Socioeconomic Impacts of **COVID-19** in Kenya
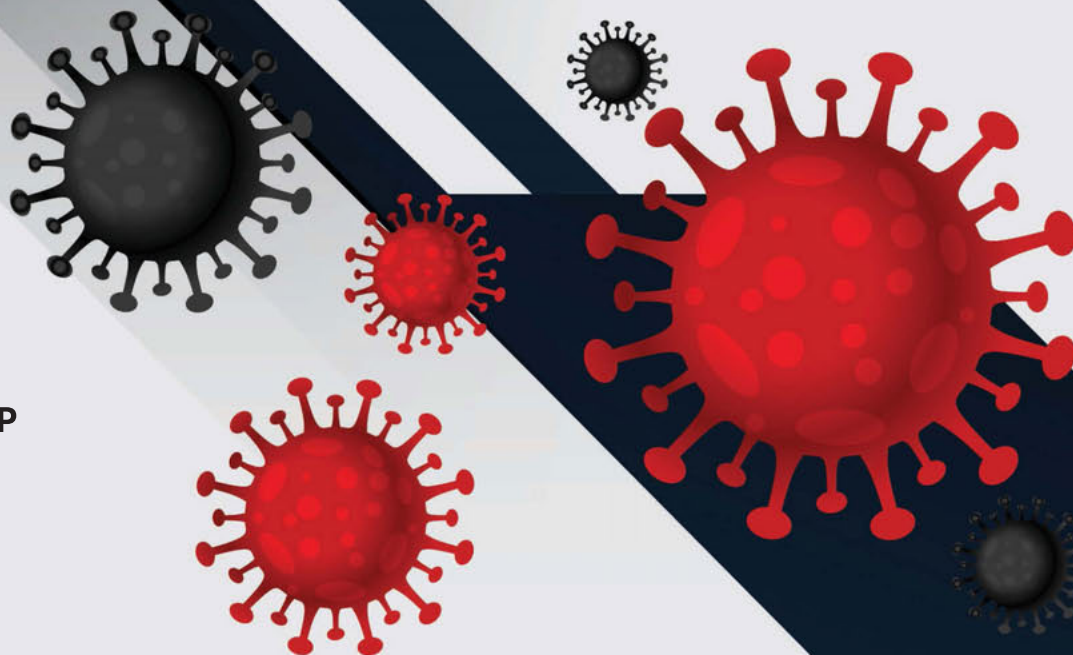
On Firms

Rapid Response Phone Survey
Round 1, January 2021

WORLD BANK GROUP
Poverty & Equity

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Abstract

The COVID-19 pandemic has severe impacts on the Kenyan economy and society as a whole. This report analyzes the impact of COVID-19 on businesses in Kenya based on a nationally representative Business Pulse Survey implemented by the World Bank between June and August, 2020. The results indicate that about 93 percent of firms experienced a decline of sales compared to the same period of the previous year. Sales dropped by around 50 percent in the average and median Kenyan firms, and by more than 70 percent for one-quarter of firms. Close to 65 percent of firms are experiencing a decline in demand, cash flow, and available finance. Moreover, firms expect sales to continue declining in the coming months. The pandemic is disproportionally affecting small and female-owned businesses. Firms in Kenya are responding to the crisis through the adoption of digital technologies. About 20 percent of firms have received public support, but lack of awareness of public assistance options is still large among those that did not receive any support. Finally, the COVID-19 Business Pulse Survey (COV-BPS) suggests policy response options divided into four areas: access to finance, firm capabilities, access to new markets, and reducing uncertainty. Additional follow-up surveys are being conducted for monitoring the current circumstances and updating the policy recommendations.

Executive Summary

The COVID-19 pandemic has severe impacts on the Kenyan economy and society as a whole. Globally, households and firms are struggling to deal with the consequences of the pandemic. The economic and social disruptions are creating multiple challenges for the private sector. Firstly, firms are facing lower demand for goods and services. Secondly, supply chains are disrupted, restricting access to intermediate goods and labor. Thirdly, access to cash and credit is deteriorating. Lastly, uncertainty is dampening investment and innovation prospects. Firms in Kenya are not exempt from these developments.

Sales have plummeted for almost all firms. More than 9 out of 10 firms have experienced a decline of sales as a consequence of the pandemic. Sales dropped by around 50 percent in the average and median Kenyan firms, and by more than 70 percent for a quarter of the firms. Firms in the tourism sector, which consists of accommodation and food services, have experienced the largest decreases in sales and are not often fully operating. In the median firms in the tourism sector, sales have fallen by 70 percent.

One in three workers is facing high vulnerability. One in five workers has lost their jobs after the start of the pandemic. Relatively few firms have resorted to other labor adjustment measures, such as reducing the working hours or wages. Firms in tourism and other services have laid off more workers than firms in other sectors. While two-thirds of all businesses are still open, 20 percent of workers are in businesses that are temporarily closed and 16 percent in businesses that are only partially open. Especially workers in small and medium-sized firms in tourism and other services sectors, as well as in older and non-exporting firms, are facing high vulnerability. More than 50 percent of the jobs in the tourism sector and 45 percent of jobs in other service sectors are vulnerable.

Close to two-thirds of firms are experiencing a decline in demand, cash flow, and available finance. 62 percent of firms have reduced working hours, and 54 percent face a lower availability of inputs. The pandemic has hit firms in the tourism and other service sectors, as well as firms with a larger female workforce, primarily through fewer working hours, while exporting firms are more affected by a lower availability of inputs. Furthermore, the reduction in cash flow has had a large impact on sales of firms in manufacturing. Lower demand is more severely affecting sales of businesses in retail.

Under the current circumstances, the median firm is able to remain open for five months and can cover costs with available cash for about 4 weeks. On average, a firm in Kenya can remain open for close to 19 weeks. The median firm can remain open for 20 weeks, indicating little variation between firms. Larger firms and firms in the agriculture and trade sectors report being able to remain open for a larger number of weeks under the current circumstances. Firms that are only partially open can remain operative for fewer weeks than fully open firms (14 weeks vs. 19 weeks). While Kenyan firms are able to continue to cover costs for 47 days on average, the median firm can cover costs for only 30 days. The large difference suggests a large variability in cash availability. Vulnerable firms can cover costs for less than half as long as fully open firms. Firms in agriculture and manufacturing firms are able to cover costs for longer than firms in the other sectors.

Firms expect sales to continue to decline. On average, Kenyan firms expect sales to decrease by 27 percent in the first six months of 2021 compared to the previous year. While the expected decline is large, there is little variation in expectation between firms. Almost all firms expect sales to decline, and only a few firms expect an increase in sales.

Firms anticipate employment to decrease at a slightly lower rate than sales. Large firms and firms in agriculture or manufacturing are more optimistic about the first 6 months of 2021.

Small and micro-sized firms are more severely affected by the pandemic than larger firms. Micro-sized firms are often forced to permanently close or temporarily cease operations as compared to larger firms. Larger firms are most often still open, indicating that they can cope better with the aftermath of the pandemic. A larger drop in sales for micro-sized and small firms further underpins them being primarily affected. While by definition micro-sized firms have laid off a smaller number of workers, controlling for observable firm characteristics, they have reduced more hours of their employees. Large firms are able to cover running costs for longer periods than smaller firms.

The pandemic is disproportionally affecting businesses with a large share of female employees. Firms in which more than half of all employees are female are 18 percentage points less often open than firms with fewer female employment. Over 40 percent of businesses with a large female workforce are temporarily closed, leaving women more vulnerable than men. However, firms with more female employees less often lay off workers and more often grant leaves of absence.

Almost 50 percent of all firms with five or more employees are starting to use, or increase the use of digital platforms. The type of response to the shock varies by firm characteristic. Larger firms more often increase the use of digital platforms. Firms in the tourism sector are less able to reap the benefits of digital platforms. Exporting firms and firms in agriculture are less likely to repackage their product mix. Of the firms that use digital platforms, 75 percent use them for business administration purposes and close to 50 percent for marketing. Larger firms more often use digital platforms in other ways, for instance, for supply chain management, payment methods, or sales. Also, younger firms are more versatile in their use of digital tools. Firms in food services could potentially take more advantage of service delivery options.

About 20 percent of firms have received public support, but a large share of those firms that did not receive any support have reported lack of awareness of government assistance programs. 20 percent of firms in Kenya have received public support during the COVID-19 pandemic. Smaller firms less often receive assistance. 80 percent of firms report not having received assistance because they were not aware of any government measures. Awareness of existing government programs is similar over firm characteristics. Of the firms that received any assistance, 40 percent received cash transfers and 33 percent received tax deferrals.

Firms most often refer to loans with subsidized interest rates as one of the three most needed policy responses. Just over 50 percent of all firms call for loans with subsidized interest, 42 percent for monetary transfers and 25 percent for tax deferrals. The type of assistance reported as "most needed" by the firms depends on their characteristics. For instance, exporters disproportionately demand tax deferrals, and agricultural firms and firms in retail are most likely to call for monetary transfers. Micro-sized firms more often call for deferral of rent, mortgage, and utilities, and less often for fiscal exemptions or deferral of loan payments than larger firms. Similarly, firms report different policies to be most needed depending on the type of shock they experienced. Firms hit by a decrease in demand are around 24 percentage points more likely to call for cash transfers, while firms that report a decrease in hours worked are more likely to report tax deferrals as the most needed policy response.

To help mitigate the adverse impacts of COVID-19 on firms, the COV-BPS suggests policy response options divided into four areas: access to finance, firm capabilities, access to new markets, and reducing uncertainty. As the crisis continues to evolve, policies must find a balance between short-term interventions to help businesses "keep the lights on" and a sustainable recovery plan that facilitates the selection of the most productive firms. In the recovery phase, policies should be geared toward supporting growth-oriented enterprises, promoting the reallocation of resources to more efficient companies, and avoiding measures that prop up zombie firms (i.e., inefficient firms that survive).

Introduction

1. The COVID-19 Business Pulse Survey (COV-BPS) aims at providing critical information to help policy makers monitor the effects of the pandemic on businesses. The COVID-19 shocks affect businesses through five distinct channels (Figure 1). Firstly, lockdown measures and regulations to control the spread of the pandemic directly affect businesses' ability to operate and consumers' ability to procure goods. Secondly, firms are hit by a reduction in demand due to lower consumption, lower export demand, and lower demand of intermediates from other businesses. Thirdly, a decline in the availability of labor and intermediate goods as value chains are disrupted, which limits firms' capacity to produce and supply goods. Fourth, firms are becoming more financially constrained due to a deterioration in the availability of cash and credit conditions. Lastly, a surge in uncertainty leads to lower incentives to invest and increases risks associated with innovation and entrepreneurship.

● **FIGURE 1:** Shocks to businesses from the COVID-19 pandemic

Lockdown effects
Public health measures require nonessential businesses to close

Temporary shock, targeting nonessential businesses, mostly in retail, hotels/restaurants (tourism), and personal services

Supply shocks
Global and local value chains are disrupted

Decreased supply of labor and intermediate inputs, affecting, e.g., firms that rely on imports

Financial shocks
Opportunities for finance becoming further constrained

Deterioration in availability of credit while demand increases affects access to finance

Demand shocks
Economic downturn drives down demand domestically and abroad

Broad-based shocks will especially hit firms producing durables, apparel/textiles, and those reliant on exports (manufacturing and services, e.g., tourism)

Uncertainty
Uncertainty drives down investment and innovation

Source: World Bank 2020b.

2. The Kenya COV-BPS is based on a nationally representative sample. The sample consists of 2,070 firms randomly selected from the universe of 138,186 firms available in the 2017 Census of Establishments from the Kenyan National Bureau of Statistics (KNBS). The sample was stratified by firm size and sector of activities. The analysis regrouped the size and sectors of activities for the sake of comparability across over 50 countries. Table A1.1 in Appendix 1 describes the distribution of the sample. The response rate was 37 percent, including all firms that the

survey team attempted to reach. The survey took place in Kenya between June and August, 2020. Phone interviews were conducted between June 10 and August 30, 2020. The team used Computer Assisted Telephone Interviewing (CATI) through a Survey CTO platform. The results presented in this report use sampling weights.

3. This report analyzes the results from the Kenya-BPS and provides in-depth information about how the pandemic is affecting private sector firms and which policies are most needed. The main reaction of the Kenyan government has been centered around tax reliefs and reducing fees and obstacles for monetary transfers and access to credit. This report aims to provide a better understanding of the effects of the COVID-19 pandemic on firm operations, labor demand, and expectations of future operations. Thereby, the results can assist in identifying the most needed policies to support the private sector throughout the COVID-19 pandemic.

4. The Government of Kenya also implemented a series of economic stimulus measures.[1] A Central Bank order for banks to waive fees for individuals who move money between their bank account and a mobile wallet came into effect on March 17. The upper limit for mobile money transfers was increased. Authorities reached a deal with commercial banks to restructure nonperforming loans caused by COVID-19 layoffs. Additionally, loans and grants are available through government and private funds, including the National Business Compact on CoVid19 (NBCC), as well as special loans through Stanbic Bank and Standard Chartered Bank, among others. The Government of Kenya also disbursed KSh 1 billion for the health care sector and US$5 million for the tourism sector. In addition, the International Finance Corporation disbursed a US$50 million loan to Equity Bank Kenya to support small and medium enterprises (SMEs).

5. Mobility decreased substantially in the early months of the pandemic. In the first month after the start of the pandemic and the government initialized restrictions, mobility decreased by up to 50 percent in key areas (Figure 2).[2] Activities related to retail and recreation had the sharpest decline. Individuals in turn spent more time at home. As COVID-19 infection rates fell over the course of the year and the government eased restrictions, mobility patterns

● **FIGURE 2:** Changes in mobility over time (percent change compared to baseline)
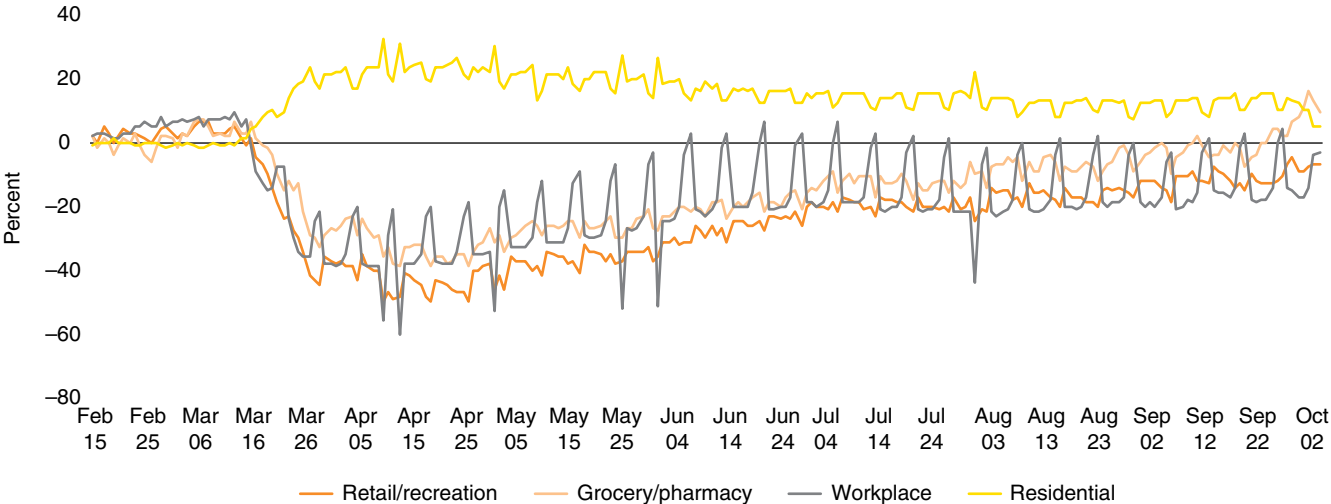
Note: Data comes from Google's "COVID-19 Community Mobility Reports." The baseline values are each day's five-week median value between January 3 and February 6, 2020.

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[1] KPMG. "Kenya: Government and institution measures in response to COVID-19." https://home.kpmg/xx/en/home/insights/2020/04/kenya-government-and-institution-measures-in-response-to-covid.html

[2] Mobility data come from Google's "COVID-19 Community Mobility Reports" and are based on location histories of individual's Google accounts. The data are therefore not representative of the country as a whole, but give an indication of how the pandemic has changed mobility patterns.

slowly converged back to the baseline rates. However, at the beginning of October, people still less often engaged in retail and recreational activities or went to the workplace. Mobility hasn't recovered equally across all locations in Kenya, however. In Nairobi, retail and recreational and workplace activities are still 13–20 percent below the baseline value, while in Mombasa the gap is only between 1 and 10 percent (Figure A2.1).

6. The remainder of this report is organized as follows. Section 2 describes the impact of COVID-19 on operations, sales, and employment, and analyzes the main transmission mechanisms. Section 3 analyzes the current status of firms in terms of expectation and uncertainty. Section 4 analyzes how firms are reacting regarding the adoption of digital technologies and changes in the product mix in response to the COVID-19 shock. Section 5 analyzes the main policy responses. Finally, Section 6 provides a set of policy recommendations based on these findings and complementary analyses across countries.
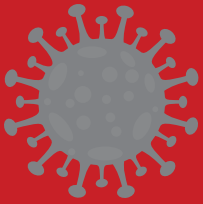
1. Operations of the Business

7. More than one-third of all firms are temporarily closed or only partially open. More than half of the firms were fully open and one-tenth of firms was partially open at the time of this survey. Firms based in Nairobi are more often fully open as compared to firms in other regions and are less often mandated to close temporarily.[3] The pandemic is disproportionally affecting businesses with a large female employment share. Firms in which more than half of employees are female are 18 percentage points more often closed than firms with fewer female employees (Figure 3).[4]

8. Larger firms were more likely to remain fully operative than smaller firms. Firms' operating status largely differs by size. Eighty percent of large firms (100+ employees) are fully open, compared to only 50 percent of small (5–19 employees) and medium-sized (20–99 employees) firms. Micro-sized firms (0–4 employees) are more often forced to permanently close or temporarily cease operations by their own choice, indicating that they are less able to deal with the aftermath of the pandemic on their own.

