

Impact of corona virus disease on employment among Small and Medium Enterprises in Zambia

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ABSTRACT

This study examined the impact of the COVID-19 pandemic on employment among Small and Medium Enterprises (SMEs) in Zambia. Data for the study were obtained from three rounds of the World Bank Enterprise Surveys (WBES) conducted between September 2019 and February 2021, supplemented by Key Informant Interviews (KIIs) with relevant business associations. The sample consisted of 601 non-agricultural private economy firms, with descriptive and inferential analyses conducted using Stata 15.0 and Microsoft Excel. The findings reveal that about 3.4% and 5% of the firms closed in the first and second waves, respectively. Notably, a higher percentage of the closed firms were small and had female top managers. Regression Adjustment analysis further demonstrates that the pandemic led to a substantial reduction in jobs among SMEs, with an average decrease of 29% in the first wave and 20% in the second wave. Female-owned firms faced a more significant impact on employment compared to male-owned firms. The study highlights the urgency for targeted policies that address firm mortality, support female entrepreneurs, and mitigate unemployment challenges in the SME sector. By implementing gender-inclusive support programs, facilitating access to credit and digital transformation, and promoting business resilience, Zambia can nurture a more robust and equitable SME sector, contributing to job creation in the post-pandemic era.

Keywords: Small and Medium Enterprises, employment, gender, COVID-19, Zambia

INTRODUCTION

The novel human Corona Virus Disease of 2019 (COVID-19) has affected all the

has not been spared as the pandemic has affected every sector of her economy. Ever since the first case was confirmed on 15th March 2020, the infections continued rising

steadily in some periods and exponentially in other periods. To help curb the Covid- 19 infections and in response to the WHO guidelines, the Government of the Republic of Zambia (GRZ) through the Ministry of Health has used various measures such as working on a rotational basis, banning non-essential travels, and adherence to social distancing. Other measures implemented include the following restriction of public gathering to at least 50 people, limiting normal operations of restaurants, closure of all bars, night clubs, cinemas, gyms, casinos, and closure of all but one international airport.

As a result of the containment measures and COVID-19 morbidity and mortality, all the sectors of the economy were affected disrupting value chains and resulting in loss of sales, revenue and subsequently jobs. The impact of COVID – 19 on employment has generally been through its effect on firms – affecting both the supply and demand sides. The supply side is affected through reduced labour supply as a result of lockdowns and illness, disruption in supply chains and shrinking investment. On the other hand, because the demand for labour is derived from the demand for goods and services, a fall in domestic and foreign demand for goods and services reduced the need for firms to produce more goods and services leading to reduced demand for labour. Although the pandemic has negatively affected almost all businesses, businesses operating in the small and medium (SME) category seem to have borne the greater burden of the COVID-19 impact compared to large firms due to various challenges they face. In most developing countries like Zambia, SMEs form the majority of the enterprises and have a higher proportion of employees relative to large firms. Notwithstanding that Covid – 19 has created vulnerabilities for SMEs, it has presented opportunities for some too (Eggers, 2020) particularly because they are quick to adapt and innovate.

In Zambia, SMEs constitute the majority of businesses and play an important role in employment creation and economic growth (Zambia Business Survey, 2020; United Nations Development Programme-UNDP, 2020). Despite their importance, they are usually more vulnerable to shocks than large firms due to the unique challenges they face. This study focuses on the impact of COVID-19 on employment among SMEs in Zambia. The specific objectives of the study were to:

1. Establish the strategies being put in place by SMEs to mitigate the impacts of COVID-19.
2. Determine the effect of COVID-19 on employment among SMEs in Zambia.
3. Assess the differentials in the impact of COVID-19 on the performance of SMEs by sex of manager.

LITERATURE

Generally, COVID-19 has affected the labour markets severely in almost every country. According to the International Labour Organisation (ILO), 8.8% of global working hours were lost in 2020 corresponding to 255 million full-time jobs (calculated at 48 hours a week) (ILO, 2021a). In 2020 alone ILO (2021a) reported 114 million job losses relative to 2019 and these job losses were higher among women and young workers compared to men and older workers, respectively. The employment losses were generally a result of inactivity, rather than unemployment.

According to Strauss, Isaacs and Rosenberg, (2021) Webster, 50% of the Southern African Development Community (SADC) countries had employment losses of over 25% of all employment and the losses were more prevalent among female workers. Moreover, it is worth noting that the pandemic has gender-differentiated impacts – with women being affected much more because they are generally unskilled (Chitiga et al. 2021), operate in the hardest-hit sectors as accommodation and food as well as retail and wholesale (Chitiga et al. 2021; International Trade Center - ITC, 2020; Common Market for Eastern and Southern Africa - COMESA, 2020; GRZ 2020; UNDP and Consumer Unit and Trust Society - CUTS, 2020) and the informal sector (COMESA, 2020). Women also tend to play double roles in the market and caregiving (Schotte, 2021; Carranza, 2020) the COVID – 19 pandemic increased their burden.

SMEs are important as they provide employment for many in both developed and developing countries alike. SMEs also contribute to economic growth, employment, poverty reduction, backward and forward linkages in industries among others (Mulenga, 2016). The COVID-19 pandemic has negatively affected the important roles the SMEs play hence affecting their contribution to economic growth and employment. As a

result of lockdowns, quarantines and low demand for goods and services most SMEs have resorted to downsizing their workforce (Beglaryana and Shakhmuradyanb, 2020; Amah, et al. 2020).

A study by Amah, et al. (2020) on the firm-level impact of COVID-19 across the world contends that the pandemic has imposed multiple shocks on firms which have had severe and widespread negative results on sales and other aspects of business activity. Similarly, exports among SMEs dropped as a result of COVID-19 (Chabossou, et al. 2021). Many other studies done at the national and cross-country level have reported the initial negative impacts of COVID-19 on business activity (COMESA, 2020; Catalyst for Growth, 2020; Shen, et al. 2020; GRZ 2020). However, COVID-19 has also presented various opportunities for firms to innovate, develop new strategies and products. Due to COVID-19, businesses offering information technology services experienced growth in demand for services (COMESA, 2020; Nocola et al. 2020).

