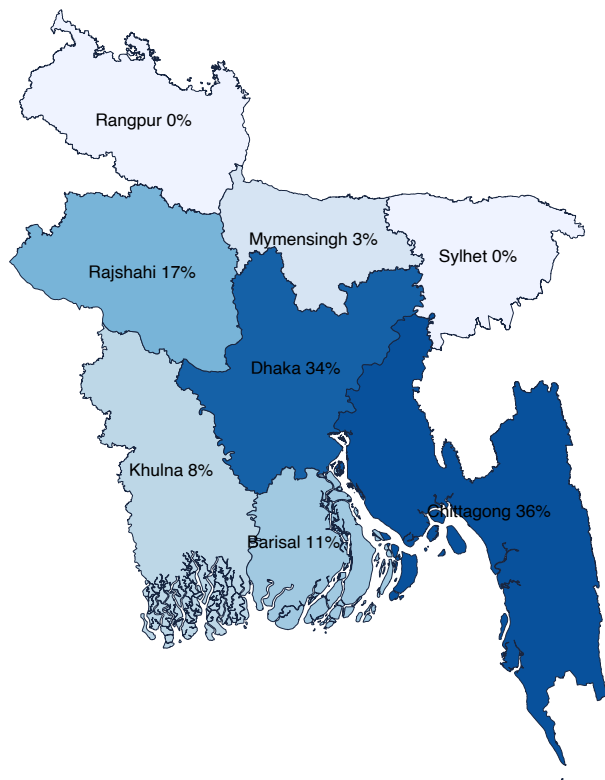


Figure: Geographical distribution of temporarily closed firms

Key highlights of the study have been summarized in the next section.

Key highlights of the study

Impact on business operations



21% of firms are temporarily closed, either by choice or by government mandate



Fashion and clothing sector had the highest percentage of temporarily closed firms among the top three sectors



Sales declined over the last 30 days for **94%** of firms



70% of all workers were in vulnerable jobs



37% of workers lost their jobs over the last 30 days



91% of firms were affected by **decrease in cash flow**



Reduction in cash flow affected the **fashion and clothing** sector most among the top three sectors



On average, businesses had enough cash available to cover costs for **110 days**

Expectations about the future and uncertainties involved



Average of expected change in sales as well as in employment in three scenarios (optimistic, pessimistic, and regular) is **-12%** for the next six months



High uncertainty about sales growth (uncertainty value~37%) and employment growth (uncertainty value~21%)



70% of micro firms had negative outlooks on their change in sales

Firms' response to the shocks



9% of firms increased or started using of digital platforms



Small and medium firms fared better than micro firms in tech adoption

Financial impacts



83% of firms reported making losses in the last 30 days



The fashion and clothing sector had the highest number of firms making losses



45% of firms faced liquidity risks over next three months



59% of firms preferred low interest-rate financing as effective financial support



63% of firms required financial support for more than one year support

Required policy support



Cash transfer, access to new credit, and loans with subsidized interest rates is the preferred combination of most-needed policies

Policy implementation gaps



Policy support reached **2%** of firms in all



Lack of awareness is the primary reason for non-utilization of policy support measures

Description of the sample and summary statistics

In this section, we provide a brief description of the sample and responses collected during the survey. The Bangladesh MSME Business Pulse Survey (BPS), including quality-control back checks, was conducted between June 4 and 16, 2020. A comprehensive listing of MSME units with telephone numbers does not exist in Bangladesh. We therefore compiled the sample frame from various sources.¹² A two-stage stratified random sample design was adopted. In the first stage, 'division' was considered—the location of the MSMEs and in the second stage, 'sector'—which of the 12 sectors the MSMEs operated in—was considered as stratum units. In all, 1044 firms were contacted over phone and responses collected from 516 firms with a response rate of around 49 percent.

Cash transfer, access to new credit, and loans with subsidized interest rates is the preferred combination of most-needed policies.

12 The sample frame was collated from the following sources: Small and Medium Enterprise Foundation, Joyeeta Foundation, Bangladesh Small and Cottage Industries Corporation, Innovision Consulting Private Limited, and Bangladesh Rating Agency Limited.

Sl.No.	Phone Calls	Frequency	Proportion
1	Successful Interviews	516	49%
2	Unsuccessful Interviews (Non-responses)	528	51%
3	Total Phone Calls	1044	

Table: Summary of non-responses

Sector/Division	Barisal	Chittagong	Dhaka	Khulna	Mymensingh	Rajshahi	Rangpur	Sylhet	Total
Agriculture, fishing, or mining	0	9	7	22	1	36	2	0	77
Other manufacturing	5	2	19	4	2	15	2	2	51
Construction or utilities	0	1	1	0	0	0	0	0	2
Retail or wholesale	1	4	32	4	11	18	6	1	77
Transportation and storage	1	2	4	3	0	2	3	3	18
Food services	0	10	10	2	0	4	3	0	29
Information and communication	0	0	1	0	0	0	0	0	1
Other services	1	2	13	2	15	33	2	1	69
Fashion and clothing	1	2	60	9	8	41	4	1	126
Leather	0	1	12	0	0	2	0	0	15
Light engineering	0	6	14	4	1	5	0	0	30
Plastic	0	0	5	0	0	0	0	0	5
Total	9	39	178	50	38	156	22	8	500

Table: Distribution of the surveyed units by division and sector

Characteristics	Mean	Median	Relevant sample size
Number of fulltime workers	7.6	2	500
Number of part-time workers	20.8	0	500
Number of part-time workers in firms with at least one part-time worker	75.2	5	138
Share of female workers (in %)	21.5	0	500
Share of female workers in firms with at least one female worker (in %)	61.1	53.5	176
Age of the firms (in years)	13.1	10	500
Share of exports in 2019 (in %)	8.4	0	153
Share of exports for firms with non-zero share of exports in sales in 2019 (in %)	53.5	60	24

Table: Key statistics from data in the sample

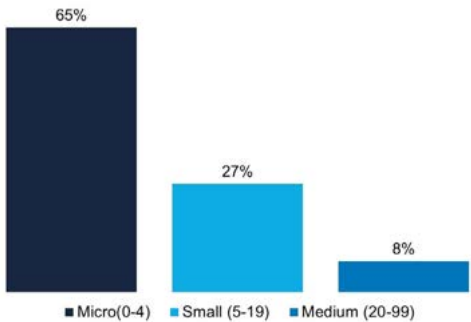


Figure: Distribution of businesses across strata: Size of firms

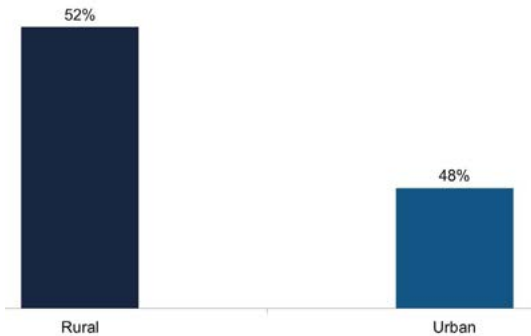


Figure: Distribution of businesses across strata: Top three sectors

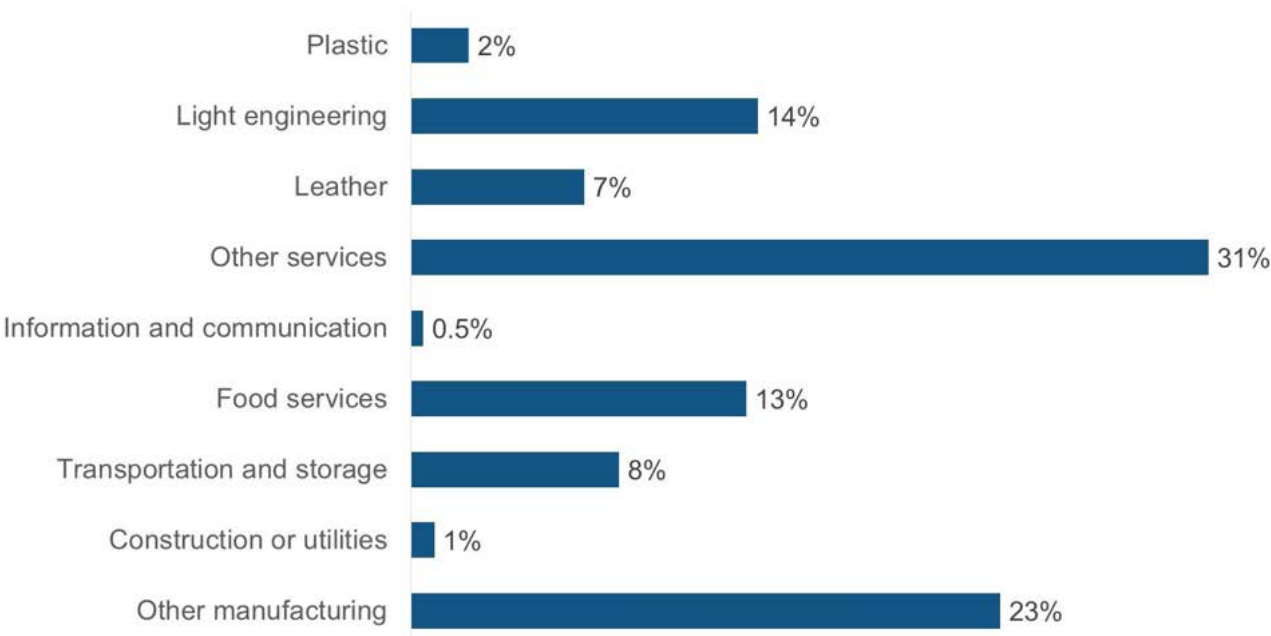


Figure: Composition of other sectors

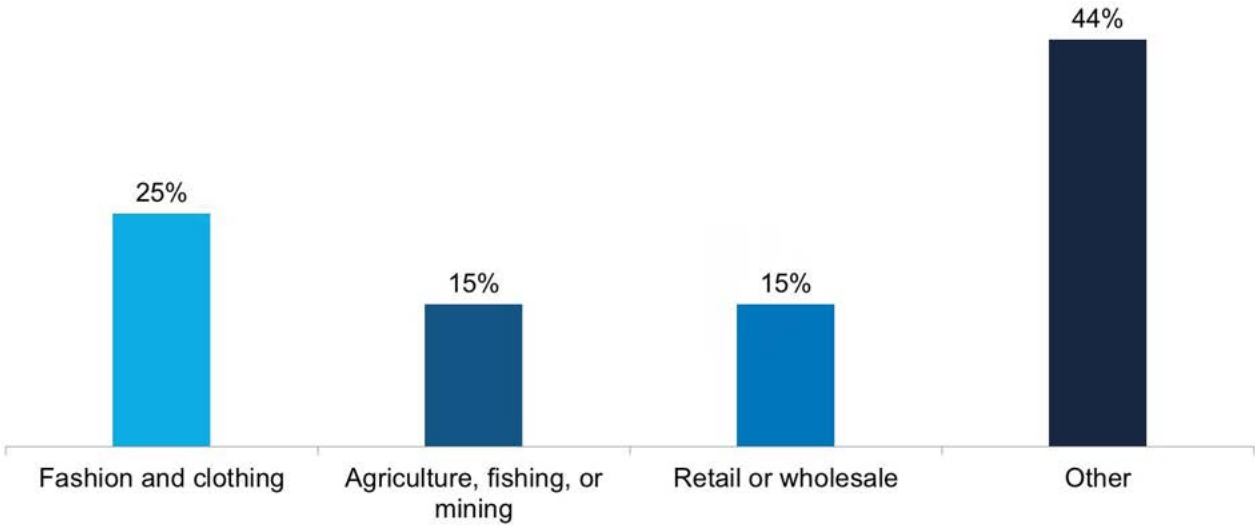


Figure: Distribution of rural and urban MSME firms

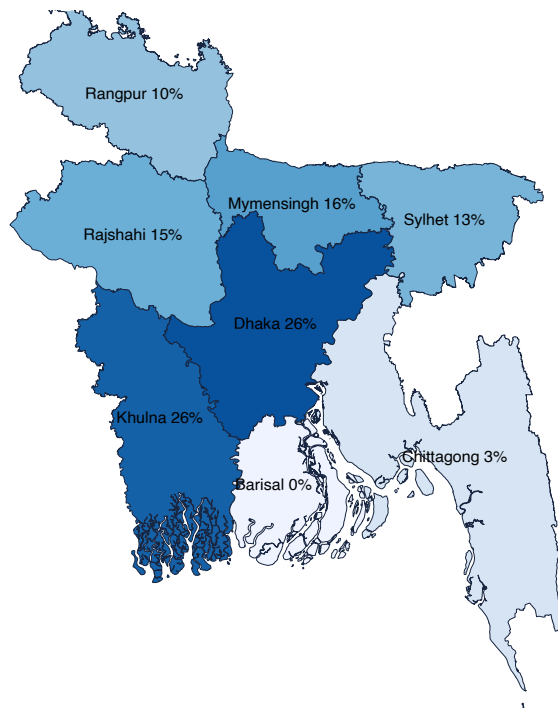


Figure: Distribution of surveyed women-owned MSMEs and micro firms by division

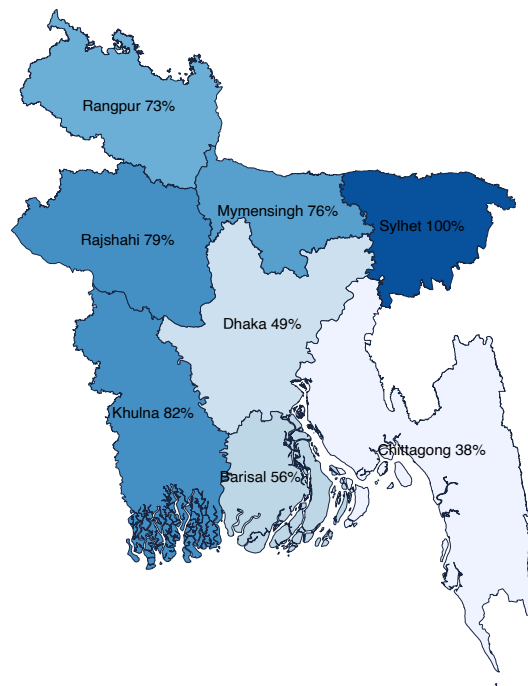


Figure: Distribution of surveyed women-owned MSMEs and micro firms by division

01 INTRODUCTION

The COVID-19 pandemic has been unlike any other crisis the world has seen in the past, in terms of its scale and impact. It has necessitated unprecedented levels of social support and stimulus packages by governments across the globe to manage economic fallouts due to burgeoning case numbers and social distancing.¹³

The pandemic has brought miseries and hardships indirectly due to the lockdowns and resulting shutdown of businesses and other activities. Consumers remained inside their homes and demand for non-essentials crashed. Bangladesh reported the first COVID-19 cases on March 8, 2020, which increased to more than 200,000 by July 17, 2020.¹⁴ In an attempt to contain the spread of the virus, the Government of Bangladesh declared a national holiday from March 26 to May 30, mandating closure of government and private offices and placing restrictions on public transport and individual movement. Since then, lockdowns have been imposed on zones demarcated by case density. Due to these steps taken to prevent the spread of the virus in the country, the outbreak has already wiped out a few quarters of GDP, and, the ravage is still unfolding.

Micro, small, and medium enterprises (MSMEs) are facing severe challenges all over the world; more so in developing economies, including

Bangladesh. MSMEs are closed, temporarily closed, or partially open. Uncertainty is further exacerbating the problem. COVID-19's impact on health is severe on persons with pre-existing health issues. The same applies for MSMEs as well. Given the sector's pre-existing vulnerabilities, their ability to withstand the pandemic is limited as most of these entities are typically small and without deep pockets.

The MSME sector is the backbone of a growing economy. Not only does it help in growth and development, it also brings much-desired equity and inclusion. In Bangladesh, more than 90 percent of non-farm enterprises are MSMEs.¹⁵ According to the Economic Census of 2013, 7.8 million enterprises operate in Bangladesh. The cottage and microenterprise segment accounts for 89 percent of these enterprises, while small and medium enterprises constitute the remaining 11 percent.

“COVID-19 is most definitely spreading economic suffering worldwide. The virus may in fact be as contagious economically as it is medically.”

-Excerpt from the book “Economics in the time of COVID-19” (Richard Baldwin and Beatrice Weder di Mauro)

13 <https://www.imf.org/en/Topics/imf-and-COVID19/Policy-Responses-to-COVID-19>

14 For current numbers: <https://www.worldometers.info/coronavirus/country/bangladesh/> and for day zero (that is, the first reported case): <https://web.archive.org/web/20200327163555/https://www.reuters.com/article/us-health-coronavirus-bangladesh-idUSKBN2oVoFS>

15 Financing Solutions for Micro, Small, and Medium Enterprises in Bangladesh, The World Bank Group

MSMEs in Bangladesh provide employment to 20.3 million workers, which makes the sector the largest source of employment after the agriculture sector. Even though the MSME sector employs a large share of the workforce, informality characterizes¹⁶ the sector. There is a sizeable gap in access to formal finance for MSMEs in Bangladesh even in normal times and despite their important role in the national economy and in job creation.¹⁷ This lack access to formal credit can lead to inadequate liquidity which in turn can result in insolvency. As this report shows, MSMEs, particularly the fashion and clothing sector are experiencing a sudden plunge in sales. Given its share in output and employment, it makes the whole Bangladesh economy vulnerable to a deep shock.

The inclusion of a chapter with special focus on MSME and cottage industries development in the National Industrial Policy 2016 shows the Government's continued and enhanced focus on the MSME sector to foster economic growth. The economic transformation of Bangladesh, coupled with its transitioning into a middle-income country,¹⁸ poses multiple challenges for the country in the face of this pandemic. The sustainable path to strong economic growth must include a quick recovery of the MSME sector.

Major commitments demonstrated by the government to ameliorate the pain points of SMEs is through providing collateral-free,

single-digit SME loans, refinancing for SMEs, cluster-based SME development, special priority to women entrepreneurs in providing SME loans, 15 percent quota for women entrepreneurs, continuous training for capacity building of SME entrepreneurs, a special drive to increase market access and market linkage of SME products, special incentives for procuring environment-friendly and productive machinery, export-oriented SMEs to get priority fiscal and non-fiscal incentives, etc.¹⁹

The Sustainable Development Goals 1 (SDG 1), focused on reaching the last mile and addressing exclusion and inequality of access, and SDG 17, focused on unlocking public and private finance for the poor at the local level, underline the importance of reviving the MSME sector.

According to Global Economic Prospects (GEP, June 2020), GDP growth in FY 2020-21 has been forecast at the drastically low value of 1 percent. The GDP growth forecast for FY 2019-20 was 1.6 percent; against the estimated growth of 8.2 percent in FY 2018-19. The COVID-19 outbreak is severely affecting the two main sources of Bangladesh's external earnings: exports of readymade garments and remittances. Against this backdrop, the International Monetary Fund (IMF) approved a disbursement of about \$244 million, under the Rapid Credit Facility (RCF), to help the country's economy cope with the COVID-19 situation.

16 Informality means they are not registered with the government

17 <http://documents1.worldbank.org/curated/en/995331545025954781/Financing-Solutions-for-Micro-Small-and-Medium-Enterprises-in-Bangladesh.pdf>

18 "Gimenez, Lea; Jolliffe, Dean; Sharif, Iffath. 2014. Bangladesh, a Middle Income Country by 2021: What Will it Take in Terms of Poverty Reduction? World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/18668> License: CC BY 3.0 IGO."