● **FIGURE 3:** Firm operating status by region, size, and female employment

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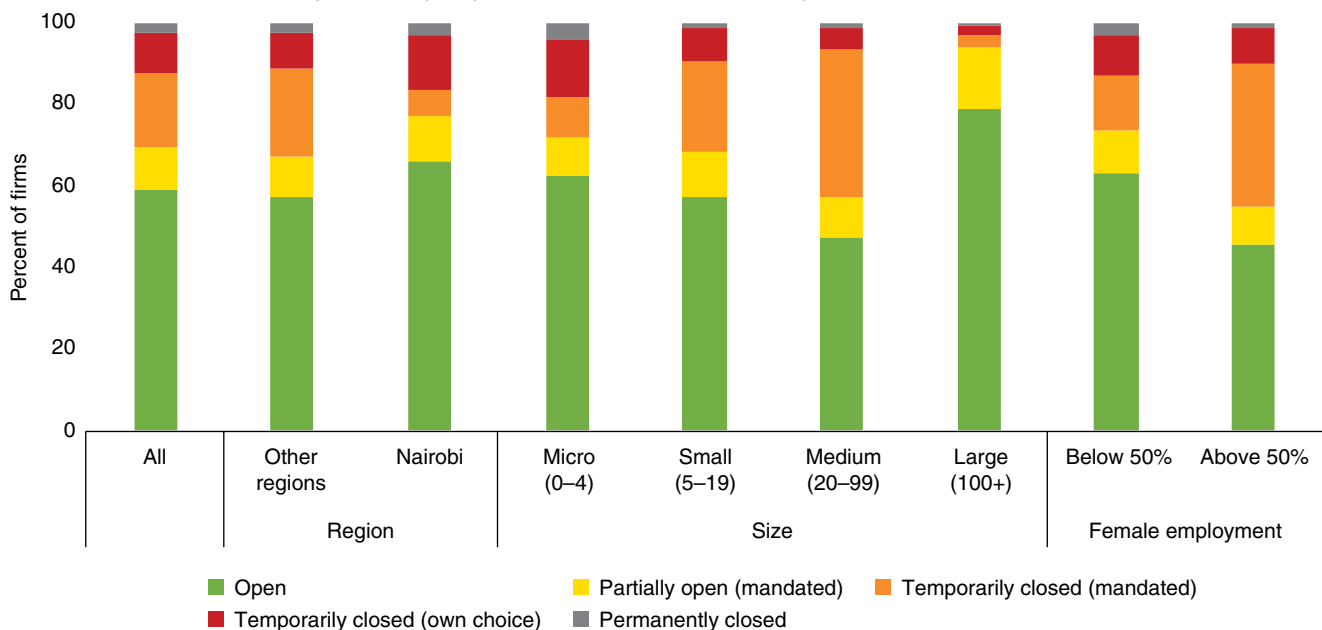
[3] Being closed by mandate refers to government regulations which ordered firms to close temporarily. These estimates need to be interpreted with caution, given that among nonresponses there might be a disproportionally larger number of temporary or permanently closed businesses.

[4] The median share of female employment is 35 percent. In roughly 20 percent of firms more than 50 percent of employees are female.

9. The pandemic is affecting some sectors of the economy more strongly than others. The majority of agricultural and manufacturing firms have been able to remain open. Within the service sector there are large differences in the operating status of firms. As the government mandated schools to close, almost all enterprises in education were closed temporarily. Furthermore, the pandemic is particularly affecting firms in the accommodation and food service sectors. They are less likely to be fully open and more likely closed by mandate than firms from other sectors. More-over, the transportation and storage sectors, as well as accommodation and food service sectors, have a relatively large share of firms only partially open by mandate. This reflects curfews and lockdown restrictions primarily affecting firms of these sectors (Figure 4).

● **FIGURE 4:** Firm operating status by sector
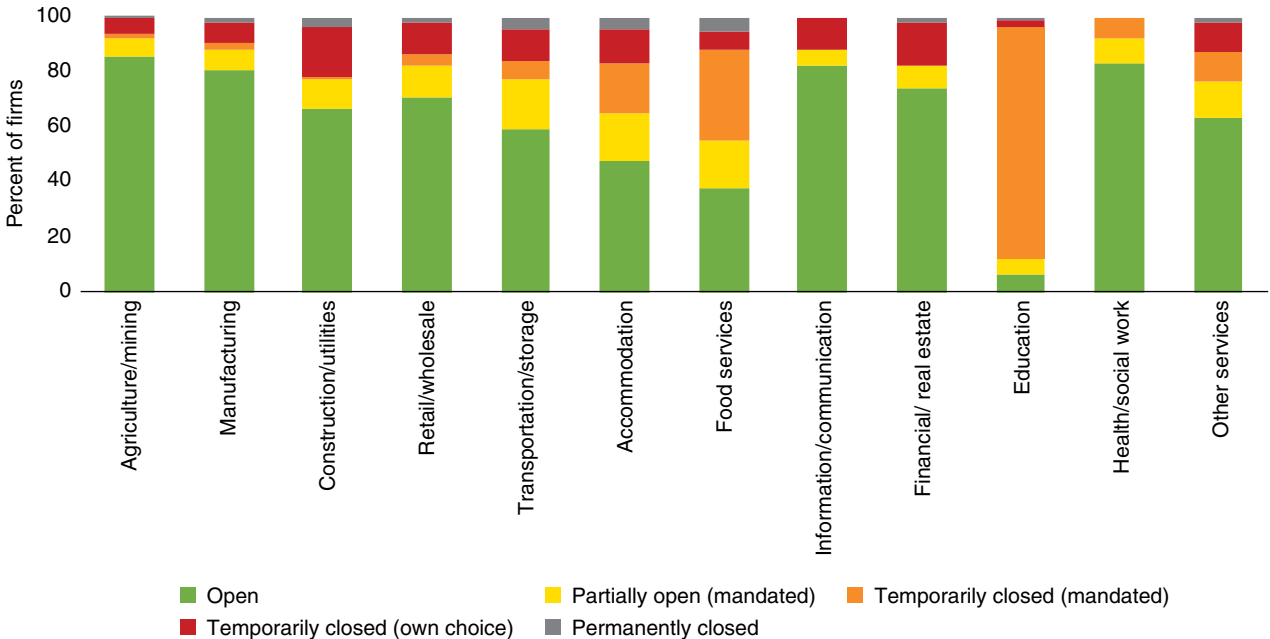
10. Thirty-three percent of workers are in firms facing high levels of vulnerability. Firms are defined as vulnerable if they are partially open or temporarily closed, as these firms could potentially run into liquidity problems and are more likely to permanently close. By this definition, 48 percent of workers in small firms and 50 percent of workers in medium-sized firms are employed in vulnerable firms, compared with only 26 percent of those working for large firms. There is also a large variation of vulnerable firms between sectors. More than 50 percent of jobs are vulnerable in the tourism sector, compared to 8 percent in manufacturing firms.[5] Moreover, workers in older and non-exporting firms, as well as firms with more than 50 percent of employees being female are more vulnerable. Despite only 1 percent of workers being in permanently closed firms, the large proportion working in vulnerable businesses is concerning (Table 1).

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[5] The tourism sector consists of accommodation and food services.

● TABLE 1: Estimated number of jobs in businesses affected by the pandemic

	Open (%)	Partially open (mandated) (%)	Temporarily closed (mandated) (%)	Temporarily closed (by choice) (%)	Vulnerable (partially open + temporarily closed) (%)	Permanently closed (%)	Number of workers*
Total	**65**	**16**	**15**	**4**	**34**	**1**	**3,112,467**
Micro (0–4)	68	10	8	11	29	3	82,958
Small (5–19)	51	11	30	7	48	1	341,923
Medium (20–99)	49	11	35	4	50	1	725,240
Large (100+)	74	19	5	3	26	0	1,962,347
Agriculture/mining	75	8	1	14	23	2	339,061
Manufacturing	90	6	1	1	8	2	258,874
Retail/wholesale	83	11	4	2	17	1	605,929
Tourism	45	23	22	7	52	3	72,444
Other services	55	20	22	2	45	0	1,836,159
Nairobi	70	26	2	2	30	0	1,231,716
Other regions	63	9	23	5	36	1	1,880,751
Young (0–4)	67	10	9	15	33	0	111,626
Maturing (5–14)	66	12	15	6	33	1	1,166,703
Established (15+)	65	19	15	1	35	0	1,834,138
Exporter	76	16	4	3	24	0	132,762
Non-exporter	65	16	15	4	34	1	2,979,705
Below 50% female employment	67	17	12	4	32	0	2,659,370
Above 50% female employment	56	11	30	2	43	1	453,097

Note: The total number of paid jobs adds the number of full-time paid jobs and half the number of part-time jobs.

2. Impact on Sales

11. Almost all firms have experienced a decline in sales. Ninety-three percent of firms report a reduction of sales in the last 30 days compared to the same period in 2019, while only 2 percent report an increase (Figure 5, panel a). Sales have declined across all firm types, but the magnitude differs between firms depending on their size and sector. For instance, sales have decreased more for firms in the accommodation and food sectors as compared to most other sectors. The pandemic has larger effects on firms in these sectors due to lockdowns, capacity restrictions, and people avoiding larger crowds. Firms in the agriculture, information and communication, financial, and real estate and the social services sectors have experienced the smallest declines in sales (Figure 5, panel b). Furthermore, micro-sized and small firms have experienced a larger decline in sales than medium-sized and large firms (Table 2).

FIGURE 5: Change in sales

a. Share of firms with an increase, decrease, or same level of sales
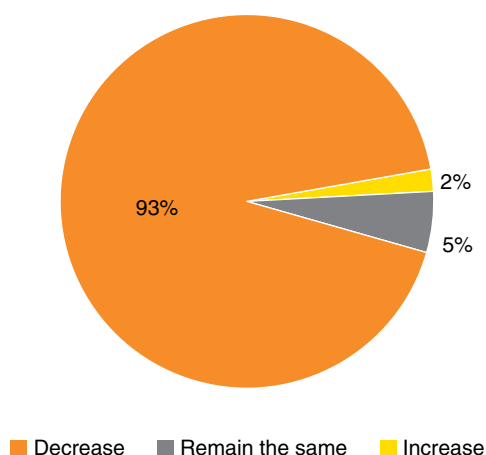
b. Estimated changes in sales across sectors
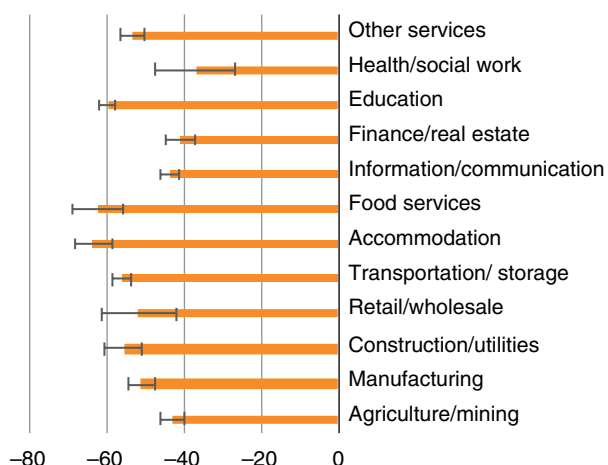
TABLE 2: Change in sales across business characteristics (%)

	Average firm decline	10th percentile	25th percentile	Median firm decline	75th percentile	90th percentile
Total	**−51**	**−90**	**−70**	**−50**	**−30**	**−10**
Micro (0–4)	−54	−90	−80	−50	−30	−10
Small (5–19)	−53	−90	−80	−50	−40	−10
Medium (20–99)	−46	−80	−60	−50	−30	−10
Large (100+)	−39	−80	−60	−50	−20	0
Agriculture/mining	−38	−75	−50	−40	−20	0
Manufacturing	−50	−90	−75	−50	−30	−10
Retail/wholesale	−53	−90	−75	−50	−40	−15
Tourism*	−63	−95	−80	−70	−50	−25
Other services	−50	−90	−70	−50	−30	−10
Nairobi	−50	−90	−75	−50	−30	0
Other regions	−52	−90	−70	−50	−30	−15
Young (0–4)	−52	−85	−80	−50	−40	−10
Maturing (5–14)	−53	−90	−80	−50	−40	−10
Established (15+)	−47	−80	−70	−50	−25	−10
Exporter	−41	−90	−60	−35	−25	0
Nonexporter	−52	−90	−75	−50	−30	−10
Below 50% female employment	−51	−90	−70	−50	−30	−10
Above 50% female employment	−51	−90	−75	−50	−30	−10

*Note: Tourism refers to accommodation and food services activities.

There is no statistically significant difference in sales declines between other observable characteristics (region, age, exporting status, and female employment).

12. Sales dropped by 51 percent, on average, compared to the same period in the previous year. For the median firm in Kenya, the drop was 50 percent (Table 2). For a quarter of firms, sales dropped by over 70 percent. Within each firm type, the decline in sales was highly heterogeneous. For the bottom 10 percent of firms, sales declined by 90 percent, while for the top 10 percent of firms, sales dropped by 10 percent. For the 90th percentile of large, agricultural firms in Nairobi, the sales remained the same. As the median and mean decline are similar, outliers are not likely driving the estimated reductions in sales.

13. Observable business characteristics explain only a small part of the heterogeneity in the reduction in sales, implying that the shock is affecting similar firms differently. The BPS suggests heterogeneity in the shock to the sales of the firm. The interaction of size, sector, region, age, exporting status, and female employment only accounts for 20 percent of the deviations of sales reductions from the overall mean and cannot explain the remaining 8 percent.[6] Observable characteristics overpredict reductions in sales closer to the mean, but can not explain large declines nor increases in sales (Figure 6).

● **FIGURE 6:** Distribution of the reduction in sales explained by the observed firm characteristics
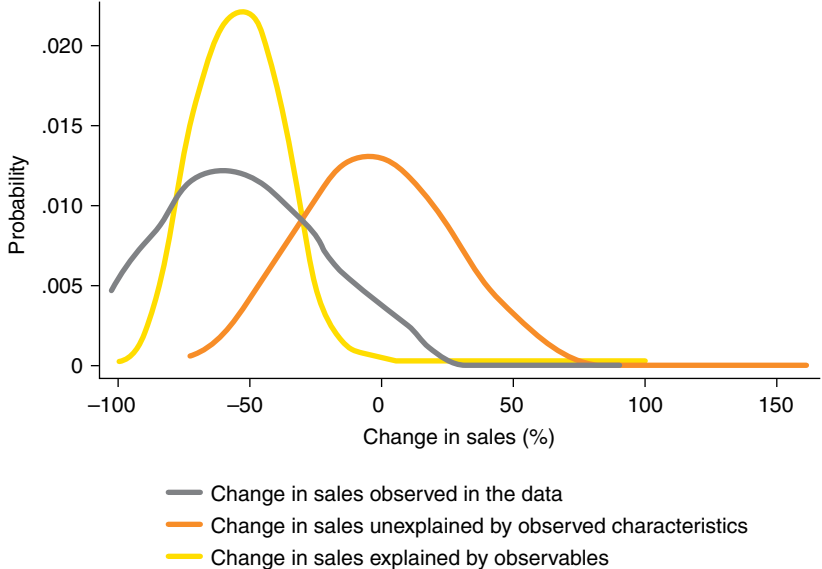
Note: The figure presents kernel density estimates of the distribution of the change in sales, the change in sales predicted by a linear regression, and the residual of the regression. The estimations of the kernel density use the default specifications in Stata. The linear regression uses dummies for the interaction of size, formality status, sector, region, age, and exporting status.

14. Firms in Kenya experience a larger average reduction in sales than the majority of African countries. When accounting for country, size, sector, and timing of the survey, firms in Kenya experienced a 65 percent reduction in sales. The magnitude of the change in sales is large when compared with other African countries. For instance, only South Africa reported a larger average decline (76 percent), while in countries such as Côte d'Ivoire, Senegal, and Tanzania the average decline was below 40 percent (Figure 7).

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[6] To obtain this estimate, the percentage change in sales is regressed on dummies for the interaction of size, sector, region, age, and exporting status, and both the prediction from the regression (the explained component) and the residual (the unexplained component) are computed. For each observation, the deviation of the sales drop from the overall mean is decomposed into deviations unaccounted for (deviations from the linear prediction) and deviations accounted for (deviations of the linear prediction from the overall mean): $y_i - \bar{y}[y_i - \hat{y}_i] + [\hat{y}_i - \bar{y}]$, where y_i corresponds to the change in sales for business i, $\hat{y}_i$ is the prediction from the linear regression, and $\bar{y}$ is the overall mean. The ratio of each component to the deviation from the overall mean is computed and averaged across all observations (using sampling weights).

FIGURE 7: Average adjusted percentage change in sales
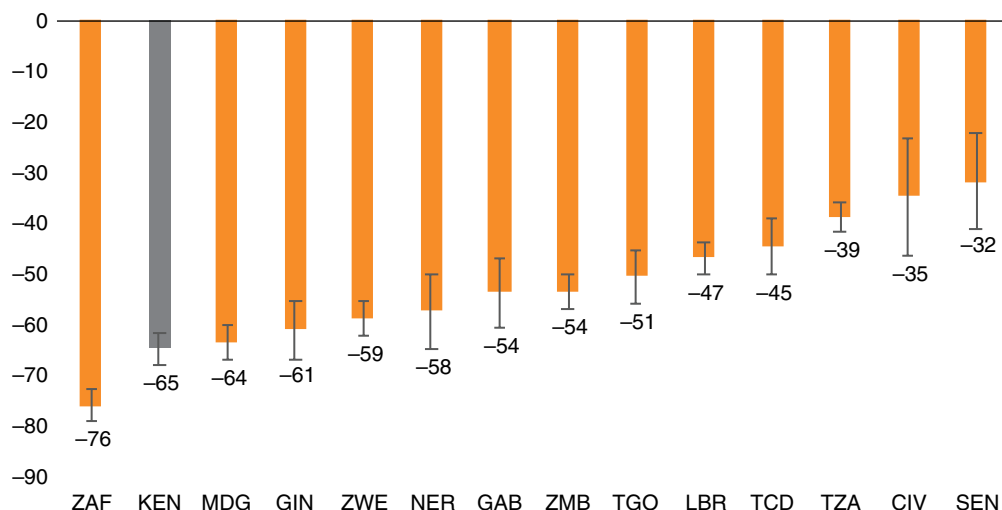
Source: World Bank—Business Pulse Survey Sub-Saharan Africa Results.
Note: Average adjusted mean from a linear regression that controls for country, size, sector, and timing of the survey. Computations use weights equal to the inverse of the number of observations per country and exclude countries where the fraction of missing values in the dependent variable excludes 60 percent.

