Odokonyero, Tonny; Kasirye, Ibrahim; Ssewanyana, Sarah et al.

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THE SOCIO-ECONOMIC IMPACT OF COVID-19 ON BUSINESS ENTERPRISES IN UGANDA: EVIDENCE FROM MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES

September 2022

Tonny Odokonyero, Ibrahim Kasirye, Sarah Ssewanyana, Madina Guloba, Paul Corti Lakuma, Julius Kiiza

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Any enquiries can be addressed in writing to the Executive Director on the following address:

Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4
Fax: +256-414-541022
Email: eprc@eprcug.org
Web: www.eprcug.org

THE SOCIO-ECONOMIC IMPACT OF COVID-19 ON BUSINESS ENTERPRISES IN UGANDA:

EVIDENCE FROM MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES (MSMES)

September 2022

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ABSTRACT

Introduction, objectives and study approach

This paper is part of a broader project designed to provide country-specific evidence for Uganda on the immediate, medium and long-term impacts of the COVID-19 pandemic and related mitigation measures and policy responses on Micro, Small, and Medium-sized Enterprises (MSMEs). It is the first wave of a planned panel study aimed at tracking the operations of MSMEs during COVID-19 and post-COVID-19 periods to unpack the short, medium, and long-term impacts of the COVID-19 pandemic.

In this wave, the paper sets out to produce evidence to inform strategies to mitigate the socio-economic impacts of the COVID-19 pandemic on MSMEs (during and in the post-COVID-19 era). Specifically, the paper generates evidence to assess and monitor the impact of the pandemic on MSMEs. It examines the effect of the COVID-19 pandemic and related mitigation measures on MSME's operations and coping mechanisms adopted by the MSMEs. It also finds out the level of business resilience among MSMEs in Uganda, given that resilience is fundamental for the survival of enterprises during shocks and recovery from shocks, such as the COVID-19 pandemic.

The analytical approach is based on the business pulse framework, a method used for unmasking the impact of COVID-19 on businesses by checking the pulse of businesses to measure the effects of COVID-19. We implemented a nationally representative survey of MSMEs covering three sectors of manufacturing, hospitality (tourism), and education, using a total sample size of 1,536 firms. We computed the business resilience index using quartile ranking (scores) of 26 resilience indicators.

Study findings

Evidence confirms that the MSME sector is a central driving force behind economic participation, including employment creation for the youth and women, and thus provides an opportunity to foster gender equality, livelihood, and recovery of the economy.

The effect of COVID-19 on MSMEs is enormous across the different episodes of COVID-19 analyzed. Some enterprises in the MSME space experienced permanent business closure because of COVID-19 and related restrictions. Direct and indirect COVID-19-related factors accounted for over 60% of the permanent business closures. The COVID-19 episodes are also characterized by intermittent business closure of complete and partial nature. The intermittent business closure rate in the first COVID-19 lockdown period was 78%, majorly driven by complete business closure (rate of 67%) - partial business closure rate was 11%. At least half of the MSMEs that had complete business closure in the first lockdown fully recovered between July and December 2020. The recovery rate increased to 58% between January and May 2021, and the fastest recovery was in the manufacturing sector and medium-sized and male-owned enterprises. However, there was a reversal in the progress of business or economic activity recovery in the second COVID-19 lockdown.

The pandemic and related containment measures also caused difficulty accessing inputs and supplies across all COVID-19 episodes - increase in input (supplies) cost majorly explains the difficulty in input access. There was a sales revenue reduction for all enterprises in all sectors. The hardest hit were enterprises in the hospitality (tourism) and education sectors and small and micro-level enterprises. COVID-19 significantly weakened the business turnover and profitability of MSMEs throughout the pandemic. Combined factors of increase in input cost and constant or reduced prices charged by MSMEs inevitably lowered MSME profitability. MSME's insolvency level was adversely affected because of disruptions in business operations, exacerbated by the severely reduced sales revenue, cash flow, and profitability. There was marked gender differential in insolvency, with female-owned

enterprises in the most disadvantaged position.

The effects on employment among MSMEs primarily manifest through job loss and wage cuts. Overall, 41% of jobs (representing 425,000 jobs) were lost among the MSMEs under the study over the reviewed COVID-19 episodes. We associated the first lockdown with a 24% job loss; the job loss between the first and second lockdown was 23%. Job losses were more prevalent among youth and female workers, and the magnitude of wage cuts was also higher for female and youth employees. In the manufacturing sector, the Capacity Utilization Rate diminished, with some improvement in the second lockdown, albeit less than the pre-COVID-19 rate. Pertaining to enterprise (business) resilience, the overall resilience score (index) is below the threshold of robust business resilience—we associate the MSMEs with an average level of resilience classified as weak.

Concerning coping mechanisms, the evidence suggests substantial adaptability challenges among the MSMEs, which may be because of inadequate capacity to harness technology to support working remotely or in digital mode. Several enterprises were non-compliant with the government directive on COVID-19 SOPS in workplaces and discontinued safety measures after the first lockdown. Finally, there was limited outreach to the MSMEs through MSME support interventions, including government responses (only 11% of the MSMEs received support). The needs presented by the MSMEs based on preferred support suggest that, during a shock-like COVID-19, interventions should emphasize supporting business survival.

Policy considerations

Responses should pay particular attention to the cost of doing business during a shock like the COVID-19 pandemic - this is crucial for controlling input costs and abating disruptions in supply chains.

Strengthen structures for better organization and coordination of MSMEs, including reinforcement of district commercial departments. Effective coordination structures are essential for mobilizing MSMEs to support their survival and recovery during and in post-COVID-19 periods.

Institute gender-responsive social protection policy responses to support job and income security of women and youth, given the gender differential on impact.

During a severe economic shock or crisis, government and development partners should focus on support interventions critical for ensuring or supporting business survival. Interventions that curtail the level of MSME insolvency during a crisis should be emphasized. We identified the following from the evidence gathered as essential for MSME survival – supporting MSME employee mobility through staff movement permits; and tackling MSME financial stress through interventions such as loan rescheduling and tax deferment, among others. Rescheduling loans provides an important lesson for devising interventions to cushion MSMEs during shocks like the COVID-19 pandemic. However, the gap that needs to be addressed is inadequate awareness by most MSMEs on the operations of loan rescheduling and how to harness such a window of opportunity.

Sensitize the business community and impart basic skills required to implement safety measures for COVID-19 prevention in workplaces.

Efforts toward business resilience building are necessary for enterprises in all three sectors, regardless of the size. However, micro and small enterprises and those in hospitality/tourism require more effort and urgency. Resilience-building efforts should focus on enhancing; adaptive ability, leveraging knowledge and information as well as external business resources for enterprise growth and development, MSME planning and preparedness capability; and innovation and diversification capability. In addition, incorporating business resilience building in Business Development Services is key for enabling enterprises to stay afloat. Resuscitating businesses can be approached through tracking the entrepreneurs of the closed firms.

Lastly, as the COVID-19 situation evolves from peak to a lesser level of severity of the pandemic, it is paramount to intensify interventions for supporting MSME recovery processes and the growth and development of the MSMEs. In the medium term, including the post-COVID-19 era, policy responses can shift the emphasis from supporting business survival to supporting the enterprises' recovery, growth, and development.

1. INTRODUCTION

The COVID-19 pandemic has had substantial global, continental, and regional impacts. The impact of the pandemic has been drastic on Uganda's macroeconomic environment. First, the closure of the national borders and other containment measures, especially in 2020, affected the tourism and hospitality sector. Projections by the Bank of Uganda (BoU) indicated that the tourism sector's earnings would fall 30% to USD USD748 million in 2019/2020 from USD 1.1 billion in 2018/19 before reducing further to USD369 million in 2020/21 (Bank of Uganda - BoU, 2020). Second, revenue mobilization has been severely affected. For example, In April 2020, the Uganda Revenue Authority collected only UGX 970 billion in taxes, which was about 70% of the regular monthly tax collections (UGX 1,350 billion). Consequently, the country has been increasingly turning to international financial institutions to close the fiscal gap, ultimately affecting the debt burden. Finally, both foreign direct investments and remittances have declined. The BoU projected that by 2020/21, the value of remittances would decrease by 80% from the peak of USD 1.3 billion registered in 2018/19 (BoU, 2020). MSMEs and households are bound to be severely affected by the above changes in the macro-environment.

Notwithstanding the relatively low documentation of infection cases in Uganda, the policy responses, mitigation measures, and mobilizing healthcare resources adopted to control the virus's spread have affected households and enterprises. In particular, the containment measures have far-reaching implications on Micro, Small, and Medium Enterprise (MSME) operations that have been a significant source of employment and income. In addition, the measures have disrupted gender roles. Thus, the impact of the pandemic on gender relations, norms and practices appears to be enormous. Some women seem to have run down their savings looking after their families, which has implications for the post-COVID-19 resilience of their largely informal businesses. This is compounded by the fact that some of the proposed policy responses appear to have a differential impact on the size, scale, and gender. Most women (mainly in micro-enterprises) lack collateral to access the government's economic stimulus. On the other hand, closing schools and daycare centres massively increased childcare needs, thereby affecting working mothers. Thus, beyond the immediate crises, COVID-19 potentially affected males and females differently, even though the evidence base needs to be strengthened (Titan et al. 2020).

The onset of the COVID-19 pandemic coincided with the Government of Uganda finalizing its third medium-term development strategy—the 2020/21-2025/26 National Development Plan (NDPIII). The plan calls for a transformative approach to addressing Uganda's current and future development needs and is aligned with attaining the global Sustainable Development Goals (SDGs). It highlights Uganda's development challenges, among which are social inequities and inequalities; growing unemployment, especially among the youth; quality of social service delivery; rising informality, deteriorating cost of doing business; and low domestic revenues, among others. The need to strengthen Uganda's MSMEs is of great interest for the NDPIII strategies. The government also plans to enhance value-addition in key growth sectors through increased domestic production, promotion of export-oriented growth (for example, by lowering the cost of doing business), and harnessing tourism potential via mass tourism. Another strategy is strengthening the private sector to drive growth, promoting effective and efficient private investment and/or development of the MSMEs.

MSMEs play a significant role in Uganda regarding employment and income and drive economic growth. They make up at least 90% of Uganda's private sector and contribute about 20% of the GDP (Republic of Uganda, 2015); their contribution to the manufacturing sector increased from 18% in 2014/15 to 24.5% in 2019/20 (*ibid*). According to the Ministry of Trade, Industries and Cooperatives (2020), of the total enterprise employment, the micro-enterprises contribute 93.5%, small enterprises 4.1% and medium 2.4%. By 2015, the MSME sector employed about 2.5 million people (Republic of Uganda, 2015), which increased to about 8.5 million people by 2020 (UNCDF, 2020). Therefore, anything that affects MSMEs has far-reaching effects on the economy.

The COVID-19 pandemic is likely to affect labour markets. It should be noted that, according to the structure of Uganda's economy, services dominate and contribute 53% percent of GDP, followed by agriculture (24%) and industry, which contribute about 20% of GDP. However, services employ 24% of the population, with the rest employed in agriculture and industry, where most MSMEs are concentrated. Still, the impact may vary across business enterprises, with MSMEs likely to suffer most because of informality and high vulnerability levels. It is thus apparent that, given their importance, the MSMEs should be the primary targets of government interventions to catalyze Uganda's post-COVID-19 economic recovery.

At the onset of the pandemic, the key short-term measure adopted in Uganda was to enforce an initial 5-week lockdown followed by several extensions, including the second lockdown in 2021 (June – August). Although the COVID-19 pandemic appeared first as a health crisis, it has had socio-economic impacts on business operations—it could have forced some businesses to close. Surviving businesses might not attain their pre-COVID-19 level of operation. Therefore, it is essential to provide an understanding of these issues based on empirical evidence to furnish insights that can pragmatically inform policy responses to support MSMEs during the pandemic and in the post-pandemic period.

The macro-economic policies that have been adopted in response to the COVID-19 crisis include bank loan rescheduling. However, loan rescheduling happened without repurposing, and the extent to which MSMEs benefited from the response has been unclear. In the same vein, easing monetary policy has been adopted without evidence of its likely impact on macro-stabilization, inflation management, and other cardinal goals of macro-economic policy management; and on MSMEs. Concerning state support for the essential economic activities—pharmaceutical industries that manufacture sanitisers, or PPEs, as well as companies involved in the food supply chain —were offered tax incentives. Such schemes may infringe on the government's short-run and medium-term capacity to raise the tax revenues (currently at only 12% of GDP in Uganda compared to 19.7% for Sub-Saharan Africa). Also, evidence-based research is lacking on the ability of these industries to make production shifts/readjustments, e.g. from sugar production to the manufacture of sanitisers; from textiles to the making of face masks. While the capability to change varies from one enterprise to another, there is no concrete evidence on which enterprises are able and which ones cannot adjust in the light of the COVID-induced demands. Additionally, the sustainability of new production lines post-COVID-19 era is not clear. The COVID-19 pandemic also coincided with the general election cycle in Uganda, which took place in February 2021. Anecdotal evidence shows that inflation and interest rates increase post-election, resulting from increased campaign finance and public spending, which crowds out credit to MSMEs.

In light of the above, there is a need to generate country-specific evidence-based research on the pandemic's immediate, short-, medium- and long-term impacts and related mitigation measures and policy responses. There is a need to articulate what COVID-19 means for Uganda's macro-economic policy management, specifically the operations of MSMEs. This project's evidence will provide insights relevant for developing or delivering business (especially MSME) support instruments or public policy responses.

This project intends to track how the MSME business operations evolve over various COVID-19 episodes, from the first total lockdown period to subsequent containment and post-COVID-19 periods. The research team knows that some agencies have conducted some research and collected data on the impact of COVID-19 on SMEs with different scopes and coverage. However, most of these activities are one-offs. Furthermore, similar research activities that have been undertaken have limited focus on micro-enterprises (mainly household-based enterprises) which are informal and run by women. As such, this study is unique in as far as it considers structural changes that promote resilience/sustainability, firm operations – hygienic issues, flexibility in working hours, cash management, retention of customers, support from the government (e.g. stimulus package), including enterprise resilience analysis. All the above are beyond the traditional indicators used in an empirical analysis of crises. Within

the MSMEs, the sectors of focus include manufacturing, education, and hospitality/tourism. Manufacturing accounts for the bulk of the MSMEs, while the education and hospitality sectors account for the largest share of private-sector employment. In the education sector, the study focuses on lower-level education (i.e., primary and pre-primary), given that they are the foundational pillar of human capital development. Also, Uganda's elementary education system is grappling with the problem of growing enrollment rates that do not yield expected outcomes because of poor completion rates. As documented by Rana (2020), Uganda has long had one of the world's highest elementary school dropout rates, a problem that the Universal Primary Education system initially exacerbated. The scope of this study covers enterprises even at the lowest level. i.e., micro-level enterprises (some of which are household-based), which to a great extent seem to have been affected by the pandemic and are likely to have missed out on fiscal stimulus by the government since the focus has been on legally registered firms.

