ECONOMIC DISRUPTION RESULTING FROM COVID-19 PANDEMIC AND THE IMPLICATION ON THE FINANCIAL PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN THIKA SUB-COUNTY IN KENYA

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ECONOMIC DISRUPTION RESULTING FROM COVID-19 PANDEMIC AND THE IMPLICATION ON THE FINANCIAL PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN THIKA SUB-COUNTY IN KENYA

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ABSTRACT

Covid-19 pandemic affected most businesses globally and metamorphosed from a health concern into an economic crisis of unquantifiable proportions. The pandemic specifically affected SMEs in a significant way. There was disruption of trade across the globe due to travel restrictions resulting in businesses not accessing the raw materials for their manufacturing activities as well as not accessing the markets for finished products. Some businesses especially in the hospitality industry had to shut down following the dwindling number of tourists arriving in the country as a result of travel restrictions by various countries. This study determined the implication of disruptions brought by the pandemic on financial performances of SMEs. The study was anchored on Stakeholders Theory, Just in Time (JIT), Theory of Disruptive Technologies and The Exogenous Growth Theory. The study employed cross sectional descriptive research design. The research reached out to one hundred and twenty-two businesses, as the target population, which were fully licensed by the County government of Kiambu and have been in operations for the year 2019 to 2021. The researcher used a questionnaire to gather primary data which was administered to respondents through the drop and pick up technique. Data was analyzed using multiple regression. The study found that government Covid-19 regulations, supply chain disruptions and technological disruptions had a significant effect on financial performance of SMEs. The study recommended that there was need by the government to review some of the policies to create an enabling environment where businesses could thrive. Beyond government intervention, private companies could partner with technology companies instead of developing in-house technologies. Governments could further complement these interventions by investing in a set of enabling digital pillars. In the post–COVID-19 era, development finance institutions can further support the scaling up of technology companies in emerging markets by intervening more upstream.

Key Words: *Business Disruption, Covid-19 Pandemic, Economic Disruption, Pandemic*

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INTRODUCTION

There was a general concurrence by most economists that all indicators in the last quarter of the year 2019 signaled a tough and tumultuous global economy in the coming year of 2020. There were rising tractions amidst key trading allies, issue of inequalities between trading countries, climate change concerns, global debts getting to record high levels, rapid changes in technology, factors that threatened to disrupt the production, trading and consumption patterns (Tembo, 2020). The Covid-19 outbreak could therefore not have come at a bad period. It is anticipated that the outbreak may result to wounding up of many established brands around the world as the pandemic has metamorphosed from a health concern into an unprecedented economic crisis. After the virus started spreading, the whole world went into a lockdown with countries closing their borders and restricting international travels. This resulted to a stationary life where most economic activities around the world halted and everyone was just concerned about their lives and how to survive (Tucker, 2020).

The pandemic had enormous effects on the globe economy. In the year 2020, which marked the height of the world lockdown and travel restrictions, the world real GDP declined by 3.3% compared to the year 2019 while the volume of goods traded in the world declined by 5.3% and foreign direct investment flow reduced significantly by 42% (Hayakawa & Mukunoki, 2021). According to World Economic Forum (2020), the United States of America (USA) which is regarded as the most stable nation economically had its economy greatly affected by the pandemic. The GDP declined at an annual rate of 32.9% and 30.2 million Americans registered for unemployment aid by July, 2020. The vagaries of the pandemic were felt across the entire globe. India's GDP dropped by 4.8% which is the steepest decline recorded in the recent past (Tomiura, 2020). According to Senga and Zhang (2021) Sales revenue in China including Hongkong, Japan, India, Indonesia and Brazil sharply decreased by 20% in the first six months of the year 2020.

At the regional level in Africa, the pandemic caught most countries unprepared and with minimal or non-existent mechanisms to cope with the virus. The pandemic was an unprecedented crisis never experienced before that quickly moved from a health concern into an economic nightmare as the continent is a net importer of huge supplies from other parts of the world (Rapoza, 2020). In the year 2019, Africa's GDP growth was at 3.6% and many countries were focusing on opportunities that could accelerate economic and social progress as well as reduce poverty. Following the lockdown and restrictions that were put in place to fight the pandemic, Africa's GDP growth rate in various countries dropped to an estimated rate of 1.8% to -2.6% depending on policy response to the pandemic (OECD, 2020). The travel restrictions which were made by respective governments resulted in reduced trade volumes by up to 30%, halted production activities where materials and expertise skills are sourced outside the country and led to loss of export markets. The exports which were greatly affected are horticultural produce, tea and coffee, mineral ores and fruits (Rapoza, 2020).

