The Impact of COVID-19 on the Performance of SMEs in Mwanza Tanzania

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Abstract
COVID-19 left many businesses stagnant with others filling for bankruptcies. Some businesses survived the shock but struggled to normalize their performance since consumers' confidence did not fully recover. This study examined the impact of COVID-19 on the surviving businesses in Tanzania by using a sample of 125 owners of SMEs from Mwanza City. Data was analyzed using regression analysis. The findings revealed that COVID-19 negatively impacted SMEs in terms of financial and operational performance while impacting positively on innovative performance as it forced them to increase the use of technology for marketing and advertisements, buying, and making payments through mobile money services. This study realized for many SMEs the prominence of adopting digital tools and online platforms to remain in operation even in times of market shocks, lockdowns, and restrictions. The findings are relevant as they inform stakeholders on how the COVID-19 pandemic affected businesses; which calls for SMEs to learn diversifying their income streams to mitigate risks associated with market disruptions. The study recommends government support and strategies to help SMEs improve their businesses which include monetary aid, tax relief, and subsidies including programs to facilitate digital adoption and transformation. This change not only would help them remain buoyant during the market shock but also put forward their businesses for impending development in a rapidly changing digital landscape.

Keywords: *COVID-19; financial performance, SME Performance, innovative performance*

INTRODUCTION

In December 2019, the coronavirus was identified in China causing severe respiratory disease originating from SARS-CoV-2 (WHO, 2020). This novel killer disease created shocks to individuals and governments. As of 1st May 2021, confirmed cases of COVID-19 were 4.5 million and 121,000 deaths from sub-Saharan Africa (United Nations Economic Commission for Africa, 2020). Meanwhile, for Tanzania, the report showed 26,483 cases and 734 confirmed deaths (OECD, 2020). As a result, many countries closed their borders, individuals were locked down and flights were canceled; causing blocks in the movements of goods and services.

In Tanzania, COVID-19 was reported in March 2020 when the first patient was discovered at Kilimanjaro Airport. Subsequently, the Tanzanian government-imposed restrictions on international travel, requiring travelers to present a negative COVID-19 test upon arrival (MoH, 2020; WHO, 2020). COVID-19 as a killer disease left permanent marks and tears by losing millions of lives worldwide while leaving businesses stagnant with many filing for bankruptcy (OECD, 2020). For instance, J. Crew, Neiman Marcus, Hertz Global Holdings, Pears Import, Dean & Deluca, and Century 21, all filed for bankruptcies due to a decline in travel, social distancing measures, and debt pressure aggravated by the pandemic (Bloomberg, 2020). However, some businesses survived the COVID-19 shock but still struggling to go back to the original level since consumers' confidence did not fully recover. This phenomenon justifies the need to examine the impact of COVID-19 on the surviving businesses and to find better strategies that will enhance their current and future performance. This becomes even more important for Tanzania where little was then known about how COVID-19 affected businesses and what was the progress on the survived businesses.

Tanzania is a developing country where nearly 76% of the workforce operates within the informal sector (NBS, 2019). This figure highlights the important role that informal employment plays in the country's economy, which suggests that the owner of the household must go outside to look for daily bread through self-employment in small businesses or working as a casual laborer. Second, most people in Tanzania buy goods and services through the physical exchange of goods and services (on a cash basis). Since COVID-19 imposed social distancing rules, some SMEs and their customers feared the exchange of goods for cash (UNCTAD, 2022). Initially, this problem caused owners to close down their businesses as people were required to stay at home. Until the President of the Fifth Phase Government, the Late John Pombe Magufuli allowed minor movements in the country, consumer confidence partially normalized. However, it did not fully recover as some SMEs had completely closed their businesses due to failure to pay daily expenses such as rent, wages, and bills (Saidu and Aifuwa, 2020). The closure of many businesses resulted in a negative impact on the micro economy because the business chain is inter-twined between consumers and providers of goods and services.

Prior studies examined the impact of COVID-19 by focusing on determinants of macro economy such as import restrictions, export barriers, increased tax on import duty, and unemployment (Nguyen and Luu, 2020; Kaur and

Kumar, 2020; Omar et al., 2020; Lu et al., 2020). Other studies examined the pre-and post-Covid periods to determine a statistical difference in various classifications of SMEs by modeling factors for technology adopters and nonadopters in COVID-19 periods (Dirga et al., 2021; Bartik et al. 2020; Kalemli-Ozcan, et al., 2020; OECD, 2020; Dai et al., 2020; Nurunnabi et al., 2020; ECCP, 2020; Juergensen et al, 2020). Through a modeling equation, the reported findings were inconclusive. However, one common phenomenon was reported as the increased standard of living, food insecurity, and lowering global GDP (OECD, 2020; Dirga et al., 2021).

