



FACTORS INFLUENCING COMMERCIAL BANK FINANCING OF WOMEN-OWNED ENTERPRISES IN NAIROBI COUNTY (KENYA)

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CHBCLA

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ABSTRACT

Compared to large corporates, small and medium enterprises (SMEs) are usually more disadvantaged and have less access to outside capital. Given their importance and contribution to the economy, lack of access to finance is likely to hurt women-owned enterprises more than their male counterparts, thus hindering their competitiveness which could result in increased failure rates. While studies in developing economies have linked low access to bank finance among women-owned enterprises to supply factors such as failure in financial markets due to asymmetric information and agency problems, poor financial management skills, lack of collateral and high interest rates among others, the situation is not necessarily similar contextually with a developing economy like Kenya, hence the need for this study. This research examined factors that influence bank financing of Women-owned Enterprises by Commercial Banks in Nairobi County, Kenya. Specifically, it examined the effect of collateral requirements, business performance, credit worthiness and financial management skills on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya using a sample size of 388 SME owners or their managers, who were sampled through stratified random sampling techniques.

From the regression analysis, the study identified financial performance as key to accessing commercial bank financing for women-owned SMEs. Additionally, it was found that accounting and budgeting business management skills were very important in increasing the chances of accessing commercial bank financing by women-owned SMEs. These findings led to the recommendation that women SME owners need to invest in acquisition of collateral assets so as to bolster their chances of securing commercial bank financing. They should consider putting in strategic efforts to enhance their performance, especially in the areas of cash flow and profits. They should also invest in building their business management skills. The study recommends that commercial banks expand the types of collateral they accept, such as savings in the bank. Furthermore, the study finds that better financial performance is crucial to accessing bank financing and advises women-owned SMEs to focus on improving their cash flow and profits. Minimizing loans from multiple lenders is also recommended to reduce the risk of default. Additionally, the study highlights the importance of accounting and budgeting skills for accessing bank financing and recommends that women business owners invest in training in these areas. The study also recommends that formal lenders engage and train women SME owners in these skills to enhance their ability to effectively utilize the funds provided to them.

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LIST OF ACRONYMS

AML	Anti-Money Laundering
CBK	Central Bank of Kenya
CFT	Combating the Financing of Terrorism
COVID	Corona Virus Disease
CRB	Credit Reference Bureau
EFA	Exploratory Factor Analysis
ETLA	<i>The Research Institute of the Finnish Economy</i>
GDP	Gross Domestic Product
H-L	Hosmer-Lemeshow test
IEG	Independent Evaluation Group
IFC	International Finance Corporation
IFRS	International Financial Reporting Standards
ILO	International Labour Organization
IMF	International Monetary Fund
ITC	International Trade Centre
KMO	Kaiser-Meyer-Olkin
KNBS	Kenya National Bureau of Statistics
Kshs.	Kenya shillings
MLE	Maximum Likelihood Estimation
MSEs	Micro and Small Enterprises
MSEA	Micro Small and Medium Enterprises Authority
MSME	Micro, Small and Medium Enterprises
NACOSTI	National Commission for Science, Technology, and Innovation
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
PAM	Percent Agreement Measure
SEM	Structural Equation Model
SMEs	Small and Medium Enterprises
UNIDO	United Nations Industrial Development Organization
US\$	United States Dollar
WBES	World Business Environment Survey

CHAPTER ONE

INTRODUCTION

1.1 Background and Context of the Study

Small and Medium Enterprises (SMEs) play a key role in national economies around the world. In the Organization for Economic Co-operation and Development (OECD) countries, for instance, SMEs are the predominant form of enterprise accounting for approximately 99% of all firms, providing the main source of employment (70% of jobs on average) and are major contributors to value creation, generating between 50% and 60% of value added on average (OECD, 2016). In emerging economies, SMEs contribute up to 45% of total employment and 33% of GDP (International Finance Corporation, IFC, 2010). In addition, SMEs have made a significant contribution to innovations, and based on the 2014 Eurostat statistics, they account for about 20% of patents which is one measure of innovation (Eurostat, 2014). SMEs are also central to efforts to achieve environmental sustainability; they play a pivotal role in the eco-industry and clean-tech markets. For example, in the United Kingdom and Finland, they represent over 90% and 70% of clean technology businesses, respectively (Carbon Trust, 2013; ETLA, 2015).

In Kenya, SMEs are the heart of the economy, representing up to 98% of the businesses (Central Bank of Kenya (CBK), 2023) and making contributions of up to 33.8% of the GDP in the year 2015, and 34% in 2019 (Kenya National Bureau of Statistics, KNBS, 2019a). Currently, SMEs contribute up to 40.2% of GDP in Kenya (Central Bank of Kenya (CBK), 2023). In addition, SMEs in Kenya are engines of employment creation, generating 80% of new jobs annually and responsible for approximately 80% of employment in the year 2016 (ITC, 2016) and currently contributes to 82% of new jobs (MSEA, 2023) thus demonstrating their importance to the country's economy.

Even so, a World Bank (2018) report documented that in emerging markets, women-owned enterprises make up 47.5% of all SMEs. However, many of them face unmet financial needs of between US\$260 billion and US\$320 billion a year, which is their biggest barrier to growth and development. Despite their notable contributions, these SMEs face lower survival rates compared to large corporate firms due to a myriad of challenges including restricted access to bank finance,

high interest rates, lack of skilled labour force, existence of technological and financial risks and severe competition from large firms, among other issues (Naradda et al., 2020).

Based on an OECD (2017a) report, the inability to access strategic resources (which is critical for SME competitiveness) is one of the top three challenges facing SMEs. Evidence from the current 2023 World Bank Enterprise Survey (WBES) established that lack of long-term bank finance was the second most important financing difficulty faced by SMEs, while high interest rates and collateral requirements were the first and third challenges, respectively. Even though many demand and supply factors have been associated with low access to finance by SMEs, an OECD report stated that supply-related factors such as financial market failures due to asymmetric information and agency problems, typically limit access to credit by SMEs and start-ups, which are often under-collateralized, have limited credit history and may lack the expertise needed to produce sophisticated financial statements (OECD, 2015). In addition, Mueller and Sensini (2021) stated that SMEs face credit discrimination from banks because of their information opacity. Most SMEs do not produce audited financial statements, and in fact, it is difficult for these enterprises to disclose their credit quality, hence, they are credit rationed by banks (Chen & Wang, 2021).

In the face of information opacity, commercial banks make loan decisions based on their own credit rating models that depend on their methodological structures. Due to the ambiguous nature of the credit rating models and information asymmetry between banks and SMEs, banks can impose not only higher prices on the loans, but also non-price related restrictions in SME lending, for example, collateral, shorter maturity and smaller loan size (Hanedar et al., 2014; Farinha & Felix, 2015). Kirschemann (2016) added that even though lenders could substitute the lack of information on SMEs with higher requirements for collateral, they would still be unwilling, in the absence of appropriate institutions, to enforce contracts. These institutions need to clearly establish which assets can be collateralized, protect creditors' rights and guarantee swift judicial procedures, among other provisions. As a result, when property rights are weak, SMEs will be more financially constrained compared to the larger firms (Kirschemann, 2016).

Even more fascinating is the concept of gender discrimination in loan markets, where enterprises owned and operated by women face difficulties in accessing bank finance due to stereotypes and gender discrimination (Rahman & Zbrankova, 2019). Financial institutions refuse to provide

women with credit, as it is difficult for banks to make a correct evaluation of their credit risk due to lack of skills, technical knowledge and previous experience (Campanella & Serino, 2019) which is a characteristic of other SMEs. A World Bank (2021) report stated that less women in Kenya (75.4%) have an account at a formal financial institution compared to men (94%) A KNBS (2016a) report indicated that even though the proportion of licensed SMEs owned by women in Kenya (31.4%) is insignificantly lower than that owned by men (48%), and majority (61%) of unlicensed SMEs are solely owned by women compared to those owned by men (6.4%), women-owned SMEs are mostly overlooked in financing compared to their male counterparts.

1.2 Statement of Research Problem

Compared to large corporates, SMEs have less access to outside capital (Bergthaler et al., 2015). A report by International Finance Corporation (IFC) (2023) indicates that 15% of SME in Europe, 23% in Latin America, 40% in developing countries and 46% in East Asia experience financing gaps. Whereas some SMEs exclude themselves because they lack profitable investment projects, others perceive that their credit application will not succeed because of the strict bank-specific demands such as collateral requirements, bookkeeping requirements, and provision of a lot of information, among others. Although access to finance is a business constraint for both men and women, evidence suggests that women face higher limitations (Mira & Kennedy, 2013).

Many commercial banks feel that the indebtedness and non-performing loans of women-owned SMEs pose a risk to their recovery and financial stability because most of them in particular, given their high leverage and lack of alternative financing, are more vulnerable to a growth slowdown or financial distress (Cingano et al., 2014). The weakness of SMEs could in turn undermine the asset quality and profitability of banks, thus constraining their ability to provide credit (International Monetary Fund, IMF, 2014). As a result, most commercial banks are sceptical about lending to SMEs.

In Kenya, the situation is no different. A report by the Central Bank of Kenya (2020) stated that while SMEs continued to be a significant source of funding for the banking industry (accounting for 57% of total customer deposits held in commercial banks), most of them are denied access to finance. As a percentage of all their gross loans, the total lending to SMEs by commercial banks

in Kenya averaged only 34.2% in 2020. A 2021 FinAccess survey for Kenya (CBK et al., 2021) stated that the gap between men and women-owned SMEs in access to finance from formal institutions has been improving since 2016 (20%), 14% in 2019 and 4.2% in the year 2021 but this percentage remains high indicating women-owned enterprises were still being overlooked in financing.

Given their importance and contribution to the economy, lack of access to finance is likely to hurt women-owned enterprises more by hindering their competitiveness which may lead to increased failures. While studies in developing economies have linked low access to bank finance among women-owned enterprises to supply factors such as failures in financial markets, due to asymmetric information and agency problems, poor financial management skills, collateral issues, and interest rates among others (Chen & Wang, 2021; Stefani & Vacca, 2015; Alesina et al., 2013), the situation is not necessarily similar contextually. Additionally, Kenyan based studies focused on supply factors and not demand factor hence a need for this study focusing on demand factors that is collateral requirements, business performance, credit worthiness and financial statement.

1.3 Research Objectives

The goal of the study was to determine the factors influencing bank financing of Women-owned Enterprises by Commercial Banks in Nairobi County, Kenya. The objectives of the study were to:

- i. Examine the effect of collateral requirements on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya.
- ii. Determine the effect of business performance on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya.
- iii. Examine the effect of credit worthiness on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya.
- iv. Examine the effect of financial management skills on commercial bank financing of Women-Owned Enterprises in Nairobi County, Kenya.

1.4 Significance of the Scope

This study looked at the credit aspect of lending in commercial banks and the policy frameworks instituted by various institutions representing the Kenyan government. Kenya Vision 2030, the long-term development blueprint that seeks to transform the country into a newly industrialized, middle-income country that provides a high quality of life to all its citizens in a clean and secure environment, recognizes the key role of small and medium-sized enterprises (SMEs) in attaining its goals (ITC, 2019). The output of the study is expected to highlight factors that influence SME lending by commercial banks and provide input into how SMEs could align to these factors to close the existing financing gap.

