

**CORPORATE ENTREPRENEURSHIP, AMBIDEXTROUS LEADERSHIP
AND SUSTAINABLE PERFORMANCE OF MICRO-FINANCE
FIRMS IN KENYA**

BY

BEATRICE JEPKEMBOI BOR

**A Research Thesis Submitted to the Department of Management Science and
Entrepreneurship, School of Business and Economics in Partial Fulfilment of the
Requirements for the Award of Doctor of Philosophy in Business Management
(Strategic Management Option)**

Moi University

2025

DECLARATION

Declaration by the Candidate

I, the undersigned, declare that this thesis is my original work and has not been submitted for the award of any degree in any other university or institution of learning other than Moi University.

Signed: Date:

Beatrice Jepkemboi Bor

PHD/BM/6058/22

Declaration by the Supervisor

This research thesis has been submitted for presentation with our approval as the University supervisors.

Sign: Date:

Dr. Andrew Kimwolo

Department of Management Science and Entrepreneurship,

School of Business and Economics

Moi University.

Sign: Date:

Dr. Peter Nderitu Githaiga

Department of Accounting and Finance,

School of Business and Economics

Moi University.

DEDICATION

I dedicate this thesis to my beloved husband, Raymond Kemei, whose unwavering love, patience, and constant encouragement have been my greatest source of strength throughout this journey. Thank you for your financial, moral, and spiritual support for paying my fees, supporting where I stayed in Eldoret during the examination period, and standing with me through countless late nights of study and sleepless moments. You encouraged me to press on when I felt like giving up, and your belief in me never wavered even when mine did. This achievement is as much yours as it is mine.

This thesis is also lovingly dedicated to my children, Ashley Jemutai, Bruno Kipkorir, Joy Jepngetich, and Abigael Chebet, whose voices and prayers gave me strength during the most demanding moments, especially throughout examinations. Thank you for your patience, understanding, and encouragement, and for graciously enduring the many hours I devoted to my studies and the times I was away from home. Every sacrifice you made was a silent contribution to this achievement, and your support moral, spiritual, and in every way has been instrumental in the successful completion of this thesis.

ACKNOWLEDGEMENT

I wish to acknowledge Dr. Andrew Kimwolo and Dr. Peter Nderitu Githaiga for their tireless support and the invaluable guidance they provided in the development of this thesis. I am also indebted to my husband and children for their encouragement, and for the moral, financial, and spiritual support that allowed me to work on this thesis.

My heartfelt appreciation goes to all the respondents from the MFIs who willingly participated in this study and provided the data that made this thesis possible. I further extend my gratitude to the management and staff of the MFIs for granting permission and creating a conducive environment for data collection, as well as to the research and data collection assistants for their dedication and commitment in the field.

Finally, I give God all the glory for good health, wisdom, and knowledge throughout the process of developing this thesis.

ABSTRACT

Sustainable Performance of Micro-Finance Institution is crucial to ensure environmental, social and economic performance. Corporate entrepreneurship has enabled most of the leading firms to grow and become sustainable in the long-term. An ambidextrous leader plays a role in improving the corporate entrepreneurship practices in the firms to ensure sustainable growth and performance. However, microfinance institutions face numerous challenges in the financial market, from competition to low-risk loan portfolios. Hence, a need to examine the role of corporate entrepreneurship strategies that can reduce these challenges as well as the moderating role of ambidextrous leadership. The main purpose was to establish the moderating effect of ambidextrous leadership style on the relationship between corporate entrepreneurship and the sustainable performance of microfinance firms in Kenya. The specific objectives were: to establish the effect of innovativeness, risk taking and pro-activeness on sustainable performance of Microfinance firms in Kenya; and to examine the moderating role of ambidextrous leadership style on the relationship between innovation, risk taking and pro-activeness on the sustainable performance of Microfinance firms in Kenya. The study was anchored on the Innovation Theory of Entrepreneurship, the Contingency Theory, and the Triple Bottom Line Theory. The study used both explanatory and cross-sectional research design and correlational design. The study targeted 467 branch managers from Microfinance institutions. A sample of 215 was selected using random sampling technique. The study used a structured questionnaire to collect data from the respondents. Content, face, and criterion validity was achieved through interrogation by experts, while construct validity was determined via factor analysis. Reliability of the instrument was tested using the Cronbach's alpha while validity was tested using KMOS. Data was analysed through descriptive and inferential statistics. The findings revealed that innovativeness ($\beta = 0.502$, $P < 0.05$), pro-activeness ($\beta_1 = 0.303$, $P < 0.05$) and risk taking ($\beta = 0.107$, $P < 0.05$) had a positive and statistically significant effect on sustainable performance of MFIs. Further, ambidextrous leadership moderated the relationship between pro-activeness ($\beta = -0.004$, $\Delta R^2 = 0.011$ $P < 0.030$), risk taking ($\beta = -0.004$, $\Delta R^2 = 0.011$ $P < 0.030$) and sustainable performance of the MFI. Similarly, it did not moderate the relationship between innovativeness and sustainable performance. The study concluded that corporate entrepreneurship had a positive impact on sustainable performance, while ambidextrous leadership has a moderating effect. The study recommends MFIs to pursue corporate entrepreneurship to remain sustainable. It should also encourage managers should exercise a moderate level of ambidextrous leadership to enhance the effect of corporate entrepreneurship on sustainable performance.

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ABBREVIATIONS

AMFI	Association of Micro-Financial Institution
EO	Entrepreneurial Orientation
MFI	Micro-Financial Institution
MSE	Micro and Small Enterprises
NACOSTI	National Commission for Science, Technology and Innovation.
NGO	Non-Governmental Organization
SACCO	Saving and Credit Cooperative Society
SCEE	Sustainable Corporate Ecological Entrepreneurship
SMEs	Small and Medium Enterprises
VIF	Variance Inflation Factor

OPERATIONAL DEFINITION OF TERMS

Ambidextrous Leadership: a type of leadership that the leader has both exploration and exploitation behavior resulting to high creativity and employee performance (Alghamdi, 2018).

Corporate Entrepreneurship: refers to the ability of the firm to ensure innovativeness, pro-activeness and risk-taking (Tantau, *et al.*, 2015).

Innovativeness: This refers to the ability to use new ideas and creativity to achieve product, market, management and process efficiency (Barbieri-da-Rosa, *et al.*, 2022).

Micro-Financial Institutions: refers to any other activity of the business which is financed, wholly or to a material extent, by lending or extending credit for the account and at the risk of the person accepting the deposit, including the provision of short-term loans to small or micro enterprises or low-income households and characterized by the use of collateral substitutes (Microfinance Act, 2006).

Pro-Activeness: refers to self-efficacy and being reliable in achieving firms' objective (Aigboje, 2018).

Risk-Taking: is the ability of entrepreneur to take calculated risk in order to achieve a firm's objective (Raham, *et al.*, 2021).

Sustainable performance: refers to achieving a long-term achievement of the firm (Mahdi & Nassar, 2021). The study examined sustainable performance using economic, social environmental and governance dimensions.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter discusses the background of the problem, the institutional setting of MFI, the problem statement, the objectives and hypotheses, significance and the scope of the study.

1.1 Background of the Study

Microfinance institutions (MFIs) have made significant contributions toward achieving several Sustainable Development Goals (SDGs), demonstrating their effectiveness in promoting financial inclusion and addressing social, environmental and economic challenges. MFIs have been particularly impactful in terms of SDG 1, which aims to end poverty (Makunyi, 2017). MFIs continue to contribute towards this goal by providing small loans to individuals and micro-entrepreneurs who lack access to traditional banking services, MFIs empower them to start or expand businesses, generate income, and improve their living conditions.

Furthermore, MFIs play a vital role in advancing SDG 8, which focuses on promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all (Uddin *et al.*, 2020). MFIs help create job opportunities and stimulate economic activities through supporting Small and Medium Enterprise. However, the impact of MFIs on other SDGs, such as environmental sustainability (SDG 13), social well-being (SDG 3), and reduced inequalities (SDG 10), can be more indirect (Uddin *et al.*, 2020).

Sustainable performance is a measurement of a firm's ability to meet its present demands as well as making sure its systems, processes, and activities does not have an adverse impact on the environment, society, or future generation (Barauskaite & Streimikiene 2021). Corporate sustainability encompasses factors and metrics related to social, economic, environmental and governance sustainability as well as their relationship to financial success on elements of social sustainability such as equitable opportunity distribution, human capital empowerment, and the positive growth of local communities and society (Alshehhi *et al.*, 2018). A measure of long-range planning, such as an organization's strategic plan that can last longer than three years, is the economic sustainability effect on the future society or the environment (Silva *et al.*, 2019).

Economic sustainability in focuses on developing operational and financial self-sufficiency and the identification of factors that influence these two aspects (Hadžiahmetović, 2021). Social sustainability is a crucial aspect of any firm since firms depend on employees, investors, suppliers, community, customers among other stakeholder. Microfinance institutions (MFIs) play a crucial role in fostering environmental and governance sustainability, especially in the context of supporting financial inclusion for underserved communities (García-Pérez, *et al.*, 2020). On the environmental front, MFIs can promote sustainability by incorporating green finance principles into their lending practices. Regarding governance sustainability, MFIs can strengthen their operations through transparent and accountable management practices. Matanda and Matanda, (2019) assert that adhering to best governance standards; MFIs can ensure that their financial services are delivered efficiently and fairly.

Globally, the social, environmental, economic governance and operational sustainability of MFIs is a prerequisite for institutional stability (Siwale & Okoye, 2017). For instance in Asia, MFIs sustainability is crucial in ensuring poverty eradication since it play a significant role in socio-economic sustainability (Gupta & Sharma, 2021). While risk management has played a major role in sustainability of Sri Lanka according to (Illangakoon *et al.*, 2022). The healthiness of financial sustainability remains to be crucial among the Sri Lanka's MFI. In China there is high demand for micro-credit facilities where microfinance institutions are the main source (Li, *et al.*, 2022). Hence, firm that has low capital leverage were most preferred because of financial sustainability. Current, the China's micro-finance institutions are facing pressure of downturns and deleveraging.

Investors and shareholders must be contended that their financial commitment to the company is sound, that they will receive a return on their investment, and that the company will comply with all legal and moral requirements. As a result, microfinance companies ought to foster an atmosphere of sustainability and openness while managing the interests of all stakeholders and shareholders (Naciti, 2019).

In Africa's, a least developed continent in terms of social and economic development, firms and entrepreneurs tend to be highly dependent on MFIs (Chirambo, 2016). Arguably, the formal financial markets in Africa to offer high interest credit facilities while the MFIs are largely unregulated which has seen business failure due to high interest rate and unhealthy competition for financial market (Kuada, 2019). In Nigeria and Zambia, Microfinance regulation has aided in improving Micro-Financial Institution performance according to (Siwale & Okoye, 2017). Financial sustainability

was found to be linked with financial structure among South Africa Microfinance institution

While in Ethiopia MFIs have greatly improved in terms of sustainable performance. The Ethiopian government has encouraged the financial inclusion of impoverished groups, women, and rural residents while also fostering MFIs sustainability (BE, 2022). These MFIs' growing loan portfolio of up to USD 455 million from 348 dollars between 2010 and 2018 (Van Marrewijk *et al.*, 2022). In terms of operational sustainability, the industry has also been successful. The majority of MFIs also concentrated on expanding their outreach initiatives and diversifying the products they offer. As a consequence, their customer base has grown and they are reaching out to more people with their financial services.

However, in East Africa community, microfinance firms frequently continue to face high operational costs while trying to offer financial services to the populace (Dushime *et al.*, 2022). Each microfinance institution has a distinct profile and operational structure that define which sorts of controls are necessary to increase financial sustainability as more of them develop into formal financial institutions (Tehulu, 2013). Due to an increase in the number of firms offering microfinance services, such as commercial banks and other profit-oriented entities, the microfinance sector in Tanzania has recently seen unprecedented expansion (Bayai & Ikhida, 2018). According to recent statistics, Tanzania's microfinance institutions are now more financially stable because more than half of them are self-financed and run with exceptional cost and operational efficiency (Mwankemwa, (2022). Turyahebwa (2013), in Uganda explored determine the level of financial performance in the central area of Uganda's chosen microfinance institutions. The results showed that the microfinance

institutions in central area of Uganda had strong financial performance, indicating that the majority of the country's financial institutions are financially sound.

Corporate entrepreneurship is a dynamic process that can significantly impact an organization's sustainable performance across environmental, social, economic, and governance dimensions. Egwakhe, *et al.*, (2022) who examined corporate entrepreneurship in Nigerian firms and found that organization culture affected how organization can adopt corporate entrepreneurship practices in achieving performance. Corporate entrepreneurship refers to a strategic approach within an established organization that encourages entrepreneurial behaviour and initiatives among employees (Minola, *et al.*, 2021). It involves fostering an entrepreneurial mind-set, encouraging innovative thinking, taking calculated risks, and being proactive in identifying and addressing emerging opportunities and challenges. Innovativeness, risk taking and pro-activeness if combined with sustainable business practices, corporate entrepreneurship can drive sustainable business performance (Urban & Nikolov, 2013).

Innovativeness is considered a fundamental element of business entrepreneurship. It enhances a firm's success and its perceived creativity and innovation (Coccia, 2016; Acs *et al.*, 2016). An essential alternative to previous definitions of entrepreneurship has shifted towards the eagerness to engage in managed business risks (Wiklund and Shepherd, 2005). Davidsson (2015) defines risk-taking as the act of engaging in uncertainty by allocating resources and capital to initiatives with minimal or no assurance of success. Cowling and Lee (2017) assert that when entering new markets with novel products or services, entrepreneurial companies ought to encourage experimentation due to the ambiguous and uncertain contexts in which they will operate.

Consequently, entrepreneurial companies develop a tolerance for failure and inherently operate under precarious situations (Kraus et al., 2012).

Another important dimension of corporate entrepreneurship is proactiveness. A company confronted with multiple uncertainties must demonstrate proactive traits to contend vigorously by fostering boldness (Coccia and Watts, 2020). The management's adaptability to modify circumstances, capacity to foresee future consequences, and opportunistic nature exemplify the facets of proactiveness (Sánchez-Gutiérrez et al., 2019). Proactive conduct may also encompass an ongoing pursuit of new market prospects and opportunities (Gomez el and Rangus, 2018).

Most entrepreneurial endeavours entail risk, as resources are allocated to initiatives and innovative products or services with uncertain outcomes and indeterminate probabilities of success (Rauch et al., 2009). The pursuit of market opportunities entails significant risk in anticipation of lucrative financial returns in both the short and long term. Entrepreneurial orientation through innovation, proactivity, and risk-taking activities empowers the organization to better comprehend consumer needs and implement steps to address them, with the expectation of achieving favorable performance outcomes. Wardi et al. (2018) and Octavia and Ali (2017) ascribe business performance to entrepreneurial orientation (EO), positing that firms can swiftly and promptly respond to competitive challenges and market risks while seizing opportunities. An innovative entrepreneur develops an innovation culture around the organization, which can create result to competitive advantage. Risk-taking encourages employees to be willing to venture into uncharted territories and invest in initiatives that may carry uncertainty but have the potential for substantial rewards.

Furthermore, it has been argued that firms ought to abandon conventional leadership styles and instead take a "ambidextrous" stance in order to support entrepreneurial activity (Monferrer *et al.*, 2021). Additionally, Numerous research indicate that corporate ambidexterity is unavoidable (He & Wong, 2004; Mueller *et al.*, 2020). Indeed, what is generally meant to be more apparent at the organizational or collective level manifests as individual ambidexterity (Zacher & Rosing, 2015), especially among leaders. This led to the emergence of a novel leadership style termed ambidextrous leadership (Rosing *et al.*, 2011). This kind of ambidextrous leadership is particularly pertinent in the context of microfinance firms since its talents may support these companies in building lasting value in a very competitive and demanding industry.

Ambidextrous leadership style is a management approach that seeks to balance exploration and exploitation in organizations (Mueller, *et al.*, 2020), this involves creating an environment that fosters innovation and entrepreneurship while maintaining a focus on delivering sustainable performance. According to Martínez-Climent, *et al.*, (2019) ambidextrous leadership combine an open leader behaviour which promote creative as well as closing leader behaviour which promote accomplishment of objectives and adhere to the organization culture. Ambidextrous leadership enables social entrepreneurial orientation resulting into increase operational performance (Luu, 2017). Ambidextrous leadership enables adaptation of innovation process which assist in corporate entrepreneurship.

Iqbal, *et al.*, (2020), examined the organizational learning mediation mechanism and psychological empowerment as a conditional element on the relationship between sustainable leadership and sustainable performance, and the findings showed that a greater degree of psychological empowerment would increase the indirect impact of

sustainable leadership on long-term success through organizational learning. Therefore, the study examined the mediating effect of ambidextrous leadership in the relationship between corporate entrepreneurship and sustainable performance.

1.1.1 Micro-finance firms in Kenya

The concept of microfinance emerged from the necessity to provide for low-income earners who are excluded by mainstream banking institutions (Maengwe & Otuya, 2016). The Irish Loan Fund System, which provided loans to underprivileged individuals in rural areas without security, can be traced to the origin of the practice of microcredit, which dates back to as early as 1700. The concept of microfinance has grown over time in Latin America, Asia, and eventually Africa. In 1976, the idea for the Grameen Bank was developed in the Bangladeshi town of Jobra with his students, Nobel Peace Prize Laureate Professor Yunus visited a local farm. By founding Grameen Bank in Bangladesh in 1983, Professor Yunus's emotional support was formalized in supporting less advantage groups.

The push for microfinancing in Kenya gained momentum in the late 1980s as a result of a large percentage of the population being excluded from official financial institutions, primarily banks (Kawou, 2016). Microfinance emerged in order to fill the void left by banks in providing credit to individuals and the growing number of micro, small, and medium-sized businesses (Bassem, 2014). Early in the 1990s, as political and economic problems began to erupt, there was a growth in the need for credit by individuals and micro, small, and medium-sized businesses, which made microfinance institutions in Kenya grateful. Equity Building Society (now Equity Bank), Family Building Society (currently Family Bank), Faulu Kenya, and K-Rep are a few of

Kenya's first MFIs. MFIs have been established in Kenya using either SACCO or NGO frameworks (Kawou, 2016).

Kenya's microfinance industry is divided into a number of categories, including regulated MFIs, commercial banks, nonbank financial institutions (Post Bank), and the to-be-regulated MFIs under the MFIs Act. Other categories include non-regulated, credit-only MFIs, financial wholesalers, micro-insurance providers, and capacity providers and development institutions. The Association of Microfinance Institutions (AMFI) has a list of MFIs that fall into different categories. According to AMFI, (2014) there were 44 organizations as microfinance institutions. The Microfinance Act of 2006, which governs microfinance institutions in Kenya, as well as the Microfinance Regulations that it spawned, lay out the country's legal, regulatory, and oversight frameworks.

According to estimates, Kenya's microfinance industry currently includes more MFIs, many borrowers, and assets worth over 250 billion shillings. In recent years, the Kenyan government has increased its support for the microfinance industry (Moyi, 2019). The Kenya Microfinance Regulatory Authority (KMRA), established by the government in 2006, is in charge of overseeing the nation's microfinance industry. The government has also implemented a number of additional laws and rules to promote the sector's expansion (Mwangi, 2018). The Kenya's National Assembly introduced a bill in 2017 allowing MFIs to take deposits from clients, increasing access among the poor to financial services. With this change, the MFIs have been able to reach almost 1,732,290 active customers. Omondi & Jagongo, (2018) assert that MFIs have been significant sources of credit for a huge number of households with low incomes and MSEs in both rural and urban parts of Kenya.

MFIs were well-known in Kenya as a result of the official banking sector's observation of the official sector's harm and lack of commercial viability from independence until the late 2000s. According to Gatimu, (2014) strong operating principles, MFIs advanced and supplied novel, inventive, and low-cost methods of funding low-income households and MSEs. MFIs in Kenya have made significant progress overall in enhancing their sustainable performance, which has increased financial inclusion and decreased poverty in the nation.

Small loans, typically for working capital, informal borrower and investor approval, mandatory savings or group guarantors as security, access to repeated and large loans based on repayment performance, timely loan repayments, monitoring, and secure saving products are all examples of microfinance activities. Four different categories can be used to describe the services that microfinance companies provide to their clients. These include social services, business development, financial intermediation, and social intermediation.