Few studies have examined the impact of COVID-19 on SMEs based in Asian continents, Europe or America. For example, in Vietnam (Nguyen and Luu, 2020); Sri Lank (Robinson and Kendatharan, 2020); European countries (Jill et al 2020; ECCP, 2020; Bartik et al., 2020); Pakistan (Shafi et al, 2020 &Kumar and Ayedee 2021), China (Lu et al., 2020 &Dai et al. 2020; Sunet. al, 2021 & Hao et al., 2020) and Malaysia (Omar et al., 2020). These studies identified five main areas of how COVID-19 affected SMEs, namely, the health of the employees, absenteeism at workplaces, reduction in business volume, and scarcity of raw materials (Bartik et al., 2020; OECD, 2020). For example (Bartik et al. (2020) found that COVID-19 affected negatively the health of employees causing absenteeism at workplaces which affected the business operations and financial stability of the firms. COVID-19 also caused financial difficulties, a decrease in turnover, and decreased consumer demand for goods and services (OECD, 2020). A few studies that explored the problem in Africa were from Nigeria (Saidu and Aifuwa 2020); which makes Tanzania to be less explored and has scanty literature. Therefore, this study examined how COVID-19 affected the surviving businesses by focusing on Mwanza City. The findings revealed that COVID-19 negatively impacted SMEs in terms of financial performance and operational performance; while it impacted positively in terms of innovative performance.

LITERATURE REVIEW

COVID-19 which was declared a global pandemic by the World Health Organization (WHO, 2019), has several infected people, more than 45 million, and caused more than 1 million deaths as of the end of October 2020 (OECD, 2020). Through the human-to-human transmission of Covid-19 restrictions to movements became mandatory which led to the lockdown of communities and hence automatic business closures (Akpan et al, 2020). The economic cost of the COVID-19 pandemic was reported as more severe than

any such historical pandemic ever occurred in the world. It is estimated that the global output dropped by $77 Billion of global GDP (Raga, 2020). More so, the economic downturn was also reflected in individual countries as well especially developing countries such as Tanzania. In Tanzania, COVID-19initially resulted in people fearing to move to marketplaces to buy necessities and other goods and services. There was no official lockdown but many people chose to stay at home to follow other measures from neighboring countries and elsewhere. This partial lockdown resulted in low money circulation and hence it affected business operations and financial stability.

Diffusion of Innovation (DOI)

DOI is one of the oldest models of technology which was started by Rogers in early 1962 and later on expanded by Rogers (2003). The model provides explanations related to how, why, and the extent of spreading new ideas or innovation over time in different cultural settings. DOI defines diffusion as the progression by which technology is transferred through specific channels in a social structure by considering four elements, namely (1) the presence of new technology, (2) proper dissemination channels, (3) time, and (4) social system (Rogers, 2003). Specifically, DOI states that individuals and groups will decide to adopt innovation based on five conditions, namely (1) relative advantage, (2) comparability, (3) complexity, (4) triability, and (5) observability. Relative advantage is the point where new technology is perceived as superior to the old norm it replaces. Compatibility is the extent of value generated from the use of innovation. SMEs that recognize and implement innovations with clear advantages can improve their operational performance by streamlining processes, reducing costs, and enhancing product quality (Rogers (2003). Complexity is the extent of difficulty or ease in understanding and or using innovation. Simpler innovations are more likely to be adopted and can lead to quicker improvements in operational performance. Meanwhile, triability is the extent to which the innovation can be tested before the adoption takes place, and observability is the extent how which the new technology is perceived as providing concrete outcomes.

Rogers (2003) pointed out four main groups of adopters of innovation to include (1) innovators, (2) early adopters, (3) early majority, (4) late majority, and (5) laggards. During COVID-19 Businesses that quickly adopted innovations such as cashless payment services, online services, and remote work solutions were able to maintain their business and hence improve their performance. Similarly, businesses that found new

technologies compatible with their existing operations and easy to implement were more likely to adopt them quickly and hence they remained in operations. Meanwhile, the late majority and the laggards are the risk-averse who take too long to adopt change for fear of losing the invested cash. DOI becomes the ideal theory to underpin this study as it details the actual scenario of the COVID-19 pandemic and how SMEs lost their customer base due to delays in diffusion to technological changes.

