FINANCIAL BEHAVIOR, FINANCIAL LITERACY AND INVESTMENT DECISIONS: A STUDY OF SMALL AND MEDIUM ENTERPRISES IN NAIROBI CENTRAL BUSINESS DISTRICT, KENYA

BY

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DECLARATION

Declaration by the Candidate

This research thesis is my original work and has not been presented for examination in any other university. No part of this thesis is to be reproduced without the consent of the author and/or Moi University.

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DEDICATION

I would like to dedicate this research thesis to my parents for their selflessness in raising me. You taught me the values of resilience, hard work and love. I pray that may the Almighty God bless you abundantly.

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ABSTRACT

Investment decisions play a significant role on the economic development of SMEs. This is because profitable investment projects result to financial prosperity of an enterprise. Despite adequate support by the Kenyan government through introduction of single business permits as a solution to business licensing problems, provision of grant funding and offering business training, SMEs continue to face serious challenges in making rational investment decisions which result to great financial losses. The study therefore sought to examine the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among small and medium enterprises in Nairobi CBD, Kenya. The specific objectives were to determine the effect of savings behavior, borrowing behavior, spending behavior and investment behavior on investment decisions and to investigate whether financial literacy moderates this relationship. The study was anchored on the prospect theory, theory of planned behavior and the human capital theory. Explanatory research design was adopted. The study targeted 1,842 registered SMEs operating within Nairobi CBD. A sample size of 329 respondents was selected using the simple random sampling technique. Questionnaires were used to collect data. The data collected was analyzed using both descriptive statistics such as means and standard deviations as well as inferential statistics including regression and Pearson correlation. Hierarchical regression model was used to test the hypotheses. The findings indicated that savings behavior ($\beta = 0.23$, $p < 0.05$), borrowing behavior ($\beta = 0.18$, $p < 0.05$), spending behavior ($\beta = 0.22$, $p < 0.05$) and investment behavior ($\beta = 0.15$, $p < 0.05$) positively and significantly influence investment decisions. In addition, the hierarchical regression results showed that financial literacy moderates the relationship between savings behavior and investment decisions ($\beta = 0.01$, $p < 0.05$, $\Delta R^2 = 2.01\%$), borrowing behavior and investment decisions ($\beta = 0.60$, $p < 0.05$, $\Delta R^2 = 0.2\%$), spending behavior and investment decisions ($\beta = 0.66$, $p < 0.05$, $\Delta R^2 = 0.2\%$), investment behavior and investment decisions ($\beta = 0.02$, $p < 0.05$, $\Delta R^2 = 0.1\%$) among SMEs in Nairobi CBD. Thus, the study concluded that financial behavior plays a significant role in investment decisions made by SMEs. Moreover, financial literacy strengthens and moderates the relationship between financial behavior and investment decisions. The study recommends that the Kenyan government collaborates with well-established financial bodies such as World Bank in a bid to offer business training to SMEs. Furthermore, Kenyan commercial banks should come up with efficient user-friendly tools that encourage wise financial behavior and financial literacy among business owners. SMEs owners are consequently encouraged to continue taking up financial education courses and to always seek for financial expertise even before making investment decisions. The study also recommends that the Kenya Education curriculum incorporates financial literacy courses so that students gain financial skills and knowledge at an early age.

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OPERATIONAL DEFINITION OF TERMS

Financial Behavior: Refers to an individual's actions, habits, conduct or practices when placed in a financial setting (Sudindra, 2018). In this study, financial behavior is categorized into: savings behavior, borrowing behavior, spending behavior and investment behavior.

Investment Decision: Refers to a choice made by an investor that entails incurring expenditures now so as to obtain profits in future (Avram, 2009).

Savings Behavior: Refers to an understanding of how people use money left after deducting expenses from disposable income (Ismail *et al*, 2013).

Borrowing Behavior: Refers to an understanding of how individuals use money they have borrowed (loan) from a financial institution or from an individual (Lusardi & Tufano, 2011).

Spending Behavior: Refers to how well an individual manages their expenses (Bona, 2018).

Investment Behavior: Refers to how individuals gather information, research, analyze and judge the procedures for decision making when choosing between various investments avenues (Mazumdar, 2014).

Financial Literacy: Refers to the capability to use knowledge and skills to effectively handle one's financial resources for purposes of lifetime financial prosperity (Huston, 2010).

Small and medium enterprise: Refers to a trade, service, firm or industry whose annual sales range between Kshs. 500,000 and Kshs. 5 million (small enterprise). On the other hand, a medium enterprise registers an annual turnover of between Kshs.5 million and Kshs.80 million (Laws of Kenya, 2012).

ACRONYMS AND ABBREVIATIONS

AT	Attitude
CBD	Central Business District
CBK	Central Bank of Kenya
GDP	Gross Domestic Product
HCT	Human Capital Theory
KNBS	Kenya National Bureau of Statistics
KSHS	Kenya Shillings
NACOSTI	National Commission for Science, Technology and Innovation
PBC	Perceived Behavioral Control
ROI	Return on Investment
SBP	Single Business Permit
SMEs	Small and Medium Enterprises
SN	Subjective Norms
SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behavior

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background of the study, statement of the problem, research objectives and hypotheses, significance of the study and scope of the study.

1.1 Background of the Study

Investment plays a great role to the growth and development of an individual, a business and a country's economy. To an individual, investment helps to save for retirement, build wealth and gain high profits. To a business, investment leads to expansion in form of market diversification, decreases financial distress and increases financial growth which enables the firm to attain their financial goals. To a country's economy, investment acts as a source of employment, driver of innovation and assists in fair distribution of income (Katua, 2014). Investment takes place when financial resources are spent to acquire an asset that is expected to generate profits in future.

The investment landscape has undergone various changes and as a result there are many unique challenges that modern investors are faced with. Shiji (2019) conducted a research study on the challenges faced by Indian investors toward online share trading. The study revealed that most investors are faced with the problem of insufficient funds for investments and lack adequate market knowledge. In addition, majority of the investors possess poor investment skills, have huge debts, are affected by a country's political climate and stock market crashes and lose money unknowingly when trading. Gopinath (2021) studied the attitude of individual investors toward commodity trading in Asia and found that most investors were faced with the problems of market vitality, uncertainty in returns, complexity of market products and standardization of contracts when trading in the commodity market.

Ibrahim (2012) argues that positive savings behavior among Malaysian employees plays a significant role in motivating them to invest for retirement. In regards to borrowing behavior, Agarwal *et al* (2017) found that the reason for borrowing, sources of borrowing, amount borrowed and timely loan repayments were all critical factors that led to wise investment decision making among the Indian population. Birari (2014) examined the spending habits of youth in the city of Aurangabad, India and recommended that when youth engage in rational spending, they are able to have sufficient funds that can enable them to invest more in mutual funds, fixed deposits and gold. Shafi (2011) assessed the relationship between risk perception and employee investment behavior and established that overconfident investors tend to take up more investments. Furthermore, the study also revealed that individuals who invest for longer time horizons and tend to perceive risk as something enjoyable are more likely to take up risky investments that yield high returns. In addition, Maelah (2018) argues that budgeting tightness has a positive impact on the organizational performance of SMEs in Malaysia.

There are various theories that suggest the relationship between financial behavior and investment decisions. Theory of planned behavior suggests that an individual's behavior is influenced by their intentions which are in turn influenced by psychological factors. The three main psychological factors that lead to behavioral influence are attitude, perceived behavioral control and subjective norms. Formulated by Icek Ajzen (1991), this theory serves as a mirror that reveals an investor's intention to engage in a particular financial behavior. Prospect theory, on the other hand, explains that investors are more focused on an investment's returns than with their cumulative wealth. This theory reveals that investors are loss-sensitive and thus tend to concentrate more on avoiding losses than seeking profits.

Financial literacy is likely to have a moderating effect on the relationship between financial behavior and investment decisions. A study by Kaigama (2016) on the moderating effect of financial literacy in the relationship between microfinance banks and survival of small businesses in Nigeria found that financial literacy helps small business entrepreneurs to effectively analyze all available financial products and select the best product. The study further revealed that microfinance banks provide adequate and affordable financial and non-financial services to boost growth and survival of the small business sector. However, such services are only beneficial to entrepreneurs who possess a high level of financial literacy. Low financial literacy levels discourage business owners from seeking financial services whereas high financial literacy levels among entrepreneurs motivates them to consume financial services which consequently boosts the profitability and survival of their firms (Rahmandoust, 2011). Upon studying the sustainability of SMEs in Ghana through utilization of financial services, Nunoo (2011) established that financial literacy has great benefits to SMEs such as increased savings and effective management of risks through purchase of insurance contracts. The study further reveals that financially literate entrepreneurs are able to utilize available financial services which in turn lead to positive effects such as reduced economic volatility and accelerated financial development of their SMEs.

1.1.1 SMEs in Nairobi County

According to the Kenya Institute for Public Policy Research and Analysis, SMEs refer to firms whose sales figures and numbers of staff are below a certain limit. A small enterprise employs a workforce of less than 50 employees and registers annual sales of between Kshs. 500,000 and Kshs. 5 million. On the other hand, a medium enterprise has a staff of between 50 and 100 employees and records annual turnover of between Kshs. 5 million and Kshs. 80 million (Kippra, 2014). According to Business Daily

Africa (2020), SMEs are mainly defined based on the number of staffs, sales made annually and assets of the company. A small enterprise can be referred to as an organization that records annual sales of between Kshs. 500,000 and Kshs. 5 million and employs between ten to forty-nine employees (Micro and Small Enterprises Act, 2012). A medium enterprise, on the other hand, is an enterprise that employs between fifty to ninety-nine workers and registers an annual turnover of between Kshs. 5 million and Kshs. 100 million (Public Financial Management Bill, 2019). In Kenya, the focus of this study, there are 7.41 million micro, small and medium enterprises (MSMEs) with 98% of such enterprises contributing approximately 40% of the country's GDP and creating job opportunities to nearly 50% of the workforce (KNBS, 2016). Among the top 100 SMEs in Kenya, 79 of them are based in Nairobi County, Kenya. SMEs greatly contribute to the growth and development of a country's economy through creation of employment, enhancement of innovation due to increased business competition, managerial competencies amongst the private sector, production of essential products and helps facilitate fair distribution of income (Katua, 2014). Despite its significant role to the economy, Kenya's SMEs are still unsuccessful owing to the fact that in every 5 SMEs three of them close business within the first three years of operation. Oladoke (2020) asserts that poor investment decisions negatively impact SMEs performance by causing financial loss, default on payments due to high debts, conflicts among business partners and finally insolvency. The study therefore sought to explore the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs in Nairobi CBD, Kenya.

The most recent comprehensive study that focused on small businesses operating in Kenya was conducted by the Kenya National Bureau of Statistics in October 2016 where the survey estimated that a total number of 7.41 million MSMEs operate in

Kenya, of which 1.56 million are licensed whereas 5.85 million are unlicensed (KNBS, 2016). According to the Nairobi County's Ministry of Trade records, there are 102,821 registered SMEs spread across different sectors in Nairobi County. SMEs in Kenya play a significant role in the growth and development of a nation's economy. They fuel economic growth through enhancement of innovation, managerial competencies, provision of essential goods and services and poverty eradication (Katua, 2014). SMEs constitute nearly 98 percent of the total businesses in Kenya, offer 30 percent of the employment opportunities annually and also contribute 3 percent of Kenya's GDP (KNBS, 2016). The FinAccess Survey Report 2021 conducted by the Central Bank of Kenya reveals that between the Years 2015 and 2019, SMEs in the informal sector were estimated to create 90 percent of the total new jobs especially in the low-income sector.

The current business operating environment of the SMEs located in Nairobi is characterized by critical success factors namely; access to finance, innovation and government support. In regards to access to finance, Nairobi County has the highest number of commercial banks, mortgage finance institutions and microfinance banks. As at 2020, Nairobi city was estimated to have nearly 40 percent of the total banks in Kenya. In reference to innovation, most of the start-ups in Kenya are based in Nairobi and this creates a favorable environment for healthy business communities to operate in. Besides, majority of the innovation conferences are held at Nairobi County including the Nairobi Innovation Week (NIW) which is hosted annually to celebrate both local and international innovations as well as to enhance the innovation and entrepreneurship ecosystem (NIW, 2022). The Kenyan government has made various strides in a bid to support the growth of the SMEs sector through collaborating with various partners to provide funding and training to SMEs as well as introducing Single Business Permits as a way of solving business licensing problems (County Governments Act, 2012).

Despite their significant contribution to Kenya's economy and a favorable business environment, SMEs based in Nairobi County are faced with numerous investment decision challenges which bring about high mortality rates. Some of the investment decision challenges facing these SMEs include; inadequate collateral required by financial institutions when obtaining loans, insufficient managerial skills needed to make wise investment decisions and mismanagement of company resources. A 2017 report by the Kenya Agribusiness and Agro-industry Alliance revealed that most SMEs managers lack adequate managerial training and therefore rely on operational goals rather than strategic goals of the company. Their main managerial technique is the trial and error mechanism which in most times results to poor investment decision making.

Financial behavior and financial literacy are seen to greatly affect investment decisions. Christanti & Mahastanti (2011) observed that financial behavior gives a clear understanding of how investment decisions are influenced by behavioral biases, human emotions and cognitive limitation of the human mind when interpreting and reacting to information. On the other hand, Garcia (2007) suggested that financial literacy is a crucial business management skill that enables SMEs owners to make successful investment decisions.

The study therefore sought to investigate the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs owners in Nairobi Central Business District.

1.2 Statement of the Problem

Investment decision is among the key decisions that an enterprise undertakes in its day-to-day running of the firm. Such decisions are critical to SMEs because they lead to financial growth, business expansion, decreased financial stress, higher returns on

investment and ability of the firm to achieve their financial goals. When SMEs make wise investment decisions, they are able to build wealth which enables them to invest in production technology and human capital knowledge consequently leading to market diversification through taking advantage of attractive market opportunities (Lõõf & Heshmati, 2008). Poor investment decisions, on the other hand, negatively impact SMEs' performance through loss of funds, high debts, liquidation, mistrust among business partners and lawsuits (Oladoke, 2020).

The SMEs sector is instrumental in the growth and development of a nation's economy because it leads to employment creation, increased business competition, drives innovation, ensures supply of essential products and services and facilitates fair income distribution (Katua, 2014). A report by the World Bank on SMEs finance in Africa found that SMEs account for nearly 90% of the businesses worldwide and contribute up to 40% of national income (GDP) in developing countries (World Bank, 2019). A study conducted by (Maina, Butoyi & Nkatha, 2010) revealed that SMEs are the main source of most new job opportunities, the basis of poverty reduction and the hub of developing countries' entrepreneurship. In a bid to foster growth of the SMEs sector, the Kenyan government in 2001 introduced the single business permit (SBP) issued under the County Governments Act No. 17 of 2012 laws of Kenya as a response to business licensing problems faced by SMEs in the initial start-up stages where they previously had to acquire multiple licenses before opening shop. In 2019, the Kenyan government in partnership with the World Bank launched the MbeleNaBiz business plan competition that seeks to provide grant funding and/or business plan training among youth-led SMEs. Despite their significant contribution to the economy and the adequate government support, Kenya's SMEs are faced with various constraints that make them remain stunted or leave market even before celebrating their first three years

of startup (Fatoki, 2014). In 2018, the Kenya National Bureau of Statistics conducted an economic survey and found that nearly 400,000 micro, small and medium enterprises do not attain their second anniversary and very few reach their fifth anniversary (KNBS, 2018).

One of the major causes of failure for SMEs especially in developing nations is poor investment decisions made by SMEs owners. Christanti & Mahastanti (2011) observed that most investors are unconsciously influenced by behavioral biases which lead them to make irrational financial decisions. Kamunge *et al* (2014) found that most SMEs owners in Kenya are not frequently trained on business management skills and this consequently results to poor investment decisions. A research study by Garcia (2007) revealed that SMEs owners who possess low levels of financial literacy lack appropriate business managerial skills to enable them make successful investment decisions.

Most previous studies conducted have focused on behavioral finance and investment decisions but there exists scanty research on the potential effect of the interaction between financial behavior, financial literacy and investment decisions. For instance, (Kisaka, 2015) researched on the effect of behavioral finance factors on stock investment decisions in Kenya, (Cherono, 2019) researched on investor behavior biases and stock market reaction in Kenya, (Nakamya, 2020) studied the impact of behavioral finance on investment decisions by investment banks in Kenya whereas (Wangi & Baskara, 2021) researched on the effect of financial behavior on individual investment decision behavior. The failure of the previous studies to research on financial literacy and its moderating effect on the relationship between financial behavior and investment decisions has resulted to minimal contribution of these studies to the finance discipline and among the SMEs sector. If SMEs in Kenya are going to experience a change for the better in their performance, their growth and an increased life expectancy in the

market, then more knowledge needs to be gained on whether financial literacy strengthens, weakens or negates the relationship between financial behavior and investment decisions. This study therefore sought to bridge this gap by undertaking a study on the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya.

1.3 Research Objectives

1.3.1 General objective

The main objective of the study was to examine the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs owners in Nairobi CBD.

1.3.2 Specific objectives

The specific objectives of the study were:

1. To establish the effect of savings behavior on investment decisions among SMEs owners in Nairobi CBD.
2. To determine the effect of borrowing behavior on investment decisions among SMEs owners in Nairobi CBD.
3. To test the effect of spending behavior on investment decisions among SMEs owners in Nairobi CBD.
4. To examine the effect of investment behavior on investment decisions among SMEs owners in Nairobi CBD.
5. To analyze the moderating effect of financial literacy on the relationship between:

   5a. Savings behavior and investment decisions among SMEs owners in Nairobi CBD.