Closer home in the country, the pandemic has affected the SMEs sector in the country substantially, including shutting down of businesses. The travel industry was deeply affected due to the international travel restrictions resulting to an estimated 90% of hotel rooms being empty and majority of tourist destinations reported losses in the year 2020 and 2021 (Hersi, 2021). A survey by KEPSA (2020) indicated that expos, conferences, sporting events and cultural centers like art galleries and museums were greatly affected by the pandemic. Personal services like hairdressing, fitness centers, and massage parlors were also affected due to the need to reduce physical contact and maintain social distance. The pandemic has also aggravated the unemployment challenge in the country. According to KNBS (2020) estimated that 1.7 million people were rendered economically inactive as a result of the pandemic. Federation of Kenya Employers (2020) indicated that on average each organization lost 33 jobs between March and August 2020.

The SME sector was also identified and earmarked as a key pillar of growth and driver in achieving hastened development in the country's "Vision 2030 Blueprint". The blueprint sought to promote growth of industries and transform Kenya into a mid-level income nation which provides comfortable ways of life to its entire citizen by year 2030. A survey by KNBS (2019) found that SMEs employ approximately 14.9 million Kenyan. The sector accounts for about 81.9% of employment opportunities in the country. The licensed businesses constitute 42.2% with a total of 4 million paid employees while the unlicensed enterprises constitute 57.8% of total businesses. The survey further established that SMEs enterprises are prevalent in the service sector. Most of them operate in wholesale and retail trade, sale of spare parts and servicing of motor vehicles and motorcycles, accommodation, catering services among others. In terms of classification of business owners by gender, a survey by World Bank (2018) established that men own 47.9% of licensed businesses, women at 31.4% and 16.5% by male-female partners. In addition, most of unlicensed businesses are owned by women at 60.7%

According to a report by W.H.O (2020), there was an emerging consensus that Covid-19 may last for an indeterminate future. This resulted to publishing of various guidelines to provide a framework that continues to guide businesses as they operate under the new environment. The guidelines were meant to help businesses operate safely as well as reduce the rate of infection in the places of work. The measures proposed included designating a member of staff or a team, depending on the size of the establishment, for ensuring high compliance levels with the containment guidelines, maintain social distancing at the workplace by members of staff and patrons. This was to be achieved by observing a physical distance of at least 1.5 meters, maintaining hygiene by either washing hands on a regular basis using running water and soap or sanitizing the hands with alcohol based sanitizers, ensuring surfaces and tools of work were thoroughly cleaned, wearing of masks while interacting with other people both in public or private places, minimize physical contact by not shaking hands or even hugging and proper disposal of waste resulting from Personal Protective Equipment (PPE) like masks and gloves. Countries were expected to tailor make their respective containment measures but majority adopted the WHO guidelines. The proposed regulations had an adverse effect on businesses as some resulted to reduced capacity as well as additional costs to ensure compliance. The reduced operating hours also meant that business revenue was affected especially those that required human physical contact and those which could not be moved online (Ahmed,2021)

Statement of the Problem

World Health Organization (2020) termed Covid-19 pandemic as an unrivalled world crisis that has resulted in a health crisis and unusual economic meltdown across the globe. World Trade Organization (2020) in an SME competitiveness outlook report stated that the pandemic started as a health crisis but has changed into an economic nightmare that has affected all aspects of trade and investment, as well as worsening the unemployment levels. Further in the same report, WTO approximated that world trade declined sharply by a high of 32% in 2020 whereas global GDP declined by around 5%.

Although the pandemic eventually spread to all countries, the economic consequences have not affected everyone in the same way. MSMEs firms in developing countries especially in Africa have been greatly affected. (WTO, 2020). KEPSA (2020) stated that one in five firms may go bankrupt and Africa risked to lose USD2.4billion worth of exports in the years of 2020 and 2021. The unemployment crisis in Africa may also become catastrophic because there are few resources to combat the pandemic. MSMEs in Africa are vulnerable to the repercussions of the crisis. (Mene, 2020).

There are concerted efforts to understand the economic implications of the pandemic on SMEs across the globe. Fabian (2020) in his study on obstacles and opportunities available to SMEs in catastrophic periods identified SMEs with low volumes or inconsistent cash flow as more likely to suffer more and struggle to remain profitable. The study also revealed the connection between profitability and strategy, particularly entrepreneurial positioning and market positioning while crafting strategies. Pantano et al (2020) did a study on the tribulation's retailers went through during the Covid-19 outbreak. The study noted that retailers who were slow to adapt and design strategies to mitigate the effects of the pandemic were hit hard financially. The study advised that retailers should prioritize crucial business activities and develop contingency plans for disruption. Sharma (2020) in his study on how the pandemic affected the supply chain decisions stated that to mitigate the effects of the pandemic, business managers had to rethink and redesign the supply chain as well as leverage on technology in the business's operations. The study is therefore relevant as it sought to establish the impact Covid-19 disruptions had on how SMEs, operating within Thika sub-county, performed financially.

Objectives of the study

The general objective was to establish the effects of Covid-19 pandemic disruptions on SMEs financial performances within Thika sub-county. The specific objectives were outlined be as follows:

- To establish the effects of government Covid-19 regulations on the financial performance of SMEs in Thika sub-county, Kenya.
- To establish the effects of supply chain disruptions on the financial performance of SMEs in Thika sub-county, Kenya.
- To establish the effect of technological disruptions on the financial performance of SMEs in Thika Sub-county, Kenya.