The output is also expected to highlight various policy gaps that should be addressed to support SMEs' access to credit and thus promote their growth and development. The improved framework can indeed influence 98% of businesses in Kenya and more than 80% of Kenyans who depend on SMEs for their livelihoods, resulting in poverty reduction, hence contributing to socio-economic development through multiplier effects. The study also recommends areas for further research.

1.5 Organization of the Study

This study comprises five main chapters. Chapter one introduced the study by giving background information, listing the problem statement, the research objective and stating the scope and justification of the study. Chapter two reviews empirical and theoretical literature on the factors influencing SME financing by commercial banks in Kenya. The third chapter details the research methodology used to conduct the study which includes model specification, data analysis techniques and research validity and reliability. Chapter four presents research findings. Chapter five provides a summary, suitable conclusions and policy recommendations, plus areas of improvement and avenues of further study

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter presents a review of literature on the study theme, which is the factors that influence bank financing of women-owned enterprises by commercial banks with a focus on collateral requirements, business performance, credit worthiness and financial management skills.

2.2 Definition of Small and Medium Enterprises

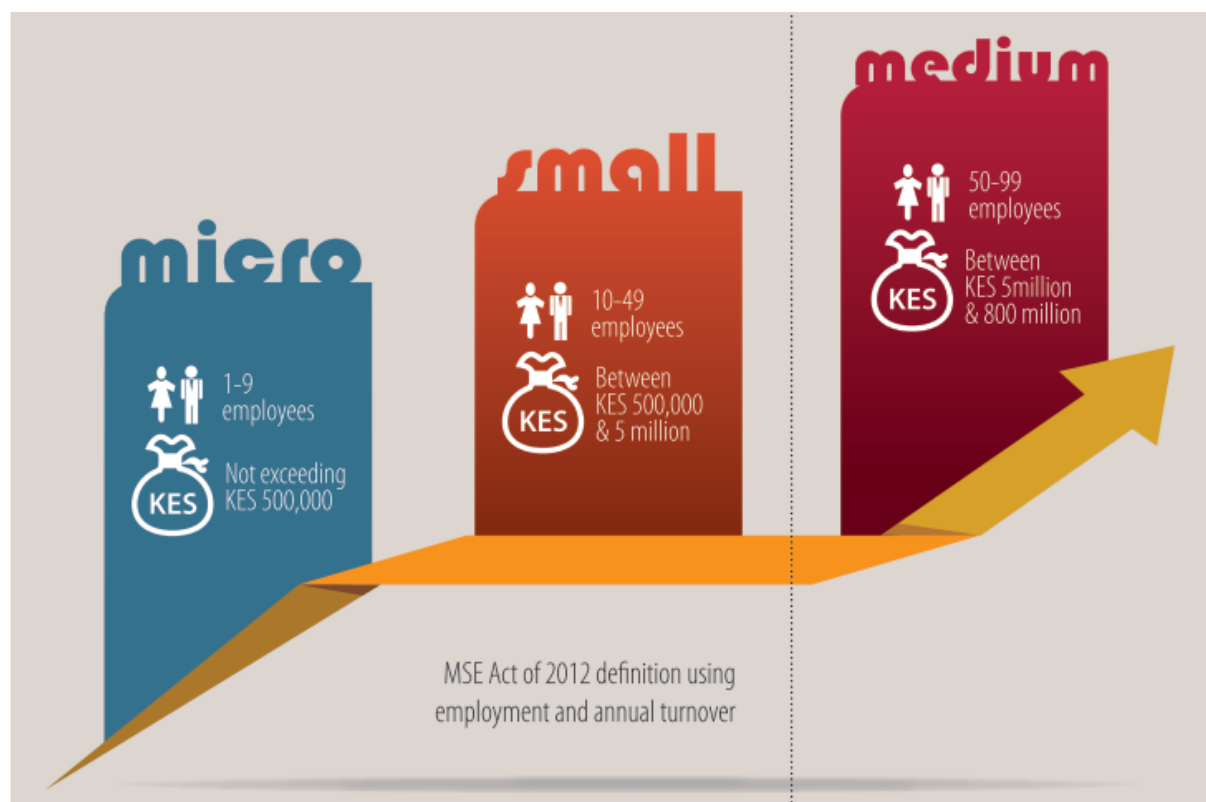
The word SME is often used to refer to small business enterprises. There's no single definition that gives a conclusive description of an SME; the definitions are normally situational. Until January 1996, the small and medium enterprises were defined as businesses whose total number of employees was less than 500 people (Savlovski, 2011). In 1996, the European Commission for the first time proposed a global framework used to define SMEs under four categories: the total number of employees, annual volume of turnover, total assets in the enterprise balance sheet and degree of independence of the enterprise or ownership. This has now been simplified to include staff headcount, annual turnover and total of the annual balance sheet (European Union, 2016).

There is, however, a quest to come up with an inclusive definition of SMEs that can be used globally. According to the European Union (2016), inconsistencies in definition could lead to uneven application of policies and thus distort competition. For instance, an enterprise in one jurisdiction might be eligible for aid, while the counterpart in another jurisdiction with the same size and structure may fail to qualify. According to Berisha & Pula (2015) differences in SME definition extend in three flanks: definitions by international institutions, definitions by national laws and by industry definitions yet finding a universal standard poses a sharp and acute critic to institutionalists, economists, academics and industrialists. According to the Independent Evaluation Group (IEG), the World Bank uses three quantitative criteria to define SMEs: number of employees, total assets and annual sales (Berisha & Pula, 2015).

In Kenya, the terms SMEs and MSEs (Micro and Small Enterprises) are used interchangeably and are defined based on the employee size; small enterprises have 10-49 employees while medium-

sized enterprises have 50-99 employees (KNBS, 2016b) The MSE Act of 2012 uses employment and annual turnover to define micro and small enterprises as presented in figure 2.1 below. This act does not define medium enterprises, which might be characterized above small enterprises with more than 50 employees and with a turnover of over Kshs. 5 million (US\$ 50,000).

Figure 2.1: Definition of SMEs based on the MSE Act of 2012



Source: MSE Act of 2012

2.3 Policy Framework on Credit Access by SMEs in Kenya

The Government of Kenya introduced Vision 2030 as a medium-term agenda to transform the country into an industrialized state by 2030. The government's third Medium-Term Plan recognizes the SME sector as a priority area for development through supporting SMEs by facilitating access to affordable credit, skills development, entrepreneurial culture and linkages to domestic and external opportunities. SMEs in Kenya encourage economic inclusion and reduce unemployment as it involves both women and youth.

Representing 98% of all businesses in Kenya, SMEs are key to the country's economy and play a central role in the economic and growth strategies. However, they face a number of challenges, most notably access to credit and existence of an enabling policy framework (ITC, 2019; Karanja et al., 2012; KNBS, 2016a; Miller & Nyauncho, 2015; Ong'olo & Awino, 2013).

In Kenya, since SMEs are considered a risky portfolio, the most common approach to extending credit is based on collateral provided, and in most cases, financial institutions take a bigger haircut (KNBS, 2016a). This approach is normally limiting for SMEs since it ties the only asset they have, thus reduces flexibility to running their operations. Above all, most SMEs do not qualify since they are start-ups with no tangible assets. Over and above providing collateral, the credit processes from commercial banks are quite hectic. It takes about 3-12 months for SMEs to access financing and this often affects the business cycle of the enterprises.

The evolution of government strategies on SMEs can be traced back to the ILO report of 1972 on Employment, Income and Equity in Kenya which recognized the SME sector as an important sector for creating income and employment for the country's population (Ong'olo & Awino, 2013). Since then, several attempts have been made to formulate policies supporting SMEs in Kenya. The existing policies have however, not been issue-specific. For instance, the country has not put in place policies to address the credit issues faced by SMEs. Policy and business frameworks that include developing the trade support ecosystem and capacity building at the firm level that aim to help Kenyan SMEs become more competitive – nationally, regionally and globally – should also be put in place. New strategies and supporting policy frameworks to discourage collateral-oriented lending and promote other ways of accessing credit should be developed. A credit guarantee scheme is one of the approaches being adopted in other countries which can be modelled along the Credit Guarantee Trust of India that was set up to support Micro, Small & Medium Enterprises (MSMEs) without requisite collateral (KNBS, 2016a). Such frameworks require a well-established institution to oversee the implementation of the respective legislations.

2.4 The Kenyan Banking System

The banking sector in Kenya comprises the Central Bank of Kenya (CBK), commercial banks, on-banking institutions and foreign exchange bureaus. The commercial banks are regulated and

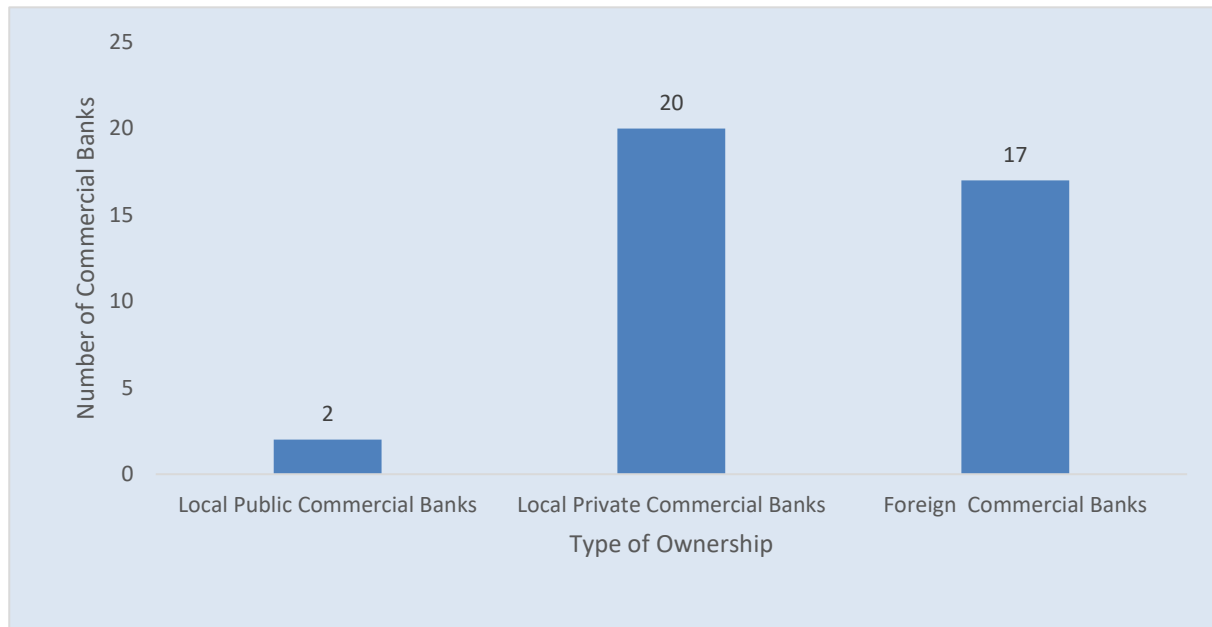
supervised by CBK with the guide of a supervisory framework which basically provides cybersecurity control measures, enforces the international monitoring framework such as IFRS 9 requirements, and the anti-money laundering framework, hence preventing the financing of terrorism (AML/CFT) controls (CBK, 2017).