The Report on the Institutional Setting of Microfinance Institutions in Kenya (MFI Report) was released by the Central Bank of Kenya (CBK) in 2019. In order to advance financial inclusion and safeguard the banking system, this report was created in accordance with the goals of the CBK, the Central Bank of Kenya Act, and the National Payment System Law (Muithya & Muathe, 2020). By doing this, the CBK hopes to promote the usage of financial goods and services while protecting consumers from dishonest vendors.

The Microfinance Act No. 14 of 2006, in particular, is taken into consideration by the MFI Report's regulatory framework for MFIs. This law specifies different aspects of

running an MFI and serves as the main regulating body for microfinance services in Kenya (Issack & Mutswenje, 2022). Microfinance practice and principles, development operation linked to microfinance, resource mobilization, eligible credit and deposit schemes, risk management, the prudential framework, consumer protection, corporate governance, and the audit of MFIs were addressed in the Microfinance Act No. 14.

Financial intermediation is the delivery of financial products and services, including credit, savings, insurance, credit cards, and payment systems, that shouldn't require any present assistance. According to Mori & Mersland (2014), social intermediation is the process of building the human and social capital necessary for sustainable financial intermediation for the disadvantaged. Kathomi, *et al.*, (2017), in Kenya sought to establish factors that influencing sustainability of MFIs and performance, and to establish the direction of such influence on financial sustainability of MFIs and to seek their challenges.

Operational sustainability, a component of financial sustainability measurement was measured using return on assets (ROA) and return on equity, (ROE). It was revealed that, majority of microfinance institution in Kenya are below the market mean sustainability as measured by both the ROA and ROE. Average size of the savings had a positive influence on return of assets and that this relationship was positive. The rest of the variables did not have a significant influence on either ROA or ROE, on the challenges of MFIs, it was found that the major challenges facing microfinance institution in Kenya are funding, repayment default and government regulations. Low profits and numbers of clients were not found to be major challenges facing the sector.

Kimando, *et al.*, (2012), in Muranga Kenya investigated the elements influencing the viability of the microfinance organizations functioning in the Murang'a Municipality. The study indicated that the factors most strongly influencing the sustainability of microfinance organizations were financial rules, the number of clients served, financial coverage, and amount of credit transacted. The study comes to the conclusion that a number of connected and related factors affect the sustainability of MFIs. The report advises MFIs to establish numerous branches in order to serve as many individuals as possible and guarantee that they adhere to laws and regulations.

The growth of enterprise services enables microbusiness owners to embrace technological, marketing, and business skill advancements. Social services, which include education, health, nutrition, and literacy instruction, are focused on improving the welfare of micro entrepreneurs. The services require immediate assistance and are typically provided by NGOs or the government (Hulme & Maitrot, 2014). Short-term loans that are typically paid back promptly after approval and that are typically for working capital with immediate, even weekly, or monthly instalments are characteristics of MFIs. In most cases, these loans have a tenure of less than a year. A form of collective guarantee, where members are collectively responsible for ensuring that their loans are returned, typically replaces the needs of conventional lenders for physical security, such as property (Kanyurhi & Bugandwa, 2016).

Ngumo, *et al.*, (2020), in Kenya through microfinance initiatives, many people in underdeveloped nations now have access to formal financial services. However, there are still millions of unmet customer needs, and the demand for financial services vastly outstrips the supply at the moment. The expansion of microfinance programs continues to be a difficult issue for the financial industry due to considerable capital constraints.

The capital-to-asset ratio, operational costs relative to the loan portfolio, and the portfolio at risk greater than 30 days are the primary elements that have an impact on the sustainability of microfinance institutions, according to financial data from Kenyan institutions. It is evident that the capital/asset ratio, operating expenses, and loan portfolio are the factors that have an impact on operations and financial sustainability. In order to build the Sustainability Index, these indicators have been added along with Operational Self Sufficiency. This index for microfinance institutions' operational self-sufficiency and financial sustainability is more thorough.

The MFIs in Kenya can quantify their degree of operations and financial sustainability with the use of this approach. This methodology can also be used to develop a sustainability index for different nations and assist the regulator in determining the sector's strong and weak points. Additionally, it is anticipated that the introduction of the new model made it easier for MFIs to access capital markets. Access to sustainability data may help to lessen some of the uncertainty surrounding the deal. This model could be seen as an additional step toward the development of microfinance standards.

Maengwe & Otuya, (2016) define microfinance as a development sector that offers financial services and yields like small loans, savings, micro-leasing, micro-insurance, and the transfer of money to help the underprivileged who have been left out expand or start their businesses. MFI is mostly used in developing nations where SMEs lack access to other financial resources. Another definition of microfinance is the provision of financial services to low-income, self-employed clients. Savings and credit are included in financial services. However, the majority of finance firm also provide insurance and payment services. According to Wanjiku & Njiru (2016), MFIs provide

social intermediation services such as group formation, building self-confidence, financial literacy training, and managerial skills among group members.

AMFI (2021) reported that, women are among the highest number of borrows as compared to men. However, most of the MFIs are struggling with low loan performance where from Micro Finance Banks (MFBs) performing loans were 66.19% in 2021 while Portfolio at Risk (PAR) for 1-30 days were 7.75% while from above 30 days are 26.00%. This marks high risk in terms of long-term economical sustainability of the MFBs which is one of the part of MFIs. However, Credit only Micro-Finance Institutions are doing better than the MFBs counterpart with loan performance of 87.47% making Portfolio at Risk of 4.59% for loan between 1-30 days while above 30 days at 7.94%.

In Kenya, Kathomi, *et al.*, (2017) studied to identify the variables that affect the financial sustainability of microfinance institutions (MFIs) in Kenya as well as the direction of those variables' effects. Utilizing return on assets (ROA) and return on equity (ROE), operational sustainability was assessed as part of the financial sustainability analysis. The financial statements of the different MFIs used for the study's financial analysis provided this information. To demonstrate the extent to which the variables had an impact on the sustainability of the institutions, the data collected from the questionnaires were divided into various classes and subjected to factor analysis. Majority of Kenya's microfinance institutions fall short of the market mean in terms of sustainability, as determined by both return on assets and return on equity. According to the study, there is a positive association between typical savings amounts and asset returns. MFIs are struggling with low loan performance where from Micro Finance Banks (MFBs) performing loans were 66.19% in 2021 while Portfolio at Risk

(PAR) for 1-30 days were 7.75% while from above 30 days are 26.00% The remaining factors had no discernible impact on either ROA or ROE.

Further, a study by Wafula, *et al.*, (2017) found that only 60% of Kenyans, including 30% of rural users, have access to banks or microfinance institutions. When the supply of financial services, including loans, is compared to the demand, it further demonstrates a shortfall (Hartarska *et al.*, 2014). By providing small loans or microloans to people who are unable to access traditional loan services, microfinance organizations fill a critical vacuum in the financial services sector. As a result, this research aims to identify the factors that affect Kenyan MFIs' financial viability.

1.2 Statement of the Problem

MFIs globally have played a role in expanding financial inclusion and reducing poverty, thereby supporting the achievement of Sustainable Development Goals (SDGs). MFIs are key vehicles for advancing Sustainable Development Goals (SDGs) on no poverty (SDG 1), good health and well-being (SDG 3), gender equality (SDG 5), decent work and economic growth (SDG 8), sustainable cities and communities (SDG 11), and climate action (SDG 13) by extending credit and financial services to low-income households and micro, small and medium enterprises (MSMEs) (Adnan & Kumar, 2021). However, they face environmental, social, economic and governance challenges (Adnan & Kumar, 2021). More specifically, Central Bank of Kenya (CBK, 2024) data reveal mission drift and governance challenges. Among MFBs, only 36% offer products for all three enterprise categories, whereas 21% target only micro and small enterprises; 61% of commercial banks but only 36% of MFBs have innovated or are innovating climate-change-related products, and climate shocks have led to average industry losses

of KES 3.531 billion. This sustainability problems may hinder the ability to serve the unbanked population, realization of the SDGs and Kenya's Vision 2030.

Although studies associate dimensions of corporate entrepreneurship innovativeness, pro-activeness and risk-taking and sustainable performance of MFIs owing to their unique nature empirical literature in developing countries is scant, while the existing studies shows mixed findings (Huang et al., 2022; Adim et al., 2018; Bosire et al., 2021; Katou et al. 2023; Martínez-Climent et al. 2019). This underscores both contextual and conceptual gaps. For example, MFIs have embraced ambidextrous leadership, which is both exploitative and explorative, tend to have strategic positioning through efficient marketing strategies, and innovative in order to become competitive and profitable (Kapukha & Makau, 2023).

Therefore, this study sought to examine whether ambidextrous leadership style moderates the relationship between corporate entrepreneurship and sustainable performance of micro-finance firms in Kenya.

1.3 Main Objective

The general objective was to examine how ambidextrous leadership moderates the relationship between corporate entrepreneurship and sustainable performance of Micro-finance firms (MFIs) in Kenya.

1.3.1 Specific Objectives

1. To establish the relationship between innovative and sustainable performance of Micro-finance firms in Kenya.
2. To investigate the relationship between pro-activeness and sustainable performance of Micro-finance firms in Kenya.

3. To assess the relationship between risk taking and sustainable performance of Micro-finance firms in Kenya.
4. To examine the moderating effect of ambidextrous leadership style on the relationship between;
 - a. Innovativeness and sustainable performance of micro-finance firms in Kenya.
 - b. Pro-activeness and sustainable performance of micro-finance firms in Kenya.
 - c. Risk taking and sustainable performance of micro-finance firms in Kenya.

1.4 Research Hypothesis

H₀₁: There is no statistically significant relationship between innovativeness and sustainable performance in micro-finance firms in Kenya.

H₀₂: There is no statistically significant relationship between pro-activeness and sustainable performance of micro-finance firms in Kenya.

H₀₃: There is no statistically significant relationship between risk taking and sustainable performance of micro-finance firms in Kenya.

H₀₄: Ambidextrous leadership does not significantly moderate the relationship between;

- a. Innovativeness and sustainable performance of micro-finance firms in Kenya.
- b. Pro-activeness and sustainable performance of micro-finance firms in Kenya.
- c. Risk-taking and sustainable performance of micro-finance firms in Kenya.

1.5 Significance of the Study

The findings may offer important insights for the development of policies aimed at fostering the growth and sustainability of microfinance institutions (MFIs) in Kenya.

The study assists in guiding government legislation, ensuring the development of

appropriate strategies on corporate entrepreneurship leadership that can help in addressing MFI'S sustainability in Kenya.

For MFI management, the study provides critical insights into their operational health, allowing them to address current challenges and respond to emerging issues effectively. Financial institutions will be equipped with the knowledge to implement appropriate corporate entrepreneurship strategies that can enhance profitability and improve overall performance. Further, MFI practitioners/managers will understand the nexus between ambidextrous leadership, corporate entrepreneurship and sustainable performance.

Finally, the study contributes to academic research by adding new literature and addressing existing gaps. Scholars and researchers will be able to utilize the findings to generate new ideas, while also enhancing literature reviews in the field of corporate entrepreneurship and sustainable performance in financial institutions.

1.6 Scope of the Study

The study introduces new empirical literature more specifically on the link between corporate entrepreneurship and sustainability performance of microfinance firms in a developing country as well as moderating the role of ambidextrous leadership. The study focused on 45 microfinance institution in Kenya. The dependent variable was sustainable performance of MFIs. The independent variable was corporate entrepreneurship with the main variables being pro-activeness, innovativeness and risk taking. Ambidextrous leadership was the moderating variable. The main theories were innovation theory of entrepreneurship, ambidextrous leadership theory and triple bottom line theory. The study adopted the positivism research paradigm and both the explanatory and cross-sectional research design. The unit of analysis were 467 branch

managers and final sample of 215 was selected using simple random sampling technique. The research was conducted over a one-year period, from January to December 2024.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The section discusses the concepts, theoretical literature, empirical literature, and the gaps and finally presents the conceptual framework.

2.1 Concepts

2.1.1 Concept of Sustainable Performance

Sustainable performance encompasses multiple dimensions (social, environmental, governance and economic performance) that are critical for the long-term survival of organizations and the society as a whole (Zheng *et al.*, 2021). Sustainability performance focuses on an organization's impact on people and communities, encompassing aspects like employee well-being, diversity and inclusion, and contributions to local societies.

Sustainable performance reflects a company's capacity to satisfy the requirements of its present stakeholders while safeguarding the interests of future stakeholders Rusu, *et al.*, (2024). Consequently, a company's profit generations and growth are linked not only to economic factors but also to social and environmental capital. Enhancing a company's sustainable performance necessitates explicit efforts, including the formulation of strategies and the creation and development of sustainable performance measurement systems (Epstein & Roy, 2001). Recent research indicates that sustainability yields long-term profits for organisations, often indirectly (Pullman *et al.*, 2009; Golicic & Smith, 2013); the development of dynamic capabilities is essential to secure enduring advantages from a firm's sustainability initiatives (Reuter *et al.*, 2010). Establishing a sustainable performance measuring system in organizations is complex

due to the multidimensionality and long-term focus of sustainability (Searcy, 2012). Defining and quantifying sustainable performance poses challenges in both corporate settings and scientific research, and the operationalization of the notion is complex. Furthermore, while the measurement of sustainable performance is a crucial component of corporate performance management, it has garnered minimal scholarly focus (Searcy, 2012; Schaltegger & Burritt, 2014).

Rather, increased focus has been directed towards research investigating the relationship between a company's sustainability initiatives and profitability. Waddock and Graves (1997) demonstrated a correlation between corporate social performance and financial performance. They asserted that firms exhibiting robust financial success are more attuned to sustainability or possess greater financial resources to address sustainability challenges. Wagner (2010) established a correlation between a firm's sustainable performance and its financial performance, asserting that only environmental performance directly influences financial performance, while the effect of social performance is reduced by advertising intensity. Pullman *et al.* (2009) determined that quantifying the return on investment for sustainability programs is challenging, and the advantages of sustainability enhancement initiatives are manifested indirectly. Paulraj (2011) asserted that by becoming a market pioneer in establishing a sustainable business, a firm can augment its market share and reputation, hence impacting its profitability.

Pagell & Wu (2009) assert that the triple bottom line (Elkington, 1997) serves as a metric for sustainable performance, encompassing not only profit but also the effects of the supply chain on social and environmental systems; it evaluates the supply chain's influence on people, profit, and the planet. To enhance sustainable performance and

establish a competitive advantage, the actions of the upstream supply chain must also be considered (Montabon *et al.*, 2016). Enhancing sustainable performance necessitates the systematic organization, oversight, and documentation of sustainability matters and initiatives in supply management, aligned with the company's sustainability strategy and vision in a comprehensive manner.

In contemporary business, sustainability-related risks and opportunities have catalyzed innovations across numerous industries and marketplaces, emerging as significant drivers of competitiveness among organisations (Schaltegger & Burritt, 2014). Van Bommel (2011) posited that a firm's ability to formulate sustainability plans and methodologies is contingent upon its intrinsic innovation capacity and its supply chain network. The impact of supply management on a company's overall sustainable performance is fundamentally contingent upon the innovative capacity of the supply management department and its approach to suppliers.

Innovativeness in supply management is regarded as an internal resource of a firm, whereas supplier orientation is viewed as the organization's capacity to use external resources. A company's enduring competitive advantage can be enhanced by adhering to the Dynamic Capabilities View (DCV), which considers the dynamics of the supply market and the business environment concerning sustainability, as well as the reconfiguration of internal and external resources and strategies (Eisenhardt & Martin, 2000; Reuter *et al.*, 2010).

It conceptually contributes to an integrated perspective on firm performance, sustainable performance can be summarized in four dimensions: economic, social, environment and governance. Firms' growth can be categorized into three main stages;

survival stage, self-sufficient stage and sustainable stage. In sustainability model, MFIs use contributions and other grants to cover costs, while in self-sufficiency mode, money generated covered all costs (Wafula, *et al.*, 2017).

In order to give stakeholders and shareholders long-term value corporate entities should aim at embracing sustainable social, economic, and environmental practices (Illangakoon *et al.*, 2022). This can be achieved by offering financial services to underprivileged groups, generating financial services that have a positive environmental impact, or coming up with novel methods to produce extra streams of income.

Studies further indicate that loan portfolio considerably affect financial self-sufficiency of MFIs negatively. Whereas interest rates charged on borrowers significantly impacted microfinance institutions' financial self-sufficiency (Remer & Kattilakoski, 2021). In order to prevent their earnings from being negatively impacted by excessive operational expenses, microfinance institutions should reduce their operating and administrative costs as well as diversify to boost revenue and capital base (Lassoued, 2022).

Environmental sustainability centers on an organization's environmental impact, emphasizing responsible resource management, reducing carbon emissions, and promoting eco-friendly practices. Governance sustainability pertains to the organization's adherence to ethical and transparent governance practices, encompassing areas like corporate governance, compliance with regulations, and risk management. Economic sustainability involves an organization's ability to generate long-term profits while ensuring financial stability and equitable distribution of economic benefits. Together, these dimensions form a holistic framework for evaluating an organization's

sustainable performance, reflecting its commitment to social responsibility, environmental stewardship, good governance, and economic viability (Rajesh & Rajendran, 2020).

The Sustainable Development Goals (SDGs), sometimes referred to as the Global Goals, were enacted by the United Nations in 2015 as a global call to action to eradicate poverty, safeguard the environment, and guarantee that by the year 2030, peace and prosperity was experienced by everyone. The 17 SDGs understand that development must balance social, economic, and environmental sustainability and that actions in one area had an impact on results in others. In order to achieve the Sustainable Development Goals (SDGs) set forth by the United Nations, microfinance institutions play a critical role (Ameli, *et al.*, 2023). SMEs, often found in underdeveloped countries or those with little access to regular financial institutions, are the main emphasis of microfinance (Noor & Ayaz, 2023). This encourages company owners to expand their operations and take advantage of greater prospects, which may improve a nation's economic growth as well as general social and environmental well-being.

Microfinance institutions are particularly connected to the SDG 1 ("No Poverty"). Microfinance enables people to launch small enterprises that can create income, lowering their risk of falling into poverty. In order to reduce severe poverty and hunger, it also assists the jobless by giving them training, loans, and other financial services like savings and insurance. Makunyi (2017) assessed the impacts of micro finance institutions in eradication of poverty in Meru South Sub County, and discovered that microfinance organizations are an extremely effective instrument for reducing poverty at the household level, with income after obtaining microfinance credit being found to have greatly increased. The study also reported that microfinance lending empowers

the underprivileged and gives them the tools they need to deal with and resolve many issues they encounter. Chikwira, *et al*, (2022), in Kenya examined using a Vector Error Correction Model using quarterly time-series data. The authors found a significant long-term association between the factors poverty, microfinancing, SMEs, and agricultural expansion.

MFIs have also tried to solve issues of gender inequality through empowering women entrepreneurs to address SDG 5 (Gender equality), which aims to achieve gender equality and empower all women and girls. MFIs often prioritize lending to women, helping to economically empower them and reduce gender disparities (Lamichhane, 2020). They have achieved by providing women with access to credit and financial services, MFIs have enabled them to start or expand businesses, invest in education, and improve their livelihoods, ultimately contributing to greater gender equality. Similarly, MFI has played a role in addressing SDG 3 (Good health and well-being) which focuses on ensuring healthy lives and promoting well-being for all at all ages (Fraisl *et al.*, 2023). MFIs indirectly support this goal by improving access to healthcare and sanitation for underserved communities. When people have access to microloans, they can invest in their health and well-being, affording necessary medical treatments, clean water, and sanitation facilities. This, in turn, contributes to improved health outcomes and greater overall well-being.

MFIs also support the attainment of the SDG 8 (Decent work and economic growth), which aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. Microfinance may aid in the expansion of regional enterprises, fostering economic growth and expanding job prospects (Heirman *et al.*, 2021). They play a critical role in the provision of microcredit

to entrepreneurs and small business owners, helping to create jobs, stimulate economic activity, and reduce poverty. MFIs contribute to economic growth and job creation in marginalized communities by offering financial services to those who would otherwise have limited access.

Another important SDG is SDG 11 that seeks to make cities and human settlements inclusive, safe, resilient, and sustainable (Abubakar & Aina, 2019). MFIs contribute to this goal by providing financing for housing and infrastructure improvements in urban and rural areas. (Singh *et al.*, 2023) asserted that individuals and communities can access microloans, they can invest in housing upgrades, clean energy solutions, and community development projects, which collectively contribute to sustainable urban development.

