

# Financial impact of COVID-19 lockdown restrictions on Small, Micro and Medium enterprises in the restaurant industry (Gauteng)

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## Abstract

**Purpose:** The study presents a comparison of the financial impact of the COVID-19 lockdown restrictions on Gauteng-based SMMEs in the restaurant industries using a South-African bank's point-of-sale (POS) de-identified data.

**Research:** The positivist research philosophy was preferred. Due to, the participating bank's existing data, quantitative research method applied. This research study comprised both exploratory and descriptive objectives. It was longitudinal in nature because it investigated the financial impact of the COVID-19 lockdown restrictions on Gauteng-based SMMEs in the restaurant industry over time (April-May 2020 and April-May 2021). The longitudinal time horizon was from April 2020 to May 2021 (a year into the lockdown period).

**Results:** The study found that the restaurant industry was adversely financially impacted, based on turnover sales transacted through POS devices during the two periods of April to May 2020 and April to May 2021. According to the study, during the COVID-19 pandemic lockdown periods Gauteng-based SMMEs relied heavily on the benefits of the Fourth Industrial Revolution (4IR), such as POS devices, for customer payments.

**Conclusions:** Based on a monthly turnover comparison the restaurant industry had the second-highest turnover, following the supermarket industry with the highest turnover. When the alert level 5 lockdown was declared on March 23, 2020, some restaurants shut down temporarily while others adjusted their operational protocols to safeguard their employees and customers.

**Study originality:** However, the restaurant industry turnovers increased in 2021 compared to 2020, indicating that there was some adaptation or rather innovation around mitigating the COVID-19 pandemic challenges.

**Practical implications:** Restaurants took additional measures by persuading consumers to order 'takeaways' online through delivery App platforms. The restaurant industry COVID-19 digital strategies remain relevant in South Africa today even after the removal of the COVID-19 lockdown restrictions because customers still make use of these digital services.

## 1. Introduction

The COVID-19 pandemic is a historic global disaster that affected human health and economic well-being globally. The worldwide health crisis, which began in 2020, influenced enterprises of all sizes within all industries (Gregurec, Furjan & Pupek, 2021:1). Although certain industries had some resilience, most Small, Medium and Micro Enterprises (SMMEs) found themselves in "new normal" working settings, with economic, political, social and psychological implications (Gregurec et al. 2021:1). Thus, the financial impact of the COVID-19 pandemic on enterprises felt globally. However, enterprises in emerging markets were likely to have felt the full brunt of the economic consequence considerably more than those in developed ones (Weber, 2020). The COVID-19 lockdown had a significant impact on SMMEs, contributing to the already struggling South African economy (Weber, 2020). SMMEs are an important part of the economy of both South Africa and the African continent (Weber, 2020).

The financial impact on SMMEs in the restaurant industry, is quantified through the de-identified data from a participating South African bank during (April-May 2020) and after the (April-May 2021) COVID-19 lockdown phases. This comparison uses the South-African bank's POS (Point of Sales) data.

SMMEs are defined as those enterprises with less than 250 workers. To distinguish between small, medium and micro enterprises the following scale is used: a small enterprise has fewer than 50 employees, a medium enterprise has fewer than 250 employees, and a micro enterprise has fewer than 10 employees (Ayandibu & Houghton, 2017:134). According to Ayandibu and Houghton (2017), the South African Revenue Service (SARS) does not have a single definition for small business, instead, numerous definitions are used for various purposes. A Small Business Corporation (SBC) is defined for Income Tax purposes as a business with a turnover of less than R14m, in addition to other qualifying conditions (Ayandibu & Houghton, 2017:134). A small SMME is defined as a firm with total net assets of less than R5 million for Capital Gains Tax purposes (Ayandibu & Houghton, 2017:134). The National Small Business Office (NSBO) serves the needs and interests of South African firms with annual revenues of less than R14 million (Ayandibu & Houghton, 2017:134). This study will be comparing the financial impact of the COVID-19 lockdown on Gauteng-based SMMEs in the restaurant industries, using the participating South-African bank's (Point of Sales) POS data. POS devices are an excellent payment option for efficiently processing debit and credit card payments (Verifone, 2016). Customers simply tap, scan or insert their card to complete a transaction while providing a password/pin number for security (Verifone, 2016). Customers can now use smartphones and watches to tap for payments, a process that has improved POS device transactions (Verifone, 2016).