Further, CBK together with other regulatory authorities supervises mortgage finance companies, microfinance banks, representative offices of foreign banks, foreign exchange bureaus, money remittance providers and credit reference bureaus (Financial Sector Regulators Forum, 2018; Cytonn, 2018). Accordingly, the banks in Kenya operate under the guidelines of the Kenyan Constitution Act no. 488 for banking, and the Central Bank of Kenya Act 491 (Momanyi, 2018). The Licensing and Regulatory Act for commercial banks and the mortgage finance institutions is applied to both institutions in accordance with the Banking Act of Kenya.

The major objective for supervision is to ensure that the banking sector is stable and resilient enough to counter challenges experienced in the volatile economy in the country (CBK, 2017). Accordingly, the statutory objects of the CBK Act (Cap 491) promote financial standing through maintaining sound management in the banking sector. Thus, the Central Bank ensures that every licensed financial institution works under strict minimum financial standing, hence ascertaining the banking institutions' effectiveness while identifying, measuring, monitoring and controlling any potential foreseen dangers.

The total number of operating commercial banks in Kenya stands at 39. This does not include banks under statutory management and receivership (CBK, 2021). As at 31st December 2021, there were 20 operating local private commercial banks, 2 operating local public commercial banks and 17 foreign-owned operating commercial banks (Figure 2.2).

Figure 2.2: Ownership of commercial banks in Kenya



The classification of commercial banks in Kenya follows three categories determined by the weighted composite index from Tier One, Tier Two and Tier Three. These comprise the net assets or the book value of shareholders, customer deposits, capital and reserves, plus profit before tax, as shown in Table 2.1.

Table 2.1: Classification of commercial banks

Group	Number of Banks	Total Net Assets (Kshs. Billions)	Market Share (%)	Customer Deposits (Kshs. Billions)	Capital and Reserves (Kshs. Billions)	Profit Before Tax (Kshs. Billions)
Large	9	4,508	74.76%	3,387	667	171
Medium	9	968	16.41%	781	147	24
Small	21	546	8.82%	394	80	2
Total	39	6,022	100%	4,562	894	197

Charterhouse Bank Ltd. under statutory management and Imperial Bank Ltd. & Chase Bank (K) Ltd. under receivership have been excluded.

Source: CBK (2021)

In the year 2021, the largest proportion of the banking industry gross loans and advances were channelled to the personal and household, trade, manufacturing and real estate sectors. In total, these four economic sectors accounted for 73.79% of gross loans in December 2021, as indicated in Table 2.2. Personal and household, trade and the agricultural sectors accounted for the highest number of loan accounts with a total of 98.95%. Trade, real estate, manufacturing and personal and household sectors accounted for the highest value of non-performing loans by registering 68.62%. This was mainly due to delayed payments from public and private sectors, slow uptake of housing units and challenges brought about by the COVID-19 pandemic. The concentration of non-performing loans was mainly in the trade, real estate, manufacturing and personal and household sectors as at December 2021.

Table 2.2: Sectoral distribution of loan accounts, gross and non-performing loans (2021)

	No. of Loan A/Cs	% of Total	Gross Loans Ksh. Million	% of Total	Gross NPLs Ksh. Million	% of Total
Agriculture	123,172	0.9	106,200.7	3.3	19,221.9	4.2
Manufacturing	24,114	0.2	466,426.6	14.3	74,646.8	16.2
Building and construction	13,465	0.1	121,174.5	3.7	33,730.6	7.3
Mining and Quarrying	1,783	0.0	25,760.1	0.8	2,468.4	0.5
Energy and water	3,428	0.0	120,380.2	3.7	16,473.0	3.6
Trade	300,231	2.3	574,525.3	17.6	100,107.5	21.8
Tourism, Restaurant and Hotels	7,050	0.1	108,895.9	3.3	24,373.6	5.3
Transport and Communication	44,542	0.3	252,367.1	7.8	42,500.2	9.2
Real Estate	29,937	0.2	458,534.2	14.1	74,932.3	16.3
Financial Services	11,925	0.1	118,444.4	3.6	5,565.0	1.2
Personal/Household	12,457,180	95.7	902,720.0	27.7	65,989.2	14.3
Total	13,016,827	100	3,255,429.0	100.0	460,008.5	100.

Source: CBK (2021)

2.5 Theoretical Framework

Various theories, as noted by Thuku (2017), exist in explaining the bank's lending behaviour, SMEs borrowing behaviour as well as the choice of financing options used by SMEs that have eventually created the financing gap experienced today. This study is anchored on the Pecking Order Theory, Financial Intermediation Theory and Credit Rationing Theory to explain the factors that determine access to bank financing by women-owned SMEs in Kenya.

2.5.1 Pecking Order Theory

According to the Pecking Order Theory by Myers and Majluf (1984), firms don't have predetermined or optimum debt to equity ratio due to information asymmetry. Thus, they adopt a hierarchical order of financing preferences where they prefer internal financing to external financing. In cases where it is necessary to seek external financing, firms first seek debt funding ahead of equity financing which is only issued as a last resort. The problem of information asymmetry arises when managers have better knowledge about the value of their firms than the rest of the market does. One of the aspects of the Pecking Order Theory implies that when it comes

to profitable firms, they would always prefer internal financing rather than taking up new debt or equity, even though debt is considered cheaper than equity within certain proportions (Myers, 1977).

The theory is relevant to this study in two ways. First, it has been adopted to explain the financing decisions of women-owned SMEs in prioritizing internal over bank financing. Studies have indicated that as opposed to seeking bank financing, most SMEs owned by women prefer financing through their own capital and savings, internal funds or getting capital from friends (Beck & Demirgüç-Kunt, 2006; Mueller & Sensini, 2021).

Therefore, the Pecking Order is internal funds over bank financing. Second, the study explains the role of better financial performance measured by profits in determining access to external finance. The theory explains and links a firm's business performance in terms of profits to the chances of accessing credit, and argues that for commercial banks, better performance is linked to higher chances of issuing finance. However, in the case of SMEs, this is contradictory to the Pecking Order perspective which documents that most profitable firms prefer internal to external financing.

2.5.2 Financial Intermediation Theory

Proposed by Pyle (1971), Financial intermediation theory has been adopted in this study to inform awareness and knowledge in giving out credit by financial institutions. The theory argues that intermediaries play a significant role in ensuring that there is a steady flow of funds between the surplus and deficit units.

Scholtens and Van Wensveen (2000) point out that these financial intermediaries arise due to the existence of market imperfections. Numerous markets are normally marred with information asymmetries between buyers and sellers, and this challenge is particularly rampant in the financial market. Borrowers normally understand the state of their collateral, seriousness, and the moral integrity to meet the loan repayments than lenders do. Conversely, entrepreneurs have inside information concerning projects they are seeking financing for; however, lenders may not have these internal details hence they have to look for the information through assessment of a borrower's credit worthiness.

2.5.3 Credit Rationing Theory

The theory was proposed by Stiglitz and Weiss (1981) to give an insight into how information asymmetry can bring about credit constraints as well as the need for collateral in an information asymmetry environment. Mazanai and Fatoki (2012) explained that asymmetric information led to credit rationing conditions by modifying the risk-return distribution; this fact encouraged banks to reject the advancing finance for investments and produced divergence between finance demand and supply. The theory, therefore, plays a role in explaining the need for assessment of credit worthiness of women-owned SMEs before advancing credit in order to unmask the information asymmetry. The theory also explains why collateral is important in minimizing credit risk of the women borrowers due to information asymmetry.

According to Stiglitz & Weiss (1981), most financial institutions have the ability to efficiently screen and monitor their clients based on the crucial private information obtained through screening and information of bank account holders, as well as documents on the firm's receipts or expenditures which can be traced. However, the relationship between the bank and borrowers is not always perfect since there exists information asymmetries between them. Therefore, interest rates alone cannot be relied upon to clear the credit market, hence the need for other stricter requirements such as collaterals (Fatoki & Smit, 2011).

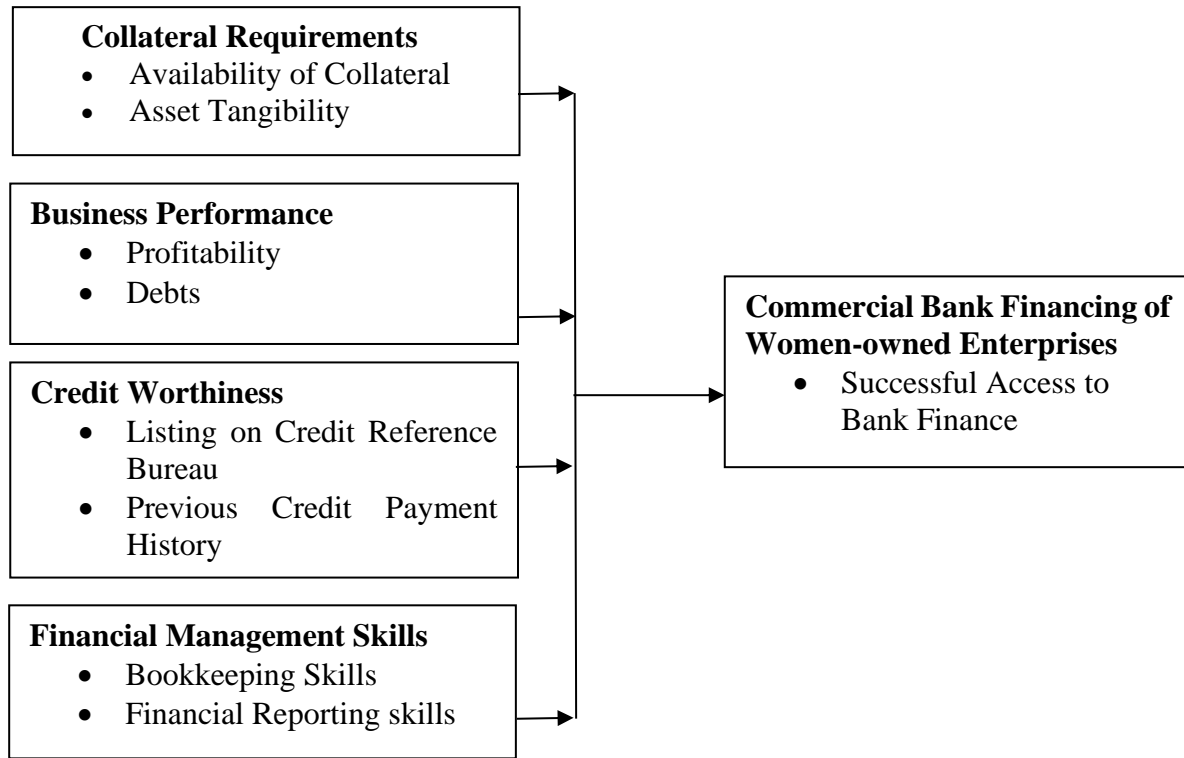
Stiglitz and Weiss (1992) cautioned that imposing many collateral requirements on borrowers reduces their willingness to undertake risky investments and thus increasing returns for banks. However, such undertakings may have adverse effects on a different mix of borrowers even if they had similar utility functions and were presented with the same investment opportunities. This is because wealthier individuals would be willing to put up more collateral and would undertake riskier projects than would less wealthy individuals if there was decreasing absolute risk aversion.