19 SMEs of Bangladesh (Vol 4, 2018); Published in Bangladesh by The Bangladesh Rating Agency Limited (BDRAL)

To mitigate the effect of the pandemic, the Government of Bangladesh is providing working-capital facilities totalling TK20,000 crore (\$2.36 billion) for the cottage, micro, small, and medium enterprise (CMSME) sector. Of this TK10,000 crore (\$1.18 billion)²⁰ was provided as part of a refinancing scheme.²¹

Since the MSME sector is strategically important for the economic revival of the country once the pandemic is over, this study looks into the extent of the impact of COVID-19 and provides a comparative assessment of the sector this year, compared to the same period last year. This is a perception survey and the interpretation is based on the responses by respondents on the date of the survey.

The COVID-19 situation is evolving rapidly on a day-to-day basis. Although, along with our survey partner Innovision Consulting, we have taken great care during the survey and prior to preparing this report, the study represents the findings at a point in time. Additionally, the sample size is guided by the terms of reference; therefore generalization of the results must be done keeping these aspects in mind.

In the chapters to follow, we have provided the status of the MSMEs and the requirements of support as reported by the respondents. The report has been divided into the following sections: a) Impact of COVID-19 on businesses in Bangladesh, covering impact in terms of operational status, sales, employment, and channels affecting operations; b) Expectations about the future and uncertainty; c) Responses to the shock; d) Vulnerability and access to finance; and e) Role of policy.

“Since the MSME sector is strategically important for the economic revival of the country once the pandemic is over, this study looks into the extent of the impact of COVID-19 and provides a comparative assessment of the sector this year, compared to the same period last year.”

20 Currency conversion rate from TK to USD was used as on 22 September 2020 (USD 1 = TK 84.85)

21 Source: <https://www.bb.org.bd/smeportal/circulars.php>

02 IMPACT OF COVID-19 ON BUSINESSES

This chapter discusses the impact of the pandemic on MSME operations in Bangladesh. The chapter has been structured into five sections. Section 2.1 discusses the operational status of firms in the wake of the pandemic-induced lockdown. Sections 2.2 and 2.3 discuss adverse effects of the pandemic on sales and employment scenarios of firms. The impact on sales has been analyzed by studying the change in sales for 30 days previous to the interview compared to the same period last year. The impact on employment has been presented in terms of various labour-adjustment mechanisms adopted by the surveyed firms to cope with the situation. Sections 2.4 and 2.5 discuss the various shocks faced by firms and their ability to survive through them.

2.1. Operational Status

At the time of the survey, around 79 percent of the firms remained open; the remaining 21 percent were temporarily closed, either by their own choice or due to government regulations (Figure 2.1). It is worth noting that none of the surveyed firms were permanently closed. Of the total firms that were open (n=393), more than half (n=214) could not operate normally due to the lockdown. Of the firms that were closed (n=107), 71 percent (n=76) were closed by their own choice. It is important to note that own choice is not to be misconstrued as a normal

business decision. At best, we can say that it is due to the lockdown, but we cannot completely rule out that it is independent of the current situation.

Across different categories of firms grouped by size, at least 67 percent managed to stay open, with a majority of them being partially open (Figure 2.2).

Thus, a lower proportion of the firms remained closed—both by government mandate as well as by their own choice—at the time of the survey. Moreover, the proportion of closure is relatively lower for micro firms (15 percent) compared to small and medium-sized firms. This could be because around 61 percent of surveyed micro firms are located in rural areas where the impact of the lockdown has been less severe compared to that in urban areas. On the contrary, more than 61 percent of small and medium firms are located in urban areas.

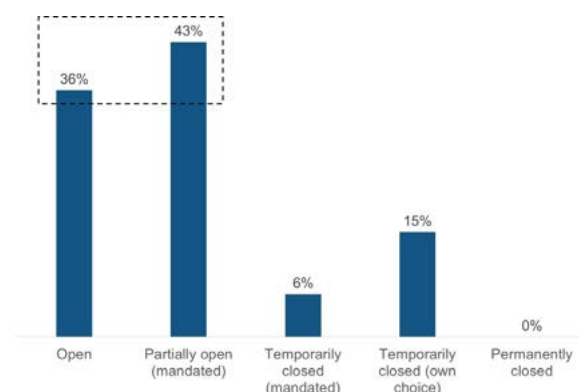


Figure 2.1: Distribution of firms by current status of operations

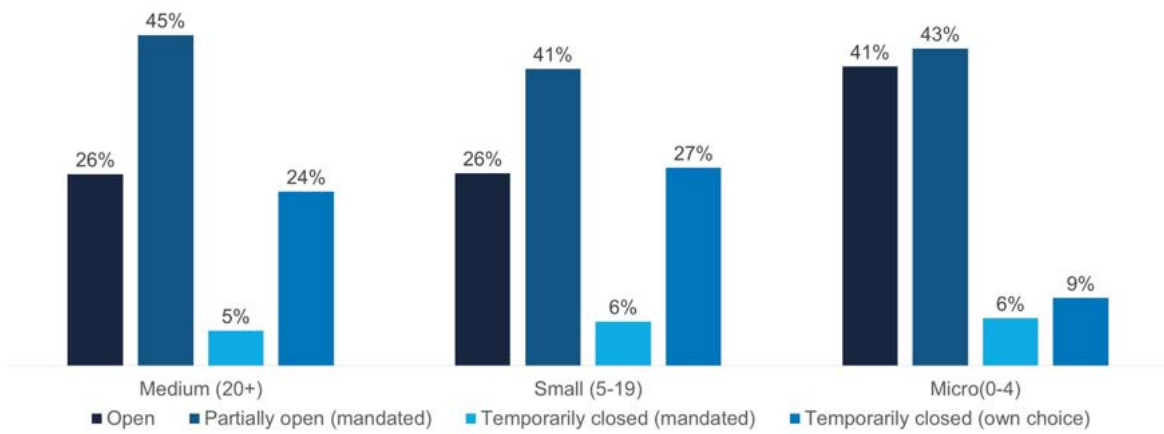


Figure 2.2: Distribution of firms by current status of operations and size

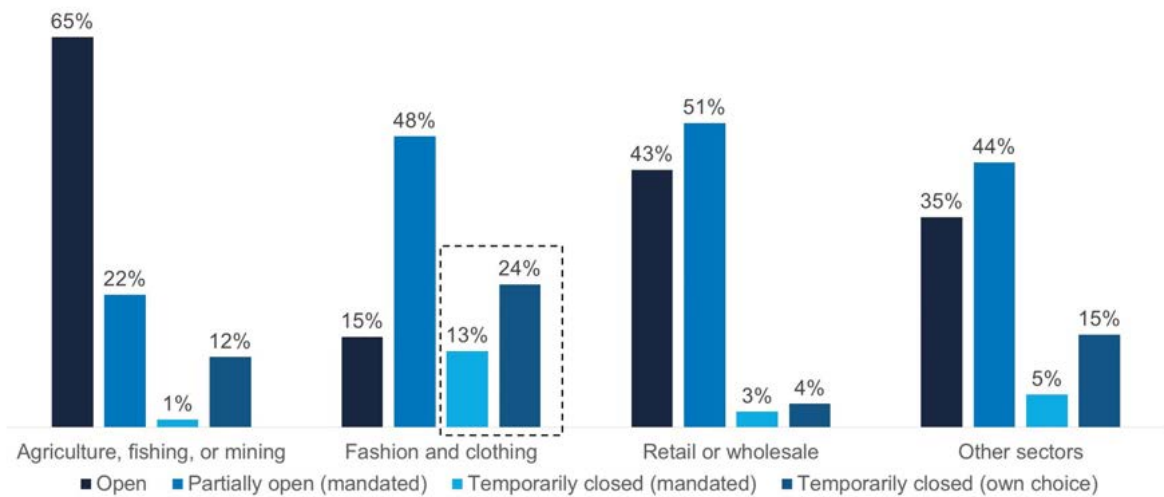


Figure 2.3: Distribution of firms by current status of operations and sector²³

As presented in Figure 2.3, firms belonging to the fashion and clothing sector have been affected the most with highest percentage of closures. Of the closed firms from the fashion and clothing sector (n=46), 65 percent of firms temporarily shut down by their own choice and not due to government regulations. This might be due to a decrease in demand for non-essential products leading to

low sales at of shops/firms dealing in fashion and clothing. However, more than 90 percent of firms in the retail or wholesale sector was open at the time of the survey. This might be because a majority of firms in this sector deals in essential items, including groceries and medicines, and were allowed to remain open during the nationwide shutdown from March 26 to May 30.

23 The top three sectors with the highest number of observations have been considered separately while the others have all been grouped into the 'Other sectors' category. The relevant sample sizes for each are: Fashion and clothing (n=126); Agriculture, fishing, or mining (n=77); Retail or wholesale (n=77); Other sectors (n=220)

Firms located in urban areas have been affected more than those located in rural areas (Figure 2.4). Around 83 percent of the firms in rural areas remained open while for firms in urban areas it was 74 percent. Of the firms that have closed in urban areas (n=63), more than 80 percent were temporarily closed by their own choice. This might be because they are more sensitive to the outbreak and have taken self-precautionary measures.

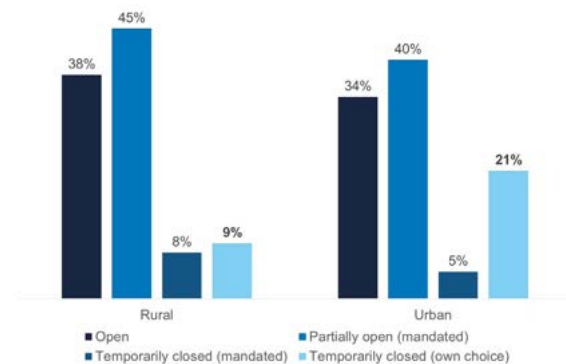


Figure 2.4: Distribution of firms by current status of operations and region

Around 70 percent of all workers covered by the survey are employed in vulnerable jobs (Table 2.1). Vulnerable jobs are jobs in firms that have temporarily closed or are partially open, since these are the firms that are more likely to run into liquidity crises, to end up unable to pay salaries, and to start laying off workers. In fact, vulnerable workers comprise over 50 percent across all categories of firms, except small firms and those involved in in agriculture, fishing, or mining.

Business characteristics	Open	Partially open (mandated)	Temporarily closed (mandated)	Temporarily closed (own choice)	Vulnerable (partially open + temporarily closed)	Total
Total	30%	47%	2%	22%	70%	14,185
Micro (0-4)	32%	24%	5%	40%	68%	2,820
Small (5-19)	58%	31%	1%	10%	42%	4,479
Medium (20+)	10%	67%	1%	22%	90%	6,886
Men-owned	22%	69%	2%	7%	78%	7,722
Women-owned	39%	20%	2%	39%	61%	6,118
Fashion and clothing	35%	33%	2%	30%	65%	8,199
Agriculture, fishing, or mining	66%	24%	0%	10%	34%	578
Retail or wholesale	40%	47%	1%	13%	60%	365
Other	16%	72%	2%	10%	84%	5,043
Rural	24%	57%	11%	8%	76%	1,859
Young (0-4)	46%	45%	0%	9%	54%	932
Maturing (5-14)	18%	33%	3%	47%	82%	5,739
Established (15+)	37%	58%	1%	4%	63%	7,514
Exporter	7%	87%	.%	6%	93%	4,323
Non-exporter	43%	31%	2%	24%	57%	7,042

Note: Total number of workers is the sum of fulltime and part-time workers

Table 2.1: Distribution of workers by current status of business

2.2. Impact on Sales

The pandemic has had adverse effects on sales of the surveyed firms; **94 percent had decreased sales in the 30 days prior to the survey relative to the same period in 2019 (Figure 2.5)**. The average change in sales for micro firms stood at -51 percent while that for small and medium firms combined stood at -55 percent.

The median change in sales for the sample (n=398) was -50 percent (Table 2.2). While the change in sales had been varied—ranging from -100 percent (for the bottom 10 percent of firms in fashion and clothing) to no impact (for the top 10 percent of firms in agriculture, fishing, or mining)—the drop is widespread across sizes, sectors, regions, age, and export/non-export status. The median change is close to the mean for most dimensions observed in Table 2.2, indicating that the figures are not driven by outliers.

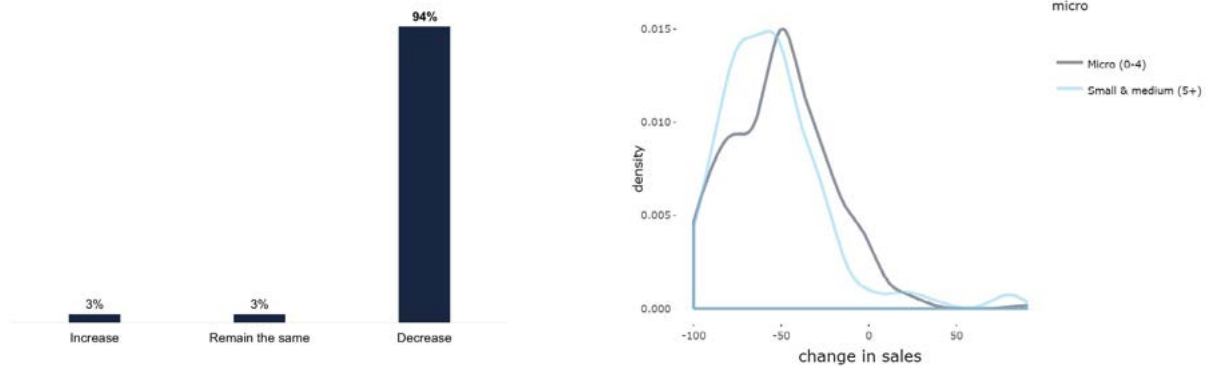


Figure 2.5: Distribution of firms by reported and estimated change in sales over the last 30 days

Note: Firms which have been closed for four weeks or more were not asked this question. Further, responses recorded as 'Don't know' have been removed. Relevant sample size (n=398).

Note: Of 398 firms, relevant sample size for micro firms=280; for small and medium firms=118

Business characteristics	Average change	10th percentile	25th percentile	Median change	75th percentile	90th percentile
Total	-52	-90	-75	-50	-30	-20
Micro (0-4)	-51	-90	-70	-50	-30	-10
Small (5-19)	-55	-90	-75	-60	-50	-25
Medium (20+)	-55	-90	-80	-60	-33	-25
Men-owned	-52	-90	-75	-50	-35	-10
Women-owned	-50	-80	-70	-50	-30	-20
Fashion and clothing	-65	-100	-90	-70	-40	-30
Agriculture, fishing, or mining	-34	-70	-50	-40	-10	0
Retail or wholesale	-44	-80	-60	-47.5	-30	-10
Other	-56	-90	-75	-60	-50	-25

Rural	-49	-90	-70	-50	-30	-15
Urban	-55	-90	-80	-60	-40	-20
Young (0-4)	-50	-80	-70	-50	-40	-20
Maturing (5-14)	-51	-90	-75	-50	-30	-10
Established (15+)	-54	-90	-75	-60	-30	-15
Exporter	-50	-80	-70	-50	-30	-30
Non-exporter	-56	-90	-80	-60	-50	-25

Note: (-ve) sign of the numbers in the table suggest decrease in sales. The data on drop in sales was collected only from those firms that were open, partially open, or not closed for more than four weeks.

Table 2.2: Distribution of change in sales by business characteristics (in %)

The decline in sales for firms in the fashion and clothing and the retail or wholesale sectors is significantly larger relative to those in agriculture, fishing, or mining (Figure 2.6). When controlling for the different characteristics of businesses like size, gender of ownership, region, and age, the effect of the sector on change in sales was statistically significant when the agriculture, fishing, or mining sector was taken as the base level (Appendix 9). Firms in the fashion and clothing sector are estimated to have experienced the highest drop in sales compared to the other sectors.

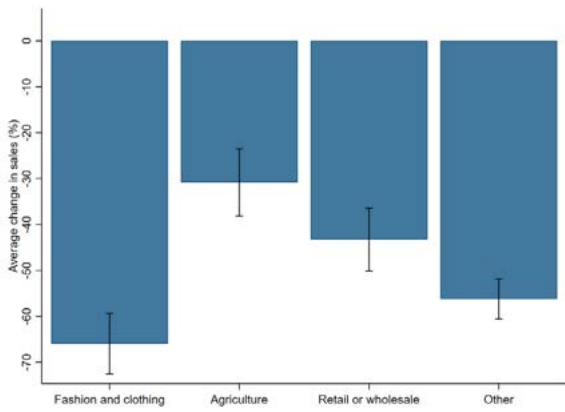
Different characteristics of the businesses explain only a small proportion of the variation observed in change in sales due to COVID-19 (Figure 2.7).²⁴ A regression model was employed, where the reported change in sales for firms was the response variable. The explanatory variables in the model were business characteristics such as size, gender of ownership, sector, region, and age. The model with all the business characteristics put together as independent variables, account for only 13 percent of the variation in sales

reduction. This model cannot explain the remaining 87 percent of the variation (Appendix 9).²⁵ A backward stepwise regression model was employed to check if the value of adjusted r-squared can be further improved. Further, the maximum variation of 13 percent was obtained out of all iterations using different combinations of business characteristics in the stepwise regression.

This resonates with the findings of Table 2.2 that the pandemic has widespread impacts in terms of change in sales across businesses with different characteristics.

24 Firms that were open, partially open, or not closed for more than four weeks at the time of survey were included in the regression model.

25 To obtain this estimate, the percentage change in sales is regressed on dummies for the variables size, formality status, sector, region, age, and exporting status, and both the prediction from the regression (the explained component) and the residual (the unexplained component) are computed across all observations.



Note: Fashion represents the fashion and clothing sector, Agriculture represents agriculture, fishing, or mining sector; Retail represents retail or wholesale. Other sectors represent the following: Other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, plastic.

Figure 2.6: Marginal effect of sector on change in sales

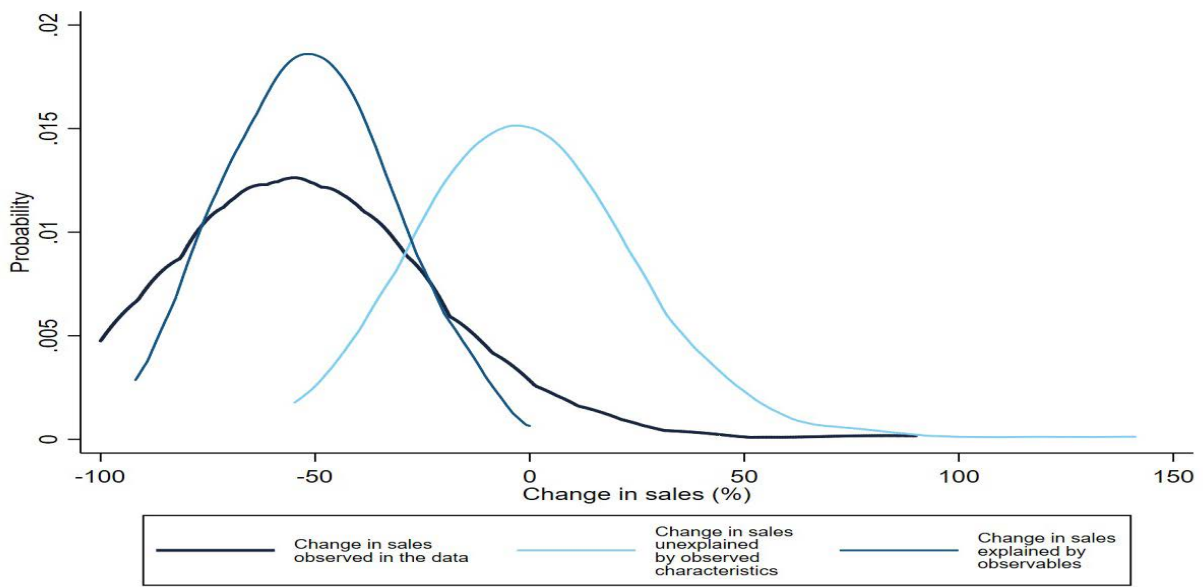


Figure 2.7: Distribution of the reduction in sales explained by the observed characteristics of the firm

Table 2.3, summarizes the direction of statistically significant coefficients of the regression model (Appendix 9) discussed above. Fashion and clothing, retail or

wholesale, and firms from other sectors are estimated to report greater reduction in sales compared to firms in the agriculture, fishing, or mining sector.