The South African government and private groups attempted to assist struggling enterprises affected by the COVID-19 lockdown in a variety of ways, but enterprise owners/managers also needed to 'think on their feet' (Carrim, 2020). The issue then became how the impact of the COVID-19 lockdown had affected the way SMMEs worked by forcing them to adjust to a scenario of continual, unexpected change in particular industries and areas of business (Carrim, 2020). As a result, these firms were compelled to adopt new tactics to remain competitive in the market. Enterprise problems resulting from the COVID-19 lockdown mostly caused by an inability to create sales, a lack of income generation and cash flow issues (Carrim, 2020).

## 2. Literature review

### 2.1. Small, Medium and Micro Enterprises (SMMEs)

According to Mmbegeni, Mavhungu & John (2021), the South African government has been promoting SMMEs since 1995. SMME 'start-ups' encourage innovation, increase productivity and create structural change (Herr & Nettekoven, 2017). Established SMMEs critical for the country's economic growth and usually only adjust to market pressure, A thriving SMME industry significantly increases job opportunities (Herr & Nettekoven, 2017). Mmbegeni et al. (2021) state that SMME survival rates in South Africa are among the lowest in the world. A financial crisis such as that resulting from the COVID-19 lockdown restrictions has a negative impact on SMMEs, slowing their growth and increasing the number of bankruptcies annually (Mmbegeni et al., 2021). Start-ups are particularly vulnerable, because they lack the resources to withstand such a crisis (Mmbegeni, et al. 2021).

This study concentrated on SMMEs based in Gauteng, one of nine provinces in South Africa. According to Muriithi (2017:37), SMMEs range from very small micro enterprises run by one or two people with very slow or no growth to fast-growing medium businesses with a turnover of millions of rands. SMMEs provide employment and income to approximately 80% of the world's population. Furthermore, SMMEs account for more than 90% of businesses in Africa and contribute roughly 50% of its GDP (Muriithi, 2017:37). Businesses with fewer than 100 employees account for more than half of all employment in low and lower-middle-income countries such as South Africa (Muriithi, 2017:37).

The Minister of Small Business Development amended the National Definition of Small Enterprise Schedule (Government Gazette, 2019). The new definition includes industry types, enterprise size, number of full-time employees and total annual turnover (see Table 2 below).

Table 1: South African National Definition of Small Enterprise Schedule

Industry or sub-industry in accordance with the standard industrial classification	Size or class of enterprise	The total full-time equivalent of paid employees	Total annual turnover
Supermarkets	Medium	51-250	± R80 million
	Small	11-50	± R25 million
	Micro	0-10	± R7.5 million
Tourism	Medium	51-250	± R40 million
	Small	11-50	± R15 million
	Micro	0-10	± R5 million
Restaurants	Medium	51-250	± R70 million
	Small	11-50	± R22 million
	Micro	0-10	± R5 million

Source: Government Gazette, 2019.

### 2.1.1. SMMEs in South Africa during COVID-19 lockdown periods

South Africa underwent the *COVID-19 pandemic* alert level 5 lockdown from midnight on 26 March until 30 April 2020. Level 5 regulations required that everyone in South Africa confined to their home unless they were performing an essential service, obtaining essential goods or services, collecting a social grant/pension or seeking emergency, life-saving or chronic medical attention (Pillai et al, 2020). Essential services entailed businesses (including SMMEs) that offered goods and services such as food, fuel, financial transactions and healthcare to name a few (Pillai et al, 2020). During the level 5 lockdown, all SMMEs and other entities had to cease operations, except for any entity involved in the manufacturing, supply or provision of essential goods or services, unless work was conducted remotely by personnel from their normal place of residence or home (Government Gazette, 2020).

As from 1 to 31 May 2020 South Africa was on *COVID-19 pandemic* alert level 4 involving restrictions that indicated a moderate to high COVID-19 spread with a low to moderate health system readiness (Government Gazette, 2020). A year into the COVID-19 pandemic South Africa was on an adjusted alert level 1 from 1 March to 30 May 2021. During the alert level 1 restriction, most normal activities could resume, if precautions and health guidelines were always followed.

### 2.1.2. Impact of COVID-19 lockdown restrictions on the SMME economy

According to Stats SA, the official unemployment rate fell by 0.8% from 35.3% in the fourth quarter of 2021 to 34.5% in the first quarter of 2022 due to changes in employment and unemployment figures (SAnews, 2022). It is the South African government's intention to create more jobs through economic policy and the promotion of investment in labour-intensive industries such as SMMEs (Pillay, 2018:2). According to Rajagopaul et al. (2020), SMMEs in South Africa account for more than 98% of enterprises, employ between 50 and 60% of the workforce across all industries, and are responsible for a quarter of private-industry employment growth. While South Africa's SMMEs contribute less to GDP than other sectors, there is little doubt that these enterprises are a crucial engine of the economy (Rajagopaul et al., 2020).