2.6 Conceptual Framework

The conceptual framework is designed to create a hypothesis abstract in order to guard the results of the study against being generalized beyond the specific conditions of a research. This study derived its conceptual framework based on empirical reviews of the supply side factors affecting access to bank finance by SMEs. Focus on the selected predictor variables is motivated by that of

various scholars such as Chen and Wang (2021), Stefani and Vacca (2015) and Alesina et al. (2013) who linked demand side factors to be stronger determinants of SMEs' access to finance. Figure 2.3 presents the study's conceptual framework.

Figure 2.3: Conceptual framework



Independent variable

Dependent variable

2.7 Empirical Literature

Several studies have focused on SMEs and bank financing due to the extreme importance of SMEs to world economies (Lee et al., 2015; Hanedar et al., 2014; Belas & Sopkova, 2016). An increasing number of studies are also narrowing down on women-owned SMEs. This has been reflected in various studies that indicate that women own and operate around one-third of all businesses in the formal sector, and they represent most businesses in the informal sector (World Bank, 2007).

Women's productive activity empowers them economically and enables them to contribute more to overall development. Whether they are involved in small- and medium-scale activities in the informal or formal sector, women's entrepreneurial activities are not only a means for economic survival, but also have a positive social repercussion for the women themselves and their social environment (UNIDO, 2001). Despite the remarkable reports, the reality in many African and transition economies is that female entrepreneurs consistently struggle and remain dormant (Chowdhury, Yeasmin & Ahmed, 2018), for reasons mainly linked to access to bank finance.

2.7.1 Collateral Requirements and Bank Financing of Women-owned Enterprises

Studies have linked collateral requirements and women-owned SMEs' access to bank finance across the world. The collateral requirement in a loan contract is a conventional way of reducing credit risk to the borrower. Due to information asymmetry in SME lending, commercial banks face difficulties in pricing the loans and lending decisions leading to credit rationing (Chowdhury, Yeasmin & Ahmed, 2018). Hence, to prove better credit quality to banks, firms usually pledge collateral and by doing so, they can reduce credit rationing. Research also shows that collateral is a positive signal for banks to reduce adverse selection and moral hazard as it is less likely that poor quality borrowers will pledge collateral. Loan defaults may cause the poor-quality borrowers to lose control over the asset, hence they have less incentive to provide collateral (Ghimire & Abo, 2013).

Galli, Mascia, and Rossi (2020) used a cross-national sample of European small and medium-sized firms (SMEs) to assess the possibility of gender biases influencing company behavior in requesting and securing bank loans. The study proved that there is gender bias in the credit markets during the economic upswing, with women-led SMEs facing discrimination in getting access to finance.

Ghosh, Ghosh and Chowdhury (2018) highlighted the factors that hinder women entrepreneurs' access to institutional finance and established that collateral dispute and lengthy processes, suspicion, preconception and conservative attitude of employees plus complicated loan processing limits women entrepreneurs' access to institutional finance. In their interrogation of the determinants of SME financing, Rahman, Rahman and Belas (2017) while collecting evidence from three central European countries, that is, Czech Republic, Slovak Republic and Hungary, indicated that micro firms and firms owned and operated by women were experiencing a shortage

of credit advanced by banks. It was established that there exists a positive relationship between the pledge of collateral and access to finance.

Stefani and Vacca (2015) in the context of Germany, Italy, France and Spain found that women were less motivated to access loans from banks since they were afraid that their applications might be rejected. Hence, they were more interested in accessing credit from family members, friends and relatives. The research also showed that women-owned firms mainly operate in the service and retail sectors and as a result, do not have sufficient collateral and are thus credit rationed.

In Nigeria, Adesua-Lincoln (2011) while assessing Nigerian female entrepreneurs' access to finance for business start-ups and growth, revealed that women entrepreneurs are particularly constrained by their weak financial base and lack of collateral. Many of the women in the study resorted to internal sources of finance for their start-ups and working capital. Locally, a study by Karanja, Mwangi and Nyakarimi (2014) on analysis of factors influencing access to credit services by women entrepreneurs in Kenya indicated that collateral requirements greatly hindered them from accessing bank credit.

2.7.2 Business Performance and Bank Financing of Women-Owned Enterprises

Other studies have linked business characteristics such as financial performance to credit access. Belluchi et al., (2010) argued that business performance measured in terms of financial statements could be an indication of the health of the entity. Financial statements are analysed as part of the underwriting process for larger accounts. Previous research shows that a business' financial performance information is one of the primary measures used to assess the capacity of a business to effect payment of credit (Collis et al., 2016). Although the generation and effective use of financial information is essential to accessing funds from external sources, loan officers tend to use full financial statements rather than relying on cash flow information alone (Belluchi et al., 2010).

Metu and Nwogwugwu (2024) used both qualitative and quantitative approaches to collect data in order to identify the obstacles that female micro entrepreneurs in Anambra state, Nigeria faced while trying to get financing. Using a logit regression model based on binary choice, which characterizes the likelihood that female micro entrepreneurs will choose between two mutually

exclusive options (obtaining or refusing microcredit), the study finds that the primary obstacles preventing women from obtaining financing are information asymmetry, lack of collateral, fear of default, and difficulty obtaining guarantors.

A study of entrepreneurs and bank managers in Italy conducted by Howorth and Moro (2006) found that a bank's lending decision is often based on the evaluation of the customer's financial statements and/or the provision of collateral and/or a credit rating score. These three technologies are grounded on hard facts and available public information. According to Mordi et al. (2014), borrowers' observable peculiarities, plus a firm's characteristics such as financial performance and loan features can influence credit rationing. Chandrayanti, Nidar, Mulyana and Anwar (2019) empirically employed the Structural Equation Model (SEM) to examine the influence of firm characteristics and business performance on credit accessibility by small businesses in West Sumatera of Indonesia. Using business performance as a mediating variable, the study showed that firms' characteristics exert significant influence on credit access through improved business performance.

A study by Muravyev et al. (2009) also found some financing difficulties for women-based firms. It was established that women were credit rationed not only due to their business characteristics, but also because of their individual characteristics, such as lack of education, experience and less family support. A similar study by Belluchi et al. (2010) in the context of Italian women-based SMEs noted that firms owned and operated by female entrepreneurs faced stricter credit conditions from banks, for example lower credit limits, higher collateral requirement, and interest rates on their loan contract due to their unstable financial performance.

Regionally, Abor and Biekpe (2007) explored the factors which influence bank financing among Ghanaian SMEs. Using the panel regression estimation model, it was established that profitability of the firm is negatively related to the bank debt ratio. In Kenya, a study by Mira & Kennedy (2013) established the challenges facing accessibility of credit facilities among women-owned enterprises in Nairobi's central business district. It was established that lack of collateral, legislation status of the business, lack of financial track record, poor business performance and lack of experience in financial management hinders women entrepreneurs from accessing credit facilities from financial institutions.

2.7.3 Credit Worthiness and Bank Financing of Women-owned Enterprises

SMEs' credit worthiness established through credit scoring is another important factor in determining access to bank finance (Wilner, 2007). Credit scoring and similar quantitative techniques have long been a part of the underwriting process used by credit managers to determine the credit worthiness of businesses. Credit scoring enables financial institutions to assess a borrower's ability to repay loans on time. Financial institutions often choose the safer side and deny credit to risky firms to avoid pecuniary loss (Zhang et al., 2016).

Compared to large corporations, SMEs are significantly disadvantaged regarding financial data organization and planning (Batsaikhan, 2015); it is difficult to predict defaults when sufficient financial data is unavailable. Therefore, financial institutions frequently rely on relationship-based lending to SMEs (Hasumi & Hirata, 2014) as it is often difficult to assess their credit risk due to their unorganized financial operating systems. As a result, SMEs face challenges in obtaining credit from financial institutions (Angilella & Mazzù, 2015).

Dutta and Mallick (2023) investigated the perceived limitations of majority-female owned Indian enterprises using data from the World Bank Enterprise Survey (WBES) for Indian firms. Research has shown that companies with a majority female ownership face more barriers to financing than companies with a minority or zero female ownership. According to gender congruity and signalling theories, the results suggest that majority-female owned firms should negotiate harder for financing access because they need to send a positive signal to investors who may have stereotyped and gendered beliefs about the abilities of entrepreneurs. These factors include business inexperience, weaker networking, and lender perceptions.

In their quest to find out why female small business owners in the United States were less likely to apply for bank loans when compared to their male counterparts, a study by Mijid (2014) aligned this trend to among other factors, the credit scoring system which on average, placed women borrowers with a lower rating compared to men as a result of various factors. Some of the factors included repayment history and delayed payments.

Locally, a study by Gangata and Matavire (2013) on the challenges facing SMEs in accessing finance from financial institutions in Kenya through a survey indicated that most SMEs in Kenya

failed to meet the set lending requirements especially on credit worthiness since most owners were listed by credit rating agencies as defaulters, had poor repayment histories and high default rates. Karanja, Mwangi and Nyakarimi (2014) similarly investigated factors that influenced access to credit among women entrepreneurs in Isiolo town (Kenya) and through Chi-Square, credit worthiness and credit rating played a significant role in inversely affecting credit access.

2.7.4 Financial Management Skills and Bank Financing of Women-owned Enterprises

An OECD (2017b) report on management of SMEs acknowledged that indeed SMEs experienced challenges in business management and this has proved to be difficult to overcome. SME owners are often managers of their enterprises and most of them have no formal qualifications in management and leadership (Ahmad & Ahmad, 2018). Although most of them understand the concepts of their business goals and objectives, they may not necessarily make good managers. Even so, Hussain, Salia and Karim (2018) found that most owners were resistant to advancing their management skills through training programs that aim to enlighten them on the importance of good management, while others were reluctant to hire qualified and skilled or independent managers, which hinders the ability of SMEs to grow, or at times, survive.

Linking business management skills to credit access, Ogubazghi and Muturi (2014) found that lack of appropriate financial skills hinders proper and critical financial planning, often leading to bankruptcy; this was a bad signal to bank lenders. Abanis et al. (2013) on the other hand, established that an enterprise with a good business plan gives details on the operational structure of the SME, summarizes the organizational structure and provides industry analysis, product descriptions and financials which greatly attracts lenders. Good business planning helps in decision-making, as it provides guidelines on any strategies to be adopted. This makes it easy for lenders to make financing decisions.

Research by Kitching et al. (2011), which included interviews with banks, commercial credit rating agencies and credit insurance companies confirmed that book-keeping skills were important in determining access to bank finance. The study established that abbreviated accounts offer limited insights into the financial performance and position of a company, and that more information is needed to assess credit risk. It is likely that directors of small companies are aware of this because some file voluntary full accounts that have been audited on a non-mandatory basis to improve their

credit rating. In another study in the United Kingdom, Lennox & Pittman (2011) provided evidence that low-risk companies attract upgrades to their credit rating when they signal favourable borrowing characteristics by choosing voluntary audits.

Seeking evidence from Libya's SMEs, Zarook, Rahman and Khanam (2013) linked business management skills and access to finance confirming that management's experience and education levels have significant positive effects on access to finance. In contrast, business planning and political connection have no significant effect regarding access to finance. In another regional study conducted in Nigeria, Fatoki and Asah (2011) found that managerial skills, experience and education levels influenced the management capability of the entrepreneur to run an SME and that lack of these competencies largely accounted for failures in firms, as well as access to finance. In Kenya, a study by Thuku (2017) established that SMEs with adequate book-keeping records have easier access to credit. Furthermore, those with audited financial statements and collateral had a higher chance of their loans being approved.