Business characteristics (Explanatory variables)	Reported change in sales (Response variable)
Size	
Sector	(-) Fashion and clothing (-) Retail or wholesale (-) Other
Region	
Age of business	
Gender of ownership	(+) Women-owned

Note: (a) Base levels for size is micro (0-4); sector is agriculture, fishing, or mining; region is rural; age of business is young (0-4); gender of ownership is male
(b) Empty cells reflect a statistical non-significant effect

Table 2.3: Estimated effect of business characteristics on reported change in sales

2.3. Impact on Employment

Reduction in the number of working hours is a severe and immediate impact of COVID-19—**58 percent of surveyed firms reported reduction in working hours of at least one worker (Figure 2.8), which has affected 12 percent of the employment covered in the survey** (Table 2.4). This adjustment mechanism is most prominent among young firms with 43 percent of their workers facing reduction in working hours. Similarly, 41 percent of firms have reduced wages of their workers. As can be observed in Table 2.4, 19 percent of all fulltime and part-time workers covered in this survey experienced wage reduction. This adjustment response is most prominent in micro firms. **At the time of the survey, 18 percent of surveyed firms had laid off workers in response to the shock (Figure 2.8).**

Total job losses were reported at 37 percent of workers (Table 2.4). Please note that the

denominator used in the values in Table 2.4, are the total number of workers. Job losses in medium firms were relatively higher compared to small and micro firms. Similarly, workers in the fashion and clothing and in the agriculture, fishing, or mining sectors suffered higher job losses than those in the retail or wholesale sector. Laying off has been disproportionately high for firms located in urban areas compared to those in rural areas; this difference is statistically significant (Appendix 13).

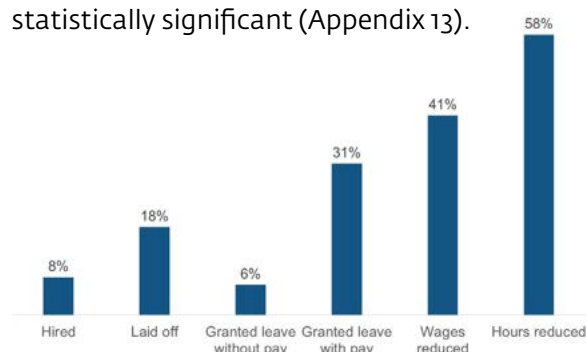


Figure 2.8: Proportion of businesses reporting at least one worker in each category

Characteristics	Hired	Laid off	Absence without pay	Absence with pay	Wages reduced	Hours reduced
Total	5%	37%	3%	51%	19%	12%
Micro (0-4)	7%	7%	1%	45%	45%	17%
Small (5-19)	3%	4%	8%	21%	8%	9%
Medium (20+)	5%	70%	1%	73%	15%	12%
Men-owned	9%	51%	2%	56%	15%	15%
Women-owned	0%	21%	4%	47%	22%	4%
Fashion and clothing	0%	24%	3%	45%	21%	6%
Agriculture, fishing, or mining	56%	25%	4%	19%	8%	12%
Retail or wholesale	0%	2%	1%	12%	17%	42%
Other	7%	62%	4%	66%	16%	19%
Rural	-49	-90	-70	-50	-30	-15
Rural	18%	16%	3%	23%	18%	25%
Urban	3%	40%	3%	55%	19%	10%
Young (0-4)	39%	5%	27%	9%	39%	43%
Maturing (5-14)	2%	33%	2%	53%	34%	13%
Established (15+)	3%	43%	1%	54%	5%	7%
Exporter	0%	76%	1%	79%	11%	7%
Non-exporter	7%	25%	5%	36%	13%	13%

Note: Total number of workers is the sum of fulltime and part-time workers

Table 2.4: Proportion of workers affected in each category of response on employment structure

Table 2.5 depicts the results from a regression model (Appendix 13), where different business characteristics are used as explanatory variables to estimate the adjustments in employment as a response to COVID-19. The direction of significant regression coefficients have been highlighted in the table. **Small and medium firms seem to be disproportionately granting leave of absence with pay to workers relative to micro firms (Table 2.5)**. Besides, small firms are more likely to send their workers on leave without pay compared to micro firms. These results are in line with the observations from Figure 2.2, where a larger proportion of small and medium firms have closed operations compared to micro firms.

In terms of sector, **firms in agriculture, fishing, or mining are more likely to hire workers and least likely to reduce working hours of their workers compared to other sectors**. Similarly, firms in urban areas are more likely to lay off workers and send their workers on leave with pay, compared to rural firms. They are, however, less likely to reduce wages of their workers, when compared to those located in rural areas.

Further, gender of the owner has significant effect only on one of the labour adjustments—reduction in wages; women-owned MSMEs seem to be disproportionately reducing wages of their workers, compared to those owned by men. Apart from this, age does not seem statistically associated with any of the labour adjustments.

Business characteristics	Hired	Fired	Absence without pay	Absence with pay	Wages reduced	Hours reduced
Size	(+) Medium	(+) Medium	(+) Small	(+) Small		
Sector	(-) Fashion and clothing (-) Retail or wholesale (-) Other sectors	(-) Retail or wholesale (-) Other sectors		(+) Fashion and clothing	(+) Other sectors	(+) Fashion and clothing (+) Retail or wholesale (+) Other sectors
Region		(+) Urban		(+) Urban	(-) Urban	
Age of business						
Gender of ownership					(+) Women-owned	

Note: (a) Base levels for size is micro (0-4); sector is agriculture, fishing or mining; region is rural; age of business is young (0-4); gender of ownership is male

(b) Empty cells reflect a statistical non-significant effect

Table 2.5: Estimated effect of business characteristics on employment adjustments

2.4. Channels Affecting Operations

At least 67 percent of firms are affected by all kinds of shocks (Figure 2.9), that is decrease in hours worked, decrease in demand, decrease in cash flow, decrease in financial services, and decrease in supply of inputs. Further, more than 90 percent of the surveyed MSMEs reported a decrease in their cash-flow availability in the 30 days before the date of the survey.

Table 2.6 presents the results from a regression model (Appendix 9) where characteristics of firms are used as explanatory variables to estimate the shocks faced by firms due to COVID-19. When controlling for the different characteristics, small businesses seem less likely to be affected by a decrease in demand compared to micro firms and this difference is

statistically significant. Apart from this, size of a business does not have a significant effect on the shocks faced by it. Businesses in agriculture, fishing, or mining are less likely to experience a decrease in working hours and a decrease in demand for their products, compared to other sectors. However, they are more likely to face disruptions in availability of financial services. Characteristics such as region and age of business do not seem statistically associated with any kind of shock. Further, financial services are more likely to be available for women-owned firms when compared to those owned by men.

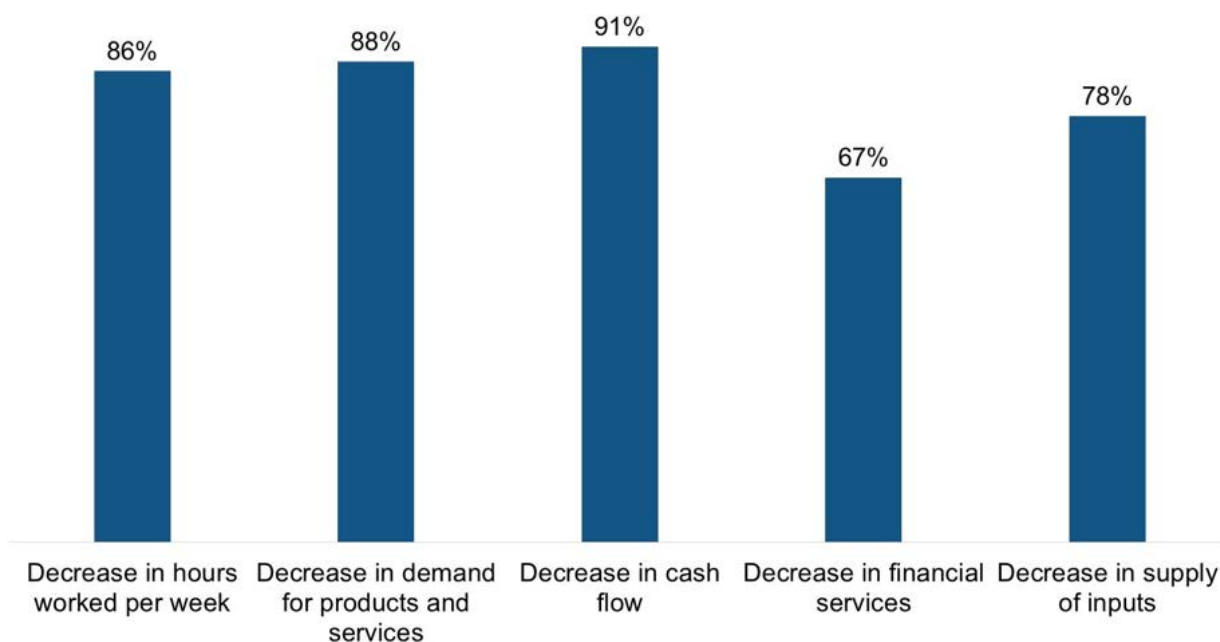


Figure 2.9: Proportion of firms affected by different types of shocks

Business characteristics	Decrease in hours worked per week	Decrease in demand for products and services	Decrease in cash flow	Decrease in financial services	Decrease in supply of inputs
Size	(-) Small				
Sector	(+) Fashion and clothing (+) Retail or wholesale (+) Other sectors	(+) Fashion and clothing (+) Retail or wholesale (+) Other sectors	(+) Other sectors	(-) Fashion and clothing (-) Retail or wholesale (-) Other sectors	(-) Retail or wholesale
Region					
Age of business					
Gender of ownership	(+) Women-owned				

Note: (a) Base levels for size is micro (0-4); sector is agriculture, fishing, or mining; region is rural; age of business is young (0-4); gender of ownership is male

(b) Empty cells reflect a statistical non-significant effect

Table 2.6: Estimated effect of business characteristics on COVID-19 shocks

The figures below estimate the marginal effect of COVID-19 shocks on change in sales for various sectors. Disruption in various channels of operation seems to have a differentiated impact on sales across sectors. The results have been derived from a regression model (Appendix 11) where different shocks are used as explanatory variables to estimate the change in sales for various sectors. **Reduction in cash flow, decrease in demand, and disruptions in availability of financial**

services are found to be significantly affecting businesses in the fashion and clothing sector. Although firms in agriculture, fishing, or mining are experiencing a decline in sales due to various shocks, the effect is found to be statistically non-significant. A decrease in demand and disruptions in availability of financial services are significantly affecting businesses belonging to the retail or wholesale sector.

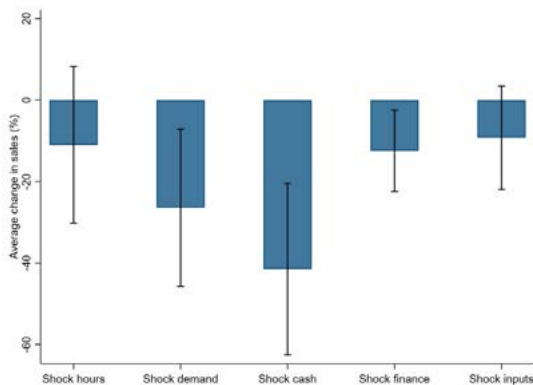


Figure 2.10: Marginal effect of shocks on change in sales for the fashion and clothing sector

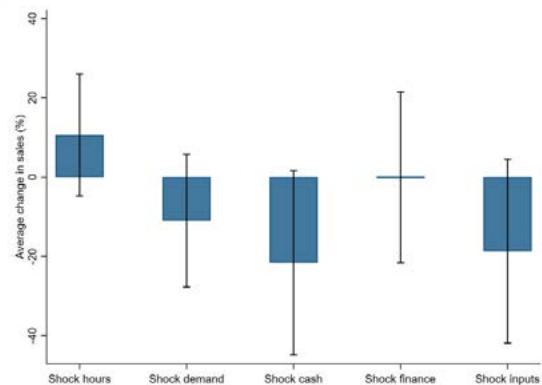


Figure 2.11: Marginal effect of shocks on change in sales for the agriculture, fishing, or mining sector

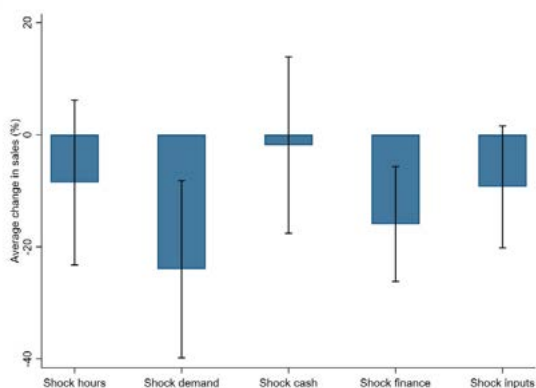


Figure 2.12: Marginal effect of shocks on change in sales for the retail or wholesale sector

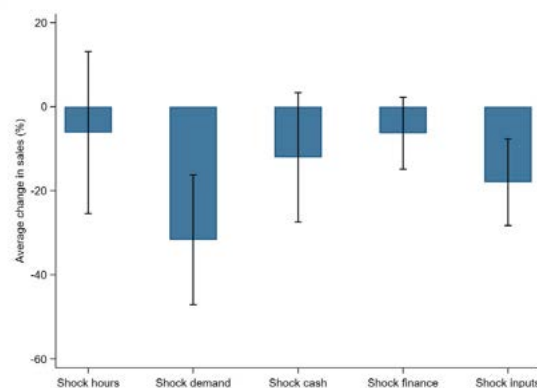


Figure 2.13: Marginal effect of shocks on change in sales for other sectors

2.5. Survival of Firms

Firms that are currently open (full or partially) can remain open for a median duration of 12 weeks under the current circumstances (Figure 2.14).²⁶ Although micro firms reported a median value of 12 weeks, the value varied for small firms (14 weeks) and medium firms (at least 52 weeks).²⁷

Figure 2.15 presents the effect of sector, size, and age of firms on the number of weeks they can remain open under the current circumstances. The results have been derived from a regression model (Appendix 15), where characteristics of firms are used as an independent variable to estimate the duration of them remaining open.

As compared to firms in agriculture, fishing, or mining, firms in retail or wholesale and in fashion and clothing are better able to remain open. Medium firms reported a survival span markedly higher

than micro firms. Similarly, established firms can remain open for a duration that is significantly longer than that for young firms.

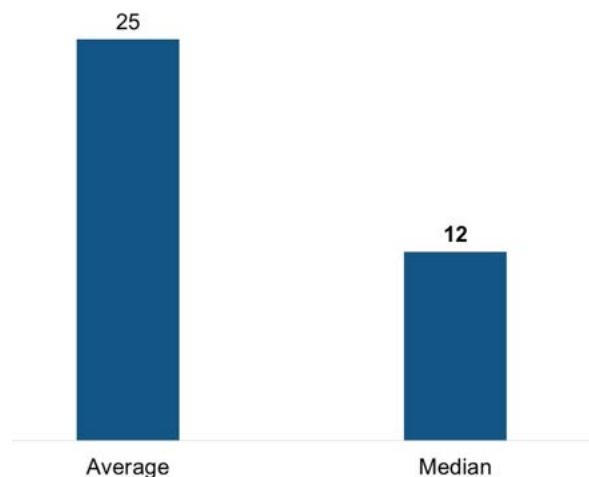


Figure 2.14: Number of weeks that businesses can remain open in the current circumstances

²⁶ Here, respondents were asked for how many more weeks their establishments can remain open in the current circumstances

²⁷ Duration greater than or equal to one year was recorded as 52 weeks

The survey suggests that businesses can continue to cover costs with available cash for a median duration of about 60 days (Figure 2.16).

As in the previous case, Figure 2.17 presents the effect of size, gender of ownership, and sector on the number of days the firms can continue to cover all costs with available cash. These have been derived from a regression model, the output of which has been given in Appendix 15. The results show that size, as a characteristic of a firm, does not significantly affect the number of days that it is able to cover costs, although medium and small firms can cover costs for longer periods than micro firms. It is similar for gender of ownership as a characteristic of the firm, although women-owned firms reported longer periods of being able to pay for all costs than those owned by men. In terms of sector, however, firms in the retail or wholesale sector have the ability to cover costs with available cash for a longer period, compared to those in the agriculture, fishing, or mining sector, and this difference is statistically significant (Appendix 15).

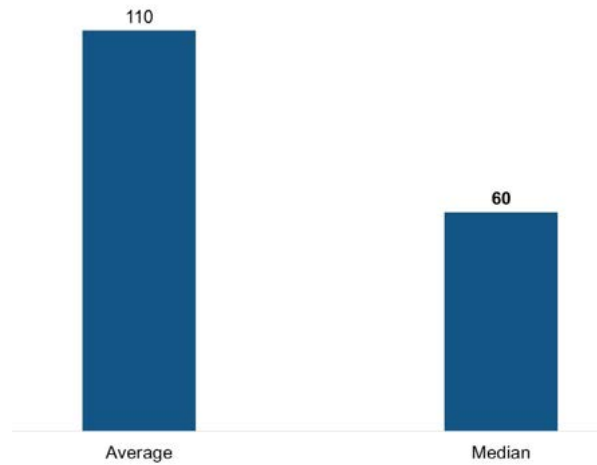


Figure 2.15: Number of days that the business can continue with available cash

Note: Fashion represents fashion and clothing, agriculture represents agriculture, fishing, or mining sector; retail represents retail or wholesale sector. Other Sectors comprises the following: Other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, plastic

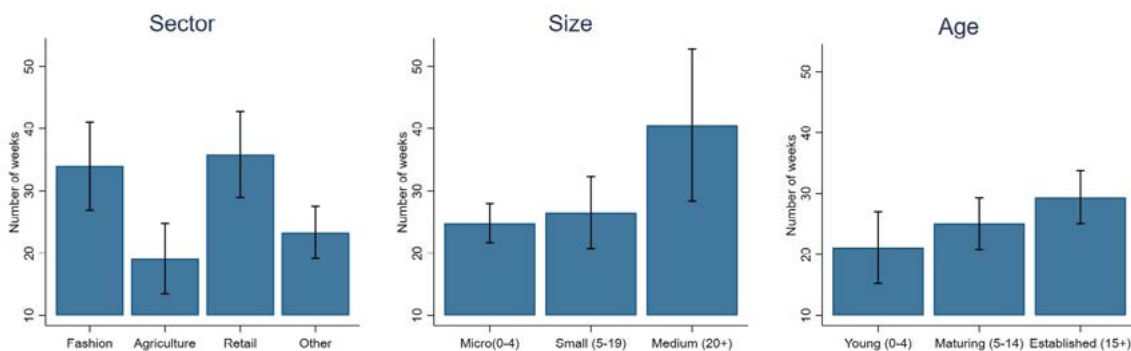


Figure 2.16: Marginal effect of business characteristics on ability to remain open in the current circumstances

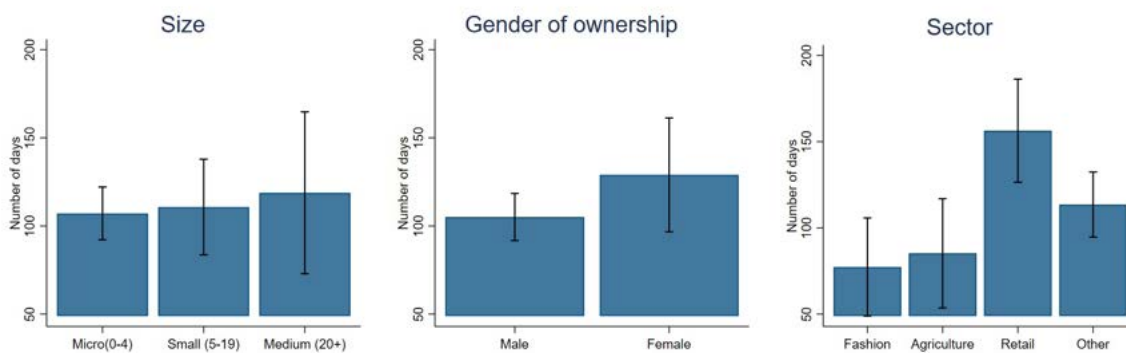


Figure 2.17: Marginal effect of business characteristics on ability to continue with available cash

Note: Fashion represents fashion and clothing, agriculture represents agriculture, fishing, or mining sector; retail represents retail or wholesale sector.