Microfinance can aid in the development of dependable, more structured enterprises that uphold workers' rights. Hence, it has helped reduce economic disparities by providing financial services to marginalized and vulnerable populations in addressing SDG 10 (reducing inequalities). Access to credit allows individuals and communities to break the cycle of poverty, improving their economic standing and reducing income inequalities.

Through micro-lending entrepreneurial more individuals can participate in activities and increase their economic chances if they have access to financial services like loans and savings (Alhassan & Nwagbara, 2021). In this way, MFIs make a meaningful contribution to SDG 10 by promoting more equitable access to financial resources and opportunities.

In India, Amit and Kedar (2014) analyzed profitability of microfinance institutions and whether commercialized MFIs, exhibit better financial performance and their likelihood of attaining sustainability, compared to traditional non-profit MFIs. An empirical analysis of profit motivated MFIs showed that profit motivated MFIs have higher chances of sustainability compared to non-for-profit MFIs in their early life period. In the second phase years later, profit driven MFIs were not sustainable. However, the study did not conclude that profit motivated MFIs are not sustainable, but rather they had lost their possibility of sustainability compared to non-profit MFIs.

The trend in MFIs' profitability indicators like Return on Assets and Return on Equity also shows disparities in the average ROE and ROA for profit and non-profit MFIs. These performance metrics have narrowed down (in fact non-profit are performing better than profit MFIs in a year or two) in last couple of years putting both categories of MFIs at par in terms of profitability and sustainability (Adbi, 2023).

Asare (2018), in Ghana sought factors that influence the sustainable performance of microfinance institutions in Ghana. Descriptive research design was employed given the nature of the inquiry. The managers of the various microfinance organizations were chosen as respondents. According to the study, a number of institutions battled with high default rates, excessive interest rates. The sustainability of microfinance organizations is impacted by the adoption of financial technology in Ghana's financial system. In addition, sustainability of microfinance institutions in Ghana was positively impacted by financial technology like mobile money since these institutions have used it to boost their profit margins.

Kayembe *et al.*, (2021) sought to determine the elements that affect MFI sustainable performance in Malawi. The study was conducted between November and December 2020. The study adopted a cross-sectional survey of MFI staff in Malawi's central area. Online data was gathered via a google form delivered via social media networks, employing convenience and purposive selection strategies. The results of the ordinary least square regression showed that corporate governance, commercialization, and the reporting and loan management system (RLMS) were all significantly influencing the sustainability of MFI in the best way.

On the other hand, it was discovered that the MFI sustainability was negatively impacted by loan design/type and loan portfolio management. Over-indebtedness variables were found to be statistically insignificant, as well as loan disbursement variables. From the study, increasing MFIs' financial sustainability requires commercialization, standardized reporting, efficient loan portfolio management tools, a stakeholder-based approach to corporate governance, and preferred board independence through scale and cost management.

Kathomi *et al.*, (2017), in Kenya sought to establish factors that influencing sustainability of MFIs performance challenges. Operational sustainability, a component of financial sustainability measurement was measured using return on assets (ROA) and return on equity, (ROE) while average size of the savings had a positive influence on return of assets and that this relationship was positive.

It was found that the major challenges facing microfinance institution in Kenya are funding, repayment default and government regulations. Kimando, *et al.*, (2012), investigated the factors influencing the viability of financial rules, the number of clients

served, financial coverage, and amount of credit transacted had a significant effect on sustainability of MFIs.

All organizations, profit and non-profit entities, and governmental institutions need to focus on sustainable performance to ensure they become sustainable and responsible. The ultimate objective of sustainability is to raise the organization's bottom line while reducing any unfavourable effects on society and the environment (Van-Zanten & Van-Tulder, 2021).

Corporate sustainability is demonstrated by profitability, reputation, legitimacy and competitive advantage, in which a firm must assume responsibility for environmental protection initiatives, such as reducing carbon emissions, utilizing green energy, and reducing the effects of climate change, while also experiencing rapid economic growth (Mahdi & Nassar, 2021). Sustainable innovations result from the process of sustainable corporate entrepreneurship (Provasnek *et al.*, 2017). Successful entrepreneurs frequently have a significant impact on the proportion of sustainability start-ups in an entrepreneurial ecosystem (Tiba *et al.*, 2020).

In the context of microfinance, MFI ought to switch from traditional performance measurements to sustainable performance in order to be competitive in the quickly changing business environment of today. This calls for deposit-taking microfinance companies to embrace corporate entrepreneurship in their operations (Penna *et al.*, 2021). This entails developing new business prospects that can produce long-term value for the firm, which is the main goal of corporate entrepreneurship. This entails developing new products, expanding into untapped areas, or developing cutting-edge

procedures or technology to boost the firm's productivity and competitiveness (Wales *et al.*, 2020).

According to Laskar (2018), an increasingly important component of corporate growth is sustainability. Performance on social and environment concerns keeping a competitive edge requires effective management of sustainable initiatives (Laszlo, & Zhexembayeva, 2017). Corporate sustainability is becoming more and more important in today's business environment, the swift adoption of corporate entrepreneurship sustainability can be attributed to the benefits of increased income and credibility that come with sustainability (Alshehhi *et al.*, 2018).

Alliance (2017) asserted that, with USD 14 trillion in assets, the European Union is the greatest investor in sustainability projects. The United States comes in second with USD 12 trillion, while Japan comes in third with USD 2 trillion. Luthra, *et al.*, (2018) established in China that, many other nations have not made as much of an effort to embrace and apply sustainable practices or to invest in sustainability programs.

Several businesses have implemented sustainability policies that take into account social, environmental, and economic factors; this has increased financial performance, according to Lassala *et al.*, (2017).

Önder (2018) observed that companies in Turkey that implemented sustainable practices had increases in their company value, reputation, and organizational skill management which lead to higher productivity and performance. These firms rise in prestige and develop a positive corporate image when they can collaborate with all stakeholders, including workers, communities, and the general public, to improve living conditions and quality of life.

It was determined, using data from India and Japan, that corporate sustainability had a major impact on the financial results that companies in both countries reported (Laskar *et al.*, 2017). Choongo (2017) observed that small and medium-sized enterprises (SMEs) in Zambia have embraced corporate sustainability and corporate social responsibility. These practices prioritize financial growth by addressing social, economic, and environmental elements of the business's operations. Only 32% of small audit firms in Nigeria were aware of sustainability reporting, according to Tamunotonye & Ifeanyichukwu (2023) however 98% of these firms felt that sustainability reporting had value. There is a direct correlation between an organization's commitment to social sustainability and its readiness to foster innovation, which is indicative of its entrepreneurial drive.

It has been revealed that microfinance institutions spend more on administrative costs than on operating and financial costs, which is likely to have an impact on their ability to run independently and produce a profit (Mia *et al.*, 2023). Microfinance institutions tend to have low capital base in relation to their operating cost, which jeopardize their sustainability (Firdaus, 2020). Further, MFIs tend to have a higher return on assets compared to return on equity. In addition, MFIs performance is largely affected by active borrowers and their loan portfolio (Blanco-Oliver, & Irimia-Diéguez, 2021).

2.1.2 Concept of Corporate Entrepreneurship

Corporate entrepreneurship, often referred to as intrapreneurship, is a strategic approach within established organizations that encourages employees to adopt to an entrepreneurial mindset (Tseng & Tseng, 2019). It involves fostering a culture of innovativeness, risk-taking, and pro-activeness among employees to identify and pursue new opportunities, create novel solutions, and navigate emerging challenges (Tu,

et al., 2021). Innovativeness within corporate entrepreneurship refers to the generation and implementation of new ideas, products, or processes that drive the organization forward. The definition of corporate entrepreneurship has evolved over the last four decades.

In the 1980s, scholars characterized corporate entrepreneurship (CE) as a collection of behaviours designed to attain creative results (Pinchott, 1985; Burgelman 1984). Burgelman (1984) defined corporate entrepreneurship (CE) as the process of expanding the firm's realm of competence and opportunity set through the internally created combination of new resources. In an alternative definition, corporate entrepreneurship (CE) is characterized as a process of organizational rejuvenation encompassing two ostensibly independent yet intrinsically connected facets: corporate venturing and a strategic emphasis on establishing new enterprises through advancements in market dynamics, processes, technology, and managerial innovations (Sathe, 1989).

In the 1990s, corporate entrepreneurship researchers regarded this idea as beneficial to a company's capacity for cultivating innovative skills (Kuratko & Audretsch 2013), hence offering a more expansive definition. Guth and Ginsberg (1990) contend that corporate entrepreneurship comprises two components: corporate venturing and organizational evolution via strategic renewal, which encompasses corporate entrepreneurial actions resulting in significant alterations to an organization's business, strategy, or structure (Kuratko *et al.*, 2015). Zahra (1991) contends that corporate entrepreneurship as formal or informal endeavours aimed at establishing new ventures within existing organizations through innovation in products, processes, and development (Kuratko & Audretsch 2013).

In the first decade of the twenty-first century, corporate entrepreneurship denoted a company's efforts to achieve competitive advantage through profit growth (Kuratko & Audretsch, 2013). Corbett et al. (2013) contend that corporate entrepreneurship manifests inside an organization in two forms: corporate venturing and strategic entrepreneurship. The former pertains to the initiation of new enterprises both internally and externally; whilst the latter encompasses all operations that yield organizational innovations and strategy rejuvenation aimed at establishing a competitive advantage. Recently, academics have concentrated on sustainable entrepreneurship. Shepherd and Patzelt (2011) define corporate ` entrepreneurship as the endeavour to preserve nature, life support systems, and communities while pursuing perceived opportunities to create future products, processes, and services for profit, where profit encompasses both economic and non-economic benefits to individuals, the economy, and society.

In the field of entrepreneurship and innovation, corporate entrepreneurship has evolved into a multidimensional construct. Corporate entrepreneurship also referred to as organizational entrepreneurship, intrapreneurship, corporate venturing, and strategic entrepreneurship (Schindehutte et al., 2018) focuses on entrepreneurial activities that occur within established organizations (Jennings & Lumpkin, 1989; Kuratko et al., 1990). It is possible to facilitate the investigation of the paths that organizations have taken by distinguishing between entrepreneurial activities and entrepreneurial behaviours. This can be accomplished by arriving at a more sophisticated knowledge of management in a variety of institutional frameworks. The latter is the subject of this study because of the importance it plays in guaranteeing the continuous growth and sustainability of firms.

However, there seems to a consensus among several scholars that corporate entrepreneurship (Heavey & Simsek, 2013; Kuratko, 2017 and Zahra1996), that corporate entrepreneurship covers three fundamental phenomena: innovation, corporate venturing, and strategy renewal. According to Ireland *et al.*, (2009), innovation is defined as the capacity of a company to creatively transform its organizational knowledge and resources into new products, processes, and systems, hence enhancing the economic value of the company. The ability of businesses to boost their market success, growth, and competitiveness is directly correlated to their level of innovation, regardless of whether it is radical or gradual (Zahra, 1996). Strategic renewal is the process of reorganizing a company's resources in order to rejuvenate its operations and produce new wealth. This is accomplished by making adjustments to the company's business scope, competitive approach, and capabilities (Guth & Ginsberg, 1990; Zahra, 1996). According to Guth and Ginsberg (1990), the term "corporate venturing" describes the business practice of pursuing entrepreneurial ventures within an existing corporation, which may include expanding into new markets.

Corporate entrepreneurship practices are concepts that enable institution to grow due to the entrepreneurial orientation nature of innovativeness, pro-activeness and risk taking. According to Tantau *et al.*, (2015) corporate entrepreneurship to improve in investment and growth of renewable energy. This study reviewed 30 businesses that used a corporate entrepreneurship strategy to make investments in renewable energy. According to the findings imply that work autonomy and management support for corporate entrepreneurship are the organizational characteristics that would most likely foster innovation in these diverse businesses.

Egwakhe, *et al.*, (2022) examined the relationship between corporate entrepreneurship and organizational performance and the moderating role of organizational culture. The study found that corporate entrepreneurship which affect the overall performance of the organization. Organization culture moderated the relationship between corporate entrepreneurship and organization performance. Lu *et al.*, (2022) explored the link between corporate entrepreneurship and sustainability. The results of this study revealed that Corporate Entrepreneurship had a positive effect on sustainability.

Research studies on corporate entrepreneurship indicate that companies can implement distinctive innovative organizations and programs by recognizing their unique characteristics through case studies of corporations exhibiting notable corporate entrepreneurship Urbaniec & Żur, (2021).

Zahra (1996) elucidated that environmental, strategic, and organizational elements are frequently associated with the emergence of corporate entrepreneurship. Hornsby et al. (2002) identified five internal critical elements that influence the emergence of corporate entrepreneurship: management support, work discretion, rewards/reinforcement, time availability, and organizational limits. Numerous global corporations, including Google and Apple, acknowledge the significance of internal environmental support for innovation and have implemented diverse management practices (Kuratko *et al.*, 2014).

Corporate entrepreneurship can better microfinance institutions to achieve sustainability, enabling them to serve their target clients, create enduring partnerships, and promote their own economic growth. Masanyiwa, *et al.*, (2022) argue that, economic, social, environmental and governance sustainability of MFIs offer a

promising path for increased access to financial services and sustainability of microfinance entities.

Piotrowska (2023) examined the determinants of corporate entrepreneurship in the context of sustainable development. Given the growing obstacles pertaining to environmental conservation, corporate social responsibility, and sustainable economic expansion, it is imperative for effective organizational management to comprehend the elements that propel corporate entrepreneurship in sustainability. In the context of sustainable development, the research highlighted that, organizational culture, leadership, and innovation as critical factors of corporate entrepreneurship. An atmosphere that is conducive to long-term commercial endeavours is created by a robust entrepreneurial culture that rewards innovation, taking calculated risks, and being proactive. The ability to empower people and a dedication to sustainability goals are hallmarks of effective leadership, which is a key factor in corporate entrepreneurship. Sustainable performance of MFIs' focuses on four dimensions: economic, social, environmental and governance.

2.1.2.1 Concept of Innovativeness

Innovativeness a dimension of corporate entrepreneurship that entails the ability of organizations to foster a culture of creativity and continuous improvement, where they actively seek out, develop, and implement new ideas, products, or processes to gain a competitive edge and drive growth (González-Tejero & Molina, 2022). Within Microfinance Institutions (MFIs), the concept of innovativeness is crucial in adapting to the evolving financial landscape. MFIs need to innovate in their services and delivery channels to meet the unique needs of their diverse client base while remaining financially sustainable (Sinha & Ghosh, 2022).

Damanpour and Evan (1984) characterize innovation as the "application of ideas or technologies within organizational systems, policies, managerial activities, products, processes, and services." Innovation study has proposed various categories to comprehend the characteristics of innovativeness. This classification enables researchers to understand the individual, organizational, and contextual aspects critical for various types of innovations (Suddaby, 2010). Schumpeter (1934) posits that innovative alternatives for a firm encompass the development of novel product and service bundles, identification of new markets, discovery of new suppliers, implementation of advanced manufacturing methods, and the design of improved organizational structures. The prevalent differentiation is between business process innovation and product innovation (Damanpour & Aravind, 2006). The distinguishing factor for this classification is whether it pertains to a new production method, process innovation in the delivery of final products, or the innovation of the end product itself. Innovativeness pertains to an organization's propensity and ability to engage in, advocate for original concepts, and uncover inventive processes that can result in inventions (Lumpkin & Dess, 1996). Innovativeness refers to the procedures an organization does to achieve its success objectives by converting original ideas into distinctive products or services (Baregheh et al., 2009). It is an organizational characteristic, a facet of its culture that reflects its readiness to pursue new opportunities, leading to an ability to innovate (Ackermann et al., 2015). Furthermore, innovation lies in organizations establishing a corporate culture that encourages participative decision-making, prioritizes learning and development, and cultivates creativity (Santos et al., 2020). Innovativeness empowers organizations to leverage the competencies of their inventive staff to respond to environmental dynamics and transformations (Gilbert, 2007). Organizations functioning in an environment marked by uncertainty, volatility,

and ambiguity are highly incentivized to enhance their capability in fostering open innovation (OI). Both micro (managerial behaviour) and macro (environmental uncertainty) factors influence innovativeness (Santos et al., 2020).

Innovativeness pertains to an organization's overall potential to introduce unique products or services to the market or to enter new markets through a robust inventive strategy and conduct. An overall assessment of innovativeness measures an organization's capacity and inclination to launch new products and services or establish new markets, while also identifying the critical elements of innovation outcomes (Wang & Ahmed, 2004). This description employs a multidimensional framework for innovativeness, encompassing five primary dimensions: product, market, behavioural, strategic, and process innovativeness. Innovativeness affects the efficacy with which organizations undertake and execute initiatives aimed at product creation.

Consequently, innovativeness tends to affect the achievement of sustained innovation success (Pallas *et al.*, 2013). Subramanian and Nilakanta (1996) examine two dimensions of innovativeness: technical and administrative innovativeness. They suggest that organizational variables, including size, structure, culture, and insufficient resources, may exert varying effects on the identified dimensions of innovativeness and overall innovativeness.

This assertion contradicts the findings of Johannessen *et al.*, (2001) and Wang and Ahmed (2004), who illustrate the multidimensional character of innovativeness. Consequently, certain scholars employ a unidimensional construct approach to innovativeness, while others utilize a multidimensional construct approach to delineate the idea. The primary emphasis is that innovativeness fosters a conducive environment

that stimulates creativity and subsequently enhances new product development processes and technological progress. Innovativeness is linked to an organization's objective of competing and effectively differentiating itself in the marketplace. Wang and Ahmed (2004) identified five domains that contribute to organizational innovativeness: product innovativeness, process innovativeness, market innovativeness, behavioural innovativeness, and strategic innovativeness. "Product Innovativeness" (PDI) pertains to the novelty and utility of a product (Wang and Ahmed, 2004). "Business Process Innovativeness" (BPI) pertains to the implementation of novel management policies, methodologies, production techniques, and creative technological applications to enhance business processes associated with any management function (Bhupendra and Sangle, 2015; Wang and Ahmed, 2004).

"Market Innovativeness" (MI) pertains to novel methods for leveraging current markets and investigating new markets for both existing and new products (Ali et al., 1995). Behavioural Innovativeness (BVI) encompasses several methods to foster and facilitate the readiness to adapt to a changing business environment (Hurt et al., 1977; Lovelace et al., 2001; Rainey, 1999). Such innovation can be assimilated at all levels of an organization, including employees, teams, and management personnel. "Strategic Innovativeness" (SI) facilitates a fundamental reconceptualization of company, ensuring its relevance across diverse competitive environments (Markides, 1998). Strategic Innovation facilitates the management of ambitious organizational objectives and the exploration of inventive methods to utilize scarce resources (Wang and Ahmed, 2004). Hogan et al. (2011) identified three dimensions of innovation capability in professional service firms, namely client-focused, marketing-focused, and technology-focused, based on the work of Calantone et al. (2002), Tuominen and Anttila (2006),

and Wang and Ahmed (2004). This research analyses the categories of organizational innovativeness identified by Wang and Ahmed (2004) inside sustainability-oriented organizations, taking into account sustainability characteristics.

Organizational innovativeness is associated with aspects such as centralization, formalization, scale, slack, and specialization (Subramanian and Nilakanta, 1996). MFI firm's innovativeness can manifest in various forms, such as offering digital financial solutions, tailoring loan products to specific client segments, or implementing efficient credit assessment methods Nyamache, (2024). MFI are able to enhance their relevance, expand their outreach, and ultimately contribute more effectively to financial inclusion and poverty reduction, while staying competitive in an ever-changing industry through innovativeness Kayongo & Mathiassen, (2023).

Researchers (Ruvio *et al.*, 2014) have examined the facets of organizational innovativeness, including creativity, openness, future orientation, risk-taking, and proactiveness. Likewise, Normann (1971) addressed the connection between organizational structures and innovativeness. Innovativeness is seen as essential not only for the success or survival of a company organization but also for improving its performance (Wang *et al.*, 2020). Innovation significantly influences business performance by establishing a superior market position that leads to competitive advantage and enhanced performance (Walker, 2004). Hult *et al.* (2004) conducted study to assess the impact of innovativeness on business performance and identified a significant influence of innovativeness on financial outcomes. Consequently, it is advised that managers enhance the innovativeness of their enterprises to achieve higher company performance. Auken *et al.* (2008) concluded that firms that endorse and facilitate creative behaviours will achieve greater performance relative to their

competitors. An innovative culture facilitates innovative activities and is essential for enhancing a firm's ability to develop, utilize, and apply unique ideas, products, technologies, and services that can lead to improved financial performance (Yousaf et al., 2020). Gunday *et al.*, (2011) concluded that various types of innovation significantly impact several dimensions of financial performance in manufacturing organizations. Tuan *et al.*, (2016) determined in their study about the impact of innovation on the financial performance of supporting industries in Vietnam that a greater commitment to creative activities correlates with enhanced performance.