2.8 Summary of Research Gaps

Some of the reviewed studies were conducted in contexts outside Kenya hence their findings cannot be generalized into a Kenyan setting due to contextual differences. The study by Rahman, Rahman and Belas (2017) focused on three European countries, that is, Czech Republic, Slovak Republic and Hungary; Stefani and Vacca (2015) focused on Germany, Italy, France and Spain while Belluchi et al. (2010) focused on Italy. Regionally, Adesua-Lincoln (2011) focused on Nigerian female entrepreneurs while Abor and Biekpe (2007) focused on Ghanaian SMEs. Even though all the above studies provided evidence that women owned SMEs struggled to access finance, they were conducted in varied contexts hence their findings cannot be generalized to a Kenyan setting considering differences in the SME's operational environment and policies.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section presents the research methodology that has been adopted in achieving the study objectives. In the chapter, there is a description of the research philosophy, research design and description of the unit of analysis and observations, sampling techniques, description of the data collection tool together with a pilot study, as well as data analysis techniques, significance of the study, constraints, and organization of the research.

3.2 Research Philosophy and Approach

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed and used (Snyder, 2019). Based on the concept of the study, the study opted for a positivism research philosophy. It systematizes the knowledge generation process with the help of quantification, which is essential to enhance precision in the description of parameters and the discernment of the relationship among them (Kumar, 2018). Positivism seeks facts of social phenomena with little regard for the subjective status of individuals. Therefore, the study adopted a positivism approach because of the need to be objective.

3.3 Research Design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims at combining relevance of the research purpose with affordability of the research process (Pandey & Pandey, 2015). Since this study was quantitative in seeking to establish relationships between the study phenomena, a correlational research design which is suitable in investigating relationships between variables without the researcher controlling or manipulating any of them (Dzwigol, 2018) was adopted. According to Nayak and Singh (2021), a correlational research design is suitable in reflecting the strength and/or direction of the relationship between two (or more) variables and is suitable when a study seeks to use inferential analysis techniques involving correlation or regression analyses.

3.4 Target Population

A population is the total collection of all the elements about which the study wishes to make some inference (Nayak & Singh, 2021). The unit of analysis in the study was women-owned enterprises operating in Nairobi County, Kenya. The choice of Nairobi County was justified because of two reasons. First, the county hosts the largest number of women-owned enterprises in Kenya compared to any other county. According to the Micro, Small & Medium Enterprises (MSMEs) Survey Report of 2021 conducted by the Kenya Bankers Association, 59.1% of the MSMEs are concentrated in Nairobi County. Focusing the study in this county was therefore logical in enhancing access to these SMEs.

Second, the study focused on the county because it hosts the highest number of bank branches based on the 2021 report by CBK. According to CBK (2021), Nairobi County has a total of 564 bank branches, which is equivalent to 40% of the total number of branches (1,459) across the country. Bank branch density is linked to higher chances of financial accessibility, which increases the probability of seeking credit from these facilities. Having eliminated the geographical bias in seeking credit, a focus on Nairobi County is logical.

The target population for this study were women-owned small and medium enterprises based in Nairobi County, Kenya. According to the Micro Small and Medium Enterprises Authority (MSEA) (2021), there are a total of 43,432 SMEs licensed in Nairobi County, excluding the unlicensed ones, and out of these, 31.4% (13,648) are women-owned. The SMEs are distributed across the 17 sub-counties in Nairobi County as shown in Table 3.1. The unit of observation was the SME owner. In cases where SMEs had more than one owner, only one of them was randomly sampled. In cases where the SME owners were not available, the managers of these SMEs owned by women were considered to respond on behalf of the owners.

Table 3.1: Target population

Sub-County	Population of Women-owned SMEs	Percentage
Starehe	1,773	13%
Kamukunji	2,046	15%
Kasarani	682	5%
Roysambu	1,091	8%
Ruaraka	409	3%
Makadara	546	4%
Embakasi South	818	6%
Embakasi North	546	4%
Embakasi Central	546	4%
Embakasi East	818	6%
Embakasi West	409	3%
Dagorreti North	273	2%
Dagorreti South	682	5%
Lang'ata	682	5%
Westlands	955	7%
Kibra	546	4%
Mathare	818	6%
Total	13,638	100%

Source: MSEA (2021)

3.5 Sampling Techniques

A sampling technique involves a procedure used to obtain a portion of the population from the target population which is believed to have the characteristics of the population (Nayak and Singh, 2021). Sampling is important in research because it enables the researcher to minimize costs since only a portion of the population is involved. Mackey and Gass (2015) argue that if a target population is big (greater than 200), a formula can be used to determine the sample size. If the target population is finite and known, then Yamane's (1967) formula has been recommended by Nayak and Singh (2021). Based on this analogy, this study adopted Yamane's (1967) formula shown below to determine the sample size.

$$n = \frac{N}{1 + N\varepsilon^2}$$

Where:

n = sample size

N = Population of women-owned SMEs in Nairobi County (13,638)

ε = error term set at 5%

Substituting the values gave a sample size of 388 women-owned SMEs. The 388 women-owned SMEs were then clustered into each of the 17 sub-counties through proportionate sampling procedures as presented in Table 3.2.

Table 3.2: Sample size distribution

Sub-County	Population of SMEs	Proportionate Sample Size	Percentage
Starehe	1,773	50	13%
Kamukunji	2,046	58	15%
Kasarani	682	19	5%
Roysambu	1,091	31	8%
Ruaraka	409	12	3%
Makadara	546	16	4%
Embakasi South	818	23	6%
Embakasi North	546	16	4%
Embakasi Central	546	16	4%
Embakasi East	818	23	6%
Embakasi West	409	12	3%
Dagorreti North	273	8	2%
Dagorreti South	682	19	5%
Langata	682	19	5%
Westlands	955	27	7%
Kibra	546	16	4%
Mathare	818	23	6%
Total	13,638	388	100%

After clustering, the sample size in each sub-county was sampled through random sampling procedures where the women-owned SMEs were sampled randomly until the required number in

each sub-county was obtained. In case of non-response, the SMEs were replaced until the target sample size was achieved in each stratum.

3.6 Data Sources and Collection Instruments

This study used quantitative primary data for inference using inferential statistics. Taherdoost (2016) defines a research instrument as a tool used to collect data. Given the need for quantitative primary data, a structured questionnaire was used to obtain information from the respondents in the banking sector. This is because questionnaires allow the respondent to present their facts on the subject matter independently, thus enabling a greater depth of response. The study collected primary data using structured questions with categorical and nominal scales. A questionnaire was more appropriate for this study as it enabled the researcher to collect first-hand information over a short period of time.

3.7 Data Collection Procedures and Ethical Considerations

The data collection procedure started after obtaining an introduction letter as well as an ethical approval from the University, which was granted on 8th December 2022. Given the letters, an official permit to conduct research in Kenya obtainable from the National Commission for Science, Technology, and Innovation (NACOSTI) was obtained. Primary data was collected through the administration of questionnaires to selected respondents. Questionnaires were administered by trained research assistants. These were administered at different times depending on the availability and schedule of the respondents. A duration of one month was taken to complete the process – December 2022 to mid-January 2023.

During the data collection process, this study adhered to appropriate research procedures and all sources of information were acknowledged as far as possible. Before the questionnaire was administered, permission was obtained, and consent sought from the respondents. The respondents were informed of their right to (or not) to take part in the survey. Confidentiality was maintained especially when dealing with questionnaires and the identity of the respondents was kept secret. The sensitivity to the participants' emotions was observed when probing questions that were sensitive. The participants were also informed that the information they provide would not be used

in any way to harm the participants or exploited for commercial and selfish personal gain, but only for academic purposes. Full disclosure, fair treatment and privacy were also practised.

The data collection process took four days with the help of research assistants. A total of four research assistants were used in the data collection process, and each was expected to administer a total of 97 questionnaires in a period of four days (25 per day). Each research assistant was paid Kshs. 2,500 (US\$ 20) per day totalling to Kshs. 40,000 (US\$ 330) funded by the researcher.

3.8 Reliability and Validity of the Research Instrument

The questionnaire was pre-tested before being used for actual data collection. Pre-testing of questionnaires is important to avoid drawbacks after administration. Kumar (2018) argues that pre-testing is a screening method that allows the researcher to administer a questionnaire on a smaller group of respondents prior to the main exercise to allow for feedback and corrections. This approach helps the researcher to minimize wrong answers due to misinterpretation of questions or blanks in questionnaires due to respondents misunderstanding of questions. A pilot study was undertaken on 5% of the population sample size of 388 which was not included in the final research. According to Taherdoost (2016), a 5-10% of the sample size is sufficient for a pilot, hence it was suitable to conduct a pilot study on the sample of 19 respondents. The data from the pilot was used to establish the research instrument's reliability and validity.

According to Babii (2020), reliability refers to the consistency of measurement. The positivists' approach insists on strict criteria for judging the quality or trustworthiness of the research findings' objectivity and that one must show evidence that the findings are consistent with occurrences in the real world. In this study, reliability was measured using the test-retest method which involves a repeat of the same test on the same sample at a different point in time (Flick, 2015). To measure test-retest reliability, the same test is conducted on the same group of people at two different points in time.

The questionnaire was pilot tested in November 2022 on 19 randomly selected women-owned SMEs in Nairobi County, Kenya. The study used test-retest method where two tests were conducted in a span of two weeks in the same month of November 2022 and reliability calculated using Percent Agreement Measure (PAM). The two data sets collected didn't show any variation

and thus had a 100% Agreement with each other. This demonstrated that the respondents gave the same answers in the two scenarios, meaning that they understood the questionnaire. Based on that measure of reliability, the questionnaire was deemed reliable for the main survey and was not changed.

On the other hand, validity in research refers to how accurately a study answers the study question or the strength of the study conclusions (Dzwigol, 2018). There are different forms of research validity, and the main ones are specified by Mackey & Gass (2015) as content validity, criterion-related validity, construct validity and face validity. This study tested for content validity where the research tool was reviewed by experts and the supervisor for coherence and clarity before being used. Face validity was warranted by ensuring that the constructs and indicators measuring the study variables were obtained from literature.

3.9 Analytical Framework

The quantitative data gathered using the questionnaires was analysed quantitatively using both descriptive and inferential statistics. Statistical Package for Social Sciences version 24 which generates both descriptive and inferential statistics was used. Descriptive statistics was used to capture the characteristics of the variables under study. Inferential statistics, which is regression analysis, was also used in the study to establish the relationships between variables. The nature of access to commercial bank financing is a binary variable since the SME owner might or might not have access to commercial bank credit, and it can be expressed more specifically using a binary choice model such that:

$$y_i^* = x_i' \beta + \varepsilon_i$$

$y_i = 1$ if $y_i^* > 0$ (An SME had access to Commercial Bank Finance; accessed more than Kshs. 500,000)

$y_i = 0$ if $y_i^* \leq 0$ (An SME had no access to Commercial Bank Finance; accessed less than Kshs. 500,000)

In the model above, x_i is a vector of the five factors namely collateral requirements, business performance, credit worthiness, financial management skills and demographic factors. The study

adopted a binary logit model which is suitable regardless of whether the independent variables are real, binary or categorical as long as the dependent variable is binary. The binary logit model was therefore suitable to establish whether the women-owned SMEs accessed commercial bank credit or not, given the four factors. The binary logit model was of the general form:

$$p(y_i = 1/x_i) = x_i^{\beta} + \mu$$

Where p represents the probability odds, y_i is a binary variable representing **1** if the women-owned SME accessed commercial bank finance and **0** otherwise, x_i represents the vector of factors that determine the likelihood of accessing commercial bank credit in this case (collateral requirements, business performance, credit worthiness, financial management skills and demographic factors), β is a vector of parameters that will be estimated, and μ_i is the error term, which has a symmetric distribution that is either normal or logistic. Overall, the following binary logit regression model was used:

$$\frac{\Pr(y_i = 0)}{\Pr(y_i = 1)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where:

y_i – dependent variable defined by $y = 1$ if the SME accessed commercial bank finance and $y = 0$ otherwise

- the dependent variable was also defined as the loan amount received or otherwise categorized as below Kshs. 500,000 and above Kshs.500,000.