Other sectors represent the following: other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, plastic

Thus, it can be seen that the pandemic has a large and widespread impact on MSMEs operations in Bangladesh. Although, around 79 percent of the surveyed firms managed to continue their businesses, the scenario varied across size and sector with fashion and clothing reporting the highest proportion of closures. Moreover, disruption of various channels of operations has hit businesses hard and added to their woes. More than 90 percent of firms reported declining sales, compared to normal times. This situation also renders the jobs of workers in the MSME sector vulnerable and, hence, coordinated policy supports are the need of the hour to arrest the economic downturn induced by this pandemic.

“Thus, it can be seen that the pandemic has a large and widespread impact on MSMEs operations in Bangladesh. Although, around 79 percent of the surveyed firms managed to continue their businesses, the scenario varied across size and sector with fashion and clothing reporting the highest proportion of closures.”

03

EXPECTATIONS ABOUT THE FUTURE AND UNCERTAINTY

This chapter discusses expectations of firms about change in sales and employment. We estimate the uncertainty for sales and employment over the next six months for small and medium firms. However, for micro firms, uncertainty has not been calculated as the questions on three scenarios: optimistic, pessimistic, and regular were intended only for small and medium firms. For micro firms, we have reported change in sales expected for the next three months.

3.1. Analysis of Expectations for Small and Medium Firms

The COVID-19 crisis, with the need for social distancing along with lockdown measures, has resulted in a new complex reality. Many MSMEs are struggling to respond to this crisis quickly and are confronted with uncertainty through and beyond the crisis.

The uncertainty for future employment and sales is estimated using the following formula.

$$\sqrt{\sum_{i=1,2,3,\dots,N} P_{adjusted_i} (Gr_i - Mean(Gr))^2}$$

Where, $P_{adjusted_i}$ is adjusted subjective probability associated with the scenarios (as reported by the respondents); Gr_i is the growth rate in sales and employment (also obtained from respondent responses). $\sum_{i=1,2,\dots,n} P_i Gr_i$ is the expected growth in employment/sales. Further, the subjective uncertainty²⁸ is calculated by taking standard deviation of expected growth in employment/sales. The subjective probabilities reported by the respondents on change in sales and employment were adjusted before using the formula. Adjustments were done such that the sum of the probabilities for the three scenarios (optimistic, pessimistic, and regular) becomes one.

After calculating the average value for the three scenarios separately, we calculated the expected change in sales or employment and standard deviation of expected change in sales or employment.²⁹ The margin of perceived variation in change in the sales in optimistic and pessimistic scenarios seems to be very high (Figure 3.1).

28 Altig, David, et al. Surveying business uncertainty. No. w25956. National Bureau of Economic Research, 2019.

29 The same value of probability has been taken to calculate expected change in sales as well as employment.

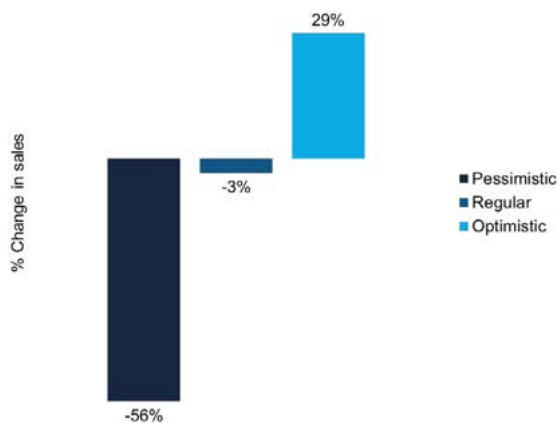


Figure 3.1: Average change in sales expected in the next six months across scenarios

In the optimistic scenario, firms expect sales to increase by 29 percent in the coming six months, while in the pessimistic scenario, average sales are expected to drop by 56 percent compared with sales in same period last year.

Even though the expected contraction in sales is, on an average, 12 percent for all three scenarios, the uncertainty remains large at 37 percent (Figure 3.2).³⁰

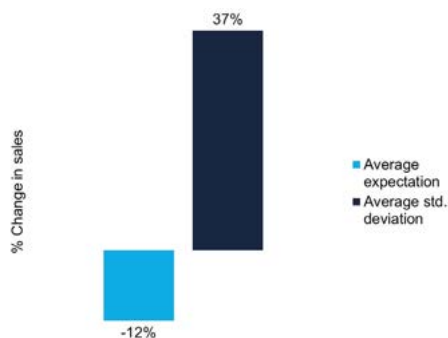


Figure 3.2: Expectations and uncertainty about sales growth for the next six months

Note: Average expectation is expectation of change in sales reported for the three scenarios. Average standard deviation is the standard deviation of expected value of change in sales for three scenarios, namely, optimistic, pessimistic, and regular.

The large value of uncertainty can be seen in Figure 3.2. The value of standard deviation averaged out for three scenarios, and comes out as three times larger than the average value of expected change in sales.

A simple way to measure firm-level uncertainty due to the COVID-19 crisis is to look at the distribution of a firm’s expected sales growth. Expectations about growth in sales vary from -57 percent to +50 percent. However, it can be noticed that the bulk of the distribution lies towards the left. This indicates a pessimistic sales outlook by the MSMEs. The large uncertainty may lead to loss of investor confidence in the MSMEs and hence, lead to a large contraction in investment. This could result in reduced future growth of the firms

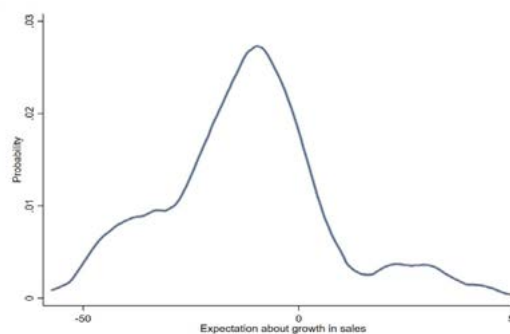


Figure 3.3: Distribution of expectations (sales)

The distribution of uncertainty comes close to a symmetric distribution; with the curve being symmetric about 37 percent. A smaller proportion of firms are uncertain up to the extent of 60 to 80 percent.

30 The uncertainty measures the average value of dispersion (standard deviation) of data about the mean in three scenarios, namely, pessimistic, regular, and optimistic. Lesser dispersion resonates more confidence by the firms on sales growth in the coming days for the three scenarios

The expected employment growth for the next six-month period after implementation of the survey is -12 percent, but uncertainty for employment remains high, although smaller than that for sales. It is not only the expected percentage changes in employment that are lower than estimates in sales growth; the uncertainty is also significantly lower (Figure 3.6).

The average expectation for change in employment ranges between -38 percent and +7 percent, and the measure of uncertainty is about 1.5 times larger than the expected change. Error! Reference source not found. shows the dispersion in individual expectations in terms of employment change, which ranges between -83 percent and around +50 percent. This range is very high and is indicative of the fact that firms are uncertain about hiring in the near future.

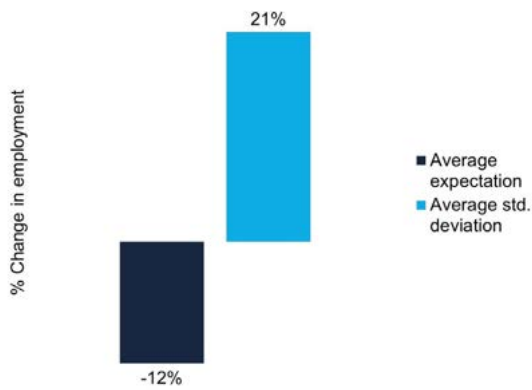


Figure 3.6: Uncertainty of employment growth for next 6 months

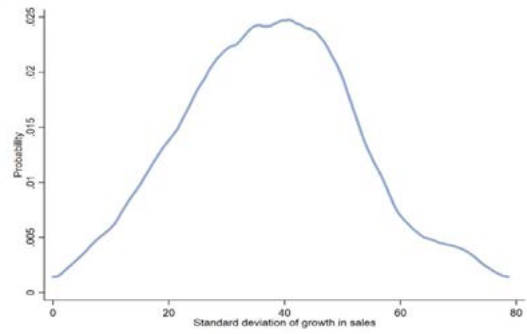


Figure 3.4: Distribution of standard deviation (sales)

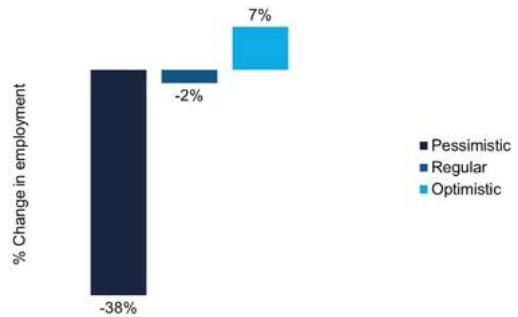


Figure 3.5: Average change in employment expected for next six months

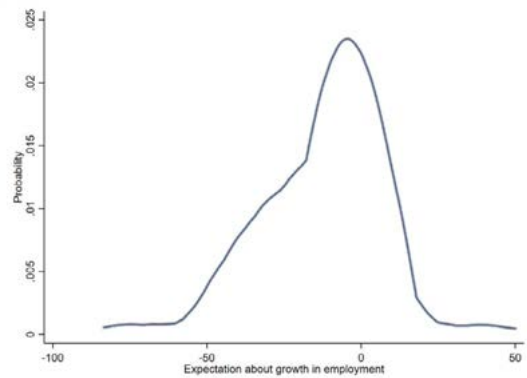


Figure 3.7: Distribution of expectations (employment)

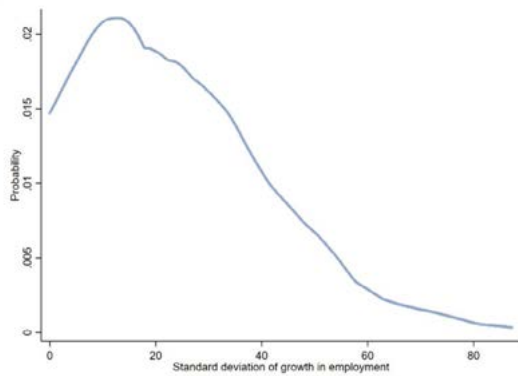


Figure 3.8: Distribution of standard deviation (employment)

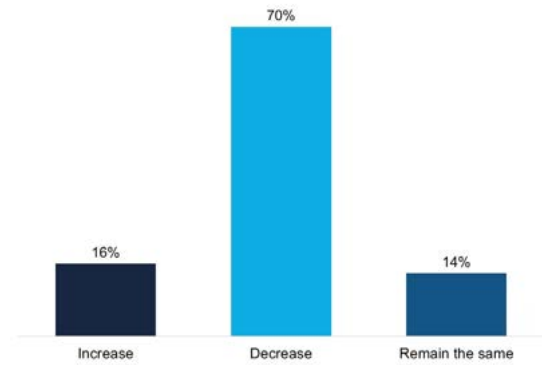


Figure 3.10: Expectations in sales (micro firms)

3.2. Analysis of Expectations for Micro Firms

Overall, 70 percent of the interviewed micro firms reported that they expect sales to drop by on average 42 percent in the next three months, compared to the same period last year. The distribution of change in sales ranges from -80 percent to 100 percent for the most optimistic of firms. The wide range in sales expectation indicates a large margin of uncertainty in the surveyed micro-sized firms.

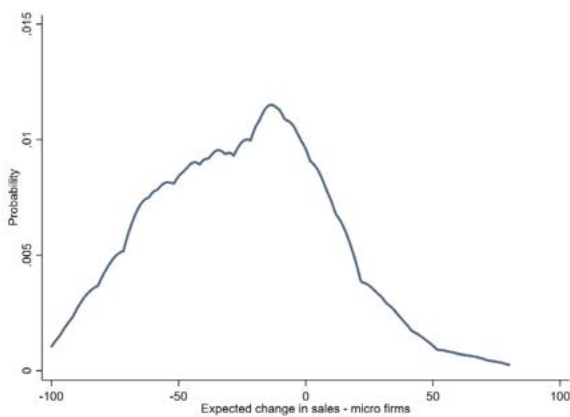


Figure 3.9: Distribution of change in sales

“Overall, 70 percent of the interviewed micro firms reported that they expect sales to drop by on average 42 percent in the next three months, compared to the same period last year.”

04 RESPONSES TO THE SHOCK

As the COVID-19 pandemic creates unprecedented uncertainty, it is critical that MSMEs figure out how to adjust and sustain their businesses. The fact that consumers are increasingly resorting to online platforms during the lockdown has increased the importance of digital platforms and e-commerce for MSMEs.

In response to COVID-19 crisis, 9 percent of surveyed firms increased or started using the Internet, social media, specialized apps, and digital platforms in their daily business operations (Figure 4.1). About 5 percent of firms have invested in new equipment, software, and digital solutions and 11 percent have adjusted their product or service mix.

The share of medium firms adopting digital platforms, investing in digital solutions, and changing their product mix is larger than small firms (Figure 4.2).

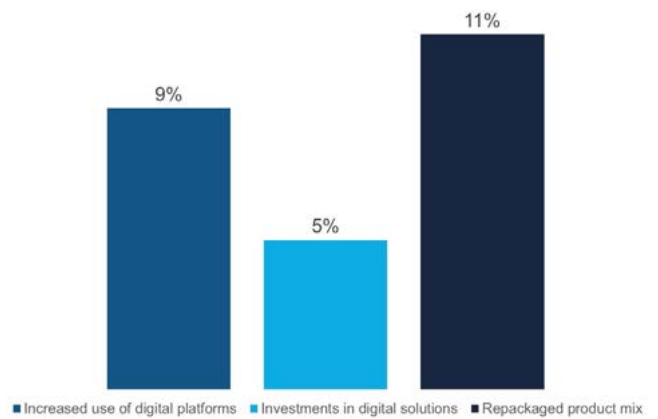


Figure 4.1: Responses to the COVID-19 shock

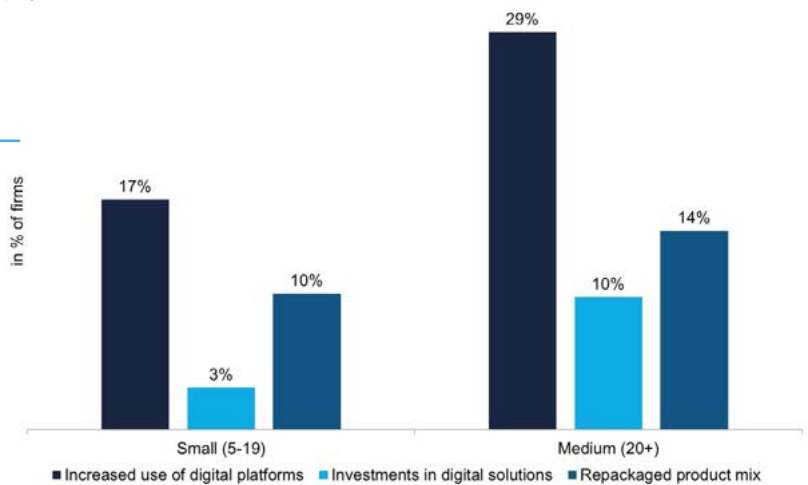


Figure 4.2: Responses to the COVID-19 shock: Size of firms

Young (0-4 years) and maturing (5-14 years) firms reported higher adjustments through increased use of the internet, social media, specialized apps and digital platforms, and repackaging product or service mix, compared to established firms (15+ years) (Figure 4.3).

“Women-owned MSMEs have significantly higher probability of using the internet and digital platforms compared to male-owned MSMEs.”

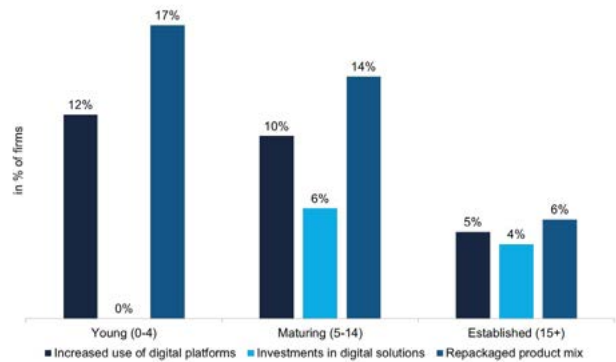


Figure 4.3: Response to COVID-19 shock: Age of firms

Figure 4.4 depicts the marginal effect of business characteristics on firms reporting increased use of the internet and digital platforms in response to COVID-19. Small and medium-sized firms are more likely to increase

the use of the internet and digital platforms compared to micro firms. Women-owned MSMEs have significantly higher probability of using the internet and digital platforms compared to male-owned MSMEs.

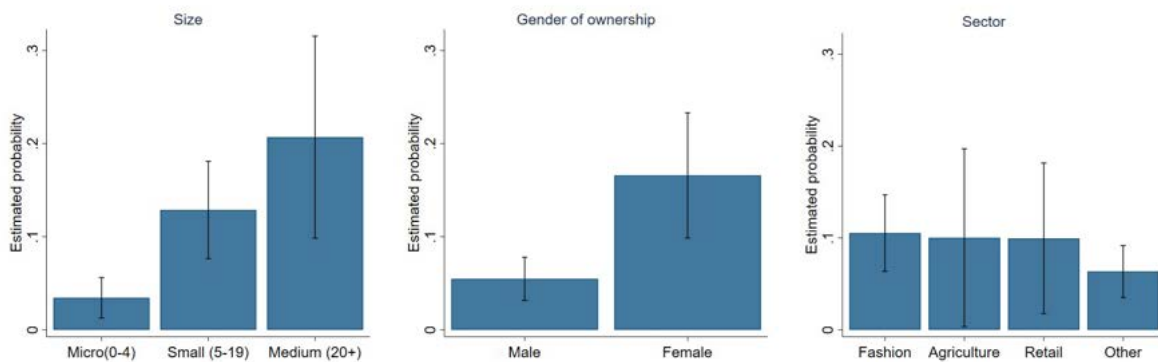


Figure 4.4: Marginal effect of business characteristics on increasing the use of digital platforms

Note: Fashion represents fashion and clothing, agriculture represents agriculture, fishing, or mining sector; retail represents retail or wholesale sector.