The study was guided by the following research questions

- What are the effect of government Covid -19 regulations on the financial performance of SMEs in Thika Sub-county Kenya?
- What are the effect of supply chain disruptions on the financial performance of SMEs in Thika Sub-county Kenya?
- What are the effect of technological disruptions on the financial performance of SMEs in Thika Sub-county, Kenya?

LITERATURE REVIEW

Theoretical Framework

Stakeholder Theory

A Stakeholder is an individual or a group of persons whose actions can have an impact on the organization or can be affected by the occurrences or activities of an organization as it pursues its objectives. The theory implies that managers serve numerous relationships which include the suppliers, employees, customers, government among others (Freeman, 1999). According to Sundaram and Inkpen (2004) stakeholder's theory make efforts to address the interests of various group of stakeholders by the management which may vary and at time conflicting. Clarkson (1995) defined the firm as a system with various stakeholders and it exists with an aim to serve the interest of its stakeholders.

Regulations refer to availability and enforcement of legal instruments such as laws and other government rules. It entails the application of legal instruments for the implementation of socio-economic policy objectives like resources allocation efficiency, stabilization, or fair and just income distribution Domas (2003). The stakeholder's theory contends government as one of the key stakeholders in a business organization and is thus relevant to the study as it explains why government had to step in and regulate how businesses were to be conducted during the pandemic. The government obtains a huge chunk of its revenue from businesses in form of taxes on profits, fees and other levies that sustain its operations. It was for this reason that the government had to step in and regulate how businesses were to operate by drawing a raft of measures to be observed during the Covid-19 disruptions in an effort to protect the businesses. The government guidelines were issued through the

Ministry of Health and that of Industrialization, Trade and Enterprise Development. This was aimed towards protecting members of the public from contracting the virus, as well as from unscrupulous business people who may want to profit from the pandemic. The study sought to analyze the implications these guidelines issued by the government had on the performances of SMEs within Thika sub-county.

Just in Time (JIT)

JIT concept is a workflow technique in manufacturing that aims at putting time and costs in production and distribution of materials at the minimum. The concept was popularized in early 1970s by the Toyota manufacturing plant in Japan with an aim to satisfy consumers' needs promptly in a technique that lay emphasis on the human resources, plant and systems. The main aim of JIT is to achieve nil inventories within the firm as well as its supply chain. This significantly reduces inventories associated costs, completely utilizes the organization's capacity thus maximizing the Return on Investment (ROI) (Cert, 1995).

For the JIT concept to work effectively and achieve desired results, there is need to create a stable work schedule, establish dependable partnership with both vendors and customers, design a procurement policy on small regular purchases, ensure and promote employees' compliance and commitment as well as ensuring top management commitment to ensure successful implementation (Mwangi, 2006). The concept is very relevant in the study as one of the major disruptions that resulted from Covid-19 pandemic was supply chain disruptions. The study sought to establish how production or manufacturing was affected by the resulting supply chain disruptions across the globe and also interrogate whether the concept of maintaining zero inventories in an interconnected world with unforeseen forces that may continue to disrupt the supply chain across the globe is a good and sustainable concept.

Theory of Disruptive Technologies

Disruptive technologies can be termed as an innovation that has the capacity to alter the way consumers, businesses and industries function (Ben, 2013). Technology disruption is the discovery of completely new technology or discovering an existing one and putting it into use in such a way that results to obsolescence of the one that has been in use for years or prolonged period of time. In some instances, a new business process or model using the existing technology can also result to disruptions in the current market ending up with a completely new market altogether (Harvard Business Review, 2008). Businesses and organizations need to be innovative, adaptive and continuously invest in technology or they will be reduced to market followers themselves (Christensen, 1997)

At the peak of the pandemic, many consumers shifted to online platforms and businesses and organization had to respond to adapt to the same. This was compounded by the government regulations that encouraged people to maintain physical distance and reduce contact as a way of minimizing the rate of infection (Henderson, 2020). According to a survey by McKinsey and Company (2020), there was a rapid shift by most companies and industries on how they continued to interact with customers via digital means and the rate of adoption of technology was accelerated resulting to businesses processes changing completely. The theory supports the study as the researcher sought to establish how technological disruptions that resulted from the pandemic affected businesses, how businesses reacted to the disruptions and whether this had any impact on the financial performance.

The Exogenous Growth Theory

The theory contends that external (exogeneous) forces are vital in influencing the success of a business, industry or economy than internal (endogenous) factors. The theory insinuates that the determining factors for growth in business are usually out of one's control and can only be reacted to but not directed. One of the features of exogenous forces is that they cannot be swayed by those in production of goods and services. However, it is consequential to be apprised of their existence to enable business leaders originate business strategies aimed at dealing with the likely results (Aghion &Howitt, 1998).