As a way of adjusting to the pandemic, studies (Amah, et al 2020; Parisotto and Elsheikhi 2020) observed that firms and businesses are changing the way production and distribution are being done with more use of remote working, e-commerce, investing in technologies, changing supply chains among others. Similar strategies were observed in a study undertaken in Zambia by MCTI (GRZ, 2020). These adjustment strategies also pose challenges on jobs as there is a shift away from labour-intensive activities. The growing closures of labour-intensive SMEs worsen the situation.

Globally, governments around the world have implemented more than 1,600 policy

initiatives in response to the COVID-19 pandemic to support SMEs (Xavier et al. 2021). The study posits that there are, however, mismatches in the policy misdirection as well as ineffectiveness of some policy initiatives. Various studies have recommended various policy initiatives. Most studies recommend a multipronged approach (Apedo-Amah, et al. 2020, Razumovskaia et al. 2021; Juergensen, Guimón and Narula, 2020; Pedauga, Sáez & Delgado-Márquez. 2021) due to the fact that the effects have been heterogeneous.

Conceptual framework

The conceptual framework is based on the empirical literature reviewed. It demonstrates the chain of transmission from COVID-19 to production, adaptation, sales, and unemployment (Figure 1). The chain starts with the outbreak of COVID-19. To contain the spread of the virus, public health measures and lockdowns are implemented in response to the outbreak. Production is disrupted by such things as lockdowns, supply chain disruptions, labor shortages, and health concerns among workers contribute to reduced production output. This leads to reduced production and sales. The decline in production and sales can lead to financial challenges for businesses. Consequently, to cut costs and maintain financial viability, businesses may resort to measures like layoffs, furloughs, reduced working hours, or freezing hiring. Furthermore, to cope with the impact on production, businesses implement adaptation measures including remote work arrangements, reconfiguring production processes to maintain physical distancing, and finding alternative suppliers for disrupted raw materials, among others. This also may result in job creation or losses.

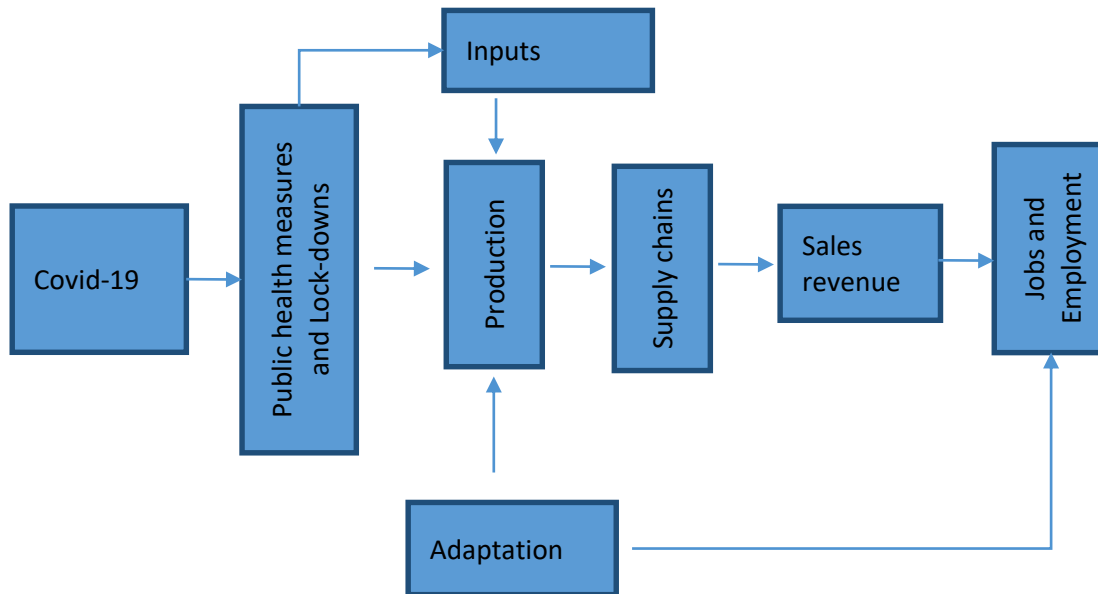


Figure 1: Conceptual framework of the employment effect of Covid-19

MATERIALS AND METHODS

The study used secondary longitudinal data from three World Bank Enterprise Surveys (WBES) supplemented by information collected through Key Informant Interviews (KIIs). Longitudinal data was constructed from three surveys of the WBES the initial one was conducted between September 2019 and March 2020, while the first follow-up survey was conducted in June and July 2020 and the second follow-up survey was conducted between December 2020 and February 2021. The whole population or the universe, covered in the standard ES is the non-agricultural private economy. The ES universe is targeted at non-agricultural, non-extractive, formal, private sector firms with 5 employees or more. However, some firms with 1 to 4 employees were also interviewed. The sample frame used for the survey was based on the 2010 Zambia Establishment Census, collected and maintained by Zambia Statistical Office. The sampling design used in the survey was a two-stage stratified cluster sample design. Three levels of stratification were used for this survey: economic activity, establishment size, and region. Based on this procedure, a nationally representative sample of 601 firms was obtained.

Under the baseline survey data was collected using a standardized questionnaire (Manufacturing Questionnaire and the Services Questionnaire) administered to all firms yielded 601 respondents. The follow-up

surveys re-interviewed the same 601 firms covered in the baseline. The first follow-up survey was conducted in June and July 2020 and had a 96.1% response rate. The second follow-up survey was conducted between December 2020 and February 2021 and had a 95.1% response rate. Under the follow-up surveys, data were collected via telephone interviews using a modified questionnaire.