X_1 – Collateral Requirements

X_2 – Business Performance

X_3 – Credit Worthiness

X_4 – Financial Management Skills

X_5 – Demographic Factors

ε – Is the error term

β – Predictor variables coefficients

The coefficients of the model were estimated using Maximum Likelihood Estimation (MLE). The model could have been estimated using Ordinary Least Square (OLS). However, this method has some limitations (Verbeck, 2012). First, the value of $x_i'\beta$ are bounded between 0 and 1, since it is a probability, and this may not be achieved in practical application. With a binary outcome, OLS was not justified theoretically, the errors are not normally distributed, and the variance in the errors is not constant over the range of predictor values. Therefore, MLE was suitable. Before running the logistic model, diagnostic tests were conducted to ensure that logistic regression assumptions were adhered to before estimation. In this study, the diagnostic tests to be conducted included Hosmer-Lemeshow (H-L) Test for model fitness.

3.10 Measurement and Description of Variables

a) Dependent Variable: Access to Commercial Bank Finance: This refers to the ability of women-owned SME to obtain finance from a commercial bank. Most previous studies used a binary variable for access to bank finance (Kira, 2015). Various scenarios can be considered for this category, the first possibility is that the business applied for a loan but was rejected by the bank. Second, the business did not apply for a loan at all because it was discouraged from doing so given the four unfavourable conditions being investigated in the study or simply assumed that its chance of getting a bank loan was minimal (Gamage, 2013). The third possibility is that the business applied for a loan and got financing of an amount below Ksh. 500,000 while the other possibility is that the business got financing of an amount above Ksh.500,000.

b) Independent Variables

The choice of the study variables, that is, collateral requirements, business performance, credit worthiness and financial management skills was motivated by empirical studies (Hanedar et al., 2014; Farinha & Felix, 2015; Kirschemann, 2016). The variables are described below.

Collateral Requirements

Collateral requirements refer to liquid and illiquid assets holding monetary value that back up loans from a lender in case of default. Collateral on a secured personal loan can include things like cash

in a savings account, a car or even a home (Chowdhury, Yeasmin & Ahmed, 2018). Lack of collateral signifies poor credit quality to banks hence lowering the chances of credit access (Ghosh, Ghosh & Chowdhury, 2018).

Business Performance

Business performance refers to a company's ability to make the best use of the resources it manages in its business activities. It is a set of analytical processes that enables the management of an organization's performance to achieve pre-selected goals. Belluchi et al. (2010) argues that business performance measured in terms of financial statements such as cash flows, debts and sales growth among others may indicate the business' health which may determine the business' ability to access credit.

Credit Worthiness

Creditworthiness refers to the ability to repay loans on time as determined by various scoring practices such as analysis of the length of credit history, listing in the Credit Reference Bureau (CRB) and analysis of the credit repayment history, among others (Wilner, 2007). Credit scoring and similar quantitative techniques have long been a part of the underwriting process used by credit managers to determine the credit worthiness of businesses. Credit scoring enables financial institutions to assess borrowers' ability to repay loans on time. Financial institutions often choose the safer side and deny credit to risky firms to avoid pecuniary loss (Zhang et al., 2016).

Financial Management Skills

Financial management skills refer to the competence required to apply the general management principles to financial resources of the enterprise, as well as performing business management practices such as planning, organizing, directing, and controlling financial activities such as procurement and utilization of funds of the enterprise (OECD, 2017b). Some of the skills include book-keeping skills, business planning skills and financial reporting skills.

Lack of financial management skills may hinder proper and critical financial planning which could result in bankruptcy. This sends a negative signal to bank lenders and decreases the chances of accessing credit (Ogubazghi & Muturi, 2014).

Table 3.3: Description of variables

Variables	Measurement	Expected Sign
Dependent variable		
Access to commercial bank finance	Measured as a binary variable where 1 = accessed commercial bank finance, 0 = otherwise.	
Loan amount accessed	Measured as a binary variable where 0 = Below Kshs. 500,000 (0), 1 = Above Kshs. 500,000 (1).	
Independent variables		
Collateral requirements	Measured as a binary variable where 1 = availability of various tangible collaterals that can be converted to monetary value and 0 = otherwise	Positive
Business performance	Measured as through a binary variable where 1 = is a proxy of good performance indicating consistent profits or decreasing debts for the last 3 years and 0 = otherwise	Positive
Credit worthiness	Measured as through a binary variable where 1 = listed by a Credit Reference Bureau as credit unworthy and 0 = otherwise	Negative
Financial management skills	Measured as a binary variable where 1 = the owner having various financial management skills such as bookkeeping skills and financial reporting skills and 0 = otherwise	Positive
Control variables		
Women-owned enterprise owner's age	<ul style="list-style-type: none"> Measured as a dummy variable where 1 = below 30 years of age, 2 = 31 to 40 years and 3 = 41 to 50 years 	Positive
Women-owned enterprise owner's level of education	<ul style="list-style-type: none"> Measured as a dummy variable where 1 = Primary Education, 2 = Secondary Education, 3 = Certificate/Diploma, 4 = Bachelor's Degree and 5 = Master's and above 	Positive
Number of employees	<ul style="list-style-type: none"> Measured as a dummy variable where 1 = 2 and below, 2 = Between 3 and 5, 3 = Between 6 and 9 and 4 = More than 9 	Positive
Awareness on the availability of bank loans for women-owned businesses	<ul style="list-style-type: none"> Measured as a dummy variable where 1 = Aware and 0 = Not aware 	Positive

CHAPTER FOUR

DISCUSSION OF FINDINGS

4.1 Introduction

In this chapter, there is a presentation of the results, findings and discussions based on the data collected from the field. Both descriptive and inferential statistics are presented in this section. The findings will guide the development of conclusions and recommendations in chapter five. The study targeted a total of 388 women-owned SMEs based in Nairobi County, Kenya across the 17 sub-counties. Responses were obtained from a total of 388 women-owned SMEs as targeted, thereby obtaining a response rate of 100%.

4.2 Descriptive Statistics

This section presents the descriptive statistics. Table 4.1 provides information on all the descriptive findings in terms of frequency and percentage since the variables were in categorical form. Respondents' demographic factors that include age, highest academic qualification, awareness of availability of bank loans and the number of employees in their businesses was obtained and presented in this section. Additionally, descriptive statistics of the dependent and independent variables was given. Since the data was categorical, only frequency and percentages were used as opposed to mean and standard deviation.

Table 4.1: Descriptive statistics

Description	Category	Frequency (n)	Percentage (%)
Demographic Factors			
Age	Below 30 years	86	22.2%
	31 to 40 years	246	63.4%
	41 to 50 years	56	14.4%
Highest level of Education	Primary	56	14.4%
	Secondary	124	32%
	Certificate/Diploma	97	25%
	Bachelor's Degree	81	20.9%
	Master's and above	30	7.7%
Number of employees	2 and less	143	36.9%
	Between 3 and 5	147	37.9%
	Between 6 and 9	44	11.3%
	More than 9	54	13.9%
Respondent's awareness on availability of bank loans	Aware	369	95.1%
	Not Aware	19	4.9%
Access to Finance			
Access to commercial bank finance	Accessed commercial bank finance	203	82.9%
	Did not access commercial bank finance	26	17.1%
Loan amount accessed	Below Kshs. 500,000	153	76.4%
	Above Kshs. 500,000	48	23.6%
Independent Variables			
Collateral Requirements	Own collateral	124	32%
	Do not own collateral	264	68%
Business Performance	Good performance (Consistent profits or decreasing debts for the last 3 years)	230	59.3%
	Poor performance (Inconsistent profits or increasing debts for the last 3 years)	158	40.7%
Credit Worthiness	Listed by a Credit Reference Bureau as credit unworthy	78	20%
	Not listed by a Credit Reference Bureau as credit unworthy	310	80%
Financial Management Skills	The owner has various financial management skills such as bookkeeping skills and financial reporting skills	281	72.4%
	The owner does not have various financial management skills such as bookkeeping skills and financial reporting skills	107	27.6%

Source: Candidate's Design from Research Data

The results in Table 4.1 show that majority, 63.4% (n = 246), of either the owners or managers of women-owned SMEs surveyed are aged between 31 and 40 years. This implies that most women below 31 prefer to engage in other forms of income-generating activities rather than entrepreneurship. The respondents' highest level of education was also obtained. This is considering the existing relationship between education and self-employment as well as loan access. It has been argued that highly educated individuals typically have better awareness and can easily access information regarding loans. They also tend to have more collateral to offer. The results indicate that up to a third (32%, n =124) of the respondents had secondary level of education. A quarter of them (25%, n = 97) had a diploma while only 28.6% (n = 111) had a bachelor's degree and above. The findings imply that majority of the businesses are owned or managed by people with a diploma or less level of education. This could be possible because highly educated people prefer formal employment.

The number of employees in women-owned SMEs in Nairobi County was also established. It was confirmed that majority of the surveyed businesses (37.9%, n =147) have 2 or less employees. However, almost an equal number (36.9%, n =147) have between 3 and 5 employees. This implies that majority of the businesses owned by women in the county have 5 employees or less.

It was also established that majority of the loan applicants, 82.9% (n = 203) were successful and only 17% were not. This implies a high success rate in the ability to access loans by women-owned SMEs. Furthermore, the study established the average loan amount which the successful women-owned businesses received. As shown in the table, majority of the businesses, 76.4% (153) accessed loans that were less than Kshs. 500,000 (US\$ 3,223) while the rest accessed more than that amount.

The descriptive results indicated that majority of the respondents, 68%, did not have collateral, while only 32% had collateral of any form such as cash in the bank, car logbooks or land title deeds. This implies that ownership of collateral among women SME owners was low and that could have a negative impact on their chances of accessing loans. In regard to credit worthiness, the descriptive results show that majority of the women-owned SMEs are credit worthy since most of them, 80% are not currently listed at CRB. The findings imply that most of the women-owned SMEs are credit worthy.

The results further demonstrate that in regard to business management skills among women SME owners or managers, up to 72.4% possess financial management skills. This implies that majority of the women are able to manage their businesses which can further boost their chances of accessing loans. In regard to business performance, it was established that majority of the women-owned businesses, 59.3% (230) record good performance (consistent profits or decreasing debts for the last 3 years) which boosts their chances of accessing bank loans.

4.3 Regression Results

In this section, two models have been estimated. The first model established the determinants of access to commercial bank financing by Women-Owned SMEs. The second model established the determinants of the amount of money accessed by Women-Owned SMEs. The two sub-sections present and explains the results.

