

**EFFECT OF FINANCAL LITERACY ON FINANCIAL DECISIONS AMONG  
WOMEN IN MOMBASA COUNTY, KENYA**

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## DECLARATION

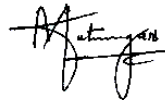
This Research Project is my original work and has not been submitted for examination to any other university.

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## **DEDICATION**

Dedication to my wife Susan Munyiva and my sons Michael Mutuku and Melvin Mwanja.

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## **LIST OF ABBREVIATIONS AND ACRYONMS**

<b>CBK</b>	:	Central Bank of Kenya
<b>GOK</b>	:	Government of Kenya
<b>KNBS</b>	:	Kenya National Bureau of Statistics
<b>NSE</b>	:	Nairobi Stock Exchange
<b>OECD</b>	:	Organization for Economic Co-operation and Development
<b>SACCO</b>	:	Savings and Credit Co-operatives
<b>SD</b>	:	Standard Deviation
<b>UAE</b>	:	United Arab Emirates
<b>VIF</b>	:	Variance Inflation Factor

## ABSTRACT

The study focused on the effect of financial literacy on financial decisions among women in Mombasa County, Kenya. Financial literacy plays a vital role in sound financial decision-making and affects the individual's financial well-being and societal economic growth and development. The financial markets are expanding every day with technology and globalization; the customer credit services have also expanded posing a challenge to individuals especially those with low financial literacy levels. The financial environment is becoming complex everyday with uncertainties rocking financial markets. Making sound financial decision is attributed to high financial literacy coupled with possession of comprehensive and reliable information. The objective of the study was to examine the effect of financial literacy on financial decisions. The study was founded on Goal Setting Theory, Prospect theory and Financial Behavior Theory. The independent variable of the study was financial literacy, control variables were growth of the financial sector, demographic factors and investment capital while financial decisions was the dependent variable. To achieve the objective of the study, descriptive research design was applied. Data was collected among 200 women across Mombasa County by use of questionnaires. The study adopted stratified random sampling. The response rate was 70.5%. Shapiro-Wilk test, Durbin-Watson test of Multicollinearity and Heteroscedasticity were checked before carrying out regression analyses. Demographic factors had correlation coefficients of 0.334 with financial literacy, 0.094 with investment capital and 0.338 with financial sector growth. Financial literacy had correlation coefficients of 0.119 with investment capital and 0.192 with growth of financial sector. Investment capital had a correlation coefficient of 0.271 with growth of financial sector. All the p-values were less than 0.05 implying that they were significant. The study established that, financial literacy has a positive significant effect on financial decisions. Demographic factors had correlation coefficients of 0.334 with financial literacy, 0.094 with investment capital and 0.338 with financial sector growth. Financial literacy had correlation coefficients of 0.119 with investment capital and 0.192 with growth of financial sector. Investment capital had a correlation coefficient of 0.271 with growth of financial sector. Demographic factors, financial literacy, investment capital and growth of financial sector were found to have p-values of less than 0.01 implying that, they are statistically significant at 99% confidence level.  $R^2$  was 0.460 while adjusted  $R^2$  was 0.176, implying financial literacy predicted a variance of 17.6% at 95% confidence level on financial decisions. The study was limited in scope with data being collected on sample size of 200 women in a population of 598046 women. To enhance the replicability of the results, a greater sample size should be considered. Other determinants of financial decisions such as psychological factors, which influence behavior and attitudes, risk tolerance and socioeconomic factors, should be considered for further study. The study recommends collaboration among government and other stakeholders to engage in financial literacy awareness among women and enact policies that favor sound financial decisions.

**Keywords:** Demographic Factors, Financial Literacy, Financial Attitude, Financial Knowledge, Financial Decisions, Growth of Financial Sector and Investment Capital.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Financial literacy is a significant element of sound financial decision-making and affects the individual's financial well-being and societal economic growth and development (Atakora, 2013). According to Guisso and Jappelli (2008), financial literacy has earned references for improving assets and portfolio investments. Financial literacy impacts financial behavior with debt management problems associated with low financial literacy (Lusardi & Tufano, 2009). According to Tschache (2009) knowledge of income, expected expenditure, cash management and saving enables one to manage their finances. Financial literacy measures the extent to which an individual understands key aspects of managing personal finances hence improving the ability to make sound decisions (Nye & Hillyard, 2013). Financial markets have vast range of financial products coupled with the problem of managing finances makes financial decision-making to be challenging. Financial literacy influences these decisions over a number of high quality assets and risk sharing instruments. The responsibility of investment and savings in the current economic times lies entirely on individuals, these calls for enhancement of sound financial decisions among individuals (Garg & Singh, 2018).

The study was founded on Goal Setting Theory, Prospect theory and Financial Behavior Theory. Goal Setting Theory postulates that, cost-benefit of financial literacy is enhancing savings, making sound investment choices and low proficiency to financial risk and debt. The theory was developed by Locke (1986) and Locke and Latham (1990). Persons with higher financial literacy tend to be positive regarding their future financial position and choices (Huston, 2010). Financial Behavior Theory was advanced by Martin Weber (1999) and

suggested that financial decisions are influenced by attitudes, values and psychological biases. The theory advocates that individuals must obtain comprehensive information from the financial markets and sideline their emotional and cognitive biases for them to make perfect financial decision. Kahneman and Tversky (1979) advanced the Prospect Theory and suggested that individuals approximate losses and gains separately. Financial decisions are based on the anticipated gains and not losses although individual considers loss aversion first before estimating the returns from the investment in the decision making process (Chavali & Mohanraj, 2016).

Increase in financial products and services leads to compromises in financial security and safety especially in societies with low financial literacy levels (Willis, 2008). Financial products and services in Kenya have been on rise over the last decade, due to innovations and developments in the banking industry and insurance industry, dynamism in financial markets, new regulations on banking and interest rates. Due to the increased products, management of money has become a challenge among women. Hasler and Lusardi (2017) established that financial literacy among 3.5 billion people in the world was very low with higher percentage of the population in developing economies like Kenya. The literacy levels in developing countries were established to be around 28% of the population with men forming a higher percentage compared to their female counterparts. According to KNBS (2019), 46% of Kenya's population belong to low economic stratum. The population of women in Kenya is slightly higher than that of men. The economic growth and development of the nation is thus depended on the contribution of each gender. It is paramount for the country to enhance financial literacy so as to establish gains on economic growth.

### **1.1.1 Financial Literacy**

According to OECD (2014) financial literacy is the capacity to comprehend financial concepts and risks, demonstrate skills and application of financial understanding in making effective decisions over a vast financial context, with the aim of enhancing financial well-being of the society. Financial literacy has three variable; financial knowledge, financial behaviour and financial attitude and emphasizes on person's capability in management of finances in addition to making informed and appropriate decisions. This implies that a person is able to effectively and efficiently plan for their future hence avoiding future financial challenges in the ever-dynamic financial environment, identifying returns, sources of finances and ensuring that one does not over spend is very key. Beck, Demirgüç-Kunt and Levine, R. (2007), argues that for financial markets to function effectively it requires good infrastructure coupled with informed customers.

Atakora (2013) notes financial education enhances and sustains both economic growth and individual's well-being. Financial literacy is thus perceived as an indicator of global economic knowledge, technology, consumer rights, organizational skills and attention to financial details. Huston (2010) identified concepts of financial knowledge as; investment, basic money concepts, borrowing and protection concepts. OECD (2014) proposed that financial knowledge involves; time value for money, effect of inflation on prices of commodities and return on investment, and interest rates both compound and simple. Atkinson & Messy (2012) posits that financial attitude refers to financial behavioral pre-depositions and beliefs that individuals have formed from their experiences. Financial attitude has a positive influence on future financial planning and propensity to save.



Financial literacy measures are; financial knowledge, financial communication, financial behavior, self-confidence, financial attitude (Zait & Berteau, 2014; Chen & Volpe, 1998; Ortorigas, 2013; OECD, 2014)) and financial skills (Klapper, Lusard & Oudheusden, 2015; Hamnad & Mohammed, 2021). Financial knowledge entails comprehension of inflation and interest rates (Huston, 2010; Huang et.al, 2020; OECD, 2013; Lusardi & Mitchell, 2011). Financial attitude is demonstrated through budgeting, planning, propensity to save and invest (Remund, 2010; Agarwalla et al., 2013). Financial behavior is depicted by; participation in stock markets, savings actively, investing actively, preference to low borrowing cost, timely payment of bills, debt management, appropriate financial decisions, formal credit access (Huston, 2012; Allgood & Walstad, 2013; Tufano, 2009; Klapper et. al, 2012). The study considered financial knowledge, behavior and attitude as financial literacy measures.

### **1.1.2 Financial decisions**

According to Kimiyaghalam and Safari (2015) financial decision entails making informed judgment on the management of money. Financial decision-making is multifaceted process, which is a function of so many elements and varies from one person to another. The process becomes easy for any individual when they are well vast with the underlying factors. Financial decisions amongst women are influenced by both psychological and demographic attributes. Sound financial decisions are aimed at reduction of losses, reduction of transaction costs and maximization of returns (Ali, Umar & Asifa, 2017).

Financial decision-making involves making various choices on investment; whether to invest in capital markets or on physical assets. Investment decisions are aimed at wealth accumulation and creation. Investment decisions depends on the risk, returns and value fluctuations. Persons

who are risk takers are profound to invest in high risk portfolios such as capital markets. Generally, women have low risk preference (Sudindra & Naidu, 2018). Dwyer, Gilkeson and List (2002) argued that women make low risk investment choices compared to their male counterparts hence women prefer diversifying their investment or investing in low risk portfolios like bonds and physical assets (Kamleitner, Mengay & Kirchler, 2017).

Credit decisions are influenced by the ratio of benefits of borrowing to the benefits of saving, if the ratio is greater than one then one makes the choice to acquire credit. Credit decisions are also influenced by the expected income over a lifetime. Credit is preferred when the income generated from the investment made smoothens an individual's income for a long period over time (Webley, 2014). Variability of the credit instrument influences the credit decisions in terms of the amount to be acquired and also dictates the type of credit. Lusardi and Tufano (2008) argued that for an individual to make an informed decision on credit selection, one should possess knowledge of interest compounding, cost of debt and non-interest fees. Credit decisions also reflect one's values, needs and goals.

Saving decisions depends on the goals of savings, different individuals have different reasons for savings ranging from specific reasons to indefinite purposes. Savings decisions can be on purchasing an insurance policy, having deposits in a financial institution or through or purchase of a treasury bill. Savings are also dependent on demographic factors such as age, with young people having low propensity to save compared to elderly people who save majorly as their retirement plan (Hui, Nguyen, Palameta & Gyarmati, 2016).

Janor, Yakob, Hashim, Zanariah and Wel (2016) suggested that decision making is inevitable in day-to-day life since several choices have to be made concerning different financial

instruments, borrowing, saving and financial services almost on a daily basis. Almenberg and Soderbergh (2011) identified investment decisions such as retirement planning, capital markets investments, bond and treasury bills and physical assets. Kim, Gutter and Spangler (2018) argued that financial decisions involve making choices on spending, savings, borrowing, asset accumulation and investing. Kamleitner and Kirchler (2007) identified variables of financial decision making as; investment, savings, credit use, spending and money management decisions.

### **1.1.3 Financial Literacy and Financial Decisions**

The appropriateness of financial decision depends on the financial literacy of the individual. Huston (2010) argues that financial literacy involves financial knowledge application in making spending and saving decisions aimed at securing financial goals. Financial literacy enables an individual to have financial success by ensuring that the individual has a good financial behavior that prevents them to plunge into debt management crisis and instills a culture of investment and saving. According to Monticone and Chiara (2010), consumers of financial assets who possess financial knowledge demand for financial products, which are in tandem with their financial goals. The suppliers of funds have to be creative and innovative in availing and access of financial products in a manner that best suits the financial needs of the consumers and investors.

High financial literacy levels enhances sound investment decisions since it leads to improved savings which in turn leads to more investment due to increased financial intermediation. Making investment with very little or inadequate analyzed information one is likely to make losses (Ali, Umar & Asifa, 2019). Sabri (2017) argued that financial literacy is a fundamental

determinant in decision-making especially in the complex financial environment, which is characterized by rapid growth in financial products and services, technological changes and future uncertainties in capital markets. Making a sound decision in dynamic and unpredictable environment requires possession of high level of financial knowledge and positive financial attitude.