According to Lawrence and Lorsch (1967) organizations should always be aware of the external environment in which they operate. This is because organizations that are adaptive and able to match their structures to the environment perform better than those which do not. The theory is very relevant to the study which seeks to establish how Covid-19 pandemic disruptions (exogenous factor) affected the financial performance of SMEs in Thika Sub-County. The study established whether the businesses that were quick to develop strategies to deal with the unprecedented pandemic outperformed those that were sluggish or tried to conduct business as usual.

Empirical Review

A study was done by Sheth (2020) on the effects of Covid-19 pandemic on consumer behavior. The study focused on whether the old consumers pattern would die or return after governments introduced various regulations that constrained human interactions. It also explored how the pandemic had altered several facets of end users from personal interaction, shopping behaviors, participating in cultural events such as marriage ceremonies, children bearing and even relocation. The study found out demand and hoarding for necessities increased significantly at the start of the pandemic by both consumers and middlemen, who anticipated to resell later at increased prices, as both adapted to the restrictions imposed by governments. The study also concluded that suppressed demand could result to an outstanding growth in sales of imperishable items such as vehicles, houses among others as some realities of the pandemic may put consumers in a buying mood. However, the study focused only on the changing consumption patterns but not whether these affected the financial performances of the businesses. The identified gap was addressed by this research.

A study was conducted by Mwai (2019) regarding government regulations and their effects on businesses in Kenya. The study analyzed various government policies on infrastructure, education, training as well as cost and availability of power and how they influenced the business environment and eventually the bottom line of enterprises. The study concluded that policies by government influence to a large extent the business environment and eventual financial performance. The study recommended the need by the government to review some of the policies to create an enabling environment where businesses could thrive. However, the study failed to examine how policies on health can influence the financial performance of businesses. This was addressed during this study.

A study was done by Sharma and Bikash (2020) on how the pandemic affected decisions on supply chain. The study revealed the major obstacle for organization was estimating the authentic customers' demand as the contagion resulted to changes in demands, either rise or decline, for certain products making projection of the final demand hard and pressing to address. Some organizations had also not invested in technology and thus found it difficult to be visible across the value chains. The study concluded that business managers must rethink and refine the supply chain, adopt technology in building supply designs as well as emphasize on dependable supply chain. The study however focused only on the supply chain challenges but not how these affected the financial performances of businesses. This gap was addressed by this research.

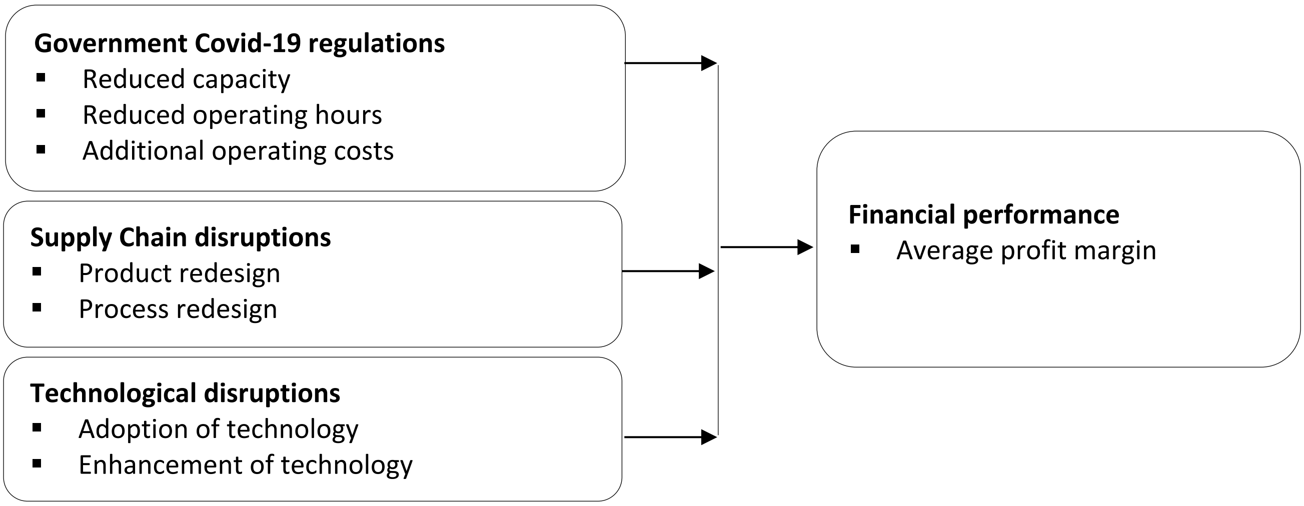
Another study was done by Cardinali et al (2020) on managing uncertainties during a global pandemic with a perspective on international business of Samsung, a company based in South Korean and specializes in manufacturing electronics and home appliances. The study emphasized that businesses should put more focus on worldwide business research at it has largely been disregarded in the times preceding the crisis as this may give businesses a perspective of the happenings across the globe and also how to deal with them. The study noted that Samsung managed to handle the supply chain challenges as it had initiated an enormous production network over time by constructing production units in diverse places. This was aimed to mitigate the risk of single sourcing, satisfy huge and growing demand, and the determination to cut on its reliance on China. This enabled Samsung to focus its production on locations which were least affected by the pandemic thus only slowing the production but not completely shutting down. The study however did not compare how the financial performance was affected compared to businesses which only single sourced their materials like in the case of JIT theory.