Hypothesis development

Financial performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business to generate revenues (Bartik et al., 2020). Financial performance has also been used to mean a measure of a firm's overall financial health over a given period. Determinants of financial performance include gross profit margin, net profit margin, working capital, current ratio, quick ratio, leverage, debt-to-equity ratio, and inventory turnover (Wood and Sangsters, 2018). As businesses grow, these determinants also report significant positive increases over time. The COVID-19 pandemic affected the determinants of financial performance. In the pandemic period and post-COVID-19, SMEs have suffered low consumer confidence and low purchasing power as a result it negatively affected the financial stability of the firms (Nguyen and Luu, 2020; Bartik et al., 2020). This was mainly attributable to unemployment which caused customers to spend less and to change their consumption patterns (Omar et al., 2020). When consumers' purchasing power falls, it adversely affects the main components of working capital in a typical profit-oriented business. This means that falling in selling volume will result in a decline in accounts receivable, quick ratio, and inventory turnover ratio; as goods will continue to exist on the shelves (Bartik et al., 2020). As a result, working capital will continue to dwindle resulting in low borrowing capability of the firm. Two years after the COVID-19, most SMEs have recovered their business but still have low borrowing capacity, low gross profit margin, and small working capital circles (Nguyen and Luu, 2020). This means consumer confidence in using cash to buy bulk goods and services takes time to normalize. Therefore, this study puts one hypothesis as follows:

H1: COVID-19 negatively affected the financial performance of SMEs

Operational Performance

Operational performance is defined as the synergy between various units of the organization and the ability to produce greater output jointly(Dai et al., 2020). Operational performance has also been defined as the level where all business departments collaborate to accomplish specific business goals (Dai et al., 2020; Lu et al., 2020). Generally, operations processes facilitate greater efficiency of the firm. Determinants of operational performance include on-time delivery of goods and services, accurate budget deliveries, and quality outputs (Ravindra and Padmakanthi (2021). Good operations can be streamlined to eliminate wastage at every stage of operations; as a result, cost is minimized, production is streamlined, and value addition over time (Lu et al., 2020). In a typical business environment, there are three main departments; namely, production, sales and distribution, and administration. Due to the pandemic of COVID-19, some of these departments were merged as a means of cost-cutting strategy. Since some employees were terminated due to a fall in revenue and general financial instability, the result of this is low-performance levels in all departments. Operational performance also includes consumption demand of products, cost or merchandise, access to raw materials, and marketing (Nguyen and Luu, 2020). Hence, COVID-19 has negatively affected these items as the cost of import increased during the COVID-19 period and never went down in post-COVID-19 periods, especially for Tanzania. The study therefore hypothesis that:

H2: COVID-19 negatively affected operational performance of SMEs

Innovative Performance

Innovation performance (IP) is the ability to transform technological processes inputs into outputs, thus resulting in innovation market success, product improvements, and value addition (Ravindra and Padmakanthi (2021). In a typical business model, innovation is measured in terms of market expansion (cross border), collaboration, creativity, cost-cutting mechanisms, time-saving, on-time delivery, and value addition of products (OCCP, 2020). The announcement of the COVID-19 pandemic which restricted human-to-human contact, made SMEs quickly adopt new technologies than ever before. Colleges started emphasizing online classes, governments adopted e-governments, and many businesses adopted e-commerce technologies, and never went back to manual processes. Studies have found out that during the pandemic, e-commerce trend adoption among emerging markets was too aggressive to the extent that users of technology of mobile e-commerce and e-commerce adoption by October 2020 had reached

78 percent (Deloitte, 2021). In Tanzania, which was the focus of this study, many SMEs started using mobile banking as a gateway to receiving cash and making payments. The usage of social media became more common and it gained more fame than at any other time. Most SMEs in many countries including Tanzania use WhatsApp, Facebook, Instagram, and YouTube to advertise their products and services (Syaifullah et al., 2021). Social media is reported as one of the most effective ways of information in Tanzania surpassing Television sets and radio broadcasting (Gemma, 2020). It is anticipated that during the COVID-19 era, the number of social media users increased by 13% in Tanzania (Todd, 2020). These new trends in technological adaptation are anticipated to somehow help SMEs manage their marketing strategies and sell their goods online. It is, therefore, a positive determinant of performance improvement resulting from the COVID-19 pandemic. We therefore hypothesize that:

H3: COVID-19 positively affected Innovative performance of SMEs

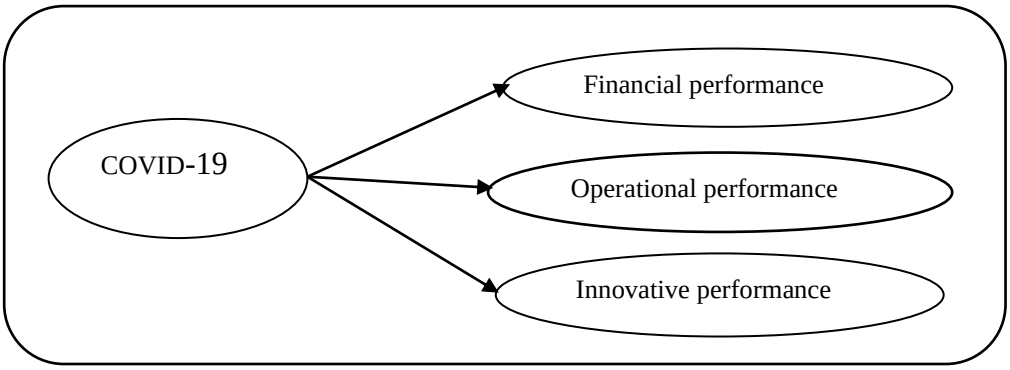

Figure 1: Conceptual Framework

Figure 1 above, shows that COVID-19 impacted the financial, operational, and innovative capabilities of SMEs. These three variables were validated quantitatively through a regression equation and the results were reported therein to validate the following hypothesis**:**

H1: COVID-19 has negatively affected the financial performance of SMEs
H2: COVID-19 has negatively affected the operational performance of SMEs
H3: COVID-19 has positively affected Innovative performance of SMEs

RESEARCH METHODOLOGY

A quantitative research design was adopted by testing a causal relationship between two variables which are the impact of COVID-19 and the

performance of SMEs. In line with this, a review of existing literature and empirical studies provided variables that established the nature of the cause and the effects on the impact of COVID-19 on the performance of SMEs. Performance was measured in three variables: financial, operational, and innovative performance as summarized in the Conceptual Framework. The SMEs in Nyamagana District in Mwanza City were surveyed and asked to rate the factors of COVID-19 and how it affected their business performance. The study considered registered SMEs in the Nyamagana District with several employees between 4 and 50. The study did not consider SMEs under informal sectors famously known as Wamachinga. A total of 200 questionnaires were distributed to owners of hotels and guest houses, restaurants, supermarkets, and other convenience stores; saloons, stationery shops, private kindergarten schools, and boutiques. A total of 125 questionnaires were returned dully filled which was a 62.5% response rate.

Testing Parametric Assumptions

Firstly, we conducted data screening to confirm missing values in the questionnaire before entering into SPSS (Pallant, 2007). It was important to double-check the indicators in the survey to ensure that all items were answered to avoid missing values. It was found that all the data were clean and there were no missing values. Missing values would result in increased error terms and other problems in validating the instruments (Field, 2013). Therefore; the entire 125 questionnaire response rate was retained. Secondly, we conformed to the non-existence of outliers. Outliers are extreme values that could either be too high or too small a value (Field, 2013). Scholars have proposed the impact of outliers in the data as a possibility of distortion of parameters and estimation errors which might make the data obscured and unable to predict significant variables (Hair et al., 2019). To uncover the outliers, the study used *the "explore"* command from the SPSS which enabled the detection of indicators with severe cases and those that showed abnormal patterns (Pallant, 2007). The results showed all items had almost similar loadings and there were no extreme values or abnormal behaviors in the data sets.

Thirdly, Skewness and Kurtosis tests were run to check whether there was a normal distribution curve (Cohen, 2018). Generally, a set of data that is not normal, can distort findings and difficult to show significant factors (Cohen, 2018). It is recommended that the values for Skewness and Kurtosis should be close to plus or minus 2 and or minus 4 for minimum and maximum values respectively (Cohen, 2018). The results showed that the minimum

value for skewness was -2.149 and the maximum was 2.608 while the minimum value for Kurtosis was 1.092 and the maximum value was 2.412 (Appendix I). These results confirm that the data is within acceptable normal distribution curves (Cohen, 2018), and therefore, further parametric analysis can be conducted. Lastly, Pearson Product correlation (r) test was conducted to confirm the existence of a linear relationship between variables and to also test for multicollinearity. If the variables show extreme correlations with other variables (i.e. r > .90), it is said to have multicollinearity problems (Tabachnick and Fidell, 2013). The results showed that the lowest correlation was 44.9% (r = 0.449) between FP and OP while the highest correlation was 66.2% (r = 0.662) between IP and COV (Table 7.13). These results suggest that there was no multi-collinearity among the variables (Tabachnick and Fidell, 2013.