The study further conducted key informants interview six (6) key informants. These were selected purposively and generally constituted Chambers of Commerce and Business Associations such as the Zambia Association of Manufacturers, Tourism Associations, Zambia Development Agency, Chambers of Commerce, Zambia Chamber of Small and Medium Business Associations.

Data analysis

Stata 15.0 statistical software and Microsoft Excel were used to analyse quantitative data. Data obtained from KIIs were analysed through assigning themes with a particular focus on specific objectives of this study. The World Bank Enterprise Survey data were analysed using descriptive and inferential analyses. Descriptive statistics helped to summarize and describe the main features of a dataset. The descriptive analysis was used to identify and summarize the various strategies implemented by SMEs to mitigate the impacts of COVID-19 based on the first objective. To determine the effect of COVID-19 on employment among SMEs in Zambia,

Regression Adjustment (RA) with Robust Standard Errors was used. This analysis allows researchers to control for confounding variables (StataCorp. 2013) and isolate the specific impact of the pandemic on job reductions among SMEs. Under RA, the Average Treatment Effect on the Treated (ATET estimation provided a specific measure of the average treatment effect of COVID-19 on employment among the treated group (SMEs that experienced the pandemic). It quantified the likelihood of job reduction among SMEs that existed during the COVID-19 period. Similarly, the Potential Outcome Means (POMs) and Average Treatment Effects (ATEs) were used to measure the overall impact of COVID-19 on employment among all SMEs in Zambia, including those that were not directly exposed to the pandemic. Both the RA and descriptive statistics were used to assess the differentials in the impact of COVID-19 on the performance of SMEs by the sex of the manager.

Data analysis was based on firms with 1 to 99 employees. It should be noted that missing observations were removed from the RA. The WBES suffers from both survey non-responses – refusal to participate, and item non-response – refusal to answer certain questions. Due to item no-response on some variables of interest we excluded some observations from the dataset when undertaking Regression Adjustment analysis.

FINDINGS

Considering that two data sources were used, the findings are divided into two: Quantitative and qualitative.

Quantitative results for the impact of COVID-19 on SMEs

Characteristics of firms and respondents

Table 1 below presents the characteristics of the sampled firms and respondents. Results show that most of the firms surveyed (85%) had males as a top manager. In addition,

about 41.60% of the firms surveyed were categorized as medium and 38.44% of firms were categorized as small. The Table also shows that very few (12.81%) of the Zambian firms are exporters of goods.

Table 1: Characteristics of the sampled firms and respondents – 2019 World Bank Enterprise Survey

Variable	Sample	Percentage
Sex of Manager		
Male	512	85.19
Female	88	14.64
Firm Size		
Small	231	38.44
Medium	250	41.60
Large	120	19.97
Exported		
Yes	77	12.81
No	524	87.19

Firm mortality

Figure 2 presents the percentage of firms confirmed permanently closed since the Covid-19 pandemic was declared in Zambia disaggregated by firm size. The figure shows that generally, about 3.4% of the firms were closed in the first wave. About 4.6% of small businesses closed in the first wave compared to only 0.34% of large firms.. In the second wave, about 5% of the firms exited. About 6.2% of small businesses closed in the second wave compared to only 0.70% of large firms. In both waves, higher percentage of the closed firms had female top managers compared to those managed by males. This points to the fact that female managed businesses are more prone to external shocks than those managed by males. Female managed businesses face greater impediments related to access to finance and other resources which may impact their ability to adapt to the pandemic's economic challenges.

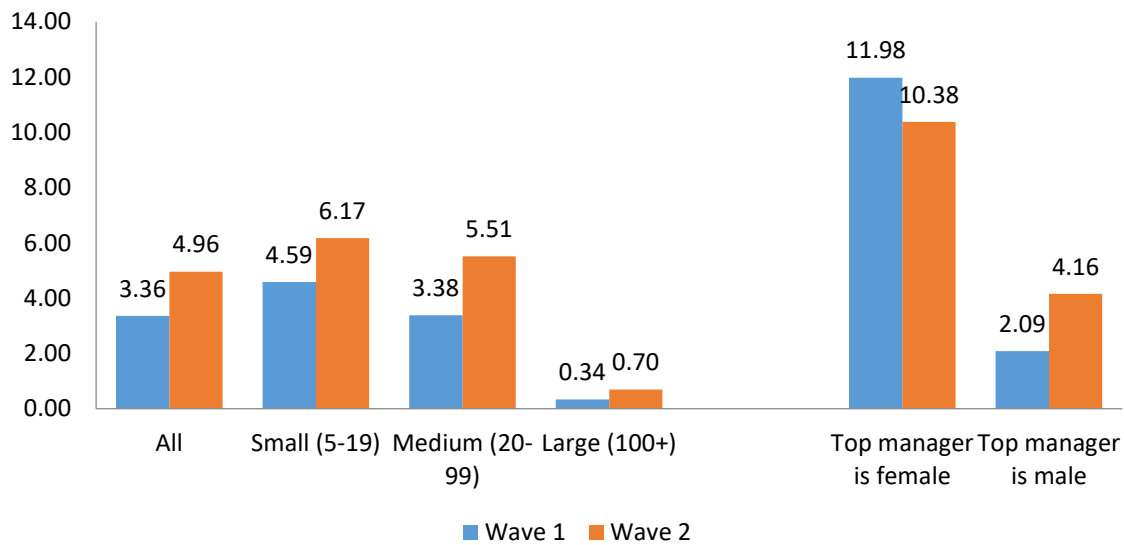


Figure 2: Percentage of firms that confirmed permanent closure since the declaration of the COVID-19 pandemic in Zambia disaggregated by size and gender of top manager

Adaptation: Changes in business activity

As a result of COVID-19, firms adopted various coping strategies in response. The number of firms reporting increased online, product or services conversion and delivery of goods or services increased from the first wave to the second wave. Table 2 shows that fewer (22.5% and 30.74%) small-sized firms adjusted to online business activities compared to 40% and 52.21% of medium-sized firms in the first wave and second wave, respectively. Similarly, 47.37% of small firms adjusted or converted their production or services in the first wave compare to 61.93% of medium-sized firms. Further, a greater proportion of firms (40.6%) with female top managers started engaging in online business activities compared to only 30.5% of the firms with male top managers in the first wave. However, in the second wave, about 45% of firms with male managers started or increased

online activities compared to about 42% of the female managed firms. A higher percentage of firms with top male top managers reported adjusting or converting their production or services under both waves, relative to firms with female top managers.