A study was done by Magableh (2021) on how the Covid-19 affected the supply chain operations and the likely resulting trends. The study submitted the pandemic has resulted to a new era in the supply chain and equally necessitated the need to reexamine how the global supply chains had performed. The crisis has also resulted to the need for increased emphasis on localized supply chains to avoid major crisis as has been witnessed. The study also noted that organizations must initiate a culture of sharing information and improve on communications in regard to supply chains. Technology and facilitating plans were also identified as key to help rebuild the supply chain system as well as revamp its adaptability in the future. The study however did not evaluate any opportunities that may have resulted from the pandemic and how the supply chain disruptions affected the financial performance of businesses. This was addressed through this research.

A study was done by LaBerge et.al., (2020) on how the pandemic shoved companies to technology decisive moments and changed businesses forever. The study established that businesses in their reaction to Covid-19 had to embrace technology earlier than had planned and assume the new ways of business which may stick going to the future. The study established that businesses had to create digital or digitally enabled products as most clients had moved towards online platforms as human interactions were reduced following the imposition of various measures by the government. To remain competitive during the business and economic environment that resulted due to the pandemic, companies had to leverage on technology in customer interactions and the entire supply chain system. The study concluded that no company could afford to ignore the technological disruptions that resulted from the pandemic if it desired to remain in business and also be competitive. However, the study did not review the impact the technological disruptions had on the performance of the businesses. This research seeks to compare financial performances before and during the pandemic as well as on companies that leveraged on technology to drive businesses and address the issue.

A study was done by Ganti (2021) on whether the pandemic accelerated the adoption of technology and created opportunities for businesses. The study noted that dramatic events have always speeded up the adoption of disruptive technologies. The study established that the pandemic has challenged how people work and ways of life worldwide but at the same time has offered opportunities bigger than any other for disruptive companies. The pandemic challenged almost all businesses and how they conduct their operation. As various governments imposed measures restricting human interactions, people reacted by adopting a culture of working remotely. This created a surge in demand for tools to enable remote working and saw service provider such as Zoom grow exponentially as businesses settled in the new way of life. It also resulted to majority of people adopting grocery delivery at their places of residence therefore disrupting retail shopping. This has resulted to mushrooming of numerous online shopping platforms that enables shoppers to order for items they need at the comfort of their homes. This has created opportunities for so many small businesses but also challenged huge and well-established retailers to adopt as complacency would easily kick them out of business. The two examples amplify some of the opportunities that resulted from technological disruptions as a result of the pandemic. However, the study did not cover the implication of this on the financial performance of businesses that adopted the new way of doing things. The gap will be filled by this research by comparing the performance before and after the technological disruptions.

Conceptual Framework



Independent variables **Dependent Variable**

Figure 1: Conceptual Framework

Source: Author (2022)

METHODOLOGY

The study adopted Cross sectional descriptive design. It helps the researcher in choosing suitable research methods that best suit the subject matter (Lewis, 2009). In this study, the target population was one hundred and twenty-two (122) registered businesses. The business must be duly licensed by the county government of Kiambu, been in operation for at least three years, and are located in Thika Sub-county, Kiambu County. The study employed stratified random sampling in formulating a sample from businesses operating in Thika Sub-county in Kiambu County. This sampling technique enables the population to be divided into several subsets based on singular or multiple characteristics. To determine the size of the sample, the Krejcie and Morgan (1970) model was employed. The sample size was 92 registered businesses. The primary tool that was used for collecting data was a questionnaire. The questions in the questionnaire were majorly close-ended but there were a few open-ended questions to enable respondents explain their responses further. To test for reliability, Cronbach's Alpha coefficient was employed. The researcher conducted a pilot-test on the questionnaire.

The researcher and a research assistant dropped the questionnaires to respondents' places of business and collect them later at an agreed time. The research adopted descriptive statistics to describe primary attributes of the data. To analyze the quantitative data, the research employed Statistical Package for Social Sciences (SPSS) and present the summarized data in the form of charts, tables or graphs.

FINDINGS AND DISCUSSION

Descriptive Statistics

Government Covid-19 Regulations

The objective was to determine how true the statements on government Covid-19 regulations were according to the respondents.

Table 1: Government Covid-19 Regulations

	Mean	Std. Dev.
Maintaining social distance reduced my business capacity	4.6582	.67721
Ban on international and inter-county travels affected my business	4.0000	.30000
Complying with government health requirement led to additional costs to the business	4.4608	.34841
The night curfew resulted to reduced business operating hours thus affecting my business negatively	4.7481	.16122
Aggregate Mean	**4.4668**	**.37171**

Source: Researcher (2023)

The findings of the descriptive analysis established that government Covid-19 regulations disrupted the SMEs in Thika Town Sub-County, Kenya (Aggregate Mean = 4.4668, Std Dev= 0.37171). This was justified by high mean for every statement presented. Moreover, the findings of the study observed that maintaining social distance reduced my business capacity (Mean=4.6582), ban on international and inter-county travels affected my business (Mean=4.0), and complying with government health requirement led to additional costs to the business (Mean=4.4608). Additionally, the study found that the night curfew resulted to reduced business operating hours thus affecting my business negatively (Mean=4.7481).