#### **1.1.4 Mombasa County**

Only 36% of women in Mombasa County are financially literate which is lower than their male counterparts at 42% (CBK, 2019). Low levels of financial literacy make women experience economic problems that pose challenges to their well-being and their households (Ford, Baptist, and Archuleta, 2011). Mombasa County is urban centre with a population of 1.9 million people out of which 598046 are women (KNBS, 2019). The population of women in Mombasa County is almost half the total population, this implies that for the economic and financial growth of the County, women should take centre stage in matters finance and thus smart financial decisions are key. Women in Mombasa County carry out various activities such as farming, entrepreneurship and retail enterprises, which requires apt decision making every moment for their survival. Mombasa County is one of the hotspots for start-up businesses, for the identification of appropriate business opportunity one must be able to access information, evaluate the information in terms of risk and returns so as to have a successful business, all processes require financial literacy. Mombasa being an urban centre is endowed with financial institutions, which have a range of products and services some customized for women, these provides an array from which women are required to make appropriate credit and savings decisions. The women of Mombasa County ought to be equipped with the necessary

knowledge thus empowering them in making appropriate decisions involving savings, investment and access to financial assets.

## **1.2 Research Problem**

The financial markets are expanding every day with technology and globalization. The two factors have enhanced innovation in the financial sector leading to financial market liberalization and vast financial products and services (Wegland, 2006). The expanded financial markets poses a challenge to persons more so those with low levels of financial literacy when it comes to investment, borrowing and savings decisions. Wachira and Kihiu (2012) argued that as the financial markets expands the risk of vulnerability to fraudulent schemes also increases, within individuals lured to make investment to schemes with high returns, only never to mature. The consumer credit has become extensively accessible making it possible for individuals to borrow uncontrollably (OECD, 2009) thus a high risk of debt management crisis. The world at a times experiences financial crisis due to ill-informed financial decisions attributed to low financial literacy levels.

Kenyan government has imposed capping on interest rates at 14% coupled with high levels of domestic borrowing by the government limiting the resources available for the private sector (World Bank, 2020). The role of women in Kenyan economy cannot be overlooked especially investments in the family through education, future house ownership plans, acquisition of property and nutrition, thus women have to be empowered to make sound decisions. Kenyan economy experiences a rapid growth of financial markets, which arouses confusion especially to individuals with low financial literacy levels, therefore individuals ought to have a basic understanding of financial markets and instruments (Leora et. al. 2014). The recent changes of pension scheme to contributory pension scheme has placed more savings and investment

responsibility to household coupled with the complexity of financial markets, deems it crucial for her citizens to be armed with necessary financial knowledge and possess the right attitude to navigate through the complex financial decisions.

Willis (2010) established that financial literacy strongly correlates with investing decisions. The study suggested that financial education programs bear no empirical evidence of enhancing financial literacy required for investment decisions since the financial markets are highly dynamic and therefore the financial knowledge gained becomes obsolete with the changes. The financial products and services are constantly changing along with the individual's situations, rendering the cost of acquisition of financial knowledge expensive. On the contrary Huston (2010) argued that financial literacy has a strong correlation with financial knowledge. The study established that financial literacy influences spending and saving decisions. Individuals who possess high financial literacy depict certain financial behaviors such as cash flow management and are less often to plunge into debt crisis. A study by Nyamute and Maina (2011) established higher financial literacy leads to better personal financial management practices. Financial literacy is crucial in debt management and retirement planning (Kimani, 2014)

Literature review reveals that there are minimal studies focused on establishing the role of financial literacy on financial decisions among the women. Most of the studies on financial literacy were exploratory, seeking to determine factors that influence financial literacy (Klapper, et. al., 2015; Hamnad & Mohammed, 2021; Ibrahim & Alquadi 2013; Rashid, Rsool, Mubashir & Arif, 2021). Studies on financial literacy and women were mostly carried out on regions with gender biases like Pakistan, Malaysia, Nigeria and India due to disparities on gender equity (Mahdzan & Tabiani, 2013; Suwanaphan, 2013). The study sought to fill the

contextual and conceptual gap through addressing the question, what is the effect of financial literacy on financial decisions among the women in Mombasa County?

### **1.3 Research Objectives**

The objective of the study was to examine the effect of financial literacy on financial decisions among the women in Mombasa County, Kenya.

### **1.4 Value of the Study**

The research study is useful to scholars and other researchers since the findings adds to the existing literature on the financial literacy and financial decisions. The study provides theoretical insights to scholars and researchers hence assist them to carry out further studies that focus on financial literacy and financial decisions.

The study is of use to policy makers and regulators of the financial institutions especially the CBK who regulate financial intermediation, for the study provides guidance on areas that are critical in enhancing financial literacy in a bid to encourage sound financial decisions that are key to the growth of investments and savings in the economy. The study provides useful insights on government especially restrictions, regulations and deregulations of the financial sectors in order to stimulate economic growth since such policies leads to either financial liberalization or financial repression.

This study is significant to the financial institution managers and capital market players as it exhibits how financial literacy influences the financial decisions and therefore provides them with information that is helpful in developing strategies on how to manage incomes, savings and investment in order to achieve financial success and wellbeing among women through training on financial literacy.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter constitutes the literature review of the study. The chapter discusses theoretical foundations of the study and describes the determinants of financial decisions. Further, the chapter reviews the empirical studies both globally and locally and gives a summary of empirical gaps. Last section of the chapter outlines the conceptual framework guiding the study.

#### **2.2 Theoretical Review**

The study was anchored on; Goal Setting Theory, Behavioral Finance Theory and Prospects Theory. Goal Setting Theory postulates that cost-benefit of financial literacy is enhancing savings, making sound investment choices and low proficiency to financial risk and debt. Financial Behavior Theory was advanced by Martin Weber (1999) and suggested that financial decisions are influenced by attitudes, values and psychological biases. Prospect theory opines that individuals approximate losses and gains separately, financial decisions are based on the anticipated gains and not losses although in the process of decision making the individual considers loss aversion first before estimating the returns from the investment.

##### **2.2.1 Goal Setting Theory**

The proponents of the theory are Locke (1986), Locke and Latham (1990). Goal setting theory is based on the belief that individuals who make conscious goals have the ability to attain the desired results. People who set goals which are objective, challenging, clear and well-defined



have been seen to attain higher returns as opposed to those who set goals which are vague and easy to achieve. The basis of this theory is the assumption that people are committed to the goals they set to achieve. The theory posits that individuals who possess financial literacy perform better in their savings goals, investment and related tasks. Locke and Latham (1990) argued that financial literacy knowledge is more effective when people have the perception that they need to manage their finances for future financial stability. Hilgert, et. al. (2003) established that scores of financial literacy were positively correlated to financial practices thus people with financial literacy have the ability to set good financial goals and work towards their achievement.

According to Priyadharshini (2017), financial literacy is imperative important in setting and achievement of financial goals. Financial markets have a vast number of financial products and services, necessitating for informed choices, which suits the needs of the individuals (Khan, 2015). Well-informed individuals make decisions that enhance their well-being and that of the society since they are able to mitigate risks involved in financial decisions. Increased levels of financial freedom advocates for financial responsibility (Xiao, 2008). Financial literacy has a strong correlation with financial behavior. Persons who managed their cash flows, savings and investments more wisely thus achieving their financial goals demonstrate high financial literacy levels (Hilgert et al., 2003).

According to Lotham and Locke (2013) individuals may set goals which are difficult to achieve, and may lead to risk-taking behavior. For instance, unrealistic goals of investment may lead to over borrowing in attempt to achieve the set goals over a specified period of time. Goals set narrows one's focus to concentrate on the sole achievement of the goal, rather than encouraging dynamism with the prevailing economic conditions. Duska (2000) argues that

multiple goals bring about conflicts of interest, especially when one has competing goals or personal goals are not aligned with organization goals, gives rise to conflict of interests and unethical vies.

Women should always set goals that are realistic and time bound which will act as yardsticks for their financial strategies and also motivate them towards achieving their set objectives. During the goal formulation process individuals should gather relevant and reliable information to avoid being myopic and have a panoramic view of the existing financial situations. Realistic goals will avert losses and enhance proper cash flow and avoid debt crisis leading to improved well-being of the individual and financial growth of the society.

### **2.2.2 Behavioral Finance Theory**

Martin Weber (1999) advanced Behavioral finance theory and he proposed that financial decisions of an individual are based on psychological features and how well the individual comprehends financial markets. According to Pompian (2008) individual's financial decisions are greatly affected by one's attitudes, psychological conditions and biases. Sewell (2010) argues that individuals think rationally and make conscious decisions based on the existing economic models and various approximations. Financial decision-making is complex due to the sophisticated financial instruments and dynamic environment, hence one has to make the rational decision to avert losses. The decisions drawn by the individuals may not always be the appropriate financial decisions and leads to losses, this is contributed by the selective analysis and evaluation of financial information which can be too shallow or incomplete and the speed at which financial decisions are settled at (Fromlet, 2001).

Financial markets often experience asymmetry in financial information thus the individuals may not always have comprehensive information and also individuals have limited cognitive capabilities, thus discrediting the aspect of perfect rationality in decision making (Nikolić, 2018). Weber (2000) advocates that for one to make the proper financial decisions, should consider the information about financial markets and ensure it is comprehensive, complete and from a reliable source especially an insider. Sewell (2010) advocates that when drawing investment conclusions, investors should sideline their emotions and act rationally without any biases. Otmar (2001) recognizes the importance of financial literacy in avoidance of ‘herd’ mentality and thus making individualized financial decisions. Behavioral finance theory thus encourages individuals to acquire comprehensive and reliable information about financial markets and apply rationality in making financial decisions (Leković, 2020).

The theory recognizes the important role that financial literacy plays in shaping individual’s cognitive capabilities. Financial literacy enables one to overcome control illusion biases and overconfidence in a desired investment, hence risk aversion through diversification (Pompian, 2006). Investor ought to have well formulated objectives, adequate gathering of information, well analyzed financial information and situations, and observe rational decision making (Kapor, 2014).

### **2.2.3 Prospects Theory**

The proponents of Prospect theory are Kahneman and Tversky (1979). The theory is based on four elements; Reference dependence where individuals make financial decisions based on their current wealth. Individuals will always make decisions that are aimed at averting losses before they can consider the returns (Hackel, Pfosser & Tränkler, 2017). The theory opines

that individuals approximate losses and gains separately, financial decisions are based on the anticipated gains and not losses although in the process of decision making the individual considers loss aversion first before estimating the returns from the investment (Chavali & Mohanraj, 2016). Individuals weigh certainty effects and loss aversion differently leading to different categories of individuals based on their risk tolerance levels; some are risk-takers, others are risk neutral while others are risk averters (Ansari & Phatak, 2017)

The critics of the theory argue that prospect theory does not put into consideration the psychological attributes of the individual such as mental dispositions, values and attitudes. The emotional attributes are cognitive biases that hinder individuals from making perfect financial decisions (Pompian, 2008). Chavali and Mohanraj (2016) argued that women are risk averters in nature and are prone to investing in low risk portfolios. Women make investments that are inclined to loss aversion at first before they consider the rate of return. Prospect theory advocates that individuals choose between alternatives of gains and losses, the theory informs the study in that individuals are compelled to make decisions that are aimed at alleviating losses and making gains. Financial literacy enables individuals to make sound decisions that isolate losses.

### **2.3 Determinants of Financial Decisions**

Financial literacy is a crucial factor in financial decisions among women and other members of the society. However, other factors such as demographic factors, availability of investment capital, growth of the financial sector and domestic credit to private sector influence financial decisions among women.

### **2.3.1 Elements of Financial Literacy**

Financial literacy is the capability to comprehend and interpret various finance areas including the ability to save, invest, make insurance decisions, partake in real estate, undertake capital budgeting and make retirement plans. According to Bell, Gorin and Hogarth (2009), financial literacy enables people to understand financial products including stocks and bonds. Literacy in finance provides individuals the opportunity to be self-sufficient and also the ability to make decisions on their own to achieve stability in their financial status. People who possess financial literacy have the ability to avoid unnecessary bad debts as well as avoiding vulnerabilities that may lead into financial extortion due to the conditions. Financial literacy is crucial for anyone in an economy since it prevents the vulnerable members of the society from being entangled through devastating financial credits (Rajesh, 2017).