Other sectors represent the following: other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, and plastic

05 VULNERABILITY AND ACCESS TO FINANCE

As highlighted in the Introduction, the MSME sector is particularly affected by limited financial resources and borrowing capacity. MSMEs are less flexible and less resilient to massive shocks to demand and supply resulting from the pandemic. The COVID-19 pandemic and the subsequent lockdown measures have resulted in disruption of businesses.

Overall, 83 percent of interviewed firms reported they were making losses over the 30 days previous to the survey (Figure 5.1).

The fashion and clothing sector was most affected among the top three sectors; 92 percent of surveyed MSMEs in this sector were making losses (Figure 5.2).

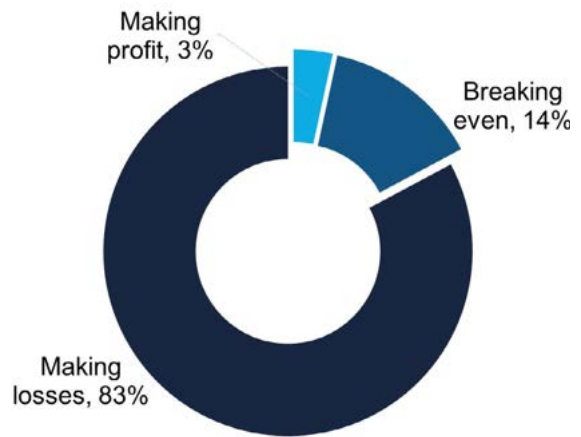


Figure 5.1: Status of MSME's income statement over the last 30 days

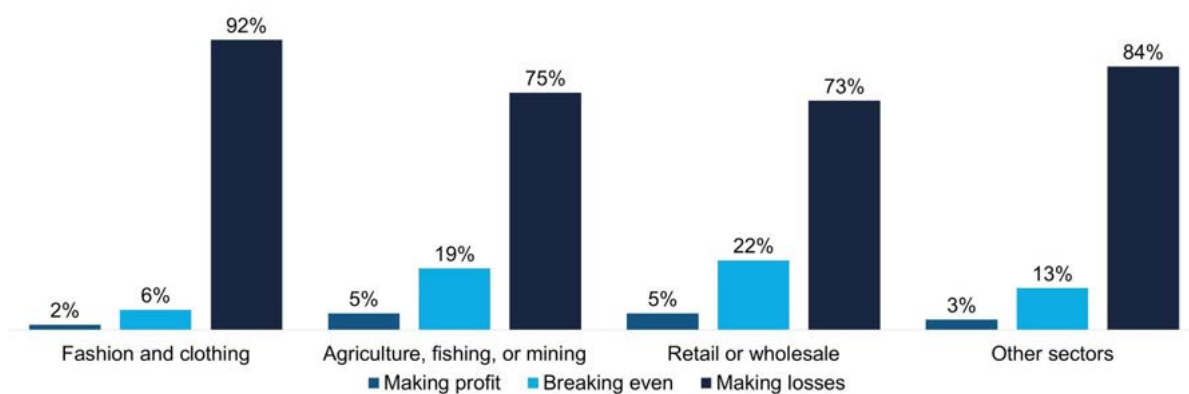


Figure 5.2: Status of MSME's income statement over the last 30 days: top three sectors

Note: Other sectors represent the following: other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, and plastic

Drop in profits over the 30 days prior to the survey was relatively more common for women-owned enterprises (Figure 5.3). **About 88 percent of MSMEs owned by women reported a decline in profit compared to 82 percent of MSMEs owned by men.**

96 percent of MSMEs that exported reported making losses, compared to 85 percent of businesses with no exports.

“Overall, 83 percent of interviewed firms reported they were making losses over the 30 days previous to the survey”

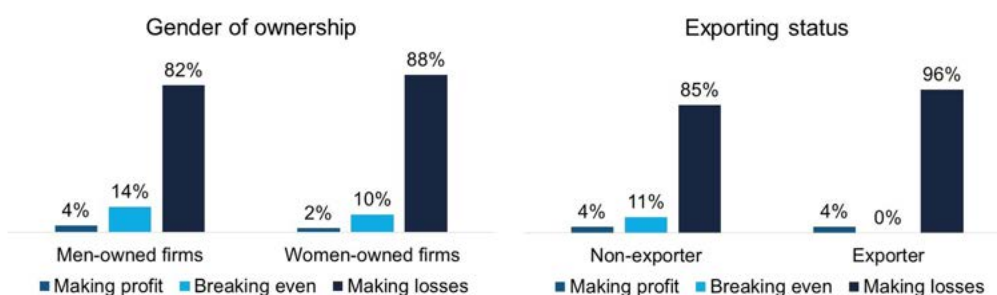


Figure 5.3: Status of income statement over the last 30 days by gender of ownership and exporting status

Interestingly, medium-sized firms were more affected in terms of profitability for the 30 days prior to the survey, compared to small and micro firms (Figure 5.4). This could be due to decrease in demand for non-essentials and disruption of domestic and international supply chains.

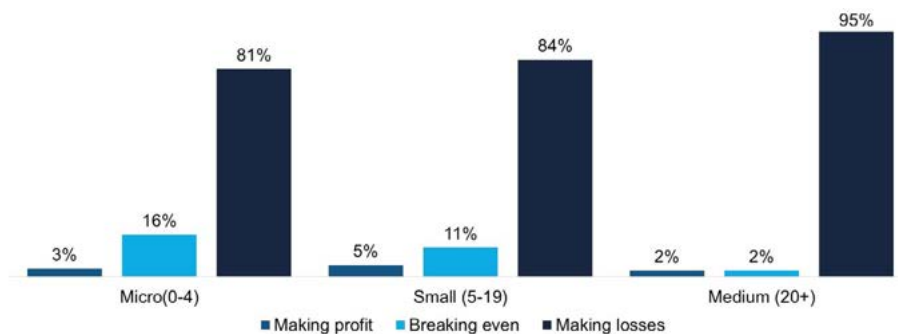


Figure 5.4: Status of income statement over the last 30 days by size of the firms

49 percent of interviewed micro firms reported that they didn't have enough liquidity to sustain themselves for the next three months, compared to 40 percent and 33 percent, respectively, of small and medium-sized firms (Figure 5.5).

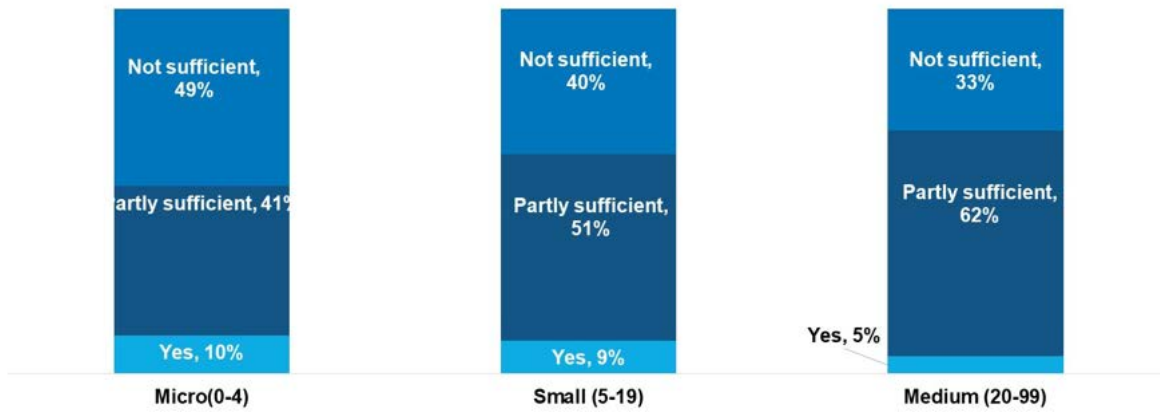


Figure 5.5: Sufficient liquidity to continue business operations over the next three months

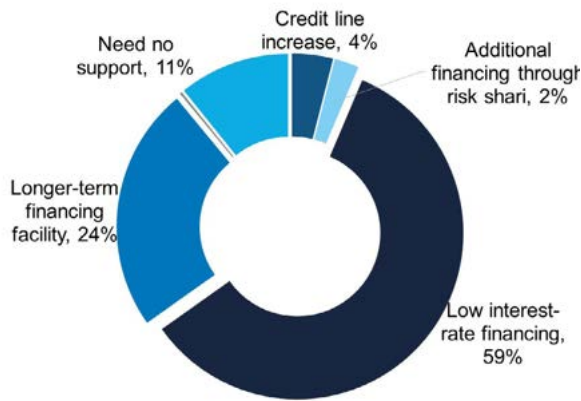


Figure 5.6: Most effective financial support

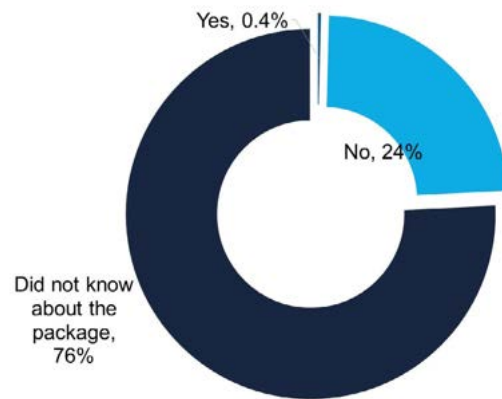


Figure 5.7: Proportion of firms that received financing from FIs under the existing COVID-19 package

Overall, 59 percent of interviewed MSMEs reported that low interest-rate financing would be the most effective financial support to mitigate the crisis (Figure 5.6). **Only 0.4 percent firms reported they received financial support from banks under the COVID-19 package.** Lack of awareness of available schemes offered by financial institutions was another major concern.

Interestingly, 69 percent of respondents reported that they require less than TK5 lakh (\$5,894)³¹ to sustain and recover their business operations in the next three months (Figure 5.8). One reason for this could be that 65 percent of surveyed firms were micro firms. **It is evident from the distribution across size of the firms, that larger-sized firms require higher financial support in the coming days (Figure 5.9).**

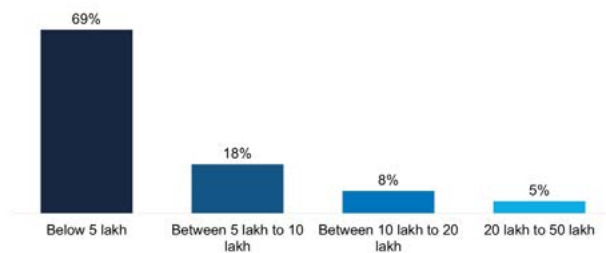


Figure 5.8: Expectations on financing need to revive operations in the next three months (in TK)

[Below TK5 lakh' equivalent to 'Below \$5,894'; 'Between TK5 lakh to 10 lakh' equivalent to 'Between \$5,894 to 11,789'; 'Between TK 10 lakh to 20 lakh' equivalent to '\$11,789 to 23,577'; 'TK 20 lakh to 50 lakh' equivalent to '\$23,577 to 58,943']

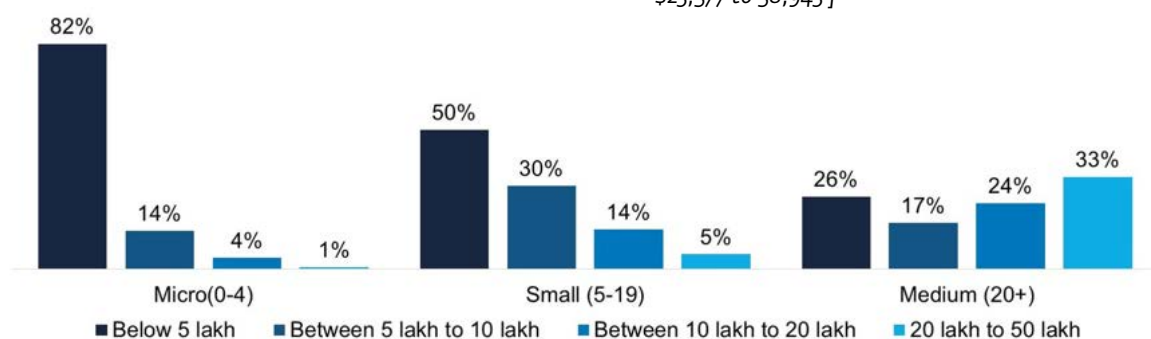


Figure 5.9: Expectations on financing need to revive operations in the next three months (In TK): Size of firms

['Below TK5 lakh' equivalent to 'Below \$5,894'; 'Between TK5 lakh to 10 lakh' equivalent to 'Between \$5,894 to 11,789'; 'Between TK10 lakh to 20 lakh' equivalent to '\$11,789 to 23,577'; 'TK20 lakh to 50 lakh' equivalent to '\$23,577 to 58,943']

It can be observed from the expected financial support requirements for the top three sectors that firms in the fashion and clothing sector reported fewer requirements for small cash (below TK5 lakh, equivalent to \$5,894) injection compared to firms in agriculture, fishing, or mining and firms in retail or wholesale (Figure 5.10).

31 Currency conversion rate from TK to US\$ was used as on September 22, 2020 (\$1 = TK84.85)

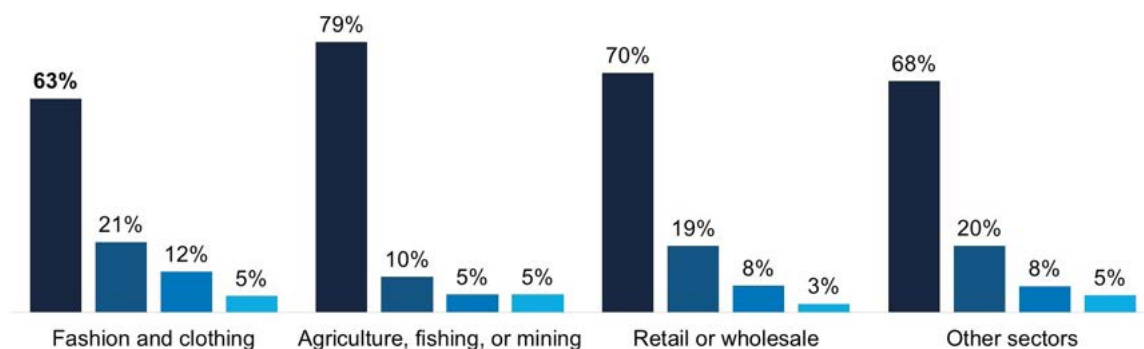


Figure 5.10: Expectations on financing need to revive operations in the next three months (in TK): Top three sectors

[Note: Other sectors represent the following: other manufacturing, construction or utilities, transportation and storage, food services, information and communication, other services, leather, light engineering, and plastic

USD equivalent of chart levels: 'Below TK 5 lakh' equivalent to 'Below USD 5,894'; 'Between TK 5 lakh to 10 lakh' equivalent to 'Between USD 5,894 to 11,789'; 'Between TK 10 lakh to 20 lakh' equivalent to 'USD 11,789 to 23,577'; 'TK 20 lakh to 50 lakh' equivalent to 'USD 23,577 to 58,943']

Overall, 63 percent of interviewed firms said they would require financial support for more than one year to revive business operations (Figure 5.11). 63 percent of the surveyed firms reported that lower revenue was a financial constraint, while 39 percent of firms said this of utilities payments. Interestingly, payment of taxes was reported least as a financial constraint in the survey.

micro-sized firms. Interestingly, fashion and clothing, retail or wholesale, and other sector businesses are more likely to face lower revenue as a financial constraint compared to firms in the agriculture, fishing, or mining sector.

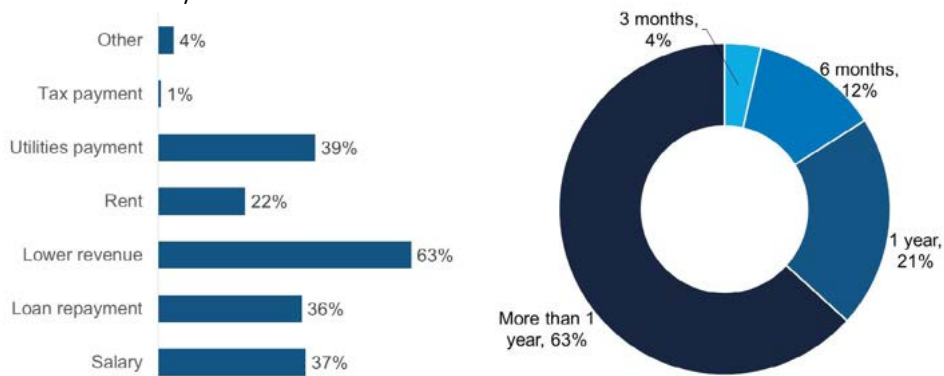


Figure 5.11: Financial constraints faced by MSMEs and duration of support required

Figure 5.12 depicts the effect of business characteristics on probability of firms reporting 'lower revenue' as one of the two most important financial constraints. Small and medium-sized firms are less likely to report lower revenue as a constraint compared to

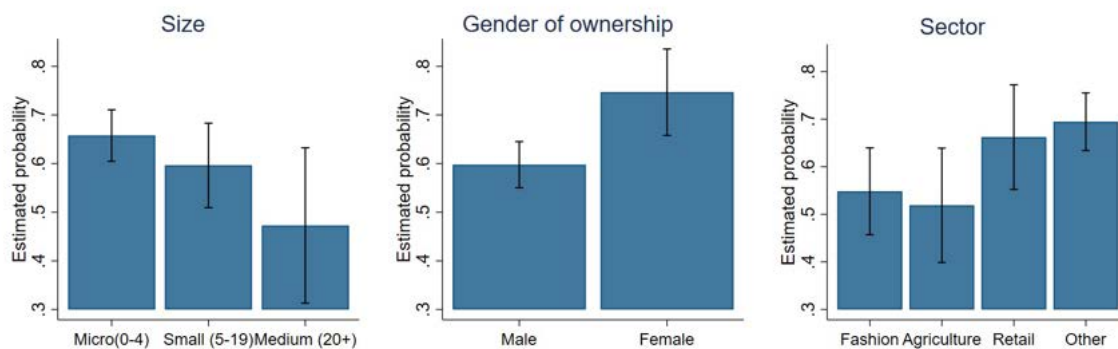


Figure 5.12: Marginal effect of business characteristics on 'lower revenue' reported as a financial constraint

Table 5.1 summarizes the results of Appendix 23. The business characteristics, namely, size, rural/urban status, age, sector, and gender of ownership were used as explanatory variables to estimate probabilities of firms reporting different types of financial constraints. It can

be observed that small and medium-sized firms are more likely to face payment of salaries as a financial constraint compared to the micro firms. **Salaries and rents are found significantly affecting businesses in urban areas.**

Business characteristics	Salaries	Loan repayment	Lower revenue	Rents	Utilities payment	Taxes	Other
Size	(+) Small (+) Medium		(-) Medium		(-) Small		(+) Medium
Sector	(-) Fashion and clothing (-) Retail or wholesale (-) Other sectors		(+) Other sectors	(+) Fashion and clothing (+) Retail or wholesale (+) Other sectors			
Region	(+) Urban		(-) Urban	(+) Urban	(-) Urban		
Age of business							
Gender of ownership			(-) Women-owned	(+) Women-owned			

Note: (a) Base levels for size is micro (0-4); sector is agriculture, fishing, or mining; region is rural; age of business is young (0-4); gender of ownership is male

(b) Empty cells reflect a statistical non-significant effect

Table 5.1: Estimated effect of business characteristics on most important financial constraints

06 THE ROLE OF POLICY

Firms were asked to report up to three most-needed policies (in no particular rank) that would support their businesses through the COVID-19 crisis.