Innovation is a crucial sub-variable of corporate entrepreneurship that can predict sustainable performance. Tantau, *et al.*, (2015) pointed that corporate entrepreneurship should promote innovativeness in the organization. Innovativeness creates competitive advantage to the organization. It leads to the development of products, services, and processes that are more environmentally friendly, socially responsible, and economically efficient.

Martín-Rojas, *et al.*, (2020) argues that in Tunisia, corporate entrepreneurship strategies had significantly lead to improvement of performance. Innovation allows an organization to respond to evolving customer preferences and regulatory changes, ensuring long-term viability. Since it has strengthened in organization learning process that improves innovation in market analysis and development of new products (Cherif, 2022).

Innovativeness according to Barbieri-da-Rosa, *et al.*, (2022) is an entrepreneurial characteristic that enable them to use new ideas in developing, processing, marketing and management of products. A study in China by Huang *et al.*, (2022) revealed that

innovativeness had a relation with performance of women owned firms. Similar, finding in Nigeria by Adim, *et al.*, (2018) revealed that innovativeness contributed to success of female owned business. However, a study in Malaysia by Falahat *et al.*, (2018) found insignificant effect of inactiveness on financial performance. However, these studies concentrated on performance of women enterprise rather than the sustainability of Micro-Finance.

2.1.2.2 Concept of Pro-Activeness

Pro-activeness, as a key component of corporate entrepreneurship, refers to an organization's ability to take initiative, anticipate changes, and actively seek out new opportunities or address challenges before they become issues (Corrêa *et al.*, 2022). It involves being forward-thinking, identifying emerging trends, and taking prompt, decisive actions to stay ahead of competitors and market shifts.

Proactiveness signifies an opportunity-seeking, forward-thinking conduct marked by the anticipation of market developments and pre-emptive actions against competitors. The proactive generation and recognition of possibilities have significantly influenced numerous entrepreneurial business models (Kreiser *et al.*, 2010; Tang *et al.*, 2013). Proactiveness allows companies to more swiftly recognize and capitalize on opportunities presented by the business environment (Zahra and Covin, 1995). It also signifies the capacity to swiftly address unmet customer demands by converting entrepreneurial opportunities into customer value. Proactiveness enhances the ability to foresee future demand, enabling timely actions that convert fluctuating market situations into competitive advantages (Covin & Slevin, 1989; Menguc & Ozanne, 2005). Concerning sustainable performance, proactive enterprises are more inclined to identify and capitalize on favourable ecological business opportunities (Lumpkin *et al.*,

2013; Dean & McMullen, 2007). Opportunity-seeking activities, such as environmental scanning, enable enterprises to enhance their awareness of ecological opportunities (Kreiser *et al.*, 2010) and get profound insights for generating social value (Lumpkin *et al.*, 2013). Moreover, proactive conduct enables enterprises to address environmental concerns more efficiently and thoroughly (Lumpkin *et al.*, 2013).

For Microfinance Institutions (MFIs), pro-activeness is essential to staying competitive and relevant in a rapidly changing financial environment. MFIs must continuously monitor external factors such as market dynamics, regulatory shifts, and socio-economic changes within the communities they serve to remain agile and responsive (Ahmad, 2022).

According to Gidda (2021), proactive MFIs are better equipped to anticipate and respond to emerging challenges such as shifts in client demand, economic volatility, or new regulatory requirements. This forward-thinking approach enables them to offer more relevant and sustainable financial products and services, ensuring long-term growth and resilience. Furthermore, pro-activeness ensures that MFIs are not just reactive to changes, but also able to shape their strategies in anticipation of future needs, ultimately benefiting both the organization and its clients (Mengesha, M., & Mishra, S. 2023).

Pro-activeness is also a critical determinant of sustainable performance. As Aigboje (2018) notes, proactive organizations actively seek out opportunities and take decisive actions to address challenges. Particularly during the early years of an enterprise's growth, pro-activeness, coupled with innovativeness and risk-taking, fosters success. Organizations that prioritize pro-activeness are often more capable of identifying and

addressing environmental, social, or economic issues early, allowing them to implement solutions that enhance sustainability. For example, pro-active MFIs are better prepared to adjust to changes in environmental regulations, consumer preferences, and social needs, ensuring they remain relevant in a competitive market.

Linton (2019) highlights that pro-activeness, along with risk-taking and innovativeness, forms the foundation of entrepreneurial orientation, significantly influencing organizational performance. Studies by Ogbari *et al.*, (2022) demonstrate that pro-activeness is linked to higher customer satisfaction, further emphasizing its impact on both employee satisfaction and organizational outcomes. Additionally, research by Bosire *et al.*, (2021) shows that pro-activeness positively impacts the performance of youth-led micro and small businesses in Kenya, while Wambugu *et al.*, (2015) found a similar effect on the performance of small and medium agro-processing firms.

While much of the literature has focused on business performance, the current study shifts the focus to sustainable performance, specifically in microfinance institutions. By assessing the role of pro-activeness in the context of MFIs, this research contributes to understanding how proactive strategies can drive long-term sustainability, ensuring that MFIs not only thrive financially but also contribute to broader social and environmental goals.

2.1.2.3 Concept of Risk Taking

Risk-taking, a critical element of corporate entrepreneurship, involves an organization's willingness to explore uncharted territories, invest in innovative ventures, and accept the inherent uncertainty or potential loss that comes with such decisions (Kim & Park 2021). This entrepreneurial trait is essential for driving long-term innovation, growth,

and competitiveness. In the context of Microfinance Institutions (MFIs), risk-taking is particularly crucial due to the nature of their mission to provide financial services to underserved and marginalized populations. MFIs often lend to clients without traditional collateral or established credit histories, making risk assessment and management a fundamental part of their operations (Deje, 2019).

MFIs must balance the need for financial sustainability with their broader mission of promoting financial inclusion. While extending loans to high-risk clients carries certain challenges, prudent risk-taking, when coupled with effective risk management strategies, enables MFIs to expand their services, empower entrepreneurs, and contribute to poverty alleviation without compromising their financial health. By carefully navigating these risks, MFIs can build resilience, drive innovation, and make a lasting social and economic impact (Hasan *et al.*, 2025).

Risk-taking, as a dimension of corporate entrepreneurship, is closely linked to sustainable performance. Organizations that embrace calculated risks are often more innovative and adaptable, especially when pursuing new ideas, products, or markets. According to Rodríguez-Peña (2016), corporate entrepreneurship fosters opportunities in employment, cultural transformation, value creation, and technological advancements, benefiting both individual entrepreneurs and broader ecosystems.

In terms of environmental sustainability, for example, organizations willing to invest in eco-friendly initiatives such as renewable energy projects or waste reduction programs may face initial risks but can ultimately reap significant long-term environmental benefits. Similarly, taking calculated risks in addressing social and economic

disparities, such as poverty reduction or promoting equitable access to resources, can lead to sustainable societal outcomes.

Research on risk-taking in entrepreneurship often focuses on small and medium-sized enterprises (SMEs). Studies conducted by Raham *et al.* (2021) in Bangladesh, Egele *et al.* (2018) in Nigeria, Wambugu *et al.* (2015) in Kenya, and Kitigin (2017) in Kenya have reported that risk-taking positively influences firms' performance. While, Adim & Poi (2019), focusing on women-owned businesses in Nigeria, found that women who embraced calculated risks were more likely to achieve better business performance. Also, Boabeng and Cai (2018) reported that entrepreneurial risk-taking positively influences corporate performance.

These studies underscore the significant impact of risk-taking on organizational growth and success. However, none of these studies specifically focus on the sustainable performance of microfinance institutions. This highlights a gap in the literature, as much of the existing research focuses on general business performance rather than on sustainable performance, particularly within MFIs.

2.1.3 Concept of Ambidextrous Leadership

Ambidextrous leadership is an emerging management approach that blends two distinct leadership styles transactional and transformational to create a balanced leadership model capable of addressing both short-term operational efficiency and long-term strategic vision. Transactional leadership is focused on achieving specific goals, managing tasks, and ensuring that followers meet set expectations through rewards and corrective actions (Nurlina, 2022). In contrast, transformational leadership aims to inspire and motivate employees, fostering innovation, creativity, and a shared sense of

purpose to guide the organization toward future growth and adaptation (Berraies & Zine El Abidine, 2019).

Ambidextrous leadership integrates both transactional and transformational approaches, enabling leaders to leverage the strengths of both styles. This balance is particularly crucial in fostering a competitive advantage, as leaders who can engage in both "exploration" (encouraging creativity, innovation, and autonomy) and "exploitation" (focusing on goal achievement and upholding norms) are better equipped to navigate complex and changing environments (Martínez-Climent *et al.*, 2019).

Exploratory leadership behaviors emphasize openness and creativity, complement exploitative behaviors that focus on achieving objectives and maintaining stability. Alghamdi (2018) emphasizes that ambidextrous leadership, through its combination of opening (transformational) and closing (transactional) behaviors, fosters a work environment where employees are encouraged to explore new ideas while simultaneously ensuring the achievement of organizational goals. This dual approach promotes both innovation and efficiency, leading to greater creativity and enhanced organizational performance. The ability to balance these opposing behaviors is particularly important for fostering sustainable growth in today's dynamic business landscape Safarli, (2024).

The attainment of ambidexterity within an organization is fundamentally a leadership challenge stemming from the enabling organizational elements cultivated by its leaders (Raisch et al., 2009). The current literature on ambidexterity classifies ambidextrous leadership into two distinct categories: exploration (opening) and exploitation (closing) (Alghamdi, 2018; Zacher and Wilden, 2014). Opening leadership pertains to behaviors

intended to increase variability in follower actions, characterized by their outcomes, such as exploratory behaviors in followers, including deviations from typical tasks (Alghamdi, 2018; Zacher et al., 2016).

Open leadership behaviors facilitate follower exploration activities, including the generation of new knowledge, the encouragement of alternative task execution methods, the provision of space for novel ideas, the acceptance of errors, and the promotion of skills and processes through inquiry, diversity, experimentation, risk-taking, discovery, and innovation to ensure future viability (Oluwafemi et al., 2020; Rosing *et al.*, 2011). Closing leadership similarly denotes diminished diversity in follower behaviors and is seen as precursors to follower exploitation behaviors, such as engaging in regular or routine activities or concentrating on executing well-defined duties (Alghamdi, 2018; Rosing *et al.*, 2011). Closing leadership behaviors result in follower exploitation activities, including implementing corrective actions, establishing specific guidelines, adhering to plans, monitoring goal attainment, creating routines (Zacher and Rosing, 2015; Rosing *et al.*, 2011), and utilizing existing knowledge, skills, and processes to enhance efficiency and execution for optimal current outcomes (Uhl-Bien and Arena, 2018). Ambidextrous leadership encompasses the interplay between two contrasting leadership behaviors: opening and closing. The leader adapts behaviors in response to situational changes. Consequently, ambidextrous leadership is defined as the proficiency in managing opposing yet complimentary aspects of each flexibility type, together with the capacity to transition between these aspects fluidly (Zarb *et al.*, 2017).

Current research on ambidextrous leadership confirms that authoritative, transactional, and transformational leadership styles represent distinct leadership behaviors. The

ambidextrous leadership idea posits that leaders must exhibit both opening and shutting behaviors in accordance with the demands of innovative tasks to enhance innovation outcomes. Therefore, if leaders push followers to demonstrate these behaviors at the appropriate moment, the results of innovation tasks will be enhanced (Klonek *et al.*, 2021). It is not produced through top-down leadership, charisma, vision, or management by objectives; rather, it necessitates multiple leaders collaborating across organizational tiers (Birkinshaw and Gibson, 2004). Rosing *et al.*, (2011) defined ambidextrous leadership as “the ability to foster both explorative and exploitative behaviors in followers by increasing or reducing variance in their behavior and flexibly switching between those behaviors”. Ambidextrous leadership is a leadership style in which the leader assists people throughout the innovation process by exhibiting flexibility and effortlessly transitioning between the exploration and exploitation phases of invention (Zacher *et al.*, 2014; Rosing *et al.*, 2011). Ambidextrous leadership suggests that a leader motivates a team to explore diverse ideas without being limited by existing norms or the leader's own considerations (Zacher *et al.*, 2014). The notion of ambidextrous leadership posits that the techniques of granting autonomy and exercising direction can be integrated into a comprehensive leadership framework. Establishing a synergy between autonomy and guidance can be highly beneficial if leaders and team members successfully coordinate their decisions (Bledow *et al.*, 2011).

Despite the abundance of concepts within many leadership theories, there is a lack of agreement on the definition of effective leadership (Gordon and Yukl, 2004). The ambidextrous leadership theory has recently been introduced as a novel framework for comprehending and directing leadership in both explorative and exploitative innovative

practices. It comprises two complimentary sets of leadership behaviors opening and closing behaviors that align with organizational and environmental demands (Oluwafemi *et al.*, 2020). Leadership theorists regard leader behavior as a significant predictor of employee creativity and innovation in the workplace (Zacher *et al.*, 2014; Zhou & Hoever, 2014). Nine years subsequent to Rosing *et al.*, (2011) introducing the concept of ambidextrous leadership, their ideas persist in significantly influencing our understanding and application of leadership theory. Rosing *et al.*, (2011) examined the leadership behaviors that most significantly impacted company innovation, specifically analyzing the actions of leaders that interacted directly with innovation teams (Probst *et al.*, 2011). Subsequent years saw leadership researchers endeavoring to develop, broaden, and empirically substantiate the idea of ambidextrous leadership, which has undoubtedly evolved into one of the most extensively investigated leadership paradigms (Ma *et al.*, 2019; Mueller *et al.*, 2018). The ambidextrous leadership theory has been extensively utilized in business research in recent years (Duc *et al.*, 2020). Zarb *et al.*, (2017) assert that ambidextrous leadership transcends a singular style, representing a synthesis of three leadership approaches: flexible, situational, and versatile leadership. Zacher *et al.*, (2016), Zacher and Rosing (2015), and Rosing *et al.* (2011) utilized the ambidextrous leadership theory to examine leaders' strategies for exploration and exploitation in relation to innovativeness. The ambidexterity theory of leadership posits that the interplay of two distinct leadership behaviors can forecast or enhance results at both individual and organizational levels, such that organizational outcomes are elevated when both leadership behaviors are pronounced. Ambidextrous leadership can enhance organizational ambidexterity by flexibly adapting behaviors to resolve disagreements or tensions (Baskarada *et al.*, 2016).

Studies indicate that firms exhibiting elevated levels of both exploration and exploitation activities experience superior sales growth rates and organizational performance (Karman and Savaneviciene, 2020; Raisch and Birkinshaw, 2008) compared to those with diminished levels in either or both activities. Business leaders can enhance their organization's growth and competitiveness by exhibiting both opening and closed leadership characteristics to promote employee creativity (Oluwafemi et al., 2020). Furthermore, ambidextrous leadership positively influences organizational capabilities, including team learning (Duc *et al.*, 2020), organizational reform (Tuan, 2017), work crafting (Ma et al., 2019), project performance (Zheng *et al.*, 2017), entrepreneurial orientation (Luu, 2017), and innovation performance (Gerlach *et al.*, 2020). Rosing *et al.*, (2011) contended that leaders must cultivate both exploratory and exploitative behaviors in their subordinates, asserting that a synergy of elevated levels of both employee exploration and exploitation behaviors will result in superior inventive performance. A burgeoning corpus of literature associate's ambidextrous leadership with innovation-driven results (Gerlach et al., 2020) and staff knowledge-sharing (Duc et al., 2020).

Ambidextrous leaders cultivate and enhance employee creativity while maintaining business stability (Bledow *et al.*, 2011; Rosing *et al.*, 2011), ultimately attaining organizational ambidexterity (Prieto-Pastor and Martin-Perez, 2015; Probst et al., 2011; Rosing et al., 2011; Tushman *et al.*, 2011). Ambidextrous leadership involves an emotional equilibrium between continuity and change, alleviating employees' apprehension over uncertainty, fostering proactivity, and enhancing their self-efficacy to engage in innovative, risk-taking behaviors (Martínez-Climent *et al.*, 2019).

Empirical evidence supports the relationship between ambidextrous leadership and sustainable performance. For instance, Katou *et al.*, (2023) examined ambidextrous leadership in Greek firms and found that the transformational (exploratory) aspect of leadership was more closely linked to sustainable performance than the transactional (exploitative) aspect. This suggests that while both leadership styles contribute to organizational success, the transformational component has a more significant impact on long-term sustainability.

Further studies, such as those by Egwakhe *et al.* (2022) and Bawono *et al.* (2022), have explored the role of ambidextrous leadership in improving performance across various industries. In China, Egwakhe *et al.* (2022) found that ambidextrous leadership fosters an ambidextrous culture within organizations, which in turn enhances project performance. Similarly, Bawono *et al.* (2022) highlighted the direct relationship between ambidextrous leadership and organizational performance, facilitated through innovative digital models.

While Martínez-Climent *et al.* (2019) focused on the intersection of ambidextrous leadership and social entrepreneurship, identifying that ambidextrous leaders encourage pro-activeness, creativity, and risk-taking. Alobari *et al.* (2019) and Beisenbina *et al.* (2023) demonstrate the importance of leadership and governance in driving sustainability, with findings indicating that leadership qualities significantly impact business viability. However, studies on ambidextrous leadership in the context of Microfinance Institutions (MFIs) in Kenya are limited.

The ambidextrous leadership model, as developed by Alghamdi (2018), demonstrate the interplay of a leader's opening and closing behaviors encouraging exploration and

focusing on exploitation positively affects employee engagement and organizational outcomes. This research highlights the importance of adopting ambidextrous leadership as a strategy for fostering corporate entrepreneurship and achieving sustainable performance, particularly in industries like microfinance, where balancing innovation with stability is necessary for competitive advantage and sustainability.

In conclusion, while existing literature has explored the impact of ambidextrous leadership on organizational sustainability, there is a notable gap in understanding its influence on corporate entrepreneurship and sustainable performance, particularly within MFIs. The current study contributes to this growing field of research by examining the moderating role of ambidextrous leadership in enhancing the effect of corporate entrepreneurship on sustainable performance of MFI's sustainability.

Despite, the numerous studies linking ambidextrous leadership with firm outcome, there are several criticisms of this form of leadership. First, research on ambidextrous leadership predominantly concentrates on a single country or sector, hence constraining the generalizability of the findings. Numerous studies have gathered empirical data exclusively from the organization's leaders or subordinates, which raises issues around common method bias, self-report bias, and the conflation of leadership actions with their desired results (Oluwafemi et al., 2020; Berraies and Abidine, 2019). Secondly, there exists criticism regarding the measurement scales for ambidextrous leadership, as the current literature provides only a singular fundamental scale that assesses the frequency of leaders' engagement in opening and closing behaviors in a general context, rather than evaluating whether these behaviors are appropriately sequenced according to the prevailing innovation circumstances or if leaders are transitioning between them without a discernible rationale (Wang *et al.*, 2021). Therefore, a methodical approach

to the creation of novel assessment scales for ambidextrous leadership is necessary. Third, several significant variables affecting a broader spectrum of employee and organizational outcomes have not been accounted for (Luo et al., 2018). The current studies did not account for mediating factors such employee behavior or moderating variables such as employee characteristics (Martínez-Climent et al., 2019). Fourth, a significant portion of the empirical study on ambidextrous leadership is hindered by limited sample sizes, which diminishes the validity of statistical inferences. This issue is prevalent in this region and within the extensive literature on organizational behavior (Aguinis & Vandenberg, 2014). The existing literature examines the impact of ambidextrous leadership on follower behavior and organizational performance. The current results do not allow for the determination of various leadership styles and climate elements that may affect innovation and follower behavior. The dynamic and fluid connection between leadership and followership necessarily produces ambiguity, contradiction, and conflict (Tourish, 2014).

2.2 Theoretical Review

The current study was anchored on several theories: the innovation theory of entrepreneurship, the contingency theory, innovation theory of entrepreneurship and triple bottom line theory. The theories are discussed in the sub-sections.