Atkinson and Messy (2012) argued that persons with high levels of financial literacy often perform better in numeracy, savings, earnings, risk diversification, risk tolerance, bank products pertaining interest rates and insurance policies. Lusardi and Mitchell (2011) suggested that financial literacy enables one to borrow at lower interest rates, evaluate the processing fees on financial assets, become empowered to take investment decisions, control their expenditure behavior, actively participate in stock markets and effectively plan for their retirement. Financial literacy coupled with microfinance plays a crucial role in women empowerment especially through provision of loans, that facilitates economic development (Nawaz, 2015). Rahmandoust, Shah, Norouzi, Hakimpoor and Khani argued that an improvement in financial literacy among women enhances their economic empowerment, reduces dependency ratio, enhances financial security and increases financial inclusion. Financial behavior enables one to make the correct decisions regarding cash management and

precautions. Financial behavior enables one to achieve their financial goals, avoid financial crisis, budget for their income and keep records.

### **2.3.2 Demographic Factors**

Demographic factors such as age, education level, marital status, and cultural backgrounds influences financial decisions (Allgood & Walstad, 2013). Demographic factors are strongly associated with risk aversion, as the age increases people show high levels of loss aversion. The current generation of young people tend to value money more and have higher propensity to spend compared to those in their 40s and beyond, since they view money as a means to satisfy their desires, thus are faced with the challenge of future planning (Ali, Umar & Asifa, 2017). The older generation tend to be future oriented and plan for their retirement therefore their decisions are directed towards securing a better financial future through appropriate investments and savings.

García and Tessada, (2013) suggested that people who have attained higher education levels demonstrates, higher financial literacy levels hence make better financial decisions. Lusardi (2012) argued that people with low education levels make poor financial decisions since they are incapable of carrying out numeracy problems in making financial decisions. On the contrary, Jariwala (2013) opined that there is no correlation between education and literacy levels, thus education level has no or minimal influence in financial decision making.

Filipiak and Walle (2015) argued that differences in nurturing between women and men has a great impact on financial decisions. The cultures that tend to favor men more than women in terms of investment, wealth creation and debt financing negatively affects financial decisions among women. Matrilineal cultures empower to be more financially responsible and thus

women from such backgrounds are profound to make better financial decisions compared to women who are from patriarchal cultures (Van Rooij et al., 2009).

Marital status of women greatly influences financial decisions, with married women making unilateral decisions with their husbands while single or divorced women make independent financial decisions though they may heavily consult with their family members (Solanke & Dandago, 2018). Lamidi (2016) argued that women in gender-biased cultures have low autonomy and involvement in making financial decisions especially on borrowing and investment with such decisions left for their male counterparts in marriage. Omeje, Oshi and Oshi (2011) noted that women inclusion in financial decision increases with education level and income of such women.

### **2.3.3 Investment Capital**

According to Baker and Martin (2011) investment capital is the amount of money a person or a firm allocates to a business activity with the aim of achieving set business objectives or the amount of money set aside by an entity to facilitate the purchase of fixed or long term assets. The sources of investment capital include: equity finance, debt finance, venture capital and angel capital. Investment capital is a critical production factor alongside with the labor and other natural resources. The decision to invest is the choice to utilize more capital in production of goods and services. Higher investment capital will result to the acquisition of more fixed assets and the vice versa. Yakimova (2021) posits that an individual invests both borrowed and their own funds in a particular project. Investment capital influences the financial stability of the organization by lowering the risk of loses thus protecting the investor. The financing of large project requires higher amounts of capital, which the business may not have, resulting to

borrowing. Debt financing has associated risks, which may make the bank unwilling to finance, this may lead to angel capital or a venture capital. The individual is compelled to make a decision based on the risk of debt and cost of debt before settling to the source of investment capital.

### **2.3.4 Growth of the Financial Sector**

Financial sector growth refers to the increase in financial contracts and markets, growth of intermediation and increased number of financial services offered in the financial sector (Oleche & Mutiiria, 2015). Financial sector growth is perceived as the positive transformation of institutions, policies, instruments and markets in the financial sector. Financial sector growth is measured through the degree of financial intermediation, which involves financial institutions attracting savings from customers and advancing credit to borrowers. The financial institutions make a return by charging a higher lending rate than the deposit rate.

Schumpeter (1982) suggested that the growth of financial sector has two broad dimensions; demand-led and finance-led dimensions. The demand of adequate financial facilities leads to a greater number of financial institutions, and financial products and services (Patrick, 1966). On the other hand, finance-led growth of financial sector is induced by supply of finances to the economy so as to stimulate the growth of the economy (Shaw,1973). Demand for financial assets leads to competition amongst the financial institutions, which in turn encourages innovation and creativity thus influencing growth of financial sector. Demand for better financial services at reduced cost has led to the rise of use of technology leading to internet and mobile banking (Haq & Luqman,2014). These transformations have led to increment in products and services, financial institutions and formulation of financial policies, all of which



enhances supply of financial assets to the private sector and especially marginalized groups and women (Yacine & Mohamed, 2021). The growth of finance sector makes financial decision-making to be complex since one has to choose from a vast array of products and services, and requires one to be well versed with the products and services for proper evaluation.

### **2.3.5 Psychological factors**

Sewell (2010) argues that psychological factors are key determinants of financial decisions. Individuals make decisions based on their inherent psychological attributes such as attitude, home biases and psychological conditioning. Different individuals interpret the same information differently and at different speeds, this creates a difference in the nature and type of financial decisions made (Curtis, 2004). Shiller (2000) argued that people who have control illusion tend to be overconfident while making choices hence their decision have a higher risk factor.

Nikolić (2018) argued that irrationalities in financial decisions occur due to cognitive biases, which emanate from inadequate cognitive capabilities leading to systemic errors reasoning and thus flawed decisions. Individuals with high level of financial literacy, have a perfect understanding of their financial behavior and tend to avoid falling into psychological pitfalls thus enhancing their financial decisions (Ljubojević & Dašić, 2018). Normal investors make financial decisions basing on their subjective assessments and evaluations, and are inclined towards personal desires, expectations and fears. The subjective assessment may be due to asymmetry in financial information or due to individual biases where one tends to favor some decisions based on emotions or limited rational capability (Leković, 2020).

Leković (2020) highlighted several cognitive biases; overconfidence bias where individuals are too optimistic in predicting future outcomes. Overconfidence bias leads to individual not diversifying risks and underestimating the risk of future events. In any financial decisions, emphasis should be laid on correct interpretation of information rather than the volume of the information. Framing bias is the subjective assessment of a financial situation depending on one's attitude, values and mental models. Heuristics refers to mental shortcuts and leads to systemic errors in financial decisions (Ritter, 2003). Representative bias is associated with individuals considering the available and accessible information in decision making, which may not always be reliable and complete (Shefrin, 2010). Conservatism bias is associated with individuals ignoring the most recent information when making decisions, sticking to information utilized in making earlier decisions (Caputo, 2014).

### **2.3.6 Financial Risk Tolerance**

The extent to which an individual is willing to take risk has a significant relationship with financial decisions (Buccioli & Zarri, 2015). Individuals can be classified as risk takers, risk neutral or risk averters. Risk tolerance levels among persons determines spending and investment decisions, which are in tandem with their goals. Risk takers incline to investments in portfolios with greater levels of risk anticipating that they will have greater returns in the long-run while risk averters require added compensation when they invest in uncertain ventures thus are more likely to diversify their investments (Ansari & Phatak, 2017). Chavali and Mohanraj (2016) argued that women are risk averters in nature and have a bias of investing in low risk portfolios. Women make investments that are inclined to loss aversion at first before they consider the rate of return.

### **2.3.7 Income uncertainty**

According to Bertola, Guiso, and Pistaferri (2005) income uncertainty has a positive influence on financial decisions. Individuals who are pessimistic about their employment in the future or working on contracts perceive future to be uncertain and develop financial behaviors that are aimed at betterment of their future through prospective savings and investments. David, Ferman, Kuhn, and Li (2018) argued that individuals with low incomes and low levels of education exhibit high levels of economic uncertainty and are thus likely to have precautionary behaviors such as prospective savings and investments. Gabaix and Laibson (2017) suggested that uncertainty can be subjective and a psychological attribute of the individual rather than an external economic factor. Individuals with high degree of income uncertainty are likely to make obscured financial decisions that reflect their attributes.

## **2.4 Empirical Review**

Empirical review provides an insight and understanding on local and international studies that have been done on financial decisions and financial literacy. The area explores and explains the knowledge available on the field of study from studies done by other scholars.

### **2.4.1 International Studies**

Mahdzan and Tabiani (2013) established that financial literacy has a positive effect on savings with individuals who possessed higher financial literacy tending to save more and planning for the future financial investments. Data was collected from 200 respondents of diverse demographic and economic characteristics such gender, age and education in Malaysia. Regression analysis was applied in the study to determine the link between variables. The study established that gender has a high correlation to investment habits with women saving more

than men in Malaysia. Suwanaphan (2013) conducted a similar study in Thailand. The study sampled 400 workers. The study established that low level of financial literacy negatively affected saving behavior, and led to overspending. The two studies acknowledged that there was a need for the government to promote financial education to create a saving culture on the society and enhance investment.

Bhabha et al. (2014) established that financial literacy affects a person's behavior on savings and investment. The study examined the effect of financial literacy on savings and investment behavior amongst women in Pakistan. The findings revealed that working-women possess a better understanding of basic financial concepts, hence higher financial literacy. The study thus established that financial literacy has a positive effect on savings and investment. A study by Mohamed, et al., (2013) on financial literacy in United Arab Emirates (UAE), which surveyed 185 participants, established that UAE population has low financial literacy levels. They adopted multiple linear regression for analysis. The study revealed that financial literacy impacted negatively on the use of credit cards as a means to borrowing. The study established that financial literacy has positive effect on savings and investment. The study advocated for financial education through partnership between government and private sector to stimulate financial literacy and deal with the low levels of financial literacy and enhance savings and investment.

A study by Singh and Garg (2017) on financial literacy of youths, established that financial literacy was low among youths in India. The study utilized empirical exploratory research design thus collecting data from already existing studies and summaries extract, upon which regression analysis was computed. The study established that males possess better financial literacy skills compared to women. The study suggest that high financial literacy leads to

improvement on management of debt, savings and investment, which then enhances the well-being of the household. Rashid, et. al. (2021) found out that financial literacy, financial attitude affects financial wellbeing and has a positive influence on economic empowerment. Data was collected on 1000 people across all the sectors in Pakistan at a point in time. Financial literacy affects the attitude towards spending, saving, risk management and investment, which have a cumulative effect on the financial wellbeing of the individual such as debt management.

A study by Sudindra and Naidu (2018) on financial literacy and financial decisions on working women in Indian context established that financial literacy positively affects financial decisions. The study focused on 378 women who were employees in information technology sector. The study used descriptive and correlation analysis for data analysis. Higher levels of financial attitude and knowledge enhances sound decision making concerning financial matters. A study by Lusardi (2012) on financial literacy and financial decision argued that people with low education levels make poor financial decisions since they are unable to manipulate numeracy problems associated with financial decisions.

#### **2.4.2 Local Studies**

Nyamute and Maina (2011) established that financial literacy positively affects debt management. 192 employees were sampled across different sectors of Kenyan economy. Questionnaires were used in data collection and analysis done with multiple linear regression. The study showed that people who have financial literacy were more sensitive in settling their bills in time. A study by Amisi (2012) revealed that managers who demonstrate high level of financial literacy made better investment decisions. Data collection was by the use of questionnaires across 16 investment managers of pension funds registered under RBA. The

study employed descriptive research design. The study established that financial literacy had a positive effect on investment decisions, since they understand the risk, returns and opportunity cost.

A study by Musundi (2014) on financial literacy among residents of Nairobi County with a focus on real estate investors. Collection of data was through questionnaires where 115 people were surveyed. Descriptive research method was employed in analysis of demographic factors and investment. The study established that financial literacy level in real estate was very low, despite the fact that financial literacy impacts on real estate choices. A study by Nyale and Omar (2020) on financial literacy and growth of start-up business in Mombasa County were 142 people were surveyed. Mixed research design with both regression analysis and descriptive analysis was used. The study established that financial literacy especially financial reporting, debt and cash management positively influence the survival of 'newbies' in business. A study by Khalid (2020) on financial literacy and financial decisions established that financial literacy positively influences financial decisions among youths, with those youths who possess higher level of financial literacy making sound investment and saving decisions and were less prone to debt management crisis. The study also established that financial literacy was low amongst youths and therefore the need for the government and financial institutions ought to establish financial education programs targeting the youths.