5b. Borrowing behavior and investment decisions among SMEs owners in Nairobi CBD.

5c. Spending behavior and investment decisions among SMEs owners in Nairobi CBD.

5d. Investment behavior and investment decisions among SMEs owners in Nairobi CBD.

1.4 Hypotheses of the Study

i. **H_{01}**: Savings behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

ii. **H_{02}**: Borrowing behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

iii. **H_{03}**: Spending behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

iv. **H_{04}**: Investment behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

v. **H_{05a}**: Financial literacy does not moderate the relationship between savings behavior and investment decisions among SMEs owners in Nairobi CBD.

vi. **H_{05b}**: Financial literacy does not moderate the relationship between borrowing behavior and investment decisions among SMEs owners in Nairobi CBD.

vii. **H_{05c}**: Financial literacy does not moderate the relationship between spending behavior and investment decisions among SMEs owners in Nairobi CBD.

viii. **H_{05d}**: Financial does not moderate the relationship between investment behavior and investment decisions among SMEs owners in Nairobi CBD.

1.5 Significance of the Study

First, the research outcome of this study will provide great insights to SMEs proprietors and managers in Kenya and beyond on how to successfully manage their SMEs by practicing wise financial behavior and making informed investment decisions through acquiring high financial literacy skills and knowledge.

Secondly, this study will assist policy makers in the financial sector especially those in the SMEs industry to know the impact that financial literacy has on SMEs owners in terms of investment decisions. This will help them to formulate and implement important financial literacy-centered policies and regulations that may help improve investment decisions made by SMEs owners.

Moreover, findings of this study will provide a rich source of literature and a reliable source of reference to academicians and future researchers interested in the academic field of finance. Generally, the findings of this study will add to the existing body of knowledge on the effect of financial behavior on investment decisions with the moderating role of financial literacy and make recommendations arising from its findings for further research on this or other related areas of study.

1.6 Scope of the Study

The research study focused on examining the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs owners. The dimensions of financial behavior that were investigated include: savings behavior, borrowing behavior, spending behavior and investment behavior and their direct effect on investment decisions. Financial literacy was the moderating variable. The study targeted 1,842 SMEs owners operating within Nairobi CBD, Kenya. Out of this, 329 respondents were sampled. The study period was from September 2022 to

November 2022 where primary data through the use of questionnaires was collected within the same period. This study was guided by three theories namely: human capital theory, prospect theory and theory of planned behavior.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter presents the concept of investment decision, concept of financial behavior, concept of financial literacy, theoretical review, empirical review and conceptual framework.

2.1 Concept of Investment Decision

According to Avram *et al* (2009) investment refers to an expenditure incurred now so as to obtain gains in the future. There are two types of investment strategies namely; fixed/ physical investments which comprises of buildings, machinery, plants or any other tangible assets and monetary investments which include stock, bonds and any other financial investments (Virlics, 2013). The decision on whether to invest or not depends on various factors such as cost of the asset, investor's profit expectation and the availability of funds to finance the investment (Harcourt *et al*, 1967). Investment can also be referred to as the commitment of resources with the hope of realizing benefits expected to occur in the future (Bierman & Smidt, 2012).

In an organizational dimension, a company reaps many benefits when it invests in developing its employees. Some of these benefits include: The firm attracts great employees, provides a platform for employees to form greater connections with one another through practicing new skill together, leads to increased employee retention in the long run and creates a resilient workforce that is adaptable to change (Verb, 2021). Similarly, economic investment is very beneficial to a firm. It provides a firm with high investment returns in the long-run, enhances growth of a firm, provides regular income, and helps overcome financial obstacles through wealth accumulation (Trianni*et al*,

2016). High levels of financial literacy and good financial behavior empowers an investor to make smart financial investment decisions.

One of the factors used to measure investment decision is the return on investment (ROI). ROI is a metric that is used to assess the profitability of an investment by comparing the initial cost of investment with the net profit gained from the investment. The ROI is also referred to as the average rate of return (ARR) or return on capital employed (ROCE). A high ROI means that an investment's profits are more than the cost employed whereas a low ROI denotes higher initial cost than the profits gained. According to AmalenduBhunia (2011), ROI ratio is used to decide on the best investment plans by showing the gains a firm is making against the cost employed by the investor. When comparing against different investment options, the investment that yields the highest ROI is the most preferred. Professional experts suggest that projects that yield negative ROI should be rejected (Doe, 2014). The ROI ratio is mainly expressed in terms of a percentage of increase or decrease in the worth of an investment. The basic formula for calculating ROI is dividing net profit by initial cost of investment times one hundred percent. ROI is a very popular financial measure because of its simplicity, flexibility and ease in calculating an investment's profitability. The ROI ratio is a key performance indicator that is relevant to SMEs when assessing profitability of investment projects, to measure financial success over time and in making informed business decisions.

2.2 Concept of Financial Behavior

Financial Behavior refers to the habits that a household or an individual adopts when managing their financial resources. Sudindra (2018) observed that individuals have different financial habits and as such financial behavior is influenced by various factors

such as level of income, advice from family and friends, financial knowledge, marital status and an individual's future perspective. Wangi (2021) argues that psychological factors like greed, fear and panic make investors to act irrationally. This proposition has consequently led to the development of behavioral finance which analyzes the effect of psychology on an investor. It attempts to describe why most investors make financial decisions based on biases rather than relying on facts. Daves (2018) in his book 'Intermediate Financial Management' observes that there are four main psychological biases that influence investment decision-making namely; overconfidence, anchoring bias, herding bias and loss-aversion behavior.

Overconfidence occurs when an investor either attributes their success to their own talents or believes that since they have been able to predict the past then they are also capable of predicting the future (Sarwar, 2016). Anchoring bias is a phenomenon that refers to how investors mainly rely on recent events to predict future events. For example, if the stock market has been performing well in the recent past then investors may tend to think that it will continue to perform well even in future. Herding bias happens when an investor follows other successful investors and invests in classes of assets that are performing well. This occurs mainly when a group of investors make the assumption that other investors are better informed. The main disadvantage of herding bias is that it results to excess demand for well-performing assets which consequently leads to inflation. Another psychological bias in behavioral finance is the loss-aversion phenomenon. Kahneman & Tversky (1979) proposed the loss-aversion phenomenon which states that investors are usually more biased towards gains because losses bring about a huge emotional impact than its equivalent gain. It asserts that investors prefer gains and they will make irrational decisions to avoid losses.

In this research study, financial behavior is seen to comprise of four main constructs namely; savings, borrowing, spending and investment behavior.

According to Keynes, savings refers to the balance amount that remains after deducting all expenses from the disposable income. It can also be defined as sacrificing part of one's current consumption in order to have improved living standards in the future. When an individual does not save and is poorly managing their money then it may lead to financial challenges such as bankruptcy and also lead to feelings of embarrassment and stress (Bernama, 2016).

Borrowing refers to the act of taking money from a source; say a bank, with a formal or informal agreement between the lender and the borrower that the funds will be repaid by a specific date and in agreed regular installments. The money borrowed is often referred to as a loan. Poor borrowing decisions often lead to over-indebtedness which in turn causes depression-related problems, social exclusion and poor living standards (Persson, 2007).

Spending behavior can be classified as either strict or loose. It refers to how high or low an individual's expenditure is when spending money (Mitchell, 2008). Different people have different spending habits including; spending without a plan, paying for convenience, spending without keeping track, impulse buying and emotional spending. In most cases, spending habits are influenced by various factors such as: personality, the media and culture, gender and age group (Gitaria, 2018).

Investment behavior is a concept that refers to how an investor judges, forecasts, evaluates and reviews the procedures for decision making. These investment procedures include; investment psychology, gathering financial information, defining, understanding, researching and analyzing (Alfredo & Vicente, 2010). Individuals with

good investment behavior tend to select investment avenues that have good credibility, offer high dividends and have high return on investment (Peng, 2003).

2.3 Concept of Financial Literacy

Financial literacy refers to sufficient knowledge about the facts, concepts, principles and underlying technology which serve as a basis to being smart in using money (financial fitness for Life, 2008).Lusardi & Mitchell (2007) defined financial literacy as the possession of, comprehensive understanding and the ability to apply given set of skills and knowledge so as to be able to make informed financial decisions. An individual with high levels of financial literacy is able to manage their finances wisely thus enabling them to live more prosperously in future. Gitaria (2018) reveals that indicators of financial literacy include; a) General finance knowledge which comprises of income and expenditure management and having an understanding of basic finance concepts. b) Loans and savings whereby a loan refers to borrowed money whereas savings is the balance amount left after deducting all expenses from the disposable income. c) Investment which is defined as allocation of financial resources now so as to gain profits or returns in future d) Insurance which acts a risk reduction tool.

A study by Huston (2012) on the relationship between financial literacy and the cost of borrowing among US consumers found that financial literacy has a significant effect on an individual's financial decisions. From the study, consumers who were financially literate were twice as likely to avoid borrowing using either mortgage loans or credit cards. Hussain (2018) conducted a study on the relationship between financial literacy and access to finance among 39 SMEs in the UK. He observed that financially literate business owners were able to acquire external finances and this helped them grow their business. Mandell (2007) argues that a high level of financial literacy leads to wiser

financial behavior such as applying for loans with low interest rates and rare bouncing of checks. From these studies, it is evident that a high level of financial literacy leads to better financial management through acquiring effective skills and knowledge.

Financial literacy plays a significant role on the investment decisions of an individual. Putri & Hamidi (2019) conducted a study on the effect of financial literacy on investment decisions among master's students in Andalas University, Padang and observed that financial literacy positively and significantly influences investment decisions. Baihaggy *et al* (2020) explain that financial literacy has a great positive effect on investment decisions because a high level of financial literacy helps to make the best use of processing financial information which helps in making investment decisions. In addition, Krisnawati (2019) also found that financial literacy and investment decisions are positively correlated. This means that a high level of financial literacy translates to better investment decisions. However, some authors argue that financial literacy has no influence on investment decisions. For example, Fitriarianti (2018) argues that investment decisions are not significantly influenced by financial literacy but rather by financial behavior and an individual's level of income.

2.4 Theoretical Review

The study was guided by the Human capital theory, Prospect theory and Theory of planned behavior.

2.4.1 Human Capital Theory

This theory was authored by three economists; Gary Becker, Jacob Mincer and Theodore Schultz in 1962. These three advocates proposed that education and training are the key sources of economic development. This theory states that workers have a set of skills and abilities which can be improved through education and training. A.W.

Lewis (1954) formed the word “human capital” and defined it as the economic value of an employee which is made up of factors such as level of education, skills, knowledge and experience (Sean, 2021). According to this theory, when an individual invests in education it results to better performance at a personal level, high productivity and profitability at the organizational level and positive returns at the community level (Nafukho *et al,* 2004). This theory suggests that when individuals invest in education and training, they become more efficient and productive which results to better job opportunities and higher earnings (Almendarez, 2011).

In relation to this study, human capital theory illustrates the role of financial literacy in investment decision- making among business owners. An individual with a higher level of financial education receives higher financial rewards (Gillies, 2015). This theory demonstrates how human capital serves as an economic resource that can greatly improve the chances of survival of small businesses (Bruederl *et al*, 1992). When business owners invest in education and training, they acquire new skills and knowledge which enables them to make informed decisions (Unger *et al*, 2011).

2.4.2 Prospect Theory

This theory is popularly referred to as the “loss- aversion theory” and was first formulated by psychologists Daniel Kahneman and Amos Tversky in 1979. They proposed that investors perceive gains and losses differently. This theory states that investors are more likely to choose an investment with potential gains rather than an investment with potential losses. Investors are usually more biased towards gains because losses bring about a huge emotional impact than its equivalent gain. Most real-world decisions must be made without full awareness of what will happen in the future. This theory assumes that various illusions affect an individual’s decision-making

process namely; regret aversion, mental accounting and loss aversion (Ogunlusi, 2021). The regret aversion illusion is based on the belief that in most cases, investors always wish to avoid regret when making investment decisions (Singh, 2012). The mental accounting illusion states that individuals at times separate funds that should have been combined. An individual will put aside a special fund for vacation purposes while at the same time have a huge loan yet the individual can divert funds allocated for vacation and use it to repay debt thus decreasing his loan interest payments. Loss aversion illusion posits that investors tend to be more loss sensitive compared to the joy experienced by the same investors when they gain (Phung, 2010). The pain of losing 100 dollars is estimated to be twice as great as the joy of winning 100 dollars (Benartzi, 2012).

In relation to this study, prospect theory explains how individuals make investment decisions even when the consequences of their choices are uncertain. This theory demonstrates that investors are more concerned with the returns on an investment (whether a gain or a loss) than with their overall wealth. It also reveals that investors are more biased toward avoiding losses than seeking gains (Wiley, 2010). It illustrates how investors are more sensitive to the pain caused by losses compared to the joy associated with gains.

2.4.3 Theory of Planned Behavior

This is a psychological theory that was formulated in 1991 by psychologist Icek Ajzen in his pursuit to predict human behavior (Ajzen, 1991). It states that an individual's behavior is influenced by intentions which are informed by a combination of three main psychological variables namely; Attitude (AT), Perceived behavioral control (PBC) and Subjective norms (SN). This theory assumes that an individual acts rationally based on

their attitudes, perceived behavioral control and subjective norms. It is an extension of the theory of reasoned action which was introduced by Fishbein & Ajzen (1975). Attitude towards behavior (AT) refers to both the positive and negative views an individual has towards a particular behavior. Perceived behavioral control can be described as the extent to which an individual is able to control their behavior. It refers to an individual's perception of how easy or difficult it is for them to conduct a given behavior and is also influenced by external factors like resources and opportunities. Subjective norms (SN) refer to the perceived societal pressure to engage or disengage in a particular behavior (Ajzen, 2002).

In relation to this study, theory of planned behavior serves as a lens for assessing an entrepreneur's intention to engage in a particular financial behavior. This theory will help to predict the attitudes, perceived behavioral control and subjective norms that inform the savings behavior, borrowing behavior, spending behavior, investment behavior and budgeting behavior of an investor. This theory is relevant to this study because it illustrates the factors that influence an individual's financial behavioral choices.

2.5 Relationship between Financial Behavior and Investment Decisions

Financial behavior can be defined as how people handle, manage and make use of the financial resources available to them (Dwiastanti, 2015). According to Vanessa & Marlene (2005), financial behavior refers to the control an individual gives to his expenditure, savings and budget. Xiao (2008) described financial behavior as the activities that individuals undertake in relation to money such as savings, cash management and loans.

Asandimitra & Kautsar (2019) researched on the financial behavior of working women in investment decision-making. They found that the working women under study had thoughts about investment planning and believed they could get profitable investments if they properly planned and saved their finances. Secondly, the respondents were found to be risk-averse and were attracted to real estate which has low risks. In addition, the study revealed that the main reason for investing among the respondents was to plan for retirement and for family security. Aduda, Odera & Onwonga (2012) conducted a study on the financial behavior and performance of investors trading shares of companies listed in the Nairobi Stock exchange, Kenya and found that investors who demonstrated rational financial behavior such as buying stocks from well-performing companies were able to realize positive results in their investments. On the other hand, investors with irrational financial behavior like herding behavior made losses in their investments. The study recommended investors to acquire sufficient financial knowledge before buying stocks so as to make the best investment decisions.

Waweru, Mwangi & Parkinson (2014) studied the behavioral factors influencing investment decisions in the Kenyan property market. The study established that the major behavioral factors influencing property investment decision-making were anchoring and representativeness. In addition, factors such as price and location of the property and availability of property market information had an impact on the investment decisions made by the property investors.

Bakar & Yi (2016) researched on the effect of psychological factors on investors' decision making in Malaysian stock market. The psychological factors under study were: availability bias, overconfidence, conservatism and herding attitude. Based on previous studies, these psychological factors were found to contribute huge roles in

determining the investment decision made by an investor. The study results revealed that human beings at times make irrational financial decisions because their psychological feelings get in their way. Besides, availability bias, overconfidence and conservatism were found to have a positive significant effect on investors' decision making.

Henager & Cude (2016) categorized financial behavior into either short-term or long-term. In their research, they state that long-term financial behavior comprises of investing behavior and retirement saving behavior whereas short-term financial behavior is made up of spending and emergency saving behavior. Studies show that financial behavior is indicated by variables such as spending, borrowing, savings behavior, investment behavior, financial planning behavior and budget behavior (Bhushan & Medury, 2014; Kalekye & Memba, 2015; Rai, 2019). This study chose to work with only four financial behavior variables namely: savings behavior, borrowing behavior, spending behavior and investment behavior. The four variables were preferred because they play a crucial role on the investment decisions made by business owners.

2.5.1 Relationship between Savings behavior and Investment Decisions

Njung'e (2013) defined savings behavior as a conduct where buyers earn income but do not spend on buying. Miller & VanHoose (2008) defined savings as a foregone consumption. Ahmed (2007) described savings behavior as the habit of putting aside money for future usage. Studies have been conducted on the effect of savings behavior on investment decisions. For instance, Jisha & Gomathi (2017) examined the perception of investment pattern among urban working women in Coimbatore city, India. The study objective was to determine the factors influencing the savings and investment

pattern of urban women employees. This descriptive statistics study was conducted by the use of primary data. The data was collected through interviews, structured questionnaires and surveys. The study targeted 50 salaried women employees located at Coimbatore city, India. The data was analyzed using the Chi- Square test. The findings of the study indicated that women employees prefer investing their claims in various savings avenues. Besides, most women were found to be risk avoidant and thus preferred less risky savings avenues. The study also revealed that the main reasons for investment were child education, earn high returns on investment, tax benefits, child marriage and personal safety. In addition, the respondents cited that their main sources of information when considering to invest were; the internet, newspapers, family members, friends, books and magazines. In conclusion, the results of the study revealed that the duration for investment was mainly short and medium-term, and mainly intended to invest in financial instruments such as shares as well as non-financial instruments such as land and jewelry.