The COVID-19 pandemic triggered significant changes in business operations, with firms adopting various coping strategies to survive and thrive during challenging times. As a result of the restrictions, businesses adopted online business activities, adjusted production and delivery of goods and services. The effectiveness of these adaptations is influenced by factors like firm size, access to resources, industry characteristics, and leadership styles, among others. In this regard, medium-sized firms might have had more resources, infrastructure, and capabilities to pivot to online operations quickly compared to small firms.

Table 2. Per cent of firms that changed business activity

	WAVE 1						WAVE 2					
	% of firms that started or increased online business activity		% of firms adjusting or converting their production or services		Started or increased delivery of goods, services (%)		% of firms that started or increased online business activity		% of firms adjusting or converting their production or services		Started or increased delivery of goods, services (%)	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
All	31.57	532	59.34	531	34.51	533	44.37	524	75.51	491	43.18	524

Small (5-19)	22.55	263	47.39	263	30.85	264	30.74	254	68.5	247	40.05	255
Medium (20-99)	39.95	181	61.93	180	38.15	181	55.21	176	76.99	162	44.28	176
Large (100+)	34.58	88	82.19	88	35.21	88	51.19	94	88.26	82	47.75	93
Top manager is female	40.63	75	42.85	75	37.05	76	41.86	76	65.91	67	36.83	75
Top manager is male	30.52	456	61.26	455	34.23	456	44.69	448	76.65	424	43.99	449

Adaptation: Changes in the workforce

Figures 3a, 3b and Table 3 present the changes in the workforce. From Figure 3a; it can be observed that on average the permanent full-time workers reduced by 15.42% in wave one and by 19.27% in wave two relative to the baseline (December 2019). Medium-sized firms experienced a higher percentage reduction in the workforce compared with small firms while large firms shed off the lowest proportion of employees in both the first and second waves.

Figure 3b further shows a negligible increase in the number of employees under wave one across all firms. However, in the second wave, small and medium enterprises increased the number of employees by almost the same proportions.

Table 3 presents the percentage of firms that decreased permanent full-time and temporary workers and the proportion of female workers among the total number of workers laid off since the onset of COVID -19. Generally, it can be observed that the percentage of firms that reduced the total number of permanent workers since December 2019 increased from wave one (25.65%) to wave two(46.53%). Higher reductions of permanent workers were observed among medium-sized firms (47.9%)

and firms with female top managers (54%). Firms that ever reduced the total number of temporary workers since December 2019 also increased from wave one (43.82%) to wave two (64.19%). Among the workers laid off, the proportion of female workers was 22.36% in wave one and 24.55% in wave two.

As highlighted above, a higher proportion of medium firms and female managed firms increased their online businesses activities as well as converting their production. These firms reduced their workforce by a greater percentage as a consequence and various factors can be attributed to this phenomenon such as automation and remote work arrangements, among others. Temporary workers also experienced reductions, with more firms opting for flexible labor arrangements during the pandemic. It has also been observed that during wave one, there was a slight increase in the number of employees across all firms, but in wave two, small and medium-sized enterprises increased their workforce by similar proportions, indicating a gradual recovery in the later stages of the pandemic.