2.2.1 Innovation Theory of Entrepreneurship

Schumpeter asserts that, an innovation is just a "new combination of factors of production" that obviates the need for the repetitive cycle of economic and market activities (Nteere, 2021). Schumpeter claims that an entrepreneur is someone who creatively destroys the immobile circular flow of activity and market supply. The highest level of risk, which is only present in this process, is not accepted by

conventional business people. According to the theory, entrepreneurial activity is the primary engine of economic growth since entrepreneurs create new products and markets while upgrading current goods and services, resulting in the creation of new wealth.

Schumpeter, contends that entrepreneurship is fundamentally rooted in invention (Schumpeter, 1934). Innovation theory, a leading perspective on entrepreneurship, posits that entrepreneurs engage in business not solely for personal gain, but also to instigate positive disruption and foster development within the economy and society as a whole (Drucker, 1985). An entrepreneur uses creative skills to develop innovative products that address societal issues. The innovation theory of entrepreneurship posits that entrepreneurs enhance manufacturing processes, create new markets, locate development prospects, uncover new sources of raw materials, introduce novel goods, and establish businesses. These factors collectively address demand issues, alleviate unemployment, and foster economic growth and development (Sriram, et al. 2020).

In Schumpeterian general economic theory, economic development transpires through a dynamic cycle of expansion and contraction. According to Mbaegbu's (2008) synthesis of Schumpeter's ideas, the depression that ensues after a boom is instigated by the entrepreneur's introduction of an innovation. The recession or depression occurs by a process of "creative destruction," a term coined by Schumpeter to describe market saturation and decline. Through innovation, established companies witness their markets being undermined by the emergence of new competing products, while new enterprises provide traditional items at significantly cheaper prices, thereby gaining a competitive edge. The process compels those established enterprises that cannot compete to fail or declare bankruptcy. When the state of instability (disequilibrium)

within the industry renders it unappealing for new enterprises to enter, the economic cycle concludes. The cycle recommences upon the establishment of a new equilibrium that surpasses the previous one, hence initiating a fresh wave of innovations and the repetition of the business cycle.

In conclusion, economic development within the Schumpeterian framework is an irregular and discordant process that fluctuates akin to ocean waves. According to Schumpeter, the availability of entrepreneurship is determined by the profit rate and the prevailing 'social climate'. The author further asserted under this model that a robust economic system typically fosters entrepreneurship, but a stagnant economic system inhibits it. This perspective posits that a development policy favouring government involvement or laws aimed at restricting profit, redistributing money, or curtailing private gain such as government price controls and taxation will ultimately dissuade entrepreneurship. In Schumpeter's framework, the variable 'social climate' represents a multifaceted phenomenon that includes the entire social, political, and socio-psychological milieu in which the entrepreneur must function and invest.

Kassa and Tsigu (2022) assert that an entrepreneur is someone who engages in creative endeavours. The innovator who introduces or commercializes new goods and services is known as an entrepreneur; he continuously searches for innovative applications and combinations for the production factors while concentrating on the originality of the market offerings. These inventors, who take on risks and uncertainty to produce newer, fresher, and ground-breaking items, owe a great deal to society.

Schumpeter also made an interesting distinction between innovator and inventor, which may seem comparable to laypeople but not to him. According to the author, an inventor

is someone who discovers a novel method of doing something, a novel product technique, or a novel use of a factor of production (Rønning & Knutagard, 2015). The innovator, on the other hand, is the one who applies such insights to new products and services. An innovator is more interested in the economics and tangible aspects of the product than an inventor is in the technical aspects of the product. Schumpeter further argues that, an inventor may occasionally end up being an innovator. An innovator is more valuable because he exploits his originality to generate commercial value in addition to simply creating or discovering something new (Sener, *et al.*, 2017).

Inventors are individuals who come up with new ideas, while innovators are those who put those ideas into practice for the first time and gain a competitive edge in the market. Utilizing or relying on anything that has never been attempted before is risky, and since entrepreneurs must assume this risk, innovation becomes their main duty and characteristic. This theory hypothesizes that on risk-taking, innovativeness and proactiveness of entrepreneur may enhance a firm's economic goals, while ambidextrous leadership style may have a moderating effect.

Critics of this theory argues that, the theory places too much emphasis on the inventive roles that entrepreneurs play. The structuring elements of entrepreneurship were disregarded. It is impossible to overlook the risk-taking role of the entrepreneur; which Schumpeter had entirely overlooked.

2.2.2 Ambidextrous Leadership Theory

Ambidextrous Leadership Theory was advanced by Rosing, Frese, and Bausch in 2011. The theory proposes that effective leaders are those who are capable of switching flexibly between two complementary leadership behaviors: exploitative (task-oriented,

efficiency-driven) and explorative (innovation-oriented, change-driven), depending on the organizational need or context (Kafetzopoulou, 2022). This leadership style enables organizations to simultaneously pursue operational efficiency and innovation a duality essential for survival and long-term performance in dynamic environments. The core tenets of the theory emphasize adaptability, behavioral flexibility, and the leader's ability to manage paradoxes by integrating both transformational and transactional leadership characteristics to promote both stability and change.

As argued by Jia *et al.*, (2022), ambidextrous leadership theory is its relevance in the current volatile and competitive business environments where leaders must balance the need for exploiting existing capabilities and exploring new opportunities. Unlike classical leadership theories that promote a singular style, this theory acknowledges that rigid adherence to only transformational or transactional leadership may be insufficient. Instead, leaders must know when to drive routine operations with structure and discipline, and when to encourage creativity, experimentation, and risk-taking. In the context of this study, the theory aligns well with the concept of corporate entrepreneurship, which inherently requires balancing risk, innovation, and proactive strategies to achieve sustainable performance.

Critically, while the theory is praised for its dynamic and flexible approach, it also poses challenges in practical implementation according to Malik, *et al.*, (2024). Not all leaders possess the cognitive and behavioral flexibility needed to shift between opposing styles. Additionally, Ounyang *et al.*, (2022) pointed out that organizational culture and support systems must also be conducive to such dual approaches, otherwise, leaders may struggle to apply ambidextrous strategies effectively. However, in the domain of deposit-taking microfinance institutions in Kenya where operational sustainability must

be achieved alongside innovation the ambidextrous leadership model becomes highly applicable. It supports the pursuit of strategic initiatives that enhance long-term performance while maintaining daily operational stability.

This form of leadership can enable organizations to transform entrepreneurial efforts into tangible performance outcomes (Nobakht, *et al.*, 2021). Specifically, ambidextrous leadership is expected to strengthen the positive effects of innovativeness, pro-activeness, and risk-taking on sustainable performance by creating an environment where both novel ideas and executional efficiency are valued and managed effectively.

In the context of this study, ambidextrous leadership may influence the relationship between corporate entrepreneurship dimensions (innovativeness, pro-activeness, and risk-taking) and sustainable performance of MFIs.

2.2.3 Triple Bottom Line Theory

The first era of sustainability commenced in the 1970s, during which the term primarily referred to environmental sustainability. Garetti and Taisch (2012) defined sustainability as the process of fulfilling economic, social, and environmental criteria by utilizing minimal natural resources and adopting advanced technology, thus safeguarding the environment and enhancing quality of life.

In his foundational work, *Essay on the Principles of Population*, published in 1987, Thomas Malthus expressed concern regarding unrestrained human consumption and its potential to expedite economic expansion (Malthus, 2011). In response to Thomas Malthus's concerns, the World Commission on Environment and Development proposed the concept of sustainable development to preserve an unspoiled environment for future generations. In 1994, Elkington coined the term "triple bottom line" to

encapsulate the comprehensive perspective of sustainable development, delineating its three components: social, environmental, and economic, referred to as "people, planet, and profit" (Elkington, 1997; Zahari & Zahari, 2021).

The theory suggests that organizations, including financial institutions, should evaluate their performance not only by profitability but also by how they contribute to social well-being and environmental conservation. Moreover, governance anchored in ethical leadership, transparency, and stakeholder accountability is increasingly recognized as a fourth critical dimension in ensuring long-term sustainability.

TBL Performance involves evaluating and measuring an organization's commitment and success based on three interconnected dimensions: environmental, economic, and social (Srivastava, *et al.*, (2022). This represents a thorough approach to performance assessment, taking into account the organization's impact on individuals, the environment, and financial outcomes (Layaoen *et al.*, 2023; Tiwari & Khan, 2019). The assessment examines an organization's ecological impact and commitment to sustainable practices, including energy consumption, waste management, greenhouse gas emissions, water usage, and the adoption of environmentally friendly technologies (Castiglione *et al.*, 2022; Y. Li *et al.*, 2020). From an economic standpoint, it pertains to an organization's financial performance, profitability, and economic growth by evaluating elements such as revenue creation, cost management, and return on investment (Dev *et al.*, 2020; Subramaniam *et al.*, 2019). From a social standpoint, it relates to the impact a corporation exerts on society, including its employees, customers, suppliers, and local communities (Layaoen *et al.*, 2023; Pitkänen *et al.*, 2023). This includes employee well-being, diversity and inclusivity, consumer satisfaction, ethical company practices, and community engagement (Asokan *et al.*,

2022).

Prior research has sought to delineate the distinct functions of external forces (society) and internal resources, along with their interrelations with organizational decision-making (Tatoglu *et al.*, 2016; Zhang and Dhaliwal, 2009; Zheng *et al.*, 2013). Bag *et al.*, (2021) addressed the influences of external stakeholders, while Ranta *et al.*, (2018) identified the pressures from the institutional context. Aslam *et al.*, (2018) asserted that industries ought to adopt green initiatives in their operations, ensuring enough health care and safety to improve their economic, social, and environmental performance. TBL is grounded in stakeholder theory. Consequently, the fundamental premise is that a company ought to evaluate its performance in connection to stakeholders, including local communities and governments, rather than solely focusing on those with whom it maintains direct transactional interactions, such as employees, suppliers, and consumers (Javed, *et al.*, 2020).

As public emphasis has shifted towards environmental sustainability, corporations have been urged to consider their broader impact on the surrounding world. A core principle that has been promoted is that corporations must encompass all values in their reporting to mitigate the risk of their operations harming world resources, both for the present and for future generations. This deliberate understanding and alteration of policies and practices is referred to as "sustainable development." World Commission on Environment and Development, 1987. The expansion of the comprehensive "world sustainability" perspective is evident in the increasing number of organizations that have commenced reporting beyond mere financial operations. In 2010, prominent corporations including Weyerhaeuser Company, The Boeing Company, Pricewaterhouse Coopers, The Procter and Gamble Company, Sony Corporation, and

Toyota Motor Corporation, among others, established the World Business Council for Sustainable Development (WBCSD), which aims to develop a pathway towards a world necessitating fundamental alterations in governance structures, economic frameworks, and business and human behaviour. The council asserts that “the changes are essential, attainable, and present significant business prospects for companies that integrate sustainability into their strategy” (WBCSD, 2010).

To establish a corporation dedicated to genuine sustainability, all participants must possess a comprehensive awareness of the significance of "sustainability." The focus must shift from financial performance to a broader perspective of the company's global effect. Upon sharing this information, it is essential to examine the community to identify the environmental concerns expressed by the public.

Aligning with these socialistic movements and departing from individualism is essential for achieving long-term, sustainable success (Rogers & Ryan, 2001). John Elkington created a method for assessing sustainability known as triple bottom line accounting (Elkington, 1997). TBL reporting is a corporate accounting method that enhances stakeholders' understanding of the organization by transcending typical financial metrics to disclose its influence on the surrounding environment. It is a unified initiative to integrate economic, environmental, and social factors into a company's assessment and decision-making processes (Wang & Lin, 2007).

TBL reports posit that considerable diversity in both format and content, reflecting the distinct characteristics of the companies that produce them. No standardized report structure has been established. A result of this is that the reader of sustainability reports must navigate through interviews, testimonials, case studies, and other storytelling

approaches to locate information that may be entirely unreported. Although the present condition of TBL is not ideal, it does not undermine its importance. According to the prevalent management adage, “if you don’t measure it, you can’t manage it,” it might be interpreted as “if you can’t manage it, you can’t change it” (Sherman, 2012). TBL reporting is an essential prerequisite for enterprises to assess and convey multiple facets of their effect on the world, beyond conventional financial reports Sherman, (2012).

Microfinance institutions (MFIs), particularly in developing countries like Kenya, serve as pivotal vehicles for inclusive growth by offering financial services to marginalized populations (Varga, 2018). In this context, the TBL framework offers a relevant lens through which sustainable performance can be assessed. Economic performance is reflected in operational sustainability and financial inclusion; social performance encompasses empowerment, poverty alleviation, and support for women and youth; and environmental responsibility involves minimizing negative ecological footprints. Governance, an emerging theme within the TBL framework, ensures that decision-making processes are equitable and ethically grounded, especially in institutions targeting vulnerable groups.

Despite its wide appeal, TBL theory is not without limitations. Critics argue that the integration and measurement of the three dimensions are often ambiguous and difficult to standardize. For instance, Srivastava *et al.*, (2022) note that pursuing all three outcomes simultaneously can lead to trade-offs or conflicting priorities within organizations, especially where financial resources are limited. Additionally, weak governance structures or regulatory environments can make it difficult to uphold transparency and accountability. Nevertheless, the value of TBL lies in promoting a

holistic approach to performance, pushing firms to look beyond short-term profits and align their operations with long-term societal and environmental goals.

In relation to the current study, TBL theory provides a foundational framework for understanding sustainable performance the core dependent variable. It aligns with the three dimensions of corporate entrepreneurship innovativeness, pro-activeness, and risk-taking which inherently drive firms to develop new products, respond to emerging needs, and explore new markets while managing associated risks. The integration of ambidextrous leadership into this framework adds further depth.

Ambidextrous leaders who can alternate between exploration (innovation) and exploitation (efficiency) are well-positioned to balance the competing demands of economic growth, social impact, and environmental care. As supported by Yalcin and Schniederjans (2019), such leadership styles enhance adaptability and responsiveness, enabling MFIs to innovate responsibly and sustain performance across all TBL dimensions. Thus, the TBL theory supports the study's dependent variable corporate entrepreneurship and leadership dynamics can jointly influence sustainable performance MFIs.

2.3 Literature Review

This section discusses the empirical literature on the recent variables. Corporate entrepreneurship, ambidextrous leadership and sustainable performance of MFIs. Empirical literature concerning corporate entrepreneurship practices, ambidextrous and sustainable performance were examined in this section. The literature was used to identify the research gaps and conceptualize the current study.

2.3.1 Corporate Entrepreneurship and Sustainable Performance

Le (2022) conducted a study to examine how Romanian companies navigate the balance between economic objectives and environmental responsibilities, focusing on the role of managerial perceptions regarding financial outcomes, innovation, and proactive orientations in shaping sustainability practices. Adopting a novel management-centered lens, the study investigated key organizational drivers of sustainable behavior. Utilizing a two-pronged methodology, qualitative data were gathered through a questionnaire distributed to 149 CEOs and CFOs, capturing insights into financial strategies and health, while statistical analysis was employed to assess long-term environmental and economic sustainability. The findings revealed moderate to strong positive association between financial performance, innovation, proactive orientation, and ecological outcomes.

Although proactive orientation and innovation significantly influence ecological policies, financial performance exerts a more indirect, moderate impact. Notably, transport companies exhibit the lowest propensity for adopting green strategies, while company age shows no substantial influence. The study highlighted the intricate relationship between sustainability and economic performance, offering meaningful insights into the barriers and opportunities Romanian firms face in promoting environmental initiatives.

Regmi *et al.*, (2023) conducted a study to investigate the role of entrepreneurship strategy and natural resources management, including extraction and utilization, conservation and prevention, and the management of water and land resources in promoting sustainable performance. The research employed a structured survey administered between January and March 2023 to gather primary data. Structural

equation modeling was used to conduct an in-depth analysis of the relationships among the variables. The results revealed that while entrepreneurship strategies play a significant role in influencing the management of natural resources, the direct effect of entrepreneurship strategy on sustainable performance was not statistically significant. Instead, natural resources management fully mediates this relationship, highlighting its critical role in linking entrepreneurial strategies to sustainability outcomes.

Yasmeen and Tan (2024) conducted a study to investigate the interplay between green human resource management (Green HRM), corporate entrepreneurial orientation, and green innovation, and their collective impact on environmental performance. The findings of this study contribute to the existing literature by demonstrating how findings of this study internal organizational practices foster environmental sustainability. Structural equation modeling was employed to analyze the dataset. The findings reveal that Green HRM significantly enhances green innovation capabilities, and corporate entrepreneurial orientation positively moderates the relationship between Green HRM and green innovation. Furthermore, green innovation mediated the relationship between Green HRM and environmental performance.

Woo (2025) conducted a study to examine the relationship between strategic leadership and organizational performance, with a specific focus on the mediating roles of corporate entrepreneurship and intrapreneurship within small and medium-sized enterprises (SMEs) in South Korea. Utilizing a cross-sectional survey design, the study targeted SMEs with at least three years of operational experience. Out of 532 distributed questionnaires, 112 valid responses were collected and analyzed using regression analysis. The findings demonstrated that strategic leadership positively influences both

corporate entrepreneurship and intrapreneurship, which subsequently enhance organizational performance.

Soenardi (2022) conducted a study to investigate the role of corporate entrepreneurship in mediating the relationship between entrepreneurial leadership and corporate culture with corporate performance at PT. The target population included employees from assistant supervisor to general manager levels, with a final sample of 76 respondents selected through a saturated sampling method. Structural Equation Modeling (SEM) using Partial Least Square (PLS) was applied for data analysis. The results revealed that both entrepreneurial leadership and corporate culture significantly influence corporate entrepreneurship. Additionally, corporate entrepreneurship was found to have a significant effect on corporate performance. However, neither entrepreneurial leadership nor corporate culture directly influenced corporate performance.

Zhang *et al.*, (2024) conducted a study to examine the impact of green entrepreneurial orientation (GEO) on the sustainable performance (SP) of agribusinesses in China, introducing green intellectual capital (GIC) and sustainable business model innovation (SBMI) as sequential mediators in the process. Empirical analysis was based on data collected from 621 agribusinesses. The findings revealed that GEO has a direct positive effect on SP. Furthermore, both GIC and SBMI serve as key mediators in this relationship, facilitating the transformation of GEO into sustainable outcomes. Notably, the study also found that GEO enhances SBMI by fostering the accumulation of GIC, which ultimately contributes to improved SP.

Rodríguez-Peña (2021) in Colombia, asserts that the relationship between corporate entrepreneurship and financial performance in emerging economies differ from

developed economies, the objectives of this study is to evaluate the impact of corporate entrepreneurship on the financial performance of subsidiaries in Colombian business groups under the moderating effect of the environment dynamism.

The study indicated that corporate entrepreneurship and performance are context-dependent. Provasnek, *et al.*, (2017), in Austria examined sustainable corporate entrepreneurship: performance and strategies toward Innovation using secondary data inform of existing literature. The findings revealed that, sustainable corporate entrepreneurship process leads to sustainable innovations. Based on findings , successful entrepreneurs play a critical role in influencing the share of sustainability start-ups in an entrepreneurship ecosystem.

Chang, *et al.*, (2023), in India explored using a multi-level analysis sustainable corporate entrepreneurship performance and social capital. It discovered that transformational leaders were important for the development of employees' internal knowledge bridging behavior at the unit level and sustainable corporate entrepreneurial performance through the analysis of data from 561 top managers, 760 managers, and 1563 employees from 282 units in 87 firms from the high technology and manufacturing industries. The external bridging knowledge ties behaviors of firm-level TMT, however, mitigated this association, making it so that the influence grew greater as the firm-level TMT external bridging knowledge ties behaviors decreased.

In Umrani, *et al.*, (2018) in Pakistan, looked into how corporate entrepreneurship (CE), organizational culture (OC), and business performance (BP) are related. The study also examined the moderating effect of OC on the CE-BP association. Data were collected from middle management of Big Five banks of Pakistan. Structural equation modeling

was carried out in two steps. The results revealed that corporate entrepreneurship and organizational culture influenced business performance.