Cash transfer, access to new credit, and loans with subsidized interest rates were reported as the preferred combination of most-needed policies (Figure 6.1).

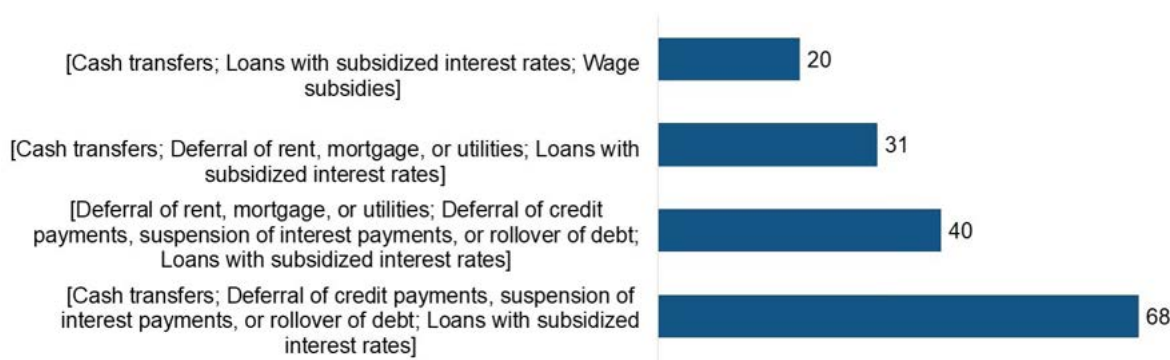


Figure 6.1: Frequency distribution of top five reported tuples for most-needed policies

The marginal effect of a firm’s characteristics on the probability of reporting various policies have been estimated using Probit regression models for each policy. In the models, business characteristics—namely, size, rural urban status, sector, region, age, and gender of ownership—were employed as the explanatory variables. In terms of the response variable, “policy support needed (yes=1; no=0)” was used in the model. The Probit model provided the estimated probability of reporting various policies (Appendix 19).

Figure 6.2 uses the above results. The figure presents the effect of sector on probability of reporting ‘loans with subsidized interest rates’ among the top three most-needed policy support. It can be observed that **businesses in fashion and clothing and in retail or wholesale are more likely to opt for loans with subsidized interest rates, compared to those in agriculture, fishing, or mining.**

Firms that face reduction in cash flow (shock_cash) are more likely to demand loans with subsidized interest rates

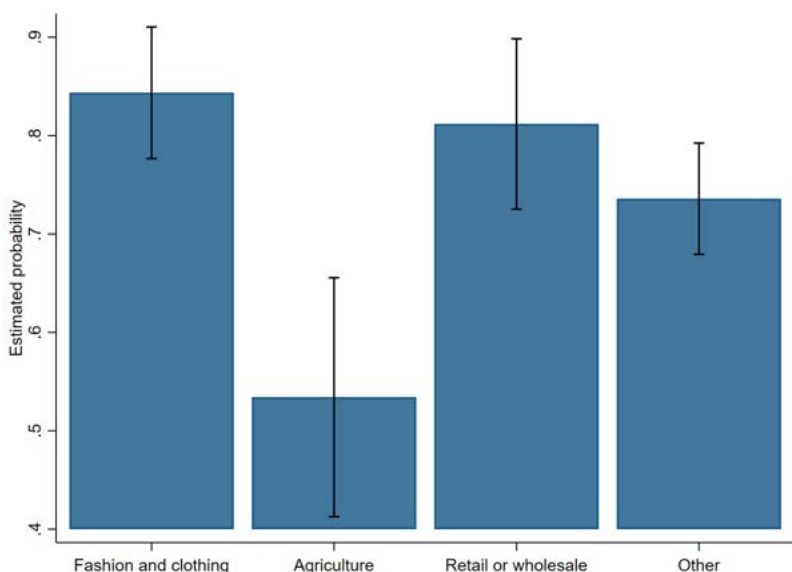


Figure 6.2: Marginal effect of sector on loans with subsidized interest rates reported as most-needed support

Table 6.1 summarizes the results of Probit regression models as discussed above, where the direction of significant regression coefficients has been highlighted in the table. It can be observed that different characteristics

of businesses (size, sector, region, age, and gender of ownership) significantly affect the choice of policy support.

Business characteristics	Monetary transfer	Deferral of rent	Deferral of loan payment	Access to new credit	Loans with subsidized rates	Fiscal exemptions	Tax deferral	Wage subsidies	Others	Has received support
Size	(-) Medium	(+) Small (+) Medium	(+) Medium		(+) Small			(+) Small (+) Medium		(+) Medium
Sector	(-) Retail or wholesale (-) Other sectors	(+) Retail or wholesale		(-) Retail or wholesale	(+) Fashion and clothing (+) Retail or wholesale (+) Other sectors			(-) Fashion and clothing (-) Other sectors		
Region	(-) Urban	(+) Urban		(-) Urban	(-) Urban			(+) Urban		
Age of business		(-) Established	(+) Maturing (+) Established							
Gender of ownership		(-) Women-owned		(-) Women-owned		(+) Women-owned				

Note: (a) Base levels for size is micro (0-4); sector is agriculture, fishing, or mining; region is rural; age of business is young (0-4); gender of ownership is male

(b) Empty cells reflect a statistical non-significant effect

Table 6.1: Estimated effect of business characteristics on most-needed policies

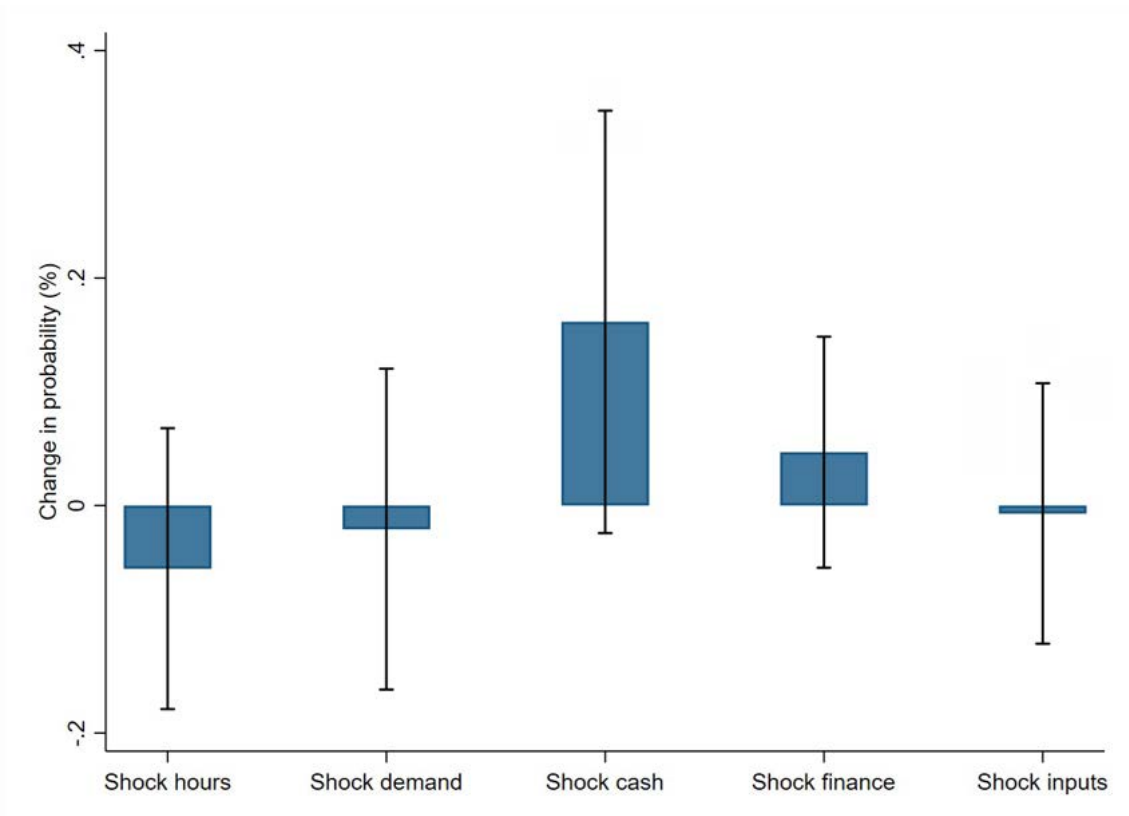


Figure 6.3: Marginal effect of shock on loans with subsidized interest rates reported as most-needed support

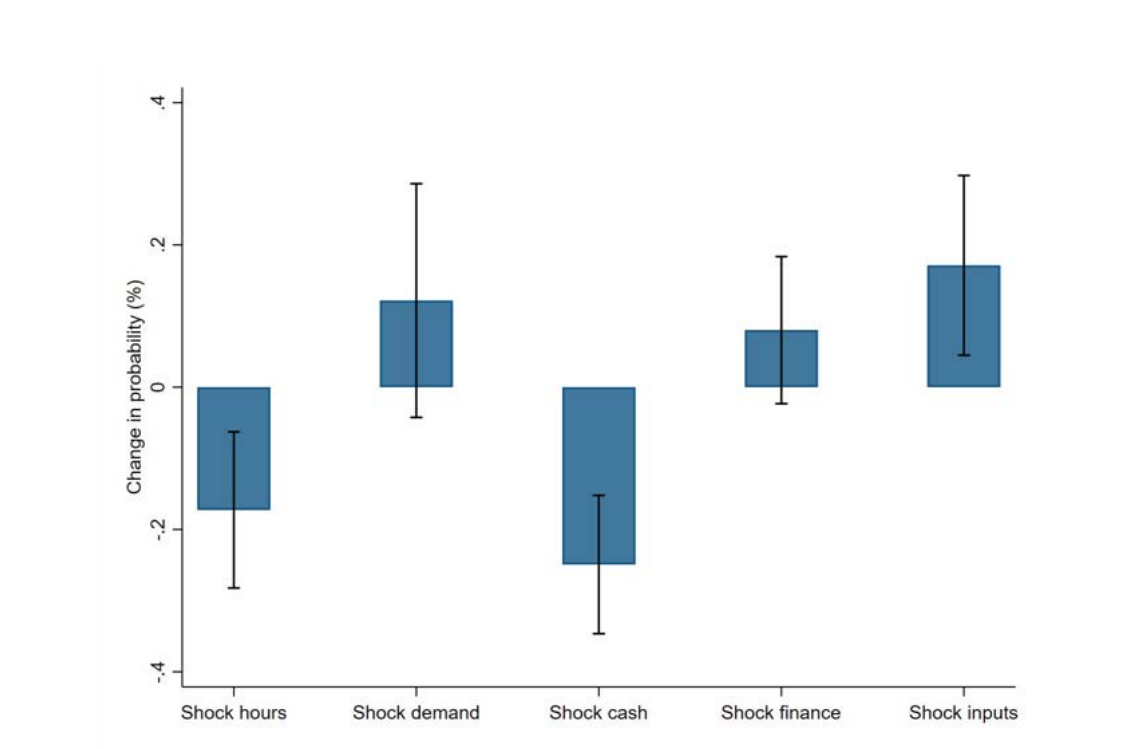


Figure 6.4: Marginal effect of shock on monetary transfer reported as most-needed support

Figure 6.3 and Figure 6.4 show the effect of each shock on the probability of demanding 'loans with subsidized interest rates' and 'monetary transfers', respectively, as the most-needed policy in response to the crisis.

Firms that face reduction in cash flow (shock_cash) are more likely to demand loans with subsidized interest rates.

However, this result is not statistically significant within the 95 percent confidence interval. **Interestingly, such firms are less likely to opt for monetary transfers as the most-needed policy and this result is statistically significant.** Reduction in

working hours is also negatively associated with the probability of choosing monetary transfers, however the effect of this shock (shock_hours) is lower than that of shock_cash. Reduction in supply of inputs is found to have a significant and positive effect on the probability of firms opting for monetary transfers.

Of all surveyed firms, only 2 percent have received any government measures in response to the the outbreak of COVID-19.

This indicates that policy support is not reaching a large number of its target population. **The proportion is even lower for micro firms, which stands at 1 percent.** The proportion is relatively larger for medium firms

compared to micro firms, albeit it reaches a very small number of medium firms. Interestingly, this difference is found to be statistically significant as evident in Table 6.1.

Of the firms that have not received government measures, 61 percent reported that they are not aware of the policy measures implemented by government (Figure 6.6).³² This proportion is even higher for micro firms at 65 percent (Figure 6.7). **Low access to government support can also be partially explained by the fact that 14 percent of businesses have not received any national or local measure, despite applying for them.** The proportion is relatively higher for medium firms with 21 percent reporting to not having received any kind of support despite applying for them. The average value of this percentage for all firms across different sizes stands at 16 percent. This indicates that there exists a wide gap between policy formulation and policy implementation in the country.

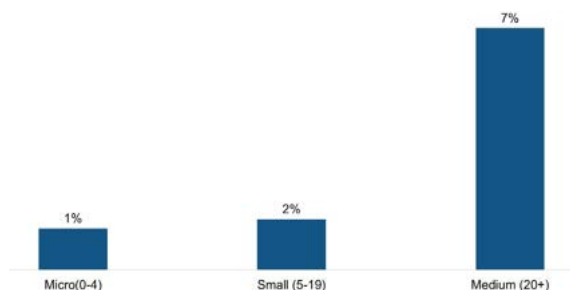


Figure 6.5: Proportion of firms receiving government measures

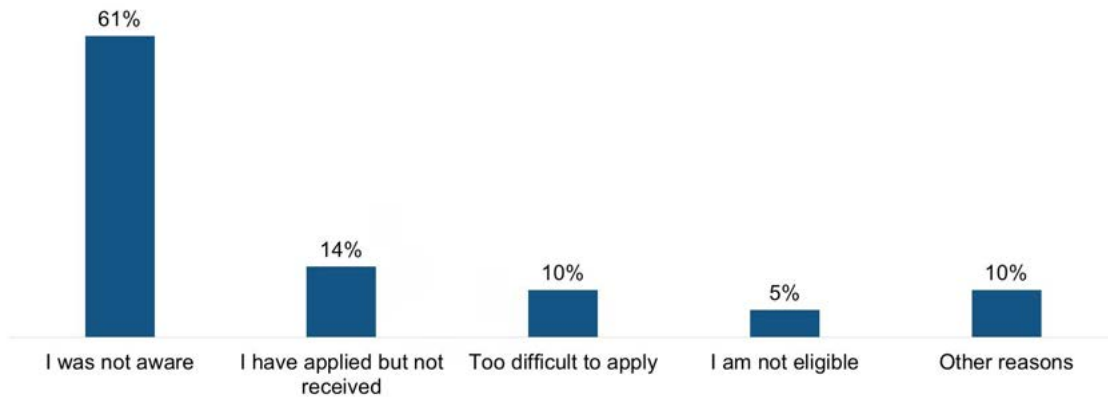


Figure 6.6: Proportion of firms by reasons for not receiving any support from government

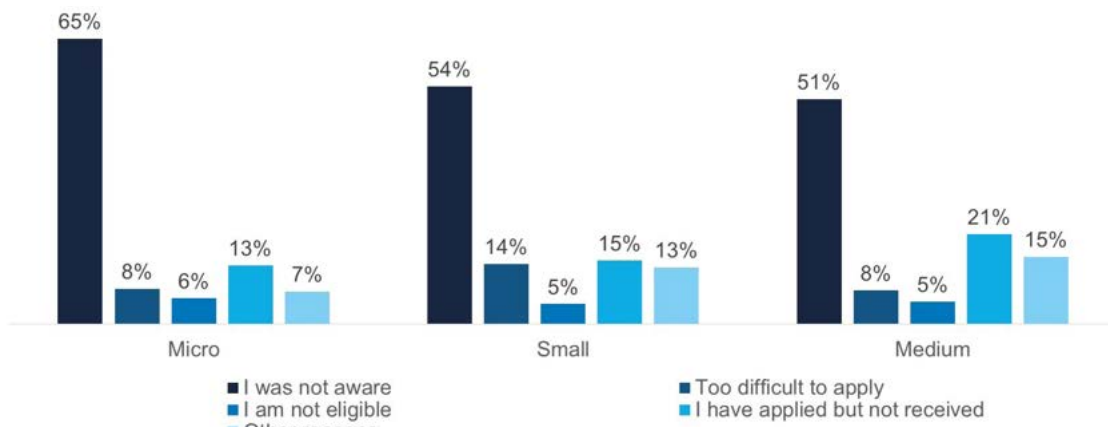


Figure 6.7: Proportion of firms by size and reasons for not receiving any government support

Out of 47 responses in ‘other reasons’ category, the distribution as follows:

“Didn’t apply” (38); “Applied online but didn’t get any response” (4); “Heard about it but didn’t receive it” (4); and “I don’t think there was any support in our village” (1)

33 n=491 as 9 firms have received local or national government measures; Government measures include cash transfer, deferral of rent, mortgage, or utilities, deferral of credit payments, suspension of interest payments, or rollover of debt, access to new credit, loans with subsidized interest rates, fiscal exemptions or reductions, tax deferral, and wage subsidies.

07 CONCLUSION

We have looked at the perceived impact of COVID-19 on MSMEs in Bangladesh. The Business Pulse Survey, which was conducted between June 4 and 15 and drew responses from 500 MSMEs, shows that around 21 percent of firms have temporarily shut their businesses due to the pandemic. The lockdown had further repercussions as 94 percent of firms reported declining sales figures. The same figure for women-owned MSMEs stood at 95 percent. In terms of likely exposure of workers, the survey found that 70 percent of workers were in a vulnerable position as they were employed in businesses that were either temporarily closed or were partially open.

Firms were asked to mention up to three most-needed policies (in no particular rank) that would support their businesses during the COVID-19 crisis. Cash transfers and access to new credit and loans with subsidized interest rates were the top two initiatives in the perception of the firms surveyed.

In terms of repaying existing loans, only 24 percent of firms reported that they would be able to continue to pay out their EMIs on a regular basis. In terms of financial constraints, the firms reported 'lower revenue' and 'utilities payments' (in no particular order) to be the topmost constraints they were facing. In terms of credit and access to finance,

the firms were in financial distress as 83 percent made losses during the 30-day period prior to the survey. Almost half the firms interviewed reported that they didn't have sufficient liquidity to sustain operations for the next three months, with small and medium firms faring slightly better than micro firms. Further, the firms unanimously reported that they were not comfortable with making credit repayments at the interest rates at which they received the loans and that it would be preferable if the rates of interest could be subsidized to 5 percent.

The survey shows that more than 80 percent of firms have not used or increased use of digital platforms in their businesses in response to the COVID-19 outbreak. This shows that financial inclusion is an area that can be looked at.