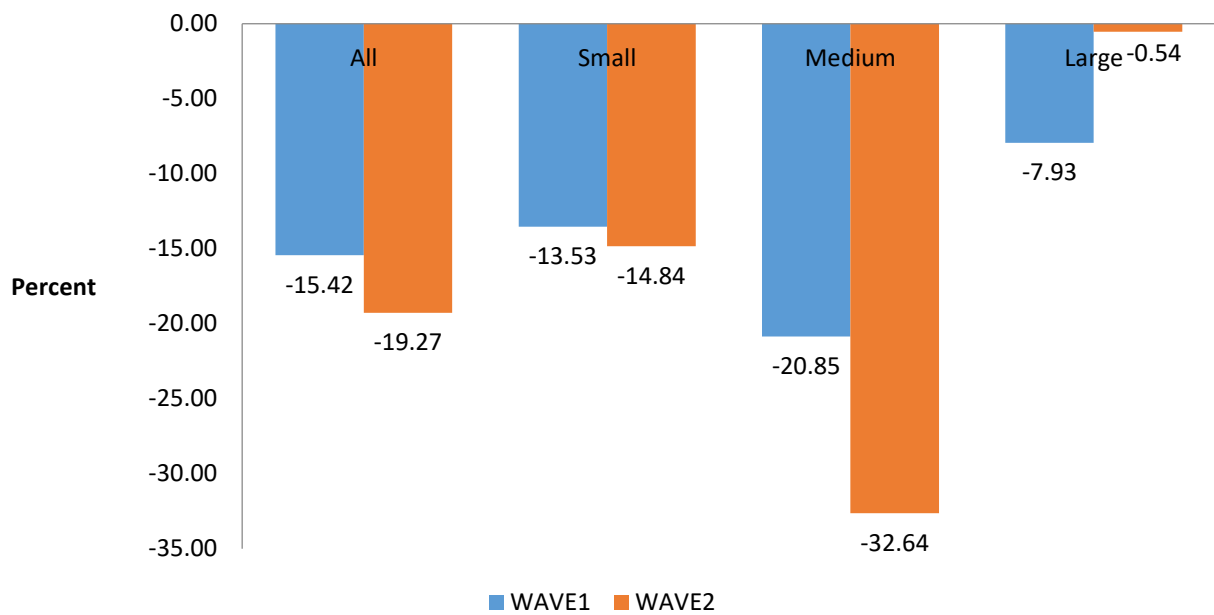


Figure 3a: Percentage change of permanent full-time workers since December 2019

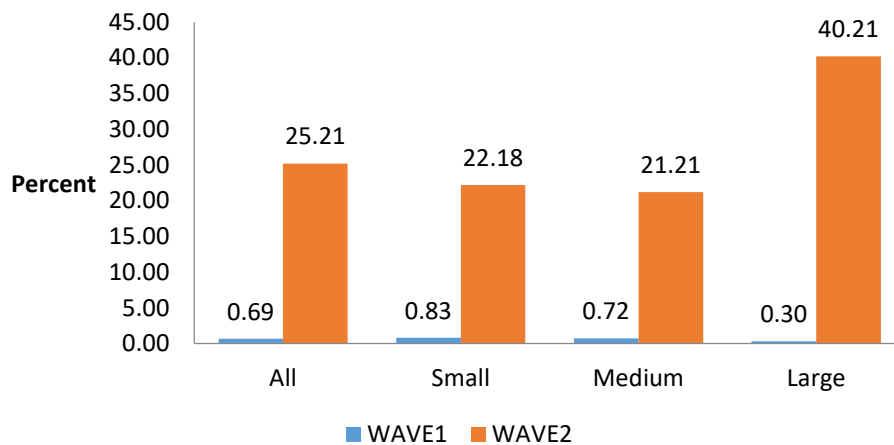


Figure 3b: Percentage of firms that increased the total number of permanent workers since Dec 2019

Table 3: Percentage of firms that decreased permanent full-time and temporary workers and the proportion of female decreased workers since the onset of COVID -19

Subcut	% of firms that decreased total number of permanent workers since Dec 2019	WAVE 1		WAVE 2		
		% of firms that ever decreased tot number of temp workers since COVID-19 began	If workforce decreased, prop fem workers among the workers laid off, round-1	% of firms that decreased total number of permanent workers since Dec 2019	% of firms that ever decreased tot number of temp workers since COVID-19 began	If workforce decreased, prop fem wrkrs among the wrkrs laid off since round 1

	Mea n	N	Mea n	N	Mea n	N	Mea n	N	Mea n	N	Mea n	N
All	25.6	50	43.8	52	22.3	13	47.9	50	64.1	52	24.5	131
Small (5-19)	20.1	24	39.5	26	18.1	8	47.7	24	58.6	25	22.7	60
Medium (20-99)	35.0	17	47.9	17	25.3	2	52.8	16	66.4	17	28.8	51
Large (100+)	17.7	8	44.6	5	21.8	2	38.1	1	71.7	4	16.4	20
Kitwe	22.8	6	27.6	2	17.0	5	68.2	8	44.1	3	14.9	11
Livingstone	47.8	7	60.7	7	32.4	6	69.6	9	73.4	5	21.1	33
Lusaka	25.0	6	47.7	26	22.4	6	43.6	27	69.5	27	26.1	77
Ndola	29.6	8	33.3	7	23.1	3	46.5	2	48.9	5	5.06	10
Top manager is female	17.4	7	54.0	2	54.1	5	49.3	6	71.3	4	16.4	28
Top manager is male	26.6	2	42.6	44	19.7	10	47.8	43	63.2	44	25.9	103

Impact of COVID-19 on Employment

Regression Adjustment results on the impact of COVID-19 on employment are presented below under Table 4a and Table 4b. Table 4a presents the Average Treatment Effect (ATET) results. The results show that in the first wave jobs under SMEs were reduced by an average of 29% while in the second wave the reduction was 20% lower than the average of 18.76 employees that would have existed if the SMEs had not been exposed to COVID-19.

Table 4b shows linear regression coefficients for the untreated (OME0) and treated potential-outcome (OME1) and (OME2) equations. Under both the untreated (OME0) and treated potential-outcome (OME1 and OME2) equations, the results indicate that employment was lower among firms with 100% local ownership compared to firms with more than 50% foreign ownership. Across the three waves, employment was lowest pre-Covid-19 period. The results also indicate that female-owned firms had a lower percentage of

employment compared to male-owned firms under all three surveys with Wave 2 having the lowest percentage followed by Wave 1. The table also shows that the number of jobs increased with firms age across the three waves. It was observed that the percentage of employment was lower among firms located in Livingstone relative to Kitwe under all three panels on Table 4b. The percentage was lowest under Wave 2. Results further indicate that firms in the manufacturing and retail sectors had lower employment compared to those in the food sector under the baseline and the first wave. Firms that had a website had a higher percentage of jobs than those without a website across all waves. Firms that had a line of credit with financial institutions showed higher levels of employment compared to those that did not have any line of credit with financial institutions.