3. Impact on Employment

15. Firms have adjusted labor on the extensive (e.g., lay-offs) rather than the intensive (e.g., leave, reduced wages and hours) margin. More than 20 percent of businesses in Kenya have fired workers (Figure 8, panel a). Labor adjustments on the intensive margin have been smaller. Relatively few firms have reduced working hours of at least one employee (12 percent), reduced wages (8 percent), or granted leave of absence with or without pay (5 and 11 percent, respectively). A small number of firms even increased employment after the start of the COVID-19 pandemic. Given the large decreases in sales, labor adjustments have been relatively modest. Yet, the larger adjustment in the extensive margin puts Kenya in a pattern that is different than observed in other countries (see Apedo-Amah et al. 2020 for comparison).

16. The response through labor adjustment changed as the crisis developed. When splitting the labor adjustments through different months, it is observed that firms in Kenya were more likely to adjust through the intensive margins in June, but this pattern changed over July and August (Figure 8, panel b), with a clear trend toward reducing the likelihood of adjusting through granting leave of absence, reducing hours, or reducing wages, in comparison to an increasing likelihood to adjust through laying off.

17. Labor adjustments have taken place at both the extensive (e.g., layoffs) and intensive (e.g., reduced wages and hours) margins, but so far have been relatively modest given the large decreases in revenue for firms. More than 20 percent of businesses in Kenya laid off workers. Labor adjustments on the intensive margin were smaller on average; relatively few firms reduced the working hours of at least one employee (12 percent), reduced wages (8 percent), or granted a leave of absence with or without pay (5 and 11 percent, respectively) in all sectors over time (Figure A2.2).

a. Average for the full sample
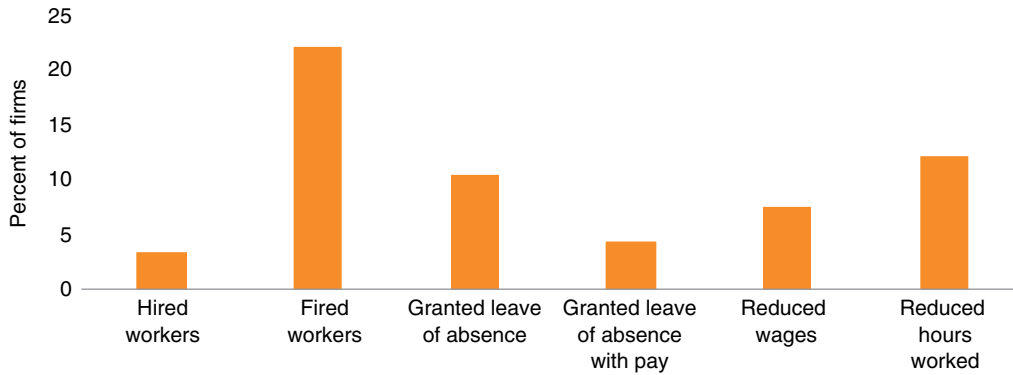
b. Average per month
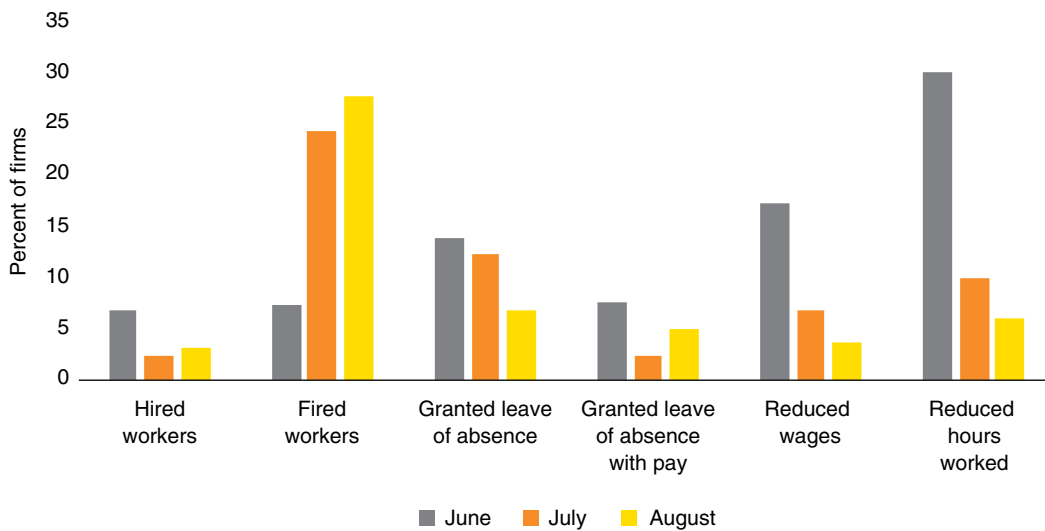
Note: Fraction of businesses reporting at least one employee in each category; it excludes businesses that are permanently closed.

18. Firms have resorted to different labor adjustment measures depending on their characteristics. Firms in the other service sectors have laid off 25 percent of workers and firms in tourism 20 percent of workers. Firms in manufacturing and retail trade have laid off less than 10 percent of workers (Table 3). Controlling for observable characteristics, there is, however, no statistically significant difference between firms of different sectors with respect to laying off of workers. Exporters and established firms less often fire workers than non-exporting and younger firms. While firms overall have more often resorted to labor adjustments on the extensive margin, firms in the tourism sector and manufacturing firms have more often adjusted on the intensive margin. Compared to other sector firms, they have more often reduced hours worked, reduced wages, or, together with retail firms, granted leave of absence (without pay). Medium and large firms in turn are more often able to grant leave of absence with pay than smaller firms. Also, exporting firms are more likely to reduce hours than non-exporting firms. Firms with a larger female workforce less often lay off workers and instead have larger labor adjustments on the intensive margin (Table A3.1).

● **TABLE 3:** Estimated fraction of workers affected by margin of labor adjustment (% of workers)

| Characteristics | Businesses open or temporarily closed | | | | | | Workers in businesses permanently closed (%) |
	Workers hired (%)	Workers laid off (%)	Workers granted leave of absence (%)	Workers granted leave of absence with pay (%)	Workers with wages reduced (%)	Workers with hours reduced (%)	
Total	**1**	**20**	**5**	**2**	**3**	**5**	**1**
Micro (0–4)	3	21	6	3	6	14	3
Small (5–19)	2	19	14	3	7	10	1
Medium (20–99)	2	20	8	4	6	7	1
Large (100+)	0	20	2	1	1	3	0
Agriculture/mining	3	18	6	3	1	6	2
Manufacturing	0	11	6	1	3	7	2
Retail/wholesale	1	7	4	1	2	4	1
Tourism*	1	21	14	2	9	11	3
Other services	1	26	4	3	3	4	0
Nairobi	0	23	1	1	1	1	0
Other regions	1	18	7	3	3	7	1
Young (0–4)	2	23	9	2	7	6	0
Maturing (5–14)	1	21	6	3	4	5	1
Established (15+)	1	19	4	2	2	4	0
Exporter	0	16	15	1	2	16	0
Non-exporter	1	20	4	2	3	4	1
Below 50% female employment	1	22	4	2	2	3	0
Above 50% female employment	2	9	11	4	5	13	1

Note: To estimate the fraction of workers affected, the total number of paid workers is computed adding the number of full-time paid workers and half the number of part-time workers. The total estimated number of workers in each category are presented in Table A2.3 in Appendix 2.
*Tourism refers to accommodation and food services activities.

4. Main Channels of Transmission of the Impact

19. More than 50 percent of firms reported decreases in demand, cash flow, available finance, hours worked, and available inputs. Fifty-four percent of firms reported being affected by a decrease in the availability of inputs, which is the least often reported transmission channel. Around 65 percent of firms reported decreases in demand, cash flow, and available finance, while 62 percent of firms lamented a decrease in hours worked (Figure 9). The different transmission channels affect different types of firms, similarly, when controlling for observable characteristics. Medium-sized firms are less often affected by any of the transmission channels besides a decrease in working hours. The pandemic hit firms in other services and tourism, as well as firms with a larger workforce, mostly through changes

in working hours. Even though these firms experienced a larger impact, they are less likely to report any of the other shock transmission channels. Exporting firms are more often affected by a decrease in the availability of inputs, compared to non-exporting firms (Table A3.2).

● **FIGURE 9:** Fraction of firms affected by transmission channels
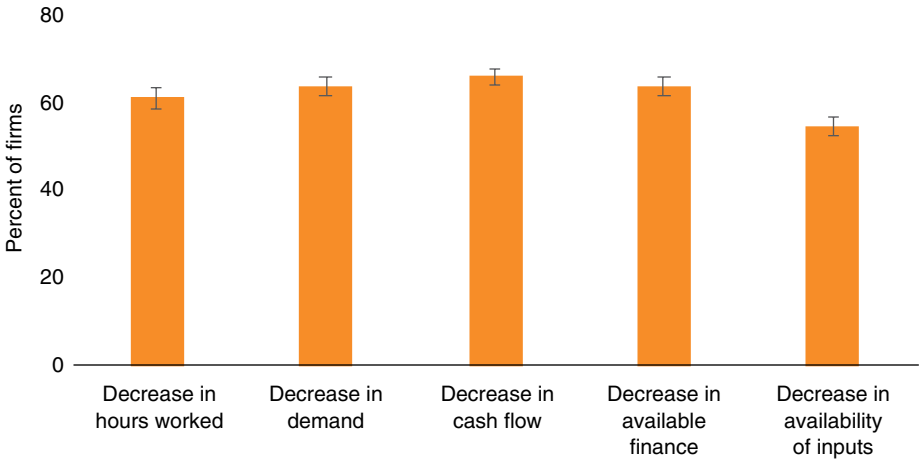
20. The different shock transmission channels of the pandemic have differentiated impacts on sales across sectors. When controlling for observable firm characteristics, a significant effect of the reduction in cash flow on sales becomes evident in the manufacturing sector. Therefore, access to finance might be vital for the survival of manufacturing firms. Decreases in demand have a larger impact on sales of retail firms (Figure 10).

● **FIGURE 10:** Estimated correlation between the change in sales and the shocks of COVID-19
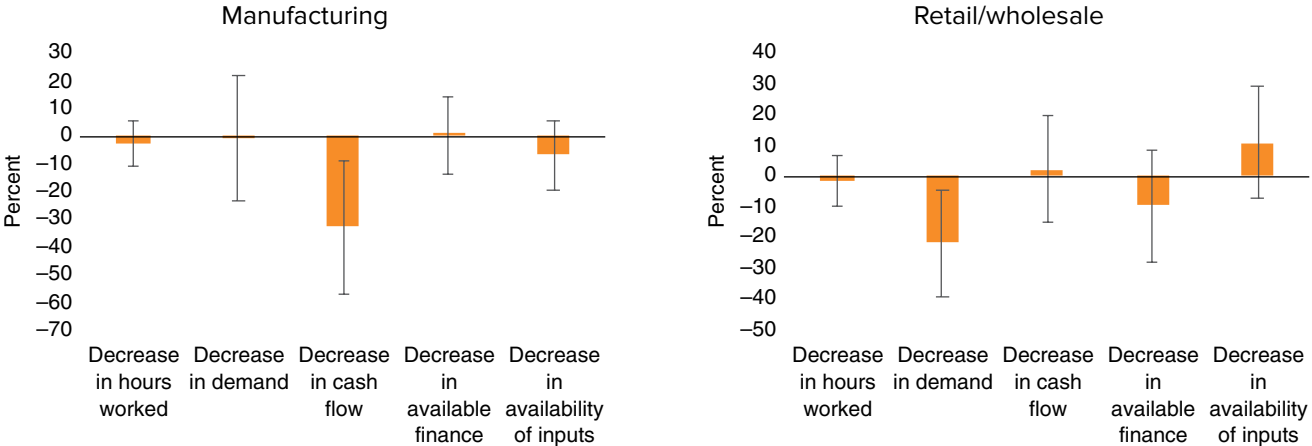
Note: Estimated coefficient from a regression of the percentage change in sales on dummies for the shocks from COVID-19. In each panel, the regression considers only businesses in the sector. See Table A3.3 in Appendix 3 for a full set of results.

5. Firm Survival Expectations

21. The median firm is able to remain open for five months under the current circumstances. On average, a firm in Kenya can remain open 18 weeks. The median firm can remain open for 20 weeks (Figure 11). Medium-sized, large, and more matured firms report a higher number of weeks they can remain open under the current circumstances. Larger reserves or better access to credit could make them more resistant than smaller firms. Firms that are only partially open report being able to continue business for only 14 more weeks in the current circumstances. Sectors which faced a larger decline in sales do not exhibit a shorter period of time of survival. For instance, firms in accommodation and food services don't report fewer weeks of being able to remain open than firms from other sectors (Figure A2.3). There are no statistically significant differences between firms based on exporting status, region, or female employment.

● **FIGURE 11:** Number of weeks that businesses can remain open in current circumstances
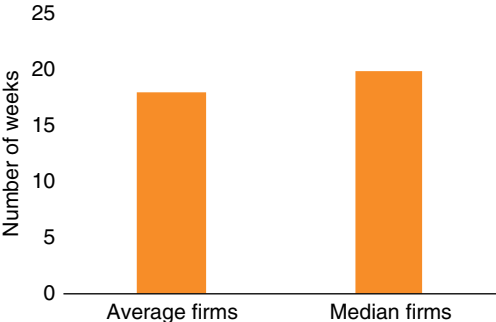
Note: Open and partially open businesses only.

22. The median firm can continue to cover costs with available cash for about four weeks. There is a large variation between firms regarding the length of survival, with average firms being able to continue to cover costs for 47 days on average, but the median firm for only 30 days (Figure 12). Large firms can cover costs for a much longer period than smaller firms. Older firms and establishments in Nairobi are able to cover costs slightly longer than newer firms. Vulnerable firms can continue to cover costs for less than half as long as open firms. Firms in the accommodation, food, and education sectors can cover costs for the shortest time period (Figure A2.4).

● **FIGURE 12:** Number of days a business can cover costs with available cash
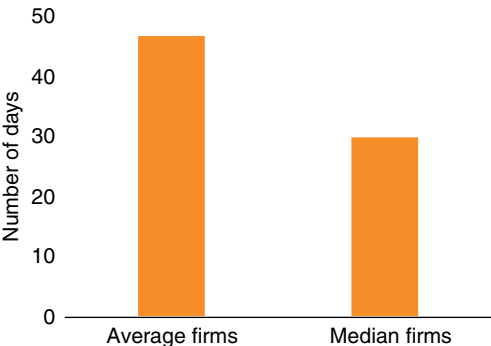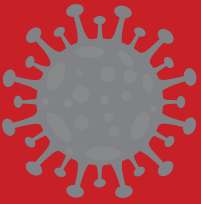
23. Firms in Kenya expect sales to continue to massively decline in the next six months. In a regular scenario, Kenyan firms expect sales to decline by 32 percent in the next six months as compared to the previous year. In a more pessimistic scenario, firms anticipate sales to decline by 56 percent which is even more than sales have declined to date (Figure 13). On average, firms expect sales to decline by about 26 percent. There is relatively little variation between firms regarding their expectation about future sales, the standard deviation being less than half as large as the average expectation. The expected decline in sales in Kenya is more than three times the global average, indicating the pessimistic outlook Kenya firms have (Figure 14), with less uncertainty around these expected results compared to other countries for which the BPS data were collected. Large firms and firms in agriculture and manufacturing are more optimistic about the future. On average, these firms and firms in the retail sector even expect sales to increase in an optimistic scenario (Figure A2.5).

● **FIGURE 13:** Average change in sales expected for the next six months across scenarios
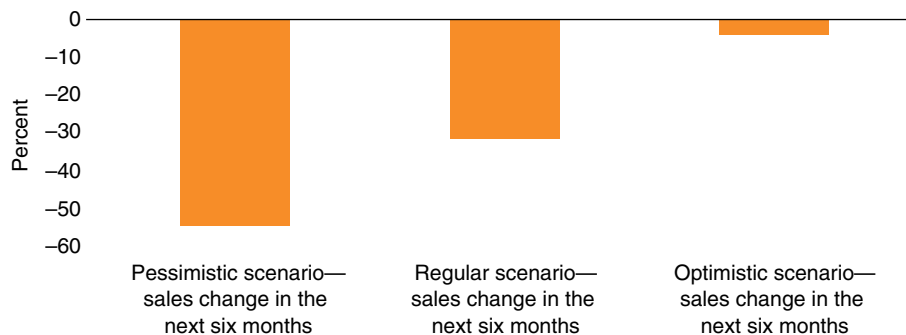
● **FIGURE 14:** Expectations and uncertainty about sales growth for the next six months
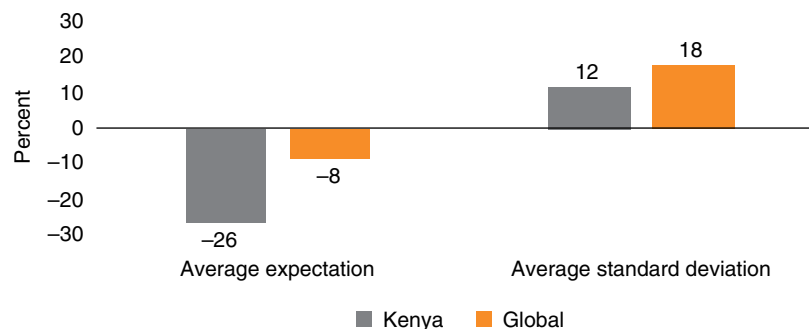
Note: For Figure 14, the global estimate is based on the average adjusted mean from a linear regression that controls for country, size, sector, and timing of the survey. Computations use weights equal to the inverse of the number of observations per country and exclude countries where the fraction of missing values in the dependent variable excludes 60 percent.