Against the above background, this study documents; the extent to which the pandemic and related mitigation measures impact MSMEs; how operations and performance of MSMEs evolved in different episodes of COVID-19; the coping mechanisms by MSMEs, the extent to which MSMEs benefited from some of the policy responses, such as stimulus package; and the preferred support needed by MSMEs for business continuity during and in post-COVID-19 periods.

The study's general objective is to produce timely evidence to inform strategies to mitigate the socio-economic impacts of the COVID-19 pandemic on MSMEs (during and in the post-COVID-19 era). Specifically, the study aims to generate data to assess and monitor the impact of the pandemic on MSMEs; and examine the effect of the COVID-19 pandemic on MSME's operations and coping mechanisms adopted. The study also set out to find out the level of business resilience among MSMEs in Uganda.

We structure the rest of the paper as follows; section two discusses the study approach, section three delves into the study findings, and section four summarizes the emerging policy issues, conclusion and considerations for policy.

2. DATA AND APPROACH

2.1 The data

2.1.1 Primary data from a survey of MSMEs in Uganda. As mentioned in the previous section, this study is unique because it is designed, to, among others, examine structural changes in MSME operations over time. Therefore, the approach undertaken is to build a panel dataset of the MSMEs that will be useful in understanding evolving situations in the MSME business environment.

This round of the MSME survey is considered the first wave of the MSME panel survey during the COVID-19 and post-COVID-19 periods. The pre-test and data collection activities were implemented in the last quarter of 2021, and we expect the next wave to be executed after six months (between June and July 2022). The goal is to build MSME panel data that will be important for tracking MSME operations and performance, including how businesses run by MSMEs evolve during the different episodes of COVID-19 and in the post-COVID-19 period.

We used a nationally representative sample of MSMEs in Uganda to implement the survey. We sampled the MSMEs based on the business registry from the Uganda Bureau of Statistics (UBOS). Therefore, the business registry was used as a sampling frame that provided the basis for sample computation and selection.

The total sample size is 1,536 enterprises spread across the four traditional regions of Uganda (Central, Western, Eastern, and Northern regions). Out of the total sample, hospitality/tourism had 563 enterprises, manufacturing had 457 enterprises, and education (primary and pre-primary) had 241 enterprises with fully completed interviews. Out of the total sample, the fully completed interviews were 1,261, yielding a response rate of 82% [1]. This is a relatively adequate response rate, given that

1 This only includes fully completed interviews. The response rate is higher if enterprises with incomplete (partial) interviews are included.

the normal response rates for firm surveys in Uganda is low (including during the COVID-19 era), averaging at less than 90% with most surveys in the range of 70% or less - for example, the Uganda Bureau of Statistics (UBOS) achieved a response rate of only 50% in a survey of private business establishments in 2020 (UBOS, 2020), Gulesci et al., (2020) achieved 70%, and the United Nations Capital Development Fund achieved 89% in a Ugandan MSME survey conducted in 2020. Based on the response rates (on average) for past studies (firm surveys) in Uganda, the response rate for this survey is therefore sufficient.

2.1.2 Electronic data collection and quality assurance

We conducted the data collection exercise between November and December 2021. The CAPI (Computer Assisted Personal Interview) software was used to electronically collect and transmit the survey data to a central data processing pool at EPRC.

2.2.3 Quality assurance

Before the data were finally transmitted, data quality checks (reviews) were conducted by field Supervisors (EPRC Researchers). Submissions with quality issues or any inconsistencies were rejected and electronically returned to the responsible Enumerators for callbacks to the respondents and error correction. The data were resubmitted after making error corrections for second quality checks and clearance. After the clearance, the Supervisors would approve the data for final transmission into the central data pool. The CAPI system ensures that we avoid likely errors at data entry.

2.2 Scope of the survey

We covered three key sectors in all the four traditional regions of Uganda. The sector disaggregation followed the International Standard Industrial Classification of All Economic Activities (ISIC). Manufacturing included food and non-food manufacturing activities, including agro-processing (ISIC codes 1030 – 3300). Hospitality (including tourism) captured activities such as; food and beverage services, accommodation services, tour and travel, art and craft, and amusement and recreation services (ISIC codes 5510 – 5630). The education sector covered primary and pre-primary levels only (ISIC codes 8511 – 8512).

COVID-19 episodes: The study uses information on time based on how the COVID-19 situation evolved in Uganda, using a five-to-six month time interval. The first period is the time before COVID-19—we considered December 2019 since economic activities were still at a relatively normal level (not yet impacted to a great extent by COVID-19). The second period (episode) is from January to June 2020—this considers the period of the first COVID-19 total lockdown in Uganda, and questions related to the effects of COVID-19 here focused on how the business situation was in the first COVID-19 lockdown in Uganda (i.e., between March and June 2020). The third episode is the period immediately after the first lockdown (i.e., July–December 2020). The fourth episode is the period in 2021 before the second lockdown (i.e., January–May 2021). The last episode is the period of the second COVID-19 lockdown in Uganda (June–August 2021).

2.2.1 MSME definition

We used the policy definition that captures the employment component to measure enterprises' size—this follows the national MSME policy for Uganda (see Table 1a).

Table 1a MSME classification using policy definition

	Micro	Small	Medium
No. of employees	Less than 5	5 - 49	50 - 100

Source: MSME policy, Uganda (Republic of Uganda, 2015).

Using the above policy definition of MSMEs, the survey data collected comprises mostly micro-enterprises (52%), followed by small enterprises (47%), as shown in Table 1b.

Table 1b Enterprise distribution by size

Size	Proportion, %
Micro	52.39
Small	47.17
Medium	0.44

Source: Computed using the 2021 MSME survey data. Weighted observations = 125,702

2.3 Analytical framework

The analysis follows the framework of the business pulse (World Bank, 2020; Apedo-Amah et al., 2020). The business pulse is a method for unmasking the impact of COVID-19 on businesses, using tools that check the pulse of businesses to measure the effects of COVID-19 on critical business dimensions (*ibid*).

Specifically, it measures the various channels of impact of COVID-19 on firms, firm adjustment strategies, and public policy responses. The key channels include business operations (operational status), including change in operation time and business closure; sales; employment shocks, demand and supply shocks, and financial shocks (World Bank, 2021; World Bank, 2020; Kuriakose, 2021) – these are captured as dimensions of impact in Figure 1a. The pulse also examines the firm's expectations and outlook, liquidity level, and adjustment mechanisms (referred to as coping mechanisms in this paper)—e.g., digital technology adoption and policy support (also see Kuriakose, 2021).

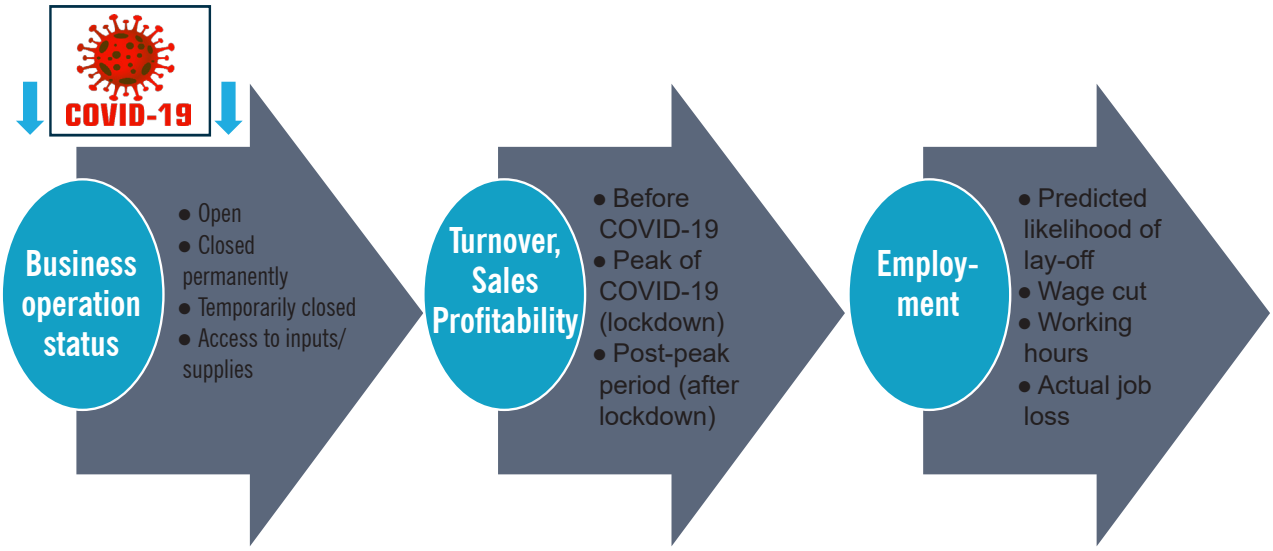
As shown in Figure 1a, the dimensions that we analyzed in this study, which represent channels of COVID-19 impact on MSMEs, are; business/enterprise operation status (e.g. business closure and input access), business or enterprise performance (sales revenue, turnover, and profitability), and employment shocks in MSMEs (i.e. changes in employment status). Other vital dimensions or channels of impact include liquidity and insolvency of enterprises, firm's responses to the pandemic (captured through coping mechanisms), enterprise expectations and uncertainty, and support received by enterprises, as well as preferred public support mechanisms.

The framework in Figure 1a illustrates that the firms encounter the first impact channel of COVID-19 and related mitigation measures on business enterprises through changes caused by business operations. When changes in business operations occur, changes (or impact) on the rest of the business pulse dimensions (e.g., sales, turnover, profits, financial shocks, and employment shocks, among others) emanate from this.

2.4 Enterprise resilience

We also measured enterprise resilience based on key business resilience attributes. The resilience attributes are adopted from Tibay et al. (2018), measured through a set of 26 individual-level resilience indicators - see appendix 1 for indicator definition. The indicators were captured from the enterprises based on a Four-Point Likert Scale, but at analysis, we converted the scale into resilience scores (index) using quartile ranking (scores). The quartile ranking segments the distribution of the resilience scores (index), ordered from low level

Figure 1a Analytical framework, based on the business pulse



Source: Author's construct using business pulse dimensions adopted from World Bank (2020).

to high level, in four equal parts (<=25 - 100). Using the index, enterprises that exhibit a high (or robust) level of resilience are expected to be associated with a score that lies in the last segment or highest quartile, with scores greater than 75 (i.e., the threshold of between 75.1 and 100).

2.5 Categorization of business closure

During analysis, we categorized business closure as follows;

a. *Permanent business closure*. We defined this in the context of unavailable enterprises because they ceased operations and could not be interviewed during the survey.
b. *Intermittent business closure*. We characterized this by non-regular business closure from the time COVID-19 set in (during the period January – June 2020, including the first COVID-19 lockdown period) through the period of the second lockdown. Intermittent closure comprises two types: the first is a complete closure of the business (i.e., closure of both business premises and operation), and the second is partial closure (i.e., closure of only business premises but not operations). Partial closure may indirectly reveal the extent to which some enterprises operate remotely.

We tracked the MSMEs that experienced complete closure in the first lockdown in the analysis to understand whether they recovered in relation to economic activities. Tracking of such enterprises will continue in the next wave of this panel study. This helps explain business enterprise recovery prospects in the future.

3. FINDINGS FROM THE MSME SURVEY

This section discusses the findings from the MSME survey, which are detailed in terms of; the characteristics of the enterprises; the effects of COVID-19 and related containment measures on enterprise operations and performance; changes in employment within the MSME sector following COVID-19 episodes and the effects on employment; access to credit and ability to repay or insolvency during COVID-19; enterprise resilience; MSME coping mechanisms in the COVID-19 period; business-related support provided for and received by MSMEs and preferred business support or interventions that MSMEs require for business continuity during and in the post-COVID-19 lockdown period.

3.1 Enterprise characteristics

In terms of distribution of the enterprises, those from hospitality and tourism make up the largest share of the MSMEs in the dataset (47%), followed by education (39%). We find that more than half of the enterprises are concentrated in the Central and Western regions (51% and 26%, respectively)—see Table 2.

On average, the enterprises employ 4 females, 3 males, and 5 youths and have operated business for about 11 years. The results on female and youth employment suggest that MSMEs are important regarding the absorption of women and young people (aged 18-30 years) into economic activities.

Most enterprises are sole proprietorships (79%), and partnerships form 14%. More than half (51%) of the sole proprietorship ventures are female-owned, which is a sign that MSMEs play a crucial role in supporting female participation in the economy. However, most of the sole proprietors are associated with a low level of education (i.e., some 'O' level and below), which may constrain the growth and development of the MSMEs. We identified some enterprises as government entities (2%) and Non-Government Organization (NGO) entities. Those identified as government entities are mainly government-aided primary schools. Those reported as NGOs are either NGOs or Church-founded schools.

Only 17% of the MSMEs have membership in business associations. This presents a challenge associated with weak networks for social and financial capital. It may also relate to a high level of informality of Ugandan MSMEs. Accordingly, it becomes difficult to mobilize or organize most of the MSMEs for business support and development through umbrella associations such as the Federation of Small and Medium-sized Enterprises and other business associations, given that the

business associations have limited scope to reach out to the MSMEs.

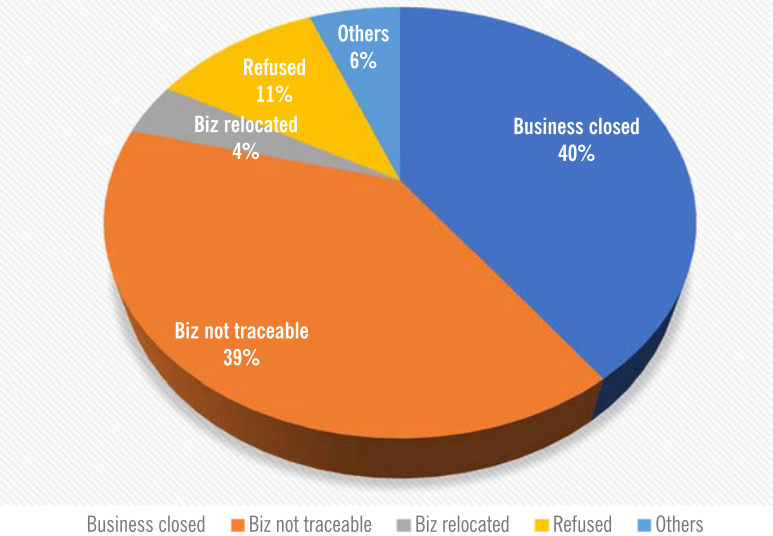
We also established that most MSMEs do not own business premises. Less than half of the MSMEs surveyed own the premises where the business is located (Table 2). This has implications on business sustainability, especially in terms of cost of operation—for example, rent, which has been a significant barrier to business operation and sustainability during and after the COVID-19-induced lockdown; most businesses that could not afford to pay rent (due to business slump) and hence defaulted and were evicted from the premises. Some of them had to close business.