Due to the COVID-19 lockdown, many SMMEs have already seen a significant decline in demand for their goods and services (Rajagopaul et al., 2020). According to a McKinsey Consumer Pulse Survey conducted at the end of March 2020, more than 80% of respondents planned to cut spending across all retail categories (Rajagopaul et al., 2020). *Challenges faced by SMMEs in South Africa due to COVID-19 lockdown restrictions.*

According to SME South Africa (2020), three out of every four small enterprise owners reported that their company would not be able to withstand extended lockdown limitations after July 1, 2020. Small business owners from all over South Africa participated in the #CombatCovid SMME Survey to determine the extent of the harm caused to their mode of operation (Motaung, 2020). POS, also known as point-of-purchase (POP) systems are checkout devices comprising integrated hardware and software subsystems tailored to the needs of certain enterprises (Gordon, 2021). Most POS systems are digital in form, with

multiple devices and peripherals, such as customer pole displays, card readers, barcode scanners and printers (Gordon, 2021). Participants of partner collectives include small enterprise owners' groups such as iKhokha, Efficacy Payments, Innervation, SureSwipe, Flash and Humble (Motaung, 2020). The 2 280 small business owners who participated in the #CombatCovid SMME study immediately prior to the South African government's imposition of the alert level 4 lockdown regulations, provided the following four key findings (Motaung, 2020):

Three out of four SMMEs would not survive the COVID-19 lockdown beyond July 2020: The COVID-19 pandemic affected more than 90% of small enterprises surveyed. 33% of them predicted a monthly reduction of 75%-100% in turnover, and 3/4 of small enterprise owners believed their business would not survive if the lockdown limitations were extended beyond July 1, 2020.

Sixty eight percent of relief applications were unsuccessful: South Africa's SMEs appeared to be either passive or untrusting of the COVID-19 pandemic relief options that were available to them. Less than half of the business owners surveyed had applied for relief funding from government, banks or other financial institutions. This finding indicated that some businesses had possibly chosen to "go with the flow of the lockdown instead of pushing against the wave" (Motaung, 2020).

Increased adoption of technology: one-quarter of the firms interviewed said they were still operating in some capacity. E-commerce and other types of technology, including messaging and video conferencing platforms, were assisting businesses to streamline their operations. More than half of the survey respondents used technology to operate their enterprises remotely (Motaung, 2020).

#### **2.1.2.1 Mitigation of COVID-19 pandemic challenges for SMMEs**

SMMEs have characteristics that make them more susceptible to the pandemic crisis at hand. Klein & Todesco, (2021) suggest that knowledge management research could give SMMEs the expertise they need to handle such a crisis. They would be better equipped to develop a benchmark strategy for this purpose if they have an overview of appropriate financial strategies suitable for SMMEs. According to Thukra (2021), more emphasis should be on how SMMEs use their entrepreneurship creativity and innovation to respond to crises.

SMMEs need to concentrate on important areas of competitiveness in their value chain, product and operations, as well as discovering the appropriate technological levers to boost competitiveness (Rajagopaul et al., 2020). Digital and new technologies can assist South African SMMEs in overcoming their size disadvantage in comparison to larger businesses (Rajagopaul et al., 2020). Access strategies enable SMMEs to concentrate on their core value proposition used to establish themselves in a new market. Volatile, Uncertain, Complex and Ambiguous (*VUCA*) model

#### **2.1.2.2. Financial support for SMMEs during COVID-19 lockdown.**

According to Hes (2022), numerous public and private financial support programmes were set up in an attempt to reduce the effects of the global COVID-19 pandemic. Small enterprise owners and street vendors in South Africa were amongst those entities most affected by the COVID-19 restrictions. Thus, these enterprise owners could benefit from the various funding interventions during challenging time (Hes, 2022). According to Kunene (2020), the South African government supported small businesses with various relief funds during COVID-19 through the various business relief programmes.

According to the #CombatCovid SMME Survey, however, 68% of relief petitions were denied (Motaung, 2020).