24. While expected sale decreases are large, there is relatively little variation in expectation between firms. Weighting the expectation of changes in sales by the likelihood that each firm associates with each of the three scenarios (regular, pessimistic, and optimistic) of happening, most firms expect sales to modestly decline, while few firms expect an increase in sales. Some firms, however, even expect declines to go up to 100 percent (Figure 15). Expecting

large declines may additionally contribute to the economic downturn, as firms are less likely to invest. The standard deviation in expected sales growth is however relatively low (Figure 16). Thus, most firms have similar expectations about future sales developments.

25. Firms anticipate employment to decline at a slightly lower rate than sales. In a regular scenario, firms on average expect employment to decrease by 20 percent in the next six months compared to the previous year. In a pessimistic scenario, firms anticipate employment to decline by 39 percent and in an optimistic scenario by 8 percent (Figure 17). On average, firms expect employment to decrease by close to 20 percent. There is relatively little uncertainty about employment changes (Figure 18). Similar to expectations about sales, smaller firms and firms in tourism and other services are more pessimistic about employment changes (Figure A2.6).

● **FIGURE 17:** Average change in employment expected for the next six months across scenarios
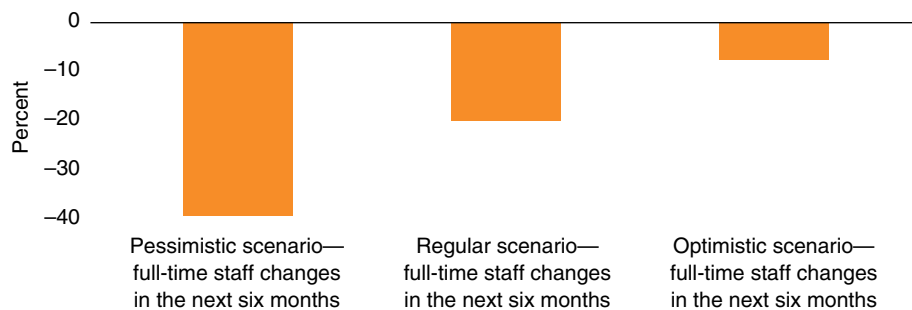
● **FIGURE 18:** Expectations and uncertainty about employment growth for the next six months
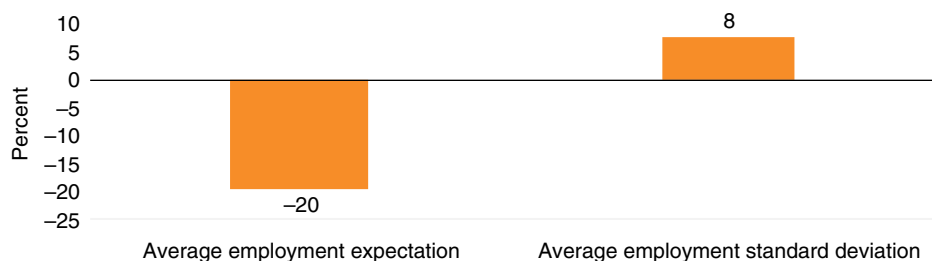
26. Fewer firms expect large employment decreases than large sales decreases. The distribution of expectations about growth in employment is less dispersed than for sales. Most firms expect employment to decline between 0 and 30 percentage points (Figure 19). Likewise, few firms expect larger increases in employment. Similar to sales, the standard deviation in expected employment growth is low (Figure 20).

● **FIGURE 19:** Distribution of expectations about growth in employment
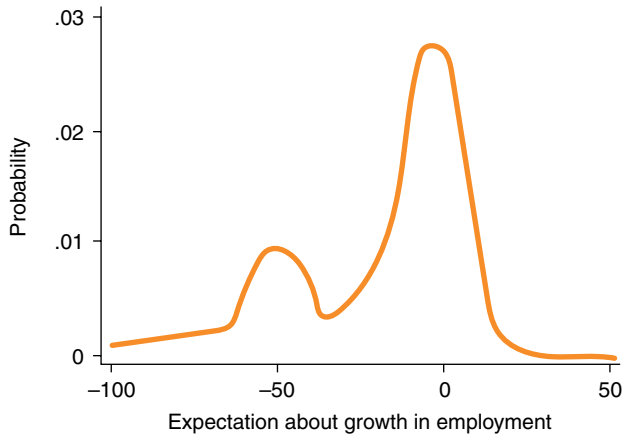
● **FIGURE 20:** Distribution of uncertainty about growth in employment
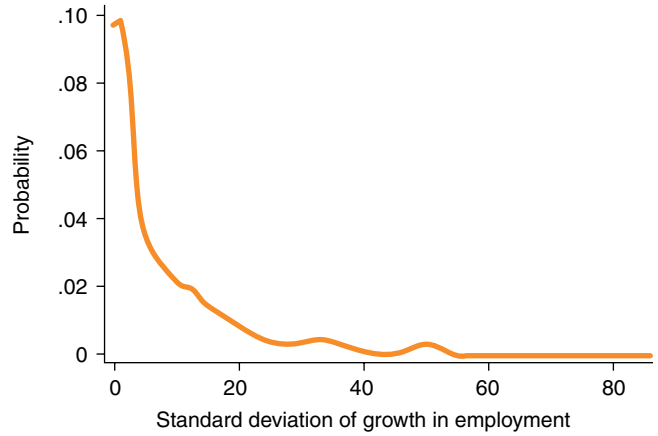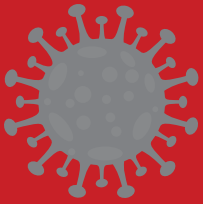
27. In response to the COVID-19 outbreak, close to 50 percent of firms with five or more employees are starting to use, or increase the use of, digital platforms. Fewer firms are investing in software or digital equipment (13 percent), changing their product mix (18 percent), or increasing working from home (12 percent) than investing in digital platforms (49 percent) (Figure 21). Large- and medium-sized firms more often use digital platforms and invest in digital equipment than small-sized firms. Firms in tourism least often use digital platforms (Figure 22). Firms in Nairobi are not more likely to resort to digital solutions than firms in other regions. Exporting firms and firms in agriculture are less likely to repackage their product mix, most likely because they cannot quickly adjust their products to shifts in demand (Table A3.5). The movement toward increased digitalization may contribute to productivity gains and potential positive reallocation within Kenya.

● **FIGURE 21:** Business responses to the COVID-19 shock
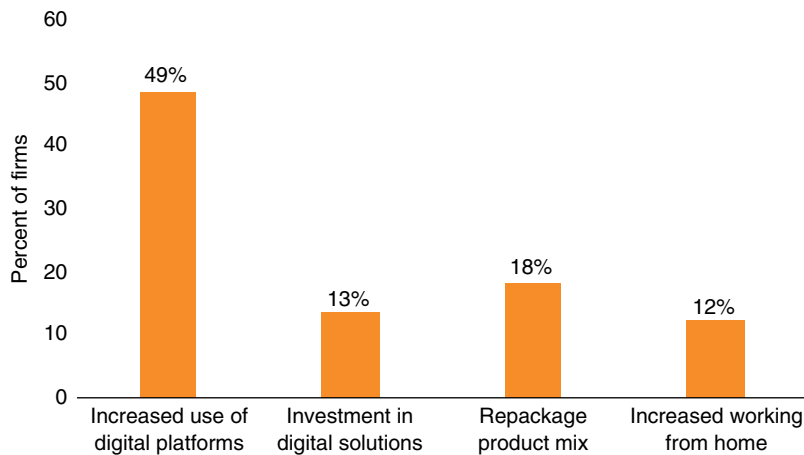
Note: Business responses do not include micro-sized firms. See Table A3.5 in Appendix 3 for regression results.[7]

● **FIGURE 22:** Predictive effect of firm characteristics on responses
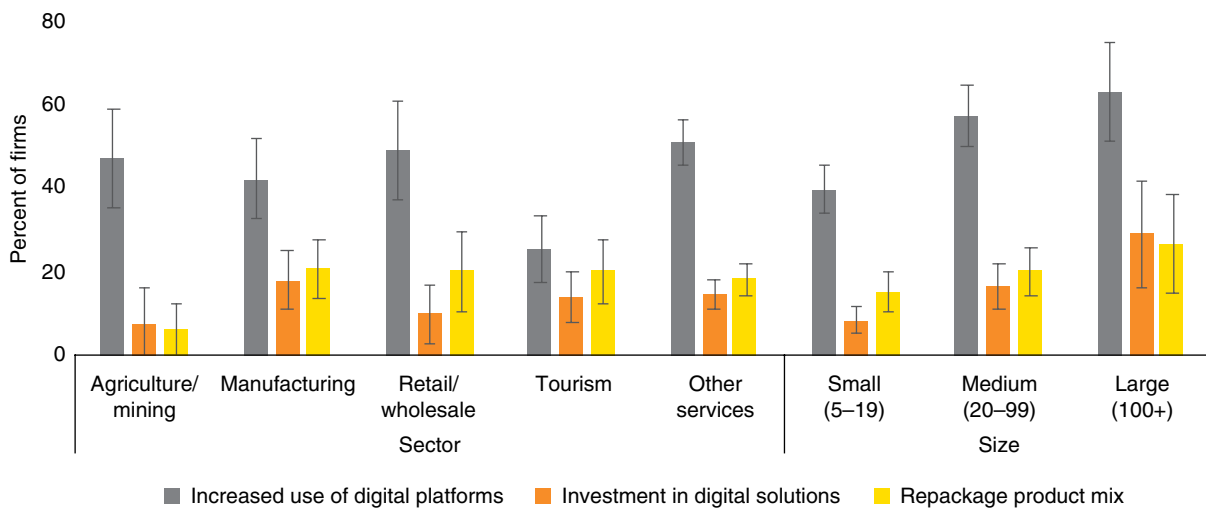
Note: Business responses do not include micro-sized firms. See Table A3.5 in Appendix 3 for regression results.

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[7] A different question was asked to micro-sized firms, which imposed restrictions for the comparability.

28. Seventy-five percent of firms use digital platforms for business administration. Close to 50 percent of firms that started to use or increased their use of digital platforms did so for marketing activities and roughly 40 percent for service delivery (Figure 23). While business administration is the most reported type of usage of digital platforms across all firm characteristics, there is substantial variation in the way firms otherwise use digital platforms. For instance, controlling for observable characteristics, large firms are more likely to use digital platforms for supply chain management, marketing, sales, payments, or service delivery than small firms. In turn, younger firms more often make use of supply chain management, marketing, and payment methods than established firms, which more often use digital service delivery tools. There aren't many differences between sectors; firms in other services less often use digital sales or marketing tools (Table A3.6). Firms in the tourism sector, which especially suffer from lockdown policies or capacity caps, could make use of service delivery platforms to mitigate decreases in sales.

● **FIGURE 23:** Type of digital platform function used
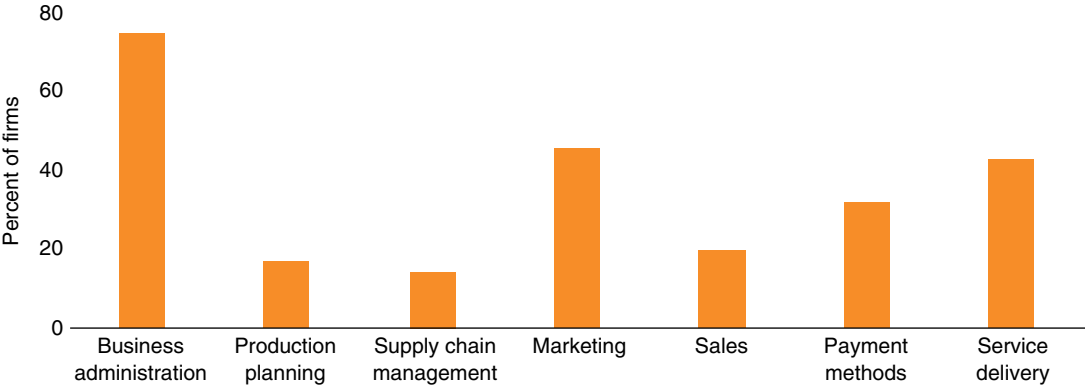
Note: Share of firms among those which indicated an increased use of digital platforms. Micro-sized firms were not included. See Table A3.5 in Appendix 3 for regression results.

29. Overall, these results could contribute to higher productivity growth and positive reallocation. Evidence from other countries suggests that firms with a higher level of technology are more productive, and digital technologies associated with business administration are positively correlated with overall technology.[8] The increase in the demand for digital technologies in Kenya could provide some opportunities for further initiatives to support overall improvement on firm technological capabilities.

30. Kenya ranks highly among African countries for the probability of firms increasing their use of digital platforms. The average probability of a firm increasing the use of digital platforms in Kenya is 53 percent. This probability ranks Kenya third out of 11 African countries with comparable results and is much higher than countries such as Chad (5 percent), Niger (5 percent), and Tanzania and Zambia (18 percent) (Figure 24).

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[8] Cirera, et al. 2020. "Technology Within and Across Firms."

Source: World Bank—Business Pulse Survey Sub-Saharan Africa Results.
Note: Average adjusted probability of starting or increasing the use of digital platforms from a Probit that controls for country, size, sector, and timing of the survey. Computations use weights equal to the inverse of the number of observations per country, and exclude countries where the fraction of missing values in the dependent variable exceeds 60 percent.

31. In response to the outbreak, the Government of Kenya introduced a range of containment policies. On March 15, 2020 all schools were mandated to close, public and private sector workers were directed to work from home, and social and religious gatherings were banned. Cashless transactions were encouraged, while hospitals and shopping malls were required to provide soap and water, as well as hand sanitizers. A nationwide curfew was introduced, followed by restaurants being restricted to takeaway services only, and bars being forced to close. Entry into Kenya was limited to citizens and residents, with quarantine required for 14 days. International flights were banned, and although they resumed on August 1 travelers were required to have a negative COVID-19 test to enter the country. Movement in and out of Nairobi Metropolitan Area, Mombasa, Kilifi, Kwale, and Mandera was restricted from April until early July. As of September 2020, hotels can sell alcohol, but restaurants are mandated to close by 8 P.M. and must not sell alcohol until the end of September. Bars remain closed until further notice.

32. The government's immediate mitigation actions have included a range of measures focused on strengthening the health system and delivering direct assistance to households. Authorities have provided in-kind assistance including soap and food aid, mainly in Nairobi's poorest areas, complemented by assistance from the UN World Food Programme.[9] Similarly, cash transfers have been delivered via mobile payments to households in low-income informal settlements in Kenya's urban centers.[10] While schools remain closed, the Kenya Ministry of Education shared guidelines for enhancing teaching and learning through four main platforms: (i) daily radio programs, (ii) education television broadcasts, (iii) KICD's EduTV Kenya YouTube channel, and (iv) digital learning resources from the Kenya Education Cloud.[11]

33. A series of relief tax measures were enacted to help lessen the immediate financial burden on Kenya's citizens and businesses.[12] The Tax Law (Amendment) Act 2020 went into effect on April 25. Tax measures include a reduction of the value added tax (VAT) rate from 16 percent to 14 percent; a reduction of the personal income tax top rate from 30 percent to 25 percent; a reduction of the turnover tax rate for micro, small, and medium enterprises from 3 percent to 1 percent; and 100 percent tax relief for persons earning up to KSh 24,000. In addition, the government enacted a temporary suspension of the listing of loan defaulters for any person; micro, small, and medium enterprises; and corporate entities whose loan account is in arrears as of April 1, 2020.

34. The Government of Kenya also implemented a series of economic stimulus measures.[13] A Central Bank order for banks to waive fees for individuals who move money between their bank account and mobile wallet came into effect on March 17. The upper limit for mobile money transfers was increased. Authorities reached a deal with

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[9] World Food Programme, "WFP Supplements Government Support to Poor Families in Kenya Hit by COVID-19." https://www.wfp.org/news/wfp-supplements-government-support-poor-families-kenya-hit-covid-19

[10] Capital News, "250,000 Households Identified for Cash Support in the Wake of COVID-19." https://www.capitalfm.co.ke/news/2020/05/250000-households-identified-for-cash-support-in-the-wake-of-covid-19/

[11] World Bank. 2020c. "How Countries Are Using Edtech (Including Online Learning, Radio, Television, Texting) to Support Access to Remote Learning during the COVID-19 Pandemic." https://www.worldbank.org/en/topic/edtech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic

[12] KPMG. "Kenya: Government and institution measures in response to COVID-19." https://home.kpmg/xx/en/home/insights/2020/04/kenya-government-and-institution-measures-in-response-to-covid.html

[13] KPMG. "Kenya: Government and institution measures in response to COVID-19." https://home.kpmg/xx/en/home/insights/2020/04/kenya-government-and-institution-measures-in-response-to-covid.html

commercial banks to restructure nonperforming loans caused by COVID-19 layoffs. Additionally, loans and grants are available through government and private funds, including the National Business Compact on CoVid19 (NBCC), as well as special loans through Stanbic Bank and Standard Chartered Bank, among others. The Government of Kenya also disbursed KSh 1 billion for the health care sector and US$5 million for the tourism sector. In addition, the International Finance Corporation disbursed a US$50 million loan to the Equity Bank Kenya to support small and medium enterprises (SMEs).

35. One in five firms in Kenya has received public support during the COVID-19 pandemic. Firms based in Nairobi were more likely to receive assistance than firms in other regions (Figure 25, panel a). Firms in agriculture and in health/social work sectors on average most often received assistance, though the differences are not statistically significant (Figure 25, panel b). Of the firms that got any assistance, close to 36 percent received monetary transfers and 33 percent received tax deferrals (Figure 26). Within the "other assistance" measure, firms most often state the provision of sanitizers and masks.

36. Micro-sized and small firms were less likely to receive public support, compared to larger firms. While 27 percent of large firms got assistance, only 16 percent of micro-sized reported having access to assistance measures (Figure 25, panel a).