Table 2 Characteristics of the MSMEs

Parameter		Value
Sector / main business activity (weighted obs. = 125,728)		
	Manufacturing	14.2
	Hospitality / tourism	46.9
	Education	38.8
Enterprise distribution by geography (weighted obs. = 132,728)		
	Central	51.3
	Western	26.5
	Eastern	14.0
	Northern	8.2
Type of entity, %	Sole proprietorship	78.8
	Partnership	13.7
	Gov't	1.8
	NGO	0.5
	Other	5.2
Gender (owner) - sole proprietorship, %	Female	51.0
	Male	49.0
Education of owner - sole prop, %	Not educated	0.8
	Some Primary	20.8
	Completed Primary	13.4
	Some O' Level	13.2
	Completed O' Level	12.0
	Some A' Level	1.6
	Completed A' Level	5.1
	Tertiary/University	33.1
Membership to a business association, %	Member (yes)	17.1
Proportion of local enterprises, %	Local	99. 5
Ownership of premise, %	Owns premise	46.7
Employees (average #)	Female	4.0
	Male	3.0
	Youth (18–30 years old)	5.0
Business experience (years of operation)	Median	9.0
	Mean	10.8

Source: Computed using the 2021 MSME survey data.

Figure 2 Establishments that were not available for the survey



Source: Computed using the 2021 MSME survey data.

3.2 The effect of COVID-19 on enterprise operations

The operations of most enterprises were severely interrupted by COVID-19 and its containment measures. Interruption of operation is mainly manifested in business relocation, the unreachability of businesses due to locations that cannot be traced, and business closure.

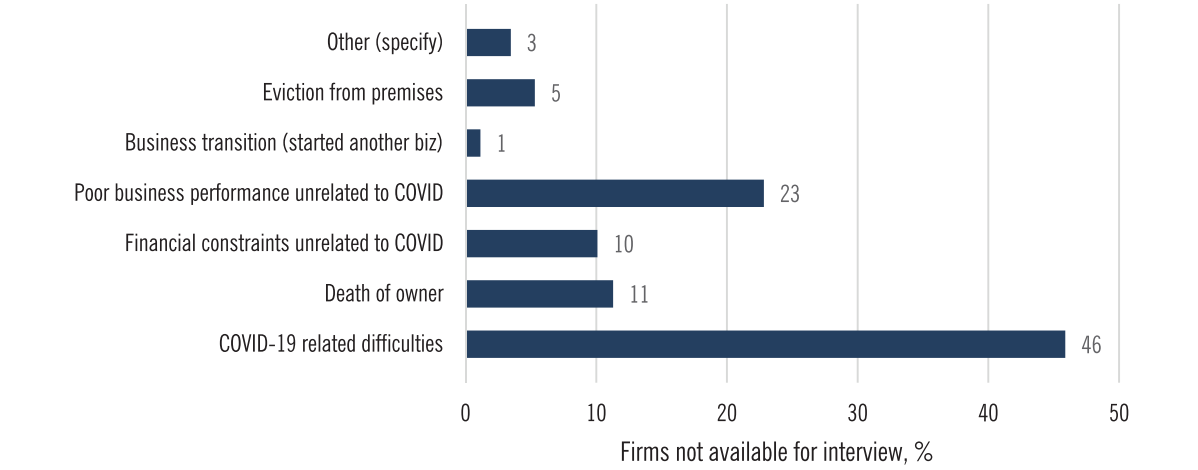
During the survey, we observed the first signal of business operation interruption where some enterprises were unavailable for interviews[2]. We captured the reasons for not being available for the survey through various sources, including; telephone calls to enterprise owners or managers (using telephone contacts obtained from the sampling frame—i.e., business registry), former employees, Area Local Council Chairpersons or members, and other establishments in the neighborhood among others. As shown in Figure 2, most such enterprises were closed (40%) and could not be traced (39%). Information obtained from the above sources reveals a high likelihood that the enterprises that could not be traced had also closed. This implies that about 79% of the enterprises unavailable for the survey potentially closed business permanently.

Of those that closed, almost half encountered business closure because of COVID-19-related difficulties (Figure 3). The problems are related to the inability to get supplies, immobility caused by COVID-19-related restrictions, lack of demand for goods or services offered, illness, and illiquidity, among others. Other key reasons for business closure that were reported include the death of the business owner (some deaths were reportedly because of COVID-19) – which signals a lack of business sustainability in case of death of business owners; financial constraints; and generally poor business performance; and eviction from business premises due to rent default (inability to pay rent).

From the data, we can categorize the reasons for business closure into two—i.e., direct and indirect COVID-19 factors. The direct COVID-19 factors are explicitly stated by the sources (i.e., the 46%); the indirect COVID-19 factors include eviction from business premises and death of business owners, which total amount to 16% (Figure 3). Combined, the direct and indirect COVID-19-related factors account for over 60% of a complete permanent business closure. Besides the direct and indirect factors, some enterprises unavailable for the survey also transitioned into other businesses by starting other lines of businesses than those captured in the business registry. The transition into other businesses was also majorly triggered by

2 Weighted observation of close to 6,800 enterprises. These are enterprises that were sampled from the business registry but were unavailable for the survey.

Figure 3 Reasons for business closure



Source: Computed using the 2021 MSME survey data.

COVID-19 and related restrictions.

3.2.1 Intermittent closure of enterprises due to COVID-19

The results in Table 3 show that there were sporadic business closures from the onset of COVID-19 in Uganda during the first half of 2020 (especially between March – June), when the government instituted the first COVID-19 total lockdown through the post-first lockdown to the second lockdown periods. Most of the enterprises surveyed intermittently closed—either closure of business premises only (i.e., operating the business while the premises are closed, perhaps through remote operations – partial closure) or closure of both business premises and operations (complete closure).

During the first COVID-19 lockdown period, most of the enterprises (78%) encountered intermittent closure—constituted by 67% closure of both business premises and operation (complete closure rate of 67%) and 11% closure of business premises only (partial closure rate of 11%). On average, the enterprises experienced 106 days of complete business closure in the same period. Meanwhile, on average, those that closed only the business premises experienced a total of 94 days of business premise closure (partial closure). Therefore, the results show that complete closure of businesses affected most enterprises (i.e., both business premises and business operations closed) in this period. The most affected enterprises due to complete closure were those in the education sector, followed by the hospitality (tourism) sector. Small and medium-sized enterprises were also more affected by complete business closure than micro-level enterprises. This may be due to the nature of such enterprises—they are less likely associated with a high level of complexity in running businesses. For example, most micro enterprises rely on locally available raw materials or supplies and are not involved in inter-district or cross-border business activities.

In the period immediately after the first COVID-19 lockdown (July–December 2020), the rate of complete business closure reduced to 33% (although with a higher number of days of business closure, i.e., 152 days), and the partial business closure rate reduced to 6% (also with a higher number of days of business closure, i.e., 151). This led to an increase in the proportion of enterprises that didn't experience closure from 22% to 61% (Table 3). In the following period (January–May 2021), the enterprises that did not close business increased to 67%. In this period, there was a further reduction in the complete business closure rate and the number of closure days to 27% and 120 days, respectively. Although the partial business closure rate remained the same at 6%, the number of days of partial closure was reduced to 124. The behaviour exhibited by the enterprises in these two post-COVID-19 lockdown periods, given the reduced magnitude of complete and partial closure, is evidence of the recovery of economic

activities after the first COVID-19 lockdown. This can be explained by lifting several government lockdown restrictions that paved the way for economic activities to rebound from the devastations of the first COVID-19 total lockdown. We observe that the rate of recovery in business activities was higher among the medium-sized enterprises compared to the micro and small-sized enterprises.

In the second COVID-19 lockdown period (June–August 2021), the trend in the potential business recovery expectedly reversed. This period was characterized by an increase in complete business closure (rate of 45%) with an average number of days of business closure of 84. The partial business closure rate was at 7% (70 days of closure on average), and the proportion of enterprises that did not close reduced to 48% in the same period from 67% in the preceding period. The worst affected enterprises in the second lockdown period were those in the education sector, followed by hospitality and tourism.

According to the MSME survey, the key driver of complete and partial business closure from the first COVID-19 lockdown through the second was the government order that restricted a number of business operations. This was the most highly ranked factor affecting all sectors throughout the COVID-19 period (from the first to the second lockdown). Other key reasons that also cut across COVID-19 episodes include reduced sales and customers (low demand), inability to sustain the business, and difficulty accessing inputs.

The results of intermittent business closure by gender

Table 3 Intermittent business closure by COVID-19 episode

	Jan-Jun 20 (1st Lockdown period), %			
	Obs. (weighted)	Partial (avg. days)	Complete (avg. days)	Didn't close
All	125,684	10.54 (94)	67.34 (106)	22.12
Manufacturing	17,831	7.74 (75)	51.15 (108)	41.11
Hosp/Tourism	59,025	12.37 (92)	53.67 (103)	33.96
Education	48,828	9.35 (104)	89.78 (109)	0.88
Micro	65,837	12.37 (93)	55.57 (104)	32.06
Small	59,267	8.44 (98)	80.46 (108)	11.1
Medium	558	14.15 (37)	64.8 (78)	21.05
	Jul-Dec 20, %			
	Obs. (weighted)	Partial (avg. days)	Complete (avg. days)	Didn't close
All	125,722	6.09 (151)	32.79 (152)	61.12
Manufacturing	17,831	1.16 (102)	8.96 (162)	89.87
Hosp/Tourism	59,063	6.55 (139)	11.32 (151)	82.13
Education	48,828	7.33 (167)	67.45 (151)	25.21
Micro	65,856	7.24 (154)	18.1 (145)	74.66
Small	59,286	4.85 (147)	49.29 (154)	45.86
Medium	558	2.18 (60)	13.83 (60)	83.99
	Jan-May 21, %			
	Obs. (weighted)	Partial (avg. days)	Complete (avg. days)	Didn't close
All	125,724	6.17 (124)	27.16 (120)	66.67
Manufacturing	17,831	0.59 (88)	6.07 (136)	93.33
Hosp/Tourism	59,065	6.57 (125)	6.43 (122)	86.99
Education	48,828	7.72 (125)	59.92 (119)	32.36
Micro	65,856	7.3 (135)	14.4 (114)	78.3
Small	59,288	4.95 (108)	41.6 (123)	53.45
Medium	558	2.18 (45)	0.00	97.82

	June-Aug 2021 (2nd Lockdown), %			
	Obs. (weighted)	Partial (avg. days)	Complete (avg. days)	Didn't close
All	125,724	6.36 (70)	45.23 (84)	48.41
Manufacturing	17,831	1.81 (40)	10.09 (73)	88.1
Hosp/Tourism	59,065	7.63 (54)	17.36 (60)	75.01
Education	48,828	6.48 (97)	91.78 (90)	1.74
Micro	65,856	6.14 (54)	25.22 (68)	68.63
Small	59,288	6.43 (86)	67.68 (91)	25.89
Medium	558	24.86 (86)	23.95 (90)	51.19

Source: Computed using the 2021 MSME survey data

show marginal differences in complete business closure in both lockdowns, between male and female owned firms - during the first lockdown, complete closure rate was 65% (and 37% in the second lockdown) and 62% (and 36% in the second lockdown) for male and female owned firms respectively (Appendix 2). However, business recovery was faster among male owned compared to female owned enterprises – for example, full-scale operation increased to 70% for male owned firms compared to 63% for female owned firms in the period immediately after the first lockdown. Recovery continued to be stronger for male owned enterprises in the subsequent period (January – May 2021), with full scale operation rate increasing to 77% compared to 68% for male and female owned enterprises respectively. We observe similar results for recovery of enterprises that had closed completely in the first lockdown – business recovery, in the period immediately after the first lockdown, into full-scale operation was higher for male owned firms (63%) compared to female owned firms (48%). Similarly, business recovery rate in the subsequent period (January – May 2021) was higher for male owned enterprises (71%) compared to female owned firms (56%) – see Appendix 3.

3.2.2 Business recovery: tracking MSMEs that had complete business closure

The analysis in this sub-section tracks the MSMEs that experienced complete business closure in the first COVID-19 lockdown to provide an understanding of business recovery and/or the extent to which their economic activities rebounded and which sectors registered slow and faster business recovery in the periods after the first lockdown. The results in Table 4 show that half of the MSMEs that experienced complete business closure in the first COVID-19 lockdown fully recovered and opened premises as well as business operations between July and December 2020. The recovery rate increased to 58% from January to May 2021. The fastest recovery was observed among enterprises in the manufacturing sector, followed by hospitality and tourism. Medium-sized enterprises also experienced a higher recovery rate compared to small and micro-sized enterprises. Enterprises in the education sector report the lowest level of recovery. This can be explained by the fact that restrictions in the education sector were not lifted, and most schools remained closed throughout the COVID-19 episodes under review, except for a handful of schools that invested in e-learning technology. However, in the second lockdown (June – August 2021), there was a reversal in the progress of business or economic activity recovery, whereby only 34% of the enterprises were observed to be fully operational, and the majority (63%) of them again closed both business premises and operations (Table 4). Recovery in economic activity, including business operations in this period, suffered the restrictions imposed in the second lockdown.

Table 4 Recovery rates of MSMEs that closed completely in the first lockdown

	Jul-Dec 2020, %			
	Obs. (weighted)	Partial	Complete	Didn't close
All	84,636	3.44	46.59	49.97
Manufacturing	9,110	1.52	16.54	81.94
Hospitality/Tourism	31,680	5.28	20.12	74.6
Education	43,836	2.52	71.97	25.51
Micro	36,587	4.7	31.8	63.5
Small	47,687	2.48	58.13	39.39
Medium	361	3.37	21.34	75.3
	Jan - May 2021, %			
	Obs. (weighted)	Partial	Complete	Didn't close
All	84,636	3.83	38.51	57.66
Manufacturing	9,120	1.03	11.83	87.14
Hospitality/Tourism	31,680	5.27	11.88	82.85
Education	43,836	3.37	63.3	33.33
Micro	36,587	4.98	25.8	69.22
Small	47,687	2.95	48.55	48.5
Medium	361	3.37	0.00	96.63
	Jun-Aug 2021, % (2nd lockdown)			
	Obs. (weighted)	Partial	Complete	Didn't close
All	84,636	3.65	62.68	33.67
Manufacturing	9,120	2.96	18.1	78.95
Hospitality/Tourism	31,680	4.94	30.22	64.84
Education	43,836	2.86	95.41	1.73
Micro	36,587	3.72	40.94	55.34
Small	47,687	3.33	79.55	17.12
Medium	361	38.36	36.96	24.67

Source: Computed using the 2021 MSME survey data

3.3 Effect of COVID-19 on access to inputs

About inputs and supplies used by the MSMEs, the COVID-19 pandemic and its containment measures presented difficulty in accessing inputs in the entire COVID-19 episodes under the study. As shown in Table 5a, about 61% of the enterprises reported that their source of raw materials or supplies was affected – the manufacturing sector was most affected (80%), followed by hospitality and tourism. Sources of raw materials or supplies were more severely affected for medium-sized enterprises (87%) compared to the small and micro-enterprises. The negative effect on the sources of inputs or supplies is expected. It may not be peculiar to Uganda, as global supply chains were disrupted by the pandemic and associated restrictions or impacts on travel and production. Globally, supply chains and supply chain management have encountered major problems coping with unpredicted demand and production restrictions (Amelie et al., 2021). The most significant challenge regarding access to inputs and supplies by MSMEs was experienced in the first lockdown period, where 58% of the MSMEs reported that access to inputs became problematic due to COVID-19 in comparison to the previous six months. Again, enterprises in the manufacturing sector (78%) and medium sized-enterprises (92%) are affected the most.