Achar (2012) studied the saving and investment behavior of teachers. The study sought to determine the saving and investment patterns of teachers in primary, high school, college and universities in Udupi District of Karnataka State. The data was collected using primary data through administration of structured questionnaires to five hundred and thirty-five teachers working in various educational institutions in Udupi District. The study utilized various statistical techniques such as Chi- Square statistics, percentages, correlation and multiple regression analysis. The findings of the study revealed that the most popular savings avenues used by the teachers under study were postal savings, life insurance, real estate and bank deposits. Besides, the main motives for saving and investments amongst the respondents were assured returns on investment, low risks and tax benefits. The study concluded that the individual

characteristics of the teachers such as gender, age and marital status directly influenced their saving and investment behavior. In addition, other factors such as monthly income and upbringing status had a direct effect on the teachers' saving and investment behaviors.

2.5.2 Relationship between Borrowing behavior and Investment Decisions

Borrowing behavior refers to an understanding of how people use money they have borrowed from a financial institution or from an individual (Lusardi &Tufano, 2011). Key concepts found in borrowing include: compound interest, credit cards and loan repayment methods. Similarly, studies have been conducted to identify how borrowing behavior influences investment decision making. Siekei (2013) conducted a study to establish the effects of credit management skills on performance of small and medium enterprises (SMEs) registered under the Equity Group Foundation (EGF) financial literacy program in Njoro District, Kenya. The targeted population was four hundred and sixty-seven beneficiaries of Equity Group Foundation project in Njoro District. The study used descriptive survey research design with data being obtained from primary sources through administration of questionnaires to the selected program beneficiaries. The data obtained was analyzed using percentages, means, standard deviation, frequency counts and t-test was used to analyze the difference in performance before and after training. This study found that the respondents who had gained skills on credit management through the Equity Group Foundation literacy program were able to acquire loan facilities from banks and micro finance institutions which enabled them invest more into their businesses. Results of the study also revealed that the credit management skills gained by the SMEs owners played a key role in enabling them to manage their loan portfolios thus minimizing the costs charged as interest rates which consequently translated to increased profitability for the firms.

Agarwal *et al* (2017) investigated the future plan for increasing financial literacy among people. The objective of the study was to provide future plan for increasing financial literacy among Indian people through proposed School level Curriculum. The research findings revealed that financial literacy is made up of various components such as investment decisions, financial planning, insurance, banking, taxes, behavior aspects, retirement among many others. In addition, the study indicated that the reason for borrowing, source of borrowing, merits and demerits of borrowing, how much to borrow, comparing interest rates of various loans being offered and the importance of timely loan repayment are all crucial learning points in the field of financial literacy that lead to wise investments. The study showed that the mentioned financial literacy topics were easy but investors who lacked knowledge of those topics found it difficult to understand financial instruments thus ended up investing in loss-making projects. The study recommended that such financial literacy topics to be included in the school syllabus and students to be taught on key financial terms so that in future they do not face financial problems and escape from financial risks.

2.5.3 Relationship between Spending behavior and Investment Decisions

Spending behavior can be defined as usage of either cash, credit or debit card in exchange for goods and services (Lipscomb, 2019). It refers to how you use your money. Studies have been conducted on the significance of spending behavior on making investment decisions. Perculeza *et al* (2016) assessed the spending behavior of the teaching personnel in an Asian University. This study sought to find out the spending behavior of the teaching personnel in Lyceum of the Philippines University. This descriptive statistics study was conducted by the use of primary data. The data was collected through administration of questionnaires. The study targeted one hundred and sixty-one teaching personnel selected from different colleges. The data was analyzed

using various statistical tools namely; ranking, frequency distribution, weighted mean and F- Test. The study revealed that in most cases, spending behavior is mainly associated with basic necessities, leisure activities and other miscellaneous spending activities of the employees. In terms of basic necessities, food was found to be the highest ranked, followed by education then followed by clothing and lastly housing. Leisure activities were associated with traveling, entertainment such as movies and family outings/ picnics. Miscellaneous spending activities involved gadgets, jewelry, charity, taxes and loans. Results of the findings also showed that the major problems encountered on spending practices by the study participants were overspending, misallocation of financial resources and inflation. Furthermore, inadequate income, use of credit cards as a mode of payment, indebtedness and many dependents were also highlighted to be challenges that respondents faced when spending. The study recommended that having a good budget in place would be of great help in regards to effectively allocating money for spending.

Baluja (2016) conducted a study on financial literacy among women located at India. The study revealed that financial literacy is concerned with aspects such as; financial knowledge and an individual's behavior and attitude towards saving, borrowing and spending. This study emphasized that money left after deducting expenditure from income is allocated for savings or investments. Results of the study showed that financial knowledge on expenditure or spending is of significant help to an investor. Indian women, who were the participants in this study, were found to be facing several psychological, physical, cultural and financial obstacles that served as bottlenecks in equipping them with financial literacy skills. Furthermore, the study indicated that women did not recognize the importance of minimizing their expenditure. The study

concluded by highlighting that women in India lack a satisfactory level of financial literacy.

2.5.4 Relationship between Investment behavior and Investment Decisions

Investment behavior refers to an individual's conduct of choosing between various investments options to place their income (Mazumdar, 2014). Awais *et al* (2016) examined the impact that financial literacy and investment experience has on risk tolerance and investment decisions. This study targeted investors based in Pakistan. The main research tool used to collect data from respondents was questionnaires. Findings of the study revealed that financial literacy and investment experience greatly influences the investment decisions made by an investor in company of the mediating role of risk tolerance. The study indicated that high levels of financial and high investment experiences serve as a guide to investors when choosing the best investment avenues and when analyzing the risk and return of an investment. Most investors are attracted to investments that yield high returns. Given that high return of an investment is associated with high risk, investors are to some extent risk tolerant with an aim of reaping high returns from the investment. In addition, results of the study showed that investors have different risk tolerance levels depending on their financial capability, age, experience and duration of the investment. The study concluded that an investor can earn great profits from risky investments through gaining financial knowledge and possessing analytical skills to evaluate financial information.

Shukla (2016) attempted to analyze the investment preference of working women. The main objective of the study was to establish the effect of demographic factors on investment awareness and preferences. This study targeted working women in Jaffna District, Sri Lanka. Upon analyzing the data collected, the study revealed that majority

of the working women are aware of the various investment avenues. In regards to investment preferences, the working women under study gave high priority to bank deposits and gold. Furthermore, the respondents emphasized mostly on safety and liquidity of an investment in comparison to high returns. The study concluded that working women prefer less-risky investments and mainly concentrate on short and medium-term investments.

2.6 Moderating Effect of Financial Literacy

According to Vitt*et al* (2000), financial literacy refers to the ability to study, evaluate, manage and effectively talk about an individual's financial conditions that affect his financial well-being. Remund (2010) described financial literacy as knowledge of financial concepts, ability to handle finances, making wise financial decisions and proper financial planning. Various scholars have researched on the relationship between financial literacy and financial decisions (Lusardi & Mitchell 2011; Christelis *et al* 2010; Yoong 2011; Smith, McArdle & Willis 2010). Most studies observe that there exists a positive relationship between financial literacy and financial results. In addition, existing literature reveals that there is a strong positive association between financial literacy and financial behavior (Cole, Sampson & Zia, 2009).

Okello *et al* (2017) examined the moderating effect of financial literacy on the relationship between access to finance and growth of small and micro enterprises in developing economies; a case study of Uganda. The study revealed that financial literacy has a significant and positive moderating effect on the relationship between access to finance and growth of SMEs in developing economies. Thus, it can be concluded that financial literacy is an important tool for managing finances of an enterprise.

In context of this study, investment decisions are among the key decisions made by SMEs. The financial behaviors adopted by SMEs can result to either wise or poor investment decisions. A high level of financial education enables SMEs to adopt good financial habits which consequently lead to wise investment decisions. Hilgert, Hogarth & Beverly, 2003 found that financial literacy has a direct correlation with good financial behavior.

According to Greenspan 2002, financial literacy enables business owners to acquire financial skills and knowledge that are useful in making strategic investment decisions, preparing budgets and in saving money. In addition, Van Rooij, Lusardi & Alessie 2011 found that financial literacy helps facilitate better credit management and timely payment of bills. Ibrahim & Alqaydi (2013) researched on financial literacy among a group of citizens of the United Arab Emirates and found that individuals with high levels of financial literacy were less likely to borrow. Moreover, Shahrabani (2012) studied the effect of financial literacy on intent to control personal budget among Israeli college students. His study results revealed that financial literacy has a positive effect on a person's intention to control their budget without necessarily incurring huge debt. Hence, the above studies justify the need to assess the moderating effect of financial literacy on the relationship between financial behavior and investment decisions.

2.7 Conceptual Framework

The central research problem of the study was to investigate the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs in Nairobi CBD, Kenya. Investment decisions represent the dependent variable; savings behavior, borrowing behavior, spending behavior and investment behavior are the independent variables whereas financial literacy is the

moderating variable. The age, gender and education of the SMEs owners and age of the SMEs serve as the control variables.

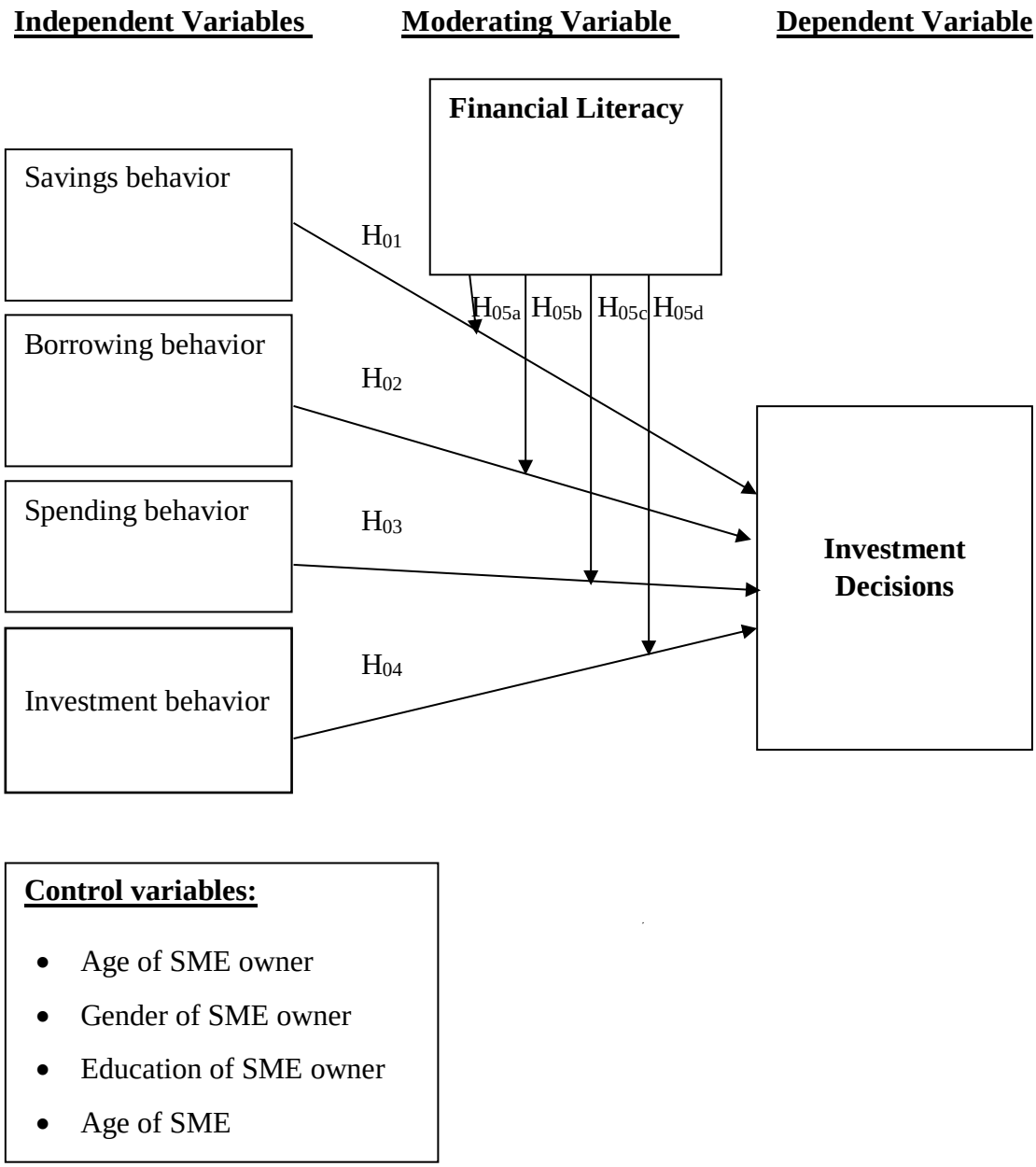

Figure 2.1: Conceptual Framework

Source: Author (2022)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter will cover the research design, target population, sampling design and procedure, data types, instruments and collection procedure, measurement of variables, pilot testing, data processing, data analysis, regression assumptions and ethical consideration.

3.1 Research Design

The explanatory research design was adopted for this study. This design was chosen because it allows for the identification of the causal links between variables conceptualized to address the research problem without their manipulation (Saldana, 2011). The explanatory research design is usually quantitative, and facilitates the testing of postulations made with regards to relationships among variables (Zohrabi, 2013). Choice of the explanatory research design was informed by the quantitative nature of the study whose focus was financial literacy and its capability to moderate the link between financial behavior and investment decisions of SMEs owners in Nairobi CBD. The moderation by financial literacy represents the indirect causal link that exists between SME owners' financial behavior and their investment decisions.

Moreover, this design was well poised to offer an explanation as to why and how financial behavior relates with investment decisions made by SMEs owners. The design catered for the use of statistical analysis approaches that show the nature of variation in investment decisions occasioned by variation in financial behavior.

3.2 Target Population

The study was conducted among SMEs operating in Nairobi CBD, Kenya. Nairobi was preferred because it is the country's capital city and most populous of the counties in Kenya. In addition, Nairobi is the main commercial center and the largest industrial center in Kenya thanks to its well-developed infrastructure, and is a home to major businesses in Kenya. These attributes enable the SMEs sector to greatly thrive in the town. Nairobi holds international as well as local enterprises, and has up to a total of 102,821 registered SMEs spread across different sectors (Kenya Bureau of Statistic, 2019). Thus, based on such a large number of SMEs with diverse business interests operating in there, Nairobi CBD was found to be an ideal location to conduct this study.

The main respondents for the study were the SME owners. This is mainly because they are the key decision makers of the small and medium enterprises they own. Thus, they were best suited to provide information on the key study variables. Records by the Nairobi County- Licensing department indicate that there are 1,842 licensed SMEs operating within Nairobi Central Business District (CBD) as at 2021.Consequently, the target population comprised of 1,842 SME owners as shown in Table 3.1 below.

Table 3.1: Distribution of the Target population

Sector Type	Target Population
Manufacturing	921
Information Technology	368
Tours & Travel	276
Hospitality	148
Consulting	92
General Shops	37
Total	**1,842**

Source: Nairobi County, Licensing Department, 2021

3.3 Sampling Design

3.3.1 Sample size determination

The study employed simple random sampling to select the sample size. The study respondents were the respective SME owners selected through simple random sampling from each of the six sectors that had been identified. The six sectors were manufacturing, information technology, tours and travel, hospitality, consulting and general shops. The study focused on the six sectors because they had the most active and highest competition of SMEs.

The study utilized the Taro Yamane (1973) sample size formula to arrive at a sample size of 329. This sample size was considered an ideal representative of the target population of 1,842 SMEs. Griffin (2013) acknowledges that a sample of between 300 and 500 is deemed good for explanatory research designs. Therefore, the sample size met the condition of this criterion.

Formula:

$$n = \frac{N}{1 + N(e)^2}$$

Whereby: n = Sample size

N = Total population size (1842)

e = Error of sampling (0.05)

The sample size was determined as follows:

$$n = \frac{1842}{1 + 1842(0.05)^2} = 329\ SME\ \text{Owners}$$

3.3.2 Sampling Procedure (Neyman's allocation formula)

In each of the 329 SMEs, an equivalent number was administered to each SME owner. The study used the Neyman's (1934) allocation formula to distribute the sample size. Given the fixed sample size, this formula was preferred so as to maximize precision of the survey.

Table 3.2: Sample Size

Sector Type	**Target Population**	**Sample Size** $n_h = \left(\frac{N_h n}{N}\right)$
Manufacturing	921	165
Information Technology	368	66
Tours & Travel	276	49
Hospitality	148	26
Consulting	92	16
General Shops	37	7
TOTAL	**1,842**	**329**

Source: Researcher, 2022

3.4 Data Type, Data Collection Instruments And Procedures

3.4.1 Data Type

Primary data was the only type of data employed in sourcing for data directly from the SME owners under study. Primary data enables the researcher to collect firsthand information (Douglas, 2015). Primary sources of the study were obtained through administration of questionnaires.

