IMPACT OF COVID-19 PANDEMIC ON THE ADOPTION OF MOBILE BANKING AMONG MICRO AND SMALL ENTERPRISES IN NAIROBI CENTRAL BUSINESS DISTRICT.

PATEL AMAY KUMAR NARENDRA BHAI

110822

A RESEARCH PROPOSAL SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF COMMERCE AT STRATHMORE UNIVERISTY BUSINESS SCHOOL

February, 2022

Declaration

I declare that this work is purely done for academic purpose and has not been published previously by any candidate from any university. To the best of the researcher's awareness, this work abides by plagiarism rule. In this research proposal, relevant references are made where necessary.

Student's name: **PATEL AMAY KUMAR NARENDRA BHAI.**

Signature:

Date:

This research proposal has been guided under the faculty supervisor by Madam Tabitha Njuguna.

Supervisor's name: **MISS TABITHA NJUGUNA.**

Signature:

Date:

Abstract

The Covid-19 pandemic affected the normal way of business operations requiring changes to be incorporated to sustain and run the businesses efficiently. One such change was the mode of financial transaction as the pandemic was seen to be influenced by the contact made with the physical modes of payment. Hence there was the proposed use of mobile banking as a more secure way of making and receiving payments. From prior studies on the factors affecting the adoption of mobile banking various factors like ease of use, security and more come to be explained. However, there is need to study the impact the Covid-19 pandemic had on the adoption of the same. This study was undertaken to explain the impact the pandemic had on the adoption of mobile banking among the micro and small enterprises in the Nairobi central business district. The study used stratified random sampling to collect data using questionnaires administered over the internet from the micro and small enterprises in the Nairobi central business district. This was done by a selection of a sample size of 60 micro and small enterprises across various six sectors widely used to classify the micro and small enterprises. From the research it was concluded that indeed Covid-19 pandemic as a factor contributed greatly to the adoption or increased usage of mobile banking among the micro and small enterprises after the pandemic set. This was mainly to avoid contact with the physical modes of payment which were seen as ways through which the virus causing the pandemic spread. The respondents believed the technology was vital and will remain a vital force in the normal business operations post the pandemic also.

Acknowledgement

I would like to express my kind gratitude to my supervisor for always providing guidance for this project. This project was successful through her continuous never-ending support. Further I would like to thank my university which provided me a platform to express my findings and have encouraged me to grasp a vast amount of knowledge, skills and self-growth. Moreover, I would like to thank God for the blessing to complete this study without any hindrances and I would also like to thank my family and friends who have provided me moral support to complete this piece of work.

List of abbreviations

MSE Micro and Small Enterprises

CBD Central Business District

MAT Mental Accounting Theory

UTAUT Unified Theory of Acceptance and Use of Technology

TABLE OF CONTENTS.

List of tables and figures.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study.

Coronavirus disease, scientifically reclassified as COVID-19, has assumed global pandemic proportions (World Health Organization, 2020). It attained a pandemic status declared by the World Health Organization (WHO) on 11 March 2020. Since then, the entire world has faced numerous phases of the disease which have resulted in various economic and social changes. Ranging from complete lockdowns to restricted travelling, all of which has affected the normal functioning of the business world.

In Kenya, the first coronavirus case was officially reported on the 12th of March 2020. Following which it has been seen that the cases have fluctuated with high and low phases. The COVID-19 pandemic has necessitated changes in the way businesses operate all the way from small scale retailers to large multi-nationals. Some of these changes are forced by the government while others are a new way of life coming up. One such norm is the use of technology to make and receive payments. Even by carrying out an analysis of the current COVID-19 pandemic, past pandemics show a great deal of effect on business operations, performances, and general growth. Past disasters have shown that two-thirds of businesses that do not reopen within 2 weeks following a disaster will file for bankruptcy within 1 year (Maldin et al., 2006).

The impact of COVID-19 on business and consumer behavior change is a topic of great importance for companies and financial industry around the world not only to take actions on short-term, but, even more important, to reconsider their strategy on medium and long term (Claudia et al., 2020). While largely it is clear that the pandemic resulted to economic dropdown and financial loses, it has also changed the way financial transactions are carried out.

Looking at Kenya the pandemic has had a negative effect on the economy despite it surviving compared to its peer economies due to diversified sectors. In terms of fiscal policy, the COVID-19 shock, and fiscal responses have halted planned fiscal consolidation and led to an accumulation of public debt. Kenya's debt position is officially sustainable but on a trajectory towards unsustainability as the government has agreed to include KShs 3.4 trillion of parastatal and county

loans as part of the country's national debt. This will push the country's debt to over KShs 10 trillion, well above the KShs 9 trillion ceiling set by Parliament (Were et al., 2021)

1.1.1 Mobile Banking

Mobile banking refers to using mobile devices to provide financial information, communication, and transactions to customers such as checking account balances, transferring funds, and accessing other banking products and services from anywhere, at any time (Ensor et al., 2012). With rapid advance of Internet technologies and diffusion of mobile phones, mobile banking (m-banking) has gained attention as a viable option in delivering financial services. M-banking provides financial transactions services such as balance check, fund transfer, and bill payment via a mobile device such as cell phone and smart phone (Sripalawat et al., 2011. Tough many people argue that internet and other technology-based transactions is not safe, not practical and would lead to fraud, a lot of people think it is safe, flexible in time and can be done anywhere and anytime (Chowdhury et al., 2011).

Mobile phones have generally found acceptance in the markets at a faster rate and Kenya seems to show the same trend. The World Bank's pointer is mobile cellular subscriptions, which as per the latest data in 2019, places the figure at 104%. The Kenya Government's Communications Authority defines mobile users by SIM penetration, and as of June 2020, reported a 119.9% mobile penetration, a 10% growth from the previous period (Frankline, 2021). With mobile phones increasing to gain market, mobile banking is also doing the same in Kenya. Kenya leads the world in adoption of mobile money services or sending money and receiving it by using mobile technology. This is majorly favored and facilitated by the M-Pesa (a Swahili word meaning money) platform offered by the largest telecommunication firm of the country, Safaricom. M-Pesa holds a mammoth share of 98.9% of the Kenya mobile money market since its launch in 2007. Mobile money is so crucial to Kenya's economy, with at least 50% of Kenya's GDP flowing through mobile money, that most mobile money transactions were zero-rated to shield citizens from the effects of COVID-19 (Frankline,2021)

1.1.2 Pandemic and Mobile Banking.

Pandemic as defined by Merriam- webster is an outbreak of a disease that occurs over a wide geographic area (such as multiple countries or continents) and typically affects a significant proportion of the population: a pandemic outbreak of a disease. This study will refer to this meaning of pandemic. This is not the first time that a pandemic has struck the globe. Indeed, even previously, many dangerous pandemics have occurred. Some of the most influential and damaging in terms of death tolls are Black Death which had almost 200 million deaths, Spanish flue which had almost 45 million death toll, plague of Justinian with a death toll of 40 million estimated.