According to the results in Table 5a, access to inputs remained difficult even after the first COVID-19 lockdown until the second lockdown. This is reflected in the fact that when the firms that reported access to inputs being difficult are combined with those that reported no change in the problematic status on input access in the previous six months, then a larger fraction of the enterprises (more than 80%) potentially suffered difficulties in accessing inputs and supplies between July 2020 and May 2021, and this seemingly worsened in the second lockdown.

Among other factors, an increase in the cost of inputs or supplies explains the difficulty in accessing the inputs. At the onset of COVID-19, 52% of the enterprises' experienced an increase in input cost – specifically, the

Table 5a Access to inputs (supplies)

			Access to inputs: compared to the previous 6 months, % of firms											
		Raw material sources affected	Jan-Jun 20			Jul-Dec 20			Jan-May 21			Jun-Aug 21		
	Obs. (weighted)	Yes, %	Problematic	No change	Easier	Problematic	No change	Easier	Problematic	No change	Easier	Problematic	No change	Easier
All	125,724	60.78	57.51	39.85	2.64	36.92	45.06	18.02	31.74	51.85	16.4	40.34	49.1	10.56
Manufacturing	17,831	80.00	77.83	20.78	1.39	42.07	25.48	32.44	32.61	38.82	28.57	53.23	31.86	14.91
Hospitality/Tourism	59,065	71.08	61.94	34.87	3.19	37.00	41.05	21.94	32.72	46.57	20.7	42.96	40.36	16.68
Education	48,828	41.33	44.73	52.84	2.44	34.95	56.99	8.06	30.25	62.94	6.81	32.51	65.89	1.6
Micro	65,856.29	63.5	60.77	34.68	4.56	38.02	41.01	20.97	33.9	45.29	20.8	45.02	39.88	15.1
Small	59,288	57.5	53.56	45.9	0.54	35.7	49.98	14.32	29.4	59.39	11.21	35.27	59.52	5.21
Medium	558	86.89	92.44	7.56	0.00	33.43	4.97	61.60	25.16	29.29	45.55	23.16	36.9	39.94

Source: Computed using the 2021 MSME survey data

Table 5b Effect on the cost of inputs/supplies

		Cost of inputs (supplies), % of firms (avg. % change): compared to the previous 6 months											
		Jan-Jun 20			Jul-Dec 20			Jan-May 2021			Jun-Aug 21		
	Obs. (weighted)	Increased	No change	Reduced	Increased	No change	Reduced	Increased	No change	Reduced	Increased	No change	Reduced
All	125,724	51.86 (32)	42.67	5.48	20.97 (26)	70.87	8.16	15.28 (28)	81.97	2.75	20.6 (27)	75.82	3.58
Manufacturing	17,831	70.86 (28)	21.9	7.24	21.94 (35)	72.79	5.27	10.63 (42)	85.57	3.79	26.96 (30)	67.37	5.67
Hospitality/Tourism	59,065	61.75 (32)	33.47	4.78	21.52 (23)	66.21	12.27	16.91 (28)	79.71	3.38	26.57 (32)	70.28	3.15
Education	48,828	33.01 (33)	61.33	5.66	19.96 (25)	75.78	4.26	15.01 (26)	83.38	1.61	11.08 (25)	85.59	3.33
Micro	65,856	59.71 (31)	35.11	5.18	24.37 (24)	66.18	9.45	19.06 (28)	78.64	2.30	27.76 (30)	70.11	2.13
Small	59,288	43.01 (32)	51.31	5.68	17.32 (28)	76.06	6.62	11.12 (29)	85.76	3.12	12.64 (29)	82.2	5.16
Medium	558	61.86 (19)	19.55	18.59	5.07 (29)	75.80	19.13	9.84 (20)	73.83	16.33	15.39 (16)	77.66	6.95

Source: Computed using the 2021 MSME survey data

cost of inputs or supplies increased by 32% on average (Table 5b). The cost of inputs remained high throughout the COVID-19 episodes, and the MSMEs were affected most in the first and second COVID-19 lockdown periods. The increase in input cost was more striking among manufacturing and medium-sized enterprises.

3.4 Effect on firm performance (sales revenue, business turnover, and profitability)

The effect of COVID-19 on MSMEs also manifests in changes in business performance. This is captured through key business performance parameters such as sales revenue, business turnover, prices, and profitability.

About sales revenue, close to 90% of the enterprises reported a reduction in sales revenue in the first COVID-19 lockdown period compared to the previous six months, with an average reduction of 68% (Table 6a). The reduction in sales revenue affected all enterprises in all sectors. However, it was highest among enterprises in the hospitality (tourism) and education sectors and small and micro-level enterprises compared to medium enterprises. The average revenue reduction was the highest in the education sector (75%) and small enterprises (71%) in the first lockdown period, and these two were consistently the most affected in terms of sales revenue reduction even in the second lockdown period (Table 6a).

Business turnover has also been consistently low. About 90% of the enterprises showed business turnover was below the expected level during the first COVID-19 lockdown period. This affected hospitality, tourism, and education enterprises the most (Table 6b). Low business turnover characterized the entire COVID-19 episodes under the study, and the education sector was the worst hit in the second lockdown period - almost all enterprises in the education sector (97%) realized turnover below their normal range. Similar results are observed for the profitability of the enterprises, although the extent of profitability reduction is more remarkable. Overall, about 92% of the enterprises encountered a reduction in profitability in the first lockdown period, with an average reduction in profits of 71% (Table 6c). Although 92% of the firms in the education sector also reported a reduction in profitability, the average reduction in profit level was as high as 81% - the highest magnitude compared to the rest of the sectors (Table 6c). Accordingly, the education sector was also the worst affected in terms of reduction in profitability. In the second lockdown, no firm in the education sector experienced an increase in profitability, implying that they continued experiencing the reduced profitability level registered in the previous periods or had a further reduction in profits.

The low or reduced profitability of the enterprises is evident given the upsurge in the cost of inputs or supplies discussed in the previous sub-section (also shown in Table 5b). An increase in input costs was not accompanied by an increase in the prices of goods charged by the MSMEs. Generally, the prices charged by the enterprises remained the same (majority of the enterprises reported constant prices throughout the COVID-19 episodes), with price reduction experienced sometimes in the first lockdown period (a relatively larger reduction compared to the rest of the COVID-19 episodes), as shown in Table 6d). The behaviour of price is associated with low demand. The combination of high input (supplies) costs and constant or reduced prices inevitably lowers profitability.

Table 6a Sales/revenue

		Changes in sales/revenue, % of firms (avg. % change): compared to the previous 6 months											
		Jan-Jun 20			Jul-Dec 20			Jan-May 2021			Jun-Aug 21		
	Obs. (weighted)	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased
All	125,429	88.91 (68)	9.35	1.74 (43)	27.17 (61)	46.24	26.59 (74)	14.04 (69)	68.16	17.8 (30)	33.88 (60)	57.18	8.93 (26)
Manufacturing	17,831	84.66 (57)	10.5	4.84	8.84 (54)	60.2	30.96	7.75 (43)	70.23	22.03	26.63 (39)	56.21	17.16
Hospitality/Tourism	58,770	91.67 (66)	7.84	0.49	15.77 (64)	47.29	36.94	7.43 (70)	69.07	23.5	32.18 (45)	54.44	13.39
Education	48,828	87.13 (75)	10.75	2.12	47.64 (76)	39.87	12.48	24.32 (72)	66.31	9.37	38.6 (80)	60.87	0.53
Micro	65,837	87.54 (65)	9.92	2.54	19.58 (61)	48.08	32.35	11.78 (57)	67.79	20.43	32.14 (43)	54.35	13.5
Small	59,034	90.65 (71)	8.48	0.87	35.45 (79)	44.19	20.36	16.49 (79)	68.88	14.62	35.52 (76)	60.67	3.82
Medium	558	66.26 (57)	33.74	0.00	44.32 (68)	47.41	8.27	20.37 (52)	34.54	45.09	66.04 (57)	21.99	11.97

Source: Computed using the 2021 MSME survey data

Table 6b Changes in business turnover

		Range of business turnover (compared to normal biz situation), % of firms: Below normal, Within normal, Above normal											
		Jan-Jun 20			Jul-Dec 20			Jan-May 2021			Jun-Aug 21		
	Obs. (weighted)	Below	Within	Above	Below	Within	Above	Below	Within	Above	Below	Within	Above
All	125,664	89.85	9.56	0.59	86.74	13.00	0.26	83.09	16.72	0.19	86.75	11.81	1.44
Manufacturing	17,831	83.65	14.11	2.25	70.75	29.11	0.13	63.48	36.45	0.07	71.24	20.38	8.38
Hospitality/Tourism	59,005	92.69	6.92	0.39	83.84	15.83	0.32	77.65	22.16	0.19	82.74	16.92	0.33
Education	48,828	88.68	11.09	0.23	96.09	3.68	0.23	96.83	2.94	0.23	97.28	2.48	0.23
Micro	65,837	89.84	9.41	0.75	83.89	16.1	0.01	77.28	22.69	0.04	82.97	14.64	2.39
Small	59,269	89.92	9.66	0.42	89.89	9.57	0.54	89.52	10.12	0.36	90.99	8.62	0.39
Medium	558	83.94	16.06	0.00	89.68	10.32	0.00	85.66	14.34	0.00	83.48	16.52	0.00

Source: Computed using the 2021 MSME survey data

Table 6c Changes in profitability

		Changes in profits, % of firms (avg. % change): compared to previous 6 months											
		Jan-Jun 20			Jul-Dec 20			Jan-May 2021			Jun-Aug 21		
	Obs. (weighted)	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased
All	125,429	91.86 (71)	6.15	2 (46)	25.78 (75)	51.01	23.21 (27)	13.48 (65)	68.63	17.89 (31)	29.42 (54)	62.39	8.18 (27)
Manufacturing	17,831	84.34 (57)	11.87	3.79	10.35 (57)	60.49	29.16 (31)	5.49 (35)	73.06	21.45 (33)	29.87 (39)	55.73	14.4(22)
Hospitality/Tourism	58,770	94.14 (68)	4.43	1.44	17.27 (67)	50.75	31.97 (27)	9.89 (64)	65.37	24.74 (30)	27.82 (43)	59.09	13.09 (28)
Education	48,828	91.87 (81)	6.13	2.01	41.67 (80)	47.85	10.48 (26)	20.72 (69)	70.93	8.34 (34)	31.2 (71)	68.8	0.00
Micro	65,837	89.61 (67)	7.11	3.28	21.13 (66)	50.72	28.15 (26)	13.60 (57)	64.49	21.91 (29)	28.6 (41)	58.38	13.02 (24)
Small	59,034	94.42 (75)	4.99	0.58	31.15 (81)	51.23	17.61 (30)	13.30 (75)	73.47	13.23 (35)	30.19 (68)	67.05	2.76 (41)
Medium	558	85.85 (65)	14.15	0.00	6.2 (66)	61.59	32.22 (16)	18.19 (49)	45.00	36.82 (20)	45.41 (75)	42.62	11.97 (25)

Source: Computed using the 2021 MSME survey data

Table 6d Changes in prices

		Changes in prices/fees, % of firms (avg. % change): compared to previous 6 months											
		Jan-Jun 20			Jul-Dec 20			Jan-May 2021			Jun-Aug 21		
	Obs. (weighted)	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased	Reduced	Remained same	Increased
All	125,453	13.23 (33)	78.18	8.59 (42)	7.73 (31)	83.72	8.55 (29)	4.4 (32)	92.23	3.36 (34)	5.03 (22)	89.69	5.28 (29)
Manufacturing	17,831	16.27 (28)	66.1	17.63 (31)	3.58 (19)	82.56	13.85 (28)	2.59 (11)	91.47	5.94 (28)	4.34 (25)	83.45	12.21 (23)
Hospitality/Tourism	58,794	13.66 (27)	75.36	10.97 (54)	7.31 (21)	83.95	8.74 (33)	1.87 (52)	93.5	4.63 (40)	4.48 (25)	87.96	7.56 (32)
Education	48,828	11.6 (43)	85.99	2.41 (9)	9.76 (41)	83.86	6.38 (22)	8.12 (30)	90.99	0.89 (9)	5.94 (19)	94.06	0.00
Micro	65,837	13.93	75.3	10.77	9.78	81.54	8.68	5.18	91.25	3.58	6.58	86.00	7.42
Small	59,058	12.44	81.39	6.17	5.52	86.06	8.42	3.58	93.35	3.06	3.35	93.72	2.93
Medium	558	14.43	79.02	6.54	0.00	92.56	7.44	0.00	90.21	9.79	0.00	99.29	0.71

Source: Computed using the 2021 MSME survey data

3.5 Access to credit and insolvency during COVID-19

The deterioration in business and macroeconomic conditions because of COVID-19 presents challenges to the financial position of enterprises. To measure the extent to which access to financial services was affected among MSMEs, this sub-section documents the findings on access to credit among MSMEs during COVID-19, with particular focus on how the pandemic affected the ability of MSMEs to repay credit that the enterprises had acquired.

As shown in Table 7, 18% and 17% of the enterprises had access to credit in 2020 and 2021, respectively. This is credit obtained in each year (2020 and 2021). Access to credit was higher among medium-sized enterprises in 2021. Although a relatively higher proportion of female owned enterprises accessed credit compared to their male counterpart in both 2020 and 2021, the differences were not pronounced[3].

Table 7 Access to credit during COVID-19

		Access to credit, % of firms	
	Obs. (weighted)	2020	2021
All	125,721	18.41	17.00
Manufacturing	17,828	15.56	17.38
Hospitality/Tourism	59,065	22.93	24.95
Education	48,828	13.97	7.24
Micro	65,856	19.00	20.65
Small	59,285	17.88	12.68
Medium	558	4.77	45.71

Source: Computed using the 2021 MSME survey data

At the onset of COVID-19 (i.e., the beginning of the first lockdown period), 21% of the enterprises had loans that were being serviced at an average interest rate of 15% (Table 8). These loans were acquired in 2019 (69% of the enterprises)[4]. A higher proportion of enterprises in the manufacturing sector (24%) had credit at the time compared to hospitality and education, and a larger share of medium-sized enterprises (41%) had credit in the same period compared to micro and small-sized enterprises.