Table 4a: Regression Adjustment results for the impact of COVID-19 on employment

Employment	Coefficients	Confidence Interval	
Average Treatment Effect on the Treated			
COVID-19 Wave 1 Vs Pre COVID19	-0.29**	-0.31	-0.08
COVID-19 Wave 2 Vs Pre COVID19	-0.20***	-0.41	-0.17
Potential Outcome Means			
Pre COVID 19	18.76***	17.12	20.40
COVID 19 – Wave 1	15.73***	14.11	17.34
COVID 19 – Wave 2	15.08***	13.53	16.63

Table 4b: Regression Adjustment results for the impact of COVID-19 on employment

VARIABLE	Pre-COVID (OME0)		WAVE 1(OME1)		WAVE 1(OME2)	
	Coefficient	C.I.	Coefficient	C.I.	Coefficient	C.I.
Ownership						
More than 50% Foreign		-0.72 - -		-0.67 - -		-0.67 -
100% Local	-0.52***	0.32	-0.41***	0.16	-0.45***	-0.22
Less than 50% Foreign	0.06	-0.36 -		-1.02 -		-0.57 -
		0.49	-0.21	0.61	0.09	0.74
Sex of Manager						
Male		-0.32 -		-0.40 -		-0.47 -
Female	-0.15*	0.02	-0.19*	0.02	-0.24**	-0.02
		-0.01 -		-0.02 -		-0.02 -
Manager Experience						
Manager Experience	0.01	0.03	0.00	0.03	-0.00	0.02
		-0.00 -		-0.00 -		-0.00 -
Manager Experience^2	-0.00*	0.00	-0.00	0.00	0.00	0.00
		0.02 -		0.02 -		0.07 -
Natural log of firm age						
	0.12**	0.21	0.11**	0.21	0.16***	0.25
Region						
Kitwe		-0.48 -		-0.74 - -		-0.79 -
Livingstone	-0.23*	0.01	-0.44***	0.14	-0.50***	-0.21
		-0.45 - -		-0.34 -		-0.39 -
Lusaka	-0.23**	0.00	-0.06	0.22	-0.12	0.15
		-0.26 -		-0.39 -		-0.19 -
Ndola	0.01	0.28	-0.03	0.33	0.12	0.42
Industry						
Food		-0.81 - -		-0.89 - -		-0.39 -
Other Manufacturing	-0.50***	0.19	-0.51***	0.13	-0.05	0.29
		-0.95 - -		-0.95 - -		-0.57 -
Retail	-0.66***	0.37	-0.60***	0.25	-0.22	0.13
Wholesale of Agric		-0.55 -		-0.86 -		-0.39 -
Inputs & Equipment	-0.14	0.26	-0.38	0.10	0.05	0.49
		-0.56 -		-0.70 -		-0.37 -
Other Service	-0.27*	0.02	-0.33*	0.03	-0.04	0.30
		-0.62 -		-0.61 -		-0.39 -
Unknown	-0.30*	0.03	-0.22	0.17	-0.01	0.37
Exporter						
No		-0.07 -		-0.36 -		-0.32 -
Yes	0.24	0.56	0.14	0.63	0.01	0.34

Has Website						
No						
Yes	0.44***	0.28 - 0.60	0.40***	0.21 - 0.59	0.40***	0.22 - 0.58
Has A Line of Credit or Loan						
No						
Yes	0.24**	0.00 - 0.48	0.17	-0.15 - 0.49	0.39***	0.11 - 0.67
Constant	2.82***	2.37 - 3.27	2.53***	1.95 - 3.11	2.25***	1.75 - 2.75

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, *

p<0.1

Qualitative results for the impact of COVID-19 on SMEs

Qualitative analysis results are based on data obtained from six (6) KII respondents that were codified into six (6) themes as presented below:

Impact on business activity: closures, sales/revenue and export

The study findings on the impact of COVID 19 on SMEs show that most of the SMEs were negatively impacted by the COVID-19 pandemic. The findings revealed that, although not all the SMEs experienced challenges during COVID 19 partial lockdown, most of the SMEs indicated some negative effects in their day-to-day running of businesses. Most Key Informants explained that COVID 19 had reduced the monthly revenue of the majority of the SMEs by about 50%. In comparison with large firms, the impact on SMEs was higher. As remarked by one of the respondents *“These categories of firms survive on spot cash basis”*. Although most SMEs experienced a fall in business activities, some key informants confirmed that SMEs that were involved in making face-masks and hand sanitisers experienced growth in sales.

Sectorial and size effects

Some of the sectors that were affected by COVID-19 were education (especially private institutions), transport, hospitality and the entire tourism sector generally. The findings further indicate that the hospitality industry was also negatively affected by the pandemic. Respondents explained that small restaurants and liquor shops were worst affected because people were not going out to eat and drink anymore. One KII highlighted that *“all businesses have been impacted in one way or the other especially those that require face to face trading and restaurants.*

Another effect is when employees get Covid-19”.

Challenges and adaptation strategies

Results from the KIIs also revealed that SMEs experienced some challenges in their operations during COVID-19 partial lockdown. Among the major challenges noted were; disruptions in the supply chain, cost of operation due to inflation, restricted number of customers, high cost of inputs, reduced profit margins, failing or delaying or reducing salaries, shedding off the workforce, failure by customers to adhere to health guidelines, failing to pay rent, and lack of financial relief. Considering the challenges firms were exposed to as a result of COVID-19, businesses employed various survival strategies which included shedding off of employees and or adjustment of workers' conditions of service. In addition, SMEs started undertaking business activities online. As highlighted by a Key Informant:

“Business owners have reacted differently, some have allowed the workers to go and work elsewhere, others have laid off their workers. Businesses that have savings are still paying their workers as they know they need money to survive, while others have closed their doors until things look up”

To help SMEs adjust, the respondents suggested that government should reduce taxes, provide soft loans and remove some levies. These measures, it was assumed, would reduce the operational costs of SMEs and in turn grow their businesses and become resilient to business shocks. Other measures suggested include the introduction of penalty waivers, strengthening of linkages between the industry and the processing sector, and IT support services.

DISCUSSION OF FINDINGS

The overarching aim of this study was to establish the impact of COVID-19 on employment among SMEs in Zambia. Specifically, the study wanted to establish the impact of COVID-19 on employment, and the gendered impact of COVID-19 on SMEs.