The conditions facing the globe currently are like those seen during the previous pandemics. However, the major difference seen is the way businesses today have still been able to carry out transactions due to the technologies available. One such technology is the mobile banking which has enabled not only businesses but also the public to pay for and receive payments for their needs. Previous pandemics which involved contacting the virus causing the disease, needed businesses to remain closed as it would be risky to transact using physical cash. However, COVID-19 has to some extent differed in that business adopted the already growing mobile banking and payment methods.

The COVID-19 pandemic has as of July 22, 2021, infected 192,848,716 people globally. The world health organization (WHO) has insisted people to reduce contact and maintain social distancing with the aim to reduce the spread of the virus. Since the onset of the pandemic, developing countries have faced stiff financial constraints with many people going jobless while some businesses forced to close. While low income resulted to low sales, most of the decline can be attributed to the fact that consumers tend to remain at home and order goods online to remain safe. Despite the prevailing challenges, people cannot behold themselves from making their obligatory payments and routine transactions for a living. But the likelihood of becoming infected with COVID-19 by touching the virus infected object or surface is high. Physical cash handling can further accelerate virus spread. Hence the need to shift to mobile payment methods (Agarwal et al., 2020). Due to the convenience, reliability and contact free feature of the mobile banking, it has been seen that it is diffusely used since the onset the coronavirus pandemic.

As of January 2021, Kenya had some 66.6 million registered mobile money accounts, a figure that has been steadily growing. In one year, there was a growth of 12.5 percent, as there were 59.2

million accounts in January 2020 (Julia, 2021). In GeoPoll's 2020 Year-End survey, it was found that customers were using mobile money more frequently in 2020 than in the previous year, likely driven by COVID-19 and a desire to use contactless payment methods.

1.1.3 Micro and small enterprises in Nairobi Central Business District.

The Micro and Small enterprises Act, 2012 of Kenya, defines a micro and small enterprise (MSE) as: a firm, trade, service, industry or a business activity whose annual turnover does not exceed five hundred thousand shillings, which employs less than ten people; and whose total assets and financial investment shall be as determined by the Cabinet Secretary from time to time, and includes, the manufacturing sector, where the investment in plant and machinery or the registered capital of the enterprise does -not exceed ten million shillings and the service sector and farming enterprises where the investment in equipment or registered capital of the enterprise does not exceed five million shillings. MSE make a substantial contribution to livelihoods and inclusive growth in Kenya. They account for 24% of the country's gross domestic product (GDP), over 90% of private sector enterprises and 93% of the total labour force in the economy.

The Central Business District in Nairobi (CBD) forms the business hub for many MSE operating in various commodities ranging from clothes, electronics, and eatables to stationery. Wholesale and Retail Trade data was reported at 206,165.000 Ksh million in Sep 2020. This records an increase from the previous number of 177,918.000 Ksh million for Jun 2020. (Kenya National Bureau of Statistics, 2020).

The COVID-19 pandemic has affected the supply and demand side of business for MSE. Due to the shortage of raw materials and cost constraints, many manufacturing firms have reduced their output affecting the supplies to the MSE. In addition, due to the reduced incomes and fear of getting the disease, many of the customers for these MSE are lost to either online stores or malls which are deemed to be well equipped with preventive measures.

According to Oxford Business Group report, in Kenyan retail market, while dedicated retail properties and formal retailers are on the rise, the market remains dominated by the traditional, informal sector where 70% of Kenyans do their daily shopping, according to consumer research firm Nielsen. An estimated 22% of traditional stores in Kenya are dukas (Swahili word meaning small shop), or small local shops, followed by table-top kiosks, market stalls, cosmetic outlets,

telecom kiosks and pharmacies. The channel for reaching to consumers is stated at 95% of Kenyan shoppers frequently using the dukas, 92% shop at kiosks and 89% shop at supermarkets.

It is hence seen that in a country like Kenya, the MSE give a good representation of the general statues of the economy in relation to how the consumers react to a certain change in trend. Hence this study be focusing on the MSE and the impact of the coronavirus pandemic on the adoption of the mobile banking by them.

1.2 Problem Statement

The transaction values and volumes of mobile banking transactions in Kenya declined by 6.98% between December 2019 and April 2020 and declined by 15.5% between March and April 2020. The results demonstrate that the Covid-19 pandemic has had an adverse effect on both the transaction values and transaction volumes of mobile banking. Interestingly, it was found that between March and May 2020, the number of mobile banking agents increased by 8.48%, suggesting that the Covid-19 pandemic has facilitated consumers' onboarding into the mobile banking space (Daniel, 2020). It was also found that there was a 16% increase in mobile banking transactions and an 8% increase in the value per transaction between April and May 2020 following short-term regulatory measures. These measures include increase in daily limits and elimination of fees and charges. (Central Bank of Kenya, Press Release, March 2020)

There are many studies so far done on the factors leading to the adoption of mobile banking. However, there is little know on the impact of the pandemic on the adoption of the mobile banking. There however seems to be a connection between the conditions the pandemic caused (forcing people to look for ways to avoid physical contact) and people and businesses adopting the mobile banking.

Various Mobile banking studies have been conducted and have come out with different results. (Wamai, 2015) studied about the determinants of Mobile Banking Adoption in Micro finance institutions in Nairobi County Kenya using the Technology Acceptance model. The study found that both perceived usefulness and perceived ease of use positively correlate and affects adoption of mobile banking technology positively. On the other hand perceived risk and perceived transaction cost were both found to have negative correlation with the adoption of Mobile technology. This study contradicted the findings of (Martha, 2018) who concluded that Perceived

Usefulness, Perceived Ease of use, Transaction cost and perceived risk all positively influenced the Adoption of Mobile Banking in Kenya while using the same model.

Other than perceived risk, perceived ease of use and transaction cost, social influence has also been disputed by previous researchers as to whether it positively or negatively influenced Mobile Banking. Gesare (2020) studied factors affecting adoption of Mobile Banking by commercial banks in Kenya using Innovation Diffusion Model and concluded that perceived ease of use influenced the customer's decision to adopt mobile banking while social influence did not. Futhermore, Kiogothe (2018) studied the factors influencing Adoption of Mobile Banking in Kenya while focusing on Nairobi County. There was a very weak relationship between Mobilebanking adoption and the social influence factors therefore concluding that social influence did not affect the customer's decision to adopt mobile banking. These two previous studies however contradicted the findings of Godfrey 2019 who concluded that social influence did have an effect on the adoption of mobile banking.

As much as there are various studies done on the factors affecting the adoption of mobile banking, there is very little attempt so far to unearth the impact COVID-19 has on the same. Mohammed (2013) noted that the influencing factors are: perceived risk, trust, convenience, and other relative factors but to what extent does the pandemic add to the adaptation of mobile banking remains unclear. There are some studies done to show the impact of mobile banking and financial performance, the outcomes of the study show the significant and positive effect of financial development in the adoption of M-banking and its usage in developing countries. The findings also explain the role of M-banking in boosting the performance of emerging economies (Malik et al., 2021).