## **2.2. SMMEs in the restaurant industry**

The restaurant industry includes professional restaurants, bars and other food service providers upon whose premises customers can enter order and eat food. Furthermore, this term applies to almost any type of eatery and is used in a variety of contexts (Wiesen, 2022). These settings include 'standalone' restaurants in a plaza or in a remote location, as well as restaurants attached to hotels or casinos (Wiesen, 2022).

Quick Service Restaurants (QSRs) or fast-food restaurants that typically have limited menus with quick-preparation items.

Full-service restaurants that provide table service and frequently have a large menu selection.

'Takeout' and home delivery services have grown rapidly (Khandelwal, 2019).

Restaurants across South Africa protested the country's ongoing prohibition of alcohol sales implemented during the COVID-19 alert level 5 lockdown claimed was destroying the restaurant industry.

According to the CEO of the Restaurant Association of South Africa (RASA), liquor sales restrictions made it impossible for restaurants to remain financially solvent (Prior, 2020). However, takeaway businesses such as Nando's fast-food chain reported an increase in delivery orders after the implementation of the national alert level 5 lockdown. Nando's CEO stated that the pandemic has accelerated its journey towards driving e-commerce to its customers (Prior, 2020). When the alert level 5 lockdown announced on March 23, 2020, some restaurants temporarily closed while others changed their operating procedures to protect their staff and patrons (Goldman, 2020). Due to the COVID-19 restrictions and concerns for the health of their staff and customers, the restaurant industry had to initiate innovative ways to reach their clientele (Said, 2020). Many restaurants, thus, made the decision to reach their clients through home deliveries and, in so doing, increased their customer base by being accessible online through social media or delivery Apps (Said, 2020).

Extra precautions with sanitation such as limiting the number of tables available, and also encouraging customers to order 'takeouts' online through delivery App platforms such as Mr Delivery Food and UberEats (Goldman, 2020). A food delivery App facilitates the delivery of food timeously to customers' doors in safe packaging (Sharma, 2022). This service enables the provision of food from restaurants close to the customer's location, thus, allowing customers who order food to experience a positive user-experience (Sharma, 2022). Some restaurants chose to have customers place their orders via telephone or delivery App platforms and would deliver the order if the distance between the restaurant and the customer's residence was within a certain distance. Customers could also place an online order and collect it from the restaurant. Feemste (2021) claims that online bill payment has increased in the wake of the COVID-19 lockdown. Digital payments helped people reduce personal contact and kept economies afloat during the coronavirus crisis (Xiao & Chorzempa, 2020).

### **2.3. The South African Banking industry**

Banking is an extremely important industry in the economy of South Africa – banks play an important role in the economy as financial intermediaries, allocating capital from lenders to borrowers, managing financial risks, facilitating trade and providing access to the payment system (Prabhavathi & Dinesh, 2018). This research uses a major South African bank's SMME client base POS financial data during the COVID-19 lockdown experienced between both April-May 2020 and 2021.

South African banks have the appropriate customer payment solution to help SMMEs re-imagine their business; with POS, devices enable SMMEs to receive payments from clients without the exchange of cash. The banks also offer SMMEs other payment options, for example, digital wallets and online payment solutions, whereby SMMEs receive payments without customers having to use credit cards (Standard Bank, 2022).

The banking industry's digitisation, as well as the continued presence and application of innovative banking solutions and enabling technology, necessitate the creation of new regulations (Willemse-Snyman, 2020). The banking industry perhaps has been the most adversely impacted by the growth of disruptive technologies throughout the economic landscape. (Kute, 2020). Retail payments were formerly a mainstay of large financial organizations in terms of payment facilitation and their key role in data collection, such as loans, mortgages and credit cards (Kute, 2020)

#### **2.3.1. SMMEs migration to POS devices**

Innovation aided the transformation of cash registers into computerised POS systems in the 1970s (Franciska & Sahayaselvi, 2017). Other gadgets that introduced include touchscreen displays, credit card

terminals, cash registers, receipt printers, barcode scanners and other components that are frequently found in a retail POS system (Franciska & Sahayaselvi, 2017). POS is the location at which a buyer exchanges money for goods or services with a seller (Franciska & Sahayaselvi, 2017). Sai (2017) states most SMMEs switched from cash registers and manual sales systems to electronic systems known as POS systems. The term 'POSES usually involves a system that is concerned with recording transactions between the seller and customer (Tikapichart, 2018) and comprises a combination of POS hardware and POS software that creates a system for transacting and processing payments (Feemste, 2021). SMMEs must be able to maintain their competitiveness and, more importantly, their ability to remain in operation (Girsch-Bock, 2013) thus, while many small- to medium-sized SMMEs are still working to replace their outdated cash registers, numerous enterprises have switched to more advanced payment methods that can process payments more efficiently and flexibly (Girsch-Bock, 2013).