● **FIGURE 25:** Distribution of expectations about growth in employment

a. All, by size and region

b. By sector
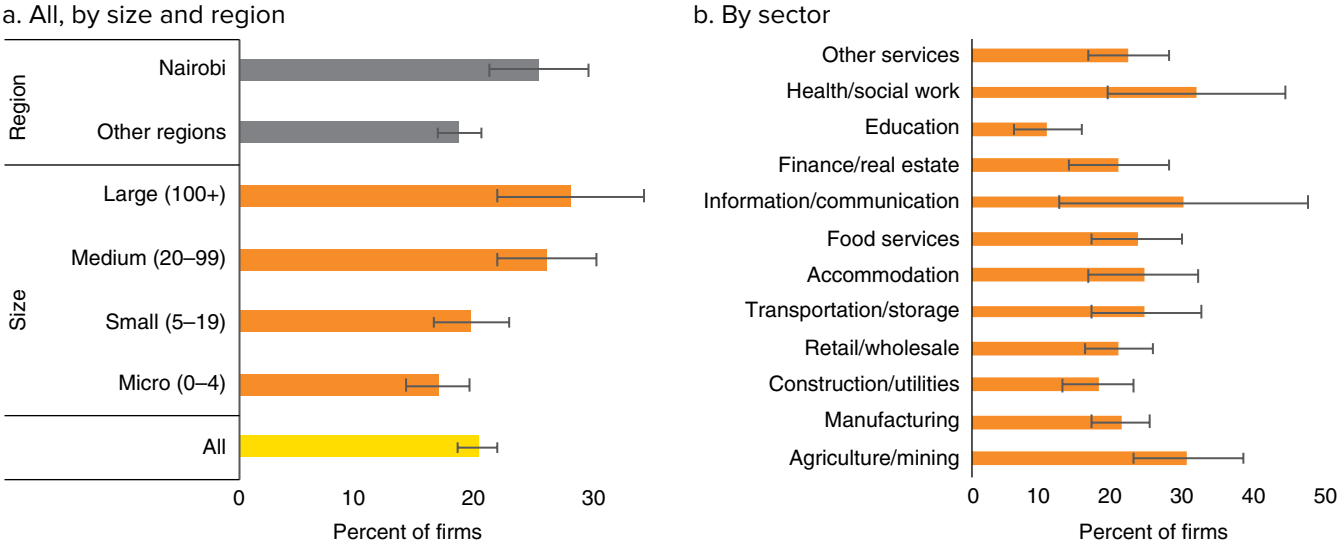
● **FIGURE 26:** Type of assistance received
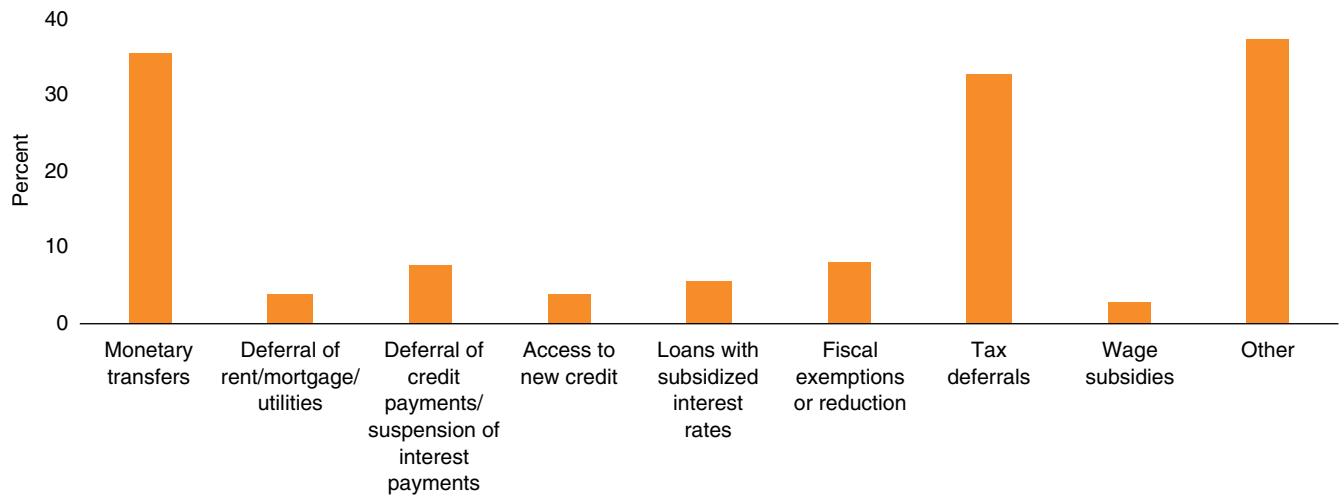
Note: The other option includes provision of sanitizer, masks, and social distancing or precautionary measures.

37. Information gaps are the main reason for not receiving public support. Among firms that did not receive any assistance, over 80 percent reported not having received assistance because they were not aware of any government measures (Figure 27). Information campaigns are thus vital to ensure that assistance reaches those that need it most. Awareness over existing government programs is similar over firm characteristics (Figure 28).

● **FIGURE 27:** Reason for not receiving assistance
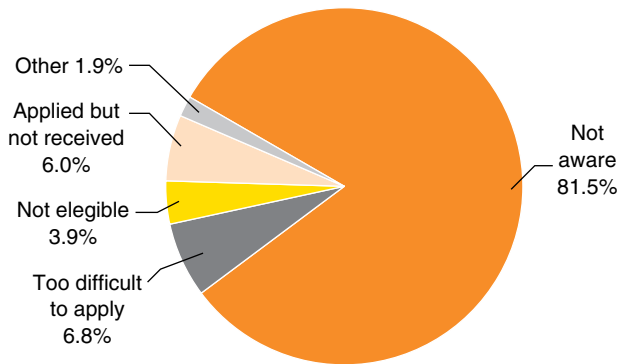
● **FIGURE 28:** Not being aware of programs by firm characteristic
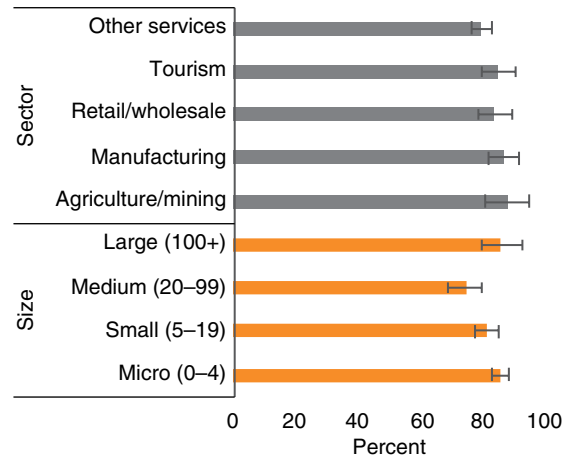
38. Loans with subsidized interest rates are the most needed policy response according to Kenyan firms. Forty-two percent of firms in Kenya call for monetary transfers from the government and 25 percent for tax deferrals, while 50 percent of firms refer to loans with subsidized interest rates as one of the three most needed policies (Figure 29). The type of most-needed assistance, however, varies between different firm characteristics. For instance, exporters disproportionately demand tax deferrals (Table A3.7). This could either reflect higher tax and custom duties or the fact that exporting firms do not face liquidity constraints or lack of credit, and therefore do not call for other policy measures. Agricultural firms and firms in retail are most likely to call for monetary transfers. Firms in the tourism and manufacturing sectors are more likely to call for loans with subsidized rates, indicating liquidity constraints.

● **FIGURE 29:** Self-reported most needed public policies to support businesses
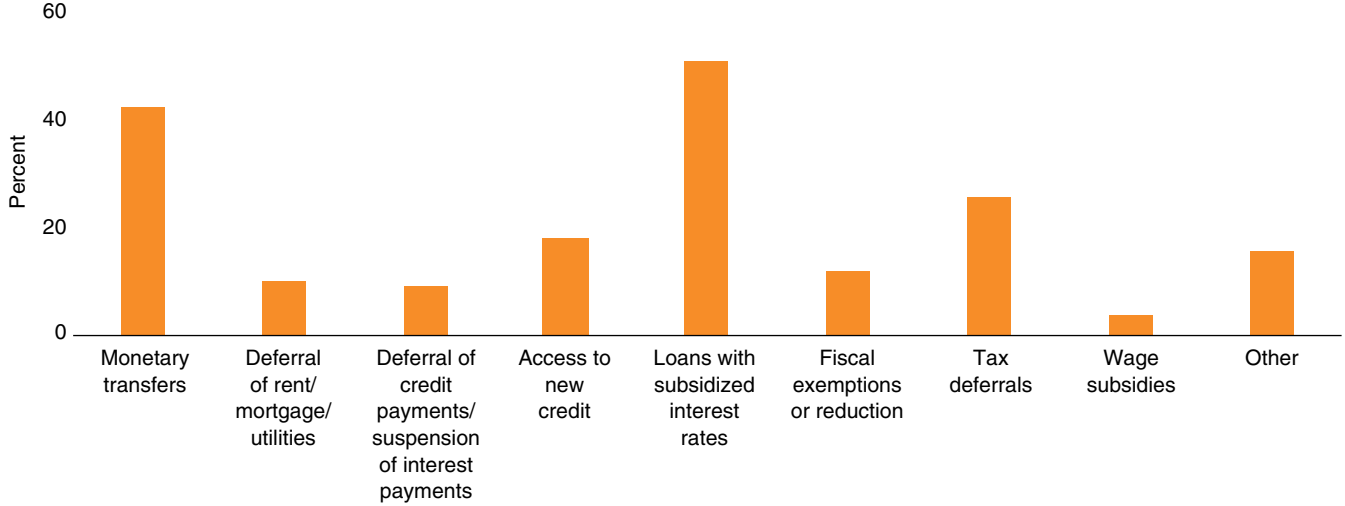
39. Firm size plays an important role with regard to the type of assistance that firms require. Larger firms more often report fiscal exemptions and deferral of loan payments as the most needed policy responses, as these likely have larger duties and open loans. As by definition micro-sized firms have only few or no employees, wage subsidies are the least often reported and most needed policy. In turn, micro-sized and small firms more often call for deferral of rent, mortgages, and utilities, since these make up a large proportion of these firms' running costs (Table A3.7).

40. Firms call for different policies depending on the type of shock they experienced. While the majority of firms report loans with subsidized rates to be among the three most needed policies, the type of shock a firm experienced has an effect on the policies that it calls for. Firms hit by a decrease in demand are around 24 percentage points more likely to demand cash transfers (Figure A2.7). In turn, firms that report a decrease in hours worked, i.e., that are more liquidity constrained, more likely call for subsidized loans or tax deferrals.

1. General Recommendations

41. To help mitigate the adverse impacts of COVID-19 on firms, this report suggests policy response options divided into four areas: ensure the liquidity of viable firms, enhance firm capabilities, promote access to new markets, and reduce uncertainty by improving access to new information. As the crisis continues to evolve, policies must find a balance between short-term interventions to help businesses "keep the lights on" and a sustainable recovery plan that facilitates the selection of the most productive firms. In the recovery phase, policies should be geared toward supporting growth-oriented enterprises, promoting the reallocation of resources to more efficient companies, and avoiding measures that risk propping up zombie firms (i.e., inefficient firms that survive).[14]

42. Ensure the liquidity of viable firms: A key priority in the short term is to alleviate the restriction of cash flows due to lower demand. Direct measures to address liquidity pressures may encompass accelerated depreciation on some or all categories of assets, which would reduce taxable income.[15]

(i) **FinTech solutions should be promoted.** Kenya is known for its innovative solutions regarding digital financial services. Digital technology offers an unprecedented opportunity to mitigate the impact of the COVID-19 crisis on micro, small, and medium enterprises (MSME) financing. Simplified loan application processes and the use of alternative data for credit decisions could be leveraged by banks to reduce turnaround times for MSME loans.

(ii) **The efficacy of the emergency tax reduction and deferral measures should be assessed.** The Government of Kenya has implemented a package of tax measures, which includes reduction of the base corporate income tax rate from 30 to 25 percent, reduction of the turnover tax rate on small business, from 3 to 1 percent, and a reduction of the standard VAT rate from 16 to 14 percent.[16] Assessing the impact of these measures on the robustness of firms, as well as on tax revenue is critical, so that evidence-based decisions can be made about whether they should continue.

(iii) **Conditions must be established to prevent the insolvency of healthy firms due to temporary illiquidity.** For micro and small businesses, this could mean increasing the debt threshold required for a creditor to initiate bankruptcy proceedings against a debtor or limiting access in modern personal bankruptcy systems to a debtor's petitions alone. Enacting these measures for a fixed time period would prevent the system from becoming one of debt collection during a pandemic, as well as help control the number of cases entering the overburdened court system. The Central Bank suspended, for six months, the listing of negative credit information for

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[14] This section is based on the overall policy guidance described in World Bank 2020a, and Cirera et al. (2021). "Assessing the impact and policy responses in support of private-sector firms in the context of the COVID-19 pandemic." While the COV-BPS findings indicate some gaps and opportunities for policy actions, these recommendations come from a menu of options based on a broader World Bank knowledge of Kenya and other engagements.

[15] These recommendations related to liquidity of viable firms are based on information beyond COV-BPS results. See World Bank (2020b) for further details. A second wave of the COV-BPS in Kenya will focus further on issues related to liquidity and solvency to provide additional evidence for this debate.

[16] IMF policy tracker. https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

borrowers whose loans became nonperforming after April 1, 2020.[17] These measures need to be reassessed and potentially expanded based on the extent and duration of the COVID-19 crisis, while keeping in mind the risks they present for financial sector sustainability.

(iv) **De-risking financial institutions will be important for increasing access to finance for healthy firms.** Risk aversion is an important factor limiting the willingness of financial intermediaries to increase lending, particularly to MSMEs. The National Treasury is setting up a credit guarantee scheme to issue partial credit for commercial bank loans to MSMEs.

(v) **The liquidity constraints of microenterprises should be alleviated.** Providing liquidity channeled through microfinance institutions, Savings and Credit Cooperative Organisations (SACCOs), and digital platforms can help address the liquidity constraints faced by these institutions and their ability to extend credit to micro and small firms. However, any initiative on this front needs to be combined with rigorous risk management processes.

(vi) **Government arrears on payments to MSMEs must be addressed.**[18] This can be accomplished by setting up a receivables financing platform that would allow financial institutions to refinance these receivables through an invoice and receivables discounting scheme. To give comfort to financial institutions, the scheme will be supported by the guarantee product.

(vii) **Early-stage companies should not be left out of safety net provisions.** Public policies to help vulnerable but viable firms stay in business and maintain employment should also include start-ups. The provision of a cash lump sum for firms to stay afloat could help overcome the immediate challenges brought on by the pandemic. Keeping this sum reasonably small would make it feasible from a fiscal perspective while ensuring that it is still relevant for start-ups. If employment retention is crucial to keep the business alive, then an immediate cash injection, either through grant or loan or guarantee, could be explored. If market failures are clearly identified, support for publicly funded venture capital companies and funds to inject equity could be explored.[19] Loan or equity injections into venture funds can help them survive through a period when they cannot realize any returns, and can ease the pressure on them to liquidate companies in which they have invested in the short term.

43. Enhance firm capabilities: The pressure to react to the crisis may offer an opportunity to improve overall managerial and technological capabilities throughout firms in Kenya. The COV-BPS results suggest that firms are responding to the crisis with the adoption of digital technologies, which can be useful for improving their overall capabilities.

(viii) **Using this crisis as an opportunity to accelerate digital technologies can help increase firm efficiency.** Evidence across countries suggests that a large proportion of firms are starting to use or increase the use of digital technologies for business purposes. In the case of Kenya the response has been relatively larger than in other developing countries, but there is still a potential for expansion, particularly among small firms. Facilitating the adoption of digital technologies that can be applied to general business functions, such as business planning, marketing, payment, and sales, will be critical for helping firms cope with the COVID-19 crisis and for improving

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[17] IMF policy tracker. https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

[18] The government was in significant arrears to suppliers and contractors, estimated at 0.7 percent of GDP (~KSh 65 billion) in FY2018/19. Paying arrears will be critical to enhance firms' liquidity during the crisis. The GoK has already taken steps and allocated KSh 13.8 billion to clear arrears and KSh 10 billion for VAT refunds as part of its policy responses to the pandemic (World Bank Kenya Economic Update. April 2020).

[19] For example, France and Germany have a long tradition of using these instruments through state development banks to provide risk capital to MSMEs.

their capabilities going forward. Among the functions with a higher potential for easy adoption are technologies related to supply chain management and sales.

(ix) **Providing business development services, such as general business training, specific technical training, and management advice, could enhance firm resilience.** International metrics suggest that Kenyan firms are lagging behind with respect to the adoption of good managerial practices, which is strongly associated with firm performance measures such as productivity and exports.[20] Evidence on business training focusing on improving business practices for SMEs across countries suggests an average impact of 10 percent on profits.[21] Indeed, previous experiments with micro and small firms in Kenya suggest that interventions to improve business practices through mentorship can lead to an increase in profits of 20 percent on average.[22] While firms are facing significant challenges associated with a reduction in demand and a shortage of cash, the need for innovative business solutions inherent to such crises can be used as an opportunity to better prepare firms for the recovery process. Ongoing interventions already aimed at supporting SMEs, such as the Kenya Industry and Entrepreneurship Project, should be accelerated and scaled up. Digital solutions can be leveraged here too, through online tools for delivering support for managerial capabilities at a lower cost.

44. Promote access to new markets: The development of the COVID-19 crisis has caused disruption in several value chains, which may not only create challenges but also opportunities for Kenyan firms.

(x) **Providing information to firms can support them in prospecting new markets.** The variation in the development of the COVID-19 crisis in different countries can generate significant variations in how global value chains are disrupted, which can in turn create business opportunities.[23] Providing information to local producers regarding opportunities in international markets, particularly in exporting sectors such as agricultural commodities (e.g., coffee, tea, fruits), processed food, and apparel, could help boost export potential during a period of global crisis. Such activities could be conducted by the Kenya Export Promotion Agency.