However, there is less information about Kenyan economy. As there are many MSE which contribute to the overall economy of Kenya, it is of important to understand their reactions in relation to the COVID-19 pandemic which will be a true picture of the economy. This study aims to capture the impact of the global coronavirus pandemic on the adoption of the mobile banking from the viewpoint of the MSE.

1.3 Research Objectives.

The general objective of this study is to examine the impact of COVID-19 on the adoption of mobile banking among MSE in the central business district (CBD) of Nairobi.

The specific research objectives are:

I. To examine the extent to which mobile banking is used among the MSE in Nairobi CBD.
II. To establish the impact of Covid-19 on the adoption of mobile banking among MSE in Nairobi CBD.

1.4 Research Questions.

The research questions that are intended to be answered by carrying out this study are:

I. To what extent is mobile banking used among the MSE in Nairobi CBD?
II. What was the impact of Covid-19 pandemic on the adoption of mobile banking among the MSE in Nairobi CBD.

1.5 Scope of the Study

This study will focus on the adoption of mobile banking to conduct financial transactions such as receiving and making payments during the day to day running of the business activities among the MSE in Nairobi CBD. The target population will be the MSE in Nairobi CBD. While the study will be conducted from September 2021 to January 2022.

1.6 Significance of the Study

The study will be of high significance to various groups and individuals as it will provide insights to a trend that has emerged during and post the start of the pandemic. As such it will have contributed to the data base for further researchers in this field of research.

Investors

Investors already in the business of MSE or planning to start one will benefit from the findings of this study. They will be able to identify the business trend of the market when it comes to the use

of mobile banking, as it will provide them with insights on the strategies they plan to come up with. As the pandemic has changed the way consumers and suppliers want to make and get payments, this study will enable them to get an insight on the trend and make decisions.

Future researchers

For those in academia, they will benefit by getting insights on how to do their research on related topics and further know what they will study or improve based on the findings. They can also use it as a reference for their research.

Consumers

The public who forms the consumer base for such enterprises will be able to get information on how the enterprises are adapting to this technology and hence can plan on how they wish to make purchases and payments.

Banks

With the results of this research the providers of mobile banking services will be able to understand to what extent they need to market or improve their services in this sector. This will enable them to make better decision on how to make the use age of their services more convenient for the business model of such enterprises.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review will involve reviews and analysis of theories and concepts related to mobile banking and its adoption by users of the technology. The main sections in this chapter include a theoretical review of the theories guiding this study, empirical literature review, summary of knowledge gaps and the conceptual framework.

2.2 Theoretical Review

This study will revolve around three theories: Contingency Theory, Unified Theory of Acceptance and Use of Technology (UTAUT) and Mental Accounting Theory (MAT). A detailed discussion of each of these is presented next.

2.2.1 Contingency Theory

This theory explains that there is no optimum method of systematizing a firm and the organization structure of the company (fielder, 1964). It argues that the most appropriate, structure for an organization is the one that best fits a given operating contingency, such as technology (Woodward, 1968 Penon 1970) or environment (Burns and Stalker, 1961; Lawrence & lorsch, 1967). Moorthy (2012) postulated that contingency theory has been widely used in research on measuring the performance and effectiveness of an organization. Cacciolatti and McNeil (2011) indicated that SME's that make good use of their structural marketing information presented a higher probability of growth. This concurs with what Mahmoud (2011) established on SMEs in Ghana that the higher the level of market orientation the greater the level of performance. This shows that there is a positive relationship between information utilization and the firm performance as noted by Keh, and Nguyen (2007)

2.2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

This theory was developed by Venkastesh et al. (2003). It has four main determinants of behavioral intentions to use a new technology system which are: performance expectancy, effort expectancy, social influence and facilitating condition. Of the four predictors, performance expectancy is the strongest predictor of attitude toward use and behavioral intentions (Jeng and Tzeng, 2012). Effort

expectancy is vital towards the introduction of new technology. If technology designers fail to take into consideration the factors related to ease of use, then the adoption process of the new technology can be constrained (Orlikowski, 1992). Performance expectancy, effort expectancy, and social influence each have a direct effect on behavioral intention, while facilitating conditions and behavioral intention have a direct effect on usage behavior. While previous models could explain 40% approximately the technological acceptance, this model was able to explain up to 70%. It has been revised with additional variables to explain users' behavioral intentions. For example, Khalilzadeh et al. (2017) integrated security-related factors with the UTAUT model and validated that security and trust have a strong effect on customers' adoption intentions of NFC M-payments in the restaurant industry. Marinkovi´c et al. (2020) modified the UTAUT model with extra variables (perceived trust and satisfaction) to evaluate customers' usage intentions of M-commerce. Despite this model been used with other models, it focuses on technological expectations rather than metal expectations. This makes it weak in explaining users' expectations determining their intentions of technology. Thus, it is necessary to integrate UTAUT with Mental Accounting Theory (MAT) to explain users technological and metal perceptions complementarily on usage intention of mobile banking during COVID-19 pandemic.

2.2.3. Mental Accounting Theory (MAT)

Mental accounting theory (MAT), proposed by Thaler (1985), is defined as the set of individuals' cognitive operations to categorize, organize, and evaluate the consequences of their decision-making in financial activities. Specifically, MAT explains that personal desires influence the cognitive processes of individuals, and their psychological processes for valuing a specific technology should be taken into consideration in the environment of voluntary usage. Concretely, in the technology adoption aspect, a consumer's decision of adoption is based on the perceived benefits of utilization of technology. Moreover, MAT can also be incorporated into an adoption model to complementarily explain customers' intentions of technology adoption. Furthermore, MAT provides a theoretical basis to explain consumers' decisions under conditions of risk and uncertainty. Combined with the disaster of COVID-19, customers' psychological processes of adopting Mobile banking for making payments and receiving payments are significantly influenced by the contactless feature of Mobile banking, which is appropriately adapted to the environmental situation, public restriction, and users' requirements. Therefore, MAT is

appropriate to apply for explaining users' mental cognitions of using Mobile banking under the COVID-19 pandemic.

According to MAT, when consumers perform a particular behavior, they tend to evaluate a possible beneficial outcome. Perceived benefits represent users' perceptions of the functional benefits of Mobile banking services, which determine their decisions of adoption. Perceived benefits have been identified as multidimensional benefits, including utilitarian, hedonic and social values, which are determined by social influence and technology uncertainty. However, few studies focus on the perceived benefits of technology characteristics corresponding to a particular condition. Specifically, in a pandemic situation, social distancing is an efficient way to decrease COVID-19 transmission risk among people. Compared with traditional payments, the contactless characteristic of Mobile banking supports users in maintaining social distancing to avoid direct and indirect contacts from cash or point of sale terminals during a transaction process. This aspect allows users to formulate their opinions on the perceived mental and physical benefits of personal safety and provides convenience and utility when using M-payment technology as a financial transaction method in the COVID-2019 pandemic. Thus, perceived benefits are considered as a mental factor to influence the users' adoption intentions of Mobile banking during the COVID-19 pandemic.