## **2.5 Summary of Literature Review and Research Gap**

The chapter on literature review has revealed the empirical and theoretical aspects of the study. Willis (2010) conducted a study where he argued there is no significant link between financial literacy and investing decisions. He further indicated that financial education programs bear no empirical evidence of enhancing literacy in finance required for investment decisions. Several studies are on the contrary establishing a significant association between financial literacy and the personal investment decisions based on demographic factors, income and occupation of people within the society (Mahdzan & Tabiani, 2013; Suwanaphan, 2013; Schmidt & Sevak, 2006; Bhabha et al., 2014; Mohamed, et al., 2013; Nyamute and Maina (2011); Amisi (2012); Yage, 2010; Musundi 2014). The literature reviewed was sufficient to reveal that there is a contextual and conceptual gap on financial literacy and financial decisions since most studies are on financial literacy and other variables such as economic growth and behavior (Klapper et. al., 2015; Hamnad & Mohammed, 2021; Ibrahim & Alqaudi 2013; Rashid, et.al. 2021). Most of the studies on financial literacy amongst women were carried out in regions with gender biases especially Pakistan, India, UAE, Malaysia and Nigeria (Mahdzan & Tabiani, 2013; Suwanaphan, 2013). As a result, the study will explore the effect of financial literacy on financial decisions to fill the existing research gap.

## 2.6 Conceptual Framework

The independent variable of the study was financial literacy while control variables were growth of the financial sector, demographic factors and investment capital. The dependent variable in the study was financial decisions. The study sought to examine the link between financial literacy and financial decisions. The control variables in the study are viewed as other factors influencing financial decisions.

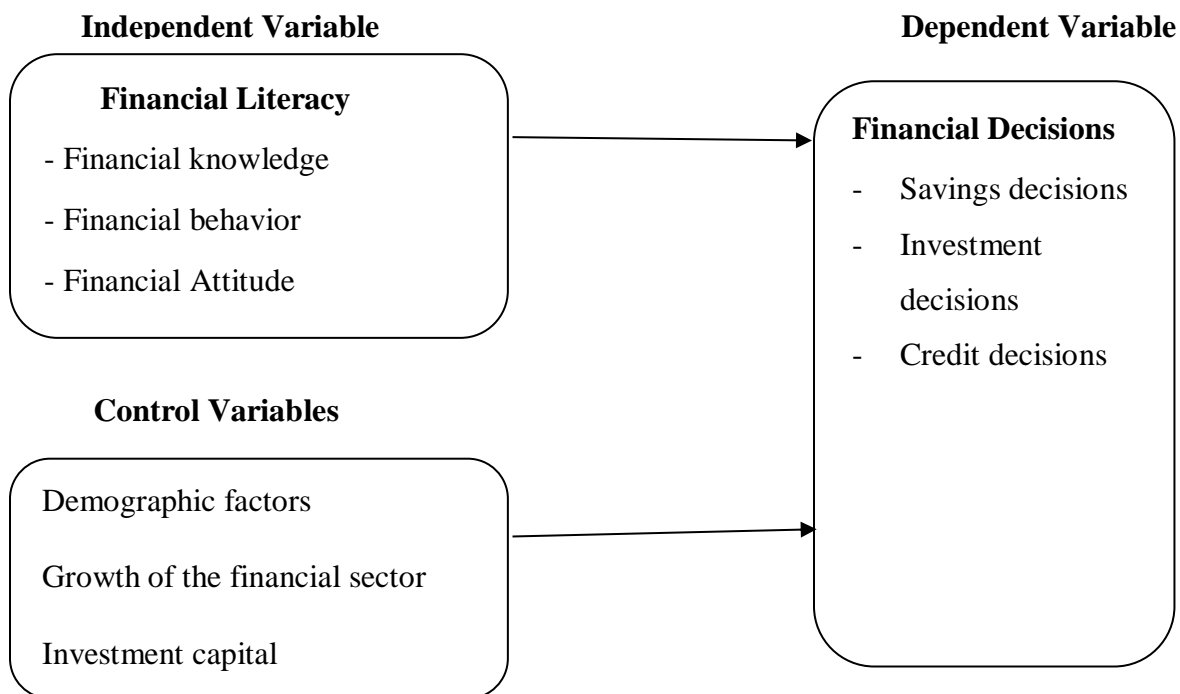


Figure 2.1 : Conceptual Framework of the Study



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter presents the research methodology adopted for the study. It entails research design, population and sample descriptions, data collection and analysis. The methodology chapter was fundamental in ensuring that the research objective about the effect of financial literacy on the financial decisions among women was determined.

#### **3.2 Research Design**

Ghuri and Gronhaug (2005) opined that research design involves the determination of the framework adopted in data collection and data analysis. The study applied descriptive research design thus providing an arena for describing the area of research, determining existing relationships and giving guidance on explaining the similarities between the data collected. The data collected on various variables was described in detailed hence the choice of the research design.

#### **3.3 Target Population**

Henry (2009) described population as collection of units such as persons, objects or items that exhibit similar characteristics. The population met the specifications of the research in a bid to address the research question. The population of the study was women within Mombasa County. According to KNBS (2019) census statistics, the population of women in Mombasa County is 598046.

### **3.4 Sampling Design**

Sampling is the process of selecting elements of the population that act as a representative for the study (Blumberg, Cooper & Schindler, 2014). Churchill (1991) argues that a sample size of 200-500 is a reliable sample in convenient sampling. The sample size was thus 200 women from the six constituencies in Mombasa County. Stratified random sampling was applied on the sample size where the stratum constituted a constituency; this ensured that data was collected in all the constituencies in Mombasa County, enhancing the generalization of the study findings. The selection of the individuals from the stratum was based on simple random sampling where 33 women were selected randomly from each of the 6 constituencies to eliminate any biasness.

### **3.5 Data Collection**

The study used primary data, where firsthand information on the variables was collected from women. Structured questionnaires were applied in the collection of the primary data. The questionnaires were dropped to the various respondents and collected back the same day by the researcher. The respondents were expected to provide information on the issues of the research concern on the 34 questionnaires delivered to each of the six constituencies in Mombasa County.

### **3.6 Data Analysis**

Normality test were determined using Shapiro-Wilk tests and multi-collinearity checked before subjecting the data to linear regression to determine the relationship between financial literacy and financial decisions.

### **3.6.1 Diagnostic Test**

Coefficient of correlation and their p-values were determined and multi-collinearity checked against the sub variables of the independent variable to test for the absence of correlation amongst the variables. All the variables had VIF values of less than 5.0 indicating absence of multi-collinearity (Ringle, Wende & Becker, 2015). Shapiro-Wilk test was used to test for normality on the sub variables. The p-values in Shapiro-Wilk were greater than 0.05 for normal distribution (Trochim, 2016). Durbin-Watson test was computed and the value was greater than 2.0 ruling out autocorrelation. Heteroscedasticity was carried out to determine how well the residuals are spread over regression results, the p-values were more than 0.05 to ruling out heteroscedasticity (Breusch, & Pagan, 1979).

### **3.6.2 Data Analysis Techniques**

The data was collected from women in Mombasa County and analyzed systematically using descriptive statistics. Regression analysis was computed to determine the effects of financial literacy on the financial decisions among women. The information from the data analysis was displayed in tables and charts ensuring that the influence between financial literacy and financial decision was established. The regression model was:

$$Y = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e$$

Whereby

Y = Financial decisions

a = Constant

X<sub>1</sub> = Financial Literacy

X<sub>2</sub> = Demographic Factors

X<sub>3</sub> = Growth of the Financial Sector

$X_4$  = Investment Capital

$X_2$ ,  $X_3$  and  $X_4$  are control variables to support the model.

$B_1$ ,  $B_2$ ,  $B_3$ , and  $B_4$  are the regression coefficients.

$e$  = error term

### **3.6.3 Test for Significance**

To test the significance of the regression model in inferential statistics, F-test was calculated. Financial literacy was regressed against the dependent variable, financial decision. F-test was determined at 95% confidence level. The p-values were less than 0.05 values implying that the results were significant for the whole population.

### **3.7 Validity and Reliability Test**

To ensure that the study findings were credible, reliability test and validity test were conducted. Reliability and validity tests were established at various levels. The subsections below discuss the tests determined.

#### **3.7.1 Reliability Test**

Reliability is the degree to which results are consistent over time and are a true representation of the total population under study (Joppe, 2000). Questionnaires are reliable, if under similar methodology the results are reproducible. According to Brink (1993) reliability tests involves establishing equivalence, stability over time and internal consistency. Reliability of the constructs and items used in the study was determined by use of Cronbach's Alpha. The value Cronbach's Alpha was 0.628. According to Hatcher (1994) reliability is high if the values of composite reliability scores are greater than 0.6.

### 3.7.2 Validity Test

Validity determines whether the research truly measures that which it was intended to measure (Trochim, 2006). Construct validity refers to how well the initial concept that is a construct is operationalized. To enhance face validity, the questionnaires were pre-tested with five respondents, then the instrument adjusted to cater for the issues raised. Content validity was used to determine whether the concepts are clear and a representation of the domain. Content validity was ensured in the collection tool through consultation with experts from literature (Hair, Money, Samuel & Page, 2007). Kaiser-Meyer-Olkin (KMO) had a value of 0.608 which is greater than 0.6 while Bartlett's Tests were significant ( $p=0.000 < 0.001$ ) confirming construct validity (Brink, 1993).

### 3.8 Operationalization of Variables

To measure the variables, operationalization into their indicators was key. Multiple indicators each with a five point Likert-scale were used for each latent construct. Table 3.1 shows how each of the latent construct operationalized. Financial literacy was operationalized by three variables; financial knowledge, financial attitude and financial behavior while financial decisions was operationalized by investment decisions, savings decisions and credit decisions.

**Table 3.1: Operationalization of Variables**

Variable	Sub-variable	Indicators	Scale	Source
Financial literacy	Financial knowledge	- Preparation of monthly budget	Nominal	Klapper, Lusardi and Oudheusden

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	- Knowledge on financial institutions		(2015); Hamnad and Mohammed (2021)
	- Management of financial plans		
	- Knowledge of financial markets		
	- Inflation rates		
	- Interest rates		
	- Basic numeracy		
Financial attitude	- Attitude towards spending	Ordinal	Ibrahim and Alquadi (2013);
	- Attitude to take risk (diversification of portfolio)		Rashid, Rsool,, Mubashir and Arif (2021)
	- Attitude towards saving		
	- Attitude towards investment		
Financial behavior	- Spending less than income	Ordinal	Rashid, Rsool,, Mubashir and
	- Saving		Arif (2021)

	- Investment		
Demographic factors	- Education level - Marital status - Age	Nominal	Allgood and Walstad, (2013); Ali et. al. (2017).
Growth of financial sector	- Use of mobile banking - Favourable policies to advance credit to certain group	Ordinal	Haq and Luqman (2014); Yacine and Mohamed (2021)
Investment capital	- Venture capital - Angel capital - Debt financing - Equity	Ordinal	Baker and Martin (2011); Yakimova (2021)
Financial decisions	- Investment decisions - Savings decisions - Credit decisions - Access to financial products and services	Ordinal	Janor et. al., (2016); Kamleitner and Kirchler (2007); Kim et. al., (2018)

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## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

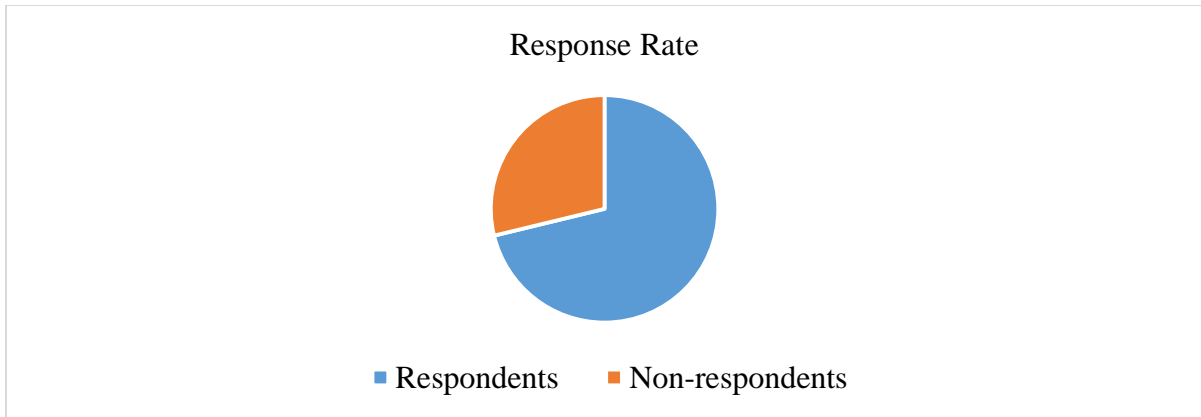
#### **4.1 Introduction**

The chapter presents the analyses conducted to test the relationships in conceptual model and reports the results of the study. The chapter describes the general information about the response rate and respondent's characteristics. The chapter also gives descriptive statistics of the variables and indicators, the findings as presented in the objectives of the study and regression analysis of the model. The chapter presents validity tests, reliability tests and tests of significance.