Based on the descriptive analyses and qualitative analysis, the study has established that the majority of the businesses were negatively affected by the pandemic. A few of them closed down their businesses under the two waves. Small businesses and those with female managers accounted for the majority of those that closed. In addition, most businesses experienced a fall in sales with small firms experiencing a higher reduction. As a result of reduced demand for goods and services and reduction in the number of hours worked per week, production and revenue reduced while underemployment of the workforce increased. The observations are in tandem with those obtained by other recent studies in Zambia and the COMESA region in 2020. According to GRZ (2020) firms in Zambia experienced closures and reduced sales. While a few firms closed permanently, most of them closed for a temporal period. A study by COMESA reported that several firms scaled down or closed subsequently leading to unemployment or underemployment (COMESA, 2020). Small businesses relying on subcontracting (B2B) and long-term agreements were more resilient during economic difficulties. Engidaw (2022) argued that numerous small and large businesses worldwide are facing significant challenges due to the COVID-19 crisis including reduced revenue, job losses, slow business activity, and weak marketing performance make it difficult to survive and maintain stability. However, Harel (2021) found that COVID-19's widespread impact, most small businesses in the industrial sector were not significantly affected financially, and they did not change their business activities or innovation practices.

From the descriptive analysis, it has been established that firms with female managers accounted for the majority of those that closed and reduced their temporary workers under both waves. A study by IFC (2020) found that female-owned businesses were more likely to close than male-owned businesses and this was attributed to the fact that female-owned firms are more concentrated in the hardest-hit sectors (services, hospitality, and the retail

trade). Another study by IFC (2021), established that the COVID-19 pandemic has severely affected over 90% of MSMEs in sub-Saharan Africa, with women-led MSMEs being hit hardest. Women-led MSMEs faced lower financial inclusion rates before the pandemic, which worsened during the crisis, as fewer of them accessed financial support compared to male-led MSMEs (IFC, 2021). The gender-differentiated pandemic impact has also been noted in the 2020 report by the International Trade Centre (International Trade Centre 2020). Furthermore, Liu, Wei and Xu (2021) established that women-led businesses experience more likely to close and experience longer shutdowns. This is because, women face various challenges which are perpetuated by gender inequalities. Women-led firms face loan access challenges and are more likely to reduce female employees. A study by Torres, et al. (2023) across 49 countries contends that women-led micro-businesses, especially in the hospitality sector and heavily impacted countries, were disproportionately affected by the COVID-19 shock compared to businesses led by men. While they increased digital platform usage, they were less likely to invest in digital solutions. Additionally, women-led businesses received less public support despite facing greater challenges.

The descriptive statistics further show that small enterprises had a higher percentage reduction in employment compared to medium enterprises before and after the COVID-19 pandemic. These results are consistent with a study by Chacha, Kirui and Wiedemann (2021) who found that small firms on average experienced a decline in their workforce as early as March 2020 in Kenya. Small enterprises are the majority in Zambia and face various challenges such as inadequate access to finance, hard and soft infrastructure among others. These constraints make them vulnerable to shocks and limit their ability to quickly adjust to opportunities. Hence, they are likely to shed off workers more quickly to minimise costs and recover slowly. A study by Bartik, et al., (2020) indicates that small firms had little cash on hand toward the beginning of the pandemic, implying that they had to cut expenses, go into borrowing or declare bankruptcy. In Uganda, Lakuma and Sunday (2020) observed that micro and small firms had larger declines in businesses activity relative to medium and large firms because most of them found COVID-19 preventive

measures costly to implement and hence had to suspend business activity.

Results from both quantitative and qualitative analyses point to the fact that the pandemic caused a reduction in the workforce as businesses had to shed off their workforce to minimise costs. According to the Regression Adjustment results, there was a notable reduction in the number of employees among SMEs resulting from the COVID-19 shock. Considering that demand for labour is derived from the demand for goods and services, SMEs used the shedding-off of employees and as a survival strategy. Various studies (GRZ 2020, et al. 2020; Beglaryana and Shakhmuradyanb, 2020; International Trade Centre 2020) found that COVID-19 caused SMEs to downsize their workforce due to reduced demand for their goods and services among other things. Besides reducing the workforce, measures such as rotations, temporal business closure and working from home led to underemployment of employment.

The Regression Adjustment results also show that firms operating in Livingstone had a lower percentage of jobs compared to those in Kitwe. An increase in percentage magnitude in wave 1 and wave 2 for Livingstone signify that the pandemic caused a reduction among firms in the region. A higher fall in jobs was observed in Livingstone because the city, being a Tourist Capital, is generally dominated by firms operating in the hospitality industry – such as accommodation, food and bars, tour and travel agencies, transportation services and cultural attractions sites. This is the sector that had been hit the most by the pandemic as it experienced total closure in the initial phase of the pandemic, explaining the large drop in employment in the city (International Trade Centre 2020, COMESA 2020; ILO 2020a). As noted by Ahebwa and English (2021), the reduction in demand for tourism has resulted from the loss of jobs or decline in incomes or savings from potential tourists. The study further established that SMEs with female managers had a lower percentage of employees compared to those managed by males across the three surveys. The differential widened in Wave 1 and further widened in Wave 2 implying that SMEs with female managers were impacted more by the pandemic. Various studies have made similar observations (Chitiga et al.

2021; ITC, 2020; COMESA, 2020; GRZ 2020; UNDP and CUTS, 2020).

Concerning the effect of the type of industry on employment, the study has observed that the manufacturing and retail sectors had higher job losses compared to the food industry. These results can be attributed to the fact that these two sectors were generally impacted negatively through disruptions in value chains – access to raw material and markets (Cai and Luo. 2020). According to a study by COMESA (2020) manufacturing sector in the COMESA region faced difficulties related to sourcing of key inputs, maintaining pre-COVID-19 productivity levels, and meeting their near-term financial obligations which led to closures of these entities giving rise to unemployment and underemployment. The study, however, found that firms with a line of credit increased their workforce before and after the COVID-19 pandemic. Finance is regarded as the lifeblood of any business enterprise, without which they cannot start up, survive or grow. Credit can be used to make capital investments and adjust the system of production. Credit can encourage growth and expansion of new and existing SMEs and thus make businesses engage more employees. Various studies (Ayyagari et al 2016; Kumar, 2017) have found a relationship between increased access to finance and increased job growth in developing countries. Kumar (2017) contends that enhanced access to finance is critical for job creation as it boosts SME growth. During the COVID-19 pandemic, many SMEs faced liquidity challenges. Firms that had access to credit were able to address their liquidity challenges and remained afloat or expanded their businesses.