3.4.2 Data Collection Instruments

A questionnaire was the principal tool for data collection in this study. A questionnaire is ideal for conducting a survey since it has the ability of covering a large sample size over a relatively shorter time compared to other instruments (Gibson, 2014). The pieces of information sought from the SMEs owners under investigation are contained in the

questionnaire (Appendix II). The questionnaire was composed of four sections. Section A focused on general background information of the SME investigated to control its potential effect on the conceptualized variables. Section B collected information on investment decisions of SMEs owners construed as the dependent variable. Section C sought to collect information on the independent variables which comprised of 4 constructs namely; savings behavior, borrowing behavior, spending behavior and investment behavior. Section D focused on financial literacy postulated as the moderating variable. The questionnaire was anchored on the Likert type scale. Bhandari (2020) observes that Likert scales as good rating scales that are useful when analyzing opinions, attitudes or behaviors. The Likert scale ranged between 1 and 5 whereby (1) denoted strongly disagree; (2) denoted disagree; (3) denoted neutral; (4) denoted agree; and (5) denoted strongly agree. Closed-ended items were designed because answers are easy to code and analyze statistically.

3.4.3 Data Collection Procedures

A total of 329 questionnaires were administered through the help of four experienced and qualified research assistants. The "drop-and-pick-later" method of questionnaire was administered to the respondents who were SME owners in Nairobi CBD. Primary data was collected with respect to the specific variables under study. Respondents were accorded enough time to exhaustively respond to the questionnaire items. The filled questionnaires were collected upon expiration of the allocated time. In case of non-response, phone calls and text reminders were sent to the respondents. The data collection exercise was carried out within two months.

3.5 Measurement of Variables

The questionnaire was classified into three parts namely: independent, moderating and dependent variables. Likert scales were the main form of measurement scales. A 5-

point Likert scale was adopted so as to obtain responses from the selected SMEs owners. The Likert scale ranged between 1 and 5 with (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

3.5.1 Dependent variable

The dependent variable for this study was *Investment decisions* and was measured using a Likert scale consisting of 10 items developed and modified from previous studies like Asila (2015), Garang (2016), Mutuku (2015), Mugo (2016), Kengatharan & Kengatharan (2014). The 10 items were return on investment, liquidity, tax implications, inflation rate, initial investment cost, income stability, investment period, diversification, risk and professional advice.

3.5.2 Independent variable

Savings behavior was conceptualized as the first independent variable and was measured using a Likert scale consisting of 6 items in line with previous studies: Mpaata (2020), Atkinson & Messy (2012), Kamunzyu & Kariuki (2019), Chaturvedi & Khare (2012). The 6 items were saving habit, savings interest rates, consumer preference, emergency savings, retirement savings and savings goal.

Borrowing behavior represented the second independent variable and was measured using a Likert scale consisting of 6 items as previously used by Davies *et al* (2019), Kariuki *et al* (2016), Olima (2013), Mutuku (2015), Siekei *et al.*, (2013). The 6 items were loan purpose, loan repayment habit, attitude towards debt, comparing loan products, cost of borrowing and size of loan (debt to equity ratio).

Spending behavior was conceptualized as the third independent variable and was measured using a Likert scale consisting of 6 items developed and modified from previous studies like Kempson (2008), Bongomin *et al.*, (2018). The 6 items were

record keeping, payment of bills, negotiation, spending plan, spending attitude and price discounts.

Investment behavior represented the fourth independent variable and was measured using a Likert scale consisting of 6 items as previously used by Barno *et al.*,(2021), Ojwang (2015), Nyakundi (2017). The 6 items were past business experiences, analysis of new products, economic viability, fearing bad financial outcomes, overconfidence and available market information.

3.5.3 Moderating variable

The moderating variable for this study was *Financial Literacy* which was measured using a Likert scale consisting of 9 items developed and modified from previous studies like Garang (2016), Sood&Medury (2012), Chaturvedi&Khare(2012). The 9 items were assessed through five key indicators of financial literacy namely; financial knowledge, financial awareness, financial attitudes, financial education programs and financial expertise.

3.5.4 Control variables

Age of the SMEs owner was measured in line with previous studies Wekesa (2015), Douglas *et al*(2017), Chege (2020), Magasi(2016) who measured age as an entrepreneur's number of years since their date of birth.

Gender of the SMEs owner was measured in line with previous studies Kanake (2018), Kiggundu (2002), Kanyare & Mungai (2017), Muathe & Muraguri (2020) who measured gender as an entrepreneur's characteristic relating to either masculinity or femininity.

Education of the SMEs owner was measured in line with previous studies Karadag (2017), Chiliya *et al.,* (2012), Purwidianti *et al.*,(2019) who measured education level as the highest level of schooling an individual has attained.

SMEs Age was measured in line with previous studies Boone *et al.,* (2007), Clarkson (2000), Gregory *et al.,* (2005) who measured age of a firm as the length of time an enterprise has been in operation.

Table 3.3: Summary of the Measurement of the Variables

Variable	Measurement Scale	Author
Investment Decisions	Five Point Likert, 10 items	Asila (2015), Garang (2016), Mutuku (2015), Mugo (2016), Kengatharan&Kengatharan (2014)
Independent Variables		
Savings Behavior	Five Point Likert, 6 items	Mpaata (2020); Atkinson & Messy (2012), Kamunzyu & Kariuki (2019),Chaturvedi & Khare, (2012)
Borrowing Behavior	Five Point Likert, 6 items	Davies *et al* (2019),Kariuki *et al*., (2016), Olima (2013), Mutuku (2015),Siekei *et al.*, (2013)
Spending Behavior	Five Point Likert, 6 items	Kempson (2008); Bongomin *et al*., (2018)
Investment Behavior	Five Point Likert, 6 items	Barno*et al.*, (2021), Ojwang (2015), Nyakundi(2017)
Moderating Variable		
Financial Literacy	Five Point Likert, 9 items	Garang (2016), Sood & Medury (2012), Chaturvedi & Khare(2012)
Control Variables		
SME Owner Age	Number of years of the SME owner since their date of birth	Wekesa (2015), Douglas *et al.*, (2017), Chege (2020),Magasi (2016)
SME Owner Gender	Relating to either masculinity or femininity	Kanake (2018), Kiggundu (2002), Kanyare& Mungai (2017), Muathe & Muraguri(2020)
SME Owner Education	Highest level of schooling attained by the SME owner	Karadag (2017),Chiliya *et al* (2012), Purwidianti *et al.*, (2019)
SME Age	Number of years the SME firm has been in existence	Boone *et al.*, (2007), Clarkson (2000), Gregory *et al.*, (2005)

Source: *Researcher, 2022*

3.6 Data Reliability and Validity

3.6.1 Reliability

Reliability refers to the consistency that an instrument demonstrates when applied repeatedly under similar conditions (Kothari, 2004). The respondents were briefed early in advance by the researcher on the need and importance of the study and permission was sought for their participation. To test the reliability of the research instrument, the researcher used Cronbach alpha which measures internal consistency of items. Choice of Cronbach alpha was based on its wide use in previous studies (Bryman, 2012). Under this approach, a Cronbach alpha value of 0.7 was deemed acceptable; that of 0.8 indicated good consistency; that beyond 0.9 was deemed excellent; while a Cronbach alpha value of 0.6 and below denoted poor reliability or lack of internal consistency in the items (George & Mallery, 2003).

3.6.2 Validity

The validity of a research is concerned with the extent to which that data measures what they are supposed to measure. Content validity is determined and demonstrated when an instrument performs what it is designed to perform (Orodho & Kombo, 2002). To ascertain content validity of the questionnaire, the research concepts under study were made available to the supervisors in the School of Business and Economics, Moi University to rate the ability of each item so as to make them relevant to the study. Their feedback was subsequently used to moderate the content of the questionnaire so that it meets the needs of the study.

Construct validity measures the extent to which the given research concepts or variables are conceptually or theoretically underpinned so as to better explain a given phenomenon that is crucial in the research (Zikmund, 2000). To check for construct validity in this study, the variables under study were grounded on relevant theories that

the researcher had keenly reviewed. Besides, the questionnaire was developed in a manner that sought to achieve the research objectives.

Face validity refers to the extent to which an instrument appears on the face value (Zikmund *et al*, 2010). To assess face validity, this research was presented to the supervisors in the School of Business and Economics, Moi University who double checked the study and advised on any areas with ambiguity.

3.6.3 Pilot Testing

The questionnaire was piloted where 33 questionnaires representing 10% of the sample size were administered to chosen SMEs operating in Kiambu County in a bid to improve the quality and validity of the instrument. This location was found to be suitable because the SMEs operating there mirrored the characteristics of the SMEs included in the actual study. A 10% sample size is recommended to be adequate to test for validity and reliability (Connelly, 2008).

3.7 Data Processing, Analysis and Presentation

3.7.1 Data Processing and Screening

Upon collection, the questionnaires were coded and data was entered into SPSS. The SPSS version 22.0 software was used for preliminary data screening and cleaning and for descriptive and inferential analysis. SPSS helps in summarizing the data by use of descriptive statistics such as tables and percentages and in predicting numerical outcome using linear regression. Data analysis used both descriptive and inferential statistics.

3.7.2 Descriptive Statistics

This is an approach through which data analysis, classification and summaries of numerical data are generated (Somekh & Lewin, 2005). The objective for conducting

descriptive statistics is mainly to reduce, summarize and analyze the item constructs. The descriptive statistics employed in the current study included percentages, frequencies, means and standard deviations.

3.7.3 Inferential Statistics

Inferential statistics was used in testing the hypotheses. Specifically, correlation analysis and regression analysis were used as expounded below:

Correlation analysis is a statistical tool that is used to determine the level of association of two variables. Correlation analysis was done to determine the strength of relationship between the variables. Correlation value of zero meant that there is no relationship between the dependent and the independent variables (Kothari, 2004). On the other hand, a correlation of ±1.0 denoted that there is a perfect positive or negative relationship. The values were interpreted between 0 (no relationship) and 1.0 (perfect relationship).

3.7.4 Model Specification

A multiple linear regression model was used to test and draw conclusions on the study hypotheses formulated. The model was specified as follows:

$$Y= \alpha + \beta_1 (OA) + \beta_2 (OG) + \beta_3 (OE) + \beta_4 (SA) + \beta_5 X_1 + \beta_6 X_2 + \beta_7 X_3 + \beta_8 X_4 + \varepsilon$$

Where:

1. Y= Dependent variable
2. α = Constant
3. $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$= Regression Coefficients
4. X_1, X_2, X_3, X_4 = Independent variables
5. OA = SMEs Owner Age
6. OG = SMEs Owner Gender
7. OE = SMEs Owner Education
8. SA = SME Age
9. ε = error term

3.7.5 Test for Moderation

Moderation happens when the relationship between the independent variable and the dependent variable relies on a third variable (Judd, Yzerbyt & Muller, 2014). Moderation is performed to assess whether the third variable strengthens, weakens or negates the relationship between the independent variable and the dependent variable.

A hierarchical regression model was used to test for moderation and was based on the recommendations by other scholars (Aiken, West & Reno, 1991; Hayes, 2012; Baron & Kenny, 1986). According to their work, four conditions must be met to establish moderation. First, the independent variable must have a significant relationship with the dependent variable. Secondly, the independent variable must have a significant relationship with the moderating variable. Thirdly, the moderating variable must have a significant relationship with the dependent variable. Lastly, the moderating variable has statistical significance when entered into the structural model. In this study, financial literacy was the moderating variable. The interaction between each of the four financial behaviors and financial literacy was computed and used in testing for the moderating effect.

In addition, the study will adopt ModGraph program developed by Jose (2008) to test the nature of moderating effect of financial literacy on the relationship between financial behavior and investment decisions.

The hierarchical regression model employed was as follows:

$$Y= \beta_0 + \beta_1 C_1 + \beta_2 C_2 + \beta_3 C_3 + \beta_4 C_4 + \varepsilon$$

$$Y= \beta_0 + \beta_1 C + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \varepsilon$$

$$Y= \beta_0 + \beta_1 C + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \beta_6 X_1 * FL + \varepsilon$$

$$Y= \beta_0 + \beta_1 C + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \beta_6 X_1 * FL + \beta_7 X_2 * FL + \varepsilon$$

$Y= \beta_0 + \beta_1 C + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \beta_6 X_1 * FL + \beta_7 X_2 * FL + \beta_8 X_3 * FL + \varepsilon$

$Y= \beta_0 + \beta_1 C + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \beta_6 X_1 * FL + \beta_7 X_2 * FL + \beta_8 X_3 * FL + \beta_9 X_4 * FL + \varepsilon$

Where:

Y= Investment decisions

B_0= Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9$= Regression Coefficients

C = Controls (SMEs Owner Age, SMEs Owner Gender, SMEs Owner Education and SME Age)

X_1= Savings behavior

X_2= Borrowing behavior

X_3= Spending behavior

X_4= Investment behavior

FL= Financial Literacy

ε= Error term

3.7.6 Regression Assumptions

The study conducted diagnostic tests as follows:

1. **Linearity Test**

Linearity occurs when the dependent variable is linearly related to the independent variables. This is to mean, a decrease in the independent variable results to a decrease in the dependent variable and vice versa or an increase in the independent variable leads to a decrease in the dependent variable and vice versa. The study used scatter-plots to test whether the relationship between the dependent variable and independent variable is linear or not. In addition, the study utilized regression lines that help observe the trend in the data of a given scatter plot (Krista, 2022). The linearity assumption was met when

the data points followed and were tightly clustered around the linear regression line. Besides, a positive linear relationship was established when the regression line had a positive slope.

2. Normality Test

Normality has been postulated as a critical assumption that must be satisfied in order to conduct multivariate analysis (Hair et al, 2006). Regression analysis assumes that data follows a normal distribution. To test for normality, the study utilized the normal probability plot (P-P plot). The normal P-P plot was used to check if the data exhibits the standard normal distribution. According to Jones (2022), indication of presence of normality in a data set is confirmed when majority of the data points are distributed along the normal PP line. Consequently, the normality assumption for the study was met when the plotted data points fell along the normal PP line thus concluding that the data is normally distributed.

3. Multi-collinearity Test

High correlation between two or more independent variables is known to constitute multi-collinearity, which when present negatively affects the regression parameter estimation. The study adopted the Variance Inflation Factor (VIF) and the tolerance level to check for presence of multi-collinearity. For VIF, a threshold of between 1 and 10 was applied. Thus, a VIF value of less than 1 or greater than 10 indicated presence of multi-collinearity. On the other hand, a tolerance level greater than 0.10 was recommended (Fidell, 2001).

4. Autocorrelation Test

This assumption seeks to test whether the random variables in a series are dependent or independent. To check for the independence of error terms, this study utilized the

Durbin-Watson (DW) test. The Durbin-Watson test checked whether the model residuals were auto-correlated or not. A threshold of between 1.5 and 2.5 was applied.

3.8 Ethical Consideration

In conducting this research, the respondents were provided with adequate information concerning the research and the consent to participation was voluntary. Additionally, the participants providing the information were competent to do so. Issues of privacy and confidentiality were put into consideration as the information from respondents was to be used for research purposes only and was dealt with utmost confidentiality (Orodho& Kombo, 2002). In addition, consent was also sought through a research permit obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and the University.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.0 Introduction

This chapter presents the findings of the primary data that was collected through the use of questionnaires. The data collected was then cleaned, coded and entered into the Statistical Package for Social Sciences (SPSS) version 22.0 in preparation for analysis. The analysis was then conducted through testing for reliability of instruments, descriptive analysis, performing diagnostic tests, correlation and regression analysis, investigating the moderating effects, hypothesis testing and discussing the key findings. The study findings were presented using tables as well as figures.

4.1 Response Rate

A total of 329 questionnaires were administered to the study respondents who comprised of SMEs owners operating in Nairobi CBD. Out of the total questionnaires administered, only 307 questionnaires were returned and properly answered. This represents a 93.3% response rate as shown in Table 4.1 below.

Table 4.1: Response rate of questionnaires

Response rate	Frequency	Percentage
Response	307	93.3
Non-Response	22	6.7
Total	**329**	**100**

***Source**: Research Data (2022)*

The above response rate was ideal for the study since it is consistent with Mugenda & Mugenda (2003) who asserted that 80% questionnaire response rate is the threshold deemed suitable for data analysis and presentation. Consequently, the 93.3% response rate was above the 80% threshold thus ideal for the research study.

4.2 Data Processing

4.2.1 Outliers

Outliers refer to data points that deviate strongly in a variable or population and this leads to suspicions by the researcher (Hawkins 1980, Jarrell 1994). Wainer (1976) defined outliers as unusual occurrences in a data set. According to Rasmussen (1988) and Zimmerman (1994), outliers bring about harmful effect such as decreasing normality of data, negatively impacting estimates that are of substantive interest, diminishing the power of statistical tests and also increasing the variances of error.

To check for outliers, the study used the $z = \pm 3.0$ since the sample size was above 80. There were three cases with univariate outliers. The three cases were identified by the $z = \pm 3.0$ guideline and were deleted thus leaving 308 cases.

4.2.2 Missing values

The Missing Completely at Random (MCAR) approach was used to check for missing values in this study. Where missing data was more than 5%, the cases were deleted. On the other hand, where the missing data was below 5%, the missing values were replaced using hot-deck imputation. One case was deleted as it was found with missing values above 5%. Thus, a total of 307 cases were maintained for further analysis.

4.3 Sample Characteristics

The study collected information on the demographic characteristics of both the SMEs owners and the SMEs firms. This information included: gender, age and education level of the SMEs owners and the number of years the SMEs had been in operation.

From the results shown in Table 4.2 below, it was found that majority of the study participants were male (66.4%) compared to their female counterparts whose total representation was 33.6%. This indicates that the data collected was representative of

all the gender categories. Besides, this shows that the SMEs have adhered to the Kenya's government policy of the one-third gender rule.

In addition, the study revealed that majority of the respondents were aged between 20-40 years and only a few respondents were above 50 years of age. This implies that most SMEs owners are in the productive age bracket and hence SMEs should put some motivational strategies in place to boost productivity and retain the workers.