Piotrowska (2023) conducted a study to explore the key determinants of corporate entrepreneurship within the context of sustainable development. The study adopted a systematic literature review approach, analyzing a wide range of theoretical and empirical sources, including scholarly articles, reports, and case studies. The findings illustrated successful corporate entrepreneurship practices aligned with sustainability performance. The study highlighted that organizational culture, leadership, and innovation are pivotal drivers of corporate entrepreneurship in fostering sustainable development. Specifically, a culture that encourages innovation, proactiveness, and risk-taking creates a conducive environment for implementing sustainable business practices. In addition, visionary and sustainability-oriented leadership characterized by commitment to environmental goals and empowerment of employees was found to be essential in advancing entrepreneurial initiatives within firms.

In Nigeria, Abdulrahman and Garba (2020), inquired how corporate entrepreneurship affects the performance of the Dangote Group's organizations. From 592 managerial staff members of the Dangote Group, a sample size of 238 respondents utilizing Slovic's formula was chosen using a stratified-proportionate sampling technique.

The study's findings showed that while proactivity has a positive and significant impact on organizational performance in Dangote Group Nigeria, innovativeness and taking risks have no positive link with organizational performance. The study suggests that the management at the Dangote Group pay attention to pro-activeness while enhancing organizational performance.

Nkosi (2016) conducted research in South Africa to investigate the relationship between corporate entrepreneurship (CE) and organizational performance. Data was collected using close-ended questionnaire. A sample of 114 information and communications technology companies was used. The findings indicated that there is a substantial association between the amount of CE and the performance of the business that was examined. Businesses that have a high degree of corporate social responsibility are more likely to be able to expand and continue their operations.

Abdissa *et al.*, (2024) conducted research in Holeta town, Ethiopia, to study the impact of corporate entrepreneurship (CE) characteristics on the organizational performance of small and medium-sized firms (SMEs). Data was collected from 173 respondents using both primary and secondary sources.

According to the findings, each of the corporate entrepreneurship aspects that were investigated had a statistically significant and positive impact on the performance of small and medium-sized enterprises (SMEs). This revealed that encouraging entrepreneurial behavior within firms, such as innovation, risk-taking, and proactiveness, can make a significant contribution to the improvement of business outcomes.

Mwaniki (2017) examines the relationship between corporate entrepreneurship and organizational performance. Data was collected from 144 respondents who were served. Participants in the study included corporate relationship managers, financial managers, strategic managers, human resource managers, operational managers, and information technology officers. Based on the findings, corporate entrepreneurial culture had a significant effect on the performance of Kenya Commercial Bank Limited.

Notably the findings demonstrated that the performance of banks is impacted by the bank's corporate innovation, which includes the utilization of mobile banking, online banking, automated cheque clearing, and real-time gross settlement (RTGS) transfers.

2.3.2 Innovativeness and Sustainable performance

Zhang *et al.*, (2022) conducted a study to examine the impact of supplier innovativeness on supply chain integration and sustainable performance among small and medium-sized enterprises in Egypt's hospitality sector. Using structural equation modeling, the researchers tested a set of hypotheses exploring how trust influences supplier innovativeness and how supply chain integration mediates the relationship between supplier innovativeness and sustainable performance. The findings revealed that trust plays a critical role in fostering supplier innovativeness, indicating that strong relational dynamics between firms and their suppliers are essential for driving innovation. Supplier innovativeness was found to directly affect both supply chain integration and sustainable performance. However, when supply chain integration was introduced into the model, the direct relationship between supplier innovativeness and sustainable performance was no longer significant. This suggests that the positive impact of innovativeness on sustainability outcomes is channeled primarily through enhanced supply chain integration. More specifically, the study identified customer integration and internal integration as key mediators in this relationship. The results imply that efforts to develop trust-based supplier relationships, better understand customer needs, and improve interdepartmental coordination are essential strategies for translating supplier innovativeness into sustainable performance gains.

Mokbel Al Koliby, *et al.*, (2024) conducted a study to examine the impact of entrepreneurial competencies and innovation on the sustainable performance of

manufacturing small and medium-sized enterprises (SMEs) in Malaysia. The study further explored the mediating role of innovation in the relationship between entrepreneurial competencies and sustainable performance. Data were collected from manufacturing SMEs and analyzed using the partial least squares-structural equation modelling (PLS-SEM) technique. The findings revealed that entrepreneurial competencies significantly enhance both innovation and sustainable performance. Moreover, innovation partially mediates the relationship between entrepreneurial competencies and sustainable performance, indicating that innovative practices act as a critical channel through which entrepreneurial capabilities are translated into long-term sustainability outcomes. The study further demonstrated that manufacturing SMEs aiming to be market leaders often implement proactive entrepreneurial competencies that enable them to effectively scan their environment, identify high-quality business opportunities, and engage in research and development (R&D) activities. These efforts help them create products that meet real customer needs, thereby seizing market opportunities and enhancing their sustainable performance. This research contributes to the growing literature on SME sustainability by highlighting the dual role of competencies and innovation in driving performance.

Ingram *et al.*, (2022) conducted a study to investigate the relationship between entrepreneurial orientation and sustainable firm performance, with a particular focus on the mediating role of innovation output in both family and non-family businesses within a post-transition economy. The research was based on a quantitative analysis of 322 Polish organizations. The findings of the study indicate notable differences between family and non-family firms in how entrepreneurial orientation influences innovativeness and sustainable organizational performance. Specifically, the study

demonstrated the significant impact of the proactiveness dimension of entrepreneurial orientation in shaping long-term performance outcomes. Innovation output was identified as a key mediator in the relationship between entrepreneurial orientation and sustainable performance.

Uddin (2025) conducted a study to investigate the relationship between innovation and sustainable performance in textile Small and Medium-sized Enterprises (SMEs) in Bangladesh, with a specific focus on the mediating role of Circular Economy (CE) practices. Grounded in Dynamic Capability Theory (DCT), the research explored how innovation functions as a dynamic capability that facilitates the adoption of CE practices and enhances sustainable performance across economic, social, and environmental dimensions in resource-constrained contexts. A quantitative survey was conducted among 205 SME employees, yielding 188 valid responses. The data were analyzed using Structural Equation Modeling (SEM) to examine both direct and mediated relationships among innovation, CE practices, and sustainable performance. The findings revealed that CE practices significantly improve sustainable performance. However, the study also showed that innovation can hinder CE adoption if not properly aligned with sustainability objectives. The mediating role of CE practices in the innovation–sustainability performance link revealed suppressor effects, suggesting that innovation strategies not strategically aligned with CE principles may undermine sustainability outcomes.

Oduro (2024) conducted a meta-analysis to examine the relationship between eco-innovation and the sustainable performance of Small and Medium-sized Enterprises (SMEs), grounding the study in the Resource-Based View (RBV) and Dynamic Capability Theory (DCT). Using a psychometric meta-analytic approach with a

random-effects model, the study analyzed a comprehensive sample of 134,841 SMEs derived from 99 studies and 233 effect sizes. Comprehensive Meta-Analysis (CMA) software was used to perform subgroup and meta-regression analyses. The findings indicate that the overall effect of eco-innovation on SMEs' sustainable performance is positively significant but moderate. Among the various dimensions of eco-innovation, eco-organizational innovation exerts the strongest influence on sustainable performance, followed by eco-process, eco-product, and eco-marketing innovations. Additionally, eco-innovation significantly enhances economic, environmental, and social performance, with the most substantial effect observed on social performance. The study also showed that contextual factors such as industry type, cultural context, industry intensity, the global sustainable competitiveness index, and the human development index moderated the relationship between eco-innovation and SMEs' sustainable performance. Furthermore, methodological variables including sampling technique, study design, and publication status contribute to study-to-study variance. These results underscore the nuanced role of eco-innovation in enhancing sustainability outcomes across different SME contexts.

Zhang *et al.*, (2024) investigate the complex interactions between institutional pressures, green innovation, entrepreneurial orientation, and sustainable performance through the lenses of institutional theory and entrepreneurship. Using data from 483 listed firms in China, the study explored how different types of institutional pressures—regulatory, normative, and cognitive affect green innovation. It further examined the mediating role of entrepreneurial orientation in this relationship and the moderating effect of entrepreneurial orientation between green innovation and sustainable performance. The

findings revealed that institutional pressures positively influence green innovation and that entrepreneurial orientation significantly mediates this relationship.

Mohamed & Hussein (2025) explored how various innovation practices influence organizational learning and, consequently, sustainable performance in the context of Somali banks. Using a quantitative approach with structural equation modeling (SEM) via Smart PLS 4.1.0, the study investigates the relationships between different types of innovation institutional, process, service, market, and product innovation—and their impact on organizational learning and performance. The results demonstrated that institutional innovation, process innovation, and service innovation have a significant positive effect on organizational learning, which in turn positively influences organizational performance. However, the influence of market innovation and product innovation on organizational learning was not statistically supported. These findings suggest that not all innovation dimensions contribute equally to enhancing learning within organizations.

Mohamed & Hussein (2025) highlighted that organizational learning is a key mediating mechanism through which certain forms of innovation translate into sustainable performance. In the volatile and dynamic environment of the Somali banking sector, fostering innovation—particularly institutional and service-related—emerges as essential for sustaining competitiveness and adapting to change.

Innovativeness is crucial among entrepreneurship orientation according to Barbieri-da-Rosa, *et al.*, (2022) as means of achieving innovation capabilities for sustainable performance. Provasnek *et al.*, (2016) explored the intersection of sustainable corporate entrepreneurship, innovation strategies, and organizational performance. Using

publicly available index ratings, the researchers qualitatively evaluated the sustainability and innovation performance of eight top-ranked global companies. The findings revealed that these companies' strategies aligned well with established corporate sustainability typologies and offered insights into areas where firms could strengthen their entrepreneurial and sustainability efforts to maintain or improve competitive positioning.

Huang *et al.*, (2022) examined Female Chinese female entrepreneurs to evaluate the relationship entrepreneurial performance and innovativeness. A sample of 558 Chinese female entrepreneurs was used. The finding revealed that innovativeness of female business owners was strongly and statistically correlated with their performance. According to the findings, psychological capital, opportunity recognition and growth mediated the innovativeness of female entrepreneurs and performance. However, gender stereotyping negatively moderated the relationship between female innovativeness and performance of business owned business.

Falahat *et al.*, (2018) examined entrepreneurial innovativeness and the performance of SMEs in Malaysia. The study looks at how innovativeness among entrepreneurs affects four different types of firm performance. A dataset of 450 SMEs in Malaysia's wholesale and retail industries was used in the study. This was analyzed using structural equation modeling partial least squares (SEM-PLS). The results showed that entrepreneurial innovativeness had a significant positive effect on three different business performances, including perceived performance in comparison to competitors, perceived business growth, and perceived non-financial. However, financial performance was insignificantly influenced by entrepreneurial innovation.

Adim *et al.*, (2018) investigated the link between performance and entrepreneurial innovativeness of women in River State, Nigeria. The study utilized a cross-sectional survey approach to obtain responses from 329 women business owners in Rivers State as the target population. The results showed that women entrepreneurs' innovativeness had a statistical association with the creation of jobs, but the relationship was not significant with contributions to household subsistence.

In Nigeria, innovativeness and the performance of small and medium-sized businesses was examined by Onyenma (2019). In this study, the performance of small and medium-sized businesses in Nigeria's Rivers and Bayelsa states was compared to in relationship with innovativeness. From a target of 360 a sample of 186 small and medium-sized businesses were examined. Pearson Moment Correlation for Products and regression model were adopted in the study. The results showed a positive and significant link between innovativeness and performance indicators for small and medium-sized businesses.

A Kenyan study by Bor (2018) examined the impact of entrepreneurial innovation on corporate performance. The study adopted an explanatory research design was adopted where a survey of top 600 medium sized firms in Kenya was used. Pearson's bivariate correlation, multiple regression, and moderated regression analysis were used besides descriptive statistics analysis. The outcome showed that entrepreneurial innovativeness had a significant effect on statistically performance. Additionally, there was no statistical moderating influence of market orientation on the association between entrepreneurial innovation and company performance.

2.3.3 Pro-Activeness and Sustainable Performance

Bello *et al.*, (2024) conducted a study to investigate the effect of entrepreneurial pro-activeness on the sustainability of selected medium-sized hotel businesses, specifically 3-star hotels, in Ilorin Metropolis, Kwara State, Nigeria. The study adopted a descriptive, cross-sectional survey design, the researchers used a simple random sampling technique to select a sample of 168 respondents from a population of 290. Data were collected through primary sources using a five-point Likert scale questionnaire and analyzed using descriptive and inferential statistics with SPSS version 22.0. The findings revealed that the pro-activeness of service does not have a statistically significant effect on the sustainability of medium-sized 3-star hotel businesses in Ilorin, as indicated by a p-value of 0.540. The study concluded that pro-active service behaviors alone may not significantly influence the sustainable performance of these hotel businesses.

Worae *et al.*, (2018) conducted a study employing impulse response function analysis within short panel vector autoregressions to examine how financial performance proxies—namely return on assets (ROA), return on sales (ROS), equity returns, and market value of equity deflated by sales—respond to shocks in environmental pro-activeness. Environmental pro-activeness was measured using energy usage intensity and emissions intensity among firms listed in the Johannesburg Stock Exchange's Socially Responsible Investment (JSE SRI) index for the period 2008–2014. The study revealed that ROA responded negatively to shocks in energy usage intensity during the first four years, while it responded positively to shocks in emissions intensity across all time periods. Conversely, ROS consistently showed a negative response to energy usage intensity shocks, but displayed a positive response to emissions intensity shocks

during the first two and final two years of the observation period. Additionally, the study found that shocks from ‘end of pipe’ environmental activities influenced equity returns only in the first year. Both ‘prevention’ and ‘end of pipe’ activities demonstrated value-destroying tendencies on the market value of equity deflated by sales throughout the time horizon. These findings highlight the nuanced and time-sensitive impacts of environmental strategies on financial metrics in South African firms.

Dickel (2017) conducted a study grounded in the natural resource-based view to investigate how technological protectability and proactiveness influence the environmental performance of new ventures. The research utilized data collected from 150 clean-technology ventures and employed both hierarchical and logistic regression analyses to test the proposed relationships. The empirical results demonstrated that both technological protectability and proactive behavior positively contribute to enhanced environmental performance. However, the study also found that while proactiveness negatively moderated the relationship between protectability and environmental performance, this moderating effect was not statistically significant. The findings demonstrated that new ventures in the clean-tech sector benefit from investing in both protective strategies for their technology and proactive environmental practices, although their interaction does not necessarily enhance outcomes.

Ledi *et al.*, (2025) conducted a study to examine the influence of CEO personality on ESG performance, particularly in the context of developing economies where weak regulatory environments and limited access to resources create challenges for sustainable practices. The study also explored the mediating role of a proactive sustainability strategy and the moderating influence of stakeholder salience. Data were gathered from 305 SMEs using questionnaires, and the hypotheses were tested through

structural equation modelling (SEM) using Amos. The findings revealed that CEO personality has a significant impact on ESG performance through the implementation of proactive sustainability strategies.

Tipu *et al.*, (2024) conducted a study to investigate the mediating role of entrepreneurial orientation (EO)—specifically innovativeness, proactiveness, and risk taking—on the relationship between big data analytics (BDA) capability and sustainable supply chain performance (SSCP), drawing on the dynamic capability view (DCV). Data were gathered from 300 manufacturing organizations via a questionnaire survey, and structural equation modeling (SEM) was employed to test the proposed hypotheses. The results revealed that innovativeness and proactiveness fully mediated the relationship between BDA capability and SSCP, whereas risk taking only partially mediated this link. Additionally, a negative relationship was reported between BDA capability and risk taking.

Tuppura *et al.*, (2013) conducted a study to examine the relationship between proactiveness and corporate social performance (CSP) within the global forest industry, where companies significantly impact the environment and must actively engage in corporate social responsibility (CSR) to maintain their social license to operate. Using international survey data collected from managers in 60 forest industry companies across multiple continents, regression analysis was applied to test the hypothesis. The findings revealed a positive impact of proactiveness on CSP, with results further indicating that employees and managers in proactive companies are more likely to take initiative in improving CSP compared to those in less proactive firms.

Ali & Muhammad (2021) conducted a study to examine the impact of proactive behavior on sustainable performance at the headquarters, divisions, and units of the General Company for the Trade of Cars and Machinery. A sample of 223 employees was used and staff roles. Data collection methods included a 40-item questionnaire, interviews, and field observations. The analysis was conducted using SPSS (v.26) and Amos (v.25). The results revealed that proactive behavior significantly influences sustainable performance both directly and indirectly, especially through broader role engagement, self-competence, and a heightened sense of responsibility towards constructive change.

Baah et al. (2021) conducted a study to explore the influence of environmental production practices on firm performance from both proactive and reactive perspectives. The study employed a survey research design and a quantitative approach, using partial least square structural equation modelling (PLS-SEM) for data analysis due to its appropriateness for predictive research models. The findings revealed that proactive environmental production practices have a positive relationship with process and environmental performance, but a negative relationship with financial performance.

Fazli *et al.*, (2023) investigated proactive and reactive strategies toward sustainable practices within the manufacturing sector of emerging economies. Data was collected from data from 202 manufacturing plants participating in the Sixth International Manufacturing Strategy Survey (IMSS-VI), the researchers employed hierarchical regression analysis and bootstrapping to test their hypotheses. The findings revealed that sustainable practices mediate the relationship between external pressure and environmental performance, supporting a reactive approach wherein firms adopt environmentally sustainable practices in response to external demands. In contrast,

external pressure was found to moderate the relationship between sustainable practices and social performance, indicating a proactive approach whereby firms voluntarily adopt socially sustainable practices to enhance their image and relationships with stakeholders. Interestingly, no moderating effect of external pressure was found on environmental performance.

Ali & Muhammad (2021) explored the influence of proactive behavior on sustainable performance within the General Company for the Trade of Cars and Machinery. Utilizing an exploratory research design, the study surveyed 223 employees across the company's headquarters, divisions, and units from a total population of 523. Data were collected using structured questionnaires, interviews, and field observations. Analytical tools included both descriptive and inferential statistics. The results showed that proactive behavior significantly influenced sustainable performance, both directly and indirectly.

Linton (2019) looked at pro-activeness, risk-taking, and innovativeness in newly established enterprises. The study sought to examine different process in entrepreneurial orientation (EO). A qualitative technique was applied in order to gain comprehensive understanding of entrepreneurial orientation. The results show that EO, along with its sub-dimensions; innovativeness, risk-taking, and pro-activeness had a significant but a differentiated effect on performance.

Ogbari *et al.*, (2022) investigated the link between entrepreneurial proactiveness and business sustainability, with a particular focus on customer satisfaction among small and medium enterprises (SMEs) in Lagos State, Nigeria. The study targeted 120 participants comprising CEOs, managing directors, and heads of functional units across

selected SMEs. Data were collected and analyzed using Pearson correlation analysis to assess the strength of the relationship between entrepreneurial proactiveness and customer satisfaction. The findings revealed a statistically significant and positive relationship, indicating that higher levels of entrepreneurial proactiveness are associated with increased customer satisfaction, thereby contributing to overall business sustainability.

Bosire *et al.*, (2021) explored the impact of entrepreneurial pro-activeness on youth-led micro and small businesses (MSEs) in Kenya. In Nyanza, 771 registered youth-led Jua Kali Artisans MSEs in the Nyanza region were adopted using a descriptive research design. The results showed that youth entrepreneurs' proactivity was not adequately achieved leading to low performance of the businesses.

Wambugu *et al.*, (2015) investigated the connection between small- and medium-sized agro-processing firms' performance and proactivity. A sample of 111 agro-processing SMEs that were registered members of the Kenya Association of Manufacturers provided the information. Partial least squares (PLS) methodology for structural equation modeling was applied in the study. The results showed that in Kenyan agro-processing SMEs, pro-activeness was a highest predictor of company performance.

Mumaraki *et al.*, (2018) evaluated the Kenyan healthcare system's pro-activeness with regard to performance at healthcare facilities in Kenya's Nairobi County. The study used a survey research design, with a target population of 71 where a sample size was 49 healthcare facilities in Nairobi. The results indicated that proactive influenced the performance of the healthcare units in Nairobi County positively.

The study by Alobari *et al.*, (2019) was conducted in Nigeria with the aim of evaluating the relationship between financial performance, corporate governance, and the sustainability of microfinance companies. A total of 24 microfinance institutions were selected from three of the six geographical zones. The data was collected from primary sources and analyzed using SPSS software. The findings indicated that there are substantial links between financial performance, corporate governance, and the sustainability of microfinance organizations in Nigeria. This implies that the better the microfinance institution's financial performance and corporate governance, the more sustainable it is.