2.3 Empirical Review

This section looks at studies like the one currently been done. It focuses on the specific objectives of the study and the different findings gotten in prior studies in relation to those topics.

2.3.1 Factors affecting the adoption of mobile banking.

Amit (2016) while studying the factors affecting mobile banking adoption behavior in India, found that a total of eight factors had been identified which affect mobile banking adoption behavior in India. Which were awareness, usefulness, and ease of use, compatibility, social influence, security, self-efficiency, and financial cost. Usefulness had been found to be making the most impact with reference to mobile banking adoption. However, social influence was identified as least influential factor among all factors. Data were collected through an online survey of mobile user respondents. Exploratory factor analysis and multiple regression analysis has been used to check the significant factors affecting adoption of m-banking in India.

Everly (2017) in her study assessed key factors that influence the usage of mobile banking services in Tanzania using TAM and transaction theory. A sample of 120 mobile phone users collected through a structured questionnaire was used. The study found that customers' awareness and perceived ease of use have a significant positive influence while perceived risk and transaction cost have a significant negative influence on the usage of mobile banking services. Customers' awareness and perceived ease of use have relatively greater influence on the usage of mobile banking services than perceived risk and transaction costs. This was like what Susan (2012) found in her study which sought to establish the determinants of adoption of mobile phone banking by the base of pyramid (BOP) customers of commercial banks in Kenya. The study used descriptive survey. The study found that adopters of mobile banking service had acquired a great deal of trust in the new channel.

In variation to the above, Tao (2021) in a study of the determinants of the adoption of mobile payment services among small and medium enterprises (SMEs) in China during COVID -19 era, gives the findings that business factors, technological competencies of SMEs in China, and the environment positively influence mobile payment adoption. Consumer intention has almost no influence on the adoption of mobile payment. A questionnaire method was used to collect data designed to solicit information from the participants.

2.3.2 Impact of Covid 19 pandemic on the business functions

A study by Agarwal et al. (2020) on growth of mobile banking in India during covid-19, showed that as the pandemic wrecked the economy and affected the exports, imports and many other industries, the banking methods were also affected. The covid-19 pandemic created a fear in the minds of people as it was believed that the currency notes could transmit the deadly virus. This created greater difficulties for the common man to conduct transactions. Mobile banking has been very helpful in the times like COVID-19 as it has been successful in promoting the social distancing policies as well as providing 24/7 banking facilities to their customers. They used secondary data from the reserve bank of India reports to conduct the study.

Similar findings were gotten by Maus (2020) whose analysis of the impact of COVID-19 on the payment industry showed that there was an unprecedented growth in the online transactions volume after the onset of the COVID-19 pandemic. People bought items such as groceries or health supplies online and comfortably from home instead of the traditional offline methods. In-store

payment behavior had also evolved at a pace that would have taken years without such an unprecedented crisis. Even cash-heavy economies such as Germany and Italy have seen a surge in (contactless) card-based and mobile payments. This was helped by the contactless payment limit being increased across most European countries from EUR 25 to EUR 50, a change that was decided and implemented in very quick time. Merchants (like wholesalers/retailers) were actively encouraging customers to pay by card, ideally contactless, instead of using cash.

Alexander, et al. (2020) conducted a study to investigate the impact of COVID-19 on small business outcomes and expectations. They surveyed more than 5800 small businesses that are members of Alignable, a network of 4.6 million small businesses (like LinkedIn). Several themes emerged. First, mass layoffs and closures had already occurred—just a few weeks into the crisis. Second, the risk of closure was negatively associated with the expected length of the crisis. Moreover, businesses had widely varying beliefs about the likely duration of COVID-related disruptions. Third, many small businesses are financially fragile: The median business with more than $10,000 in monthly expenses had only about 2 weeks of cash on hand at the time of the survey. Fourth, most businesses planned to seek funding through the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

Fabeil et, al. (2020) in their study in Malaysia on the impact of COVID-19 on micro-enterprises, concluded that businesses generally have had to change their functions and operation to suit the new norm which mainly involved using of internet and mobile banking applications. Microentrepreneurs, for example, experienced loss of daily income due to disruptive supply chain resulting from the closure of supporting sectors, besides lack of workers and declining in cash reserves (Dzulkifli, 2020; Aling, 2020). Many entrepreneurs began to shift to alternative approaches to continue their business operation. Among the alternative business continuity strategy adopted by entrepreneurs during the MCO (movement control order) period was by selling and promoting their products via social media and mobile applications like Facebook and WhatsApp. In addition, some of them decided to hire part-time transporter/runner to deliver their product to end customer and adopted cash on delivery (COD) transaction (Halim, 2020).

2.4 Summary of Literature and Research Gaps

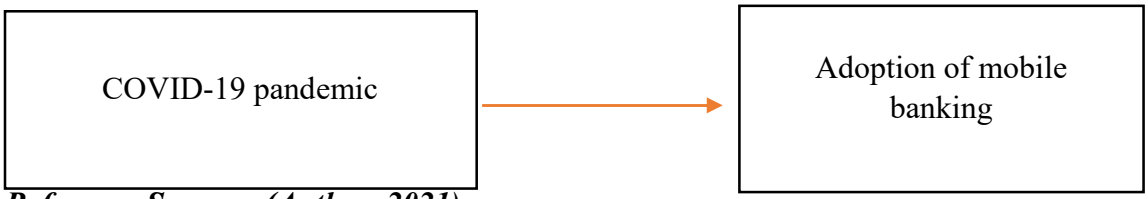
Prior study by Amit (2016) has concentrated on the factors affecting the adoption of mobile banking. However, as it is also shown by, Maus (2020), on the impact of COVID-19 pandemic on business functions, mobile banking has been on the rise after the onset of the pandemic. Despite these studies, it is unclear to what extent the COVID-19 pandemic has led to the adoption of mobile banking by the MSE in Nairobi. This is mainly because there is very little studied so far in relation to the same. Moreover, most of the studies on the impact of COVID-19 on either business function or mobile banking adoption are carried out in Asian and western countries and there is hence a gap for the same to be carried out in focus for African nations and in relation to this study, Kenya.

From the review of Maus (2020), it is evident that after the onset of the COVID-19 pandemic, businesses whether small scale or large multinationals, have had to undergo changes in their operations and functionality. This has widely come out as a means to curb the spread of the virus causing the COVID-19 disease. One of the strongest points that comes out is that mobile banking technology was widely growing as people and business looked for ways to continue receiving finances and make repayments to avoid complete business closures.