ANNEXURE

A.1. Assumptions and Caveats

Appendix 1: Survey assumptions and caveats

Assumptions	
1	The reference period for COVID-19 outbreak has been taken from March 26, 2020, the date from which the lockdown was imposed.
2	Classification of MSMEs by size was done on the basis of the reference document provided by IFC. MSMEs were categorized on the basis of their number of workers into micro (0-4), small (5-19), medium (20-99), and large (100+) firms. Most firms in the business pulse survey in Bangladesh were micro, small, or medium (496 out of 500). However, during the survey a few large firms were also reported (n=4). Given the relatively small number of large firms, they were clubbed into the 'medium' category at the analysis stage. The final classification followed in this report is Micro: 0 to 4 workers; Small: 5 to 19 workers; Medium: 20+ workers.
3	The probabilities for the three scenarios, namely, regular, optimistic, and pessimistic in module COV-3 was adjusted so that the sum of probabilities would be 1. Since the question on expected probabilities for the scenarios was subjective in nature, the sum of probabilities associated with the three scenarios was not 1 in the response during survey. The probabilities of the scenarios were adjusted during the analysis stage.
Caveats	
1	The final sample is not representative of MSME units in Bangladesh at the national or division level. Additionally, the sample size of 500 units is affixed by the terms of reference and not by the usual power calculation or setting the margin of errors with level of significance for estimating any parameters or testing any hypothesis. It is 'as it is' analysis and effects sizes have been calculated using statistical modelling for the data collected at the given point of time. The interpretation of results should not warrant any representation at country, division, or sector level.
2	The sample frame prepared for this survey was partial; not all MSMEs in Bangladesh were covered in the sample frame. Hence, representation of sample units for population data is not ensured. Calculation of sample weights is not feasible for the current assignment.
3	The COVID-19 situation is evolving on a daily basis and its impact is multi-dimensional in nature. The responses for various questions may change if the respondents are re-approached with the same survey questionnaire. We faced similar situations during our back-check exercise for the COV-3 module (Expectation and Uncertainty), in particular. Respondents changed their responses a number of times. For example, they reported different responses on change in sales during the first and second back-checks. Hence, this report presents findings based on data at a particular point in time only.
4	The data used to prepare the sample frame was of 2018 and earlier. During the survey, we observed that many owners reported to have changed their businesses.
5	Categorization of firms into different sectors was done on the basis of responses given for the type of product or service representing the largest share of annual sales for the firm.

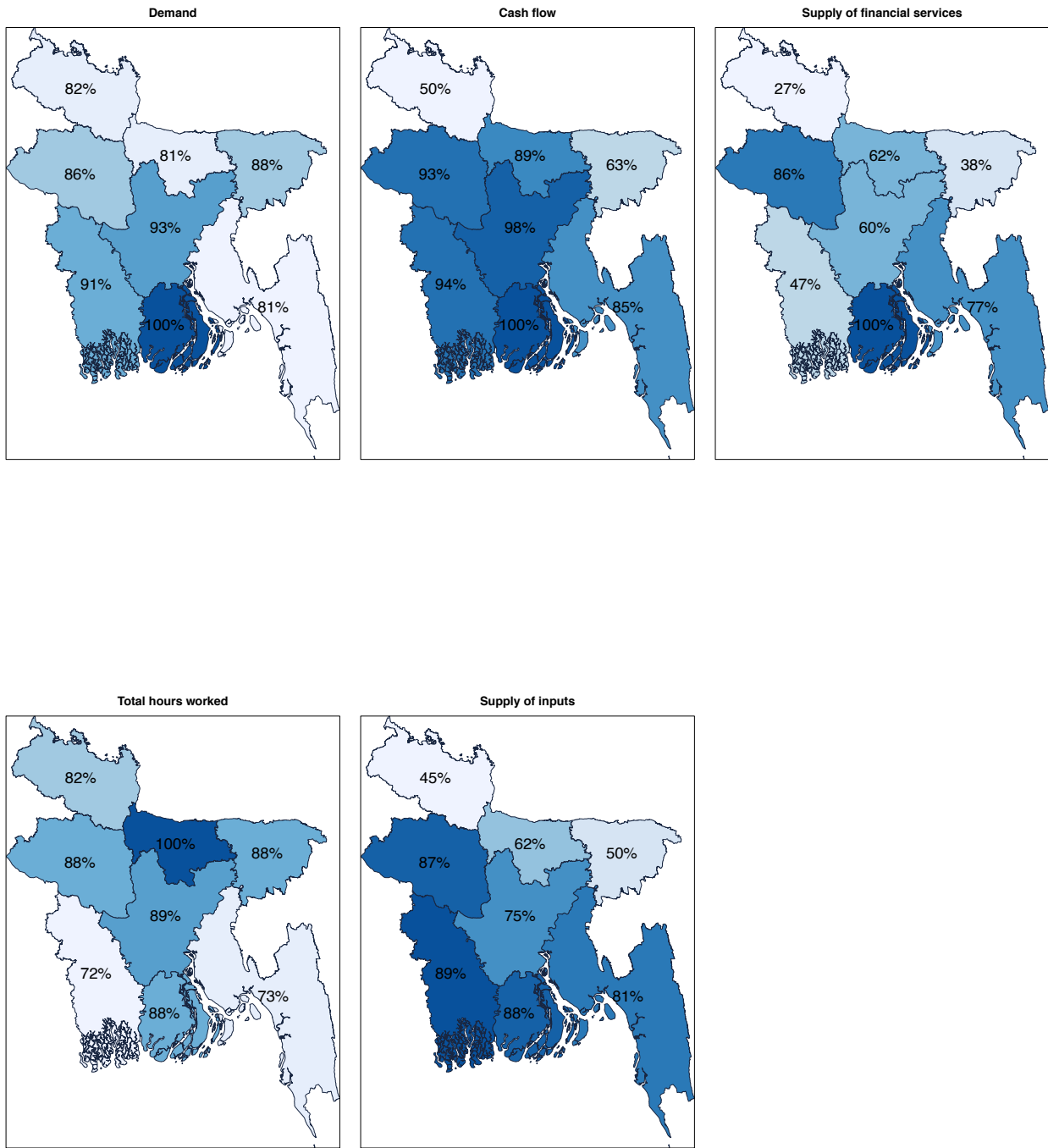
A.2. Description of Derived Variables and Some Additional Results

Appendix 2: Description of the derived variables used in the analysis

Sl.No.	Variable name	Description	Levels/details
1	size	Size of the firms	1-Micro: 0-4 full-time workers; 2-Small: 5-19 full-time workers; 3-Medium: 20+ full-time workers
2	exporter	Exporting status of the firms	0-Non-exporter: Share of exports=0; 1-Exporter: Share of exports>0
3	gender	Gender of ownership of the firms	0-Male; 1-Female
4	sector	Top 3 sectors in the survey	1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other sectors*
5	age_bin	The age of the establishment	1-Young (0-4); 2-Maturing (5-14); 3-Established (15+)
6	change_sales	Change in sales in 30 days prior to survey date	No level defined
7	shock_hour	Decrease in total working hours per week in the 30 days prior to survey date	0-(Increase; remain the same) 1-decrease
8	shock_demand	Decrease in demand for product and services in the 30 days prior to survey date	0-(Increase; remain the same) 1-decrease
9	shock_cash	Decrease in cash flow in the 30 days prior to survey date	0-(Increase; remain the same) 1-decrease
10	shock_finance	Decrease in availability of financial services in the 30 days prior to survey date	0-(Increase; remain the same) 1-decrease
11	Shock_input	Decrease in supply of inputs in the 30 days prior to survey date	0-(Increase; remain the same) 1-decrease

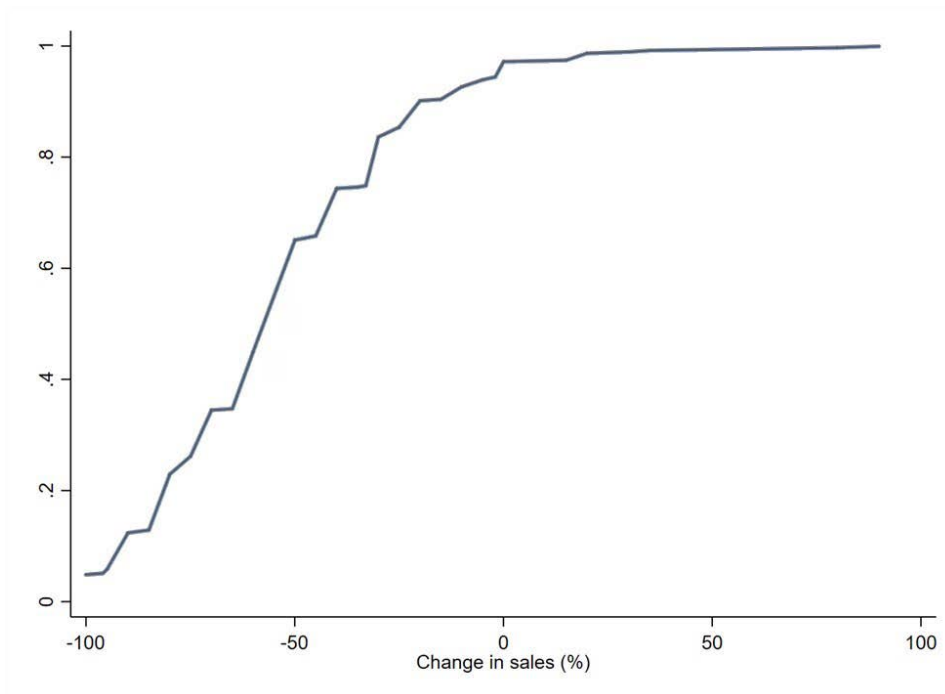
Note: Other sector includes the following sectors: other manufacturing; construction or utilities; transportation and storage; food services; information and communication; other services; leather; light engineering; plastic

Appendix 3: Proportion of firms experiencing shocks by division



Note: Out of 500 surveyed firms shock is reported by 401 firms

Appendix 4: Estimated cumulative distribution of change in sales



Appendix 5: Weeks that business can remain open in the current circumstances (open and partially-open businesses only)

Business Characteristics	Average	Median
Micro(0-4)	25	12
Small (5-19)	26	14
Medium (20+)	40	52
Men-owned	26	12
Women-owned	24	12
Fashion and clothing	33	52
Agriculture, fishing, or mining	21	9
Retail or wholesale	34	52
Other	22	11
Rural	25	11
Urban	27	18
Young (0-4)	22	12

Maturing (5-14)	25	12
Established (15+)	28	20
Exporter	35	48
Non-exporter	27	14

Note: Other sector includes the following sectors: other manufacturing; construction or utilities; transportation and storage; food services; information and communication; other services; leather; light engineering; plastic

Appendix 6: Number of workers affected by margin of adjustment (Businesses open or temporarily closed)

Business Characteristics	Hired	Fired	Absence without pay	Absence with pay	Wages cut	Hours cut
Total	702	5,227	450	7,212	2,662	1,685
Micro(0-4)	207	201	40	1,259	1,282	475
Small (5-19)	118	194	365	922	373	386
Medium (20+)	377	4,832	45	5,031	1,007	824
Men-owned	681	3,921	187	4,289	1,159	1,196
Women-owned	17	1,299	263	2,903	1,355	240
Fashion and clothing	4	1,931	229	3,722	1,756	488
Agriculture, fishing, or mining	324	145	21	110	49	70
Retail or wholesale	1	8	4	42	61	155
Other	373	3,143	196	3,338	796	972
Rural	329	306	60	433	328	465
Urban	373	4,921	390	6,779	2,334	1,220
Young (0-4)	366	46	253	84	365	398
Maturing (5-14)	104	1,913	125	3,062	1,949	751
Established (15+)	232	3,268	72	4,066	348	536
Exporter	3	3,281	55	3,411	474	314
Non-exporter	492	1,745	355	2,542	906	896

Note: Other sector includes the following sectors: other manufacturing; construction or utilities; transportation and storage; food services; information and communication; other services; leather; light engineering; plastic

Appendix 7: Expected time to resume operations (proportion of temporarily closed business)

Business Characteristics	Less than 2 weeks	2-4 weeks	1-2 months	2-6 months	Don't know
Total	16%	11%	22%	15%	36%
Micro(0-4)	12%	12%	25%	6%	45%
Small (5-19)	23%	11%	18%	27%	20%
Medium (20+)	9%	9%	18%	9%	55%
Men-owned	13%	11%	26%	16%	34%
Women-owned	22%	13%	13%	13%	41%
Fashion and clothing	18%	20%	11%	9%	42%
Agriculture, fishing, or mining	30%	10%	40%	10%	10%
Retail or wholesale	.%	.%	20%	.%	80%
Other	13%	4%	28%	24%	30%
Rural	25%	14%	30%	7%	25%
Urban	10%	10%	16%	21%	44%
Young (0-4)	10%	15%	15%	20%	40%
Maturing (5-14)	19%	13%	21%	10%	37%
Established (15+)	15%	6%	26%	21%	32%
Exporter	.%	.%	43%	14%	43%
Non-exporter	23%	13%	15%	25%	25%

Note: Other sector includes the following sectors: other manufacturing; construction or utilities; transportation and storage; food services; information and communication; other services; leather; light engineering; plastic

A.3. Results from OLS and Probit Regressions

Appendix 8: Definition of variables used to estimate the effect of business characteristics on change in sales and shocks

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
OLS	Reported change in sales	Continuous variable varying from -100 to 90)	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Reduction in operating hours	Decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Reduction in demand	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
Probit	Reduction in cash flow	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Reduction in finance available	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Reduction in supply of inputs	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Appendix 9: Estimated effect of business characteristics on change in sales and shocks

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS (1)	Probit (2)	Probit (3)	Probit (4)	Probit (5)	Probit (6)
Business Characteristics	Reported change in sales	Reduction in operating hours	Reduction in demand	Reduction in cash flow	Reduction in finance available	Reduction in supply of inputs
Micro (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Small (5-19)	-0.023 (3.768)	-0.4 (0.227)	-0.494* (0.206)	-0.141 (0.235)	0.147 (0.183)	0.0857 (0.198)
Medium (20+)	4.172 (5.746)	-0.599 (0.349)	0.431 (0.472)	0.03 (0.396)	-0.109 (0.269)	-0.356 (0.277)
Fashion and clothing	-35.15*** (5.067)	1.410*** (0.292)	0.665* (0.283)	0.462 (0.319)	-0.708** (0.257)	-0.29 (0.27)
Agriculture	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Retail or wholesale	-12.46* (5.133)	0.915*** (0.27)	0.618* (0.284)	0.147 (0.297)	-0.967*** (0.258)	-0.745*** (0.262)
Other	-25.42*** (4.473)	1.624*** (0.26)	0.878*** (0.249)	0.592* (0.279)	-0.512* (0.234)	-0.243 (0.241)
Rural	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)

Urban	-1.556	0.128	-0.0521	-0.195	0.151	0.158
	(3.133)	(0.207)	(0.194)	(0.205)	(0.149)	(0.159)
Young (0-4)	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)
Maturing (5-14)	-0.72	-0.411	0.148	0.187	-0.266	-0.0536
	(3.996)	(0.295)	(0.241)	(0.239)	(0.188)	(0.194)
Established (15+)	-6.663	-0.262	0.206	0.357	-0.171	0.073
	(4.244)	(0.307)	(0.252)	(0.262)	(0.201)	(0.209)
Men-owned	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)
Women-owned	10.79**	0.0435	0.191	0.132	-0.567**	-0.0991
	(4.155)	(0.284)	(0.271)	(0.289)	(0.188)	(0.206)
Constant	-29.27***	0.477	0.557*	0.885**	1.223***	1.041***
	(5.186)	(0.326)	(0.281)	(0.3)	(0.265)	(0.267)
Observations	386	388	388	388	388	388
Adjusted R-squared	0.127					
Pseudo R-squared	0.22	0.086	0.034	0.065	0.038	
Standard errors in parentheses						
* p<0.05	** p<0.01	*** p<0.001				

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 10: Definition of variables used to estimate effect of shocks on change in sales in top three sectors

Name of model	Response variable (Y)	Definition of Y			Explanatory variables		
OLS	Reported change in sales (overall)	Reported change in sales all the sectors [Continuous variable varying from -100 to 90]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes, 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
OLS	Reported change in sales (Fashion and clothing)	Reported change in sales in Fashion and clothing sector [Continuous variable varying from -100 to 35]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes, 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
OLS	Reported change in sales (Agriculture, Fishing or Mining)	Reported change in sales in Agriculture, Fishing or Mining sector [Continuous variable varying from -90 to 80]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes, 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]

Name of model	Response variable (Y)	Definition of Y	Explanatory variables				
OLS	Reported change in sales (Agriculture, Fishing or Mining)	Reported change in sales in Agriculture, Fishing or Mining sector [Continuous variable varying from -90 to 80]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes, 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
OLS	Reported change in sales (Retail or wholesale)	Reported change in sales in Retail or wholesale sector [Continuous variable varying from -90 to 30]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes, 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]

Appendix 11: Estimate effect of shocks on change in sales in top three sectors

Business Characteristics	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)
	Reported change in sales	Probit (2)	Probit (3)	Probit (4)	Probit (5)
Reduction in operating hours =0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)
Reduction in operating hours =1	-9.351*	-11.00	10.61	-8.523	-6.155
	(3.904)	(9.652)	(7.693)	(7.367)	(9.780)
Reduction in demand =0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)
Reduction in demand =1	-26.33***	-26.46**	-11.02	-24.01**	-31.73***
	(4.272)	(9.684)	(8.364)	(7.918)	(7.811)
Reduction in cash flow =0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)
Reduction in cash flow =1	-17.19***	-41.50***	-21.61	-1.863	-12.02
	(4.861)	(10.57)	(11.62)	(7.887)	(7.797)
Reduction in finance available =0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)
Reduction in finance available =1	-6.772*	-12.47*	-0.0857	-15.94**	-6.345
	(2.934)	(5.038)	(10.76)	(5.128)	(4.334)

Business Characteristics	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)
	Reported change in sales	Probit (2)	Probit (3)	Probit (4)	Probit (5)
Reduction in availability of inputs =0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)
Reduction in availability of inputs =1	-13.53***	-9.241	-18.73	-9.302	-18.00***
	(3.414)	(6.373)	(11.59)	(5.449)	(5.220)
Constant	10.14	22.43*	4.029	1.125	9.375
	(5.264)	(10.72)	(13.69)	(10.36)	(10.23)
Observations	398	83	66	72	177
Adjusted R-squared	0.289	0.491	0.080	0.308	0.310
Standard errors in parentheses					
*p<0.05	** p<0.01	*** p<0.001"			

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 12: Definition of variables used to estimate the effect of business characteristics on change in employment structure

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
OLS	Hired workers	Whether the business hired in the last 30 days? [Discrete variable:1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Granted absence without pay	Whether the business granted absence without pay in the last 30 days? [Discrete variable:1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Granted absence with pay	Whether the business granted absence with pay in the last 30 days? [Discrete variable:1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
Probit	Wages cut	Whether the business reduced wage of workers in the last 30 days? [Discrete variable:1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Hours cut	Whether the business reduced working hours of workers the last 30 days? [Discrete variable:1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Appendix 13: Estimated effect of business characteristics on change in employment structure