FINDINGS

Table 1: Profile of Respondents (n=125)

Q1: Gender			N=125
1	Male	74%	93
2	Female	26%	32
Q2: Age brackets			N=125
1	Below 25	5%	7
2	25-35 years	39%	48
3	36-45 years	29%	35
4	46-55 years	13%	17
5	Above 55 years	14%	18
Q3: Business Size (Capital Capacity)			N=125
1	Less than 10M	60%	75
2	10-20M	21%	26
3	20M-50M	9%	10
4	50M-100M	6%	8
5	Above 100M	4%	5
Q4: Type of Business			N=125
1	Hotels	9.6%	12
2	Guest House	7.2%	9
3	Restaurant	4.8%	6
4	Supermarket	3.2%	4
5	Convenient stores	22.4%	28
6	Saloons	24%	30
7	Stationery shop	8%	10
8	Private kindergarten	3.2%	4
9	Boutique	17.6%	22

Table 1shows the percentage of the respondents based on gender. From a total of 125 respondents, 74% were males (93 respondents) while 26% were

female (32 respondents). Concerning the age of respondents, most were (39% - 25-35 years old), followed by 29% (36-45 years old). There were about 13% (17 respondents between 46-55 years old) and also 14% (18 respondents who were above 55 years old) and lastly, there were 5% (7- respondents who were below 25 years old). Meanwhile, with regards to the type of SMEs or type of business status, as was composed of the questionnaire, respondents were asked to rank their businesses as whether it is Small, Medium, or Large. Table 2 shows that the majority of the respondents (88% or 85) were running small businesses, meanwhile, (24% or 30) had Medium businesses while (8% or 10) respondents rated their businesses as large. Lastly, in terms of capital capacity, it was revealed that the majority of the respondents (60% or 49) had a capital capacity above 10M, followed by 21% (26 respondents) with a capital capacity of 10M-20M. There were about 6% or 8 respondents having capital capacity in the range of 50M-100M; and lastly 4% equivalent to 5 respondents who had capital capacity of above 100M. These findings indicate that most of the SMEs contacted were small business owners whose capitals were within 10M-20M shillings. This study examines the capital structure determinants of SMEs in Tanzania which is contrary to other countries like Poland, Czechia, Slovakia, Hungary, Bulgaria, and Romania whose capital base is higher (Kumar et al., 2020; Czerwonka & Jaworski, 2021). It, therefore, highlights the role of firm-specific factors and the influence of a business-friendly established environment.

Table 2 below shows that there is a positive linear relationship between the four constructs of COVID-19, namely, financial performance (FP), operational performance (OP), and Innovative performance (IP). The table also confirms that there are no extreme values of relationship between the variables.

Table 2: Pearson Correlations (r)

		FP	OP	IP	COV
FP	Pearson (r)	1			
	Sig. (2-tailed)				
	N	125			
OP	Pearson (r)	.449**	1		
	Sig. (2-tailed)	.001			
	N	125	125		
IP	Pearson (r)	.457**	.325**	1	
	Sig. (2-tailed)	.000	.000		
	N	125	125	125	
COV	Pearson (r)	.471**	.533**	.662**	1
	Sig. (2-tailed)	.000	.000	.001	
	N	125	125	125	125

**Correlation is significant at the 0.01 level (2-tailed)

Exploratory Factor Analysis (EFA)

Test was made on factor loadings in the EFA with VARIMAX rotationto confirm whether the indicators fit within their expected constructs (Malhotra, 2009). A benchmark of 0.60 was set as a default in SPSS for the inclusion or exclusion of items in its expected factor (Tabachnick and Fidell, 2013). Three items (FP5, OP3, and IP1) showed multiple loadings and they were subsequently dropped and EFA was rerun (Osborne, 2015). The final results indicated that all items had a minimum loading of .60 which is an acceptable threshold as shown below in Table 3.

Table 3: Exploratory Factor Analysis (EFA)

	1	2	3	4
FP1	.779			
FP2	.634			
FP3	.879			
FP4	.797			
OP1		.809		
OP2		.802		
OP4		.812		
OP5		.779		
IP2			.864	
IP3			.804	
IP4			.791	
IP5			.709	
IP6			.788	
COV3				.676
COV2				.675
COV3				.687

Kaiser Meyer Oklin (KMO) and Bartlett's Test of Sphericity Test were checked to reconfirm the factor loadings. Scholars define KMO as a measure of sampling adequacy that produces a confirmation of the indicators in the constructs of EFA (Cohen, 2018). The results in Table 4 below revealed a KMO value of .716 and Chi-Square was 3456.205 which was significant at.000. These results confirm that the sampling was adequate for running further inferential analysis (Pallant, 2007).

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.716
Bartlett's Test of Sphericity	Approx. Chi-Square	3456.205
	Df	453
	Sig.	.000

After performing EFA, the indicators were merged (FP1+FP2+FP3+FP4); (OP1+OP2+OP4+OP5), and (IP2+IP3+IP4+IP5+IP6) by using a "*transform variable"* command in the SPSS. This procedure enabled us to merge the statements to form one main variable for Regression. However, since some variables were dropped, it was necessary to re-run the reliability test of Cronbach Alpha (Hair et al., 2019); and the results are shown below.