Therefore, this study will try to link the impact of COVID-19 pandemic and the adoption of mobile banking by the MSE in Nairobi CBD. This will be vital as it will help bring out an understanding on how this MSE in Nairobi, have adopted to the new business operation styles seen in prior studies conducted around the globe with similar environmental condition: involving lockdowns, social distancing and avoiding contact with cash notes and coins to reduce spread of the virus causing the COVID-19 pandemic.

2.5 Conceptual Framework

The conceptual framework is a diagrammatic illustration of the relationship between independent variables and the dependent variable. According to the framework, the independent variables influence the dependent variable. The independent variable for this study is the COVID-19 pandemic while the dependent variable is the adoption of mobile banking. Questionnaires with Likert scale ratings will be sued to ask the retailers on how they view COVID-19 pandemic caused them to adopt mobile banking if indeed they did.



Reference Source: (Author, 2021)

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

This chapter will cover how the research will be conducted. It will explain the population of the intended research, the sampling size, data collection methods and analysis of the data. It will also include discussion on the quality of the research in terms of validity, reliability, and objectivity of the research. Finally, it will have the ethical issues in research discussed.

3.2 Research design

Research design is a plan of research study that constitutes guidelines of how to collect and analyze data. The plan refers to the overall scheme or program to be conducted during research. It includes an outline of what the investigator will do from writing hypotheses and their operational implications to the final analysis of data. According to Kerlinger (1986), a research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. Bryman (2016) defines it as a framework for the collection and analysis of data to answer the research question(s).

This study will be a quantitative research study. As Gay et al. (2009) notes, quantitative research relies on the collection and analysis of numerical data to describe, explain, predict, or control variables and phenomena of interest. The dimension of quantitative research that this study will use is descriptive studies. Descriptive studies are those used to describe a phenomenon associated with a subject population or to estimate proportions of the population that have certain characteristics. The study will aim to describe the impact of the COVID-19 pandemic on the adoption of mobile banking among MSE in Nairobi CBD.

3.3 Population and sampling

3.3.1 Population.

Burns and Grove (2009) state that target population comprise of all the elements to be included in research. Mugenda and Mugenda (2006) defined population all elements that meet the criteria for inclusion in a study. In this study, the MSE in Nairobi CBD will form the population. According

to the Kenya Bureau of Statistics, 2016 there are around 268100 micro small and medium licensed enterprises in Nairobi County. Out of which 83.8% are micro, 14.85% small and the rest medium.

3.3.2 Sampling technique and sample size

The study used stratified random sampling technique, where the population was divided into strata depending on the sector the enterprise operated in following the categories used by the Kenya Bureau of Statistics for their report on Micro Small and Medium establishments' basic report in 2016. Simple random sampling was then applied within each stratum to select a sample from the population. Stratified sampling enables the researcher to representatively sample each subgroup in the population hence higher statistical precision. Simple random sampling avoids biased selection and ensures that each object has an equal chance of selection hence satisfying the statistical regularity principle, which proposes that random selection of a sample implies that it possesses similar attributes as the entire population. Since stratified sampling has high statistical precision, it requires a small sample size hence the study took 6 random samples per stratum.

Table 1: sample size

Classification of MSEs	**Sample Size**
Manufacturing: repairs, textile, food products	**10**
Wholesale and retail trade: repair of motor vehicle and motorcycles	**10**
Financial and insurance activities	**10**
Accommodation and Food services activities	**10**
Other services: sports, repair of computers, personal services.	**10**
Administrative and support service: office support and business support.	**10**

Source: (Kenya Bureau of Statistics, 2016)

3.4 Data collection methods

The data will be primary data and will be collected using questionnaires. The questionnaire that will be designed for data collection will be formulated from the research objectives of the study. The questionnaire will contain questions that address the formulated specific objectives. Although determination of this study entirely depends on the respondent's honesty, the researcher will ensure that there is accuracy of the process of the data collection by enhancing a good policy when developing the questionnaire. The researcher will maintain privacy and ensure confidentiality in the respondent's information.

3.5 Data analysis

The data collected will be cleaned and arranged in tables to sort the data. It will also be checked for completeness in case of missing information. Section A of the questionnaire which contains general information building on the history of the firm and its mode of business and financial transaction will be analyzed using percentage share of the total each response gets along with mean and mode.

The other sections which contain use of Likert scale, will be analyzed using the mean and median as this will best provide the strength each response shows in the study. The mean and standard deviation of the same will be calculated using the following model formula.

Standard deviation (STD)= √[second mean-(mean one squared)]

The data will also be analyzed and presented using graphs and pie carts to shows the distribution of the responses.

3.6 Research quality

The extent to which a research instrument like a questionnaire gets similar results after repeated trials is the reliability. A reliable research instrument will yield consistent results after repeated trials or when used by other researchers they would make the same conclusions. Number of different steps will be taken to ensure the reliability of the study; the same type of questions will be used for all the respondents in order to increase reliability. In addition to this, simple question design will be used to enable the respondents fill it with ease.

Validity refers to how accurately a method measures what it is intended to measure. If research has high validity that means it produces results that correspond to real properties, characteristics, and variations in the physical or social world. In order to ensure validity of the research instrument, the researcher will use the opinion of the research supervisor and standard rating scales previously used.

3.7 Ethical issues in research

The research will not entail any unethical practices which includes invasion of privacy, conflict of interest of issuing of questionnaires without informed consent of the participants. Honest reporting will be done, and no duplication will be done of other publications and citations of other referenced work will be used.

CHAPTER 4

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter clarifies on various aspects of the information such as the analysis on the mean mode and medium of the responses collected and its interpretations. The information uses various statistical methods to explain the results collected. The questionnaires were sent to the various respondents via link to fill in the questionnaire on the google forms.

4.2 Sample representation

A sample size of 60 respondents was used from which 52 responses were collected. This therefore accounts for 86.67% response rate, which was mainly due the reason that the questionnaire was not filled by some of the respondents as it was administered online and made it hard to trace them back.

Likewise, some respondents seemed to have committed to filling the questionnaire but did not return the answers. According to Mugenda and Mugenda (2008), a response rate of 70% and above is convenient for computing statistical inferences. The information can be summarized as follows.

	Number of MSE	Percentages
Responses received	52	86.67%
Responses not received	8	13.33%
total	60	100%

Table 2: Response Rate

4.3 Descriptive analysis

The analysis below will explicitly explain the results collected for each objective.

4.3.1 Duration in business.

The data in table 3 below presents the duration with which the respondents has been active with the business.

Duration in business	Frequency	Percentage
Less than 1 year	13	25%
Between 1 to 5 years	24	46.2%
More than 5 years	15	28.85
Total	**52**	**100%**

Table 3: Duration in business.

The findings in table 3 indicate that majority of the respondents about 75% have been in business for more than a year. About 25% have been in business for less than a year. This indicates that a big chunk of the MSE have been in business before and during Covid-19 pandemic hence giving a substantial coverage on the impact the pandemic had on their mobile banking adoption in business processes.