In regards to level of education, as shown in table 4.2 below, a high percentage of the SMEs owners had attained secondary school level (43.3%) followed by the certificate/diploma holders (23.8%). The respondents at the postgraduate level were 15%, degree holders were 12.7% and those at the primary school level accounted for 5.2% of the study. This reveals that SMEs owners with a sound educational background are able to understand the workings of the SMEs.

Moreover, the findings revealed that a high percentage of the SMEs firms under study had been in operation for between 2- 10 years whereas those more than 10 years were 16.3%. These findings indicate that majority of the SMEs had been in operation for a reasonable period of time and this was ideal for the study as far as assessing investment decisions and financial behavior was concerned.

Table 4.2: Sample characteristics

Gender	**Frequency**	**Percentage %**
Male	204	66.4
Female	103	33.6
Total	307	100
Age of SME owner	**Frequency**	**Percentage %**
20-30	70	22.8
31- 40	154	50.2
41-50	49	16
Above 50	34	11.1
Total	307	100
Education Level	**Frequency**	**Percentage %**
Primary	16	5.2
Secondary	133	43.3
Certificate/ Diploma	73	23.8
Bachelor's degree	39	12.7
Post graduate	46	15
Total	307	100
SME Age	**Frequency**	**Percentage %**
Less than 2	65	21.2
2 – 5 years	129	42
6 – 10 years	63	20.5
More than 10	50	16.3
Total	307	100

4.4 Descriptive Statistics with Respect to Variables

The study utilized means and standard deviations when conducting descriptive statistics.

4.4.1 Influence of Savings Behavior on Investment decisions

Based on the findings shown in Table 4.6 below, most SMEs owners set savings goals they can be able to achieve (mean = 3.80, SD = 0.99). This would imply that setting targets in their savings consequently helps the SMEs to plan for good investment projects. Besides, the study indicated that the respondents have a good savings culture whereby they prefer to save rather than rely on debt even during difficult situations (mean = 3.63, SD = 1.02). Furthermore, it was established that most proprietors do not save their money with their preferred financial institution (mean = 3.33, SD = 0.95). This would mean that the SMEs proprietors under study prefer to save their money in

other savings avenues such as money market funds, pension funds or cash management. The findings further revealed that most SMEs owners have in place emergency savings (mean = 3.57, SD = 0.90) and retirement savings (mean = 3.53, SD = 1.01).

Table 4.3: Descriptive statistics for Savings Behavior

Statement	Mean	Std. Deviation	Skewness	Kurtosis
I save money each month with a financial institution of my choice	3.33	0.95	-0.66	0.59
I monitor my savings by reviewing my bank statement to check the interest rates earned	3.55	0.79	-0.60	0.33
I prefer to save than to borrow even in difficult circumstances	3.63	1.02	-0.75	0.51
I have an emergency savings that covers for any unplanned expenses in my business	3.57	0.90	-0.64	0.49
I have in place a retirement savings account for myself and my employees	3.53	1.01	-0.58	0.29
I often set achievable savings goals	3.80	0.99	-0.68	0.17
Average Score	**3.57**	**0.94**	**-0.65**	**0.40**

***Source**: Research Data (2022)*

4.4.2 Influence of Borrowing Behavior on Investment decisions

Based on the results illustrated in Table 4.7 below, the study respondents agreed to mostly relying on debt rather than equity when buying firm assets (mean = 3.85, SD = 1.06). This indicates that borrowed funds, as long as they are well managed, play a great role in the economic growth and development of small and medium firms. The study findings also revealed that SMEs owners always consider the cost of loan (mean = 3.72, SD = 0.95), purpose of loan (mean = 3.67, SD = 0.84) and also compare loan products offered by different lenders (mean = 3.63, SD = 0.97) before acquiring any loan. This would imply that assessing key factors when borrowing such as cost and purpose of loans helps SMEs to acquire debts that they are able to service while still carrying on

with their day-to-day operations. In addition, it was established that most SMEs proprietors strive to pay their debts on time (mean = 3.61, SD = 0.87). This is important because when firms pay their debts on time, they reduce their financial distress and also maintain good long-term relationships with their creditors.

Table 4.4: Descriptive statistics for Borrowing Behavior

Statement	Mean	Std. Deviation	Skewness	Kurtosis
I take loans for a given purpose or use	3.67	0.84	-0.95	1.34
I always strive to pay my debts on time	3.61	0.87	-0.41	0.35
I avoid debts at all costs	3.81	0.92	-0.48	-0.09
I always compare loan products offered by different lenders before making final decision to borrow	3.63	0.97	-0.68	0.46
I always consider the cost of borrowing before acquiring any loan	3.72	0.95	-0.71	0.34
I rely on debt rather than equity to purchase assets in my business	3.85	1.06	-0.79	0.18
Average Score	**3.72**	**0.94**	**-0.67**	**0.43**

***Source**: Research Data (2022)*

4.4.3 Influence of Spending Behavior on Investment decisions

The data analysis shown in Table 4.8 below revealed the following: The respondents under study agreed to keeping records of their business operations (mean = 3.57, SD = 0.91). This shows the importance of record keeping to SMEs proprietors as they are able to assess their expenditure and cut on cost where necessary. The findings further revealed that the study participants often negotiate for favorable terms with their suppliers (mean = 3.59, SD = 0.85) and look out for discounts before making purchases (mean = 3.61, SD = 1.04). This would mean that when SMEs go for negotiations and price discounts, they are able to get high quality products at fair prices and with favorable payment terms. This helps to save on cost. Furthermore, the study findings showed that the SMEs owners follow a spending plan when using their business income

(mean = 3.48, SD = 0.92). This is important because it illustrates that a spending budget serves as an effective management tool for most firms especially when allocating financial resources.

Table 4.5: Descriptive statistics for Spending Behavior

Statement	Mean	Std. Deviation	Skewness	Kurtosis
I keep records of my business operations	3.57	0.91	-0.82	0.80
I pay my bills and other financial commitments on time to avoid penalties	3.45	0.87	-0.45	0.48
I usually negotiate for favorable terms and conditions with my suppliers	3.59	0.85	-0.66	0.51
I stick to and follow the spending plan I have created on how to use my business income	3.48	0.92	-0.30	0.04
I prefer to spend than to save	3.6	0.95	-0.49	-0.14
I often compare prices and/or look for discounts before making a purchase	3.61	1.04	-0.61	0.06
Average Score	**3.55**	**0.92**	**-0.56**	**0.29**

***Source**: Research Data (2022)*

4.4.4 Influence of Investment Behavior on Investment decisions

Based on the findings show in Table 4.9 below, the study respondents were undecided on whether they rely on past business experiences when making investment decisions (mean = 3.26, SD = 0.99). This could be so because the investment world is dynamic and so what might have worked in the past might not work in the present. Furthermore, it was established that most proprietors only complete profitable projects (mean = 3.5, SD = 0.95). This would be so as to detect and avoid losses early. The study participants further agreed that sometimes the fear of making bad financial outcomes makes them not to invest in a given project (mean = 3.5, SD = 0.92). This would imply that

psychological factors such as fear significantly influence the decision-making process of an investor. It shows that emotions and investment decisions are highly correlated. The findings also revealed that SMEs owners rely on the available market information when making investment decisions (mean = 3.6, SD = 0.97). This illustrates that conducting a thorough market research and an enables SMEs to make wise investment decisions.

Table 4.6: Descriptive statistics for Investment Behavior

Statement	Mean	Std. Deviation	Skewness	Kurtosis
Most of the investment decisions I make are usually informed by past business experiences	3.26	0.99	-0.56	0.09
I analyze and evaluate a new product in the market before purchasing it	3.42	0.93	-0.40	-0.52
I only complete projects that are economically viable	3.5	0.95	-0.37	0.06
At times, I fail to undertake an investment due to fear of bad financial outcomes	3.5	0.92	-0.45	-0.06
In most cases, I overestimate my investment in the business	3.5	0.96	-0.35	-0.01
I rely on the available market information when making investment decisions.	3.6	0.97	-0.57	0.02
Average Score	**3.46**	**0.95**	**-0.45**	**-0.42**

***Source**: Research Data (2022)*

4.4.5 Descriptive Statistics for Financial Literacy

The data analysis shown in Table 4.10 below revealed the following: The respondents were confident that they know how to prepare and analyze their firm's financial reports (mean = 3.7, SD = 1.05) and that they balanced their checkbook on a monthly basis (mean = 3.6, SD = 0.94). This would imply that when SMEs proprietors have knowledge in preparing financial reports, then they are able to budget, spend wisely,

save and assess the economic viability of a project which enables them make wise investment decisions. However, the participants had doubt whether they hire experts to advice on the firm's financial health (mean = 3.2, SD = 0.88). This implies that financial experts play a significant role in advising on the company's financial status. Study findings further revealed that the SMEs proprietors were aware of the legal consequences of defaulting on loans (mean = 3.7, SD = 0.97). This implies that when firms comply with the statutory laws and repays their debts on time then they are able to avoid penalties and lawsuits which at times lead to insolvency. Furthermore, the findings established that the participants had previously attended financial management programs (mean = 3.5, SD = 0.86). This demonstrates that possession of financial knowledge and skills positively impact SMEs owners by enabling them engage in wise investment decisions. Besides, the respondents were conversant with loan interest rates calculations (mean = 3.6, SD = 0.98). This shows the importance of financial literacy skills which enables entrepreneurs to identify better loan products with favorable interest charges.

Table 4.7: Descriptive statistics for Financial Literacy

Statement	Mean	Std. Deviation	Skewness	Kurtosis
I always hire expertise to advice on the firm's financial health	3.2	0.88	-0.60	0.23
I have previously attended a financial management training program	3.5	0.86	-0.43	0.17
I know how to calculate interest rates charged on my loans	3.6	0.98	-0.53	0.16
I am aware of the legal consequences of defaulting on a loan	3.7	0.97	-0.54	-0.06
I balance my checkbook on a monthly basis by comparing my cash book against the bank statement	3.6	0.94	-0.48	0.09
I assess the company's profits and repayment ability before taking a loan	3.6	0.97	-0.56	0.11
I am uncertain about how I spend my firm's finances	3.6	1.05	-0.59	-0.05
I know how to prepare and analyze financial reports of my business	3.7	1.05	-0.77	0.23
My personal attitude towards money management influences me to budget	3.8	1.07	-0.63	-0.32
Average Score	**3.59**	**0.97**	**-0.57**	**0.06**

***Source**: Research Data (2022)*

4.4.6 Descriptive statistics for Investment Decisions

Based on the results illustrated in Table 4.11 below, the study participants agreed that they have diversified their assets (mean = 3.62, SD = 1.09). This would imply that diversification enables SMEs owners spread their risks by investing in different asset classes. However, the SMEs proprietors under study were undecided on whether they assess the returns when choosing an investment (mean = 3.14, SD = 1.05).This trigger concerns as to whether failure by SMEs owners to assess the return on investment (ROI) is what leads to poor investment decisions which consequently leads to financial struggles and business closure. Study findings further revealed that the respondents

always consider the liquidity of an investment (mean = 3.57, SD = 0.89). Liquidity refers to how easily an asset or investment can be converted into cash. This would mean that when an investment is highly liquid, then an SME is able to be cash-rich which consequently enables them to spend or take up other more profitable opportunities that come their way. In addition, the SMEs proprietors agreed that they always consider the inflation rate before investing (mean = 3.64, SD = 0.93). Inflation is commonly defined as the sudden rise in commodity prices. This would imply that inflation negatively impacts investment through increasing prices for investment avenues which is costly to the SMEs owners. Furthermore, it was established that SMEs proprietors always consider the initial cost before investing (mean = 3.72, SD = 0.96). This would mean that initial cost is a crucial factor to consider when investing because profitability of a project is able to be calculated by subtracting the initial cost from the estimated project income.

Table 4.8: Descriptive statistics for Investment Decisions

Statement	Mean	Std. Deviation	Skewness	Kurtosis
I always examine the return when choosing an investment	3.14	1.05	-0.29	-0.19
I always consider the liquidity when making an investment decision	3.57	0.89	-0.61	0.21
I always consider the tax implications of an investment so as to earn a high net after-tax return	3.51	0.97	-0.43	0.14
I always consider the rate of inflation before investing	3.64	0.93	-0.69	0.47
I always consider the initial cost before making an investment decision	3.72	0.96	-0.52	0.03
I often invest in projects that have stable incomes	3.64	1.03	-0.59	0.05
I put into consideration the investment period before making a decision	3.77	0.99	-0.71	0.26
I have diversified my assets	3.62	1.09	-0.52	-0.46
I always conduct market research before investing to assess the riskiness of an investment	3.06	1.01	-0.74	0.46
I consult professionals for guidance and advice before making an investment decision	3.58	1.06	-0.57	-0.03
Average Score	**3.53**	**1.00**	**-0.57**	**0.10**

***Source**: Research Data (2022)*

4.5 Reliability Test

To measure the internal consistency of items, the study used Cronbach's Alpha which measured the six variables under study. Table 4.6 below revealed the test results and it was evident that all the six constructs had met the recommended reliability threshold of 0.7. Spending behavior had a Cronbach's Alpha coefficient of 0.727. This was followed by investment behavior with a Cronbach's Alpha value of 0.763. Thereafter, savings behavior was next with a Cronbach's Alpha value of 0.789. Borrowing behavior had a

Cronbach's Alpha value of 0.791. The two variables with the highest scores were: Financial literacy that recorded a Cronbach's Alpha value of 0.831 followed closely by investment decisions construct with a Cronbach's Alpha value of 0.808.

Table 4.9: Reliability Results

	Cronbach's Alpha	Number of Items
Investment decisions	0.808	10
Savings behavior	0.789	6
Borrowing behavior	0.791	6
Spending behavior	0.727	5
Investment behavior	0.763	6
Financial literacy	0.831	9

***Source**: Research Data (2022)*

4.6 Validity Test

Given that the reliability score for each of the constructs was a Cronbach's Alpha value of greater than 0.7, this showed that the tool was valid for this research.

4.7 Test for Regression Assumptions

In relation with the assumptions of regression analysis, the study carried out diagnostic tests to ensure data was accurate and unbiased. These tests included: multicollinearity test, linearity test, normality test and autocorrelation test.

4.7.1 Multicollinearity test

To check for multicollinearity between the independent variables, the study utilized the Variance Inflation Factor (VIF) and the Tolerance level. The results as shown in Table 4.10 below indicate that the VIF values are less than 3. Thus, it can be inferred that there was absence of multicollinearity between the independent variables. These results match with those of Oduor *et al* (2021) who asserted that for VIF, a threshold of

between 1 and 5 is recommended. In addition, the values for the tolerance level as per the study findings were all greater than 0.10. This implied that there was no presence of multicollinearity between the independent values.

Table 4.10: Multicollinearity

	Collinearity Statistics	
	Tolerance	VIF
Savings Behavior	.464	2.157
Borrowing Behavior	.487	2.055
Spending Behavior	.613	1.631
Investment Behavior	.580	1.725
Financial Literacy	.482	2.076

a. Dependent Variable: Investment Decisions
***Source**: Research Data (2022)*

4.7.2 Linearity test

Scatter plots were used to test for linearity. The fit lines shown in each of the scatter plots below revealed that there was a positive linear relationship between the independent variables and dependent variable. These results align with those of Amugune (2018) who found that linearity using scatter plots is confirmed when there are variations of observations spotted around the regression line.

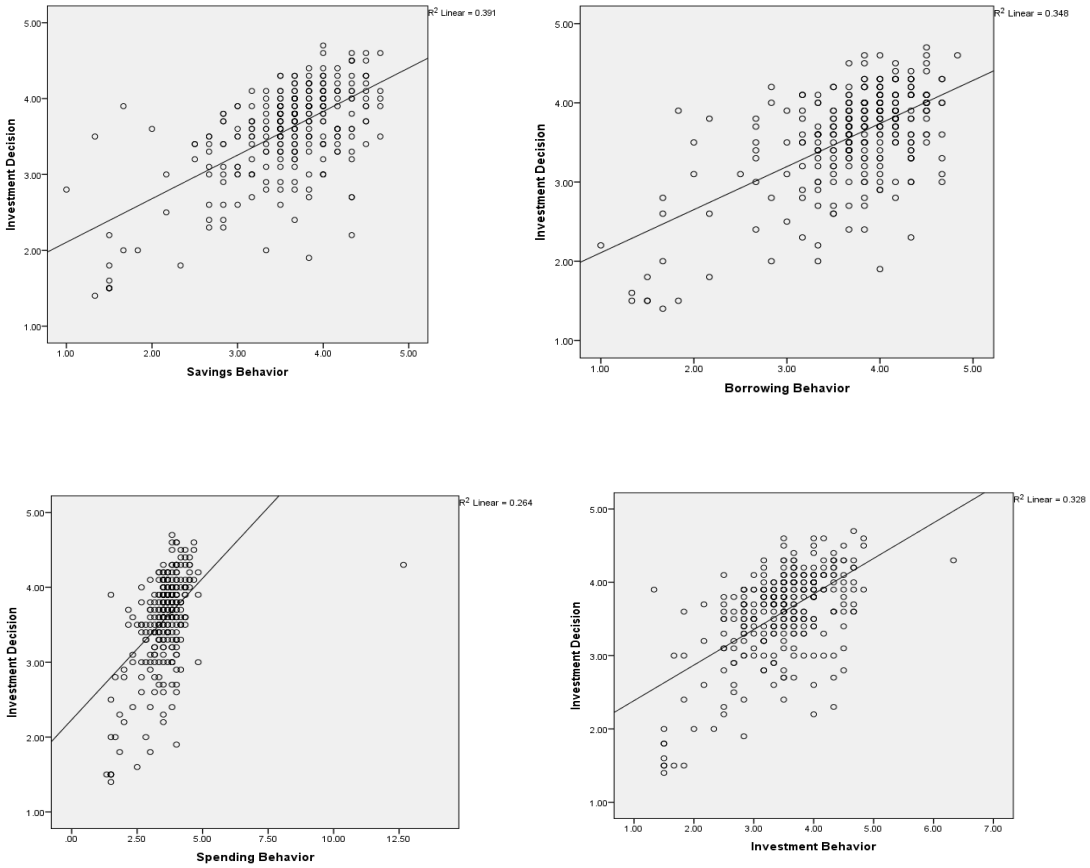

Figure 4.1: Results for linearity using Scatter Plots

***Source**: Research Data (2022)*

4.7.3 Normality test

Normality test was conducted through the use of normal P-P plots to ensure that the data set was distributed normally. The normal P-P plot shown in Figure 4.4 above revealed that the data points fell along the diagonal line in the normal P-P plot. It can thus be inferred that the normality assumption was upheld therefore the data set was ideal for use in the study. These results are similar with those of Engotoit *et al* (2016) who established that normality in a data set is present when the data points are close to the best fit line in the P-P plot.