45. Improve access to information: Evidence for Kenya and other countries suggests that firms are expecting large declines in sales in the coming six months, with a high degree of uncertainty. Improving transparency and access to information about support currently available for businesses can increase the likelihood of reaching the firms most in need and could help improve expectations overall.

(xi) **Providing guidance on health protocols could help reduce risks.** Widely disseminating information on protocols to minimize the risk of transmission of COVID-19 among customers could increase confidence and business activity. This could also help reduce the risk of outbreaks within a business, a situation that could seriously exacerbate the operational challenges already being faced by firms. In tandem with such information campaigns, some financial support to help firms adopt the required sanitary measures could improve compliance. This topic will be analyzed in the next report, which will include questions on adoption of health protocols.

(xii) **Stronger communication is needed about policy interventions already available to support businesses.** A common challenge across many developing countries, including Kenya, is that a very large share of businesses are not aware of the public programs available to support them. In Kenya, about 80 percent of businesses that

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[20] See evidence across countries, including Kenya, from the World Management Survey. https://worldmanagementsurvey.org/

[21] McKenzie, D. 2020. "Small Business Training to Improve Management Practices in Developing Countries." Policy Research Working Paper, 9408. World Bank.

[22] Brooks, Donovan, and Johnson. 2018. "Mentors or Teachers? Microenterprise Training in Kenya." American Economic Journal: Applied Economics; Beaman, Lori, Jeremy Magruder, and Jonathan Robinson. 2014. "Minding small change among small firms in Kenya," *Journal of Development Economics* 108: 69–86.

[23] https://www.wsj.com/articles/high-food-prices-drive-consumers-to-hunt-for-value-11591700401

did not receive support reported they were not aware of the options available to them. Evidence from a similar survey across countries suggests that firms that are more likely to receive assistance also have better expectations regarding the future of their business.

(xiii) **Targeted channels should be used to reach different types of firms with information regarding government programs.** Kenya has more than 20 national programs in place to support entrepreneurship activities. An ongoing assessment conducted by the World Bank suggests that many of those programs provide services related to access to finance. However, information about those policy instruments is not easily available. The Government of Kenya could consolidate information about all public programs to support businesses, including the expansion of activities specifically related to COVID-19, and facilitate access to this information for businesses. This could be converted into a sustained practice as a way to optimize public resources.

2. Recommendations on Targeting Firms

46. The results of the COV-BPS highlight that one of the main challenges faced in implementing business support during COVID-19 is to identify which firms should be targeted. MSMEs seem to be the most vulnerable in general. They are disproportionally more impacted in terms of reductions in sales and they face a higher likelihood that they will close, partially because they tend to have less access to credit. At the same time, the number of layoffs is significantly higher among large firms. Given the ubiquity of the shock across the whole economy, the challenge of targeting specific groups of firms is not very different than it was prior to COVID-19. The cautions that were applicable before the pandemic regarding targeting criteria for interventions to support businesses are still valid—the large heterogeneity between firms belonging to the same sector and of similar size must be considered. There are a number of options to improve the targeting of firms.

47. The challenge of targeting firms: Results of the COV-BPS suggest the impact of COVID-19 on businesses in Kenya is widespread across firms of different size, sector, region, and age. This creates significant challenges for policy makers when defining a specific group of firms to target.

(i) **A "funnel approach" to assistance can help ensure that the firms with the greatest potential for improvement get the most support.** This approach might be particularly relevant for interventions that aim to provide business training and financing support through grants, but who are also looking to identify businesses with a high level of commitment and need. The program can provide very basic assistance services for a large number of firms (e.g., some online courses, simple benchmarking information, or short one-hour firm visits). Firms that demonstrate interest and undertake some improvement actions following this first engagement can then be filtered into receiving a second, more intermediate level of business training support or a specific grant. This approach has the political advantage of offering some assistance to a large number of firms while restricting the most costly and time-consuming parts of the program to firms that demonstrate engagement and immediate improvement.[24]

(ii) **Mobile phones can be used to reach women-owned businesses.** MSMEs run by women can be disproportionally affected by the COVID-19 shock, and specific targeted interventions already conducted in Kenya suggest that they can lead to effective results.[25] Policies could include: (i) providing mobile phones to women to facilitate

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[24] See more details on McKenzie, D. 2020. "Small Business Training to Improve Management Practices in Developing Countries." Policy Research Working Paper, 9408. World Bank.

[25] McKenzie and Puerto. 2017. "Growing Markets through Business Training for Female Entrepreneurs: A Market-Level Randomized Experiment in Kenya," *American Economic Journal: Applied Economics*.

access to financing, and (ii) using customer data on mobile phone and mobile banking transactions to identify women more vulnerable during this crisis to more effectively target relief payments.

(iii) **The targeting of solutions can leverage big data analytics from digital platforms.** Mobile Network Operator (MNO) data that capture financial transactions, such as credit, remittance, and payment data for firms, can be especially useful. Some of the simple metrics to identify these enterprises could be: (i) reduced volume and number of mobile money transactions, (ii) increased uptake of overdraft facilities in the last few months, and (iii) vulnerable informal MSMEs in hard-hit sectors by the COVID-19 pandemic, such as the retail, agribusiness, and manufacturing sectors.

(iv) **Complementary measures should be considered to offer support for solvency problems among SMEs or strategically large firms.**[26] Given the extent of the COVID-19 crisis, providing liquidity may be an insufficient remedy, as liquidity does not compensate businesses for their losses. Should the crisis threaten the solvency of MSMEs, governments would have to consider additional measures to complement the emergency actions discussed above. Some options may include: direct compensation through grants for viable firms/sectors that have been significantly impacted;[27] support for publicly funded venture capital companies and funds to inject equity if market failures are clearly identified;[28] indirect support through loss-sharing mechanisms and other forms of leverage funding; and stimulation of private equity investment.[29] The implementation of any of these options should address specific market failures, be reassessed regularly, and remain temporary in nature. These schemes can be controversial if they lead to large-scale nationalizations and can be expensive in terms of fiscal resources. Therefore, they would have to be designed in a transparent way with clear sunset clauses and exit strategies.

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[26] More details are provided by World Bank. 2020. "Assessing the impact and policy responses in support of private-sector firms in the context of the COVID-19 pandemic."

[27] For example, the European Commission indicated that direct compensation for damages suffered due to the COVID-19 outbreak for companies active in sectors that have been particularly hit (e.g., transport, tourism, and hospitality or organizers of cancelled events) would be authorized even though they are state aids, which are typically prohibited in the EU.

[28] For example, France and Germany have a long tradition of using these instruments through state development banks to provide risk capital to MSMEs.

[29] As with lending, guarantees have the potential to provide large-scale effects and subsidy leverage if they are well designed and implemented. The U.S. Small Business Administration's leverage program for Small Business Investment Companies has a long history and provides a number of lessons.

Altig, David, Jose Maria Barrero, Nicholas Bloom, Steven J. Davis, Brent H. Meyer, and Nicholas Parker. 2019. "Surveying business uncertainty." No. W25956. National Bureau of Economic Research.

Apedo-Amah, Marie Christine; Avdiu, Besart; Cirera, Xavier; Cruz, Marcio; Davies, Elwyn; Grover, Arti; Iacovone, Leonardo; Kilinc, Umut; Medvedev, Denis; Maduko, Franklin Okechukwu; Poupakis, Stavros; Torres, Jesica; and Tran, Trang Thu. 2020. "Unmasking the Impact of COVID-19 on Businesses: Firm Level Evidence from Across the World." Policy Research Working Paper n. 9434. World Bank, Washington, DC.

Beaman, Lori, Jeremy Magruder, and Jonathan Robinson. 2014. "Minding small change among small firms in Kenya," *Journal of Development Economics* 108: 69–86.

Brooks, Wyatt, Kevin Donovan, and Terence R. Johnson. 2018. "Mentors or teachers? Microenterprise training in Kenya." *American Economic Journal: Applied Economics* 10, no. 4: 196–221.

Cirera, X., Comin, D., Cruz, M, and Lee, K. M. 2020. "Technology Within and Across Firms." NBER Working Paper, n. 28080.

Cirera, Xavier; Cruz, Marcio; Davies, Elwyn; Grover, Arti; Iacovone, Leonardo; Lopez Cordova, Jose Ernesto; Medvedev, Denis; Okechukwu Maduko, Franklin; Nayyar, Gaurav; Reyes Ortega, Santiago; Torres, Jesica. 2021. Policies to Support Businesses through the COVID-19 Shock: A Firm-Level Perspective. Policy Research Working Paper, No. 9506. World Bank, Washington, DC.

McKenzie, D., and Puerto, S. 2017. "Growing markets through business training for female entrepreneurs: a market-level randomized experiment in Kenya." The World Bank.

World Bank. 2020a. "Africa's Pulse: Assessing the Economic Impact of COVID-19 and Policy Responses in Sub-Saharan Africa" Washington, DC.

World Bank. 2020b. "Assessing the impact and policy responses in support of private-sector firms in the context of the COVID-19 pandemic." Finance Competitiveness and Innovation Global Practice. Washington, DC.

World Bank. 2020c. "How Countries Are Using Edtech (Including Online Learning, Radio, Television, Texting) to Support Access to Remote Learning during the COVID-19 Pandemic." Washington, DC.

Appendix 1. Description of the Sample

The Kenya-BPS sample consists of 2,070 firms randomly selected from the universe of 138,186 firms available in the 2017 Census of Establishments from the Kenyan National Bureau of Statistics (KNBS). Table A1.1 shows the distribution of the sample based on the analysis.[30]

The sample was stratified by size groups (micro: 0–3, small: 4–9; medium-small: 10–49, medium-large: 50–149, and large: 150+ employees) and sector (agriculture, food processing; wearing apparel, other industry; construction and real estate; wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation; food service activities; information and communication technology (ICT), finance, professional, and administrative services; and education, health and other services).[31] The analysis regrouped the size and sectors of activities for the sake of comparability across countries, as the COV-BPS has been implemented and harmonized across more than 50 countries.[32]

Phone interviews were conducted between June 10 and August 30, 2020. The team used Computer Assisted Telephone Interviewing (CATI) through a Survey Solutions platform. The response rate was 37 percent. A total of 5,567 firms were reached or attempted to be reached by the survey team. Among those, 1,827 firms were missed after all attempts. Other firms were missed by being unable to participate, declining consent, or unobtainable contact. The sample based on the universe population for each stratum was provided by KNBS from the Census of Establishment data (2017). To account for nonresponses and to ensure the weighted sample matches the universe population in each strata, the unadjusted weights were multiplied by an adjustment factor and calculated for each strata by dividing the target sample total by the actual number of firms successfully sampled, which was used in the analysis.

● **TABLE A1.1:** Number of firms by sector, size, region, and exporting status

	Agriculture/ mining	Manufacturing	Retail/ wholesale	Tourism	Other services	Total
All	**142**	**388**	**301**	**298**	**941**	**2,070**
Micro (0–4)	19	188	154	109	310	780
Small (5–19)	36	91	88	106	313	634
Medium (20–99)	44	57	42	66	235	444
Large (100+)	43	52	17	17	83	212
Young (0–4)	18	42	43	48	92	243
Maturing (5–14)	57	161	172	170	546	1,106
Established (15+)	67	185	86	80	303	721
Other regions	121	307	233	275	699	1,635
Nairobi	21	81	68	23	242	435
Below 50% female employment	101	332	256	184	755	1,628
Above 50% female employment	41	56	45	114	186	442

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[30] Tourism-related activities refer to the accommodation and food and beverage service activities.
[31] The sample was stratified by the groupings listed. In order to match standard firm size classifications, they have been aggregated in Table A1.1.
[32] Results for cross-country comparability are available at Apedo-Amah et al. (2020).

● **FIGURE A2.1:** Changes in mobility over time (percent change compared to baseline)

Nairobi

Mombasa
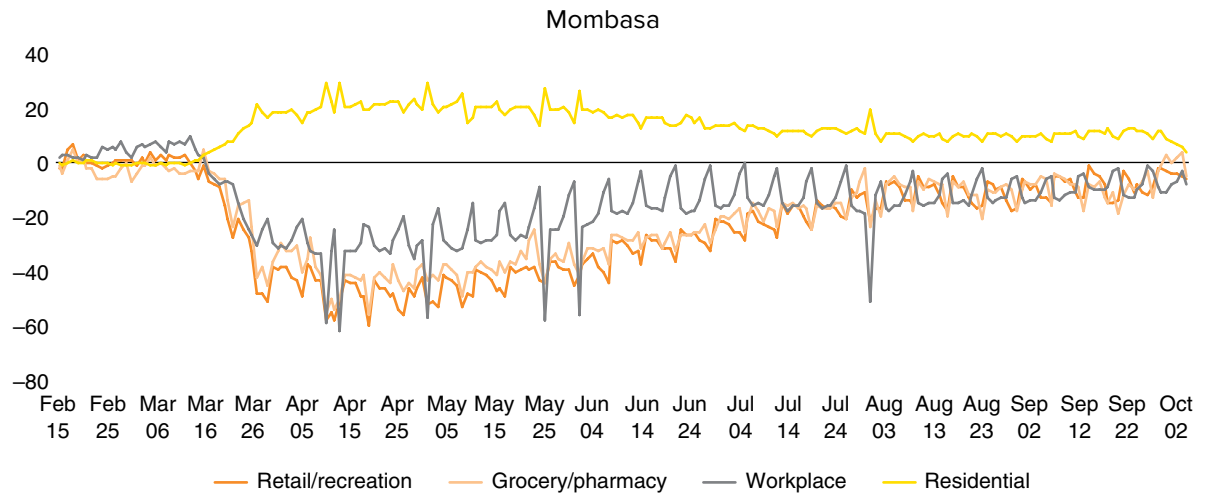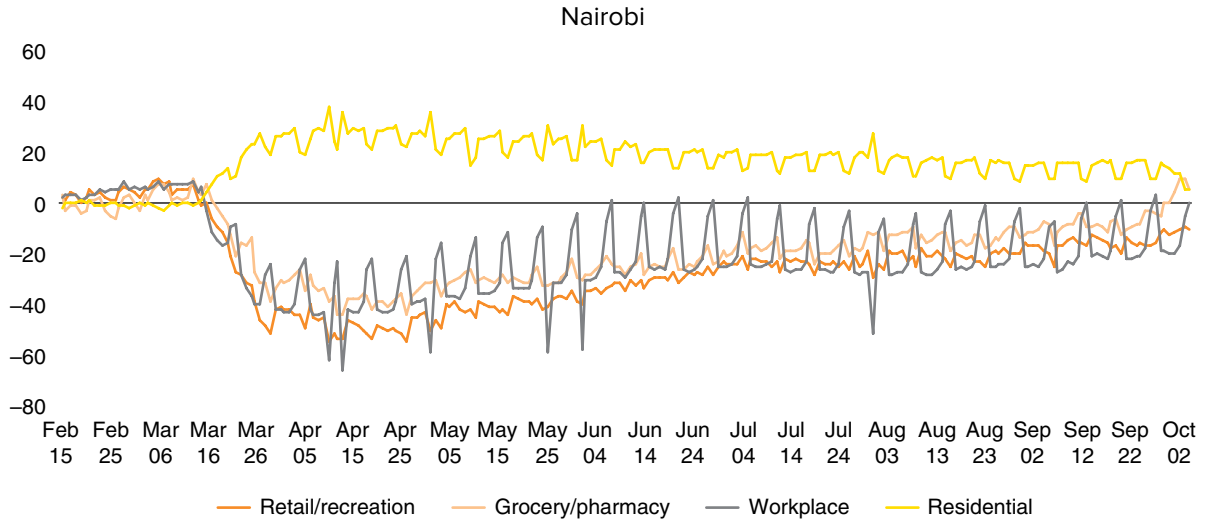
● FIGURE A2.2: Margin of adjustment in employment by month and sector
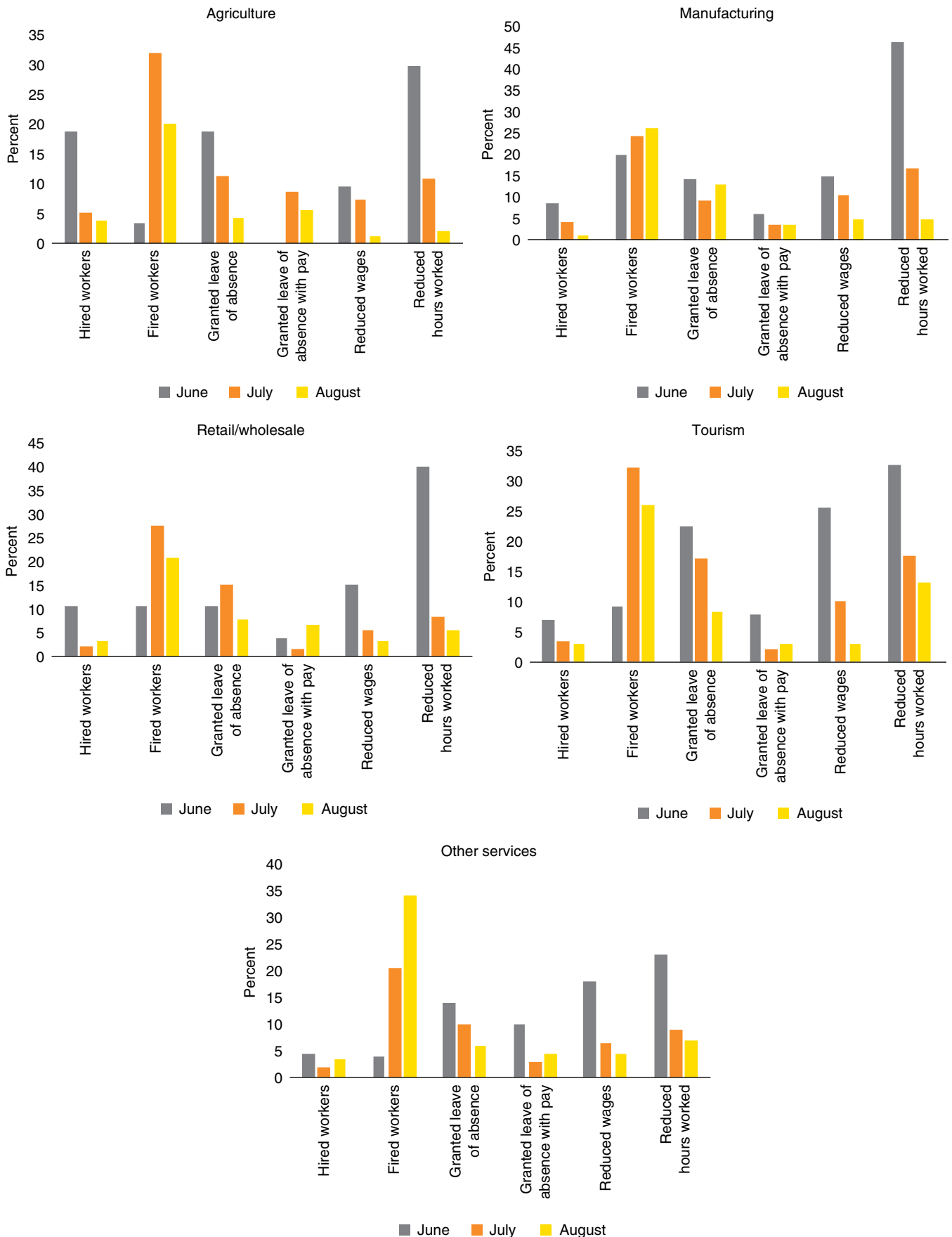
Note: Fraction of businesses reporting at least one employee in each category; excludes businesses that are permanently closed.