Even though a POS system has many benefits, it is crucial also to consider the drawbacks. Furthermore, debit card users at SMME POS terminals run the risk of revealing their PINs to other customers (Kimmons, 2017). Most systems take steps to conceal the keypad, but none of these solutions flawless. Additionally, SMMEs run the typical security and privacy risks associated with conducting business online if their system is web-based (Kimmons, 2017). The convenience of having the POS system widely accessible can come with a certain level of risk, even though most POS station providers offer significant security protection (Kimmons, 2017). SMMEs rely on the network's operating software when using a POS system and that software needs updated frequently. A regular maintenance fee typically charged for POS systems to cover system updates and modifications. Furthermore, security lapses may occur if the software not updated regularly or if it is updated incorrectly (Conrad, 2017). Those security breaches may involve highly sensitive and protected information, depending on the nature of the business (Conrad, 2017). POS systems may become unpredictable or fail to process transactions properly if a user enters incorrect data or starts the wrong application (Evans, 2017). SMME owners and employees need to participate in adequate training to learn how to use the POS system and complete transactions properly because of their complexity (Evans, 2017).

### 3. Research methodology

Positivist philosophy was preferred for this study because the data collected was de-identified SMME financial data from a South African bank that was used to support mathematical claims that can be supported by logic and truth. De-identification involves stripping identifying information from a dataset so that it is impossible to connect individual data to a specific source (Garfinkel, 2015). The privacy risk connected to the information's collection, processing, archiving, distribution or publication decreased through de-identification (Garfinkel, 2015). Based on the POS device transactions from SMMEs' clients, the participating bank has a database of the SMMEs' monthly turnovers. These SMMEs' customers use POS devices to pay for goods and services. The goal of the POS device is to track and record all transactions that occur between a buyer and a seller (Bill, 2021).

A core component of positivist reasoning is deductive reasoning. The POS data employed during this study assist the researcher in reaching a clear/logical conclusion with regard to the financial impact of the COVID-19 lockdown on SMMEs. (Saunders et al., 2019).

#### 3.1. Research approach

A quantitative research method involves quantifying and analysing variables to obtain results. The participating bank's existing data's numerical nature, resulted in the chosen data collection method, quantitative. A quantitative research process uses numerical data from a determined and chosen subgroup of a population to generalize the results to the population being studied, quantitative research, thus, is systematic and objective (Creswell, Ebersohn, Eloff, Ferreira, Lvankova, Jansen, Nieuwenhuis, Pietersen & Plano Clark, 2019:184).

According to Kafle (2019), regression analysis attempts to investigate the relationship between two or more variables using an equation that is referred to as a 'regression line'. Because the result obtained using

the least squares method, the line also known as the 'line of best fit' (Kafle, 2019). Correlation is a predictive relationship between two variables (Kumar & Gautam, 2020). With this measure of dependence, the study determines the nature, direction and strength of the relationship between two variables (Kumar & Gautam, 2020). The degree of relationship between the variables is correlation analysis, however, this analysis does not specify which of the variables is a cause and which is an effect (Kafle, 2019). This research study used correlation to assess data from a statistical standpoint. The turnover of the SMMEs was the dependent variable, whereas the active POS devices of the SMMEs was the independent variable. Correlation utilized to examine the relationship between the two variables in terms of how one influences the other. The data for the study analysed using the Statistical Analysis System (SAS) system. SAS used to generate reports, gather and analyse statistical data and to run Structured Query Language (SQL) queries (Pedamkar, 2022).

### 3.2. Research design

An exploratory study is effective when using a quantitative framework to establish the influence of one variable on another (UKEssays, 2018). This study made use of secondary data from the participating bank's existing database. Upon analysing the existing data, the following criteria used, while keeping the research problem in mind: to compare the financial impact of the COVID-19 lockdown instructions imposed during both April-May 2020 and 2021 on Gauteng-based SMMEs in the restaurant using a South-African bank's POS data.

### 3.3. Research Strategy

A descriptive study establishes associations between variables (Creswell, 2013). The study investigated the likelihood of a change in one independent variable causing a change in another dependent variable.