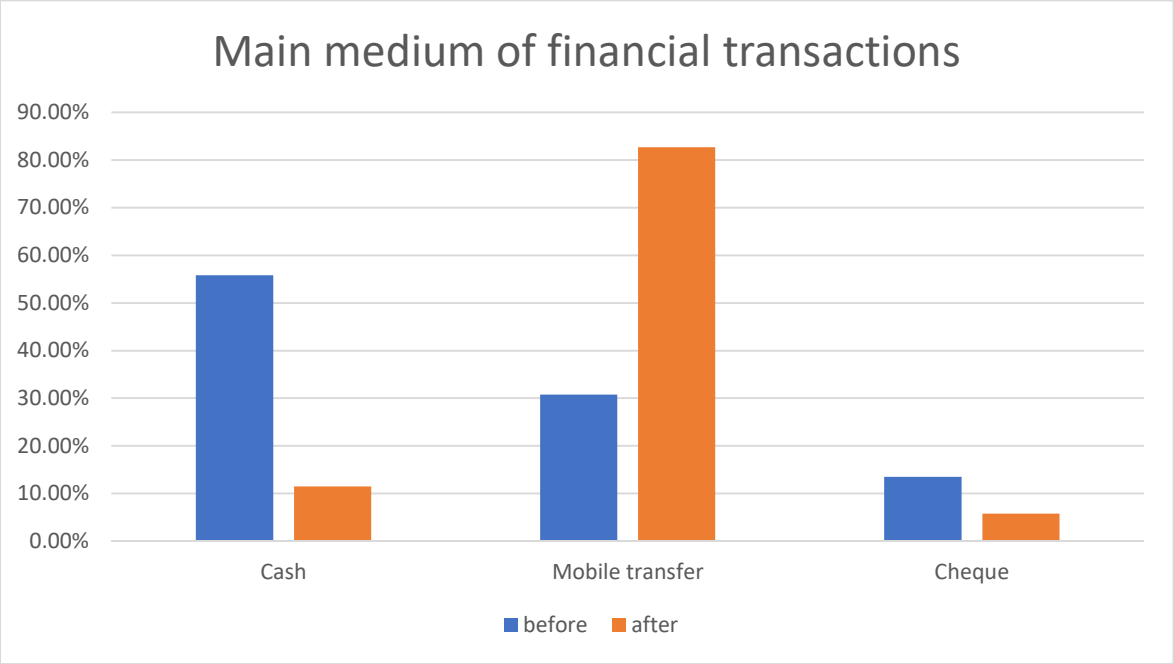
4.3.2 The extent to which mobile banking is used among the MSE in Nairobi CBD.

For this specific objective, a number of questions were asked and the findings summarized below.

Table 4: main medium of financial transactions.

Main medium of financial transactions	Before Covid-19 pandemic (%)	After Covid-19 pandemic (%)
Cash	55.8%	11.5%
Mobile transfer	30.8%	82.7%
Cheque	13.5%	5.8%

Figure 2: main medium of financial transactions



From the table 4 above it can be depicted that before the Covid-19 pandemic started, most of the MSE used in the sample used cash as a means to carry out their financial transactions (55.8% of them). However, 30.8% of them also used mobile transfers including mobile banking and bank transfers to carry put majority of their financial transactions, while another 13.5% used cheques as their main medium for the same.

After the setting in of the Covid-19 pandemic, the results seem to have changed drastically. A big chunk of 82.7% of the respondents used mobile banking as their main medium of carrying out financial transactions. While those who used cash dropped to 11.5% and 5.8% for the cheques.

Another important summary is shown below in table 5 on the rate of using mobile banking after the Covid-19 pandemic set in.

Table 5: rate of usage of mobile banking after Covid-19 set in.

Rate of using mobile banking	Number of respondents	Percentage
Not at all	1	1.9%
Rarely	9	17.3%
Often	20	38.5%
Very often	22	42.3%

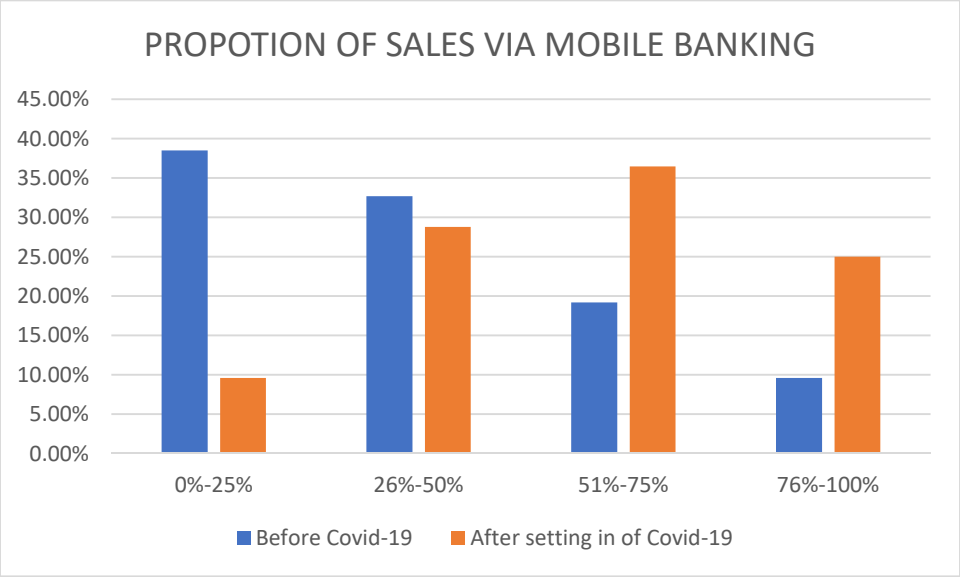
The findings from the table above show that 42.3% of the respondents used mobile banking for the business functions very often after the setting in of the pandemic. Another 38.5% used mobile banking often in the business while 17.3 % rarely used mobile banking after the pandemic setting in while only 1.9% did not use it at all.

Moreover, the proportion of sales which were received via mobile banking before and after setting in of the Covid-19 pandemic was measured and the findings are summarized below.

Table 6: sales proportion via mobile banking.

Sales proportion per month via mobile banking	Before Covid-19	After setting in of Covid-19
0%-25%	38.5%	9.6%
26%-50%	32.7%	28.8%
51%-75%	19.2%	36.5%
76%-100%	9.6%	25%
total	100%	100%

Figure 3 proportion of sales via mobile banking



This explains that before Covid-19 pandemic 38.5% of the respondents made between 0%-25% of their sales via mobile banking, 32.7% of them made between 26%-50% of sales per month via mobile banking, another 19.2% made between 51%-75% of sales via mobile banking and finally 9.6% made between 76%-100% of their sales via mobile banking.