4.3.1 Determinants of Access to Commercial Bank Financing by Women-Owned SMEs

To examine the factors influencing bank financing of Women-owned Enterprises by Commercial Banks in Nairobi County, Kenya, the study adopted a multivariate binary logit regression model. The model summary results in table 4.2 indicated that the factors under the study (collateral requirements, business performance, credit worthiness, financial management skills and demographic factors) account for up to 48.1% of the variation in commercial bank financing of women-owned SMEs in Kenya (Nagelkerke R Square = 0.481). This implies that collateral requirements, business performance, credit worthiness, financial management skills and demographic factors are important in explaining the variation in commercial bank financing of women-owned SMEs in Kenya.

Table 4.2: Binomial logistic regression model summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
353.96	0.357	0.481

The Hosmer-Lemeshow (H-L) statistic was also adopted to test the model fitness of the binary logistic regression model. As indicated in table 4.3, the binary logistic regression model predicting the effect of collateral requirements, business performance, credit worthiness, financial

management skills and demographic factors on commercial bank financing of women-owned enterprises in Nairobi County, Kenya was a good fit (Sig < 0.05) hence a good predictor.

Table 4.3: Hosmer-Lemeshow statistic test of Binary Logistic Model Fitness

Chi-square	df	Sig.
54.23	8	0.007

The regression results on the determinants of access to finance by women-owned SMEs is shown in table 4.4. From this, it can be documented that awareness, collateral, financial performance, credit worthiness and financial management skills have a significant effect on commercial bank financing of women-owned SMEs.

The regression results indicate a positive effect of good financial performance on access to commercial bank finance. This implies that good performance increases the likelihood of accessing commercial bank financing. Consequently, an Odds Ratio value of 2.344 demonstrates that those women-owned businesses which have good financial performance are 2.344 times more likely to access commercial bank financing compared to the ones which are not performing well. Good financial performance enhances access to bank finance by businesses as it demonstrates the company's stability, creditworthiness, and ability to meet financial obligations, thereby instilling confidence in lenders. The findings are consistent with those by Belluchi et al. (2010) who argue that business performance measured in terms of financial statements may indicate the business' health and impact on its chances of accessing credit.

The regression results indicate a positive effect of availability of collateral on access to commercial bank finance which implies that owning collateral increases the chances of accessing bank financing. Consequently, an Odds Ratio value of 2.830 demonstrates that those women-owned SMEs that have collateral are 2.830 times more likely to access commercial bank financing compared to the ones who don't have any form of collateral. The availability of collateral enhances access to bank finance by businesses as it provides a tangible and secure asset that can be used as a guarantee, thus reducing the lender's risk and increasing the likelihood of obtaining a loan. These findings are consistent with those by Ghosh, Ghosh and Chowdhury (2018) who established that

among the factors hindering women entrepreneurs' access to institutional finance was lack of collateral.

The regression results further indicate a negative effect on credit worthiness on access to commercial bank finance which implies that being credit unworthy decreases the chances of accessing bank financing. Consequently, an Odds Ratio value of 0.196 demonstrates that those women-owned SMEs that are not credit worthy (listed at CRB) are 0.196 times less likely to access commercial bank financing compared to the ones who are not listed at CRB (are credit worthy). Being creditworthy and not listed in a credit reference bureau enhances access to bank finance by businesses as it signifies a positive financial history and reliability, making the business more attractive to lenders and increasing the likelihood of favourable loan terms. Studies by Gangata and Matavire (2013) on the challenges facing SMEs in accessing finance from financial institutions in Kenya cited poor credit worthiness as a reason since most owners were listed, had poor repayment histories and high default rates.

The regression results show a positive effect of financial management skills on access to commercial bank finance. This implies that having financial management skills increases the chances of accessing bank financing. Consequently, an Odds Ratio value of 0.572 demonstrates that those women-owned SMEs or managers who had financial management skills are 0.572 times more likely to access commercial bank financing compared to the ones who don't have any form of financial management skills. Financial management skills enhance access to bank finance by businesses as they demonstrate the ability to effectively handle and optimize financial resources, thus instilling confidence in lenders about the business' capacity to repay loans and manage financial obligations responsibly. These findings are consistent with those from a study conducted by Kitching et al. (2011) which established that when business directors of small companies consistently update their financial books, they improve its financial discipline and proper planning which may act as a positive in accessing credit.

The regression results show a positive effect of awareness on the availability of financing for women-owned enterprises on access to commercial bank finance. This implies that being aware of the availability of financing for women-owned enterprises increases the chances of accessing bank financing. Consequently, an Odds Ratio value of 0.561 demonstrates that those women-owned

SMEs or managers who were aware of the availability of financing for women-owned enterprises are 0.561 times more likely to access commercial bank financing compared to the ones who are not aware. Being aware of the availability of a bank loan enhances access to bank finance by businesses as it allows them to proactively explore and leverage funding opportunities, thus demonstrating preparedness and increasing the chances of obtaining timely financial support when needed.

The regression results show a positive effect of owner's education level on access to commercial bank finance. This implies that higher education level increases the chances of accessing bank financing. Consequently, Odds Ratio values of 11.311, 2.952, 4.076 and 4.336 demonstrate that those women-owned SMEs or managers who had secondary, diploma, bachelor's degree or a master's level of education and above are 11.311, 2.952, 4.076 and 4.336 times more likely to access commercial bank financing compared to the ones who do not. Higher education level can enhance access to bank finance by businesses as it often contributes to better financial literacy, strategic decision-making, and communication skills, thus positively influencing the perception of lenders and fostering trust in the business' ability to manage finances responsibly.

Table 4.4: Determinants of access to commercial bank financing by women-owned SMEs

	B	S.E.	Wald	Sig.	Exp (B)
Available Collateral (Ref_None)	1.040	0.279	13.937	0.000***	2.830
Good Financial Performance (Ref_Bad Financial performance)	0.852	0.279	9.318	0.002***	2.344
Credit Worthiness (Ref_Credit Worthy)	-1.628	0.294	30.604	0.000***	0.196
Available Financial Management Skills (Ref_None)	0.559	0.292	3.658	0.005**	1.7489
Age (Ref_Below 30 years)					
Age: 31 to 40 Years	0.127	0.464	0.075	0.784	1.135
Age: 41 to 50 Years	-0.419	0.397	1.114	0.291	0.657
Education (Ref_Primary)					
Education: Secondary	2.426	0.618	15.412	0.000***	11.311
Education: Certificate/Diploma	1.083	0.583	3.452	0.063 *	2.952
Education: Bachelor's Degree	1.405	0.591	5.645	0.018**	4.076
Education: Masters and Above	1.467	0.599	5.988	0.014**	4.336
Aware of Bank Financing (Ref_Not Aware)	0.578	0.298	3.750	0.005***	1.7825
Number Employees (Ref_2 and Below)					
Between 3 and 5	-20.706	5,060.774	0.000	0.997	0.000
Between 6 and 9	-21.323	5,060.774	0.000	0.997	0.000
More than 9	-19.997	5,060.774	0.000	0.997	0.000
Constant	20.354	5,060.774	0.000	0.997	691,031,042.67

*Noted: *** significant at 1% level of significance; ** significant at 5% level of significance and * significant at 10% level of significance*

4.3.2 Determinants of the Amount Accessed by Women-Owned SMEs

To establish the factors influencing the amount of money accessed by women-owned enterprises by commercial banks in Nairobi County, Kenya, the study similarly adopted a multivariate binary logit regression model. The dependent variable was categorized into two: below Kshs. 500,000 (0) and above Kshs. 500,000 (1). The model summary results in table 4.5 indicated that the factors under the study (collateral requirements, business performance, credit worthiness, financial management skills and demographic factors) account for up to 46.3% of the variation in the amount accessed by women-owned SMEs in Kenya (Nagelkerke R Square = 0.463).

Table 4.5: Binomial logistic regression model summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
372.685	0.346	0.463

The H-L statistic was also adopted to test the model fitness of the binary logistic regression model. As indicated in table 4.6, the binary logistic regression model predicting the effect of collateral requirements, business performance, credit worthiness, financial management skills and demographic factors on the amount accessed by women-owned enterprises in Nairobi County, Kenya was a good fit (Sig < 0.05) hence a good predictor.

Table 4.6 Hosmer-Lemeshow statistic test of binary logistic model fitness

	Chi-square	df	Sig.
Model	78.44	8	0.008

The regression model coefficients were also established as shown in table 4.7. It was noted that awareness, collateral, credit worthiness and financial management skills have a positive and significant effect on the amount of commercial bank financing to women-owned SMEs in Kenya ($\beta < 0.05$). However, financial performance has a positive but not significant effect on the amount of commercial bank financing to women-owned SMEs in Kenya. With regard to demographic factors, the study established that the number of employees and age of the women-owned SMEs

managers doesn't affect the amount accessible from commercial banks. However, awareness about existence of the loan as well as secondary level of education have a positive and significant effect on the amount accessed through commercial bank financing.

The regression results indicate a positive effect of availability of collateral on the amount of loans accessed by women-owned SMEs from commercial banks. This implies that owning collateral increases the chances of accessing more than Kshs. 500,000 of bank financing. Consequently, an Odds Ratio value of 1.589 demonstrates that those women-owned SMEs that have collateral are 1.589 times more likely to access more than Kshs. 500,000 of commercial bank financing compared to the ones who don't have any form of collateral. The availability of collateral enhances access to larger loan amounts from banks, as it provides a tangible security that mitigates the lender's risk, allowing businesses to leverage their assets and potentially secure a higher loan amount. A related study by Rahman, Rahman and Belas (2017) while taking the evidence from three central European countries, that is, the Czech Republic, Slovak Republic and Hungary, also established that micro firms and firms owned and operated by women are experiencing a shortage of credit from banks due to lack of collateral.

The regression results indicate a negative effect of credit unworthiness (currently listed at the CRB) had a negative effect on the amount of loans accessed by women-owned SMEs from commercial banks. This implies that credit unworthiness (currently listed at the CRB) decreases the chances of accessing more than Kshs. 500,000 of bank financing. Consequently, an Odds Ratio value of 0.532 demonstrates that those women-owned SMEs who were credit unworthy (currently listed at the CRB) are 0.532 times less likely to access more than Kshs. 500,000 of commercial bank financing compared to the ones who were not listed (were credit worthy). Credit unworthiness, indicated by being currently listed at a credit reference bureau, worsens the possibility of accessing higher loan amounts from banks, as it signals a higher perceived risk to lenders, thus limiting the available credit and potentially resulting in less favourable loan terms. The findings are consistent with that by Mijid (2014) who indicated that low credit scoring by women borrowers as a result of repayment history, delayed payments and poor past history had a negative impact on access to credit by women.

The regression results indicate a positive effect of financial management skills on the amount of bank loans accessed by women-owned SMEs from commercial bank finance. This implies that having financial management skills increases the chances of accessing more than Kshs. 500,000 of bank financing. Consequently, an Odds Ratio value of 0.448 demonstrates that those women-owned SMEs that have financial management skills are 0.448 times more likely to access more than Kshs. 500,000 of commercial bank financing compared to the ones who don't have any form of financial management skills. Financial management skills enhance the chances of accessing larger loan amounts from banks for businesses by demonstrating a heightened ability to effectively utilize funds, mitigate risks, and ensure responsible financial practices, thereby instilling confidence in lenders and increasing the likelihood of securing a more substantial loan. The findings agree with that of a study conducted in the United Kingdom by Lennox & Pittman (2011) who provided evidence that low-risk companies attract upgrades to their credit rating when they signal their favourable borrowing characteristics by choosing voluntary audit.