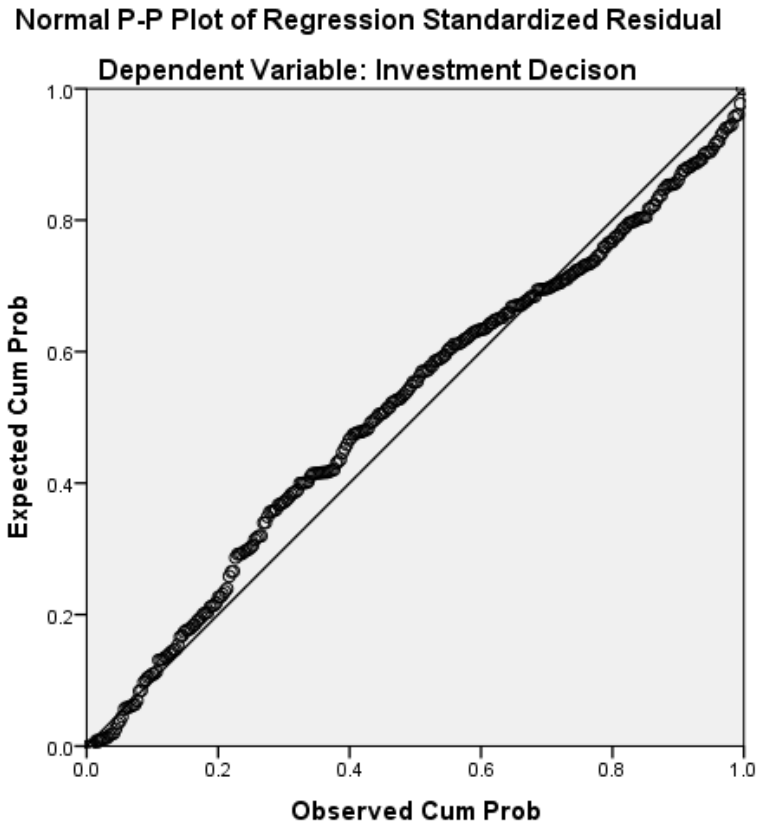

Figure 4.2: Results for normality using the P-P Plot

***Source**: Research Data (2022)*

4.7.4 Autocorrelation test

Presence of autocorrelation was checked using the Durbin-Watson test. For purposes of interpreting the study findings, the threshold of $1.5 \leq d \leq 2.5$ was used. The results in Table 4.11 indicate that there was no presence of autocorrelation because the Durbin-Watson statistic (2.025) was within the threshold limit. These results match with those of Magoma, Mbwambo, Sallwa & Mwasha (2022) who asserted that existence of autocorrelation using the Durbin-Watson test is confirmed when the variables have values that are outside the $1.5 \leq d \leq 2.5$ range.

Table 4.11: Autocorrelation test

Model Summary[b]		
Model	**Std. Error of the Estimate**	**Durbin-Watson**
1	0.42746	2.025

a. Predictors: (Constant), Spending Behavior, Investment Behavior, Borrowing Behavior, Savings Behavior

b. Dependent Variable: Investment Decision

***Source**: Research Data (2022)*

4.8 Correlation Analysis

This section presents findings on the level of association and the strength of the relationship between the dependent variable and the independent variables The Pearson Correlation was utilized to test for correlation. In interpreting the correlation findings, an r value within the range 0 – 0.29 denoted weak relationship, r value of between 0.3 – 0.49 meant moderate relationship whereas r value greater than 0.5 denoted strong or significant relationship.

The correlation results showed that: There was a strong and positive relationship between savings behavior and investment decisions ($r = .625^{**}$, $p<0.05$). There was a positive and significant correlation between borrowing behavior and investment decisions ($r = .590^{**}$, $p<0.05$). Spending behavior correlated positively and significantly with investment decisions ($r = .514^{**}$, $p<0.05$). The correlation between investment behavior and investment decisions was positive and significant ($r = .573^{**}$, $p<0.05$). There was a strong and positive relationship between financial literacy and investment decisions ($r = .542^{**}$, $p<0.05$).

Table 4.12: Correlation results

Variables	ID	SB	BB	SPB	IB	FL
Investment Decisions (ID)	1					
Savings Behavior (SB)	.625**	1				
Borrowing Behavior (BB)	.590**	.629**	1			
Spending Behavior (SPB)	.514**	.535**	.528**	1		
Investment Behavior (IB)	.573**	.584**	.511**	.457**	1	
Financial Literacy (FL)	.542**	.607**	.625**	.535**	.556**	1

** Correlation is significant at 0.01 level (2-tailed); * Correlation is significant at 0.05 level (2-tailed).

***Source**: Survey Data (2022)*

4.9 Regression Analysis

After conducting correlation analysis, where it was established that each of the independent variables in the study had a positively significant relationship with the dependent variable, there was need to assess how all the independent variables jointly affect the dependent variable.

4.9.1 Regression Results for the Direct Effects

A multiple linear regression was carried out where the independent variables and dependent variable were regressed. As per the results shown in Table 4.13, it can be concluded that savings behavior, borrowing behavior, spending behavior and investment behavior are important variables in investment decisions. This is supported by the R square value of 0.525. This means that savings behavior, borrowing behavior, spending behavior and investment behavior jointly explain 52.5% of investment decision. The adjusted R Square value of 0.512 indicates that 51.2% variation in investment decision is collectively explained by the financial behavior factors.

In addition, the study findings further revealed that savings behavior, borrowing behavior, spending behavior and investment behavior jointly and significantly

influence investment decisions among SMEs owners in Nairobi CBD, Kenya. This is supported by the F statistic 41.152 which is large enough to infer the significance of the overall regression model.

In regards to the control variables as shown in Table 4.13, it is evident that gender of the SMEs owner was found to have no significant effect on investment decision ($\beta = 0.049$, $p = 0.347$). On the other hand, age of the SME ($\beta = 0.053$, $p = 0.021$), experience ($\beta = 0.012$, $p = 0.032$) and education level of the SME owner ($\beta = 0.032$, $p = 0.002$) was found to have a positive significant effect on investment decisions. This justifies the need for the controls in the study.

H_{01}: Savings behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

As shown in Table 4.13, savings behavior was found to have a positive significant effect on investment decisions ($\beta = 0.226$, $p = 0.000$). The p-value was less than 0.05 meaning that savings behavior has a significant effect on investment decisions. A positive beta coefficient, on the other hand, meant that a unit increase in savings behavior results to 0.226 increase in investment decision among SMEs owners in Nairobi CBD.

H_{02}: Borrowing behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

Borrowing behavior was found to have a positive significant effect on investment decisions ($\beta = 0.177$, $p = 0.001$). The p-value was less than 0.05 meaning that borrowing behavior has a significant effect on investment decisions. In addition, a positive beta coefficient implied that a unit increase in borrowing behavior leads to 0.177 increase in investment decision among SMEs owners in Nairobi CBD, Kenya.

H_{03}: Spending behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

In addition, spending behavior was found to have a positive significant effect on investment decisions ($\beta = 0.219$, $p = 0.000$). The p-value was less than 0.05 meaning that spending behavior has a significant effect on investment decisions. Furthermore, a positive beta coefficient meant that a unit increase in spending behavior results to 0.219 increase in investment decision among SMEs owners in Nairobi CBD, Kenya.

H_{04}: Investment behavior has no effect on investment decisions among SMEs owners in Nairobi CBD.

In reference to Table 4.13 below, investment behavior was found to have a positive significant effect on investment decision ($\beta = 0.154$, $p = 0.001$). The p-value was less than 0.05 meaning that investment behavior has a significant effect on investment decisions. Besides, a positive beta coefficient implied that a unit increase in investment behavior leads to 0.154 increase in investment decision among SMEs owners in Nairobi CBD, Kenya.

Table 4.13: Regression results for the direct effects

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	Beta	t	Sig.
(Constant)	0.738	0.186		3.956	0.000
Control Variables					
Gender	0.049	0.052	0.039	0.941	0.347
Age	0.053	0.031	0.079	1.701	0.021
Experience	0.012	0.029	0.019	0.401	0.032
Education	0.032	0.022	0.062	1.484	0.002
Predictor Variables					
Savings Behavior	0.226	0.054	0.246	4.148	0.000
Borrowing Behavior	0.177	0.053	0.192	3.332	0.001
Spending Behavior	0.219	0.055	0.231	3.969	0.000
Investment Behavior	0.154	0.047	0.177	3.262	0.001
Model Summary					
R	.724				
R Square	.525				
Adjusted R Square	.512				
Std. Error of estimate	.423				
F Statistic	41.152				
a. Dependent Variable: Investment Decisions					

Source: Research Data (2022)

4.9.2 Regression Results for the Moderating effect of Financial Literacy on the Relationship between Financial Behavior and Investment Decisions

The main objective for the study was to examine the moderating effect of financial literacy on the relationship between financial behavior and investment decisions. A moderator is a variable that either strengthens, weakens or negates the relationship between an independent and dependent variable. Hayes (2009) established that there are three conditions that must be met for there to be an indication of moderation effect. First, there has to be variance in the R square for with and without interaction. Secondly, the interaction coefficient should be any other value except zero. Thirdly, the F value for the overall model must be significant.

H_{05a}: Financial literacy does not significantly moderate the relationship between savings behavior and investment decisions

The hierarchical regression model 3 sought to check for the moderating effect of financial literacy on the relationship between savings behavior and investment decisions. Table 4.14 shows that financial literacy has a significantly positive moderating effect ($\beta = 0.01$, $p < 0.05$) on the relationship between savings behavior and investment decisions. This was further supported by the overall moderation regression model 3 which was significant ($F= 36.46$; $p < 0.05$). The Beta coefficient of 0.01 is different from zero. The R-square ($R^2 = 0.526$) reveals that the first interaction model accounts for 52.6% of the variation in investment decision. This is an increase from the previous model's 32.5% thereby leading to an R-square change of ($\Delta R^2 = 20.1\%$). This implies that the variance in R-square attributed by the interaction is significantly more than the variance explained for without the interaction. Thus, it can be concluded that financial literacy has a significant moderating effect on the relationship between savings behavior and investment decisions. The savings behavior of a SMEs owner has a positive effect in making wise investment decisions. However, this effect strengthens when the SMEs owner possesses high financial literacy. With high financial literacy, the SMEs owner is able to maximize their savings through saving in avenues that offer high savings interest rates and thus enable him to have sufficient funds for investment in profitable projects.

H_{05b}: Financial literacy does not significantly moderate the relationship between borrowing behavior and investment decisions

The overall moderation regression model 4 sought to conduct the moderating effect of financial literacy on the relationship between borrowing behavior and investment decisions. As shown in Table 4.14, financial literacy has a positive and significant

moderating effect ($\beta = 0.60$, $p < 0.05$) on the relationship between borrowing behavior and investment decisions. The Beta coefficient of 0.60 is different from zero. In addition, the overall moderation regression model 4 was significant ($F= 33.11$; $p < 0.05$). The R-square ($R^2 = 0.528$) reveals that the second interaction model accounts for 52.8% of the variation in investment decision. This is an increase from the previous model's 52.6% thereby leading to an R-square change of ($\Delta R^2 = 0.2\%$). This means that the variance in R-square attributed by the interaction is significantly more than the variance explained for without the interaction. Hence, it can be concluded that financial literacy has a significant moderating effect on the relationship between borrowing behavior and investment decisions. Borrowing behavior, when operating independently, is very effective in determining the type of investment decisions SMEs owners make. On the other hand, financial literacy strengthens this relationship by enabling a SMEs owner to have financial knowledge and skills that help them compare various loan products, negotiate for favorable loan interest rates and know the legal implications of defaulting on loan repayment. This, in turn, enables the SMEs owner to borrow wisely for investment.

H_{05c}: Financial literacy does not significantly moderate the relationship between spending behavior and investment decisions

The hierarchical regression model 5 sought to check for the moderating effect of financial literacy on the relationship between spending behavior and investment decision. Table 4.14 shows that financial literacy has a significantly positive moderating effect ($\beta = 0.66$, $p < 0.05$) on the relationship between spending behavior and investment decisions. This was further supported by the overall moderation regression model 5 which was significant ($F= 30.42$; $p < 0.05$). The Beta coefficient of 0.66 is different from zero. The R-square ($R^2 = 0.530$) reveals that the third interaction

model accounts for 53.0% of the variation in investment decision. This is an increase from the previous model's 52.8% thereby leading to a R-square change of (ΔR^2 = 0.2%). This implies that the variance in R-square attributed by the interaction is significantly more than the variance explained for without the interaction. Thus, it can be concluded that financial literacy has a significant moderating effect on the relationship between spending behavior and investment decisions. The spending behavior of an entrepreneur greatly affects the investment decisions they make. However, this relationship is strengthened in the presence of financial literacy. A business owner who has a high level of financial literacy knows the importance of sticking to the firm's monthly budget, knows how to prepare financial reports so as to assess the firm's financial performance, pays the business bills on time so as to avoid penalties and always seeks to negotiate for favorable terms and conditions with their suppliers. This financial knowledge on how to wisely spend the business finances consequently leads to better investment decisions.

H_{05d}: Financial literacy does not significantly moderate the relationship between investment behavior and investment decisions

The overall moderation regression model 6 sought to conduct the moderating effect of financial literacy on the relationship between investment behavior and investment decisions. As shown in Table 4.14, financial literacy has a positive and significant moderating effect ($\beta = 0.02$, $p < 0.05$) on the relationship between investment behavior and investment decisions. The Beta coefficient of 0.02 is different from zero. In addition, the overall moderation regression model 6 was significant ($F= 27.79$; $p < 0.05$). The R-square ($R^2 = 0.531$) reveals that the fourth interaction model accounts for 53.1% of the variation in investment decision. This is an increase from the previous model's 53.0% thereby leading to an R-square change of (ΔR^2 = 0.1%). This means

that the variance in R-square attributed by the interaction is significantly more than the variance explained for without the interaction. Hence, it can be concluded that financial literacy has a significant moderating effect on the relationship between investment behavior and investment decisions. The investment behavior of a SMEs owner has a positive effect on the investment decisions they undertake. On the other hand, financial literacy strengthens this relationship. This is evident in an entrepreneur who has financial knowledge and skills and is thus able to compute the return on investment of a project consequently enabling him know whether a project is economically viable or not. In addition, a financially literate investor is able to conduct thorough market research such as studying market trends which consequently enable him to make wise investment decisions.

Table 4.14: Hierarchical Regression Results of Financial Literacy

Variables	**Model 1 Coefficient**	**Model 2 Coefficient**	**Model 3 Coefficient**	**Model 4 Coefficient**	**Model 5 Coefficient**	**Model 6 Coefficient**
Constant	(.00) **	(.00) **	(.00) **	(.00) **	(.00) **	(.00) **
OG	0.06(.34) **	0.04(.35) **	0.04(.35) **	0.04 (.36) **	0.04(.32) **	0.04(.33) **
OA	0.15(.02) **	0.08(.03) **	0.08(.02) **	0.08 (.04) **	0.08(.01) **	0.08(.01) **
OE	0.10(.03) **	0.06(.00) **	0.06(.00) **	0.06 (.00) **	0.06(.04) **	0.06(.04) **
SA	0.07(.00) **	0.02(.00) **	0.02(.00) **	0.02(.01) **	0.02(.02) **	0.02(.01) **
SB		0.25(.01) **	0.25(.01) **	0.61(.03) **	0.36(.00) **	0.36(.03) **
BB		0.19(.00) **	0.19(.00) **	0.17(.02) **	0.29(.01) **	0.29(.11) **
SPB		0.23(.00) **	0.23(.00) **	0.21(.00) **	0.59(.02) **	0.58(.05) **
IB		0.18(.00) **	0.18(.00) **	0.17(.00) **	0.17(.00) **	0.18(.05) **
SBFL			0.01(.02) **	0.58(.02) **	0.18(.03) **	0.17(.03) **
BBFL				0.60(.04) **	0.82(.04) **	0.82(.04) **
SPBFL					0.66(.01) **	0.64(.01) **
IBFL						0.02(.03) **
Model Summary Statistics						
R Square - R^2	0.029	0.325	0.526	0.528	0.530	0.531
Δ in R^2	-	0.296	0.201	0.002	0.002	0.001
F statistic	2.28	41.15	36.46	33.11	30.42	27.79

****** Significant at 0.01 level (2-tailed); *Significant at 0.05 level (2-tailed).
OG: Owner Gender, OA: Owner Age, OE: Owner Education, SA: SMEs Age, SB: Savings behavior, BB: Borrowing behavior, SPB: Spending behavior, IB: Investment behavior, FL: Financial literacy

Source: Research Data (2022)

4.10 Moderating Effect of Financial Literacy using Mod Graphs

4.10.1 Moderating effect of Financial Literacy on Savings Behavior and Investment Decisions

At low levels of financial literacy, as shown in Figure 4.3 below, investment decisions are close to 0.2 for low savings behavior and 4.0 for high savings behavior. At medium levels of financial literacy, investment decisions are at 0.25 for low savings behavior and rises up to 12.0 for high savings behavior. On the other hand, for high financial literacy, investment decisions are at 0.3 for low savings behavior but rise to 20.0 for high savings behavior.