After the setting in of the Covid-19 pandemic the numbers have changed to: 9.6% of the respondents making between 0%-25% of sales via mobile banking, 28.8% between 26%-50%, 36.5% between 51%-75% sales via mobile banking and finally 25% of them making between 76%-100% of their roughly sales per month via mobile banking.

4.3.3 The impact of Covid-19 pandemic on the adoption of mobile banking among the MSE in Nairobi CBD.

The impact that the Covid-19 pandemic had on the MSEs adopting mobile banking was measured by a number of questions whose findings are summarized below:

First the questions relating to the effect mobile banking will have on the various business functions especially during and post Covid-19 pandemic were responded as follows:

Table 7: effect of mobile banking on business functions during and post Covid-19.

Business functions	MEAN	STD	MODE
operations	3.37	1.02	4
debt management	3.13	1.06	4
credit management	3.25	0.96	4
customer care	3.35	1.11	4
others	3.08	0.83	3

From the above summary, it can be explained that operations on daily basis gained an average of 3.37 (on a scale where 1= insignificant, 2= minor,3= moderate, 4= major and 5= severe) and a mode of 4 implying that mobile banking has and will have a moderate to major effect on this business process. Debt and credit management gained averages of 3.13 and 3.25 respectively implying that there is moderate effect on those processes of mobile banking while customer care had a mean of 3.35 again showing moderate to major effect of mobile banking on that process.

Table 8: impact of Covid-19

	MEAN	STD	MODE
COVID-19 as a factor lead to the adoption of mobile	4.19	0.86	4
If mobile banking was not used during COVID-19, business could not be conducted efficiently.	3.88	1.14	5
Mobile banking was preferred during COVID-19 pandemic both by the business and customer perspective.	4.37	0.88	5
Mobile banking is used to collect debt faster	3.79	1.20	4
Mobile banking enables faster payment to creditors.	4.19	0.83	5
Mobile banking will continue to be preferred even after COVID-19 pandemic	4.44	0.77	5

The findings in the table 8 cover the responses from respondents on various questions to gauge the impact of Covid-19 on the adoption of mobile banking among the MSE in CBD. The answers were given in a scale where:1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

It can be depicted from the summary above that, the responses on whether COVID-19 as a factor lead to the adoption of mobile had a mean of 4.19 and mode of 4 implying that most of the respondents agreed to the fact that indeed mobile banking adoption was impacted by the setting in of the Covid-19 pandemic. In addition, a mean of 3.88 was achieved in relation to the question if business would not be conducted efficiently If mobile banking was not used during COVID-19 this was supported by a strong mode of 5 implying that definitely removal of mobile banking would affect the business operations in times of the pandemic setting in.

A mean of 4.37 was found for response to whether Mobile banking was preferred during COVID-19 pandemic both by the business and customer perspective. This showed that a strong agreement was given to the fact that mobile banking was the preferred way to carry out the financial transactions. A mean of 3.79 and 4.19 was gotten when the results were analyzed for fact whether mobile banking was used to collect debt faster and whether it was used to enables faster payment to creditors, again having a good umber showing agreement to this facts.

Finally, when asked whether mobile banking will be preferred even after the ceasing of the Covid-19 pandemic, a mean of 4.44 was gotten showing that the respondents believed to agree to the fact that mobile banking was now part of the normal business processes.

4.4 Summary

In summary of this chapter, after getting a response rate of 86.67%, it is seen that most of the answers collected show that Covid-19 as a factor has led to the adoption of mobile banking among the MSE. This is also supported by the fact that, when asked whether Covid-19 lead to the increased use of mobile banking for making and receiving finances, a 98.1% positive result was obtained. Hence it can be seen that the associated benefit of non-physical handling of cash during this pandemic has led to businesses too either start adopting or increase the level of usage of mobile banking in their business processes.

CHAPTER 5

SUMMARY, DISCUSSIONS AND RECOMMENDATIONS

5.1 Introduction.

This chapter concludes the research and therefore provides a summary of the findings for the objectives for the research. Further recommendations, conclusions and suggestions for further research are provided.

5.2 Summary of findings.

5.2.1 Extent of mobile banking usage among the MSE in Nairobi CBD.

From the summary of the findings in relation with the extent to which mobile banking technology was used before and even after the Covid-19 pandemic set it indicate that there was a significant increase from 30.8% to 82.7% of them using mobile banking as the main medium of financial transactions. This was mainly attributable to the fact that mobile banking as a technology for carrying out financial transactions is contact less and hence helped to minimize the spread of the coronavirus.

Furthermore, this is also explained by the fact that the charges on mobile banking were reduced significantly during the early phase of the pandemic hence encouraging more businesses to incorporate its usage. This is in line with Safaricom charging no fees on transactions up to 1000 shillings during that phase, (The East African, 2020).

5.2.2 The impact of Covid-19 on the adoption of mobile banking among MSE in Nairobi CBD.

From the findings in chapter four, it is evident that indeed Covid-19 pandemic had a positive effect on the adoption of mobile banking. This is significantly shown by the fact that 98.1% of the respondents agreed to the fact that Covid-19 lead to the increased use of mobile banking for making and receiving finances. This was also clear from the fact that the businesses agreed that if mobile banking was not used during COVID-19, business could not be conducted efficiently as a mean of 5 was obtained when asked so. This was mainly due to the fact that many online competitors had started the service of providing commodities to customers at a safe cashless means and this

demanded a change to ensure that even the MSE can still compete and sustain their business. The above facts agree with what Kenya Bankers Association (KBA, 2022) found in their research on the most preferred channel in 2021 where they discovered that mobile banking was preferred by 8.4 % of the people as compared to the 52% in the year before for the same reasons of the contact free nature of the money transfer.

The sales figures received via mobile banking before and after the pandemic set in when compared reveal that there is a spike in the amount of sales received via mobile banking after Covid-19 pandemic. This furthermore supports the point that indeed the pandemic was a factor leading to the adoption of and use of the mobile banking in the normal course of the business.

5.3 Conclusions

In a nutshell, from this research it can be said that the nature of the pandemic and the surrounding situations demanding businesses and customers to remain as much distant as possible, facilitated the uptake of mobile banking. In addition to that, the MSE that have mobile banking in their daily operations see an improvement in their sustainability and continuity after the Covid-19 pandemic set in. This is mainly because the pandemic changes the lifestyles and way the businesses operated from handling cash to avoiding any contact points.

As a small business, the MSE needed to incorporate what their bigger competitors and online stores used to ensure the customer base was not entirely lost and those who incorporated the use of the mobile banking do agree that it will be used in the future also due to the ease and adaptability found now.

5.4 Recommendations

Overall, from the study it can be recommended that MSE should adopt the use of mobile banking in their normal business operations as it has shown to have helped them run more efficiently in these new times of business. Adding to the fact that post Covid-19, businesses are adding digital aspects to their operations, MSE should be able to compete well with the use mobile banking as it is easy to use, safe and reliable along with the fact that it is contact less cash transfer.