Table 5: Reliability Test

Variable	No. of items	Cronbach Alpha
Financial Performance (FP)	4	.918
Operational performance (OP)	4	.921
Innovative performance (IP)	5	.911
COVID-19(COV)	3	.913

From the reliability results (Table 5), it was revealed that the values for all the indicators within the variables had higher Cronbach Alpha loadings of above .9, which is regarded as highly reliable data (Hair et al. 2019). Specifically, FP with 4 items had Cronbach Alpha values of .918; OP which had 4 items had Cronbach Alpha loadings of .921, IP with its 5 items had a Cronbach Alpha value of .911; and COV which was a dependent variable with three indicators had a Cronbach Alpha value of .913. These results indicated higher reliabilities than before data were confirmed in the EFA.

Linear Regression

Linear regression was conducted at three levels where the independent variable (COV) was regressed separately against each construct of the dependent variable and the findings were based on each separate hypothesis.

H1: COVID-19 negatively affected the financial performance of SMEs

The first hypothesis tested the relationship betweenCOVID-19 on the financial performance of SMEs. The regression commands in SPSS produced three tables simultaneously which were (1) the model summary (R), (2) the ANOVA table, and (3) the Coefficient Table. These are named Table 6, Table 7, and Table 8 respectively.

Table 6: Model Summary

Model	R	R Square	AdjustedR Square	Std. Error of the Estimate	Durbin-Watson
1	.641[a]	.613	.551	.4532	1.4242

a. Predictors: (Constant), FP
b. Dependent Variable: COV

Table 7 above shows an initial summary of the regression results with one variable (Financial performance-FP) which was regressed against one dependent variable which is Covid-19 (COV). The regression value which is the model results (R) is .641, while the R^2 value was .613 and adjusted R^2 was .551 with a standardized error of the estimate of.4432. These findings indicate that the variable COV (Independent variable) is an acceptable measure of varied performance (dependent variable) for the SMEs of the selected sample.

Table 7: ANOVA[a]

Model		Sum-of Squares	Df	Mean Square	F	Sig.
1	Regression	12.125	11	1.863	18.76	.000[b]
	Residual	10.772	104	.110		
	Total	22.897	125			

a. Dependent Variable: FP
b. Predictors: (Constant), COV

ANOVA as the second explanation of the regression results confirmed the interaction effects between variables, between and within the groups; hence, providing confirmations for further analysis (Hair et al.,2019). One-way ANOVA (Table 7) was run to relate the mean values of COVID-19 to dependent variable financial performance. The F-test confirmed the relationship existed between the independent variables and the dependent variable which was statistically significant at .000. The Regression equation is summarised in the following equation:

$\hat{Y} = \alpha + \beta_1 X_{FP} + \acute{\varepsilon}$

Where:

$\hat{Y}$ = COVID-19

β = Partial regression coefficients
FP = Financial Performance
$\acute{\varepsilon}$ = Error term.
α = Constant

The final regression results are presented in the table below of Coefficients.

Table 8: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.434	1.496		21.195	.000		
	FP	.-418	.123	.147	1.046	.000	.772	1.387

a. Dependent Variable: COV

The interpretation of the table above (Table 4) is that if other factors remain constant, the independent variable (COVID-19-COV) negatively affected the dependent variable (financial performance) by.-418 (Beta coefficient) and the relationship was significant at .000.

H2: COVID-19 negatively affected operational performance of SMEs

The second hypothesis intended to find how COVID-19 impacted the operational performance of SMEs. Again, the regression commands in SPSS produced three tables namely, (i) the model summary (Regression (R) table (ii) the ANOVA table, and (3) the Coefficient table, which are Table 9 Table 10, and Table 11.

Table 9: Model Summary

Model	R	R Square	AdjustedR Square	Std. Error of the Estimate	Durbin-Watson
1	.681[a]	.662	.601	.3433	1.3452

a. Predictors: (Constant), COV
b. Dependent Variable: O

Table 10 shows the initial results of the regression for the second research objective. The variable COVID-19 (COV) was regressed against one dependent variable (Operational performance-OP). The regression value which is the model results (R) is .681. Meanwhile, the R-Square value was .662 and the adjusted R^2 was .601; with a standardized error of the estimate was .3433. These findings from the data indicate that the variable COV (Independent variable) is an acceptable measure of operational performance

(dependent variable) for business performance among SMEs at Nyamagana. Also, the DW test showed values of 1.3452. which falls within the acceptable threshold according to Dubin Watson (1971); indicating a normal distribution of residuals.