Table 2: Percentage of Business Capacity Reduction

		Frequency	Percent
Valid	Below 20%	6	7.6
	20-40%	12	15.2
	40-60%	6	7.6
	More than 60%	55	69.6
	Total	79	100.0

Source: Researcher (2023)

The results indicated that majority of the SME (69.6%) experienced a high decline in business capacity related to government Covid-19 regulations. The findings of the study were inconsistent with those by Sheth (2020) that the demand and hoarding for necessities increased significantly at the start of the pandemic by both consumers and middlemen, who anticipated to resell later at increased prices, as both adapted to the restrictions imposed by governments. However, the findings were in consistent with Mwai (2019) that policies by government influence to a large extent the business environment and eventual financial performance. Further, Hart and Wilson (2020) supported that the influence of regulations on businesses largely depends on how the business and its stakeholders adapted to the regulations.

Supply Chain Disruptions

The objective was to determine the extent to which the supply chains were disrupted by the Covid-19 pandemic.

Table 3. Supply Chain Disruptions

	Mean	Std. Deviation
The pandemic affected the access to my supplies	3.8481	.36122
The time taken to receive the supplied products increased considerably	4.0819	.48354
Alternative suppliers were available at a higher price	3.9873	.49338
The alternative suppliers could not meet the quality required	4.4557	.50122
The business faced stock out during this period due to increased supply cost	4.3797	.48842
Aggregate	**4.1504**	**0.46556**

Source: Researcher (2023)

The aggregate mean of 4.1504 and a standard deviation of 0.46556 indicated that there was general consensus that the supply chains for majority of the SMEs were highly disrupted during the Covid-19 pandemic period. The pandemic affected the access to my supplies which was justified by a mean of 3.8481. Complementary to that, there was a general consensus among the respondents that the time taken to receive the supplied products increased considerably (Mean=4.0819). Corresponding to this, majority opined that COVI9-19 had led to an upsurge in operational costs for traders and increased prices for retailers and processors as a result of delay of movement of inputs (Mean=3.9873). They further argued that the alternative suppliers could not meet the quality required justified by a mean score of 4.4557. Additionally, majority opined that business faced stock out during this period due to increased supply cost (Mean=4.3797). This clearly supported the challenges highlighted that price changes, customer access to products, customer handling, cost incurred in spacing and constant cleaning the premises, changes in customer demand, and adherence to the government set guide affected the supplied products prices.

The study agrees with Sharma and Bikash (2020) the major obstacle for organization was estimating the authentic customers' demand as the contagion resulted to changes in demands, either rise or decline, for certain products making projection of the final demand hard and pressing to address. The study was consistent with Cardinali et. al., (2020) findings that Samsung managed to handle the supply chain challenges as it had initiated an enormous production network over time by constructing production units in diverse places. This was aimed to mitigate the risk of single sourcing, satisfy huge and growing demand, and the determination to cut on its reliance on China.

Technological Disruptions

The section presents results related to technological disruptions in Small and Medium Enterprises in Thika Sub-County, Kenya.

Table 4: Technological Disruptions

	Mean	Std. Dev.
Businesses that adapted technology and new businesses processes have been less affected by the disruptions of the pandemic.	4.3797	.48842
Adopting technology has enabled businesses to maintain and retain their customers.	4.1111	.54311
The pandemic has made businesses develop online platforms and increase their online presence	4.3544	.53200
Embracing technology has decreased business operational costs	4.1716	.47777
The pandemic made businesses to accelerate the adoption of technology in their processes	4.2345	.45643
Adopting technology has resulted to increased sales	4.3544	.53200
Aggregate Score	**4.2676**	**0.50496**

Source: Researcher (2023)

The study aggregate score on technological disruption mean of 4.2676 and standard deviation score of 0.50496 indicates that technology advancement in the operations of enterprises keeps the SME owners effective and enables efficiency in their operations. The results further indicated that businesses that adapted technology and new businesses processes were less affected by the pandemic disruptions (Mean=4.3797). Further, the study indicated that adopting technology enabled businesses to maintain and retain their customers (Mean=4.11). The pandemic made businesses develop online platforms and increase their online presence (Mean=4.35). The results indicated that embracing technology decreased business operational costs, the pandemic made businesses to accelerate the adoption of technology in their processes and adopting technology resulted to increased sales. These were justified by mean of 4.17, 4.23 and 4.35 respectively. It was clearly demonstrated that technology highly affected the access, timely delivery, cost and quality of products sold by the SMEs in Thika Town Sub-county.