The pandemic and related restrictions adversely affected MSME's ability to repay these existing loans due to disruptions in business operations, exacerbated by severely reduced sales revenue, cash flow and profitability. On average, 66% of the enterprises experienced reduced ability to service or repay existing loans. The extent of decrease in the ability to repay was greater in the manufacturing sector (77%), followed by hospitality/tourism (67%) and education (58%). This is an indication that the COVID-19 pandemic and related restrictions potentially increased insolvency among MSMEs. Results also show that there was a large gender differential in regard to insolvency of firms. The findings indicate that the level of insolvency created as a result of COVID-19 was higher among female owned enterprises compared to male owned enterprises. As shown in Appendix 4, a larger proportion of female owned enterprises (77%) experienced reduced ability to repay their loans, compared to 66% for male owned enterprises. In response to the reduced ability to repay and/or additional risk of insolvency, the MSMEs requested the creditors for loan rescheduling by extending the period of their loan tenure to enable the enterprises to adjust their loan repayment plans to the COVID-19 realities and avoid loan default. However, only slightly more than half (54%) of the enterprises requested rescheduling their loans. The rest of the enterprises could not have made the loan rescheduling request due to a lack of knowledge of such provisions in loan tenure. Only the medium-sized enterprises had a significant proportion (93%) that requested loan rescheduling, which may reflect an acute awareness of loan tenure provisions. Of the enterprises that requested loan rescheduling, the majority (86%) were successful in obtaining rescheduled loans. The positive response from the creditors or financial institutions to grant rescheduling of the loans could have possibly abated further adverse effects that the enterprises could have encountered, including massive loan default. This kind of financial intervention is critical for the survival of MSMEs. It provides an important lesson for strategies to cushion MSMEs during shocks like the COVID-19 pandemic and other crises.

3 In 2020, 21.73% and 20.16% of female and male owned enterprises accessed credit respectively. In 2021, 21.37% and 19.23% of female and male owned enterprises accessed credit respectively.

4 Computed from the 2021 MSME survey data but not reported in the paper.

Table 8 Loan status and ability to repay

			Ability to repay (COVID-19 effect) % of firms				
	Had credit by March 2020, %	Avg. interest rate, %	Increased	No change	Decreased	Request to reschedule	Loan rescheduled
All	20.95	15	22.01	12.46	65.53	54.04	86.40
Manufacturing	23.74	13	9.66	13.07	77.26	53.97	84.68
Hospitality/Tourism	20.06	16	16.52	16.29	67.2	51.02	84.39
Education	21.01	14	34.8	7.26	57.94	57.94	89.43
Micro	17.6	15	13.73	16.99	69.27	47.08	88.95
Small	24.49	15	29.02	8.34	62.64	59.4	85.19
Medium	41.21	17	26.86	28.33	44.81	92.54	64.51

Source: Computed using the 2021 MSME survey data

3.6 The effect on employment in the MSME sector

3.6.1 Employment by COVID-19 episode

This sub-section discusses how the pandemic affected employment in the MSME sector. As shown in Table 9, the MSMEs under the study employed 8 people on average (Table 9), a total of 1.03 million people (Table 10) before the onset of the COVID-19 pandemic. Most jobs created by the MSMEs were in the education sector (0.59 million)—employing 12 people on average, followed by hospitality and tourism (0.26 million) and manufacturing (0.18 million)—Table 10. The MSMEs employ a larger share of females (55%) than males, and the majority (close to 70%) of MSME employees are youth. Thus, MSMEs are key drivers of job creation for women and young people.

When the pandemic set in, the average number of employed persons reduced to 6 and 5 in the first and second COVID-19 lockdown periods, respectively (Table 9). The results in Table 9 also show that the average number of employed females reduced from 5 to 3 and for males reduced from 4 to 2 meanwhile the youth employed reduced from an average of 5 to 3 between the pre-COVID-19 period and the second lockdown.

3.6.2 Job losses by COVID-19 episode.

The adverse effect of COVID-19 and related restrictions on employment was felt through the loss of jobs and wage cuts. The results in Table 10 illustrate significant job losses across sectors and gender. Overall, jobs in the MSMEs under the study reduced from 1,026,000 to 601,000, representing a share of 41% or 425,000 jobs lost. Of these, 241,000 jobs were lost between the period before COVID-19 and the end of the first COVID-19 lockdown, and 184,000 jobs were lost between the first lockdown (from the end of the first lockdown period) and the second lockdown. Except for manufacturing, which had a job gain of about 4,000 between the periods at the end of the second lockdown, the rest sectors experienced consistent job losses. The improvement experienced in the manufacturing sector

Table 9 Number employed by COVID-19 episode (average)

Period	Employment - Average # employed						
	All	Manufacturing	Hospitality/Tourism	Education	Male	Female	Youth
Before COVID-19 (Dec 2019)	8	10	4	12	4	5	5
1st Lockdown	6	7	3	9	3	3	4
2nd Lockdown	5	8	3	6	2	3	3

Source: Computed using the 2021 MSME survey data

Table 10 Total employment by sector and COVID-19 episode (000' employed)

	All	Manufacturing	Hospitality /Tourism	Education	Male	Female	Youth
Before COVID-19 (Dec 2019)	1,026	179	263	585	457	569	685
1st Lockdown	785	131	196	457	352	433	505
2nd Lockdown	601	135	173	292	275	326	386
Job loss (Dec 2019 - June 2020)	241	48	67	128	105	136	180
Job loss between 1st & 2nd Lockdown	184	-4	23	165	77	107	119
Overall job loss (Dec-19 to Aug-21)	425	44	90	293	182	243	299

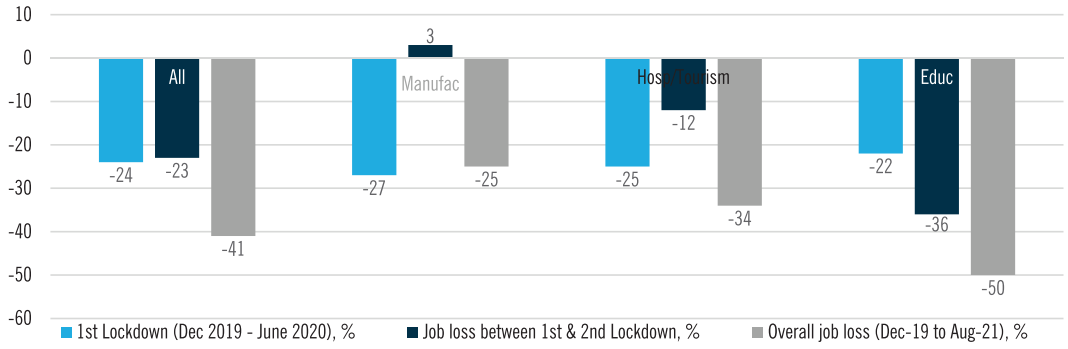
Source: Computed using the 2021 MSME survey data

could be explained by the fact that manufacturing activities were considered essential by the government in the different episodes of COVID-19. Hence, the manufacturing enterprises could have recalled some of the laid-off workers or hired new ones during that period.

The job losses in the different sectors were mainly because of the inability of the enterprises to keep staff because of financial constraints given subdued business activities. The education sector encountered the most extensive overall job loss (293,000), compared to hospitality and tourism (90,000) and manufacturing (44,000).

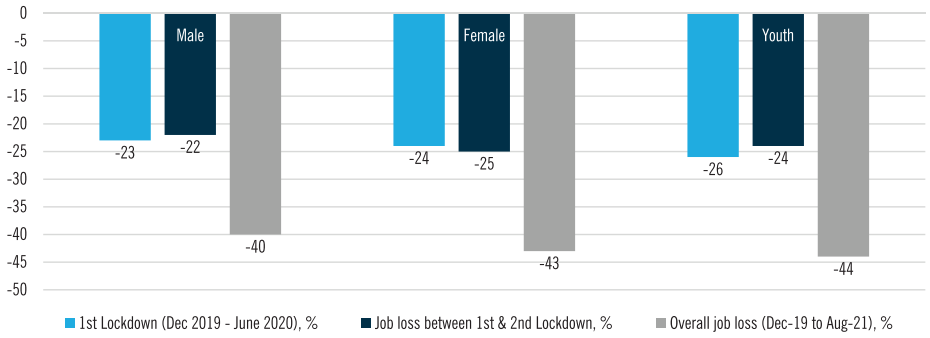
Figure 4 shows the shares of jobs lost by sector and the COVID-19 episode. The overall job loss was 41%; job loss associated with the first lockdown was 24%; the job loss between the first and second lockdown was 23%. The least job loss was in manufacturing, and the largest was in the education sector (50%), followed by hospitality and/or tourism (34%). This is because most people employed in schools were laid off due to school closure (particularly private schools were hit hardest), and tourism or hospitality due to the low sharp decline in tourist arrivals, complete closure of bars and restaurants, and low demand for hotel services.

Figure 4 Percentage changes in employed persons (jobs) by sector and COVID-19 episode, %



Source: Computed using the 2021 MSME survey data

Figure 5 Percentage changes in employed persons (jobs) by gender and COVID-19 episode



Source: Computed using the 2021 MSME survey data

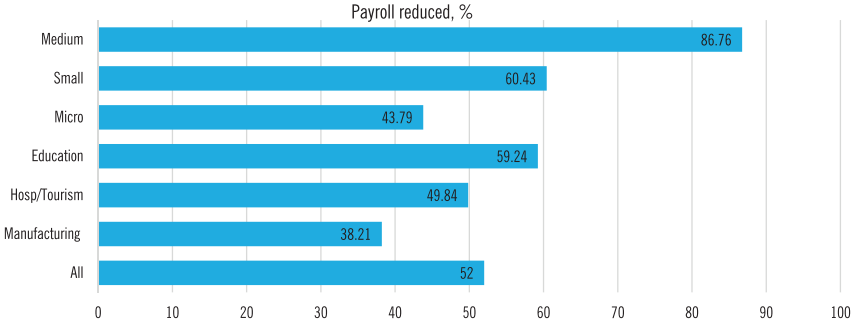
The results of job loss disaggregated by gender are shown in Figure 5. The statistics show a large share of jobs lost among the youth employees of the MSMEs – about 44% of the youth lost their jobs. This was an increase from a 26% job loss among the youth in the first COVID-19 lockdown. Job losses were also more prevalent among female workers (43%) compared to male workers (40%), and a similar pattern is observed in COVID-19 episodes. The results suggest a high level of vulnerability of female and young workers in the MSME job market.

3.6.3 Extent of salary cuts due to COVID-19-related reasons.

Besides job losses that occurred due to employee lay-offs, the enterprises also pursued a reduction in payroll due to COVID-19-related reasons, as shown in Figure 6. Overall, more than half (52%) of the enterprises pursued payroll reduction to ease the financial stress wreaked upon them by COVID-19 and related restrictions. Payroll reduction was more prevalent among education sector enterprises (schools) at 59%, compared followed by hospitality/tourism (50%) and manufacturing (38%). Payroll reduction was also more common among medium-sized enterprises (87%), followed by small-sized enterprises (60%) and micro-level enterprises (44%).

As shown in Table 11, the reduction in payroll that occurred in the first COVID-19 lockdown led to a wage cut by 61% on average. From the first through the second lockdown, most firms (64% - 78%) maintained the reduced salary of the first lockdown. During the second lockdown, the firms that implemented further wage cuts increased the magnitude of wage reduction to 73%, higher than the wage cut implemented in the previous episodes. At the onset of COVID-19, the wage cut for female employees was 62%, slightly higher than that of the male employees (60%). Also, the proportion of enterprises that cut wages for female employees (48%) was higher than those that cut wages for male employees (36%). However, the proportions equalized in the second lockdown period. The wage cut for youth employees was also relatively higher than for non-youth employees in the first and second COVID-19 periods.

Figure 6 Payroll reduction by sector and size of enterprises



Source: Computed using the 2021 MSME survey data

Table 11 Change in salary by COVID-19 episode

		Salary change (avg. % change): compared to the previous 6 months, % of firms											
		Jan-Jun 20			Jul-Dec 20			Jan-May 21			Jun-Aug 21		
	Obs. (weighted)	Reduced	No change	Increased	Reduced	No change	Increased	Reduced	No change	Increased	Reduced	No change	Increased
All	125,714	52.19 (61)	42.33	0.07	14.03 (68)	63.92	11.47	6.43 (55)	78.01	5.54	13.41 (73)	70.79	2.63
Female	125,678	47.92 (62)	38.21	0.05	12.04 (74)	57.7	10.59	5.58 (60)	69.81	5.09	11.84 (76)	63.87	1.83
Male	125,678	35.72 (60)	34.88	0.01	9.14 (75)	47.97	7.36	4.43 (66)	56.21	3.55	10.09 (76)	50.04	1.27
Youth	125,678	46.36 (61)	39.7	0.05	12.29 (73)	57.27	9.98	4.90 (62)	70.28	4.00	10.95 (77)	62.81	2.17
Non-Youth	125,678	40.97 (59)	30.98	0.03	10.56 (75)	49.17	8.61	4.84 (62)	59.77	4.11	10.72 (70)	54.98	1.06

Source: Computed using the 2021 MSME survey data

3.7 Sector-specific effect of COVID-19: The case of manufacturing

3.7.1 Capacity Utilization Rate.

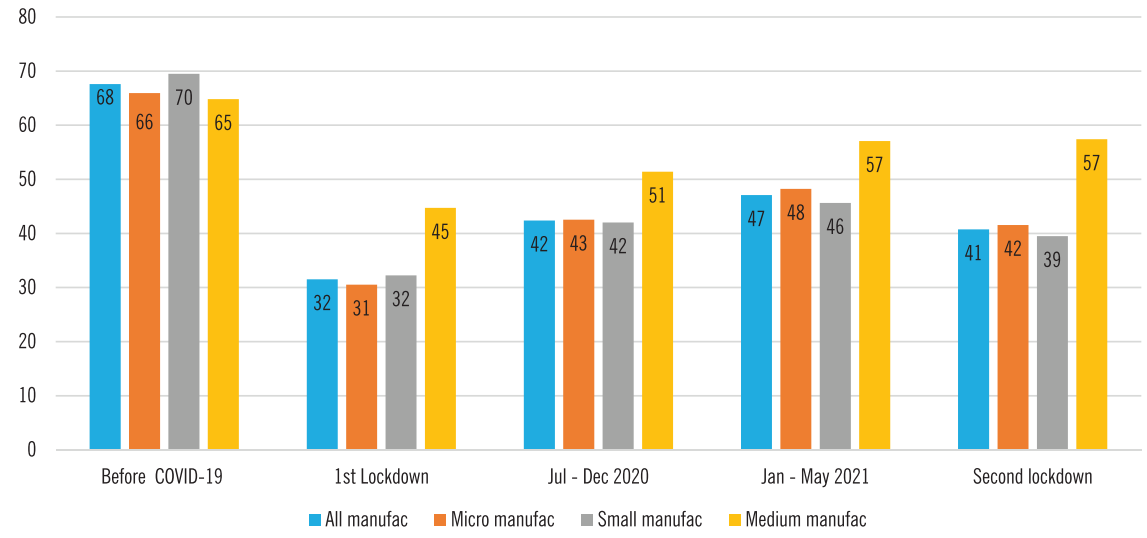
We collected data on the Capacity Utilization Rate (CUR) of the manufacturing enterprises under the study, based on their operational experience in the different episodes of COVID-19. The CUR relates to the extent to which the manufacturing enterprises' potential outputs were realized on average in percentage terms. The results, shown in Figure 7, reveal that the overall CUR for the manufacturing enterprises was 68% on average before COVID-19. So even before COVID-19, firms were operating below the optimal level. There were slight differences in the CUR by the size of the enterprises, with the lowest CUR observed among medium-sized manufacturing enterprises (65%). In the first COVID-19 lockdown period, there was a significant contraction in the CUR for all the manufacturing enterprises. The CUR decreased by 35 percentage points from 68 percent to 32 percent for all enterprises. The highest contraction in CUR was observed among the small and micro-sized enterprises (38 and 34 percentage point reduction, respectively). The medium-sized enterprises experienced a lower contraction in CUR, by 20 percentage points. After the first lockdown, the CUR improved for all the enterprises, albeit marginally. In the second lockdown, the overall CUR again declined by 6 percentage points compared to the previous six months (January to May 2021). Except for the medium-sized manufacturing enterprises that maintained a CUR of 57% in the second lockdown (compared to the previous six months), the rest of the manufacturing enterprises (micro and small) encountered a further reduction in CUR (Figure 7).