#### 3.4. Longitudinal research study

This research study was longitudinal in nature as it investigated the financial impact of the COVID-19 lockdown restrictions on Gauteng-based SMMEs in the restaurant industries over time (April-May 2020 and April-May 2021). Secondary data on SMMEs monitored during this two-year period (2020-2021), the periods April-May 2020 and April-May 2021 observed separately to consider the results of the COVID-19 lockdown on the specified SMMEs operating in Gauteng, South Africa. Thus, the longitudinal time horizon was from April 2020 to May 2021 (a year into the lockdown period) and captured the longitudinal study's de-identified data from the participating South African bank through its SMMEs' customer base with active POS devices.

### 3.4. Population and Sampling

The SMME clients of a South African bank in Gauteng are the research population for this study. Due to the nature of this research study, probability sampling was used. This study decreased the size of a large population by only using 14.39% of pre-existing data then divided and grouped into restaurant SMMEs.

Table 2: Total South African bank's SMMEs with active POS devices during the period January 2020 to December 2021

	2020	2021
Restaurant	62 127	63 849
Medium	34 632	32 527
Small	15 969	17 937
Micro	11 526	13 385

Source: Participating South African bank

Table 2 above shows the total number of SMMEs within the restaurant that the participating bank had as clients from January 2020 to December 2021.

Table 3: 14.39% of the total SMME with active POS devices during the period April-May 2020 and April-May 2021

	2020	2021
Restaurant	10 545	8 112
Medium	5 950	3 169
Small	2 659	2 897
Micro	1 936	2 046

Source: Participating South African bank

Table 3 above contains the SMME population that sampled down to 14.39%. This table includes SMMEs that the participating bank has as clients in the restaurant industry from April-May 2020 and April-May 2021. On Monday, March 23, 2020, South Africa's President declared that the country would go into a nationwide alert level 5 lockdown beginning at midnight on Thursday, March 26, 2020. Thus, the financial data impact for the sample was monitored initially from April-May 2020, then a year into the lockdown being April-May 2021.

### 3.5. Data collection and analysis

Data collection was achieved through the collection of existing de-identified data of active POS turnover stats. As indicated previously, de-identification involves the process of removing personal information from a record or data set. Individuals' privacy is protected by de-identification because after such a process the data set no longer considered containing personal information (El Emam, 2016). Individuals' privacy cannot be violated if a data set does not contain personal information. As a result, the privacy protection provisions of the Freedom of Information and Protection of Privacy Act (FIPPA) would not apply to de-identified information (El Emam, 2016).

Data collected, analysed and described through graphs and tables. The collected de-identified data used to answer the research objective.

## 4. Findings

In April-May 2020, there were 10 545 restaurant SMMEs with active POS devices, while in April-May 2021 there were 8 112 such SMMEs, making a grand total of 18 657 restaurant SMMEs with active POS devices. One year into the COVID-19 lockdown restrictions, the restaurant SMMEs with POS devices had decreased by 2 433. It is evident that a year into the COVID-19 lockdown restrictions the restaurant industry lost the 2 433 of SMMEs with active POS devices. The decline in SMME POS devices may be attributable to the scaling down or closure of enterprises because of COVID-19 lockdown restrictions' negative financial effects, either reduced.

The participating South African bank defines micro-enterprises in the restaurant industry as businesses with a total yearly turnover of R0-1 million. The numerical data on all micro-enterprises for the study is based on the definition of micro-enterprises. A financial institution that monitors enterprise turnover, the banking sector only considers enterprise turnover when determining a business's size or categorisation.

### 4.1. Correlation analysis: Descriptive statistics of the financial impact of COVID-19 lockdown on the restaurant industry in 2020/21

The variables employed in this study's descriptive statistics are:

The independent variable was the SMME clients of the participating South African bank with active POS devices,

The dependent variable was these SMMEs' monthly turnover.

Table 4 below shows that the restaurant industry has 37 data points for each variable: turnover and POS. The mean consisted of the single average data obtained for the turnover variable, which was R92 000 000, whereas POS devices were 473 for the restaurant industry across the SMMEs. The standard deviation for turnover was R166 000 000 which was R74 000 000 higher than the mean/average turnover, meaning the variance was high. The standard deviation for POS was 642 devices - 169 devices more than the mean, indicating that the variance was high. While the minimum turnover was R7 92 000 and the maximum



turnover R628 000 000. Restaurant SMMEs responded to the COVID-19 lockdown through digital payments, including digital food ordering initiatives and home deliveries to clients, and prospered as a result. The minimum number of POS devices consisted of 5 per restaurant SMME, while the maximum was 2 952.