The study was consistent with LaBerge et al., (2020) findings that businesses had to create digital or digitally enabled products as most clients had moved towards online platforms as human interactions were reduced following the imposition of various measures by the government. The study agreed with Ganti (2021) that the pandemic has challenged how people work and ways of life worldwide but at the same time has offered opportunities bigger than any other for disruptive companies.

Financial Performance of SMEs

The section presents the level of net profit margin, loan repayment capabilities and sales level.

Table 5: Financial Performance

	Mean	Std. Dev.
My business was making profits during the Covid-19 pandemic period.	1.3797	.48842
The business settled its expenses during the Covid-19 period effectively e.g. rent, salaries, water and electricity	1.4937	.50315
The business experienced no challenges servicing the loans during the Covid-19 period	1.3797	.48842
The loans were serviced on time and no debit interest accrued	2.5443	.50122
The business operating costs were not significantly affected due to Covid -19 health requirements	2.4810	.50283
There was an increase in sales volume in the period 2019 to 2021	1.6780	.43567
Aggregate Score	**1.8261**	**.48661**

Source: Researcher (2023)

From the findings presented in Table 5. established that the financial performances of the SMEs under COVID-19 restrictions were poor. The findings were justified by an aggregate mean of 1.8261 and an aggregate standard deviation of 0.48661. Majority of the SMEs profits declined (Mean=1.3797), expenses surged exponentially (Mean=1.4937), Problem of servicing loans increased (Mean=1.3797) and the loans were not serviced on time and no debit interest accrued (Mean= 2.5443). The business operating costs were significantly affected by Covid-19 health requirements (Mean=2.4810) and there was a percentage decrease in sales volume in the period 2019 to 2021 (Mean=1.678).

The respondents agreed that to communicate with their customers, partners, suppliers, investors, and other stakeholders, creating a communication plan was one of the ways of protecting businesses against covid-19 disruptions. The enterprises cutting expenses and other variable spending, like marketing, new hiring, and travel, may help get through the financial difficulties.

Diagnostic Tests

Inferential Analysis

The following section presents the inferential analysis results related to Covid-19 pandemic disruptions and SMEs financial performances. The section presents the correlation and regression analysis.

Correlation Analysis

Table 6. Correlations

		Regulations	Supply Chain Disruptions	Technological Disruptions	Financial Performance
Regulations	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	79			
Supply Chain Disruptions	Pearson Correlation	.048	1		
	Sig. (2-tailed)	.675			
	N	79	79		
Technological Disruptions	Pearson Correlation	.131	.997**	1	
	Sig. (2-tailed)	.789	.500		
	N	79	79	79	
Financial Performance	Pearson Correlation	-.556**	-.743**	-.723**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	79	79	79	79

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

Source: Researcher (2023)

The correlation coefficient was interpreted based on 5% significance level. When the values are close to +1 or -1 the relationship is strong positive and strong negative respectively. The study found that government Covid-19 regulations, supply chain disruptions, and technological disruptions had a strong and negative effect on the financial performance of SMEs as reflected by Pearson correlation of -0.556, -0.743 and -0.723 respectively.

Regression Analysis

This section presents the strength of relationship amongst variables (correlation coefficient). The section also presents the extent to which the independent variables caused the changes in the dependent variable. The last part shows the linear relationship amongst variables.

Table 7. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915[a]	.837	.830	1.52677

a. Predictors: (Constant), Regulations, Supply Chain Disruptions, Technological Disruptions

Source: Researcher (2023)

The study results in table 7 presents that the independent variables (Regulations, Supply Chain Disruptions, and Technological Disruption) and dependent variable (financial performance) were strong correlated (R=0.915). The adjusted R square of 0.830 indicated that 83% changes in financial performance was determined by government Covid-19 regulations, supply chain disruptions, technological disruptions.

Table 8. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	895.122	3	298.374	128.001	.000[b]
	Residual	174.827	75	2.331		
	Total	1069.949	78			

a. Dependent Variable: Financial Performance

b. b. Predictors: (Constant), government Covid-19 regulations, supply chain disruptions, technological disruptions

Source: Researcher (2023)

Table 8 presents the model goodness of fitness. The study result indicated that the F calculated was smaller than the F critical value, then the data did fit the model at 5% significance value.

Table 9. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.690	2.703		5.065	.000
	Regulations	-1.478	.143	.-496	-10.360	.000
	Supply Chain Disruptions	-4.123	1.145	-2.204	-3.602	.001
	Technological Disruptions	-2.751	1.129	-1.489	-2.436	.017

a. Dependent Variable: Financial Performance

Source: Researcher (2023)

$$Y = 13.690 - 1.478X_1 - 4.123X_2 - 2.751X_3 + \varepsilon$$

The study results presented that government Covid-19 regulations had a significant effect on financial performance of SMEs (Beta=-1.478, sig<0.05). This indicates that every unit change in government Covid-19 regulations, the financial performance will change by 1.478 in the opposite direction. The findings of the study were inconsistent with those by Sheth (2020) that government regulations had insignificant effect on financial performance of SMEs. The findings were in consistent with Mwai (2019) that policies by government significantly affect financial performance. Further, Hart and Wilson (2020) supported that the influence of regulations on businesses significantly affects financial performance.