3.8 MSME resilience

The popular policy discourse for strengthening the MSME ecosystem in developing countries during COVID-19 and in the post-COVID-19 era is on strategies to galvanize government efforts as well as development partners to pursue actions that can speed up the recovery of MSMEs as an integral part of the overall economic recovery programme. The MSMEs are critical for contributing to post-pandemic economic revival (UNCTAD, 2021)[5]. This is because of the significant contribution of the MSME sector to the economy in terms of livelihood sources and job creation. Accordingly, policies should emphasize the recovery of MSMEs, especially in post-pandemic time, with the viewpoint of supporting processes of recovery of the economy. Because of this argument, it is paramount to provide empirical evidence for understanding MSMEs' resilience. This is because enterprise or business resilience is fundamental for

5 https://unctad.org/news/supporting-small-businesses-critical-covid-19-recovery

Figure 7 Capacity Utilization Rate (%) - manufacturing enterprises, by COVID-19 episode



Source: Computed using the 2021 MSME survey data

enabling business survival and recovery from shocks such as the COVID-19 pandemic. This section of the paper discusses the level of business reliance among the MSMEs under the study. It identifies the underlying conditions responsible for weak resilience, which require strategic policy interventions to build resilience and accelerate the recovery of MSMEs.

The results in Table 12 show the extent of enterprise resilience by sector, based on the resilience scores (index) generated using quartile ranking. According to the results, the overall resilience score is 60.01 (Table 12). This is below the threshold for high or strong business resilience. It signals an average level of resilience that is relatively weak for the MSMEs under the study. The weakest resilience is in the hospitality (tourism) sector (resilience score/index of 59.75), followed by manufacturing. The resilience score for enterprises in the three sectors is below the threshold.

Figures 8a, 8b and 8c show MSME resilience by the size of enterprises. The resilience score for micro-level enterprises is the lowest (54.08 – Figure 8a), suggesting that micro-enterprises have the weakest level of resilience. The highest level of resilience was observed among medium-sized enterprises (score of 74.50 – Figure 8c), followed by small-sized enterprises (score of 64.15 – Figure 8b). However, the scores for all three categories (micro, small, and medium enterprises) are below the threshold. These results show that business resilience-building efforts are necessary for enterprises in all three sectors, regardless of size. However, micro and small enterprises and those in hospitality/tourism may require more effort given the relatively weakest resilience score associated with them.

The results show that relatively, the strongest resilience domain relates to enterprise leadership and management. Overall, the weakest resilience domains for all enterprises (on average), as shown in Table 12, are in the order; adaptive ability, ability to leverage knowledge and information, access to external resources, planning and preparedness, and innovation and diversification. Specifically, the results show that the MSMEs have significant weaknesses in the following areas. First is weak capacity to respond to changes—that is, inability to harness technology to enable relevant changes in the product line or business operation, as well as lack of e-commerce readiness (broadly termed as weak adaptive ability). Second is the weak ability to leverage knowledge and information – e.g. low level of ability and awareness to access information regarding available aids such as government funding or stimulus package, and other information and knowledge relevant for business growth and development. The third is a low level of access to additional aids from third parties (i.e. low ability to leverage external resources for business survival, growth and development). Fourth is weak planning and preparedness capability–e.g., lack of preparedness plans to be implemented in case of hazards (disaster preparedness), to counteract any hazards; and weak or no soft infrastructure to mitigate adverse effects of shocks, including lack of business insurance or a weak insurance policy. Fifth is weak innovation and diversification capability—inability to create additional business revenue sources; inability to diversify business portfolio or products; including the inability to produce or start dealing with new and sophisticated products.

Results in Table 12 show that in the manufacturing sector, the most substantial resilience is in the domain of leadership and management capability, and the weakest resilience domains are - adaptive ability, ability to leverage knowledge and information, and access to external resources. For the case of education, the most robust resilience domain is the staff's core competence; the weakest (adaptive ability, planning and preparedness, and innovation and diversification). In hospitality (tourism), the strongest resilience domain is also in leadership and management capability; and the weakest domains related to ability to leverage knowledge and information, adaptive ability, and access to external resources).

About enterprise size (Figures 8a, 8b, and 8c), the strongest resilience domain for micro-enterprises is leadership and management; and the weakest domains are - adaptive ability, planning and preparedness, and ability to leverage knowledge and information. For the small enterprises, the strongest resilience domain is the staff's core competence; and the weakest domains are - the ability to leverage knowledge and information, access to external resources, and adaptive ability.

Lastly, the strongest resilience domain for medium-sized enterprises is also the staff's core competence; and the weakest domains are - the ability to leverage knowledge and information, access to external resources, and adaptive ability.

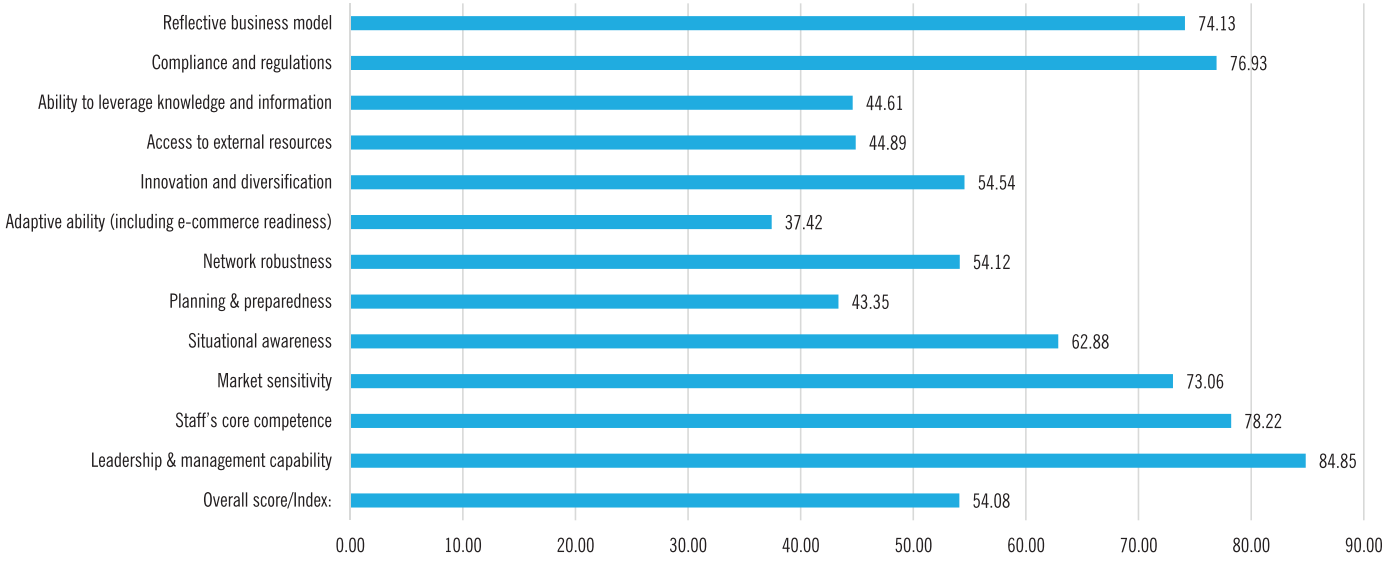
Table 12 MSME resilience index by sector

	All		Manufacturing		Hospitality/Tourism		Education	
	Score/Index	Quartile Rank	Score/Index	Quartile Rank	Score/Index	Quartile Rank	Score/Index	Quartile Rank
Overall score/Index (avg.)	60.01	2.88	60.10	2.88	59.75	2.92	60.42	3.00
Leadership & management capability	85.39	4.00	87.23	4.00	85.07	4.00	82.60	4.00
Staff's core competence	82.80	4.00	85.81	4.00	79.37	4.00	85.10	4.00
Market sensitivity	76.01	4.00	78.23	4.00	75.45	4.00	73.13	4.00
Situational awareness	67.94	3.33	67.79	3.33	66.25	3.33	72.19	3.33
Planning & preparedness	50.35	2.33	49.14	2.33	51.84	2.67	49.17	2.67
Network robustness	61.33	3.00	59.42	3.00	60.07	3.00	67.92	3.50
Adaptive ability (including e-commerce readiness)	46.79	2.14	46.65	2.14	47.41	2.14	45.58	2.14
Innovation and diversification	58.04	3.00	61.08	3.00	57.71	3.00	52.99	2.67
Access to external resources	49.35	2.00	47.98	2.00	48.80	2.00	53.23	3.00
Ability to leverage knowledge and information	47.90	2.00	47.54	2.00	45.68	2.00	53.75	3.00
Compliance and regulations	80.76	4.00	79.20	4.00	81.54	4.00	81.93	4.00
Reflective business model	78.06	4.00	77.95	4.00	76.78	4.00	81.25	4.00

Source: Computed using the 2021 MSME survey data

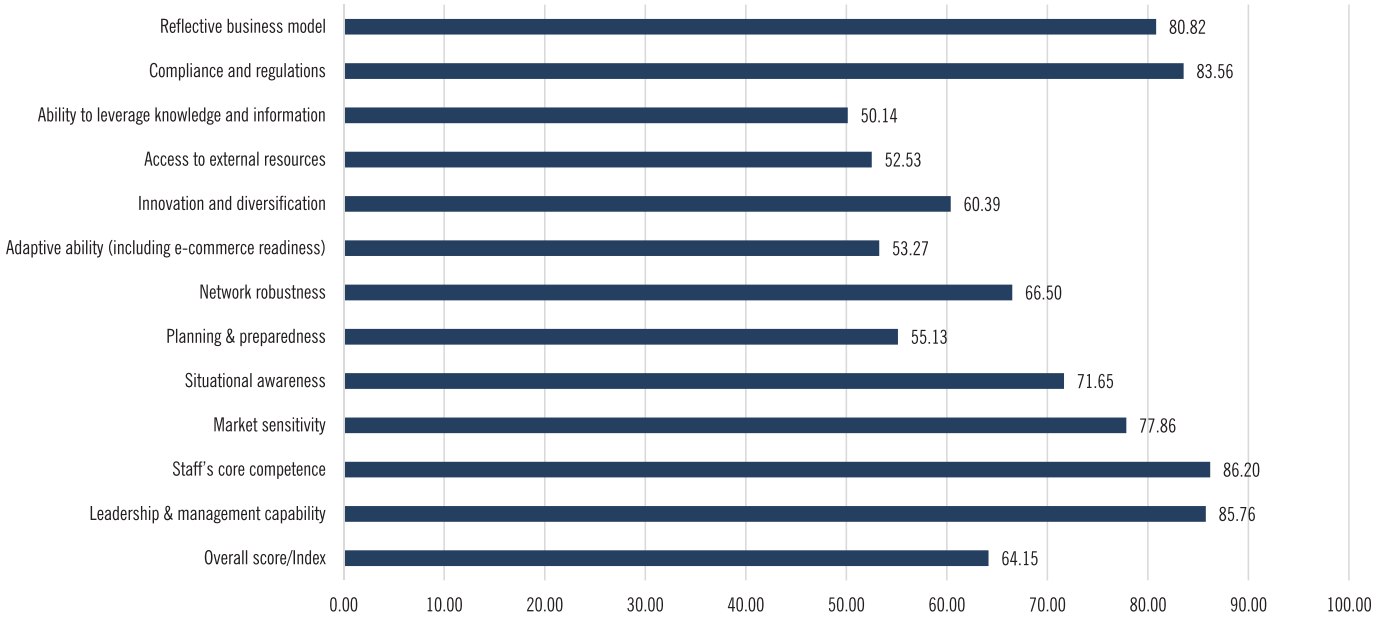
Resilience index by enterprise size

Figure 8a Micro-enterprise resilience score/index



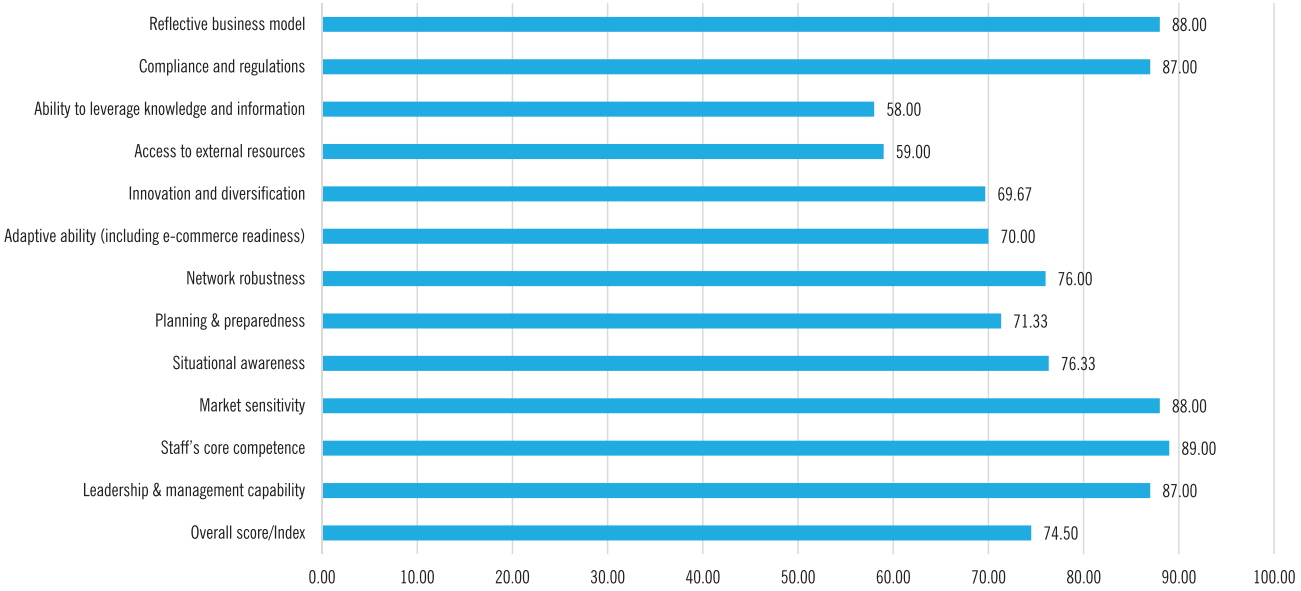
Source: Computed using the 2021 MSME survey data