Table 4: Correlation analysis: descriptive statistics for the restaurant industry

### Restaurant

#### The CORR Procedure

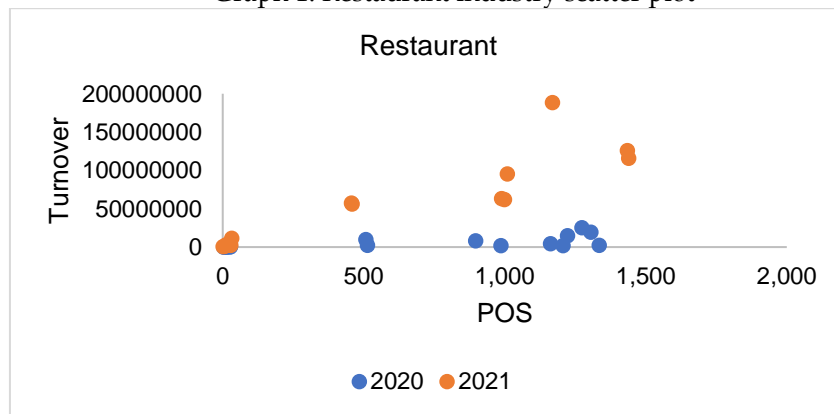
2 Variables: Turnover\_Total Point\_of\_Sale

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Turnover_Total	37	92761249	166342873	3432166203	792772	628165494
Point_of_Sale	37	472.67568	641.80813	17489	5.00000	2952

Source: Participating South African bank

Graph 1 below indicates that the restaurants’ maximum turnover in the restaurant industry was R200 million, while the maximum number of POS devices was 1 500. In 2020, there was a negative correlation between the two variables since the turnover did not increase although the number of POS devices did. In contrast, the year 2021 shows a positive correlation since both variables are rising. Therefore, the restaurant industry SMMEs were clearly financially impacted by the COVID-19 lockdown restrictions during 2020 compared to 2021, during which the restaurant industry showed financial turnover growth, indicating its financial recovery.

Graph 1: Restaurant industry scatter plot



Source: Participating South African bank

Table 5 below depicts a high correlation between the turnover and POS devices. The restaurant industry had the highest dependency on POS devices at 0.92 coefficients meaning there was a very strong correlation. This finding, therefore, indicates that this industry relied on POS devices for 92% of its sales a year into the COVID-19 pandemic lockdown. Sales for the restaurant industry were R91 823 953 in April-May 2020 and were R782 740 604 in April-May 2021. The medium enterprises had the highest sales, followed by small and then micro businesses. Restaurants became more reliant on digital sales, so additional ways to

reach customers in quarantine were provided through online orders, and options for food delivery services, increasing the reliance on POS devices, because customers had the option to pay immediately upon ordering food online or to request that delivery personnel bring a POS device for payment upon receipt of their order.

Table 5 Pearson correlation coefficients for the restaurant industry

Pearson Correlation Coefficients, N = 37 Prob >  r  under H0: Rho=0		
	Turnover_Total	Point_of_Sale
Turnover_Total	1.00000	0.91828 <.0001
Point_of_Sale	0.91828 <.0001	1.00000

Source: Participating South African bank

#### 4.2. The findings of the financial impact of COVID-19 lockdown on the restaurant industry

During May 2020 the restaurant industry's medium enterprises had the highest turnover, followed by small business and then micro enterprises with the lowest turnover – these latter enterprises overall were the most adversely financially impacted in 2020. There, however, was growth in all three enterprises from April to May 2020 – a sign of their adapting to change during a crisis. Furthermore, a year into the COVID-19 lockdown in May 2021 small enterprises had the highest turnover, followed by micro business, while the medium enterprises had the lowest turnover. Small enterprises may have had the highest turnover because some of these businesses were forced to lay off employees due to the financial strain of COVID-19 lockdown. The reduction of staff numbers may have resulted in some medium enterprises becoming small enterprises as a tactic to survive the pandemic. While some small businesses may have had to apply the same strategy and shift to being micro-enterprises. Due to the fact that consumers could order 'takeouts' for home delivery, restaurants may have reduced their staff sizes to accommodate fewer 'sit-in' patrons. The restaurant industry's maximum turnover was R200 million, while the maximum amount of POS devices was 1500. The restaurant industry relied on POS devices for 92% of its sales a year into the COVID-19 lockdown.