The regression results indicate a positive effect of being aware of the availability of financing for women-owned enterprises on the amount of bank loan accessed by women-owned SMEs from commercial bank finance. This implies that being aware of the availability of financing for women-owned enterprises increases the chances of accessing more than Kshs. 500,000 of bank financing. Consequently, an Odds Ratio value of 0.520 demonstrates that those women-owned SMEs that were aware of the availability of financing for women-owned enterprises are 0.520 times more likely to access more than Kshs. 500,000 of commercial bank financing compared to the ones who were not aware. Being aware of the availability of financing for women-owned enterprises enhances the possibility of accessing a larger loan amount from a bank for businesses by allowing women entrepreneurs to proactively seek and leverage specialized funding opportunities, demonstrating strategic planning and contributing to a supportive financial environment for their ventures.

Additionally, it was established that a higher level of education has a positive impact on the amount of bank loan accessed by women-owned SMEs from commercial bank finance. This implies that having a higher level of education increases the chances of accessing more than Kshs. 500,000 of bank financing. Consequently, an Odds Ratio value of 4.066 demonstrates that those women-

owned SMEs whose owners have a higher education level (secondary level) are 4.066 times more likely to access more than Kshs. 500,000 of commercial bank financing compared to the ones who don't have formal level of education. A high education level enhances access to a larger loan amount from a bank for businesses by fostering better financial literacy, strategic decision-making, and communication skills, thus positively influencing the perception of lenders and increasing confidence in the business' capacity to effectively manage and repay a larger loan.

Table 4.7: Determinants of amounts accessed by women-owned SMEs

	B	S.E.	Wald	Sig.	Exp(B)
Available Collateral (Ref_None)	0.463	0.261	3.141	0.007***	1.589
Good Financial Performance (Ref_Bad financial performance)	0.495	0.268	3.411	0.006***	1.641
Credit Worthiness: Listed by a Credit Reference Bureau as credit unworthy (Ref_Credit Worthy)	-0.631	0.265	5.688	0.017**	0.532
Available Financial Management Skills (Ref_None)	0.803	0.299	7.227	0.007**	2.232
Age (Ref_Below 30 years)					
Age: 31 to 40 Years	-0.524	0.430	1.486	0.223	0.592
Age: 41 to 50 Years	-0.914	0.372	6.050	0.014**	0.401
Education (Ref_Primary)					
Education: Secondary	1.403	0.593	5.600	0.018**	4.066
Education: Certificate/Diploma	0.573	0.579	0.979	0.322	1.773
Education: Bachelor's Degree	0.761	0.584	1.694	0.193	2.139
Education: Masters and Above	1.115	0.590	3.578	0.059*	3.051
Aware of Bank Financing (Ref_not aware)	0.654	0.311	4.421	0.035**	1.923
Number Employees (Ref_2 and below)					
Between 3 and 5	-21.243	5,282.742	0.000	0.997	0.000
Between 6 and 9	-22.141	5,282.742	0.000	0.997	0.000
More than 9	-20.198	5,282.742	0.000	0.997	0.000
Constant	21.203	5,282.742	0.0000	0.997	1,615,667,676.06

*Noted: *** significant at 1% level of significance; ** significant at 5% level of significance and * significant at 10% level of significance*

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary results for the descriptive and inferential analysis based on the study objectives. It also presents the conclusions and recommendations for policy. Lastly, avenues for further study are presented.

5.2 Summary and Conclusions of the Study

The first objective of the study was to examine the effect of collateral requirements on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya. The descriptive findings established that few women-owned SMEs have collateral such as car logbooks and motorcycles, land title deed, house and cash in savings for bank loan application. The inferential findings revealed that availability of collateral has a positive and significant effect on both the ability to access commercial bank financing as well as the amount accessed. This led to the conclusion that higher chances of commercial bank financing as well as amount accessed by women-owned SMEs depends on having collateral such as car logbooks and motorcycles, land title deed or house.

The second objective of the study was to determine the effect of business performance on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya. Descriptive findings imply that most of the women-owned SMEs have displayed better financial performance. Correspondingly, inferential findings indicated that financial performance has a positive and significant effect on access to commercial bank financing by women-owned SMEs but not on the amount accessed. This leads to the conclusion that better financial performance is the key to accessing commercial bank financing for women-owned SMEs but it doesn't determine the amount accessed.

The third objective of the study was to examine the effect of credit worthiness on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya. Descriptive findings indicated that most of the women-owned SMEs are credit worthy, with a few of them currently servicing

other loans, and have never been auctioned before for failure to repay a loan or been listed by the CRB. Correspondingly, regression findings demonstrated that credit worthiness (not currently listed at the CRB) has a positive and significant effect on both access to commercial bank financing as well as the amount accessed by women-owned SMEs. The study concludes that a good credit score is significantly associated with higher chances of commercial bank financing, as well as the amount accessed by women-owned SMEs.

The fourth objective of the study was to examine the effect of financial management skills on commercial bank financing of Women-owned Enterprises in Nairobi County, Kenya. It was established that most of the SMEs do proper accounting. In addition, majority of the owners of women-owned SMEs have attended a business management training in the form of either a seminar or a workshop, demonstrating a high quest to improve their financial management skills. Regression findings demonstrated the importance of financial management skills which positively and significantly affect both access to commercial bank financing as well as the amount accessed by women-owned SMEs. This led to the conclusion that business management skills were very important in increasing the chances of accessing commercial bank financing by women-owned SMEs as well as the amount accessed.

Lastly, it was demonstrated that concerning demographic factors, the age of the managers of women-owned SMEs does not affect their chances of accessing bank financing and neither does it affect the amount accessed. However, awareness about existence of the loan as well as the level of education have a positive and significant effect on both the chances of accessing bank financing as well as the amount accessed.

5.3 Policy Recommendations of the Findings

Given the conclusion that higher chances of commercial bank financing for women-owned SMEs depends on having collateral especially car logbooks and motorcycles, land title deed or house, the study recommends that women SME owners invest in acquisition of these assets to bolster their chances of securing commercial bank financing. To the commercial banks, the study recommends the need to widen the scope regarding collateral requirements by accepting other types of collateral

such as savings in the bank. This will go a long way in enhancing commercial bank financing to women-owned SMEs.

Based on the conclusion that better financial performance is the key to accessing commercial bank financing for women-owned SMEs, the study recommends that women-owned SMEs consider putting in strategic efforts to enhance their performance, especially cash flows and profits. They should also seek to minimize borrowing of loans from several lenders to reduce the risk of default and poor performance. In doing so, their chances of accessing commercial bank financing increases significantly.

Based on the conclusion that accounting and budgeting business management skills were very important in increasing the chances of accessing commercial bank financing by women-owned SMEs, the study recommends that business owners invest towards training in these skills. On the other hand, the study advises formal lenders to consider engaging and training women SME owners on these skills to improve their chances of judicious utilization of the funds they advance to them.

5.4 Avenues for Future Research

The contextual scope of the study was limited to Nairobi City County only. Hence, the study recommends a wider contextual scope to other parts of the country, especially rural set-ups to compare the findings alongside the case of rural versus urban women-owned SMEs. Other future studies can also consider investigating the supply side factors that affect accessing commercial bank financing by women-owned SMEs since most of the women cited cost, bureaucracy, stringent and tedious application processes as some of the reasons why they don't apply for financing from commercial banks.

There is need for future studies to interrogate and find out how these factors are interlinked and play a role in shaping access to commercial bank financing by women-owned SMEs. The study has also assumed a direct relationship although it is safe to say that other factors in the environment of operation may affect the relationship between the two main variables seen in the study. Therefore, future studies should consider interrogating the moderating effect of some factors such

as COVID-19 on the relationship. For robustness, other future studies can employ a probit model on similar factors to assess the difference in the findings.

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APPENDICES

Appendix I: Introduction Letter

Clare, Chebichi,
Graduate School of Business,
University of Cape Town,

Dear Sir/Madam,

RE: INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH

This questionnaire (enclosed) is designed to gather information on the *Factors Influencing Commercial Bank Financing of Women-owned Enterprises in Nairobi County, Kenya*. This is academic research being conducted as part of the University of Cape Town requirements in partial fulfilment of the requirements for the ward of a Master of Commerce in Development Finance degree.

Please note that this is strictly an academic exercise towards the attainment of the above purpose. You are hereby assured that the information will be treated with confidentiality. Your cooperation will be highly appreciated, and you will remain anonymous.

Thank you in advance for your response.

Yours Sincerely,

Clare, Chebichi.

Research Student

Appendix II: Research Questionnaire

Section A: Demographic and Respondent's Profile

This questionnaire requires SME owners to provide information on the topic: *Factors Influencing Commercial Bank Financing of Women-owned Enterprises in Nairobi County, Kenya*. The Information will be used for academic purpose only and will not be divulged to any other person. Please fill all the sections hereunder. Note that all the questions herein are correlated and are equally important for the study.

(Please use the mark (X) to select the most appropriate).

1. Please indicate your age category.

- Below 30 years
31 to 40 years
41-50 years
Over 50 years

2. Please indicate your highest academic qualification

- Primary
Secondary
Diploma /Certificate
Bachelor's Degree
Master's and above

3. Please indicate the number of employees in your business

- 2 and below
Between 3 and 5
Between 6 and 9
More than 9

4. Have you ever heard of availability of bank loans (credit) for women-owned businesses?

- Yes
No

5. Have you ever been successful in accessing bank loan application?

- Yes
No

6. If you were successful in the application, how much loan was given to you by the bank?

- Less than Kshs. 100,000
Between Kshs. 100,000 – 500, 0000
Between Kshs. 500,001 – 1 Million
More than 1 Million

7. Which of the following assets does your business own?

(Please mark X for the one that applies)

Collateral Requirements	Yes	No
Car Logbook and Motorcycle		
Land Title Deed		
House		
Cash in Savings Account		

8. Please indicate the description that best fits your business in terms of financial performance.

	Yes	No
For the last 5 years, the business has been experiencing increasing cashflows		
For the last 5 years, the business has been experiencing decreasing debts		
For the last 5 years, the business has been experiencing increasing sales		
For the last 5 years, the business has been experiencing increasing profits		

9. Are you currently listed at the Credit Reference Bureau (CRB)?

Yes

No

10. Do you possess any of the following financial management skills?

(Please mark X for all that apply)

Financial Statement	Yes	No
Bookkeeping and Accounting		
Financial Reporting Skills		
Business Planning		
Budgeting		

THANK YOU FOR TAKING TIME TO RESPOND

**Appendix III: National Commission for Science, Technology and Innovation (NACOSTI),
Research Permit**


REPUBLIC OF KENYA
 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION


NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **748578**
Date of Issue: **04/January/2023**

RESEARCH LICENSE



This is to Certify that Miss. Claire Mamwa Chebichi of University of Cape Town, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: **FACTORS INFLUENCING COMMERCIAL BANK FINANCING OF WOMEN OWNED ENTERPRISES IN NAIROBI COUNTY, KENYA for the period ending : **04/January/2024.****

License No: **NACOSTI/P/23/22957**

748578
 Applicant Identification Number

Signed by candidate

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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