Figure 8b Small-enterprise resilience score/index



Source: Computed using the 2021 MSME survey data

Figure 8c Medium-enterprise resilience score/index



Source: Computed using the 2021 MSME survey data

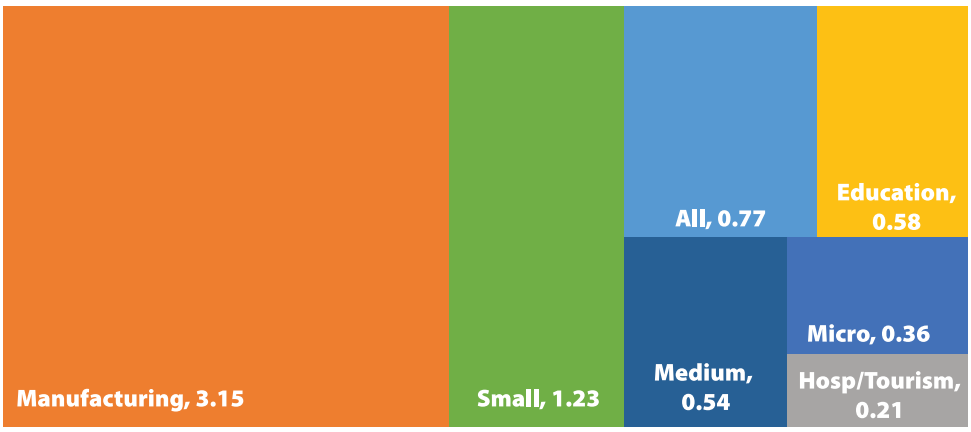
3.8 Coping strategies adopted by MSMEs

3.8.1 Working remotely in the MSME sector

Working from home was not a common strategy that the MSMEs employed in all the sectors under the study. As shown in Figure 9, the proportion of firms with employees that worked from home as one of the COVID-19 coping strategies is very low across all sectors and firms by size. When asked if any employees worked from home during COVID-19, only 0.77% of the enterprises reported some employees worked from home. This shows the adaptability challenge among the MSMEs, which may be because of inadequate capacity, such as skills and resources to harness technology to support working remotely or in digital mode.

The most common coping strategies employed by the MSMEs for business continuity from the onset of COVID-19 in Uganda (especially in the first lockdown) are presented in Table 13. According to the results, the top-ranked strategies by the MSMEs include venturing into new product lines or services (e.g., home delivery of goods and services), payroll reduction, and obtaining raw materials or supplies on credit (e.g., hotels and restaurants would obtain food supplies on credit).

Figure 9 Enterprises that reported employees working from home during COVID-19, %



Source: Computed using the 2021 MSME survey data

Table 13 Highly ranked coping strategies for business continuity

	Strategy ranked as main, % of firms: On-set of COVID-19 (Jan-Jun 2020)			
	Obs. (weighted)	New product/service	Reduced payroll	Raw materials on credit
All	125,682.89	95.17	76.56	92.69
Manufacturing	17,831	89.93	77.93	88.74
Hospitality/ Tourism	59,024	95.72	75.98	90.08
Education	48,828	96.42	76.77	97.29

Source: Computed using the 2021 MSME survey data

3.9 Introduction of safety measures by MSMEs during COVID-19

MSMEs also introduced safety measures for COVID-19 prevention during their operation. Over three-quarters of the firms introduced safety measures for COVID-19 prevention for their workers on duty during enterprise operations. The period when the most significant proportion of firms (i.e., 64%)[6] introduced the safety measures is between January and June 2020 - especially during the first lockdown. This implies that not all enterprises complied with the government (Ministry of Health) directive that required all workplaces to put in place and implement Standard Operating Procedures (SOPs) as a safety measure for COVID-19 prevention.

From the end of the second lockdown to the time the survey was conducted (November-December 2021), a larger proportion (85%) of the firms that introduced the COVID-19 safety measures indicated they were still implementing or adhering to the measures. This means that 15% of the enterprises that had introduced the safety measures for workers on duty at the onset of COVID-19 discontinued the measures at the time of the survey.

Introducing and compliance with safety measures presented cost implications for the MSMEs, amounting to about 8% of business operation costs (Table 14). The findings in Table 14 show that medium and small firms were more compliant with COVID-19 safety measures than micro-level enterprises at the time of the survey. Firms in the education sector reported higher costs of the safety measures, measured through the cost of implementing COVID-19 Standard Operating Procedures (SOPs).

6 Not reported in the tables of results.

Table 14 Firms that introduced safety measures, %

		Introduced safety measure	Average	Firms that are
	Obs. (weighted)	Yes	Cost of SOPs (% of operation cost)	still implementing the measures, %
All	125,724	78.17	8.02	84.79
Manufacturing	17,831	94.77	5.35	75.65
Hosp/Tourism	59,065	88.82	5.18	87.82
Education	48,828	59.24	14.73	84.63
Micro	65,856	79.47	4.55	83.71
Small	59,288	76.52	12.02	85.87
Medium	558	100.00	8.75	97.82

Source: Computed using the 2021 MSME survey data

The main (highly ranked)[7] measures that were introduced by the MSMEs include; hand sanitisers and disinfectants (ranked by 82% of the firms as the main); and Personal Protective Equipment (PPE) such as masks and gloves (ranked by 83% of the firms). The least ranked measures introduced by the MSMEs include; staff working in shift (1.27%); Tele-working (i.e., remotely working from home) (0.69%); paid sick leave extension (0%); sensitization of employees on COVID-19 transmission (8.80%); and workers encamped (residing) at establishment's premises (1.84%).

As earlier mentioned, some MSMEs that introduced safety measures discontinued the measures. The major reasons for the discontinuation (i.e., highly ranked reasons) [8] are—the measures became costly (86% of the firms) and hence unsustainable; and they perceived the measures as not effective in preventing COVID-19 (98.89%), and all the firms perceived the measures as unsafe (100%).

The enterprises that did not introduce any safety measures at the onset or during COVID-19 were constrained due to several factors. Key among them (i.e., highly ranked factors)[9] are; Lack of knowledge and/or awareness about the measures (95% of the MSMEs); lack of knowledge to implement the measures (88%); refusal by staff to adopt measures (99.58%); and measures perceived as unsafe by almost all the firms that did not introduce them (99.74%). A large fraction of the MSMEs also indicated that they did not just want to implement the measures (94%). Almost all the reasons for not introducing the safety measures suggest an inadequate level of awareness about the measures among the MSMEs. They also indicate low readiness to adopt and implement the measures due to lack of skills or knowledge required to implement them. This is a likely indication that the government did not do enough to sensitize the business community and impart the basic skills required to implement the safety measures for COVID-19 prevention in workplaces—for example, Table z1 shows that only 11% of the few MSMEs that received any form of support during the pandemic benefited for COVID-19 prevention training.

3.10 Extent of support to MSMEs and preferred support during COVID-19

This sub-section discusses the business support received by MSMEs during COVID-19 to assess the extent the government reached out to support MSMEs during the pandemic through public interventions such as the COVID-19 stimulus package and other forms of interventions. The preferred kinds of support to MSMEs (based on MSME needs) are also analyzed to inform MSME future interventions based on the need of MSMEs to avoid the risks associated with generic interventions.

Overall, according to Table 15, only 11% of the MSMEs reported they received any form of support, and the variation between support received by male and female owned enterprises was marginal. This shows limited outreach to the MSMEs through MSME support interventions, including government responses. The MSMEs that received a relatively higher level of support are those in the medium-sized category (40%), followed by small-sized enterprises (18%). The micro-level enterprises received the least level of support (4%).

The main support received by the MSMEs were financial subsidy - 22% of the 11% of MSMEs that received any form of support; and Personal Protective Equipment (PPEs). Of the enterprises that received financial subsidies, 63% received from the government, 13% received from Non-Governmental Organizations (NGOs), and 1% from commercial banks as the primary sources of the subsidy. The commercial banks were more responsive to the manufacturing sector than tourism and education, perhaps because manufacturing seemed less risky at the time since it was part of essential economic activities and was allowed by the government to continue operating even during the peak of COVID-19 (i.e., total lockdown periods).

7 The table for these results are not included in the paper.
8 The table for these results are not included in the paper.
9 The table for these results are not included in the paper.

One of the most severe difficulties highlighted by the MSMEs was the problem related to transport for the workers to commute to work. This is evident in the limited extent of staff movement permit coverage among the enterprises (only 1.8%), which was a massive barrier to staff mobility, disrupting the flow or operation of business activities.

3.10.1 MSME preferred support for business continuity in times of COVID-19

The study identified the most preferred support that the MSMEs need from the Government and Development Partners to ensure business continuity during a crisis, such as the COVID-19 pandemic. The enterprises ranked different support options, and they provided multiple option selection for ranking. We present the findings in Table 16. The top most preferred support concerning the COVID-19 crisis was the staff movement permit to ensure mobility of MSME employees during COVID-19 time, especially if there is a lockdown—almost all the MSMEs (99%) ranked this as the most preferred). Employment support followed this through a waiver of the employer's contribution towards the National Social Security Fund (NSSF)—ranked by 98% of the enterprises. The next support option is fiscal intervention through tax deferment, especially the Pay As You Earn (PAYEE) tax—ranked by 97% of the enterprises, and loan rescheduling (ranked by 96% of the enterprises), as well as COVID-19 prevention training (ranked by 95% of the enterprises). Other preferred support includes PPEs and rent waivers. The least preferred options are financial subsidy and cheap credit.

The needs presented by the MSMEs suggest that during the time of a shock like COVID-19, the most vital issue to address is business survival. For example, the enterprises needed their employees for continuity of operations, hence the need for staff movement permits. Several enterprises were at a standstill because of staffing (human resource) gaps, since their employees could not freely move, especially during the COVID-19 total lockdown periods. There was a high level of financial stress among the MSMEs due to; the low level of economic activity and demand, reduced sales, turnover and cash flow, and reduced profitability amidst the high cost of inputs and supplies. This presents the need for support options that can ease the financial stress and promote business survival, such as loan rescheduling, tax deferment, and employment support as social security contribution waiver. This kind of MSME need suggests that the enterprises prefer interventions that do not increase their level of liability or insolvency during a crisis, which may be why a support option such as credit is not highly preferred.

Table 15 MSMEs that received support during COVID-19

	Obs. (weighted)	Received support (any), %	Type of support received by those who received support						Source of financial support			
			Financial subsidy	Cheap credit	Loan rescheduling	PPEs	COVID prevention training	Staff movement permit	Gov't	Biz association	NGO	Commercial bank
All	125,724	11.11	21.85	3.36	1.68	21.01	10.92	1.68	62.78	0.00	13.34	0.93
Manufacturing	17,831	4.42	-	-	-	-	-	-	62.04	0.00	18.98	18.98
Hospitality/Tourism	59,065	4.27	-	-	-	-	-	-	11.09	0.00	0.00	10.34
Education	48,828	21.82	-	-	-	-	-	-	64.96	0.00	13.73	0.00
Micro	65,856	4.29	-	-	-	-	-	-	-	-	-	-
Small	59,288	18.41	-	-	-	-	-	-	-	-	-	-
Medium	558	40.08	-	-	-	-	-	-	-	-	-	-

Source: Computed using the 2021 MSME survey data

Table 16 Table: Preferred support - lowest and top most highly ranked support needed by MSMEs

	Financial subsidy	Cheap credit	Loan rescheduling	PPEs	COVID-19 prevention training	Rent waiver	Employment support – NSSF	Tax - PAYEE deferment	Staff movement permit
All	18.6	69.88	95.72	90.59	94.97	85.92	97.83	96.97	99.25
Manufacturing	22.13	71.15	93.42	97.73	99.05	86.04	99.93	99.13	98.92
Hospitality/Tourism	19.92	66.14	97.63	97.28	95.43	79.78	99.8	96.9	99.55
Education	15.07	74.85	93.9	77.49	92.47	94.95	93.97	96.1	98.94
Micro	16.3	71.6	98.08	95.63	96.49	80.09	99.96	98.32	99.86
Small	21.58	67.64	92.6	84.00	93.01	93.47	95.03	95.41	98.49
Medium	22.15	67.96	100	92.72	91.83	91.15	100	66.01	92.72

Source: Computed using the 2021 MSME survey data

4. EMERGING ISSUES, CONCLUSION AND RECOMMENDATION

4.1 Emerging issues and conclusion

The MSME sector is a central driving force behind economic participation, including employment creation for the youth and women. If well supported or developed, it provides the opportunity to foster gender equality, livelihood, and recovery of the economy.

The effect of COVID-19 on Ugandan MSMEs is enormous and at the end of the second lockdown, businesses had not yet regained their pre-COVID-19 status. The evidence shows that the MSMEs experienced permanent business closure due to COVID-19 and related restrictions. Almost 80% of the enterprises that were unavailable for the survey potentially closed business permanently. Direct and indirect COVID-19-related factors accounted for over 60% of a complete permanent business closure. In addition to permanent business closure, COVID-19 episodes are also characterized by intermittent business closure of complete and partial nature. The intermittent business closure rate in the first COVID-19 lockdown period was as high as 78%, composed of majorly complete business closure (at a rate of 67%) and partial business closure (at a rate of 11%). The major factors behind complete and partial business closure across COVID-19 episodes were government orders that restricted most business operations, reduction in sales and customers (decline in demand), hence inability to sustain business; and difficulty accessing inputs or supplies.