#### **4.2 Response Rate**

The study focused on a sample size of 200 women across Mombasa County. The study adopted stratified random sampling technique. Out of the 200 questionnaires distributed, 151 were collected back, 141 of these questionnaires were fully filled with only 10 of the questionnaires with sections that were partially filled may be due to oversight or confidentiality of the information. Some of the non-respondents cited a no-survey principle while others declined to respond to the questionnaires. The response rate was 70.5% as presented in figure 4.1.





**Figure 4.1: Pie chart on Response Rate**

### **4.3 General Information**

This section discusses general information of the respondents, which include; age, level of education, monthly earnings and marital status.

#### **4.3.1 Age**

When required to state their age, majority of the women surveyed stated that they aged between 30-39 years. 32.6% of the women who responded were aged between 40-49 years of age while 17% of the women who responded were aged between 21-30 years. 4.3% of the women who responded were 21 years and below with only 2.8% of the women surveyed aged between 51-60 years. Table 4.1 illustrates the findings.

**Table 4.1: Age of the Respondents**

	Frequency	Percent
Below 21 years	6	4.3
21-30 years	24	17.0
30-39 years	61	43.3
40-49years	46	32.6
50-59 years	4	2.8
Total	141	100.0

**4.3.2 Family's Monthly Income**

When requested to state their monthly income, 45.4% of the women who responded had monthly income in the range of KSh.0- 25,000, with 44.7% of the respondents indicating that their monthly income was between KSh.25001-50000. Only 9.9% of the women who responded stated that their monthly income was between KSh.50001-75000. None of the women who responded had an income of over 75000. Table 4.2 illustrates the findings.

**Table 4.2: Monthly income**

	Frequency	Percent (%)
KSH. 0-25000	64	45.4
KSH. 25001-50000	63	44.7
KSH. 50000-75000	14	9.9
KSH. 75001-100000	0	0
KSH. Over 100000	0	0
Total	141	100.0

### 4.3.3 Level of Education

When required to state their level of education, 34.8% of the women who respondents were high school leavers with 33.3% of the women who responded stating that they were degree holders while 24.8% of the respondents were diploma/certificate holders. 5.8% of the women who respondents were class 8 leavers. Only 1.4% of the women who responded had post-graduate education level. Table 4.3 depicts the findings.

**Table 4.3: Level of Education**

	<b>Frequency</b>	<b>Percent</b>
Primary school level	8	5.7
Secondary school level	49	34.8
Undergraduate level	47	33.3
Diploma/ certificate level	35	24.8
Postgraduate level	2	1.4
Total	141	100.0

### 4.3.4 Marital Status

When asked to state their marital status, 44% of the women who responded were married while 41.1% of the women who responded were single. 12.1% of the women who responded stated that they were separated while 2.8% of the respondents stated that they were divorced. Table 4.4 depicts the findings.

**Table 4.4: Marital Status**

	<b>Frequency</b>	<b>Percent</b>
Single	58	41.1
Married	62	44.0
Separated	17	12.1
Divorced	4	2.8
Total	141	100.0

**4.4 Reliability Tests**

The study had 5 variables; demographic factors, financial literacy, growth of financial sector, investment capital and financial decisions. The variables were sub-divided into 25 constructs. Kaiser-Meyer-Olkin Measures of sampling adequacy were assessed to test the factorability of the items. The manifest variables had KMO Measures of Sampling Adequacy of 0.608. The p-value of Bartlett's Test of Sphericity was 0.000, which is less than 0.001 indicating that it was significant. Table 4.5 depicts the findings. The value of KMO was above the threshold of 0.6 (Kaiser, 1974).

**Table 4.5: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.608
Bartlett's Test of Sphericity	Approx. Chi-Square	1179.809
	Df	351
	Sig.	.000

Table 4.6 presents Cronbach's Alpha, which was found to be 0.628 at 5% significance level indicating that the constructs were reliable since it surpasses the threshold of 0.6 (Hatcher, 1994) confirming reliability and construct validity.

**Table 4.6: Reliability Statistics**

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<b>Cronbach's Alpha Based on</b>		
<b>Cronbach's Alpha</b>	<b>Standardized Items</b>	<b>N of Items</b>
.628	.612	25

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#### **4.5: Descriptive Analysis of the Study Variables**

The women were required to specify various statements using a scale of 1 to 5 which best described their situation. The scale was as follows; 1- Strongly disagree, 2- disagree, 3- not sure, 4- agree and 5- strongly agree. From the findings on the concepts, the mean and standard deviation were determined for interpretations and generalizations.

##### **4.5.1 Financial Literacy**

Financial literacy was measured through financial knowledge, financial attitude and financial behavior with each of the variable operationalized by three indicators.

###### **4.5.1.1 Financial Knowledge**

When asked to select the correct response on the cost of debt depending on the repayment period. The correct response was 'YES' it is cheaper to repay a loan in one year rather than in 3 years. 58.2% of the women surveyed gave the correct response while 22% of the women who answered gave a wrong response 'NO'. Only 19.9% of the women who responded indicated that they did not know the response. Table 4.7 illustrates the findings.

**Table 4.7: Financial Knowledge on Cost of Debt**

	<b>Frequency</b>	<b>Percent</b>
Yes	82	58.2
No	31	22.0
I do not know	28	19.9
Total	141	100.0

When asked to select the correct response on the current information on financial interest rates, where the correct response was “YES” government has capped interest rates at 14% but banks can offer loans at less than 14%, 51.7% of the respondents gave the correct response. 27.7% of the women, who responded, stated that they did not know, while 20.6% of the respondents gave a wrong response. Table 4.8 demonstrates the findings.

**Table 4.8 : Financial Knowledge on Interest Rates**

	<b>Frequency</b>	<b>Percent</b>
Yes	73	51.7
No	29	20.6
I do not know	39	27.7
Total	141	100.0

When asked to respond on the effect of inflation on value of money, where the correct response was “value of money will be less than today due to inflation”, 51.1 % of the women who responded selected the correct response. 31.9% of the women who responded indicated that they did not know the response while 17% of the respondents gave the wrong response. Table 4.9 demonstrates the findings.

**Table 4.9: Financial Knowledge on Time Value of Money**

	<b>Frequency</b>	<b>Percent</b>
Yes	72	51.1
No	24	17.0
I do not know	45	31.9
Total	141	100.0

Majority of women who were surveyed (40.4%) answered all the three questions correctly, 38.6% of the women who responded giving one correct response for all the three questions on financial knowledge. 17% of the women surveyed did not know the response to any of the financial items while only 4.0% of the women surveyed selected two correct responses amongst the three. Table 4.10 presents the summary.

**Table 4.10: Summary of Financial Knowledge**

	<b>Frequency</b>	<b>Percent</b>
3 Correct Responses	57	40.4
2 Correct Responses	6	4.0
1 Correct Response	54	38.6
I don't know	24	17.0
Total	141	100

#### **4.5.1.2 Financial Attitude**

Financial attitude had three constructs with the indicators establishing the attitude of women surveyed on spending, risk tolerance and risk diversification. When asked to specify their financial attitude towards spending, majority of women surveyed (34.3%) disagreed that one

should not spent money as if there was no tomorrow while 25.5% of the women who responded strongly disagreed that money was made for spending and were optimistic about the future. 21.3% of the women surveyed agreed that money was made for spending and they were care free about the future while 17.7% of the women who responded were pessimistic about the future. Only 1.4% of the women who responded were indifference on whether to spend, invest or save. Table 4.13 depicts the findings. Table 4.11 depicts the findings. The mean was 2.70 while standard deviation was 1.4878.

**Table 4.11: Financial Attitude Towards Spending**

	1	2	3	4	5	Total	Mean	SD
Frequency	36	48	2	30	25	141	2.700	1.4878
Percentage	25.5%	34.3%	1.4%	21.3%	17.7%	100%		

When requested to specify their attitude towards risk diversification, 46.8% of the women who responded agreed that it is necessary to diversify risk through various investment, while 38.3% of the women surveyed strongly agreed that risk diversification is key. 10.9% of the women who responded disagreed that risk diversification was essential in investment while 2.8% of the women surveyed did not see the essence of diversifying investment. Only 1.4% of the respondents were indifference when it comes to investment and risk diversification. Table 4.12 demonstrates the findings. The average was 4.071 and standard deviation was 1.0395.

**Table 4.12 : Financial Attitude Towards Risk Diversification**

	1	2	3	4	5	Total	Mean	SD
Frequency	4	15	2	66	54	141	4.071	1.0395
Percentage	2.8%	10.9%	1.4%	46.8%	38.3%	100		



When asked to specify their financial risk tolerance, 41.8% of the women who responded strongly agreed that their financial tolerance level was low and would probably invest in a low risk investment. 29.8% of the women surveyed agreed that they had preference to low risk investment such as government bonds while 12.0% of the respondents disagreed that they preferred low risk investment with 9.2% of the women surveyed strongly disagreed that they preferred low risk investment. Only 7.1% of the respondents were indifference in their financial risk tolerance. Table 4.13 demonstrates the findings. The average was 3.8299 and standard deviation was 1.0927.

**Table 4.13: Financial Attitude Towards Risk tolerance**

	1	2	3	4	5	Total	Mean	SD
Frequency	13	17	10	42	59	141	3.8299	1.0927
Percentage	9.2%	12.0%	7.1%	29.8%	41.8%	100		

#### **4.6.1.3 Financial Behavior**

Financial behavior had three constructs with the indicators being debt management, budgeting and spending. When asked to specify their financial behavior on debt management, 48.9% of the women surveyed agreed that they usually settle their debts in good time without defaulting while 33.3% of the women who responded strongly agreed that they settle their debts on time and had never defaulted loan repayment. 12.1% of the women surveyed disagreed that they settle their debts in good time while 5% of the women who responded strongly disagreed that debt payments were promptly as they fell due. Only 0.7% of the women surveyed were not sure about their debt repayment in time. The mean was 3.936 with standard deviation being 1.1289. Table 4.14 illustrates the findings.

**Table 4.14: Financial Behavior on Debt management**

	1	2	3	4	5	Total	Mean	SD
Frequency	7	17	1	69	47	141	3.936	1.1289
Percentage	5%	12.1%	0.7%	48.9%	33.3%	100		

When requested to specify their financial behavior on budgeting, 41.8% of the women who responded agreed that they budgeted for their income every month, while 35.5% of the women who responded strongly agreed that they drew a budget on monthly basis. 14.9% of the women surveyed strongly disagreed that they budgeted for their income while 7.1% of the women who responded strongly disagreed that they budgeted for their income. Only 0.7% of the respondents were not sure whether they were budgeting for their income. Table 4.15 demonstrates the findings. The average was 3.837 and standard deviation was 1.2537.

**Table 4.15: Financial Behavior on Budgeting**

	1	2	3	4	5	Total	Mean	SD
Frequency	10	21	1	59	50	141	3.837	1.2537
Percentage	7.1%	14.9%	0.7%	41.8%	35.5%	100		

When requested to state their financial behavior on borrowing, 41.8% of the women who responded disagreed that they often borrowed finances to cater for their monthly expenditure while 31.9% of the women surveyed strongly disagreed that they would borrow to finance their monthly expenditure. 18.4% of the women who responded indicated that they often borrow to finance their monthly bills while 7.8% of the women surveyed strongly agreed that they often borrow to finance their recurrent expenditure. Table 4.16 depicts the results. The average was 2.284 and standard deviation 1.3001.