### 5. Practical implications and conclusions

When the alert level 5 lockdown declared, some restaurants shut down temporarily while others adjusted their operational protocols to safeguard their employees and customers (Goldman, 2020). Stringent liquor sales limitations, according to the CEO of the Restaurant Association of South Africa (RASA), made it hard for all forms of eateries to remain financially viable (Prior, 2020).

However, restaurant industries turnovers increased in 2021 compared to 2020, indicating that there was some adaptation or rather innovation around mitigating the COVID-19 pandemic challenges. In terms of SMMEs in the three industries, the micro businesses were the most adversely financially impacted with the lowest turnover, followed by small enterprises, while medium enterprises achieved the highest turnover.

#### 5.1. POS devices: restaurant industry

South African banks offer the ideal consumer payment solution to assist SMMEs in reimagining their businesses, with POS devices allowing SMMEs to be paid without using cash (Standard Bank, 2022). The total SMMEs population that was used for the data gathering of this research study was 39 694 active POS devices used during the months of April to May 2020 and 2021. The restaurant industry utilised 9% of the total POS devices that used to gather data for this study. Medium enterprises comprised 55.6% of POS

devices; small enterprises comprised 24.3% of POS devices and micro enterprises the remaining 20.1%. Medium enterprises had the highest number of active POS devices, small enterprises the second highest number of active POS devices and micro enterprises the smallest number of active POS devices. It is evident, however, that micro-enterprises are adapting well to POS devices because the difference between the small and micro enterprises' use of such devices is only 4.2%.

## **6. Limitations and direction for future research**

### **6.1. Limitations of the study**

The participating South African bank's de-identified SMME POS data only consists of turnover arising from POS card transactions data, meaning cash purchases were not included in research.

The participating South African bank's participation was voluntary, and they could have withdrawn from this research study at any time if they so wished.

The study only made use of SMME POS turnover financial data from one South African bank.

Only one SMME industry, restaurant, was used for the study.

Limitations of the quantitative approach included a lack of an in-depth understanding of context because the research was only based on data collected from one bank.

Not all Gauteng SMMEs are POS device clients of the participating South African bank, there are independent aggregators and other banks that offer the same product that were not involved in this study. Thus, the research was limited to the number of SMMEs the one participating bank has as POS clients.

Only 14,39% of the total SME population during April-May in 2020 and 2021 were used for this research project.

### **6.2. Suggestions for future research**

Future research could focus on investigating the utilization of POS devices, including the types available and how they operate as well as their functionalities, in addition to suitable types of POS software/devices employed by enterprises in terms of the size of business and the products and/or services it offers. Further thinking about the future of POS as an innovative financial device is needed.

Further potential research could focus on mechanisms that SMMEs can use to prepare better for unforeseen events. This study's findings indicated that micro and small businesses were the most adversely financially impacted enterprises by the results of the unforeseen challenges of the COVID-19 pandemic lockdown restrictions. A study of the various types of business insurance policies currently available and the types of unforeseen events they cover could be part of future research. The investigation of situations outside of insurance issues, such as money management and problem-solving abilities could also be of value to SMME owners and managers.

A comparative study of the available digital payment wallets as a means of payment for POS device transactions. Currently, these digital wallets include Android Pay, Apple Pay, Fitbit Pay, Garmin Pay, Google Pay and Samsung Pay. Investigating and comparing all the digital payment methods currently accessible in South Africa, as well as assessing the compatibility of POS device software for enterprises to cater for clients who have switched to digital payment solutions, might be the focus of such research.

A study of the effects of load shedding on South African SMMEs. Many of these enterprises have had to rely on 'backup' measures to remain operational. The COVID-19 lockdown was not the only problem that SMMEs faced; thus, load shedding might have likewise affected SMMEs' ability to operate effectively and resulted in adverse financial consequences.

## **7. Ethics**

The bank permitted the researcher to use this data for research and academic writing purposes only without making reference to the bank's name as being the data source in any manner whatsoever. The bank further acknowledged that the research data would be made accessible to third parties via the research report and/or academic writing that may be publicly available. The use of de-identified data means that no personal information about the Gauteng SMMEs, such as business names, was disclosed, thus, making it

impossible to identify individual SMMEs (Garfinkel, 2015). The bank's legal team was of the opinion that the permission letter only affords the researcher with the appropriate authority to use the said data for the specified research purpose and, thus, did not believe a non-disclosure agreement (NDA) was necessary.

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