Sreejith & Sreejith, (2023) examined the link between women's entrepreneurial goals and their cultural capital, ICT skills, and self-efficacy. In 2020, a sample of 349 women entrepreneurs participated in the study, which was performed in Kerala, India. Data was collected using a self-administered web-based survey to determine the participants' entrepreneurial ambition. Based on the findings cultural capital was the primary indicator of entrepreneurial inclination among women. ICT skills and entrepreneurial self-efficacy were also shown to have strong associations with entrepreneurial goals. According to the study, cultural capital, ICT skills, and entrepreneurial self-efficacy all have a significant influence in shaping women's entrepreneurial intention.

Broccia *et al.*, (2022) conducted a study to investigate the factors of entrepreneurial and social entrepreneurial self-efficacy (ESE and SESE). The study focused on Portuguese entrepreneurs and employed a quantitative survey approach to collect data from 120 participants using a verified questionnaire. The study's findings found that both ESE and SESE shared certain characteristics, such as risk management, but differed in others, such as ambition, which primarily drives ESE. Going by the findings,

entrepreneurial education should be supplemented with social entrepreneurship education in order to get better results in both ESE and SESE.

Wang *et al.* (2023) investigated the impact of entrepreneurship education on entrepreneurial intention. The research was conducted at three Chinese institutions between August 2018 and June 2019. The participants were 155 college students who were purposefully chosen, and data were obtained via a semi-structured questionnaire. Using multiple regression and partial least squares-structural equation modeling (PLS-SEM) techniques, the findings revealed that entrepreneurship education can significantly influence entrepreneurial intention through entrepreneurship self-efficacy and psychological capital had a moderating effect on the association of entrepreneurship education and entrepreneurial intention.

Amofah *et al.*, (2020) conducted a study on MBA students' entrepreneurial self-efficacy. The target population consisted of 147 MBA students from a Ghanaian university who were chosen using a self-administered questionnaire as the data collecting technique. The findings demonstrated that students had a favorable attitude toward their entrepreneurial self-efficacy, but perceived risks were shown to be a substantial barrier to the students' entrepreneurial self-efficacy. The study indicated that identifying, comprehending, and conveying entrepreneurship's benefits and hazards is effective in boosting students' entrepreneurial self-efficacy.

Kariuki (2022) did another study in Kenya to investigate the association between transformational leadership, entrepreneurial self-efficacy, psychological empowerment, and employee retention in Microfinance Institutions. The study employed a quantitative methodology with a sample size of 337 employees from

Microfinance Institutions. The data was collected through questionnaires, and it was analyzed using multiple regression analysis. According to the study's findings, transformational leadership, entrepreneurial self-efficacy and psychological empowerment have a considerable favorable influence on employee retention. Furthermore, the study stated that Microfinance Institutions' management and leadership should aim to foster psychological empowerment and ensure improved staff retention.

Soares *et al.*, (2021) conducted a study in Brazil with the primary goal of identifying the influence of corporate entrepreneurship (CE) on family company sustainability. This research included a total of twenty-five family enterprises with a total of two hundred and twenty-eight individuals. A survey questionnaire was used to collect data, and interviews were undertaken to complement the data.

2.3.4 Risk Taking and Sustainable Performance

Munawarah *et al.*, (2024) explored the interplay between sustainability practices, risk management, and innovation in enhancing the performance of social enterprises in Indonesia. A structured survey involving 118 social enterprises was conducted to evaluate the extent of sustainable practices, risk mitigation strategies, innovation levels, and operational models. Data were analyzed using Structural Equation Modeling (SEM) and Partial Least Squares (PLS). The results indicated that sustainability practices significantly promote innovation, while both innovation and risk management directly enhance sustainable performance. Furthermore, innovation was found to mediate the link between sustainability practices and performance, as well as between risk management and performance. The operational type moderated the relationship between risk management and sustainable performance but did not moderate the

sustainability-performance link. These findings underscore the critical role of innovation in advancing sustainability and suggest the need for context-specific risk management strategies.

Ajor and Joy (2020) investigated the influence of a risk-taking mindset on the sustainability of small and medium enterprises (SMEs) in Bayelsa State, Nigeria. The study employed a cross-sectional survey design within a quasi-experimental framework. A total of 300 owner-managers and supervisors used. Data was gathered through structured questionnaires and analyzed using Spearman Rank Order Correlation via SPSS version 21. The results showed a statistically significant and positive relationship between a risk-taking mindset and organizational sustainability. The findings led to the conclusion that fostering a risk-taking culture is essential for sustained business performance in SMEs.

Abdaljabar *et al.*, (2024) focused on the adoption and impact of Enterprise Risk Management (ERM) on sustainable performance in Jordanian firms. The study's findings demonstrated that modern organizations are increasingly transitioning from fragmented risk-handling practices to integrated ERM systems in response to corporate failures and rising global sustainability challenges. It highlighted the critical need for Jordanian firms, particularly in the industrial and service sectors, to implement robust risk management frameworks aimed at improving environmental, social, and economic outcomes.

Ifeoma *et al.* (2019) investigated the Nigerian business environment. The study's goal was to examine entrepreneurial risk-taking, difficulties, and barriers to long-term sustainability in the area. Although the target group was not specified, a qualitative

research strategy based on content analysis was used to gather and analyze primary material acquired from various sources. According to the findings, limited infrastructure, high taxes, and weak corporate governance are important challenges concerning sustainability. The research indicated that greater efforts by the government and the private sector may be required to enhance the sustainability of the Nigerian business environment.

Oudat and Ali (2021) conducted a study in Bahrain to investigate the influence of risk management on the financial performance of commercial and investment banks. The study employed a sample size of nine commercial and investment banks to gather and evaluate data largely related to profitability, asset quality, and non-performing loans. The findings revealed that risk management may have a considerable beneficial impact on bank profitability. Furthermore, there was a non-significant relationship between asset quality and non-performing loans and yearly profit. The study indicated that risk management is still an essential factor to consider when evaluating bank financial performance.

Kiptoo *et al.*, (2021) performed a research with the primary goal of investigating the impact of risk management on the financial performance of Kenyan insurance companies. The target population consisted of 150 insurance firms operating in Kenya, and data was gathered using both primary and secondary sources, including interviews, questionnaires, and focus group discussions, as well as journals, books, and annual financial reports. According to the findings, an efficient risk management method improves the financial performance of insurance companies. It was found that risk management is crucial in insurance organizations and plays a significant part in their performance.

Muithya and Muathe (2020) conducted a research study in Kenya between 2019 and 2020 with the primary goal of investigating the impact of dynamic capacities on the performance of various microfinance institutions. This exploratory study's target population was six chosen microfinance organizations, with a sample size of 54 senior managers. Questionnaires were used to gather data, and descriptive statistics, independent samples T-test, correlation, and regression were used to analyze it. The study's findings suggested that dynamic skills had a beneficial correlation with microfinance institution performance.

Raham *et al.*, (2021) investigated the effects of risk-taking, pro-activeness, and innovativeness on the success of SMEs in Bangladesh. The study used a non-probability sampling technique to collect data from 180 SME organizations' owners from 250 SME in the Bangladeshi City of Dhaka. A hierarchical regression analysis was conducted to examine the control and independent variable. The results showed that SME success in Bangladesh is significantly influenced by the age of the firm, risk-taking, pro-activeness, and innovativeness.

Boabeng and Cai (2018) investigated the effects of risk-taking and entrepreneurial innovation on business performance. A quantitative study was carried out with the participation of 250 entrepreneurs. The findings showed that innovation significantly improves company performance. Additionally, taking risks has a statistically significant impact on how well a company performs.

Adim and Poi (2019) studied the performance of women-owned businesses in Nigeria with regard to taking entrepreneurial risks. Using simple random sampling of 153 respondents from a target of 329 women enterprise, the study found a significant link

between women entrepreneurs' success in Rivers State and their willingness to take entrepreneurial risks. The study concludes that taking calculated risks helps women business owners in Rivers State perform better in terms of their ability to support their households and create jobs.

Egele *et al.*, (2018) evaluated the performance and risk-taking of SMEs in Nigeria. This study's objective was to determine how entrepreneurial risk-taking affected the performance of small and medium-sized businesses (SMEs) in Kano State, Nigeria. A cross-sectional research design was used to collect data for the study from 393 owners, managers, and employees of SMEs in Kano State, Nigeria, using a questionnaire and interview. The study reported that performance of SMEs and entrepreneurial risk taking are positively and significantly related.

Wambugu, *et al.*, (2015) investigated the connection between SMEs' performance and risk-taking in Kenya. The goal of the study was to determine the relationship between entrepreneurial risk-taking and firm performance. small and medium agro-processing businesses. The results of the study showed that taking risks had a favorable effect on the performance of agro-processing SMEs. The current study analyzed sustainable performance of micro-financial institutions.

Warwathe *et al.*, (2024) conducted a study to investigate the effect of leaders' risk-taking behavior on the sustainability of Savings and Credit Cooperative Organizations (SACCOs) in Kenya. The objective was to identify critical factors linked to SACCO sustainability, with a specific focus on leadership risk-taking practices. The study was conducted across five counties: Nairobi, Kiambu, Machakos, Murang'a, and Kajiado, involving a sample of 174 SACCOs. Employing a descriptive research design, the study

relied on objective, quantifiable data to ensure the generalizability of findings. Through correlation analysis, the results revealed a positive relationship between leadership risk-taking and SACCO sustainability. The study concluded that leaders who demonstrate a willingness to take calculated risks significantly enhance the long-term viability of their SACCOs.

Chelagat (2022) examined the influence of risk-taking behavior on the sustainability of small and medium-sized enterprises (SMEs) in Uasin Gishu County, Kenya. Grounded in the Psychological or Trait Entrepreneurship Theory, the study employed a descriptive survey research design. The target population consisted of 450 registered SMEs, from which 135 were selected through simple random sampling. Primary data was collected via structured questionnaires and analyzed using linear regression to evaluate the relationship between risk-taking and business sustainability. The findings revealed that risk-taking behavior accounted for 67.9% of the variance in SME sustainability, with a statistically significant and strong positive relationship ($\beta = 0.862$, $p < 0.05$). The study concluded that risk-taking is a key determinant of SME performance and sustainability.

In Kenya, a study by Kitigin (2017) examined relationship between taking risks and business performance among SMEs. An ex post facto research design was used in the study targeting all of the SMEs in Eldoret were its targets where a sample 100 SMEs were selected. The research's hypotheses were put to the test using Pearson correlation. There was a significant link between taking risks and the success of SMEs in Eldoret. The current study examined the sustainable performance of Micro-Finance using hierarchical multiple regression modelling.

Lee and Kim (2024) conducted a study to empirically examine factors influencing the sustainable corporate performance of Korean business-to-business (B2B) companies by using unique survey data. The study analyzed key factors such as technological capability, the chief executive officer (CEO)'s risk-taking propensity, B2B seller skill, and key account management (KAM) to clarify their impact on both sustainable financial and non-financial performance. The results revealed that the CEO's risk-taking propensity and B2B seller skill significantly impact sustainable financial performance, while technological capability and the CEO's risk-taking propensity significantly affect sustainable non-financial performance. The influence of the CEO's risk-taking propensity on both performance dimensions highlights the importance of entrepreneurial competency for corporate sustainability. Furthermore, the findings showed that ESG management plays a crucial mediating role, enabling technological capability, B2B seller skill, and KAM to significantly influence sustainable financial performance. Likewise, all explanatory factors contributed to sustainable non-financial performance through ESG management, emphasizing ESG's central role in driving comprehensive corporate sustainability.

Ngo and Vu (2025) conducted a study to investigate the relationship between entrepreneurial competence, psychological capital, the risk-taking propensity of entrepreneurs, and enterprises' sustainability performance. The study surveyed 471 entrepreneurs operating their enterprises in Vietnam and examined sustainability performance, entrepreneurial competence, and psychological capital as high-order constructs. Using the partial least squares structural equation modeling (PLS-SEM) technique, the findings revealed that psychological capital has a positive impact on sustainability performance. Furthermore, the relationship between entrepreneurial

competence and psychological capital, as well as the relationship between psychological capital and sustainability performance, is mediated by risk-taking propensity. Additionally, entrepreneurial competence was found to mediate the relationship between sustainability performance and risk-taking propensity, highlighting the complex interrelations among these factors in influencing sustainable outcomes for SMEs.

He *et al.*, (2023) conducted a study to understand the motivation behind corporate ESG engagement from the perspective of corporate risk-taking. Utilizing data from Chinese publicly listed firms covering the period from 2010 to 2020, the study found that higher ESG ratings significantly reduce corporate risk-taking behavior. This core finding remained robust even after implementing a series of robustness tests to address potential endogeneity issues and employing alternative measures of risk-taking. Additionally, the study revealed that the negative relationship between ESG performance and corporate risk-taking is stronger in firms characterized by lower information transparency, weaker corporate governance, and limited external monitoring. These findings offer critical insights into the trade-offs between sustainable corporate growth and risk-taking behavior, particularly within institutional contexts marked by relatively weak investor protection.

García-Lopera *et al.*, (2022) conducted a study to analyze the influence of professionalization on firm performance, while also examining the mediating roles of risk-taking and technological innovation. The study surveyed 310 Spanish small and medium-sized enterprises (SMEs) and employed the partial least squares path modeling (PLS-SEM) technique to evaluate the relationships among the variables. The findings revealed that professionalization, risk-taking, and technological innovation all have a

direct and positive impact on firm performance. In addition to these direct effects, the study identified significant indirect effects, indicating that professionalization enhances firm performance not only on its own but also through its influence on risk-taking and innovation behaviors. These mediating effects further strengthen the positive relationship between professionalization and performance.

Simamora (2023) conducted a study to investigate the moderating role of managerial ability in the relationship between risk-taking behavior and firms' performance. The research was based on 383 manufacturing firm-year observations listed on the Indonesian Stock Exchange. The findings revealed that risk-taking behavior positively influences firm performance, particularly in firms with higher managerial ability. Managers with high ability possess the knowledge, skills, and access to information necessary to leverage the benefits of risk-taking while minimizing its associated costs. The study further observed that the positive moderating effect of managerial ability on the relationship between risk-taking and firm performance is more pronounced in firms led by high-ability managers, dual-role CEOs (serving as both CEO and board chair), shareholder-CEOs, and family CEOs.

Zhang and Aumeboonsuke (2022) conducted a study to investigate the practical implications of technological innovation on firm performance. Using a sample of 1,166 listed companies in China spanning the period from 2012 to 2020. The results demonstrated that technological innovation has a statistically significant negative impact on firm performance. The finding suggests that while technological advancement is often assumed to enhance competitiveness, it can also lead to increased risk exposure that diminishes short-term performance outcomes. Innovation activities tend to raise the firm's capacity for risk-taking, which in turn may jeopardize firm

stability and reduce performance levels. Furthermore, a heterogeneity test based on firm ownership structure indicated that the adverse effects of technological innovation are more pronounced among non-state-owned enterprises (NSOEs) compared to state-owned enterprises (SOEs).

Zhu *et al.*, (2022) conducted a study to examine the relationship between environmental performance and corporate risk-taking behavior within the Chinese corporate context. The researchers employed a variety of econometric methods, including robustness and endogeneity tests, to validate the consistency and reliability of their findings. The results revealed a significant negative relationship between environmental performance and corporate risk-taking, indicating that firms with higher environmental performance tend to engage in less risky business activities. This suggests that companies focusing on environmental initiatives may adopt more cautious and risk-averse strategies, possibly due to the need to maintain stakeholder trust, regulatory compliance, and long-term sustainability. Firms that engage in mature environmental management practices and green innovation were observed to experience a less severe trade-off between environmental responsibility and risk-taking. These findings reinforce the argument that well-integrated environmental strategies can support sustainable corporate growth without necessarily stifling risk-oriented ventures.

2.3.5 Ambidextrous Leadership and Sustainable Performance

Lyu *et al.*, (2022) conducted a study to investigate the relationship between ambidextrous leadership and sustainability performance, with a particular focus on the mediating roles of employees' green creativity and green product innovation. Using data collected through a questionnaire survey of 307 manufacturing enterprise leaders and applying regression and bootstrap analysis, the study empirically tests a set of

hypotheses. The study found that ambidextrous leadership positively impacts sustainability performance. Furthermore, the findings show that employees' green creativity and green product innovation each mediate this relationship. Additionally, the study reported a serial mediation effect through which ambidextrous leadership influences sustainability performance via a combined pathway of green creativity and green product innovation.

Moeliadi *et al.*, (2025) conducted a study to examine the impact of collaboration capability on bank performance sustainability in the context of the competitive pressures following the rise of fintech. Drawing on established instruments from prior literature, the researchers employed a quantitative methodology, distributing questionnaires to 101 private commercial banks in Indonesia. The proposed model was tested using structural equation modeling with partial least squares (SEM-PLS) through SmartPLS 4.0. The analysis demonstrated that collaboration capability has a direct positive effect on bank performance sustainability. Additionally, digital capability positively influenced both collaboration capability and bank performance sustainability.

Katou *et al.*, (2023) conducted a study to explore how ambidextrous leadership—encompassing both transformational and transactional styles—influences sustainability performance through the serial mediation of organizational ambidexterity and circular economy practices. Using structural equation modelling analyses on survey data of Greek organizations, the study found that both organizational ambidexterity (through explorer and exploiter attributes) and circular economy fields of action serve as positive mediators in the relationship between ambidextrous leadership and sustainability performance. Moreover, the findings revealed that transformational leadership exerts a greater impact on sustainability outcomes compared to transactional leadership.

Zahid *et al.*, (2024) conducted a study to examine the interrelationships among corporate social responsibility (CSR), green intellectual capital, green ambidextrous innovation, and sustainable performance within the framework of Industry 4.0 and sustainability. Based on a questionnaire survey of 317 small and medium enterprises, the researchers employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS v4 to test the proposed model. The analysis revealed that CSR has a significant positive impact on sustainable performance, with green intellectual capital and green ambidextrous innovation acting as key mediators. Additionally, the study highlights that Industry 4.0 plays a moderating role in strengthening the relationship between green intellectual capital and green ambidextrous innovation with sustainable performance, underscoring the importance of technological integration in achieving environmental and organizational sustainability goals.

Khan (2019) conducted a study to explore the impact of organizational ambidextrous capabilities on sustainability performance in small and medium-sized enterprises (SMEs), particularly within the dynamic and uncertain business environment marked by rapid technological change and intense competition. Data were collected through postal questionnaires from 438 SMEs in the manufacturing and services sectors in Pakistan, using proportionate stratified random sampling and achieving a 51% response rate. The proposed model was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis revealed that organizational ambidextrous capabilities significantly and positively influence sustainability performance. Additionally, each component had ambidextrous leadership, organizational structure, and organizational context shows a direct positive effect on sustainability performance. Furthermore, the study found that organizational innovation ambidexterity partially

mediates the relationship between organizational ambidextrous capabilities and sustainability performance.

Tuan Luu (2017) studied the role of ambidextrous leadership in enhancing entrepreneurial orientation (EO) and improving operational performance, while also exploring the moderating effect of organizational social capital (OSC) on the relationship between ambidextrous leadership and EO. Based on survey data collected from 427 managers, the study employs quantitative analysis to test the proposed relationships. The findings reveal that ambidextrous leadership has a significant positive effect on EO, and this relationship is further strengthened by the presence of high levels of OSC. Additionally, EO is shown to positively predict operational performance, highlighting its mediating role in achieving business effectiveness.

Nyamboga (2025) examined how ambidextrous leadership enables technology firms to balance innovation and operational efficiency, particularly in the face of competitive pressures and rapid technological change. Using a qualitative thematic analysis of peer-reviewed literature published between 2015 and 2025, the study draws on sources from Google Scholar, Scopus, Web of Science, SpringerLink, and JSTOR. The analysis revealed that ambidextrous leadership plays a critical role in sustaining performance amid uncertainty. Technologies like AI and automation are found to enhance operational efficiency, while innovation thrives in environments that promote continuous learning, experimentation, and knowledge sharing. Strategic resource allocation emerges as a key factor in supporting both core operations and exploratory initiatives. Despite these benefits, the study highlights persistent challenges, including aligning leadership culture with organizational values, ensuring effective resource distribution, and assessing innovation outcomes. The study concluded that

ambidextrous leadership is essential for fostering innovation without compromising efficiency and offers practical guidance for technology firms, as well as a foundation for future research on adaptive leadership in the context of emerging technologies.