There was a reversal in the progress of business or economic activity recovery during the second COVID-19 lockdown. Half of the MSMEs that had complete business closure in the first COVID-19 lockdown fully recovered between July and December 2020. Their recovery rate increased to 58% between January and May 2021. Manufacturing and medium-sized enterprises had the fastest recovery, while the education sector had the least. Observed business recovery in the period after the first COVID-19 lockdown was faster among male compared to female owned enterprises.

The COVID-19 pandemic and its containment measures presented difficulty in accessing inputs across all COVID-19 episodes, and an increase in the cost of inputs (supplies) majorly explains the difficulty in input access. The worst affected enterprises were those in manufacturing and medium-sized enterprises since they are high consumers of raw materials. It is important to note that the rise in input cost was not accompanied by increased prices charged by the MSMEs due to low demand.

Regarding enterprise performance, there was a reduction in sales revenue for all enterprises in all sectors. However, the most brutal hits were enterprises in the hospitality (tourism) and education sectors and small and micro-level enterprises. Low business turnover characterized the entire COVID-19 episode, with the education sector emerging as the worst affected, especially in the second lockdown period. Business turnover and profitability of MSMEs were significantly weakened throughout the COVID-19 episodes. Overall, about 92% of the MSMEs encountered a reduction in profitability in the first lockdown period – the average reduction in profits was 71%, but higher for the education sector (81%). In the second lockdown, the MSMEs continued experiencing the reduced profitability level encountered in the previous periods (education still the worst hit), and a significant number encountered a further reduction in the profit level. The combined factors of increased inputs (supplies) price and constant or reduced prices charged by MSMEs inevitably lowered the MSME profitability level.

Insolvency was adversely affected due to disruptions in business operations, exacerbated by severely reduced sales revenue, cash flow and profitability - 66% of the enterprises experienced reduced ability to service existing loans. Reduction in ability to service loans was the highest among manufacturing enterprises. Female owned enterprises also encountered a higher level of insolvency. Overall, insolvency among MSMEs increased because of the pandemic and related restrictions.

The employment effects of COVID-19 and related restrictions were felt through the loss of jobs and wage cuts. Overall, jobs in the MSMEs under the study reduced from 1,026,000 to 601,000, representing a share of 41% or 425,000 jobs lost. The job loss associated with the first lockdown was 24%; the job loss between the first and second lockdown was 23%. The highest job loss was in the education sector, followed by hospitality and tourism. Job losses were more preventable among youth and female workers, suggesting a relatively higher vulnerability of female and young workers in the MSME job market. In addition, to employ lay-offs resulting in job losses, more than half of the enterprises pursued payroll reduction to ease their financial stress. Wage reduction was 61% on average in the first lockdown, which increased to 73% in the second lockdown. Most of the enterprises maintained the reduced salary level of the first lockdown in the COVID-19 episodes that ensued. The magnitude of wage cut was higher for female and youth employees.

In the manufacturing sector, enterprises' Capacity Utilization Rate (CUR) diminished. The overall CUR reduced to 32% in the first lockdown period from 68%. There was some improvement in the CUR in the second lockdown to 41%, albeit less than the pre-COVID-19 CUR.

Pertaining to enterprise (business) resilience, the overall resilience score (index) is below the threshold for robust business resilience. The MSMEs are associated with an average level of relatively weak resilience. The weakest resilience is observed in the hospitality (tourism) sector, followed by manufacturing. However, the resilience score for enterprises in each of the three sectors under the study is below the robust business resilience threshold. We observed the highest level of resilience among medium-sized enterprises, and the least was among micro-level enterprises. However, the resilience scores (index) for all (micro, small, and medium-sized enterprises) are below the threshold. Overall, the low level of business enterprise resilience is majorly explained by weak adaptive ability, weak ability to leverage knowledge and information; low ability to leverage external resources for business growth and development; weak planning and preparedness capability; and weak innovation and diversification capability.

Some MSMEs employed mechanisms to cope with the COVID-19 situation and changing business environment. However, the evidence suggests huge adaptability challenges among the MSMEs, which may be due to inadequate capacity such as skills and resources to harness technology to support working remotely or in digital mode – most of the enterprises (99%) could not implement working remotely. The most common coping strategies employed by the MSMEs for business continuity from the onset of COVID-19 include venturing into new product lines or services, payroll reduction, and obtaining raw materials or supplies on credit. Over three-quarters of the enterprises introduced safety measures for COVID-19 prevention for their workers on duty. However, not all enterprises complied with the government directive that required all workplaces to put in place SOPs as a safety measure for COVID-19 prevention. Compliance with safety measures costs the MSMEs about 8% of their business operating costs. The MSMEs that discontinued safety measures did so because the measures became costly and hence unsustainable; and perceived ineffectiveness in preventing COVID-19, as well as perceived unsafety. The enterprises that did not introduce any safety measures were non-compliant to COVID-19 SOPs mainly because of inadequate awareness about the measures; a low level of readiness to adopt and implement the measures due to a lack of skills or knowledge required to implement the measures.

Regarding support extended to MSMEs during the pandemic, the evidence suggests that there was a limited extent of outreach to the MSMEs through MSME support interventions, including government responses. No considerable gender differential was observed between female and male owned enterprises in regard to receipt of business support interventions. The needs presented by the MSMEs based on their preferred support suggest that during a shock-like COVID-19, the most vital issue to address in the MSME ecosystem is business survival.

4.2 Policy recommendations

The government should pay particular attention to the

cost of doing business in a time of a shock like the COVID-19 pandemic. This is crucial for controlling inputs' costs and ensuring minimal supply chain disruptions. Address key factors that determine the cost of doing business, including transport cost, removing barriers to supply chains, utility cost, and the cost of implementing COVID-19 SOPs within the MSME business environment.

Strengthen structures for better organization and coordination of MSMEs. Effective coordination structures are essential for mobilizing MSMEs to support their survival and recovery during and in post-COVID-19 periods. This can be done through streamlining existing MSME umbrella institutions or the directorate of MSMEs at the Ministry of Trade, Industries and Cooperatives to ensure effective coordination of MSMEs and mobilization for supporting survival and recovery. This can be complemented by instituting mechanisms to ensure the effectiveness of interventions that support the MSMEs, which requires a sound monitoring system to ensure that the interventions achieve the intended MSME outreach. This is crucial for ensuring that government responses (such as the stimulus package) are effectively delivered to the MSMEs. Additionally, reinforcing district commercial departments (offices) is crucial for strengthening coordination and support towards enterprises.

Consider gender-responsive social protection policy responses to support job and income security of women and youth, given the gender differential on impact regarding job losses and wage cuts. This can be achieved by instituting accessible childcare services to enable female employees to work, direct income and other forms of support for female and young workers, and exceptional support for women-led enterprises.

During severe economic shock or crisis, focus on support interventions that are critical for ensuring or supporting business survival. For example; address MSME employee mobility issues by supporting them through staff movement permits (issuing of movement permits can be extended to MSME employees, especially in sectors identified to be part of essential services or economic activities such as manufacturing); tackle MSME financial stress during the shock to promote business survival through interventions such as loan rescheduling and tax deferment, among others; interventions that curtail the level of MSME insolvency during a crisis should be emphasized. Rescheduling loans provides an important lesson for devising interventions to cushion MSMEs in times of shocks like the COVID-19 pandemic. However, the gap that needs to be addressed is an inadequate awareness by most MSMEs on the operations of loan rescheduling and how to harness such a window of opportunity when there is a crisis for business survival.

Sensitize the business community and impart basic skills required to implement safety measures for COVID-19 prevention in workplaces.

Efforts toward business resilience building are necessary for enterprises in all three sectors, regardless of the size. However, the micro and small enterprises and those in hospitality/tourism may require a higher level of effort and urgency due to their relatively weakest resilience. To build MSME resilience, put emphasis on enhancing adaptive ability by increasing MSME capacity to respond to changes by building capacity to harness technology for business survival and development, including enhancement of e-commerce readiness. Strengthening MSME's ability to leverage knowledge and information through investments in business information centres and awareness creation for business information necessary for business survival, growth, and development is also key. Other policy considerations include; increasing MSME's ability to leverage external resources for business growth and development; enhancing capability for planning and preparedness, including developing and scaling up innovative business insurance interventions tailored to MSMEs; and establishing or strengthening initiatives that promote business innovations and diversification capability among MSMEs. It is also important that Business Development Services (BDS) should incorporate business resilience building interventions in order to enable enterprises stay afloat even in periods of economic shocks. This should be accompanied by policy interventions that address MSME vulnerability by transforming MSMEs into large enterprises given that larger enterprises tend to be more resilient.

For the enterprises that closed operations, it is important to track the entrepreneurs and support them to resuscitate the businesses. Lastly, as the COVID-19 situation evolves from peak to a lesser level of severity of the pandemic, it is paramount to intensify interventions that target supporting MSME recovery processes and the growth and development of MSMEs to increase opportunities to foster gender equality, livelihood, and overall revival of the economy. This implies that in the medium term, including the post-COVID-19 era, policy interventions can shift the emphasis from short term interventions that support business survival to transformative responses that support recovery and growth and development of the enterprises.

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Appendix 1: Business resilience indicators

Indicator	Description
K1. Leadership & management capability	Ability to make critical decisions regarding how the business should be operated during challenging times? e.g., decisions to invest in resilience building, business branding/rebranding, human resource capacity building, changes in business operation including having an adequate supply of goods & a range of supply options, etc.
K2. Staff's core competence	Level of the core business competencies of your staff (e.g., regarding necessary skills for business success including great customer service & marketing; ability to make consistently high product quality)
K3. Market sensitivity	Ability to keep abreast with and adapt to market changes, e.g., up-to-date price information and other market condition trends (including supply & demand)
K4. Situational awareness: a	Level of strength/capacity regarding the internal business environment, e.g., business plans/policies, employee inter-personal relationship/human resource management, etc.
b	Knowledge of the external business environment, e.g., taxation, policy, technology, etc.
c	Level of knowledge regarding existing government support, e.g., COVID-19 response
K5. Planning & preparedness: a	Capacity/strength of your soft infrastructure to mitigate the adverse effect of shocks, i.e., business insurance
b	Strength of your business planning and preparedness to counteract any hazard (existence and effectiveness of preparedness plan to be implemented in case of hazards - e.g., disaster preparedness)
c	Ability/capacity to settle financial obligations (e.g. loan repayment) in difficult times or during shocks
K6. Network robustness: a	Extent of having effective network of physical capital, e.g., ownership of business premises and appropriate equipment
b	Extent of having effective network of social capital, e.g., active association membership and/or business community networks
K7. A. Adaptive ability	Extent of dynamic capacity to respond to changes, e.g., technology to enable relevant changes in the product line or business operation.
b. Readiness for	General extent of business readiness to engage in e-commerce
e-commerce: a	Level of capacity to use digital technologies in the enterprise
b	Extent of availability (ownership) of digital gadgets (computers, etc.)
c	Level of access to the internet for your enterprise operation
d	Ability to pay for internet costs
e	Staff's skills level to engage in digitalizing the business
f	
K8. Innovation and diversification: a	Extent / ability to create additional revenue sources
b	Ability to diversify your business portfolio/products
c	Business capacity to produce or deal in new and sophisticated products?
K9. Access to external resources	Extent of access to additional aids from third parties
K10. Ability to leverage knowledge and information	Awareness and ability to access available aids such as government funding?
K11 Compliance and regulations: a	Extent to operate the business according to rules and regulations, e.g., product and hygiene standards, Food & Drugs Act, etc.
b	Level of compliance to COVID-19 SOPs
K12. Reflective business model	Extent to which you conduct self-monitoring of performance for future decisions on business operation

Source: Author's compilation of resilience indicators based on Tibay et al., (2018) – with modification to suit COVID-19 context, e.g., including measures of ability to meet financial obligations during crisis, and compliance to COVID-19 SOPs/regulations.

Appendix 2: Intermittent business closure by gender

1st Lockdown			
	Partial	Complete	Didn't close
Male owned enterprises	8.9	64.6	26.5
Female owned enterprises	12.3	62.0	25.8
Jul-Dec 2020			
	Partial	Complete	Didn't close
Male owned enterprises	7.0	23.0	70.1
Female owned enterprises	4.2	32.6	63.1
Jan-May 2021			
	Partial	Complete	Didn't close
Male owned enterprises	5.8	17.7	76.5
Female owned enterprises	4.8	27.2	68.0
2nd Lockdown			
	Partial	Complete	Didn't close
Male owned enterprises	7.3	37.3	55.4
Female owned enterprises	6.4	35.7	57.9

Source: Author's computation using MSME survey data

Appendix 3: Recovery of firms that completely closed in the first lockdown, by gender

Jul-Dec 2020			
	Partial	Complete	Didn't close
Male owned enterprises	3.6	33.8	62.6
Female owned enterprises	3.6	48.7	47.7
Jan-May 2021			
	Partial	Complete	Didn't close
Male owned enterprises	2.4	26.6	70.9
Female owned enterprises	4.5	39.9	55.6
2nd Lockdown			
	Partial	Complete	Didn't close
Male owned enterprises	3.1	55.6	41.3
Female owned enterprises	5.3	51.8	42.9

Source: Author's computation using MSME survey data

Appendix 4: Ability to repay credit, by gender

	Increased	No change	Decreased
Male owned enterprises, %	19.4	20.3	60.6
Female owned enterprises, %	20.6	2.2	76.5

Source: Author's computation using MSME survey data.

Appendix 5: Priority sector issues for policy action targeting business resilience building

Sector	Resilience Domain	Specific actions/investment areas
Manufacturing	1. Adaptive ability	(a) Manufacturing technology for relevant changes in or diversification of product lines. (b) E-commerce investments - Capacity to use digital technologies (e.g., digital skills development) - Digital infrastructure (increase access to gadgets including computers, internet access)
	2. Knowledge & information	(a) Business information centers/initiatives (b) Awareness about public support interventions including stimulus package
	3. External resources	(a) Improve access to additional resources or aids from third parties including favourable credit rescheduling (b) Improved access to inputs, or supply chains
Hospitality	1. Knowledge & information	(a) As above
	2. Adaptive ability	(a) As above (b) Communication technology for hospitality – digital tourism marketing (c) Virtual Reality for tourism development (d) Food packaging
	3. External resources	(a) As above
Education	1. Adaptive ability	(a) Education technology for e-learning, investments for equitable access (b) Learning solutions for educators (d) Strengthen digital skills – for both learners and teachers
	2. Planning & preparedness	(a) Soft infrastructure to mitigate shocks e.g. MSME tailored business insurance (b) Business disaster risk reduction strategies (c) Strengthen business saving culture – build capacity of entrepreneurs or businesses to save (d) Strengthen ability to repay credit – e.g., rescheduling
	3. Innovation & diversification	(a) Creation of additional revenue sources and technology development for improved product lines

Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4, Fax: +256-414-541022
Email: eprc@eprcug.org, Web:www.eprcug.org