Table 10: ANOVA[a]

Model		Sum-of Squares	Df	Mean Square	F	Sig.
1	Regression	14.114	11	1.678	14.56	.000[b]
	Residual	11.782	104	.110		
	Total	25.896	125			

a. Dependent Variable: FP
b. Predictors: (Constant), COV

Table 10 shows the summary of the Analysis of Variance known as ANOVA. ANOVA in the second research objective indicated that there is an interaction effect between the two variables (operational performance and COV). The relationship was statistically significant at .000; with F-Statistics showing 14.56 of the effect size. The F-test which confirmed the relationship between the two variables was statistically significant at .000. The Regression equation for the second variable is:

$\hat{Y} = \alpha + \beta_1 X_{COV} + \acute{\varepsilon}$

Where:

$\hat{Y}$ = Financial Performance
β = Partial regression coefficients
OP = COVID-19
$\acute{\varepsilon}$ = Error term.
α = Constant

The following regression results are presented in the table of Coefficients.

Table 11: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.312	1.211		24.165	.000		
	COV	.-521	.124	.152	1.057	.000	.812	1.451

a. Dependent Variable: OP

The interpretation of the table above (Table 11) is that if other factors remain the independent variable (COVID-19-COV) negatively affects the dependent variable (operational performance) by .-521 (unstandardized beta coefficient) and the relationship was significant at .000.

H3: COVID-19 positively affected Innovative performance of SMEs

The third and last hypothesis predicted the effect of COVID-19 on the innovation performance (IP) of SMEs. Three tables of automatic regression commands on the SPSS software produced the following results as shown in Tables12, Table 13, and Table 14.

Table 12: Model Summary

Model	R	R Square	AdjustedR Square	Std. Error of the Estimate	Durbin-Watson
1	.712[a]	.678	.635	.3887	1.5152

a. Predictors: (Constant), COV
b. Dependent Variable: OP

Table 12 shows the regression results for the relationship between one variable (COVID-19-COV) which was regressed against one dependent variable (Innovative performance-IP). The results revealed that (R) is .712. Meanwhile, the R-Square value was .678 and the adjusted R^2 was .653; with a standardized error of the estimate was .3887. These findings from the data indicated that the variable COV (Independent variable) is an acceptable measure of operational performance (dependent variable) for business performance among SMEs at Nyamagana. The DW test revealed values of 1.5152 which falls within the acceptable threshold according to Dubin Watson (1971); indicating normal distribution of residuals for the tested variables. Meanwhile, the ANOVA table below confirmed the existence of the relationship between COV and IP. The F-statistics showed values of 19.61 which were significant at .000. The final results are depicted in Table 13 below.

Table 13: ANOVA[a]

Model		Sum-of Squares	Df	Mean Square	F	Sig.
1	Regression	14.114	11	1.467	19.61	.000[b]
	Residual	13.770	104	.141		
	Total	27.884	125			

a. Dependent Variable: IP
b. Predictors: (Constant), COV

ANOVA which was confirmed by the F-test confirmed the relationship between the two variables (COV & IP), which was statistically significant at .000. The Regression equation for the third variable is as follows:

$\hat{Y} = \alpha + \beta_3 X_{COV} + \acute{\varepsilon}$

Where:

$\hat{Y}$ = Innovative Performance
β_3 = Third Partial regression coefficients
OP = COVID-19
$\acute{\varepsilon}$ = Error term.
α = Constant

The following regression results are presented in the table below (Table 4.19) of Coefficients to answer the last research objective (objective 3)

Table 14: Regression Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	2.432	1.723		26.261	.000		
	COV	.365	.134	.167	1.224	.000	.722	1.521

Dependent Variable: IP

The interpretation of Table 15 above is that if other factors remain constant, the independent variable (COVID-19-COV) positively affected the dependent variable (operational performance) by .3.65 and the relationship is significant at .000.

DISCUSSION AND INTERPRETATION

The result of the regression summary for all three models was confirmed to be statistically significant. In both cases, R Square (R^2) was above 60% with adjusted R^2 of above 55% which loaded with minimal standard error of estimate. Similarly, the F-test statistics for the three models were significant. The implication of these results shows that the selected predictors of (COVID-19) could explain the variations in business performance in both financial performance, operational performance, and innovative performance of SMEs in Mwanza Tanzania.Financial performance was considered a dependent variable during COVID-19 as business performance depended on the situation of the diseases and the lockdown which halted trading. The results from the survey data revealed that COVID-19 negatively affected the financial performance of SMEs. The regression results revealed a co-efficient value of -545 and a t-value of 0.438 which was significant at .000. These results meant that COVID-19 affected the SMEs negatively and made them backward in economic power. Similar findings were reported in other parts of the world where they tested post-COVID-19 outcomes on businesses. For example, Bartik et al. (2020) and Dai et al. (2020) reported economic downturn for SMEs that were previously successful in pre-COVID-19

periods and eventually sustained collapse. They found that their operation and profitability levels reduced greatly and thanks to the government intervention in Singapore some businesses managed to recover. Similar results were documented by Dirga et al. (2021) and Gossling et al. (2021).