● FIGURE A2.3: Predictive effect of size and sector on weeks a business can remain open

a. By size, age, and status
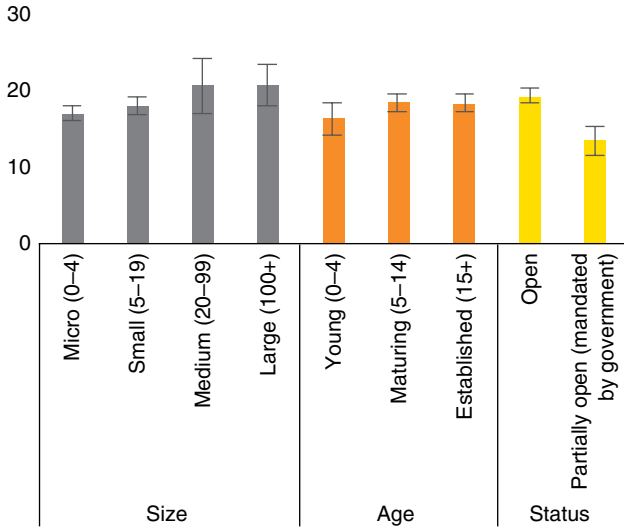
b. By sector
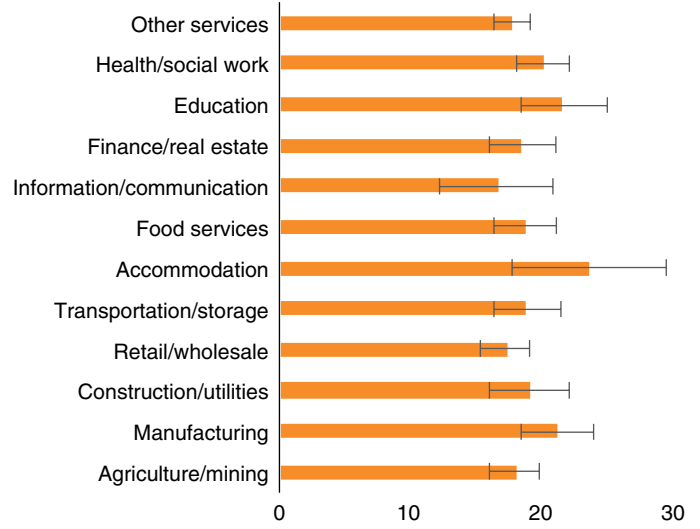
Note: The figure includes only open and partially open businesses. Marginal effect from a linear regression on dummies for size, formality status, sector, region, age, exporting status, and female employment dummy. Only groups with statistically significant differences are shown. The number of weeks a firm can remain open are winsorized at the 99 percent level, to account for outliers. See Table A3.4 for full set of results.

● FIGURE A2.4: Predictive effect of size and sector on days a business can cover costs with available cash

a. By size, age, region, and status
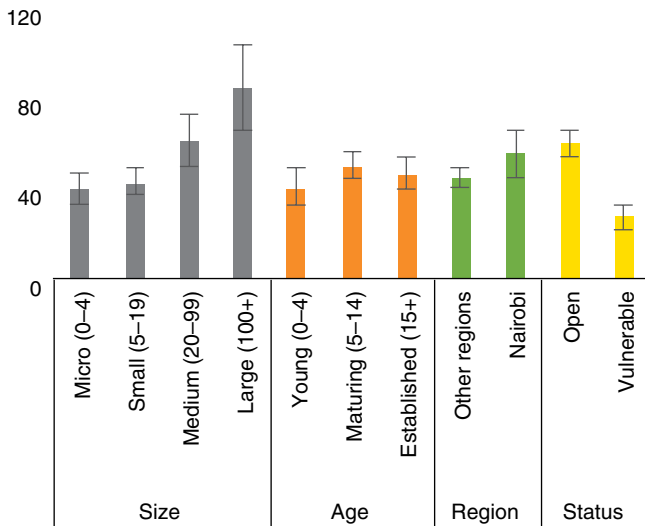
b. By sector
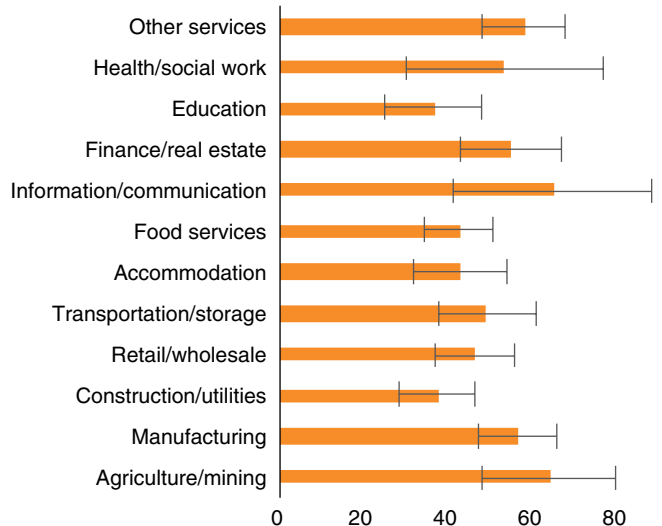
Note: Vulnerable firms are those that are partially open or temporarily closed. Marginal effect from a linear regression on dummies for size, formality status, sector, region, age, exporting status, and female employment dummy. Only groups with statistically significant differences are shown. The number of days a firm covers costs are winsorized at the 99 percent level, to account for outliers. See Table A3.4 for full set of results.

● FIGURE A2.5: Average change in sales expected for the next six months by sector and size

Legend:
- Pessimistic scenario—sales change in the next six months
- Regular scenario—sales change in the next six months
- Optimistic scenario—sales changes in the next six months
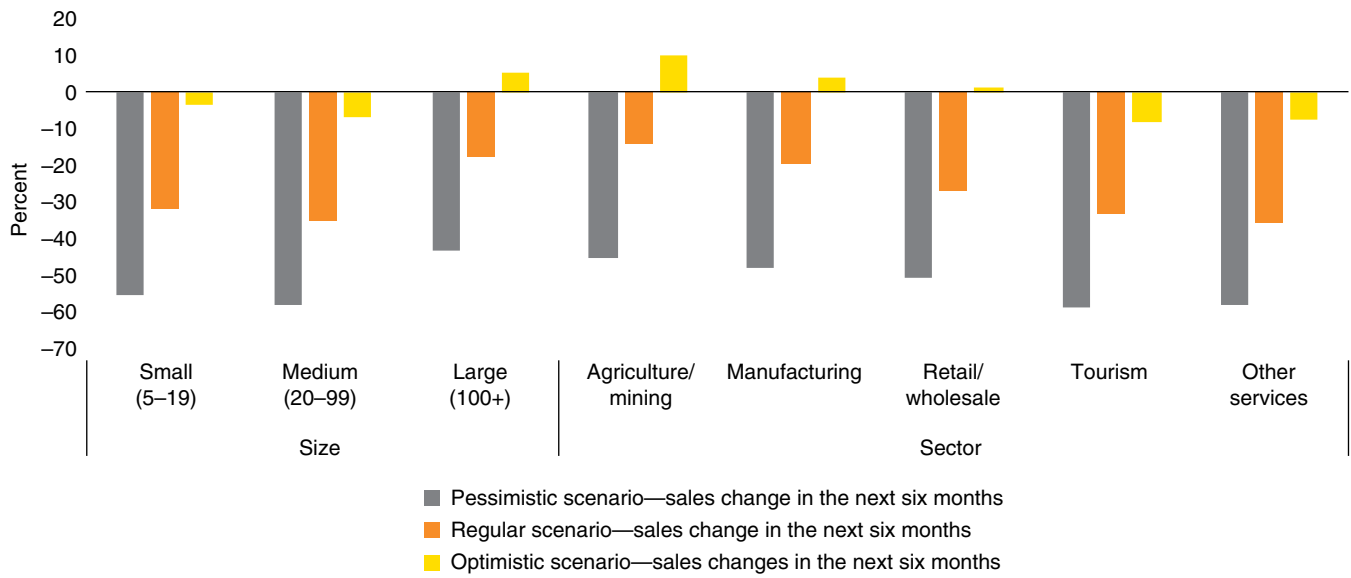
● FIGURE A2.6: Average change in employment expected for the next six months across scenarios
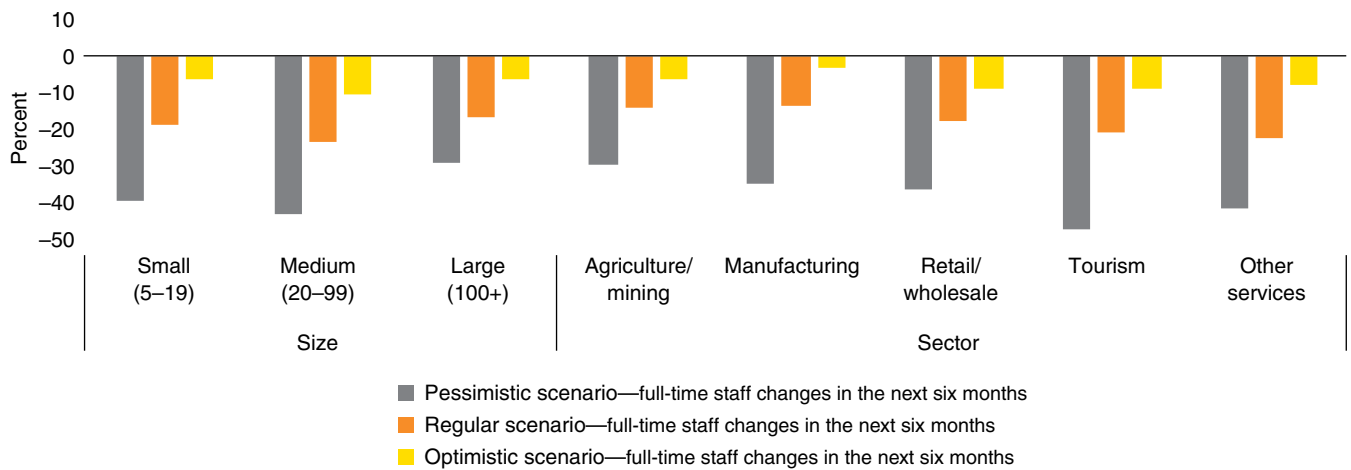
Legend:
- Pessimistic scenario—full-time staff changes in the next six months
- Regular scenario—full-time staff changes in the next six months
- Optimistic scenario—full-time staff changes in the next six months
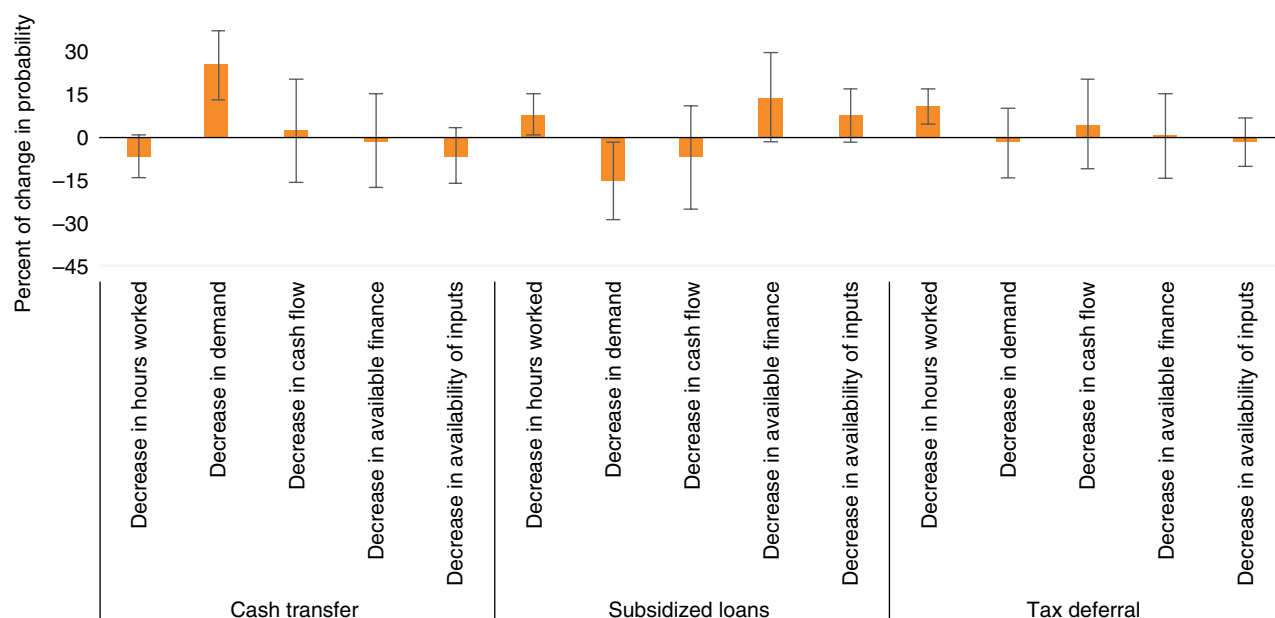
Note: Marginal effects from a probit regression of dummies whether the business demands each specific policy on dummies for each shock type, controlling for observable characteristics (size, sector, region, age, and exporting status). See Table A3.8 for full set of results.

● **TABLE A2.1:** Expected time to resume operations (fraction of temporarily closed business)

	Less than 2 weeks (%)	2–4 weeks (%)	1–2 months (%)	2–6 months (%)	More than 6 months (%)	Don't know (%)
Total	**0**	**1**	**0**	**7**	**10**	**82**
Micro (0–4)	1	1	0	3	7	88
Small (5–19)	0	1	0	9	10	80
Medium (20–99)	0	0	0	14	18	68
Large (100+)	0	0	0	1	0	99
Agriculture/mining	0	0	0	1	0	99
Manufacturing	0	0	0	3	2	95
Retail/wholesale	0	1	0	2	5	92
Tourism	1	1	2	7	8	81
Other services	0	0	0	12	15	72
Nairobi	1	0	0	2	6	91
Other regions	0	1	0	8	11	79
Young (0–4)	0	0	1	8	7	84
Maturing (5–14)	0	1	0	6	11	81
Established (15+)	0	0	0	8	10	82
Exporter	0	1	2	0	0	97
Non-exporter	0	1	0	7	10	82
Below 50% female employment	0	0	0	6	8	85
Above 50% female employment	1	2	1	12	17	68

● **TABLE A2.2:** Weeks that business can remain open in current circumstances

	Average firm	Median firm
Total	**18**	**20**
Micro (0–4)	17	20
Small (5–19)	18	20
Medium (20–99)	21	20
Large (100+)	21	20
Agriculture/mining	20	20
Manufacturing	22	20
Retail/wholesale	17	18
Tourism	19	20
Other services	19	20
Other regions	18	20
Nairobi	19	20
Young (0–4)	15	19
Maturing (5–14)	18	20
Established (15+)	19	20
Non-exporter	18	20
Exporter	22	21
Below 50% female employment	18	20
Above 50% female employment	19	20

● TABLE A2.3: Estimated number of workers affected by margin of adjustment

Characteristics	Businesses open or temporarily closed						Workers in businesses permanently closed
	Workers hired	Workers laid off	Workers granted leave of absence	Workers granted leave of absence with pay	Workers with wages reduced	Workers with hours reduced	
Total	**29,399**	**617,003**	**152,016**	**72,066**	**82,006**	**145,964**	**19,326**
Micro (0–4)	2,492	17,411	5,280	2,427	4,896	12,010	2,304
Small (5–19)	6,929	63,907	46,888	9,737	25,012	32,896	3,066
Medium (20–99)	12,944	147,174	56,598	30,739	41,556	51,541	5,323
Large (100+)	7,034	388,511	43,249	29,164	10,543	49,516	8,633
Agriculture/mining	8,809	60,600	21,101	8,962	3,687	19,063	5,200
Manufacturing	1,015	27,312	14,264	1,545	6,564	19,275	4,839
Retail/wholesale	4,316	40,961	25,331	3,165	11,704	22,399	5,072
Tourism	985	15,199	10,436	1,796	6,675	7,997	1,881
Other services	14,273	472,930	80,883	56,598	53,376	77,230	2,334
Nairobi	4,593	278,039	16,695	10,931	17,832	16,175	2,252
Other regions	24,806	338,964	135,320	61,135	64,175	129,789	17,074
Young (0–4)	2,596	25,183	10,000	2,630	7,589	7,135	4,45
Maturing (5–14)	16,017	242,407	70,803	32,871	42,083	60,700	15,227
Established (15+)	10,786	349,413	71,213	36,564	32,335	78,128	3,654
Exporter	117	20,966	19,369	1,028	3,107	21,722	0
Non-exporter	29,282	596,037	132,647	71,038	78,899	124,242	19,326
Below 50% female employment	22,330	575,742	103,942	52,495	57,098	87,999	12,659
Above 50% female employment	7,069	41,261	48,074	19,571	24,908	57,964	6,666
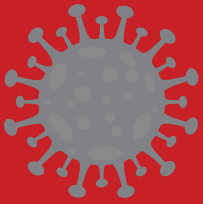
Appendix 3. Results from OLS and Probit Regressions