**Table 4.16: Financial Behavior on Borrowing**

	1	2	3	4	5	Total	Mean	SD
Frequency	45	59	0	26	11	141	2.284	1.3001
Percentage	31.9%	41.8%	0%	18.4%	7.8%	100%		

**4.5.2 Investment Capital**

Investment capital had two constructs bases on the source of investment; debt or savings. When required to respond on whether debt financing was the main source of investment capital, 50.4% of the women who responded strongly disagreed that their main source of investment capital was debt financing while 31.9% of the women surveyed disagreed that they relied on debt for investing. 8.5% of the women who responded agreed that their main source of investment capital was through debt financing while 7.1% of the women surveyed strongly agreed debt financing was their main source of capital. Only 2.1% of the respondents were not sure about the source of their investment. Table 4.17 demonstrates the findings. The average was 1.901 and standard deviation was 1.2265.

**Table 4.17: Investment Capital is through Debt Financing**

	1	2	3	4	5	Total	Mean	SD
Frequency	71	45	3	12	10	141	1.901	1.2265
Percentage	50.4%	31.9%	2.1%	8.5%	7.1%	100%		

When asked to indicate whether savings were the main source of their investment capital, 46.1% of the women surveyed strongly agreed that their major source of investment capital was through savings while 40.4% of the women who responded agreed that savings majorly was the source of capital. 5.7% of the women surveyed strongly disagreed that savings was the

major source of capital with the same number disagreeing. Only 2.1% of the women surveyed were not sure of their main capital source. Table 4.18 illustrates the findings. The average was 4.156 and standard deviation was 1.0973.

**Table 4.18: Investment Capital is through Savings**

	1	2	3	4	5	Total	Mean	SD
Frequency	8	8	3	57	65	141	4.156	1.0973
Percentage	5.7%	5.7%	2.1%	40.4%	46.1%	100%		

### 4.5.3 Growth of Financial Sector

Growth of financial sector had 4 constructs with the indicators being use of financial intermediation, economic growth and regulation. When asked to state whether growth of financial sector enhances savings, 58.9% of the women who responded agreed that the growth of financial sector enhances savings while 31.9% of the women who responded strongly agreed that growth of financial sector enhances their savings. 4.3% of the women who responded strongly disagreed that growth of financial sector enhances their savings while 2.8% of the women surveyed disagreed that growth of the financial sector enhances savings. Only 2.1% of the women surveyed were indifference on whether growth of the financial sector enhances their savings or not. Table 4.19 illustrates the findings. The average was 4.113 and standard deviation was 0.9110.

**Table 4.19: Financial Sector Growth Enhances Savings**

	1	2	3	4	5	Total	Mean	SD
Frequency	6	4	3	83	45	141	4.113	0.911
Percentage	4.3%	2.8%	2.1%	58.9%	31.9%	100%		

When asked to specify whether growth of financial sector encourages financial intermediation, 42.6% of the women surveyed agreed that the growth of the financial sector encourages use of cashless payment modes while 22.7% of the women surveyed disagreed that the growth of financial sector encourages use cashless modes of payments. 19.1% of the women who responded strongly agreed that the growth of financial sector encourages the use of cashless money transfers while 9.2% of the women who responded strongly disagreed that growth of financial sector encourages the use of cashless modes of money transfers. Only 6.4% of the women surveyed were indifference. Table 4.20 demonstrates the findings. The average was 3.397 while standard deviation was 1.2811.

**Table 4.20: Growth of Financial Sector Encourages Financial Intermediation**

	1	2	3	4	5	Total	Mean	SD
Frequency	13	32	9	60	27	141	3.397	1.2811
Percentage	9.2%	22.7%	6.4%	42.6%	19.1%	100%		

When required to state whether capping of interest by government at 14% has encouraged borrowing, 38.3% of the women surveyed disagreed that capping of interest rate at 14% has encouraged them to borrow, while 34.85 of the women who responded agreed that capping of interest rate at 14% had encouraged them to borrow. 14.9% of the women who responded strongly disagreed that capping of interest rate at 14% encourages borrowing while 8.5% of the women surveyed strongly agreed that capping of interest rates encourages borrowing. Only 3.5% of the respondent were not sure whether capping of interest encourages borrowing or not Table 4.21 illustrates the findings. The average was 2.837 while standard deviation was 1.2852.

**Table 4.21: Regulation of Interest Rate Encourages Borrowing**

	1	2	3	4	5	Total	Mean	SD
Frequency	21	54	5	49	12	141	2.837	1.2852
Percentage	14.9%	38.3%	3.5%	34.8%	8.5%	100%		

When requested to indicate whether increase of excise duty has discouraged the use of mobile money platforms, 36.9% of the women who responded agreed that increase in excise duty discourages the use of mobile money platforms in making transactions while 34.9% of the women who responded disagreed that increase of excise duty discourages the use of mobile money platforms. 13.5% of the women who responded strongly disagreed that increase in excise duty discourages the use of mobile money platforms in making transactions while 8.5% of the women who responded strongly agreed that increase in excise duty on mobile money transactions discourages their use. Only 7.1% of the women who responded were indifference. Table 4.22 demonstrates the results. The average was 2.929 while standard deviation was 1.2629.

**Table 4.22: Increase of Excise Duty Discourages Use of Mobile Money Platforms**

	1	2	3	4	5	Total	Mean	SD
Frequency	19	48	10	52	12	141	2.929	1.2629
Percentage	13.5%	34.9%	7.1%	36.9%	8.5%	100%		

#### 4.5.4 Financial Decisions

Financial decisions had three variables; investment decisions, with 3 constructs, savings decisions and credit decisions, both had 4 constructs giving a total of 11 constructs.

#### 4.5.4.1 Investment Decisions

When requested to specify on investment on physical assets, 50.4% of the women who responded agreed that they had investments on physical assets while 19.1% of the women who responded strongly agreed that they had invested in physical assets. 17.7% of the women who responded disagreed that they had invested in physical assets while 7.8% of the women surveyed strongly disagreeing of having any physical assets investments. Only 5% of the women who responded were not sure of any investments they have made on physical assets. Table 4.23 depicts the results. The average was 3.533 and standard deviation 1.2096.

**Table 4.23: Investment Decisions on Physical Assets**

	1	2	3	4	5	Total	Mean	SD
Frequency	11	25	7	71	27	141	3.533	1.2096
Percentage	7.8%	17.7%	5%	50.4%	19.1%	100%		

When asked to state whether they had investment on capital markets, 51.1% of the women who responded disagreed that they had investment on capital market while 27.7% of the women surveyed strongly disagreed of having any investment with capital markets. 12.8% of the women who responded agreed that they had invested with capital markets while 5.7% of the women surveyed where not sure of any investment with capital markets. Only 2.8% of the women surveyed who strongly agreed that they had investments with capital markets. Table 4.24 depicts the findings. The average was 2.121 and standard deviation 1.0452.

**Table 4.24: Investment Decisions on Capital Markets**

	1	2	3	4	5	Total	Mean	SD
Frequency	39	72	8	18	4	141	2.121	1.0452
Percentage	27.7%	51.1%	5.7%	12.8%	2.8%	100%		

When required to state whether they had investments with government on treasury bonds, 52.5% of the women who responded disagreed of having any investments on treasury bonds while 34.8% of the women who responded agreed that they had invested on treasury bonds. 6.4% of the women surveyed strongly disagreed that they had investments on treasury bonds while 3.5% of the women who responded were not sure of any investments on treasury bonds. Only 2.8% of the women surveyed who strongly agreed that they had made invested in treasury bonds. Table 4.25 illustrates the results. The mean was 2.965 while standard deviation was 0.9434.

**Table 4.25: Investment Decisions on Treasury Bonds**

	1	2	3	4	5	Total	Mean	SD
Frequency	9	74	5	49	4	141	2.695	0.9434
Percentage	6.4%	52.5%	3.5%	34.8%	2.8%	100%		

#### 4.5.4.2 Savings Decisions

When asked to respond on whether they had retirement savings plan, 39.0% of the women who responded agreed that they had retirement savings plan while 33.3% of the women who responded disagreed of having any retirement savings plan. 14.9% of the women surveyed strongly disagreed that they had retirement savings plan while 9.2% of the women who responded strongly agreed that they a retirement savings plan. Only 3.5% of the women



surveyed were not sure whether they had a retirement savings plan. Table 4.26 depicts the findings. The average was 2.943 and standard deviation 1.3026.

**Table 4.26: Retirement Savings plan**

	1	2	3	4	5	Total	Mean	SD
Frequency	21	47	5	55	13	141	2.943	1.3026
Percentage	14.9%	33.3%	3.5%	39.0%	9.2%	100%		

When requested to specify whether they had insurance savings plan, 44.7% of the women who responded agreed that they had an insurance savings policy while 31.2% of the women surveyed disagreed of having any insurance savings plan. 13.5% of the women who responded strongly disagreed of having savings through insurance policy while 9.9% of the women surveyed strongly agreed that they had an insurance savings plan. Only 0.7% of the women who responded were not sure whether they had an insurance plan. Table 4.27 illustrates the results. The average 3.064 and standard deviation 1.3050.

**Table 4.27: Insurance Savings Plan**

	1	2	3	4	5	Total	Mean	SD
Frequency	19	44	1	63	14	141	3.064	1.3050
Percentage	13.5%	31.2%	0.7%	44.7%	9.9%	100%		

When asked whether they had savings with financial institutions, 44.4% of the women who responded agreed that they saving with financial institutions while 28.4% of the women surveyed disagreed that they were saving with financial institutions. 16.3% of the women who responded strongly disagreed that they were saving with financial institutions while 7.8% of the women surveyed strongly agreed that they had savings with financial institutions. Only

2.1% of the women who responded were not sure if they were saving with financial institutions. Table 4.28 demonstrates the findings. The average was 3.00 and standard deviation was 1.3093.

**Table 4.28: Savings with Financial Institutions**

	1	2	3	4	5	Total	Mean	SD
Frequency	23	40	3	64	11	141	3.000	1.3093
Percentage	16.3%	28.4%	2.1%	44.7%	7.8%	100%		

When required to respond on whether they had savings with government through short-term treasury bills, 49.6% of the women who responded disagreed of having any savings with the government through treasury bills while 34.0% of the women surveyed strongly disagreed that they were saving with government through treasury bills. 9.2% of the women who responded agreed that they had established savings with government through treasury bills. Only 3.5% of the women surveyed strongly agreed that they were saving with government through treasury bills with a similar percentage being indifferent. Table 4.29 demonstrates the results. The average was 1.986 and standard deviation 1.0350.

**Table 4.29: Savings with Government through Treasury Bills**

	1	2	3	4	5	Total	Mean	SD
Frequency	48	70	5	13	5	141	1.986	1.0350
Percentage	34.0%	49.6%	3.5%	9.2%	3.5%	100%		

#### **4.5.4.3 Credit Decisions**

When required to state whether they had credit facilities with financial institutions, 46.1% of the women who responded agreed that they had taken credit facilities with financial institutions while 23.4% of the women surveyed disagreed of having credit facilities with financial

institutions. 19.9% of the women who responded strongly disagreed of having credit facilities with financial institution while 8.5% of the women who responded strongly agreed that they had credit facilities with financial institutions. Only 2.1% of the women who responded were not sure whether they had credit facilities with financial institutions. Table 4.30 illustrates the findings. The average was 3.00 and standard deviation was 1.3575.

**Table 4.30: Credit Facilities with Financial Institutions**

	1	2	3	4	5	Total	Mean	SD
Frequency	28	33	3	65	12	141	3.000	1.3575
Percentage	19.9%	23.4%	2.1%	46.1%	8.5%	100%		

When asked to state whether they had mortgage facilities, 56.7% of the women surveyed disagreed of having mortgages while 34.8% of the women surveyed strongly disagreed of having mortgage. 5.0% of the women who responded agreed that they had mortgages that were running while 3.5% strongly agreed that they had mortgages. Table 4.31 shows the results. The mean was 1.858 and standard deviation 0.7519.