Meanwhile, the study found out that the operational performance of the business was also affected negatively by the COVID-19 pandemic. Past studies reported that the pre-COVID-19 operational activities of many SMEs were reduced due to the lockdown and falling consumer purchasing power (Nguyen and Lu, 2020). This study found a negative relationship betweenCOVID-19 and business operations. The relationship was statistically significant which indicates that businesses were affected by the pandemic. Similar results were reported by Lu et al. (2020) and Nguyen and Lu (2020). Their findings which were based in the Asian continent revealed that the pandemic halted the operations and cross-border linkage and trading which eventually lowered the internal business operations of SMEs.

Lastly, the Innovative Performance (IP) was found to be positively related to the COVID-19 variable. The regression results showed a positive relationship between COVID-19 and innovative performance and the relationship was significant. This indicates that the use of technological tools after the COVID-19 pandemic had increased significantly. Similar findings were documented in other countries (Omar et al., 2020; Saidu et al., 2020; Syaifullah et al, 2021). For example, Syaifullah et al. (2021) found an increased online marketing and procurement of goods and services during and after the pandemic. These results affirmed that SMEs have become better ICT adopters due to mandatory preventive measures to reduce direct contact among people. In other words, SMEs realized the prominence of adopting digital tools and online platforms to remain in operation during market shocks, lockdowns, and restrictions.

CONCLUSION AND RECOMMENDATIONS

In light of DOI Theory (Rogers, 2003), the study emphasizes the importance of financial vitality, diversification, and the role of SMEs in driving change. During COVID-19, businesses that quickly adapted to new market environments and customer preferences were more likely to survive and prosper. Meanwhile, the late adopters of technology and the laggards who were risk-averse most likely failed to operate lost customers, and faced business closure.

Many SMEs established significant resilience and flexibility during the COVID-19 pandemic. They swiftly revolved around new business models, such as online sales and delivery services, to cope with COVID-19 measures. Regardless of their flexibility, SMEs faced substantial economic challenges, including cash flow issues, low demand, and problems in accessing monetary support. These challenges resulted in layoffs of employees, reduced operations, and even bankruptcy of some businesses. Nonetheless, the impact of COVID-19 varied across different sectors. Sectors such as retail business, convenience stores, supermarkets, hospitality, and tourism were most affected while sectors such as ICT, telecommunications, healthcare, and e-commerce realized average growth. This study highlights the importance of direct government support and strategies to help SMEs rebuild their businesses. This includes fiscal measures, tax relief, interest-free loans, public-private partnerships, and subsidies. The government can initiate platforms that facilitate digital adoption and improvement.

The study recommends that future studies should be done by involving a large sample size in various cities to get a bigger picture of the situation. Similarly, future studies should use both quantitative and qualitative data to get more explanations of the respondents and to be able to suggest a way forward for the government and other players in the business ecosystem. Since the government expects to receive tax from these businesses for economic development, supporting them will help improve both individuals (micro-economic) as well as macroeconomic development of the country. The study found some SMEs shifted from town centers to the outskirts of the city to avoid too much rental expenses. The government can support them by building areas of business that are permanent like the Machinga complex in Dar es Salaam City. Nonetheless, there were areas where the government shifted some of the SMEs that were not fully in operation at the time of data collection.

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APPENDIX I: NORMALITY TESTS

	N	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
FP1	125	1.54	-2.129	.025	1.677	.046
FP2	125	1.35	-1.687	.025	1.230	.046
FP3	125	2.08	-1.374	.025	1.886	.046
FP4	125	2.34	-1.802	.025	1.308	.046
FP5	125	1.62	-2.149	.025	2.118	.046
OP1	125	1.39	-1.830	.025	2.491	.046
OP2	125	1.43	.270	.025	-1.961	.046
OP3	125	1.82	-.694	.025	-1.210	.046
OP4	125	1.48	-1.240	.025	2.105	.046
OP5	125	1.56	-.231	.025	-1.984	.046
IP1	125	1.49	-1.712	.025	1.906	.046
IP2	125	1.26	-.868	.025	1.269	.046
IP3	125	1.40	-.365	.025	-1.471	.046
IP4	125	0.51	-.038	.025	-2.037	.046
IP5	125	1.37	-.130	.025	-1.199	.046
COV1	125	1.37	-1.593	.025	2.412	.046
COV2	125	1.35	-1.490	.025	2.033	.046
COV3	125	1.40	-.111	.025	-1.961	.046
Valid N (listwise)						