● **TABLE A3.1:** Estimated correlation between employment adjustments and business characteristics

	(1) Probit	(2) Probit	(3) Probit	(4) Probit	(5) Probit	(6) Probit
	Hired workers	Fired workers	Granted leave of absence	Granted leave of absence with pay	Reduced wages	Reduced hours worked
Small (5–19)	0.157 (0.19)	0.289*** (0.11)	0.682*** (0.15)	0.197 (0.19)	0.427*** (0.14)	0.188 (0.12)
Medium (20–99)	0.248 (0.19)	0.325*** (0.12)	0.733*** (0.17)	0.450** (0.18)	0.560*** (0.16)	0.187 (0.13)
Large (100+)	0.313 (0.23)	0.547*** (0.20)	0.540** (0.23)	0.552** (0.27)	−0.095 (0.20)	−0.114 (0.25)
Manufacturing	−0.116 (0.25)	0.144 (0.16)	0.455** (0.21)	−0.029 (0.25)	0.542** (0.24)	0.588*** (0.20)
Retail/wholesale	−0.249 (0.24)	0.133 (0.18)	0.494** (0.22)	0.039 (0.26)	0.229 (0.24)	0.250 (0.22)
Tourism	−0.206 (0.25)	0.203 (0.17)	0.581*** (0.21)	−0.037 (0.26)	0.581** (0.23)	0.577*** (0.21)
Other services	−0.393* (0.22)	0.065 (0.15)	0.199 (0.19)	0.040 (0.24)	0.268 (0.22)	0.164 (0.20)
Nairobi	−0.195 (0.17)	−0.076 (0.11)	−0.431*** (0.16)	−0.209 (0.18)	−0.174 (0.16)	−0.183 (0.13)
Maturing (5–14)	−0.016 (0.27)	−0.190 (0.15)	−0.213 (0.18)	−0.281 (0.25)	−0.033 (0.18)	0.071 (0.16)
Established (15+)	−0.412 (0.27)	−0.318** (0.16)	−0.270 (0.20)	−0.231 (0.23)	−0.257 (0.20)	−0.116 (0.17)
Exporter	−0.599* (0.36)	0.033 (0.25)	0.298 (0.26)	0.105 (0.24)	−0.063 (0.25)	0.565** (0.26)
Above 50% female employment	−0.273* (0.15)	−0.194* (0.12)	0.301** (0.13)	−0.019 (0.15)	0.050 (0.12)	0.044 (0.12)
Observations	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**

Note: Standard errors in parentheses. Weights are applied in all estimations.
* $p<0.10$, ** $p<0.05$, *** $p<0.01$

● TABLE A3.2: Estimated correlation between shocks and business characteristics

	(1) OLS Reported change in sales	(2) Probit Reduction in operating hours	(3) Probit Reduction in demand	(4) Probit Reduction in cash flow	(5) Probit Reduction in finance available	(6) Probit Reduction in availability of inputs
Small (5–19)	0.125 (2.54)	−0.105 (0.11)	−0.142 (0.10)	−0.100 (0.10)	−0.120 (0.10)	−0.109 (0.10)
Medium (20–99)	6.651** (3.04)	−0.174 (0.14)	−0.502*** (0.12)	−0.434*** (0.12)	−0.483*** (0.12)	−0.456*** (0.11)
Large (100+)	10.718** (5.39)	−0.071 (0.19)	0.237 (0.18)	0.196 (0.18)	0.147 (0.17)	0.068 (0.17)
Manufacturing	−8.838** (3.59)	0.494*** (0.16)	0.062 (0.17)	0.074 (0.17)	0.155 (0.17)	0.207 (0.16)
Retail/ wholesale	−9.338** (3.77)	0.402** (0.17)	−0.162 (0.17)	−0.213 (0.18)	−0.187 (0.17)	−0.014 (0.16)
Tourism	−19.604*** (3.84)	0.958*** (0.18)	−0.492*** (0.17)	−0.550*** (0.17)	−0.476*** (0.17)	−0.224 (0.16)
Other services	−7.901** (3.42)	0.520*** (0.15)	−0.544*** (0.15)	−0.637*** (0.15)	−0.562*** (0.15)	−0.442*** (0.14)
Nairobi	0.484 (2.74)	−0.081 (0.11)	0.196* (0.11)	0.178 (0.11)	0.180 (0.11)	0.169 (0.10)
Maturing (5–14)	−2.531 (3.65)	0.084 (0.16)	0.097 (0.14)	0.067 (0.14)	0.051 (0.14)	0.004 (0.14)
Established (15+)	2.079 (3.96)	0.120 (0.17)	0.068 (0.15)	−0.057 (0.15)	−0.123 (0.15)	−0.137 (0.15)
Exporter	4.254 (5.70)	−0.048 (0.25)	0.288 (0.26)	0.399 (0.28)	0.492* (0.28)	0.457* (0.24)
Above 50% female employment	0.286 (2.89)	0.288** (0.12)	−0.377*** (0.10)	−0.398*** (0.10)	−0.352*** (0.10)	−0.329*** (0.10)
Observations	**1,565**	**1,628**	**2,070**	**2,070**	**2,070**	**2,070**

Note: Standard errors in parentheses. Sampling weights applied in all specifications. Base categories are micro-sized firms, the agricultural sector, firms in other regions, young firms, and non-exporters.
* p<0,10, ** p<0,05, *** p<0,01

	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS	(6) OLS
	Total	Agriculture	Manufacturing	Retail	Accommodation/ food	Other services
Decrease in hours worked	−4.206*	−8.355	−2.503	−0.534	0.431	−6.580**
	(2.20)	(5.05)	(4.22)	(4.20)	(4.06)	(2.87)
Decrease in demand	−16.107***	−9.542	−3.481	−21.393**	−20.382*	−14.916***
	(4.56)	(7.44)	(11.51)	(9.13)	(11.09)	(4.83)
Decrease in cash flow	−15.373***	−17.997*	−26.725**	1.979	−21.725	−26.329***
	(4.84)	(9.44)	(12.45)	(8.81)	(19.68)	(5.49)
Decrease in available finance	−0.565	2.730	−5.402	−13.933	−15.613**	4.927
	(3.86)	(8.10)	(8.00)	(9.27)	(6.12)	(4.26)
Decrease in availability of inputs	−1.192	−11.215*	−9.087	10.986	−1.600	−5.596
	(3.39)	(6.63)	(6.49)	(9.10)	(5.76)	(3.55)
Observations	**1,565**	**125**	**332**	**255**	**188**	**665**

Note: Standard errors in parentheses. Sampling weights applied in all specifications.
* p<0,10, ** p<0,05, *** p<0,01

● TABLE A3.4: Estimated correlation between firm survival and business characteristics

	(1) OLS	(2) OLS
	Weeks that establishment can remain open	**Days that establishment can continue to pay costs**
Small (5–19)	0.771 (0.88)	−0.636 (4.78)
Medium (20–99)	3.981* (2.06)	10.738 (7.30)
Large (100+)	3.363** (1.49)	45.210*** (10.59)
Manufacturing	3.270** (1.64)	−11.282 (9.67)
Retail/wholesale	−1.303 (1.49)	−23.904** (9.82)
Tourism	0.591 (1.46)	−34.091*** (9.15)
Other services	0.199 (1.22)	−28.567*** (8.71)
Nairobi	0.493 (1.13)	17.238*** (6.03)
Maturing (5–14)	2.338* (1.38)	9.169 (5.59)
Established (15+)	2.275 (1.48)	7.593 (5.79)
Exporter	2.016 (2.05)	−1.022 (11.40)
Above 50% female employment	1.195 (0.93)	−7.640* (4.58)
Observations	**774**	**1,749**

Note: Standard errors in parentheses. Sampling weights applied in all specifications. Base categories are micro-sized firms. the agricultural sector, firms in other regions, young firms, and non-exporters. The number of weeks a firm can remain open and the number of days a firm cover costs are winsorized at the 99 percent level, to account for outliers.
* $p<0.10$. ** $p<0.05$. *** $p<0.01$

● TABLE A3.5: Estimated correlation between responses to the pandemic and business characteristics

	(1) Probit Increased use of digital platforms	(2) Probit Investment in digital solutions	(3) Probit Repackaging of product mix
Medium (20–99)	0.458*** (0.13)	0.402** (0.16)	0.190 (0.15)
Large (100+)	0.612*** (0.18)	0.842*** (0.24)	0.408* (0.23)
Manufacturing	−0.130 (0.19)	0.387 (0.24)	0.743*** (0.24)
Retail/wholesale	0.056 (0.22)	0.004 (0.32)	0.702** (0.28)
Tourism	−0.639*** (0.21)	0.268 (0.27)	0.710*** (0.26)
Other services	0.097 (0.17)	0.283 (0.24)	0.629*** (0.23)
Nairobi	0.270* (0.14)	0.224 (0.16)	0.305** (0.15)
Maturing (5–14)	−0.099 (0.24)	−0.186 (0.24)	0.181 (0.25)
Established (15+)	−0.104 (0.24)	−0.197 (0.25)	0.017 (0.26)
Exporter	0.268 (0.25)	0.230 (0.29)	−0.516** (0.22)
Above 50% female employment	0.097 (0.14)	0.259 (0.16)	0.240 (0.16)
Observations	**1,039**	**1,039**	**1,039**

Note: Standard errors in parentheses. Sampling weights applied in all specifications. Base categories are large firms, the agricultural sector, firms in other regions, young firms, and non-exporters. Micro-sized firms were not included.
* $p<0.10$. ** $p<0.05$. *** $p<0.01$

	(1) Probit Business administration	(2) Probit Production planning	(3) Probit Supply chain management	(4) Probit Marketing	(5) Probit Sales	(6) Probit Payment methods	(7) Probit Service delivery
Medium (20–99)	0.471***	0.783***	0.478**	−0.271	0.167	−0.067	0.362**
	(0.18)	(0.23)	(0.23)	(0.17)	(0.20)	(0.19)	(0.18)
Large (100+)	0.528	0.842**	0.883***	0.541**	0.429*	0.759***	0.528*
	(0.34)	(0.33)	(0.28)	(0.27)	(0.25)	(0.26)	(0.27)
Manufacturing	−0.449*	−0.046	−0.143	0.245	0.318	−0.101	0.286
	(0.27)	(0.27)	(0.29)	(0.28)	(0.26)	(0.26)	(0.26)
Retail/wholesale	−0.061	−0.240	−0.150	−0.303	−0.269	0.042	0.181
	(0.34)	(0.34)	(0.33)	(0.32)	(0.29)	(0.32)	(0.32)
Tourism	0.154	−0.148	−0.190	0.313	0.116	−0.552	−0.451
	(0.34)	(0.41)	(0.41)	(0.35)	(0.34)	(0.35)	(0.37)
Other services	−0.042	−0.314	−0.196	−0.544**	−0.564**	−0.399*	0.312
	(0.25)	(0.24)	(0.26)	(0.24)	(0.24)	(0.23)	(0.24)
Nairobi	0.141	0.168	0.329	0.518***	0.649***	0.396**	−0.013
	(0.20)	(0.21)	(0.20)	(0.18)	(0.18)	(0.19)	(0.18)
Maturing (5–14)	−0.398	0.172	−0.118	−0.274	0.142	−0.791**	0.919***
	(0.43)	(0.38)	(0.38)	(0.37)	(0.42)	(0.34)	(0.35)
Established (15+)	−0.073	−0.264	−0.796**	−0.877**	−0.009	−0.897***	0.975***
	(0.45)	(0.41)	(0.40)	(0.38)	(0.44)	(0.34)	(0.36)
Exporter	0.153	0.396	0.454*	0.409	−0.110	−0.444*	−0.561**
	(0.36)	(0.26)	(0.26)	(0.44)	(0.26)	(0.26)	(0.25)
Above 50% female employment	0.006	0.145	−0.103	−0.116	−0.215	−0.126	0.297
	(0.22)	(0.22)	(0.21)	(0.19)	(0.23)	(0.20)	(0.19)
Observations	**542**	**542**	**542**	**542**	**542**	**542**	**542**

Note: Standard errors in parentheses. Sampling weights applied in all specifications. Sample consists of firms which indicated an increased use of digital platforms. Micro-sized firms were not included.
* p<0.10, ** p<0.05, *** p<0.01

	(1) Probit	(2) Probit	(3) Probit	(4) Probit	(5) Probit	(6) Probit	(7) Probit	(8) Probit	(9) Probit
	Cash transfer	Deferral of rent or mortgage	Deferral of loan payments	Access to new credit	Loans with subsidized rates	Fiscal reductions	Tax deferral	Wage subsidies	Access to any assistance
Small (5–19)	−0.053	−0.078	0.322**	0.221**	0.108	0.219*	−0.095	0.406**	0.129
	(0.10)	(0.13)	(0.14)	(0.11)	(0.10)	(0.13)	(0.10)	(0.20)	(0.11)
Medium (20–99)	−0.247**	−0.452***	0.297*	−0.039	0.059	0.323**	−0.198*	0.674***	0.361***
	(0.11)	(0.16)	(0.16)	(0.13)	(0.11)	(0.15)	(0.11)	(0.19)	(0.13)
Large (100+)	−0.155	−0.602***	0.486**	−0.253	0.006	0.545**	−0.045	0.359	0.354**
	(0.18)	(0.18)	(0.22)	(0.16)	(0.18)	(0.24)	(0.19)	(0.31)	(0.17)
Manufacturing	−0.314**	0.128	0.143	1.000***	0.331**	0.458**	−0.127	−0.028	−0.188
	(0.15)	(0.20)	(0.20)	(0.22)	(0.15)	(0.22)	(0.16)	(0.29)	(0.16)
Retail/ wholesale	−0.227	−0.087	−0.059	0.722***	0.180	0.299	−0.068	−0.086	−0.151
	(0.16)	(0.21)	(0.23)	(0.23)	(0.16)	(0.24)	(0.17)	(0.30)	(0.17)
Tourism	−0.279*	0.131	0.006	0.959***	0.311**	0.250	0.036	−0.260	−0.052
	(0.16)	(0.20)	(0.21)	(0.22)	(0.16)	(0.24)	(0.17)	(0.28)	(0.17)
Other services	−0.352**	−0.073	0.005	0.864***	0.162	0.483**	−0.037	0.273	−0.324**
	(0.14)	(0.18)	(0.19)	(0.21)	(0.14)	(0.21)	(0.15)	(0.25)	(0.15)
Nairobi	−0.194*	0.103	0.015	−0.073	−0.212**	0.280**	0.016	−0.366	0.227**
	(0.10)	(0.14)	(0.14)	(0.11)	(0.10)	(0.12)	(0.10)	(0.26)	(0.11)
Maturing (5–14)	0.064	−0.271*	0.167	0.079	−0.025	0.338**	−0.068	0.001	0.063
	(0.13)	(0.16)	(0.17)	(0.14)	(0.13)	(0.17)	(0.14)	(0.28)	(0.15)
Established (15+)	0.116	−0.180	0.092	−0.096	−0.171	0.318*	−0.137	0.345	−0.025
	(0.14)	(0.18)	(0.19)	(0.16)	(0.14)	(0.19)	(0.15)	(0.27)	(0.17)
Exporter	−0.247	−0.127	0.135	−1.022***	−0.069	−1.392***	0.675***	−0.168	0.172
	(0.24)	(0.24)	(0.27)	(0.24)	(0.24)	(0.27)	(0.24)	(0.31)	(0.22)
Above 50% female employment	−0.051	0.342***	0.224	0.174	0.156	0.199	−0.231**	0.145	0.012
	(0.10)	(0.12)	(0.14)	(0.11)	(0.10)	(0.13)	(0.10)	(0.17)	(0.11)
Observations	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**

Note: Standard errors in parentheses. Sampling weights applied in all specifications. Base categories are micro-sized firms, the agricultural sector, firms in other regions, young firms, and non-exporters.
* p<0,10, ** p<0,05, *** p<0,01

● TABLE A3.8: Estimated correlation between policy demand and shocks

	(1) Probit	(2) Probit	(3) Probit	(4) Probit	(5) Probit	(6) Probit	(7) Probit	(8) Probit
	Monetary transfer	Deferral of rent or mortgage	Deferral of loan payments	Access to new credit	Loans with subsidized rates	Fiscal reductions	Tax deferral	Wage subsidies
Decrease in hours worked	−0.169* (0.10)	0.702*** (0.16)	0.262* (0.13)	0.268** (0.12)	0.209** (0.10)	0.507*** (0.13)	0.335*** (0.10)	0.624*** (0.18)
Decrease in demand	0.725*** (0.21)	0.457** (0.20)	−0.313 (0.25)	−0.263 (0.17)	−0.415** (0.19)	−0.381** (0.18)	−0.071 (0.19)	−0.168 (0.17)
Decrease in cash flow	0.079 (0.24)	0.117 (0.25)	−0.460** (0.22)	−0.472** (0.23)	−0.151 (0.24)	−0.642*** (0.21)	0.148 (0.27)	−0.448** (0.18)
Decrease in available finance	−0.056 (0.22)	0.652** (0.26)	0.331 (0.22)	0.407* (0.22)	0.378* (0.21)	0.007 (0.20)	0.055 (0.24)	−0.696*** (0.27)
Decrease in availability of inputs	−0.155 (0.13)	0.018 (0.23)	0.222 (0.18)	0.347** (0.15)	0.193 (0.12)	0.022 (0.17)	−0.058 (0.13)	1.120*** (0.33)
Observations	**1,628**	**1,628**	**1,628**	**1,628**	**1,628**	**1,628**	**1,628**	**1,628**

Note: Standard errors in parentheses. Sampling weights applied in all specifications.
* p<0,10, ** p<0,05, *** p<0,01