**Table 4.31: Mortgage Facilities**

	1	2	3	4	5	Total	Mean	SD
Frequency	49	80	0	7	5	141	1.858	0.7519
Percentage	34.8%	56.7%	0%	5.0%	3.5%	100%		

When required to respond on whether they were borrowing from family and friends, 38.3% of the women surveyed disagreed that they borrowed from family and friends while 31.2% agreed that they borrowed from family and friends. 17.7% of the women who responded strongly agreed that they borrowed from family and friends while 11.3% strongly disagreed that they

borrowed from family and friends. Only 1.4% of the women who responded were not sure whether they borrowed from family and friends. Table 4.32 depicts the results. The average was 3.057 and standard deviation 1.3668.

**Table 4.32: Credit from Family and Friends**

	1	2	3	4	5	Total	Mean	SD
Frequency	16	54	2	44	25	141	3.057	1.3668
Percentage	11.3%	38.3%	1.4%	31.2%	17.7%	100%		

When required to specify their preference on the length of servicing a credit facility, 42.6% of the women who responded agreed that, they preferred long-term credit facilities while 22.7% disagreed that, they preferred long-term credit facilities. 18.4% of the women who responded strongly agreed that, they preferred long-term credit facilities while 14.9% of the women surveyed strongly disagreed that, they preferred long-term credit facilities. Only 2.1% of the respondents were indifferent on their preferences. Table 4.33 illustrates the findings. The average 3.270 and standard deviation 1.3881.

**Table 4.33: Preference for Long Term Credit Facilities**

	1	2	3	4	5	Total	Mean	SD
Frequency	21	32	2	60	26	141	3.270	1.3881
Percentage	14.9%	22.7%	1.4%	42.6%	18.4%	100%		

#### **4.6 Diagnostic Tests**

Normality tests, heteroscedasticity, multi-collinearity and autocorrelation tests were checked before the variables were subjected to regression analysis. The results of the tests are described in details in this section.

#### 4.6.1 Normality Tests

Normality tests were assessed by use of Shapiro-Wilk and Kolmogrov-Smirnov. All the variables were found to have p-values more than 0.05 in Shapiro-Wilk test implying normal distribution. Financial knowledge had p- value of 0.331, financial attitude had p-value of 0.121, financial behavior had p-value of 0.105, investment capital had p-values of 0.091 while growth of financial sector had p-value of 0.95. Table 4.34 depicts the findings.

**Table 4.34: Kolmogorov-Smirnov<sup>a</sup> and Shapiro-Wilk tests**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Demographic factors	.147	141	.200*	.957	141	.331
Financial Literacy	.265	141	.200*	.929	141	.105
Investment Capital	.078	141	.200*	.978	141	.091
Growth of financial sector	.159	141	.134	.838	141	.095

#### 4.6.2 Heteroscedasticity Test

Heteroscedasticity test was computed using Breuch-Pagan test of heteroscedasticity where the regression residuals values of the independent variables were used. The p-value was found to be 0.65 which is greater than 0.05 confirming no heteroscedasticity. Table 4.35 illustrates the findings.

**Table 4.35: Breuch-Pagan Heteroscedasticity Test**

Sum squares	Df	Mean Squares	Sig
7.703	4	1.9258	.650

### 4.6.3 Multi-collinearity Test

Table 4.36 presents multi-collinearity test. Demographic factors had VIF value of 1.051 (tolerance=0.951), financial literacy had VIF value of 1.107 (tolerance=0.904), investment capital had VIF value of 1.037 (tolerance=0.964), while growth of financial sector had VIF value of 1.173 (tolerance=0.852). All the variables had VIF values of less than 5.0 while the tolerance levels were less than 1.0 indicating absence of multi-collinearity (Ringle, Wende & Becker, 2015).

**Table 4.36: Multi-Collinearity Test**

Model	Collinearity Statistics	
	Tolerance	VIF
Demographic Factors	.951	1.051
Financial Literacy	.904	1.107
Investment Capital	.964	1.037
Growth of financial sector	.852	1.173

### 4.6.4 Autocorrelation Test

The Durbin- Watson test was determined to check for autocorrelation between the variables to be included in the model, a value of 2.531 was obtained, which is higher than threshold of 2.0 implying absence of autocorrelation. Table 4.37 illustrates the findings.

**Table 4.37: Autocorrelation Test**

Model	Durbin- Watson
1	2.531

## **4.7 Financial Literacy and Financial Decisions**

The objective of the study was to establish the effects of financial literacy on financial decisions.

### **4.7.1 Correlation Analysis**

The Spearman correlation analysis was conducted for the four variables included in the model. The findings revealed that, all the four variables that were included in the model had a significant relation with one another. Demographic factors had correlation coefficients of 0.334 with financial literacy, 0.094 with investment capital and 0.338 with financial sector growth. Financial literacy had correlation coefficients of 0.119 with investment capital and 0.192 with growth of financial sector. Investment capital had a correlation coefficient of 0.271 with growth of financial sector. Demographic factors, financial literacy, investment capital and growth of financial sector were found to have p-values of less than 0.01 implying that, they are statistically significant at 99% confidence level. Table 4.39 presents the findings.

**Table 4.38: Spearman Correlation**

		Demographic factors	Financial Literacy	Investment capital	Growth of financial sector
Demographic factors	Correlation	1.000			
	Coefficient				
	Sig. (2-tailed)	.			
	N	141			
Financial Literacy	Correlation	.334**	1.000		
	Coefficient				
	Sig. (2-tailed)	.000	.		
	N	141	141		
Investment capital	Correlation	.094**	.119**	1.000	
	Coefficient				
	Sig. (2-tailed)	.000	.000	.	
	N	141	141	141	
Growth of financial sector	Correlation	.338**	.192**	.271**	1.000
	Coefficient				
	Sig. (2-tailed)	.003	.002	.000	.
	N	141	141	141	141



## 4.7.2 Regression Analysis

The study aimed at determining the effects of financial literacy on financial decisions. Regression model, summary of the model and variance of analysis are discussed in details in this section to make interpretations and generalizations for the study.

### 4.7.2.1 Regression Model

The established equation is:

$$Y = 1.957 + 0.021X_1 + 0.105X_2 + 0.096X_3 + 0.318X_4 \dots\dots\dots \text{Equation 4.1}$$

Where Y- is the dependent variable, which is financial decisions represented by 1.957 as the Y-intercept, X<sub>1</sub> is financial literacy, X<sub>2</sub> is demographic factors, X<sub>3</sub> is investment capital, X<sub>4</sub> is growth of financial sector. The study established that, financial decisions would be at 1.957 when all the variables are zero. All the four variables; demographic factors, financial literacy, investment capital and growth of financial sector were found to have positive and significant relationship with financial decisions. An improvement of demographic factors by a unit would improve financial decision by 0.105 while an increase in financial literacy by a unit would improve financial decisions by 0.021. An improvement of investment capital by a unit would improve financial decisions by 0.096 while a growth of financial sector would improve financial decisions by 0.318. Table 4.40 illustrates the findings.

**Table 4.39: Beta-Coefficients**

Model	Unstandardized		Standardized		
	B	Std. Error	Beta	T	Sig.
1 (Constant)	1.957	.484		4.043	.000
Demographic Factors	.064	.048	.105	1.333	.005
Financial Literacy	.019	.074	.021	.255	.009
Investment Capital	.087	.071	.096	1.224	.003
Growth of financial sector	.238	.062	.318	3.808	.000

**4.7.2.2 Summary of the Model**

The calculated R at 5% significance level was 0.460 implying that, financial literacy had a positive relationship with financial decisions. The adjusted R<sup>2</sup> is coefficient of determination, predicted that there is a variance of 17.6% at 95% confidence level between financial literacy and financial decisions. The estimated standard error was 0.49859. This implies that the observed values fall on average 0.49859 from the regression line, thus a good fit for the model. Table 4.41 illustrates the findings.

**Table 4.40: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.460 <sup>a</sup>	.211	.176	.49859

**4.7.2.3 Analysis of Variance**

The independent variables had regression sum square of 8.857 while the residual sum square were 33.062 constituting to a total variance of 41.919 on financial decisions. The findings show a significant goodness of fit between the variables since the calculated F-test value (5.938) is greater than the F-critical, which is 1.562 at 95% confidence level. The strength of variation between independent variables and financial decisions was significant ( $p=0.000<0.05$ ). The results are presented in Table 4.42

**Table 4.41: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.857	6	1.476	5.938	.000 <sup>b</sup>
	Residual	33.062	133	.247		
	Total	41.919	139			

a. Dependent Variable: Financial decisions

b. Predictors: (Constant), Demographic factors, Financial Literacy, Investment capital, and growth of financial sector.

#### **4.8 Discussion of the Findings**

Majority of the women surveyed (60.3%) were aged between 30-49 years, with a few (4.3%) were aged below 21 years and none of the women surveyed was aged above 60 years. Mombasa is an urban centre with majority of her population being in the productive age. Majority of the respondents (54.6%) were mid-level income earners, this is because majority of Kenya's population is mid-level income earners. This is coherent with KNBS (2019) statistics. Only 5.7% of the respondents were Class 8 leavers, this is contributed by the efforts of government to ensure everyone has acquired basic education. Demographic factors were found to have a positive and significant effect with financial decisions. The study established that, age ( $R^2=0.71$ ,  $p=0.004$ ) and level of education ( $R^2 = 0.66$ ,  $p=0.001$ ) had a positive and significant effect on financial decisions. Younger people less than 40 years have higher propensity to spend and are faced with the challenge of future planning (Ali, et. al. 2017). Women with higher levels of education are able to manipulate basic numeracy problems and analysis of environment hence positively influencing financial decisions (Lusardi, 2012; Huston, 2010). Demographic factors were found to have a positive and significant effect on financial decisions.

Only 44.4% of the women answered correctly more than two questions on financial knowledge. With the respondents, demonstrating higher knowledge on financial debt (58.2%) while time value of money recorded the least among the women surveyed (51.1%). The findings of the results are in agreement with OECD (2014) whose findings were that; financial literacy was 42% in urban centres of developing countries.

The mean on attitude towards financial spending was 2.72 with a greater number of women surveyed (59.8%) expressing higher propensity to spend rather than investing or savings. This

is attributed to the majority of the women who responded (60.3%) being less than 40 years of age. The findings synchronize with Ali et. al (2017) who established that, the younger generation view money as a means to quench their desires. The mean on attitude towards risk diversification was 4.07 implying that, women have higher preference to the spreading of risk. The findings are in coherence with Ansari and Phatak (2017) who argued that, due to risk aversion nature of women they tend to diversify their risk. Risk tolerance among the women surveyed had a mean of 3.8299 with majority of the women who responded (41.8%) strongly agreeing that, they prefer low risk investments. The findings agree with Chavali and Mohanraj (2016) who argued that, women are risk averters and tend to invest in low risk portfolios.

Majority of the women surveyed (mean=3.936) indicated that, they managed their debts and avoided defaulting of financial credits. Debt management crisis leads to financial insecurity, thus individuals with high levels of financial literacy avoid debt management problems (Shah, 2011). Budgeting of income was a common practice (mean=3.837) among the women surveyed. Hamdan and Mohammed (2021) argued that individuals with high level of financial literacy demonstrate their knowledge through budgeting and good record keeping. Behavior on financial borrowing to finance recurrent needs had a mean of 2.284 implying that it was not a common practice.

Investment through debt financing had a mean of 1.901 while investment through savings had a mean of 4.156. The findings indicate that individuals invest both borrowed and savings (Yakimova, 2021). This implies that women prefer financing their investment through savings rather than through debt financing. This is attributed by regulation of the interest rate capping by the government with banks having stringent measures on credit facility allocations, discouraging borrowing (World Bank, 2020).

The growth of financial sector improves savings had a mean of 4.113. Capping of interest rates discourages borrowing and encourages more savings (Chari, Dovic and Kehoe, 2016). Growth of financial sector enhances financial intermediation had a mean of 3.397. The increased demand of financial assets and technological advancements encourages financial intermediation (Shaw, 1973). Regulation of interest rate encourages borrowing had a mean of 2.837 implying that capping of interest rate discourages borrowing (Chari et. al., 2016, Dominique, 2007). Increase in excise duty discourages use of mobile money transactions had a mean of 2.929, implying that it is indifferent. Mobile money transfer is secure and convenient and it is transformative hence they have a greater value (Haq & Luqman, 2014). Growth of financial sector was found to have a positive and significant effect on financial decisions. Growth of financial sector enhances supply of financial assets to the private sector and especially marginalized groups and women (Yacine & Mohamed, 2021).