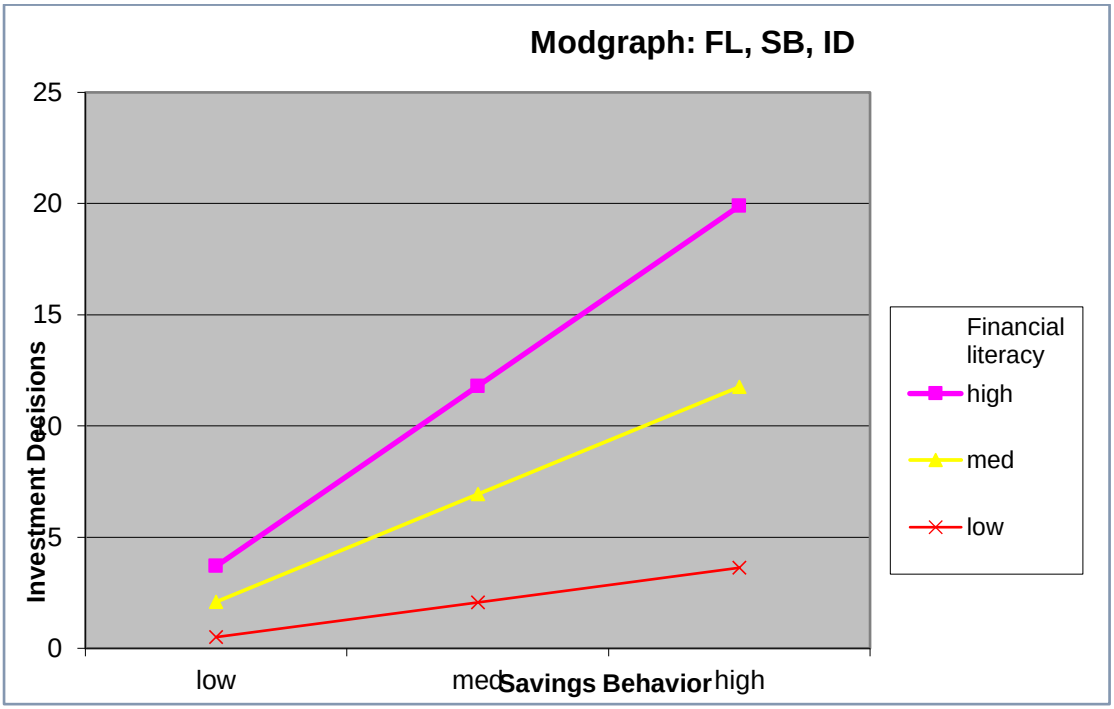

Figure 4.3: Moderating effect of financial literacy on savings behavior and investment decisions

(ID- Investment Decisions, **SB-** Savings Behavior, **FL-** Financial Literacy**)**

4.10.2 Moderating effect of Financial Literacy on Borrowing Behavior and Investment Decisions

As shown in Figure 4.4 below, at low levels of financial literacy, investment decisions are close to 0.0 for low borrowing behavior and 2.0 for high borrowing behavior. At medium levels of financial literacy, investment decisions are at 1.0 for low borrowing behavior and rises up to 9.0 for high borrowing behavior. On the other hand, for high financial literacy, investment decisions are at 2.5 for low borrowing behavior but rise to 16.0 for high borrowing behavior.

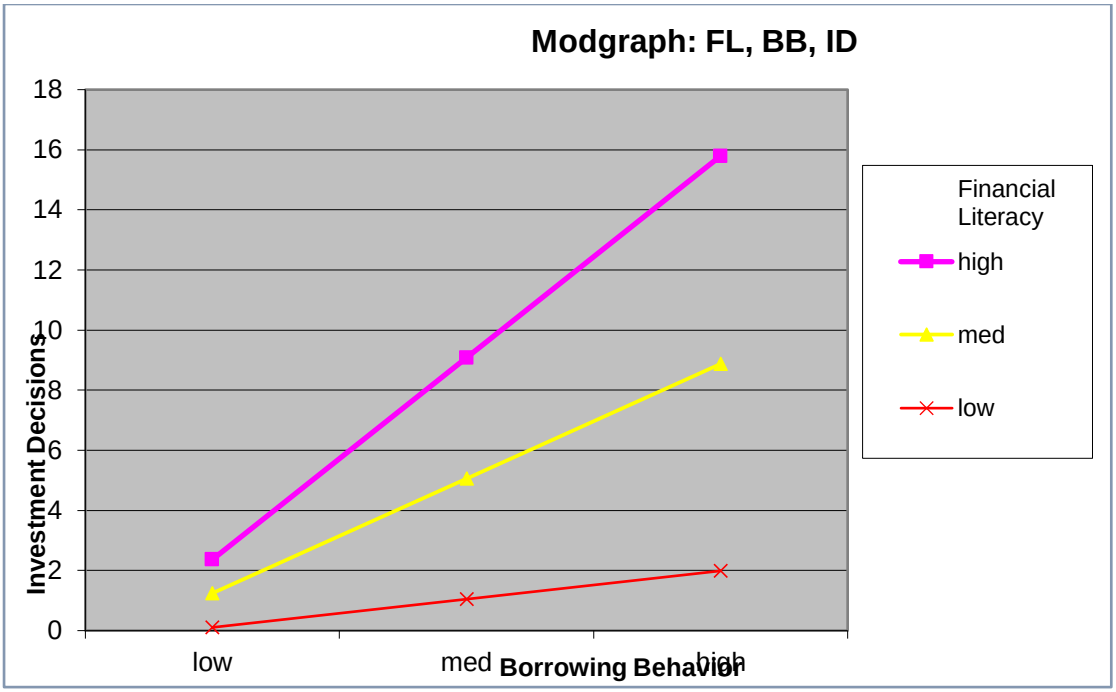

Figure 4.4: Moderating effect of financial literacy on borrowing behavior and investment decisions

(ID- Investment Decisions, **BB-** Borrowing Behavior, **FL-** Financial Literacy**)**

4.10.3 Moderating effect of Financial Literacy on Spending Behavior and Investment Decisions

At low levels of financial literacy, as shown in Figure 4.5 below, investment decisions are close to 0.1 for low spending behavior and 3.0 for high spending behavior. At

medium levels of financial literacy, investment decisions are close to 2.0 for low spending behavior and rises close to 10.1 for high spending behavior. On the other hand, for high financial literacy, investment decisions are at 3.0 for low spending behavior but rise to 18.0 for high spending behavior.

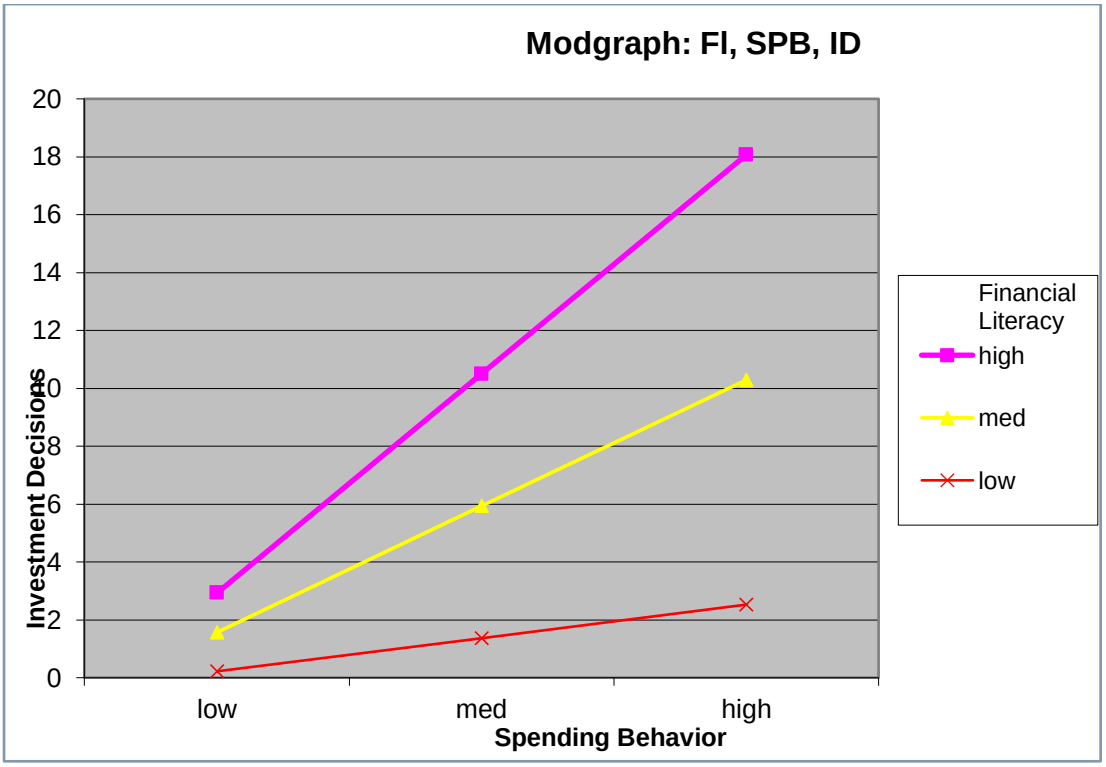

Figure 4.5: Moderating effect of financial literacy on spending behavior and investment decisions

(ID- Investment Decisions, **SPB-** Spending Behavior, **FL-** Financial Literacy**)**

4.10.4 Moderating effect of Financial Literacy on Investment Behavior and Investment Decisions

As shown in Figure 4.6 below, at low levels of financial literacy, investment decisions are at 1.0 for low investment behavior and 3.0 for high investment behavior. At medium levels of financial literacy, investment decisions are at 2.0 for low investment behavior and rises close to 8.0 for high investment behavior. On the other hand, for high financial

literacy, investment decisions are close to 4.0 for low investment behavior but rise to 12.0 for high investment behavior.

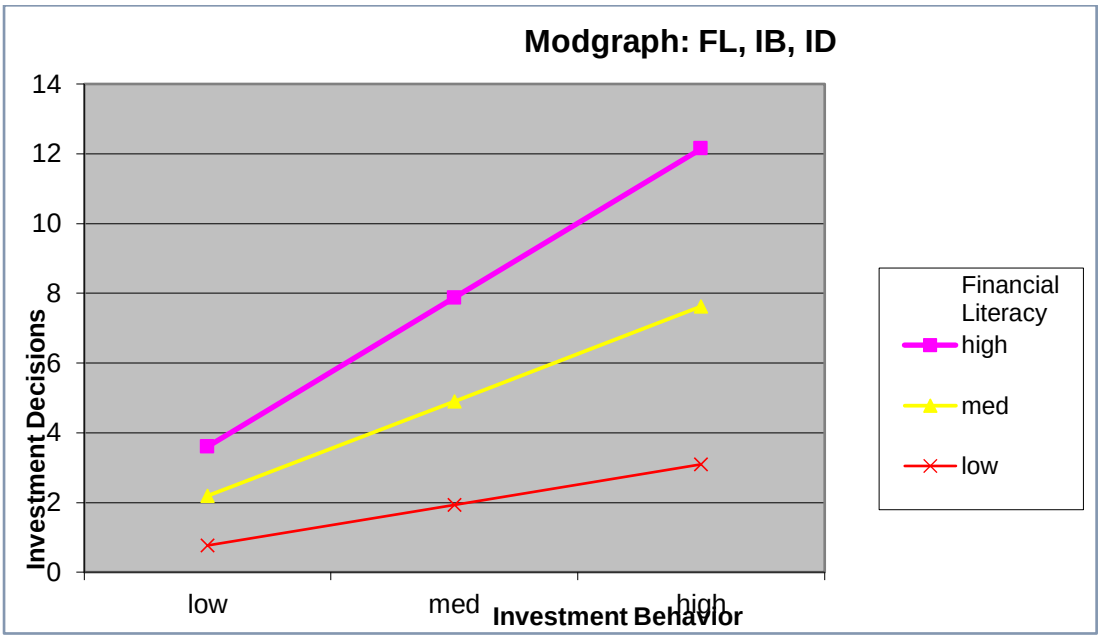

Figure 4.6: Moderating effect of financial literacy on investment behavior and investment decisions

(ID- Investment Decisions, **IB-** Investment Behavior, **FL-** Financial Literacy**)**

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the study findings in line with the specific study objectives. It also presents the conclusion of the findings and also provides recommendations to policy makers. Areas for further research are also outlined in this chapter.

5.2 Summary of the Findings

Based on the study findings, savings behavior was found to have a significant effect on investment decisions. Therefore, the first null hypothesis (H_{01}), savings behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya, was rejected. This is because its p-value of 0.000 was less than 0.05. Having a savings account enables an individual to cater for unexpected emergencies, secures their financial future and also helps to accumulate wealth that can be used for investments. These findings align with those of Koe *et al* (2020) who established that when people save, they are able to avoid financial problems such as bankruptcy and this consequently improves their living standards in future through investing in profitable projects. These findings also collaborate with Dupas & Robinson (2013) who asserted that entrepreneurs who save outside of the business firm for some time usually increase their business reinvestment opportunities in future. Moreover, Benjamin *et al* (2009) found that good saving practices among Kenyan households enabled them to accumulate wealth for future investment. However, these findings contradict with those of Tybur *et al* (2012) who observed that men prefer to borrow for the sake of immediate investments rather than save for future investment.

The second null hypothesis (H_{02}), borrowing behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya, was rejected. This was supported by the p-value of 0.001 which was less than 0.05. This denotes that borrowing behavior has a significant effect on investment decisions among SMEs owners in Nairobi CBD, Kenya. Thus, it can be inferred that the borrowing practices that an investor adopts consequently affect the type of investment decisions they make. For example, when one takes a loan that has lower interest rates, they are able to save money that can be used to invest compared to a loan with high interest rates. These findings are consistent with Tendai & Ellen (2011) who found that good management of business finances such as loans enhances the survival and success of a firm. Besides, Felix (2018) observed that borrowing behavior of SMEs is positively correlated with their investment decisions. However, these findings conquer with those of Lawrence *et al* (2009) who established that, households with high access to credit save less and this results to a reduction in investment in the short-run.

The third null hypothesis (H_{03}), spending behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya, was rejected. This is because its p-value of 0.000 was less than 0.05. This implies that spending behavior has a significant effect on investment decisions among SMEs owners in Nairobi CBD, Kenya. The spending habits that an individual adopts influence the kind of investments they take up. Good spending behavior enables an investor to minimize on unnecessary expenses and is able to have sufficient funds especially for projects that require huge amounts of money. On the other hand, bad spending habits such as impulse buying and spending on unnecessary items reduces money that could have otherwise been used for investment. These study findings support those of Apat (2019) who asserted that spending behavior of corporations has a positive and significant effect on their

investment decisions. In addition, these findings align with those of Rubalcava *et al* (2004) who found that spending behavior has a positive significant effect on investment decisions. Moreover, Perculeza *et al* (2016) established that good spending behavior such as having a budget in place enables an individual to effectively plan money for spending and is thus able to have money for investing. However, these study findings contrast with Coibon *et al* (2021) who asserted that spending behavior has a negative effect on investment decisions especially during periods of macroeconomic uncertainty.

The fourth null hypothesis (H_{04}), investment behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya, was rejected. This is because its p-value of 0.001 was less than 0.05. This means that investment behavior has a significant effect on investment decisions among SMEs owners in Nairobi CBD, Kenya. When an investor adopts good investment practices such as analyzing a new product in the market even before purchasing it or assessing the profitability of a project at its initial stages then they are able to make informed investment decisions. In addition, an investor who not only relies on past business experiences but also analyzes the present and forecasted trends is able to make correct investment choices. These study results are in line with those of Peng (2003) who perceived that good investment behavior enables investors to choose investment avenues that offer high dividends and have high return on investment. Moreover, these study findings support those of Shafi (2011) who found that investors who perceive risk as something enjoyable and tend to invest for longer time horizons are more likely to take up risky investments that yield high returns. However, these findings contradict with those of Baker & Nofsinger (2002) who observed that investment behavior negatively affects investment decisions. For example, overconfident investors tend to think that their knowledge is more accurate than what it really is and thus end up making huge losses.

The fifth null hypothesis (H_{05a}), financial literacy does not moderate the relationship between savings behavior and investment decisions among SMEs owners in Nairobi CBD, was rejected. This is because its p-value of 0.020 was less than 0.05. This means that financial literacy has a significant moderating effect on the relationship between savings behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya. Financial literacy teaches an individual the importance of saving money. It also helps an individual to assess the different savings interest rates offered by various financial institutions. These study results collaborate with those of Lusardi, A. (2008) who found that financial literacy helps improve household saving behavior and leads to wise financial decision-making. Besides, these findings are consistent with Bernheim *et al* (2001) who established that financial literacy education has a positive impact on savings behavior which leads to better investment decisions. However, these findings contradict with those of Mandell & Klein (2009) who observed that individuals who had taken up a personal financial management course did not have a better savings-orientation compared to those who had not taken the financial course.