5.5 Suggestions for further research.

The study recommends that a more detailed study should take place which can incorporate the other types of businesses which also contribute greatly to the economy of Kenya like the agriculture sector.

Moreover, a further research on the same topic but in other parts of Kenya can be recommended for example the developing towns like Nakuru, Thika and alike which can help to add on the impact the Covid-19 pandemic had on their business firm and mobile banking usage.

5.6 Limitations of the research.

The research was limited by time in that the research was undertaken in a short period with limited time for doing a wider research. The pandemic is still ongoing and a wider time frame could help get more accurate results on the topic.

Secondly, the questionnaires were administered online due to the Covid-19 pandemic which again limited the information which could have been gained if conducted face to face. Furthermore due to the high number of MSE enterprises in the city of Nairobi, the study only focused on the CBD area which again limited it from gaining the impact of the pandemic on mobile banking adoption on wider level like that in Nairobi or even beyond.

REFERENCES.

Alexander W. Bartik, Marianne Bertrand, Zoe Cullen, Edward L. Glaeser, Michael Luca, and Christopher Stanton. (July 2020). The impact of COVID-19 on small business outcomes and expectations.

Anzetse Were, Amrik Heyer and David Taylor (2021) State of the Economy: Focus on the impact of COVID on women and education.

Beth Maldin and Kathleen Criss (2006). Risky Business: Planning for Pandemic Flu

Bernard Ngaruiya (2014). Effects of mobile money transactions on financial performance of small and medium enterprises in Nakuru Central Business District

Bong-Keun Jeong1 & Tom E Yoon1 (2012). An Empirical Investigation on Consumer Acceptance of Mobile Banking Services.

Central Bank of Kenya(2020). Emergency measures to facilitate mobile money transactions. Press Release, March 2020.

Dr. Varsha Agarwal, Shrestha Poddar, Sahil J Karnavat (2020). A Study on Growth of Mobile Banking in India During COVID-19

Ensor, B., Montez, T. and Wannemacher, P. (2012). The State Of Mobile Banking 2012, Forrester Research, USA

Ferina Nyansiaboka Oekmwa (2020). Effects Of Mobile Banking on Performance of Micro and Small Enterprises in Nairobi County Central Business District, Kenya.

Frankline Kibuacha (2021). Mobile Penetration And Growth In Kenya.

Gesare, S. (2020, November). Factors Affecting Adoption of Mobile Banking by Commercial Banks in Kenya. Nairobi.

Godfrey, U. V. (2019, November). Factors Affecting Adoption of Mobile Banking by Commercial Banks in Kenya. Kenya.

Howard Bodenhorn (2020). Business In A Time Of Spanish Influenza.

Institutions in Nairobi County in Kenya. *International Journal of Science and Research, 6*(6), 2279-- 2286.

Julia Faria (2021). Registered Mobile Money Accounts In Kenya 2019-2021.

Kenya National Bureau Of Statistics (2016). Micro, small and medium establishments basic report.

Kiogothe, M. (2018). Factors Influencing Adoption of Mobile Banking in Kenya: A Case of Commercial Banks' Customers in Nairobi County.

Martha, J. W. (2018, August). Factors Influencing the Adoption of Mobile Banking in Kenya: A case study of Equity Bank Kitengela Branch. Machakos, Kenya.

Matthew Hudson (2020). What Is A Retailer?

Micro and Small Enterprises Act, 2012.

Mohammad Rokibul Kabir (2013). Factors Influencing The Usage of Mobile Banking: Incident From A Developing Country.

Robert fairlie (June 2020). Impact of COVID-19 on small businesses owners: evidence of early-stage losses from the April 2020 current population survey.

Sebastian maus, (July 2020). How will the COVID-19 crisis impact the payment industry?

Tut Daniel (July 2020). FinTech and the COVID-19 Pandemic: Evidence from Electronic Payment Systems

Wamai, J. &. (2015). Determinants of Mobile Banking Adoption by Customers of Microfinance

Yuyang Zhao And Fernando Bacao (2021). How Does The Pandemic Facilitate Mobile Payment?An Investigation On Users' Perspective Under The COVID-19 Pandemic.

FSD Kenya (March 2021). The Value of (in)formality: a case study of MSEs in the Nairobi CBD.

APPENDIX.

Appendix 1: Research Questionnaire.

This questionnaire aims to collect data to determine ***the "Impact of COVID-19 on adoption of mobile banking among Micro and small enterprises in Nairobi Central Business District"*** for partial completion of the requirements for the degree of Bachelor of Commerce (BCOM). The information attained will solely be used for academic research work. The data shall be strictly confidential.

Kindly fill in the following questionnaire. Your responses will be highly appreciated.

SECTION A: GENERAL INFORMATION.

1) How long have you been in business?

   Less than 1 year ☐

   Between 1 to 5 years ☐

   More than 5 years ☐

2) How often did you use mobile banking after the COVID-19 pandmemic set in?

   Not at all { }

   Rarely { }

   Often { }

   Very often { }

3) What was the main medium of financial transactions before COVID-19 pandemic?

   Cash ☐

   Mobile transfer (including M-pesa, bank transfers) ☐

   Cheques ☐

4) What is the main medium of financial transactions after the outbreak of COVID-19 pandemic?

   Cash ☐

   Mobile transfer (including M-pesa, bank transfers) ☐

   Cheques ☐

5) Has COVID-19 lead to the increased use of mobile banking for making and receiving finances?

   Yes ☐

   No ☐

SECTION B: IMPACT ON BUSINESS FUNCTIONS.

1) What proportion of sales (roughly per month) proceeds were received via mobile banking before COVID-19?

   0%-25% ☐

   26%-50% ☐

   51%-75% ☐

   76%-100% ☐

2) What proportion of sales (roughly per month) proceeds were received via mobile banking after COVID-19?

   0%-25% ☐

   26%-50% ☐

   51%-75% ☐

   76%-100% ☐

3) What will be the effect of mobile banking on business functions (especially during and post COVID-19)?

BUSINESS FUNCTIONS	1 (insignificant)	2 (minor)	3 (moderate)	4 (major)	5 (sever)
Operations					
Debt management					
Credit management					
Cutomer care					
Others					

SECTION C: ADOPTION OF MOBILE BANKING DURING COVID-19

Kindly tick the most appropriate column.

	1 (strongly disagree)	2 (disagree)	3 (neutral)	4 (agree)	5 (srongly agree)
COVID-19 as a factor lead to the adoption of mobile banking in the business (or increased its use)					
If mobile banking was not used during COVID-19, business could not be conducted efficiently.					
Mobile banking was preferred during COVID-19 pandemic both by the business and customer pespective.					

Mobile banking is used to collect debt faster					
Mobile banking enables faster payment to creditors.					
Mobile banking will continue to be preferred even after COVID-19 pandemic					