Financial literacy has positive and significant effects on financial decisions. Financial literacy enables individuals make sound decisions on savings, investment and borrowing. Financial literacy encourages a sustainable financial behavior with individuals being cautious on falling into debt management crisis. Financial literacy plays a vital role in decision-making especially in the complex financial environment, which is characterized by rapid growth in financial products and services, technological changes and future uncertainties in capital markets (Sabri, 2017).

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter presents the summary of the findings, conclusions and recommendations drawn from investigating the effect of financial literacy on financial decisions among women in Mombasa County. The last section of the chapter outlines the limitations of the study and gives suggestions for further research.

#### **5.2 Summary of Findings**

The objective of the study was to examine the effect of financial literacy on financial decisions among women in Mombasa County, Kenya. Financial literacy had 3 indicators; financial knowledge, financial attitude and financial behavior. The study examined demographic factors, growth of financial sector and investment capital as control variables of financial decisions. Demographic factors were found to have a positive link with financial decisions. Age and level of education had a positive effect on financial decisions. The younger population had a higher propensity to spend than save or invest while women of 40 years and above were futuristic thus are actively involved in retirement planning through savings and investment.

Financial literacy had a positive effect on financial decisions. Financial knowledge had positive association with financial decisions, which is attributed to solving numeracy problems and proper evaluation of financial information. Financial attitude had a positive influence on financial decisions, this is associated with attitude towards risk diversification and low risk tolerance levels among women, which makes them to be cautious when making financial decisions. Financial behavior had positive effect on financial decisions, which associated with attributes of debt management behavior, budgeting and record keeping. Financial literacy had

a positive effect on financial decision since it instills the investment and savings culture among women. Financial literacy enables one to collect and evaluate information on financial environment thus making sound financial decisions.

Investment capital was found to have a positive and significant relationship with financial decisions. Availability of investment capital influences the decision on type of investment capital. Individuals make decision on whether to invest through savings or through debt financing. In case of debt financing individuals make a choice from the various sources of debt financing. The cost of borrowing and interest rates influences the investment capital choices. High cost of borrowing and capping of interest rates discourages borrowing from financial institutions while encouraging borrowing from family and friends.

Growth of financial sector had a positive and significant link with financial decisions. Capping of real interest rates discourages borrowing since financial institutions put in place stringent measures on borrowing to ensure credit is allocated to the most deserving sectors and encourages savings as individuals will be unable to easily access credit for investment thus resolving to save to raise the initial capital. Technological advancements such as use of internet banking and mobile money transfers enhances financial intermediation. Policies that increase the supply of finances to marginalized groups and women encourage borrowing among women.

### **5.3 Conclusion of the Study**

The key conclusion of the study is that financial literacy has a positive significant effect on financial decisions. Financial literacy enhances capacity to comprehend risk, analysis and evaluation of financial information and enhances financial behavior in terms of budgeting and



record keeping. Financial literacy enables one to effectively and efficiently plan for their future, thus leading to retirement planning decisions, enhanced savings and investment decisions, and avoidance of financial debt problems (OECD, 2014; Beck et al., 2007 & Atakora, 2013). Financial attitude has a positive influence on future financial planning and propensity to save (Remund, 2010; Agarwalla et al., 2013). Financial literacy influences savings behavior and overspending, with high financial literacy levels associated with improved saving behavior and reduction of overspending (Suwanaphan, 2013)

Demographic factors (age and level of education) has a positive effect on financial decisions. Women of below 40 years of age have higher propensity to spend while those above are greatly associated with future planning, investments and savings. Women are associated with risk aversion, low risk tolerance and risk diversification (Ali, et. al., 2017, Allgood & Walstad, 2013). Individuals with high levels of education make sound financial decisions compared to their counterparts with low education levels (Lusardi, 2012; García & Tessada, 2013). This is contrary with findings of Jariwala (2013) whom argued that there no association between level of education and financial decisions.

Investment capital has a positive relationship with financial decisions. Individual invests both borrowed and their own funds in a particular project. Individual are compelled to make a decision based on the risk of debt and cost of debt before settling to the source of investment capital (Yakimova, 2021; Baker & Martin 2011). Growth of financial sector had a positive effect on financial decisions. Regulation of interest rates through capping discourages borrowing and enhances saving (Chari et. al., 2016, Dominique, 2007). Policies targeting to increase supply of finances to women influences financial decisions such as borrowing, savings and investment among women (Yacine & Mohamed, 2021).

#### **5.4 Recommendations of the Study**

The study found out that financial literacy has a positive significant effect on financial decisions. Individuals ought to possess high levels of financial literacy for them to settle on sound financial decisions. Financial literacy impacts financial behavior with debt management problems associated with low financial literacy. Knowledge of income, expected expenditure, cash management and saving enables a person to manage their finances. Financial literacy levels among women was about 44% thus there is a need to empower women through financial literacy to enhance their financial decisions.

Government and other policy makers ought to enact policies that encourage growth of economy through coming with policies that encourage savings, investment, retirement planning and increment in the supply of finances to women. Favorable policies will enhance financial literacy among women leading to appropriate financial decisions thus actively participating in the growth of economy. Policies on regulation and deregulation especially on interest rates should be reviewed to encourage both borrowing and savings. Government should collaborate with other stakeholders to enhance financial literacy education among her citizens.

Financial institution and capital market managers should develop policies that encourage investments and savings among their institutions. They should also avail real time information on investment opportunities, various products and services offered to facilitate sound decision making among their customers.

The major contribution of the study to the field of knowledge, is that the study is in coherence with theoretical foundation and prior empirical analysis on effect of financial literacy on

financial decisions, citing a positive link. The study clears the air on the effect of level of education on financial decisions since it adds to the positive link between the two variables. The study adds to the existing literature on financial literacy and financial decisions.

### **5.5 Limitations of the Study**

The study focused on the effect of financial literacy on financial decisions among women in Mombasa County. The study did not investigate other intervening variables such as psychological factors, risk tolerance and socioeconomic factors. The study was only limited to savings, credit and investment decisions and overlooked other financial decisions such as retirement planning. The study was limited in scope in that it only focused on a single gender (women) and one region hence may have been influenced by religion or culture biases. The study collected data from 141 respondents, the sample size may not be large enough to eliminate the risk of research biases.

### **5.6 Suggestions of Further Study**

Though the objective of the study was achieved, effect of other variables such as psychological factors and risk tolerance should be investigated. A larger sample size should be considered for studies involving large populations. Further studies should be carried out to determine the effect of financial literacy on financial decisions on both genders. Further studies should examine the effects of financial literacy on other financial decision variables such as retirement planning decisions.

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## APPENDICES

### Appendix I: Questionnaire

Dear respondent,

You are humbly requested to respond to all the questions in the questionnaire. The information presented will be treated with ultimate confidentiality and is strictly for research. The objective of the study is to establish the Effect of Financial Literacy which is characterized by financial knowledge, financial attitude and financial behavior; investment capital and growth of financial sector on Financial Decisions characterized by investment decisions, savings decisions and credit decisions.

#### **SECTION A: Demographic Information**

Answer by indicating the appropriate box (√)

1. Please indicate your age group

- a) Under 21 years
- b) 21 - 30 years
- c) 31 - 40 years
- d) 41 -50 years
- e) 51 - 60 years

2. Please select an option that indicate your total income from all your sources

- a) Ksh. 0-25,000
- b) Ksh. 25001- 50,000
- c) Ksh. 50,001-75001
- d) Ksh, 75,001-100,000

e) Over Ksh. 100,000

3. Please select the highest level of education you have attained

a) Primary school

b) High school

c) Undergraduate degree

d) Diploma or certificate

e) Postgraduate degree

f) Other (please state) .....

4. Please select your marital status,

a) Single

b) Married

c) Separated

d) Divorced

**SECTION B: FINANCIAL LITERACY**

Please select (✓) ONE response for each question

6. Financial knowledge

a) It is cheaper to get a loan of 10000 and repay within a year rather than repay within 3 years

i. Yes

ii. No

iii. I do Not Know

b) The interest rates in Kenya are capped at 14% but banks can lend at a lower interest rate

ii. Yes

ii. No

iii. I do Not Know

c) If I saved Ksh.1000 in a bank account that offer an interest of 2% in a year, with the inflation being 0.5% per month. What would be the value of your money at the end of the year?

i. Less than the value today

ii. More than the value today

iii. I do not know

Please select (✓) ONE response for each question that clearly describe the following statement based on the scale

**[1] strongly disagree [2] disagree [3] not sure [4] agree [5] strongly agree**

7. Financial attitude.

	1	2	3	4	5
I believe that money is there to be spent, therefore I live today and allow tomorrow to take care of itself					
I believe in the statement that ‘do not put all your eggs in one basket’ thus diversification of risk is very essential in investment					
I would prefer to investing in a government bond rather than a share of a mutual fund					

8. Financial behavior

	1	2	3	4	5
I prefer paying my debts in good time, I have never defaulted paying my debt					
I always draw a budget on monthly basis before I start spending my income/ earnings					
I often find myself borrowing to finance my monthly expenditure on household items, rent and pay bills					

9. Investment Capital

	1	2	3	4	5
The decision to invest depends much on the investment capital at my disposal					
My investment capital comes mainly from debt					
Most of my investment capital comes from savings					

10. Growth of financial sector

	1	2	3	4	5
Growth of the financial sector encourages me to save					
I prefer financial intermediation in making payments rather paying in settling the payments in cash					
Capping of interest rate by government at 14% has encouragement me to borrow frequently					
The increase in excise duty from 15% to 20% has discouraged me from Mobile money platforms					

**SECTION C: FINANCIAL DECISIONS**

Please select (✓) ONE response for each question that clearly describe the following statement based on the scale

**[1] strongly disagree [2] disagree [3] not sure [4] agree [5] strongly agree**

10. Investment decisions

	1	2	3	4	5
I have maintained a balance between physical assets like land, buildings and current liabilities					
I monitor the changes in my portfolios with the Nairobi Stock Exchange market regularly					
I receive returns from the treasury bonds I have secured with Kenyan government at least once a year					

11. Savings decisions

	1	2	3	4	5
I contribute on a monthly basis towards a pension scheme to secure my retirement plan					
I have a pay monthly premiums to an insurance company with which I have acquired an insurance policy					
I hold a savings deposit account with a commercial bank/SACCO which I operate in a cycle over 3 months					
I have acquired a treasury bill with the Kenyan government which will mature in less than 10 years					

12. Credit decisions

	1	2	3	4	5
I prefer a personal loan with microfinance/ SACCO rather than commercial bank due to the lower processing fees and interest rates					
I have acquired a mortgage to help finance my residential house					
I prefer alternative forms of credit such as borrowing from family and friends					
I prefer acquiring a loan that I will repay over a long period at lower repayment amounts rather than a loan that I will pay large amounts over a short period of time					

*Thank You!*

## Appendix II: Introductory Letter



# UNIVERSITY OF NAIROBI

## FACULTY OF BUSINESS AND MANAGEMENT SCIENCES

### MOMBASA CAMPUS

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27<sup>th</sup> October, 2021

TO WHOM IT MAY CONCERN

**RE: INTRODUCTION LETTER**

This is to certify that **BENARD KIOKO MULI (REG. NO. D61/5295/2017)** is a bona fide student of the University of Nairobi, pursuing a degree in Masters of Business Administration (MBA). As part of the fulfillment of the requirement of the course, he is undertaking a study titled *“EFFECTS OF FINANCIAL LITERACY ON FINANCIAL DECISIONS AMONG WOMEN IN MOMBASA COUNTY, KENYA.”*

You have been selected as one of the respondents in the study. The purpose of this letter therefore, is to kindly request you to assist and facilitate in carrying out the study in your organization by answering the questions in the attached questionnaire.

Data and information obtained through this exercise is purely for academic purpose and will be treated with utmost confidentiality. In case of any questions or clarifications, he can be reached on 0714794419 or [bkioko2013@gmail.com](mailto:bkioko2013@gmail.com)

Your assistance and cooperation will be highly appreciated. Thank you very much in advance.

Yours Faithfully,

A handwritten signature in black ink, appearing to read 'Stephen Odock', written over a horizontal line.

Dr. Stephen Odock,  
Coordinator, Faculty of Business and Management Sciences, Mombasa Campus