The study also observed that SMEs with websites had a higher percentage of jobs compared with those without websites. SMEs with websites had a higher percentage of employees before and after the pandemic. The use of ICTs (websites) is essential for modern business operations business as it enhances product visibility and gives the firm some level of credibility. Websites were used by firms to undertake transactions during the pandemic. According to Hayakawa, Mukunoki and Urata (2023) E-commerce development is essential to mitigating the negative effect of COVID-19 on trade in importing countries. Moreover, ICT infrastructure foster economic resilience in the face of pandemics (Kim, et al. 2022). The COVID-19 pandemic has led to an increase in online shopping, social media use,

teleconferencing, and video streaming which have increased internet and mobile data service demands (WTO, 2020). However, e-commerce for goods and services trade has faced challenges like supply and delivery disruptions, price gouging, product safety issues, cybersecurity concerns, and the need for increased bandwidth (WTO, 2020).

It is important to understand the ability of firms to adapt to the new normal as this has a bearing on their future performance and survival which ultimately affects employment. The study observed that various firms are adapting by investing in ICTs, adjusting production processes, laying off workers, among other things. However, the adaptation to changes was observed to be slower among small firms relative to medium as well as among firms with female top managers relative to those with male top managers. A study by Parisotto and Elsheikhi (2020) observed that as a result of COVID-19, businesses are changing the way production and distribution are being done with more use of remote working, e-commerce, investing in technologies, changing supply chains among others. Omar and Morales (2021) noted that innovation is a key strategy to the survival of SMEs. However, the adoption of the technologies is usually slow among SMEs (Akpan, Soopramanien & Kwak 2020). Women usually face various challenges in the market compared to males, hence explaining their slower pace in adjustment relative to firms with male top managers.

CONCLUSION

The study found that almost all the businesses were affected negatively by the COVID-19 pandemic. This resulted from the restrictive measures imposed by the government, COVID-19 infections of employees and international linkages. The study has also established that the impact of COVID-19 on the business activity was not homogenous – various businesses were affected differently depending on the sectors. The findings reveal that a considerable percentage of firms, especially small businesses, were forced to close during the pandemic. Generally, about 3.4% of the firms closed in the first wave, with 4.6% of small businesses and only 0.34% of large firms being affected. In the second wave, approximately 5% of the firms exited, with 6.2% of small businesses and only 0.70% of large firms facing closure. Notably, a higher

percentage of the closed firms had female top managers compared to those managed by males. SMEs adapted to the crisis by increasing online activities and converting services. However, the workforce experienced significant reductions, with female-owned firms exhibiting lower employment percentages. Regression Adjustment analysis further demonstrates that the pandemic led to a substantial reduction in jobs among SMEs, with an average decrease of 29% in the first wave and 20% in the second wave. Female-owned firms faced a more significant impact on employment compared to male-owned firms.

The challenges imposed by COVID-19 and restrictive measures (partial lockdowns) resulting thereof have led businesses to reduce hours of operation subsequently reducing production, sales/revenues and increasing costs for businesses. Reduced business hours and increased costs led to the shedding off of some workers to minimise operation costs in the short run. Business entities have also reported having converted production or services. Moreover, others started or increased online business activity. Although some businesses have started adjusting their operation, the pandemic has continued to impact operations and jobs negatively.

The study highlights the need for targeted policies that address firm mortality, support female entrepreneurs, and mitigate unemployment challenges in the SME sector. It is worth noting some limitations of this study. The variables used for analysis in this study are limited to the variables found in the 2019 Zambia WBES, and the two follow-up surveys. Therefore, several variables that might influence employment were not captured. The survey focuses on formally registered non-agricultural private economy SMEs. The agricultural sector and the informal sector were excluded. Moreover, the study focussed on the short term impacts of the pandemic. Thus future research should focus on capturing the important variables.

Policy Implications

Based on the findings from this study, it is recommended that:

1. Financial Support for SMEs: Implement targeted financial support programs to assist SMEs in recovering from the pandemic's impacts. This can include low-interest loans, grants, or tax incentives to help businesses

stabilize their operations, retain employees, and invest in innovative solutions.

2. Gender-Inclusive Support Programs: Design policies and initiatives that specifically address the challenges faced by female-owned SMEs. This can involve providing training, mentorship, and access to resources to empower women entrepreneurs and ensure their businesses can withstand future crises.
3. Digital Transformation and Infrastructure: Promote digitalization among SMEs by providing incentives for the adoption of online business models and e-commerce platforms. Investment in digital infrastructure, such as reliable internet connectivity, can enhance business agility and resilience during disruptions.
4. Sector-Specific Support: Tailor assistance to different sectors based on their unique challenges. For instance, industries hit hardest by the pandemic, such as hospitality and retail, may need specialized support to recover and sustain employment levels.
5. Access to Credit: Strengthen access to credit for SMEs by easing loan application processes and working with financial institutions to create favorable lending conditions. This can enable businesses to invest in growth and retain their workforce.
6. Business Continuity Planning: Encourage SMEs to develop business continuity plans to prepare for future disruptions. Support and provide guidance in creating strategies that enable them to adapt swiftly to changing circumstances.

DATA AVAILABILITY STATEMENT

Data used in this study is available at: Enterprise Surveys (<http://www.enterprisesurveys.org>), The World Bank.

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