The study results presented that supply chain disruptions had a significant effect on financial performance of SMEs (Beta= -4.123, sig<0.05). This indicates that every unit change in supply chain disruptions, the financial performance will change by 4.123 in the opposite direction. The study agrees with Sharma and Bikash (2020) that supply chain disruptions significantly affects the financial performance of SMEs. The study was consistent with Cardinali et. al., (2020) findings supply chain challenges significantly affects financial performance.

The study results presented that technological disruptions had a significant effect on financial performance of SMEs (Beta= -2.751, sig<0.05). This indicates that every unit change in technological disruptions, the financial performance changes by 2.751 in the opposite direction. The study was consistent with LaBerge et al., (2020) findings that technological disruptions significantly affect customer interactions and hence financial performance. The study agreed with Ganti (2021) that the technological disruptions significantly affects financial performance.

CONCLUSIONS AND RECOMMENDATIONS

The results of the descriptive study proved that Kenya's SMEs in Thika Town Sub-County were disrupted by the government's Covid-19 restrictions. The study's findings also showed that preserving social distance hindered the ability to conduct business, that the limitation on interstate and foreign travel affected traders personally, and that adhering to government health regulations increased the business's expenses. The survey also discovered that the nighttime curfew led to shorter business hours, which had a detrimental impact on businesses. The results indicated that majority of the SME experienced a high decline in business capacity related to government Covid-19 regulations. The demand and hoarding for necessities increased significantly at the start of the pandemic by both consumers and middlemen, who anticipated to resell later at increased prices, as both adapted to the restrictions imposed by governments.

Everyone agreed that during the Covid-19 epidemic period, the supply chains for the vast majority of SMEs were severely impacted. Also, there was a widespread agreement among the respondents that the time it took to obtain the given goods increased noticeably as a result of the pandemic, which hindered access to SMEs' supplies. As a result of the delay in the transportation of inputs, the majority of respondents believed that COVI9-19 had increased operational expenses for traders and raised prices for retailers and processors. They added that the substitute providers were unable to provide the requisite level of quality. The majority also believed that because supply costs were higher during this time, businesses experienced stock outs. This amply supported the issues raised regarding how changes in prices, customer access to products, customer handling, costs associated with setting up and maintaining a clean workspace, shifts in customer demand, and adherence to established government guidelines affected the prices of the products that were supplied.

According to the report, technological advancement in business operations keeps SME owners productive and promotes operational efficiency. The findings also showed that organizations who adopted new business practices and technological advancements were less impacted by pandemic disruptions. The survey also showed that firms may keep and retain their consumer bases by implementing technology. Businesses expanded their online presence and created online platforms as a result of the pandemic. The findings showed that adopting technology reduced operating expenses for enterprises, the pandemic forced firms to speed up the adoption of technology in their procedures, and that adopting technology led to higher sales. It was amply shown that technology has a significant impact on the availability, promptness of delivery, pricing, and quality of goods offered by SMEs in the Thika Town Sub-county.

The study concluded that government Covid-19 regulations had a significant effect on financial performance of SMEs. The study concluded that government actions have a significant impact on the business climate and ultimate financial performance. The study concluded that how well a business and its stakeholders responded to the regulations determined how much of an impact the regulations had on it.

The study concluded that supply chain disruptions had a significant effect on financial performance of SMEs. The study concluded that business managers must rethink and refine the supply chain, adopt technology in building supply designs as well as emphasize on dependable supply chain.

The study concluded that technological disruptions had a significant effect on financial performance of SMEs. The study came to the conclusion that if a company wanted to stay in business and be competitive, it could not afford to disregard the technical disruptions caused by the pandemic. According to the study's findings, the Covid-19 pandemic put most firms in a unique situation where they had to quickly adjust and create new business procedures in order to stay profitable and competitive.

The study recommended there is need by the government to review some of the policies related to SMEs operations and taxation to create an enabling environment where businesses could thrive. To remain competitive during the business and economic environment that resulted due to the pandemic, SMEs have to leverage on technology in customer interactions and the entire supply chain system. Well-capitalized technology SMEs with a large network of users and vast amounts of digital data are better positioned to seize the opportunities offered by the crisis.

Beyond government intervention, SMEs could partner with technology companies instead of developing in-house technologies. Governments could further complement these interventions by investing in a set of enabling digital pillars. In the post–COVID-19 era, development finance institutions can further support the scaling up of technology SMEs in emerging markets by intervening more upstream.

Suggestion for Further Study

The study concentrated on Covid-19 pandemic disruptions and SMEs financial performances within Thika sub-county. Further research to other sectors of the economy and the economy in total. Only three independent variables; government Covid-19 regulations, supply chain disruptions, and technological disruptions were considered. Further study should focus on other indicators of Covid-19 pandemic disruptions. It would also be interesting to do a comparative study within EAC

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