Business Characteristics	Probit (1)	Probit (2)	Probit (3)	Probit (4)	Probit (5)	Probit (6)
	Hired workers	Fired workers	Workers granted	Probit (4)	Probit (5)	Probit (6)
Micro (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Small (5-19)	0.09 (0.246)	0.124 (0.164)	0.461* (0.211)	0.345* (0.149)	0.0246 (0.146)	-0.271 (0.147)
Medium (20+)	0.721* (0.356)	0.680** (0.24)	0.099 (0.378)	0.613* (0.238)	0.399 (0.229)	0.0993 (0.233)
Fashion and clothing	-1.798*** (0.349)	0.0978 (0.226)	-0.374 (0.329)	0.846*** (0.217)	0.413 (0.214)	0.531* (0.209)
Agriculture	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Retail or wholesale	-1.722*** (0.427)	-0.664* (0.286)	-0.815 (0.484)	-0.457 (0.272)	0.259 (0.234)	1.387*** (0.239)
Other	-1.306*** (0.266)	-0.480* (0.218)	-0.0701 (0.29)	-0.0798 (0.21)	0.772*** (0.2)	1.096*** (0.196)
Rural	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)

Urban	-0.307 (0.246)	0.339* (0.156)	0.191 (0.218)	0.378** (0.143)	-0.272* (0.132)	0.0809 (0.133)
Young (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Maturing (5-14)	-0.391 (0.328)	0.384 (0.211)	-0.253 (0.24)	-0.103 (0.181)	-0.284 (0.161)	-0.248 (0.17)
Established (15+)	0.134 (0.31)	0.163 (0.224)	-0.445 (0.266)	0.11 (0.19)	-0.202 (0.172)	-0.156 (0.181)
Men-owned	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Women-owned	-0.1 (0.329)	-0.0165 (0.187)	-0.0162 (0.254)	-0.0989 (0.173)	0.466** (0.157)	-0.133 (0.159)
Constant	-0.312 (0.328)	-1.180*** (0.265)	-1.332*** (0.311)	-0.983*** (0.24)	-0.516* (0.223)	-0.397 (0.226)
Observations	483	483	483	483	483	483
Pseudo R-squared	0.297	0.096	0.075	0.156	0.058	0.112
Standard errors in parentheses						
* p<0.05	** p<0.01	*** p<0.001"				

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 14: Definition of variables used to estimate the effect of business characteristics on ability to survive

Name of model	Response variable (Y)	Definition of Y	Explanatory variables				
OLS	No. of weeks can remain open under current circumstances	For how many more weeks the business can remain open in the current circumstances? [Continuous variable varying from 1 to 52]	Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]	The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]	Region [1-Rural; 2-Urban]	Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]	Gender of ownership of the MSMEs [Women owned -1; Men owned -0]
OLS	No. of days can operate with the available cash	For how many days could the business continue paying all costs and payments (such as payroll, suppliers, taxes or loan repayment) with the cash available? [Continuous variable varying from 0 to 360]	Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]	The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]	Region [1-Rural; 2-Urban]	Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]	Gender of ownership of the MSMEs [Women owned -1; Men owned -0]

Appendix 15: Estimated effect of business characteristics on ability to survive

Business Characteristics	OLS (1)	OLS (2)
	No. of weeks can remain open under current circumstances	No. of days can operate with the available cash
Micro (0-4)	0 (.)	0 (.)
Small (5-19)	1.731 (3.429)	3.6 (16.21)
Medium (20+)	15.77* (6.466)	11.67 (24.92)
Fashion and clothing	14.87** (4.607)	-7.929 (21.85)
Agriculture	0 (.)	0 (.)
Retail or wholesale	16.74*** (4.651)	71.10** (22.18)
Other	4.231 (3.742)	28.27 (19.29)
Rural	0 (.)	0 (.)

Urban	-0.28 (2.954)	3.343 (13.57)
Young (0-4)	0 (.)	0 (.)
Maturing (5-14)	3.924 (3.663)	-12.36 (17.12)
Established (15+)	8.247* (3.86)	-9.78 (18.14)
Men-owned	0 (.)	0 (.)
Women-owned	-6.916 (4.364)	23.89 (17.99)
Constant	14.21** (4.342)	87.31*** (22.14)
Observations	232	388
R-squared	0.125	0.05
Adjusted R-squared	0.089	0.027
Standard errors in parentheses		
* p<0.05	** p<0.01	*** p<0.001"

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 16: Definition of variables used to estimate the effect of business characteristics on adjustments in business model

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
Probit	Increased use of digital platforms	Started or increased use of digital platforms in response to COVID-19 [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Investment in digital solutions	Investment in any new equipment, software or digital solution in response to COVID-19 [Discrete variable: 1=yes; 2-No]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Repackaging of product mix	Has the firm changed or is in the process of changing its products or services in response to COVID-19? [Discrete variable: 1=yes; 2-no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Appendix 17: Estimated effect of business characteristics on adjustments in business model

Business Characteristics	Probit (1)	Probit (2)	Probit (3)
	Increased use of digital platforms	Investment in digital solutions	Repackaging of product mix
Micro (0-4)	0 (.)	0 (.)	0 (.)
Small (5-19)	0.843*** (0.238)	-1.014* (0.499)	-0.377 (0.349)
Medium (20+)	1.227*** (0.296)	0 (.)	0 (.)
Fashion and clothing	0.0387 (0.43)	-0.853 (0.617)	-0.747 (0.513)
Agriculture	0 (.)	0 (.)	0 (.)
Retail or wholesale	-0.00573 (0.504)	0 (.)	0 (.)
Other	-0.344 (0.427)	-1.016 (0.668)	-0.935 (0.502)
Rural	0 (.)	0 (.)	0 (.)
Urban	0.870** (0.272)	-0.44 (0.568)	0.215 (0.398)
Young (0-4)	0 (.)	0 (.)	0 (.)
Maturing (5-14)	-0.128 (0.261)	0.546 (0.47)	0.18 (0.435)
Established (15+)	-0.434	0	-0.338

	(0.296)	(.)	(0.473)
Men-owned	0	0	0
	(.)	(.)	(.)
Women-owned	0.802***	0.735	0.797*
	(0.223)	(0.522)	(0.352)
Constant	-2.404***	-0.6	-0.726
	(0.467)	(0.601)	(0.66)
Observations	483	137	160
Pseudo R-squared	0.307	0.189	0.139
Standard errors in parentheses			
* p<0.05	** p<0.01	*** p<0.001"	

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 18: Definition of variables used to estimate the effect of business characteristics on most-needed policies

Business Characteristics	Probit (1)	Probit (2)	Probit (3)
	Increased use of digital platforms	Investment in digital solutions	Repackaging of product mix
Micro (0-4)	0 (.)	0 (.)	0 (.)
Small (5-19)	0.843*** (0.238)	-1.014* (0.499)	-0.377 (0.349)
Medium (20+)	1.227*** (0.296)	0 (.)	0 (.)
Fashion and clothing	0.0387 (0.43)	-0.853 (0.617)	-0.747 (0.513)
Agriculture	0 (.)	0 (.)	0 (.)
Retail or wholesale	-0.00573 (0.504)	0 (.)	0 (.)
Other	-0.344 (0.427)	-1.016 (0.668)	-0.935 (0.502)
Rural	0 (.)	0 (.)	0 (.)
Urban	0.870**	-0.44	0.215

	(0.272)	(0.568)	(0.398)
Young (0-4)	0 (.)	0 (.)	0 (.)
Maturing (5-14)	-0.128 (0.261)	0.546 (0.47)	0.18 (0.435)
Established (15+)	-0.434 (0.296)	0 (.)	-0.338 (0.473)
Men-owned	0 (.)	0 (.)	0 (.)
Women-owned	0.802*** (0.223)	0.735 (0.522)	0.797* (0.352)
Constant	-2.404*** (0.467)	-0.6 (0.601)	-0.726 (0.66)
Observations	483	137	160
Pseudo R-squared	0.307	0.189	0.139
Standard errors in parentheses			
* p<0.05	** p<0.01	*** p<0.001"	

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Probit	Wage subsidies	The most needed policies to support this business over the COVID-19 crisis - Wage subsidies [Discrete variable: 1=yes; 0=no]	Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]	The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]	Region [1-Rural; 2-Urban]	Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]	Gender of ownership of the MSMEs [Women owned -1; Men owned -0]
Probit	Others	The most needed policies to support this business over the COVID-19 crisis - Others [Discrete variable: 1=yes; 0=no]	Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]	The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]	Region [1-Rural; 2-Urban]	Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]	Gender of ownership of the MSMEs [Women owned -1; Men owned -0]
Probit	Has received support	The most needed policies to support this business over the COVID-19 crisis - Has received support [Discrete variable: 1=yes; 0=no]	Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]	The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]	Region [1-Rural; 2-Urban]	Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]	Gender of ownership of the MSMEs [Women owned -1; Men owned -0]

Appendix 19: Estimated effect of business characteristics on most-needed policies

Business Characteristics	Probit (1)	Probit (2)	Probit (3)	Probit (4)	Probit (5)	Probit (6)	Probit (7)	Probit (8)	Probit (9)	Probit (10)
	Monetary transfer	Deferral of rent	Deferral of loan payment	Access to new credit	Loans with subsidized rates	Fiscal exemptions	Tax deferral	Wage subsidies	Others	Has received support
Micro (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Small (5-19)	-0.207 (0.155)	0.424** (0.154)	0.222 (0.146)	-0.285 (0.158)	0.556*** (0.165)	0.594 (0.417)	0.601 (0.623)	0.536** (0.196)	-0.39 (0.34)	0.0278 (0.379)
Medium (20+)	-0.704** (0.232)	0.538* (0.24)	0.495* (0.227)	-0.411 (0.266)	0.483 (0.265)	0.566 (0.562)	0 (.)	0.800** (0.284)	-0.266 (0.468)	0.883* (0.441)
Fashion and clothing	-0.481 (0.255)	-0.0137 (0.245)	0.141 (0.206)	-0.0924 (0.208)	0.989*** (0.237)	-0.707 (0.655)	-0.741 (1.121)	-1.457*** (0.365)	0.46 (0.296)	-0.478 (0.449)
Agriculture	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Retail or wholesale	-1.223*** (0.265)	0.691** (0.251)	0.24 (0.226)	-0.653** (0.235)	0.856*** (0.244)	-0.0107 (0.574)	0 (.)	-0.537 (0.34)	0.312 (0.322)	0 (.)
Other	-0.579* (0.239)	0.229 (0.223)	0.154 (0.192)	-0.249 (0.193)	0.584** (0.201)	-1.447 (0.764)	0 (.)	-0.736* (0.292)	0 (.)	-0.607 (0.42)
Rural	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)

Urban	-0.481***	0.688***	-0.16	-0.470***	-0.611***	0.405	0.452	1.170***	0.132	0.172
	(0.137)	(0.14)	(0.132)	(0.138)	(0.147)	(0.426)	(1.085)	(0.242)	(0.255)	(0.377)
Young (0-4)	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Maturing (5-14)	-0.0976	-0.151	0.375*	-0.268	-0.162	0.0628	-1.094	-0.0291	-0.362	0.38
	(0.168)	(0.167)	(0.171)	(0.17)	(0.175)	(0.42)	(0.685)	(0.225)	(0.32)	(0.33)
Established (15+)	-0.0422	-0.381*	0.418*	-0.328	0.0541	-0.631	0	-0.24	0.0132	0
	(0.181)	(0.184)	(0.181)	(0.184)	(0.191)	(0.566)	(.)	(0.246)	(0.309)	(.)
Men-owned	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Women-owned	-0.152	-0.351*	-0.101	-0.373*	-0.254	1.113*	-0.206	0.339	-0.243	-0.325
	(0.162)	(0.177)	(0.162)	(0.181)	(0.174)	(0.437)	(0.764)	(0.217)	(0.342)	(0.489)
Constant	1.549***	-1.020***	-0.884***	0.262	0.306	-2.320***	-1.219	-1.497***	-1.812***	-1.962***
	(0.264)	(0.245)	(0.225)	(0.22)	(0.227)	(0.584)	(0.754)	(0.297)	(0.314)	(0.341)
Observations	483	483	483	483	483	483	85	483	410	336
Pseudo R-squared	0.099	0.11	0.024	0.07	0.082	0.259	0.167	0.185	0.054	0.096
Standard errors in parentheses										
* p<0.05	** p<0.01	*** p<0.001"								

Appendix 20: Definition of variables used to estimate the effect of shocks on most-needed policies

Name of model	Response variable (Y)	Definition of Y	Explanatory variables				
Probit	Monetary transfer	The most-needed policies to support this business over the COVID-19 crisis - Monetary transfer [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
Probit	Deferral of rent	The most-needed policies to support this business over the COVID-19 crisis - Deferral of rent [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
Probit	Deferral of loan payment	The most-needed policies to support this business over the COVID-19 crisis - Deferral of loan payment [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]

Probit	Access to new credit	The most-needed policies to support this business over the COVID-19 crisis - Access to new credit [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
Probit	Loans with subsidized rates	The most-needed policies to support this business over the COVID-19 crisis - Loans with subsidized rates [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
Probit	Fiscal exemptions	The most-needed policies to support this business over the COVID-19 crisis - Fiscal exemptions [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]
Probit	Tax deferral	The most-needed policies to support this business over the COVID-19 crisis - Tax deferral [Discrete variable: 1=yes; 0=no]	Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]	Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]

<p>Probit</p>	<p>Wage subsidies</p>	<p>The most-needed policies to support this business over the COVID-19 crisis - Wage subsidies [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]</p>
<p>Probit</p>	<p>Others</p>	<p>The most needed policies to support this business over the COVID-19 crisis - Others [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in total hours worked per week in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in demand for products and services in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in cash flow availability in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in supply of financial services normally available in the last 30 days [Discrete variable: 1=yes; 0=no]</p>	<p>Reported decrease in supply of inputs, raw materials, or finished goods and materials purchased to resell in the last 30 days [Discrete variable: 1=yes; 0=no]</p>

Appendix 21: Estimated effect of shocks on most-needed policies

Business Characteristics	Probit (1)	Probit (2)	Probit (3)	Probit (4)	Probit (5)	Probit (6)	Probit (7)	Probit (8)	Probit (9)
	Monetary transfer	Deferral of rent	Deferral of loan payment	Access to new credit	Loans with subsidized rates	Fiscal exemptions	Tax deferral	Wage subsidies	Others
Reduction in operating hours =0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Reduction in operating hours =1	-0.595*	0.191	0.141	0.0764	-0.180	-0.221	0	0.000841	-0.132
	(0.232)	(0.210)	(0.204)	(0.220)	(0.214)	(0.615)	(.)	(0.274)	(0.385)
Reduction in demand =0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Reduction in demand =1	0.350	0.0535	0.255	-0.458	-0.0653	-0.521	0	0.169	-0.221
	(0.233)	(0.229)	(0.226)	(0.235)	(0.230)	(0.628)	(.)	(0.317)	(0.409)
Reduction in cash flow =0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Reduction in cash flow =1	-1.001**	0.344	0.181	0.283	0.453	0	0	0.152	0.196
	(0.306)	(0.269)	(0.250)	(0.312)	(0.249)	(.)	(.)	(0.368)	(0.525)
Reduction in finance =0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)

Reduction in finance =1	0.237 (0.153)	-0.0244 (0.152)	-0.0921 (0.148)	0.925*** (0.178)	0.143 (0.155)	0 (.)	0 (.)	0.564* (0.221)	-0.0643 (0.313)
Reduction in availability of inputs =0	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Reduction in availability of inputs =1	0.486** (0.178)	0.0778 (0.180)	-0.182 (0.172)	0.146 (0.199)	-0.0219 (0.182)	0 (.)	0 (.)	-0.568* (0.222)	-0.120 (0.358)
Constant	1.116*** (0.324)	-1.059*** (0.297)	-0.672* (0.274)	-1.282*** (0.321)	0.360 (0.270)	-1.472** (0.549)	-1.150* (0.568)	-1.540*** (0.385)	-1.708*** (0.492)
Observations	401	401	401	401	401	231	8	401	401
Pseudo R-squared	0.058	0.009	0.009	0.085	0.012	0.033	0.000	0.041	0.010
Standard errors in parentheses									
* p<0.05	** p<0.01 *** p<0.001"								

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

Appendix 22: Definition of variables used to estimate the effect of shocks on most-needed policies

Name of model	Response variable (Y)	Definition of Y	Explanatory variables
Probit	Salary payment	Financial constraints the business is facing - Salary payment [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Loan repayment	Financial constraints the business is facing - Loan repayment [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>
Probit	Lower revenue	Financial constraints the business is facing - Lower revenue [Discrete variable: 1=yes; 0=no]	<p>Size of the firms [1-Micro (0-4 full time workers); 2-Small (5-19 full time workers); 3-Medium (20-99 full time workers)]</p> <p>The top 3 reported main sector of activity of establishments [1-Fashion and clothing; 2-Agriculture, fishing, or mining; 3-Retail or wholesale; 4-Other]</p> <p>Region [1-Rural; 2-Urban]</p> <p>Age of business [1-young (0-4 years old); 2-Maturing (5-14 years old); 3-Established (15+ years old)]</p> <p>Gender of ownership of the MSMEs [Women owned -1; Men owned -0]</p>

Appendix 23: Estimated effect of business characteristics on financial constraints

Business Characteristics	Probit (1)	Probit (2)	Probit (3)	Probit (4)	Probit (5)	Probit (6)	Probit (7)
	Salary pay- ment	Loan repayment	Lower revenue	Rent pay- ment	Utility pay- ment	Tax pay	Other
Micro (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Small (5-19)	0.737*** (0.146)	-0.0518 (0.146)	-0.169 (0.146)	-0.322 (0.176)	-0.332* (0.151)	0.328 (0.799)	-0.313 (0.339)
Medium (20+)	0.797*** (0.23)	0.0297 (0.229)	-0.495* (0.23)	-0.318 (0.266)	-0.431 (0.245)	0 (.)	0.726* (0.34)
Fashion and clothing	-0.428* (0.208)	-0.182 (0.203)	0.0777 (0.205)	1.001** (0.329)	0.188 (0.202)	-5.232 (779.4)	-0.57 (0.439)
Agriculture	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Retail or wholesale	-0.781** (0.242)	0.0419 (0.219)	0.388 (0.227)	1.065** (0.335)	-0.27 (0.221)	0.419 (1.211)	-0.103 (0.396)
Other	-0.619** (0.196)	-0.111 (0.188)	0.482* (0.19)	0.890** (0.312)	-0.201 (0.188)	0 (.)	0.0484 (0.336)
Rural	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)

Urban	0.563*** (0.139)	-0.053 (0.13)	-0.314* (0.132)	0.661*** (0.149)	-0.540*** (0.131)	0.737 (1.126)	-0.282 (0.244)
Young (0-4)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Maturing (5-14)	0.165 (0.179)	0.204 (0.163)	-0.297 (0.167)	0.137 (0.176)	-0.102 (0.165)	0 (.)	-0.287 (0.282)
Established (15+)	0.304 (0.188)	0.0644 (0.174)	-0.0722 (0.178)	-0.27 (0.199)	-0.0215 (0.176)	0 (.)	-0.276 (0.3)
Men-owned	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Women-owned	-0.134 (0.166)	0.0275 (0.16)	0.440** (0.168)	-0.673*** (0.203)	0.0924 (0.163)	4.481 (779.4)	0.227 (0.295)
Constant	-0.585** (0.226)	-0.354 (0.214)	0.362 (0.218)	-1.769*** (0.336)	0.169 (0.214)	-1.528 (0.939)	-1.400*** (0.371)
Observations	483	483	483	483	483	44	483
Pseudo R-squared	0.132	0.007	0.053	0.122	0.062	0.245	0.077
Standard errors in parentheses							
* p<0.05	** p<0.01	*** p<0.001"					

Note: Rows with "zero" coefficients have been taken as reference level of the categorical variable in the model

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