The sixth null hypothesis (H_{05b}), financial literacy does not moderate the relationship between borrowing behavior and investment decisions among SMEs owners in Nairobi CBD, was rejected. This is because its p-value of 0.036 was less than 0.05. This means that financial literacy has a significant moderating effect on the relationship between borrowing behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya. A financially literate investor strives to pay their debts on time so as to avoid penalties and fines. In addition, financial literacy equips an individual with knowledge on how to calculate the interest rates charged on a loan. These study results align with those of Omboi&Wangai (2011) who found that a well-educated small-scale entrepreneur is more likely to apply for loans from financial institutions for investment

purposes. This is because financial literacy imparts knowledge on how to keep business records and the ability to understand the credit information given by money lenders. Besides, Chepngetich (2016) asserted that financial literacy on borrowing has a positive and significant effect on the performance of SMEs. However, these findings contradict with those of Wamalwa (2016) who observed that business owners with primary level of education have better loan repayment rates compared to their more educated counterparts who possessed secondary or post-secondary education.

The seventh null hypothesis (H_{05c}), financial literacy does not moderate the relationship between spending behavior and investment decisions among SMEs owners in Nairobi CBD, was rejected. This is because its p-value of 0.013 was less than 0.05. This means that financial literacy has a significant moderating effect on the relationship between spending behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya. A well-educated business entrepreneur always keeps records of his business operations so as to track the revenue and expenditure of the business. Besides, financial literacy equips one with skills on how to prepare a budget and the importance of sticking to the budget. These study results collaborate with those of Jariwala (2014) who found that financial literacy helps consumers to control their spending thus able to make correct investment choices. In addition, these study findings support those of Baluja (2016) who observed that financial knowledge on spending is of significant importance to an investor. However, these study findings contrast with Huston (2010) who asserted that financial literacy might not necessarily lead to improved financial behavior due to poor spending habits such as impulsive buying and unusual preferences.

The last null hypothesis (H_{05d}), financial literacy does not moderate the relationship between investment behavior and investment decisions among SMEs owners in Nairobi CBD, was rejected. This is because its p-value of 0.026 was less than 0.05. This means

that financial literacy has a significant moderating effect on the relationship between investment behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya. Financial literacy imparts skills and knowledge on how to calculate the return on investment of a project so as to assess its profitability and also helps an investor to keenly assess the market trends and reach out to financial experts in case of any doubt. These study results collaborate with those of Assefa & Rao (2018) who found that financial literacy helps improve the investment knowledge and skills of an investor which leads to informed investment decisions. Moreover, these study findings support those of Lotto (2020) who asserted that individuals with a high level of financial literacy are well equipped with skills and knowledge involved with assessing the riskiness of an investment opportunity thus able to make wise investment choices. However, Willis (2011) contrasts with these study results since she argues that financial literacy is not effective in making informed investment decisions due to presence of behavioral biases and the complexity of today's non-standardized financial products that affect the investment behavior of an individual.

Table 5.1: Summary of Hypotheses Test results

Direct Effects			
No.	Hypotheses	P-value	Decision
H_{01}	Savings behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya.	0.000<0.05	Reject null hypothesis
H_{02}	Borrowing behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya.	0.001<0.05	Reject null hypothesis
H_{03}	Spending behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya.	0.000<0.05	Reject null hypothesis
H_{04}	Investment behavior has no effect on investment decisions among SMEs owners in Nairobi CBD, Kenya.	0.001<0.05	Reject null hypothesis
Moderating Effects			
H_{05a}	Financial literacy does not moderate the relationship between savings behavior and investment decisions among SMEs owners in Nairobi CBD.	0.020<0.05	Reject null hypothesis
H_{05b}	Financial literacy does not moderate the relationship between borrowing behavior and investment decisions among SMEs owners in Nairobi CBD.	0.036<0.05	Reject null hypothesis
H_{05c}	Financial literacy does not moderate the relationship between spending behavior and investment decisions among SMEs owners in Nairobi CBD.	0.013<0.05	Reject null hypothesis
H_{05d}	Financial literacy does not moderate the relationship between investment behavior and investment decisions among SMEs owners in Nairobi CBD.	0.026<0.05	Reject null hypothesis

5.3 Conclusions

5.3.1 Effect of savings behavior on investment decisions

The study concludes that savings behavior plays a significant role in investment decisions made by SMEs owners in Nairobi CBD. The proprietors engage in savings since it helps accumulate huge funds that are necessary for future investment. Findings

of the descriptive analysis revealed that majority of the respondents set achievable savings goals which enabled them to effectively plan for good investment projects. In addition, the SMEs owners were found to have a good savings culture where they preferred to save rather than borrow even in difficult circumstances. However, most of the proprietors admitted that they do not save their money in financial situations rather prefer other savings avenues such as money market funds and pension funds. The regression results found that savings behavior has a significantly positive effect on investment decisions.

5.3.2 Effect of borrowing behavior on investment decisions

In regards to borrowing behavior, the study concludes that borrowing behavior has a positive and significant effect on investment decisions among SMEs owners in Nairobi CBD. Factors associated with borrowing behavior such as cost of loan, purpose of loan and the credit worthiness of a proprietor have the capacity to enable a SMEs owner to make prudent investment decisions. The descriptive findings showed that borrowed funds highly contribute to the economic growth and development of SMEs. It was also established that the study respondents strived to repay their debts on time and always compared loan products offered by different lenders. Besides, the cost and purpose of the loan were key factors that SMEs owner took into account before taking a loan. The regression results found that borrowing behavior has a significantly positive effect on investment decisions.

5.3.3 Effect of spending behavior on investment decisions

The study concludes that spending behavior plays a crucial role in investment decisions made by SMEs owners in Nairobi CBD. Proper book-keeping of business records and sticking to the firm's budget enable a proprietor to identify areas where finances are not well-utilized and make the necessary changes. Through descriptive analysis of

spending behavior, the study found that record keeping is crucial in the operations of a business. In addition, most study participants followed a budget and always negotiated for favorable terms and conditions with their suppliers. The regression analysis results indicated that spending behavior has a significant and positive effect on investment decisions.

5.3.4 Effect of investment behavior on investment decisions

The study concludes that investment behavior has a positive and significant effect in investment decisions. Assessing the available market information enables a business owner to make correct investment choices. Findings of the descriptive analysis revealed that most SMEs owners complete only the profitable projects. Besides, the findings showed that the study respondents rely on market information and at times their fear of bad financial outcomes makes them shy away from investing in certain projects. However, there were mixed reactions on whether the SMEs owners relied on past business experiences when making investment decisions.

The regression results established that investment behavior has a positive and significant effect on investment decisions.

5.3.5 Moderating effect of financial literacy on the relationship between savings behavior and investment decisions

The study concludes that financial literacy moderates the relationship between savings behavior and investment decisions. This implies that savings enables an individual to accumulate wealth which used for investment and this is made easier through financial literacy which equips one with skills on identifying the savings avenue that offer high interest rates. The effect of savings behavior on investment decisions is made even stronger when SMEs owners possess financial literacy.

5.3.6 Moderating effect of financial literacy on the relationship between borrowing behavior and investment decisions

The study concludes that financial literacy moderates the relationship between borrowing behavior and investment decisions. When an investor borrows, they are able to have funds for investment. With high financial literacy, the investor knows that it is important to repay the borrowed funds on time so as to avoid financial distress and maintain a good relationship with their creditors. With the moderating influence of financial literacy on borrowing behavior, the investment decisions are enhanced.

5.3.7 Moderating effect of financial literacy on the relationship between spending behavior and investment decisions

The study concludes that financial literacy moderates the relationship between spending behavior and investment decisions. How an investor spends their money determines the kind of investment they are able to engage in. Financial literacy, through offering skills and knowledge, helps the investor know how to prepare and analyze business records which consequently helps him assess his income and expenditure and maximize profit or cut cost where necessary. Financial literacy boosts the spending behavior of an entrepreneur and this leads to informed investment decisions.

5.3.8 Moderating effect of financial literacy on the relationship between investment behavior and investment decisions

Moreover, financial literacy moderates the relationship between investment behavior and investment decisions. This would imply that the habits that an individual adopts in regards to investment affect the investment choices they make. Financial literacy accelerates this impact. A well-educated individual knows how to assess the market trends and is able to make prudent investment decisions. Financial literacy significantly moderates this relationship.

5.4 Recommendations of the Study

This study was pinned on three theories namely: Human capital theory, Prospect theory and Theory of Planned Behavior. In context of the Human capital theory, the study reveals that financial education and training is an economic resource that equips business owners with skills and knowledge that help them make wise investment choices. Consequently, this improves the chances of survival of small firms. For Prospect theory, the study found that there is need for business owners to understand the biases that influence their investment decision-making and therefore take action. Business owners should avoid the fear of loss they got from previous investment experiences and should instead seek financial advice and undertake financial courses that can help them make correct investment choices. They should also strive to choose projects that have potential of high return on investment when making investment choices. Lastly, on the Theory of Planned Behavior, the study established that an individual's attitudes, perception and traditions influence the financial behavior they adopt. Financial literacy further strengthens this financial behavior and this enables the individual to make informed investment decisions.

Besides, the study recommends that SMEs owners continue to strive for high financial education through taking up financial education courses and consulting financial experts even before making an investment decision.

In addition, the study recommends that the Kenya government should collaborate with well-established financial bodies such as World Bank and IMF that can offer business training programs to SMEs. The study further recommends that Kenya commercial banks offer financial awareness programs to targeted groups such as SMEs and also come up with efficient user-friendly tools that enhance prudent financial behavior and financial literacy.

Lastly, the study recommends that financial literacy courses be incorporated in the Kenya Education curriculum so that students gain prudent financial skills and knowledge while they are still young.

5.5 Limitations of the Study

This study is limited to primary data that was collected through administering questionnaires to the SMEs owners under study. However, this helped to get first-hand information from the respondents under study. In addition, the study is limited to SMEs that operate within Nairobi CBD, Kenya. Other studies should research on businesses located outside Nairobi CBD. Lastly, the study is limited to SMEs. Hence, there is need to study the well-established companies, banks and SACCOs.

5.6 Areas for Further Research

The study assessed how financial literacy moderates the relationship between financial behavior and investment decisions among SMEs owners in Nairobi CBD, Kenya. There is need to investigate other moderating variables such as investor's characteristics, years of investment and investor's risk type. In addition, the study focused on SMEs operating within Nairobi CBD. Hence, there is need to conduct further research on the moderating effect of financial literacy on the relationship between financial behavior and investment decisions among SMEs located outside Nairobi. Moreover, the study utilized primary data and was cross-sectional in nature. Thus, there is need to conduct a longitudinal research study that utilizes secondary data.

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APPENDICES

Appendix I: Introductory Letter

Mercy Wanjiku Muriu

P.O. Box 1248-00621

Nairobi

Kenya.

Dear Respondent,

RE: REQUEST FO FILL THE QUESTIONNAIRE

I am a Master's student of Business Management at Moi University, School of Business and Economics. I am currently carrying out a research and the questionnaire is designed to collect information on **"*Financial behavior, financial literacy and investment Decisions among owners of small and medium enterprises in Nairobi CBD, Kenya.*"**

The information you provide will be used only for academic purposes and shall be kept strictly confidential. Therefore, you are kindly requested to give accurate information.

Your contribution in facilitating this study will be highly appreciated.

Yours faithfully,

Mercy Wanjiku Muriu

Postgraduate student

Appendix II: Questionnaire

SECTION A: BACKGROUND INFORMATION

(Kindly Tick where appropriate)

1. Indicate your gender: Male ( ) Female ( )
2. Indicate your age bracket
   20- 30 years ( ) 31- 40 years ( )
   41- 50 years ( ) above 50 years ( )
3. How long has this firm been in operation?
   Less than 2 years ( ) 2- 5 years ( )
   6-10 years ( ) more than 10 years ( )
4. Kindly indicate your highest level of education

   Primary education ( ) Secondary education ( ) Certificate/ Diploma ( )

   Bachelor's Degree ( ) Post-graduate education ( )

SECTION B: INVESTMENT DECISIONS

Please tick (√) the extent of agreement to each of the statements provided below:
***Key: SA** -Strongly Agree, **A**-Agree, **N**-Neutral, **D**-Disagree, **SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
INV1	I always examine the return when choosing an investment					
INV2	I always consider the liquidity when making an investment decision					
INV3	I always consider the tax implications of an investment so as to earn a high net after-tax return					
INV4	I always consider the rate of inflation before investing					
INV5	I always consider the initial cost before making an investment decision					
INV6	I often invest in projects that have stable incomes					
INV7	I put into consideration the investment period before making a decision					
INV8	I have diversified my assets					
INV9	I always conduct market research before investing to assess the riskiness of an investment					
INV10	I consult professionals for guidance and advice before making an investment decision					

SECTION C: SAVINGS BEHAVIOR

Please tick (√) the extent of agreement to each of the statements provided below:

***Key: SA** -Strongly Agree, **A**-Agree, **N**-Neutral, **D**-Disagree, **SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
SB1	I save money each month with a financial institution of my choice					
SB2	I monitor my savings by reviewing my bank statement to check the interest rates earned					
SB3	I prefer to save than to borrow even in difficult circumstances					
SB4	I have an emergency savings that covers for any unplanned expenses in my business					
SB5	I have in place a retirement savings account for myself and my employees					
SB6	I often set achievable savings goals					

SECTION D: BORROWING BEHAVIOR

Please tick (√) the extent of agreement to each of the statements provided below:

***Key: SA** -Strongly Agree, **A**-Agree, **N**-Neutral, **D**-Disagree, **SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
BB1	I take loans for a given purpose or use					
BB2	I always strive to pay my debts on time					
BB3	I avoid debts at all costs					
BB4	I always compare loan products offered by different lenders before making final decision to borrow					
BB5	I always consider the cost of borrowing before acquiring any loan					
BB6	I rely on debt rather than equity to purchase assets in my business					

SECTION E: SPENDING BEHAVIOR

Please tick (√) the extent of agreement to each of the statements provided below:

***Key: SA** -Strongly Agree, **A**-Agree, **N**-Neutral, **D**-Disagree, **SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
SPB1	I keep records of my business operations					
SPB2	I pay my bills and other financial commitments on time to avoid penalties					
SPB3	I usually negotiate for favorable terms and conditions with my suppliers					
SPB4	I stick to and follow the spending plan I have created on how to use my business income					
SPB5	I prefer to spend than to save					
SPB6	I often compare prices and/or look for discounts before making a purchase					

SECTION F: INVESTMENT BEHAVIOR

Please tick (√) the extent of agreement to each of the statements provided below:

***Key: SA** -Strongly Agree**, A**-Agree**, N**-Neutral, **D**-Disagree**, SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
IB1	Most of the investment decisions I make are usually informed by past business experiences					
IB2	I analyze and evaluate a new product in the market before purchasing it					
IB3	I only complete projects that are economically viable					
IB4	At times, I fail to undertake an investment due to fear of bad financial outcomes					
IB5	In most cases, I overestimate my investment in the business					
IB6	I rely on the available market information when making investment decisions.					

SECTION G: FINANCIAL LITERACY

Please tick (√) the extent of agreement to each of the statements provided below:

***Key: SA** -Strongly Agree**, A**-Agree**, N**-Neutral, **D**-Disagree**, SD**- Strongly Disagree*

Code	Item	SD	D	N	A	SA
FL1	I always hire expertise to advice on the firm's financial health					
FL2	I have previously attended a financial management training program					
FL3	I know how to calculate interest rates charged on my loans					
FL4	I am aware of the legal consequences of defaulting on a loan					
FL5	I balance my checkbook on a monthly basis by comparing my cash book against the bank statement					
FL6	I assess the company's profits and repayment ability before taking a loan					
FL7	I am uncertain about how I spend my firm's finances					
FL8	I know how to prepare and analyze financial reports of my business					
FL9	My personal attitude towards money management influences me to budget					

Appendix III: NACOSTI Letter

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **102751**

Date of Issue: **22/October/2022**

RESEARCH LICENSE

This is to Certify that Miss.. Mercy Wanjiku Muriu of Moi University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: Financial behavior, financial literacy and investment decisions among owners of small and medium enterprises in Nairobi CBD, Kenya for the period ending : 22/October/2023.

License No: **NACOSTI/P/22/21265**

102751

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

Appendix IV: University Letter

MOI UNIVERSITY

MOI UNIVERSITY
POSTGRADUATE OFFICE
SCHOOL OF BUSINESS AND ECONOMICS

Tel: 0790940508
0771336914
0736138770
Fax No: (053) 43047
Telex No. MOIVARSITY 35047

P.O. Box 3900
Eldoret.
Kenya

RE: MU/SBE/PGR/ACD/21B **DATE:** 17th October, 2022

TO WHOM IT MAY CONCERN:

RE: MERCY WANJIKU MURIU- MBA/5530/21

The above named is a bonafide student of Moi University School of Business and Economics, undertaking **Master of Business Administration** degree specializing in Finance.

She has successfully completed the coursework, defended her proposal, and is proceeding to the field to collect data for her research titled: ***"Financial Behavior, Financial Literacy and investment Decisions among Owners of Small and Medium Enterprises in Nairobi CBD, Kenya."***

Any assistance accorded to her will be highly appreciated.

Yours faithfully,

SCHOOL OF BUSINESS & ECONOMICS
MOI UNIVERSITY
P O Box 3900 ELDORET 30100

DR. RONALD BONUKE
POSTGRADUATE CHAIR, SB&E

/bc

Appendix V: Plagiarism Result