Shahraki (2023) conducted a study to examine the relationship between ambidextrous leadership and operational performance through the mediating role of social entrepreneurial orientation. The study found that ambidextrous leadership positively influences social entrepreneurial orientation, which in turn contributes to improved operational performance. These findings highlight the relevance of socially conscious leadership in achieving sustainable organizational success and provide insights into the evolving nature of firm management in dynamic environments.

Zheng *et al.*, (2017) conducted a study to explore the effects of ambidextrous leadership on sustainability-based project performance, with a specific focus on the mediating role of ambidextrous culture in project-based environments. Using a valid sample of 217 project leaders and members, multiple linear regression was applied to test the direct relationships among ambidextrous leadership, ambidextrous culture, and project performance. Furthermore, the mediating effect of ambidextrous culture was assessed using bootstrapping via structural equation modeling (SEM), while ANOVA was employed to analyze within-group differences. The results demonstrate that ambidextrous leadership has a direct positive effect on both ambidextrous culture and project performance. Additionally, ambidextrous culture mediates the relationship between leadership and performance, underscoring the importance of cultivating a dual-focused culture for enhanced project outcomes. The findings of this study underscored the critical role of leadership and cultural dynamics in project success, offering practical

implications for training project leaders to adopt ambidextrous behaviors and promoting a supportive project culture in construction-based organizations.

Wu *et al.*, (2021) conducted a study to investigate how entrepreneurial leadership and ambidextrous learning interact to influence organizational performance in the context of digital transformation (DT). Using multi-source data collected from 73 CEOs/entrepreneurs and 377 middle managers in China, the study examines the relationships among entrepreneurial leadership, ambidextrous learning, and organizational performance. The analysis shows that ambidextrous learning is positively associated with organizational performance and that entrepreneurial leadership positively influences ambidextrous learning. Additionally, ambidextrous learning mediates the relationship between entrepreneurial leadership and organizational performance. The study also showed that changes in operational processes strengthen the impact of ambidextrous learning on organizational performance, while such changes do not significantly alter the relationship between entrepreneurial leadership and ambidextrous learning.

Atiku & Randa (2021) conducted a study to examine the role of ambidextrous leadership in sustaining small and medium enterprises (SMEs) during the post-COVID-19 era. Adopting a desktop research approach, the study analyzed the impact of ambidextrous leadership on the innovative performance of SMEs by drawing from empirical studies conducted in both large conglomerates and SMEs across various contexts. The analysis shows that ambidextrous leadership is positively associated with innovation within SMEs, particularly in the high-tech sector across both developed and developing countries. The findings suggest that entrepreneurs may adopt an ambidextrous leadership style to enhance the innovative performance of their

enterprises amid crisis periods. Moreover, ambidextrous leadership plays a crucial role in fostering workforce creativity, promoting continuous business process improvement, and ensuring resource efficiency, all of which are essential for the resilience and sustainability of SMEs in the wake of global disruptions.

Awan, *et al.*, (2018), in Pakistan focused on the effects of an ambidextrous leadership on the relationship between Governance Mechanism and Social Sustainability. Data was collected from Pakistani manufacturing industries were gathered utilizing standardized survey questions. For data analysis, structural equation model was employed. The results of the study show that ambidextrous leadership and contractual governance mechanisms serve as tools to improve social sustainability while simultaneously meeting the needs of manufacturing enterprises. The findings further revealed that, in order to increase social sustainability, manufacturing companies must include transactional leadership while designing and implementing contract governance mechanisms as it was found that ambidextrous leadership style moderate relational contract and a relational governance mechanism and tune to meeting the demands of social sustainability.

Zheng *et al.*, (2017) explored the influence of ambidextrous leadership on sustainability-oriented project performance, drawing on organizational ambidexterity theory. A sample of 217 project leaders and team members was surveyed from Chinese construction projects, and multiple linear regression was employed to analyze the direct relationships among the key variables. The findings demonstrated that ambidextrous leadership positively and directly influenced both ambidextrous culture and sustainability-based project performance. Moreover, ambidextrous culture significantly mediated the relationship between leadership and performance outcomes.

Ying and Jin (2023), in China explored digital transformation and corporate sustainability, the moderating effect of ambidextrous innovation. The study separated DT into two categories: market- and technology-based digital transformations. It looked at how ambidextrous innovation impacts the interaction between both types and corporate sustainability as well as its implications on corporate sustainability. The A-share listed firms in China were examined using the two-way fixed effects model and the two-stage least squares approach between 2013 and 2021. The findings demonstrated that TDT and MDT both had favorable effects on business sustainability. The more the enterprise's levels of exploratory and exploitative innovation, the more both forms of DT contribute to corporate sustainability.

A study by Egwakhe *et al.*, (2022) in China, evaluated ambidextrous leadership and project performance based on sustainability. Both correlation and multiple linear regression model were adopted on as sample of 217 project leaders and members from Chinese construction projects. In order to examine the mediating impact of ambidextrous structural equation modeling was adopted. The findings showed that ambidextrous leadership positively impacts both ambidextrous culture and project performance. Additionally, ambidextrous leadership mediated effect on project performance through ambidextrous culture.

In Greek firms, the performance of ambidextrous leadership and sustainability were examined by Katou *et al.*, (2023). Using survey of private and public Greek firms in services, manufacturing, and trade sectors within an externally dynamic environmental framework. This was examined using structural equation modeling. The results showed that the relationship between ambidextrous leadership and sustainable performance is favorably mediated by organizational ambidexterity and the circular economy domains

of action. Compared to the mechanism arising from transactional leadership, the mechanism originating from transformational leadership has a greater impact on sustainable performance.

Martnez-Climent *et al.*, (2019) looked at ambidextrous leadership, social entrepreneurship, and operational effectiveness. The study found that organization's social entrepreneurship is influenced by pro-activeness, creativity, risk-taking, and reciprocity. According to the study reciprocity had positive effect on ambidextrous leadership by influencing the company's mission, which is relevant to the relationship between ambidextrous leadership and social entrepreneurial orientation.

Indonesian telecoms organizations were analyzed by Bawono *et al.*, (2022), if there was impact of an ambidextrous leadership and social media on corporate performance. Quantitative data were extracted for the study. The results showed that ambidextrous leadership has a positive effect on company performance, ambidextrous leadership has a positive effect on digital transformation, social media had a positive effect on digital transformation, social media has a positive effect on firm performance, and digital transformation has a positive effect on firm performance.

In another study of telecommunication firms in Indonesia by Bawono (2022) on ambidextrous leadership and business success. It established that ambidextrous leadership has a significant positive effect on performance of firms, both directly and indirectly through the development of innovative digital business models. In order to achieve the result, sequential explanatory design that adopted quantitative and qualitative approaches. The quantitative analysis was done on 180 respondents

questionnaires analyzed using partial least squares and qualitative research used 12 sources using thematic analysis.

Azmy and Hartono (2024) investigated the influence of ambidextrous leadership on employee performance within the manufacturing industry. The study adopted a comprehensive literature review approach to explore how this leadership style affects the ability of employees to meet business objectives. The findings revealed that ambidextrous leadership characterized by a balance between exploration and exploitation positively impacts employee performance by stimulating innovation and adaptability. The study emphasized the importance of leadership styles that can inspire employees to innovate, especially in the highly dynamic manufacturing sector.

Effendi *et al.*, (2024) explored the relationship between ambidextrous leadership, business models, and financial performance among Indonesian microfinance institutions (MFIs). The study further investigated the mediating role of business models and the moderating effect of environmental dynamism. Using data from 104 MFIs and analyzing it through the moderated mediation (ModMed) technique with PROCESS Macro 4.0, the study found that ambidextrous leadership positively influenced both business models and financial performance. The business model mediated the relationship between leadership and performance, while environmental dynamism moderated the effect of the business model on financial outcomes.

Babu *et al.*, (2024) examined the impact of ambidextrous leadership on innovative work behavior (IWB) and employee performance in the IT sector. Utilizing a cross-sectional design, data were collected from 371 employees through structured questionnaires adapted from prior studies. Participants were selected using systematic sampling, and

the data were analyzed using partial least squares structural equation modeling (PLS-SEM) via SmartPLS 4.0. The results demonstrated that ambidextrous leadership significantly enhanced innovative work behavior, which in turn positively affected employee performance. Moreover, the study confirmed that the indirect effect of ambidextrous leadership on performance mediated through innovative work behavior was stronger than the direct effect.

In Kenya Rono, *et al.*, (2021), examined the moderating effect of organizational ambidexterity on the relationship between dynamic capabilities and performance of food and beverages companies in Kenya. A census technique was used to collect primary data on the 98 food and beverage companies that are members of the Kenya Association of Manufacturers. Data was gathered using structured questionnaires, and were then analyzed using both descriptive and inferential statistics. The results demonstrated that the performance of food and beverage companies in Kenya is positively and significantly impacted by sensing capabilities, seizing capabilities and reconfiguring capabilities. Further, organizational ambidexterity moderated the relationship between dynamic capabilities and performance of food and beverages firms in Kenya.

2.3.6 Moderating role of ambidextrous leadership

The focus of this study was on the moderating role of ambidextrous leadership. Ambidextrous leadership encompasses three primary characteristics: opening leadership behaviors that promote employee engagement in exploration, closing leadership behaviors that direct employees towards proactive exploitation, and adaptable trade-offs between these two leadership behaviors tailored to varying contexts (Tuan Luu, 2017).

Transformational leaders typically motivate people to actively participate in experimental endeavors and promote the acquisition of novel information (including new technologies, methodologies, and materials), thereby inspiring employees to discover innovative solutions to challenges. Through exploration, employees tend to gain a fresh perspective on product design and raw material utilization, thereby inspiring them to innovate sustainable products. In contrast to opening leadership, close leadership emphasizes the thorough utilization of the existing knowledge base.

Choi & McNamara (2018) assert that exploitation enables employees to enhance their existing knowledge and subsequently produce novel ideas for innovation. This occurs as employees can enhance, modify, convert, and disseminate existing knowledge during the exploitation process, hence broadening their knowledge base (Nielsen *et al.*, 2018). Furthermore, the knowledge base establishes the groundwork for product creation and innovation. The utilization of the current knowledge base can stimulate green product innovation, as exemplified by green product innovation (Dangelico, 2016). During exploitation, staff can diminish energy consumption of current products and minimize harmful emissions by utilizing eco-friendly resources, finally leading to green product innovation (Begum *et al.*, 2022a). Consequently, both opening leadership and closing leadership can significantly augment green product innovation to a degree. Nonetheless, overly experimental or exploitative endeavors may cause firms to succumb to business pitfalls (Levinthal & March, 1993). Exploratory efforts can generate new knowledge to foster the creation of innovative products; nevertheless, the substantial costs associated with exploration and the lack of assured returns may result in short-term economic failure (Wu *et al.*, 2020). Conversely, exploitative behaviors might enhance existing knowledge to refine current products. The absence of

innovation resulting from excessive exploitation may not ensure the effectiveness of sustained economic operations (Solís-Molina *et al.*, 2018).

Ambidextrous leadership, embodying both opening and closing leadership, fosters employee engagement in acquiring new knowledge for the development of innovative green products while simultaneously directing them to utilize existing knowledge for the enhancement of current products through sustainable practices. Corporate sustainable performance refers to the developmental trajectory of a business aimed at concurrently attaining three objectives: environmental preservation, economic prosperity, and social well-being (Pham & Kim, 2019). Enterprises must provide cost-effective, energy-efficient, and high-satisfaction products to enhance economic, environmental, and social performance (Pham & Kim, 2019). Furthermore, the creation of such items necessitates that staff actively seek new knowledge to innovate green products, as well as enhance existing products using sustainable ways. Ambidextrous leadership empowers employees to autonomously pursue new knowledge for the development of green products while simultaneously directing them to effectively utilize existing knowledge to enhance current products through sustainable practices (Berraies and Zine El Abidine, 2019). Consequently, ambidextrous leadership may be more effective in improving corporate sustainable performance.

Moreover, ambidextrous leaders guide their organizations to maintain adaptability and evade environmental selection pressures (Floyd and Lane, 2000, p. 155), as "exploitation pertains to knowledge acquired through localized inquiry, experiential enhancement, and the selection and application of established routines, whereas exploration involves knowledge gained through deliberate variation, systematic experimentation, and creative play" (Baum *et al.*, 2000).

Exploitation refers to the enhancement of current knowledge, whereas exploration denotes the pursuit of new knowledge (March, 1991). Ambidexterity refers to the managerial difficulty of synergizing exploitation and exploration while combining external and internal knowledge (Raisch *et al.*, 2009). Eisenhardt and Martin (2000) emphasize the peril of obsolescence associated with exclusively acquiring information internally. Externally obtained knowledge can also strengthen existing knowledge frameworks. Ambidextrous leadership enhanced learning and organizational knowledge, which are the foundations of entrepreneurial orientation (Krauss *et al.*, 2005).

Ambidextrous leadership is crucial for fostering a culture of creativity within the firm (Chughtai *et al.*, 2022). By simultaneously promoting exploration and exploitation, ambidextrous leaders cultivate an environment that motivates employees to pursue inventive solutions, experiment with innovative concepts, and contribute to the organization's capacity for innovation (Berraies and El Abidine, 2019). Moreover, ambidextrous executives recognize the importance of equilibrating risk-taking and stability within the firm (Gill *et al.*, 2019). They offer a secure and nurturing environment that enables employees to undertake measured risks, explore novel methodologies, and articulate their creative concepts, all of which are vital for innovative work behaviour. Resource allocation constitutes another vital facet of this interaction. Ambidextrous leaders tend to distribute resources, guaranteeing that staff possess the requisite support and tools to investigate new concepts and actively engage in the advancement of creative projects (Jia *et al.*, 2021).

This leadership style's ambidexterity fosters emotional equilibrium between continuity and change (Huy, 2002), thereby alleviating employees' apprehension over uncertainty

and enhancing their self-efficacy to partake in innovative and risk-taking endeavours. Furthermore, ambidextrous leaders deploy opening leadership behaviours to motivate people to actively seek innovative ideas and solutions, subsequently transitioning to close leadership behaviours to facilitate their implementation. Consequently, ambidextrous leadership tends to promote proactivity, innovation, and risk-taking among personnel.

Ambidextrous leaders involve employees with high openness to experience in exploration and experimentation, while engaging those with low openness to experience in progressive adaption. Ambidextrous leaders alternate between opening and closing leadership behaviours to reconcile these two change inclinations inside the organization, thereby diminishing employee resistance to change and enhancing their receptiveness, which in turn fosters the development of entrepreneurial values. Furthermore, ambidextrous leaders, via opening behaviours, "unfreeze" outdated values and initiate the shift to entrepreneurial ideals, while through closing behaviours, they "refreeze" these new values. Indeed, the exploration facilitated by open leadership behaviours (Zacher and Rosing, 2015) involves experimentation, risk-taking, and the pursuit of innovative solutions. Facilitative leadership behaviours promote innovative actions among employees, allow for independent thought and action, and endorse their efforts to contest established norms (Rosing et al., 2011).

Ambidextrous leaders' initial behaviours foster proactivity, innovation, and risk-taking for transformative transformation. Conversely, closing leadership behaviours involve establishing explicit guidelines, overseeing goal attainment, and executing corrective measures (Rosing et al., 2011), which are associated with the effective execution of innovative concepts (Miron-Spektor et al., 2011) and the reinforcement of

entrepreneurial values. The synergy between exploration and exploitation cultivated by ambidextrous executives (Ghoshal and Bartlett, 1997, p. 151) stimulates corporate entrepreneurship. Duncan (1976) emphasizes that the innovativeness aspect of corporate entrepreneurship (Frishammar and Åke Hörte, 2007) may arise from dual structural configurations, namely exploration and exploitation, facilitated by ambidextrous leadership.

Moreover, ambidextrous leaders guide their organizations to maintain adaptability and evade the pressures of environmental selection (Floyd and Lane, 2000, p. 155), as "exploitation pertains to knowledge acquired through localized inquiry, experiential enhancement, and the selection and reutilization of established routines, whereas exploration involves knowledge gained through deliberate variation, systematic experimentation, and creative play" (Baum et al., 2000, p. 768). Exploitation refers to the enhancement of current knowledge, whereas exploration denotes the pursuit of new knowledge (March, 1991). Ambidexterity refers to the managerial problem of synergizing exploitation and exploration while combining external and internal knowledge (Raisch et al., 2009). Eisenhardt and Martin (2000) emphasize the peril of obsolescence associated with exclusively acquiring information internally. Externally obtained knowledge might also bolster existing knowledge frameworks. Ambidextrous leadership enhances learning and organizational knowledge, which are the foundations of entrepreneurial orientation (Krauss et al., 2005).

2.3.7 Firm Size and Age

Badulescu *et al.*, (2018) investigated the influence of firm size and age on the adoption of corporate social responsibility (CSR) initiatives among small and medium-sized enterprises (SMEs) in Romania. The study aimed to identify the key determinants that

influence varying levels of CSR engagement. It emphasized that CSR practices within SMEs are largely shaped by managerial decisions and the personal values of entrepreneurs. A central hypothesis of the study was that younger firms exhibit lower engagement in CSR activities. To test this, survey data were collected from 84 SMEs based in Oradea, Romania. The findings indicated notable differences between newer and more established firms regarding CSR participation; however, firm age was not found to be a definitive determinant of CSR engagement.

Doucoure and Diagne (2020) explored the effects of firm size and age on the performance of small food processing enterprises in Senegal. The primary aim was to develop a conceptual model linking size, age, market orientation, and business performance. Data were gathered from 250 small enterprise managers through structured surveys. The study revealed that firm size, age, and market orientation all significantly influenced firm performance. The study emphasized the strategic role these factors play in enhancing business outcomes.

Fadilah *et al.*, (2022) examined the relationship between firm size and age, sustainability reporting, and earnings management among mining companies listed on the Indonesia Stock Exchange between 2015 and 2019. Using a sample of 70 observations from 14 firms, multiple linear regression analysis conducted through SPSS v25 revealed that both firm size and age positively influenced sustainability reporting. Furthermore, the economic dimension of sustainability reporting had a positive effect on earnings management, while the environmental dimension had a negative effect; the social dimension showed no significant impact.

Maryana and Yenni (2021) assessed firm size and firm age in relation to sustainability report disclosure. The study also examined leverage, media visibility and industrial affiliation in relation to sustainability. A sample of 18 selected firm were examined over the period of 2014 to 2018 using longitudinal research design. The results indicated that size had positive significant relationship with sustainable disclosure, however, firm age had negative significant relation with sustainable disclosure. The current study examines firm size and age as control variable rather than independent variables.

Gunu and Adamade (2015) examined the link between firm age and financial performance. Secondary data was used to assess the relationship between firm age and financial performance. The study found that firm age had a negative relationship with financial performance.

Mulwa (2020) looked at the financial performance and firm size of Kenyan deposit-taking microfinance institutions. Using both a static and a dynamic panel data model, the study's goal was to ascertain how firm size affected the financial performance of deposit-taking microfinance institutions in Kenya. Secondary data on six institutions from 2011 to 2018 were used in the study. Customers' deposits had no significant effect on financial performance. While firms' assets had a positive influence.

2.4 Research Gaps

Despite the growing scholarly attention toward corporate entrepreneurship (CE), ambidextrous leadership, and sustainable performance, existing literature continues to reflect significant shortcomings that underscore the need for more nuanced, context-specific, and methodologically rigorous studies. A review of previous studies reveals salient gaps along four key dimensions: contextual, temporal, geographical, and

methodological. These gaps are addressed by the current study conducted in 2025, which examines the relationship between corporate entrepreneurship and sustainable performance of micro-finance firms in Kenya, with ambidextrous leadership serving as a moderating variable and analysed through a hierarchical regression model.

The majority of prior studies on corporate entrepreneurship have focused on general organizational performance, innovation outcomes, or financial metrics, often within the confines of large corporations or manufacturing sectors. For instance, Rodríguez-Peña (2021) evaluated corporate entrepreneurship and financial performance in Colombian subsidiaries, highlighting environmental dynamism but failing to account for the broader spectrum of sustainability performance, particularly in non-corporate entities such as micro-finance institutions. Similarly, Provasnek et al. (2017) investigated sustainable CE strategies in Austrian multinational corporations, relying heavily on secondary data and omitting sector-specific challenges faced by smaller, socially oriented financial firms.

In the African context, studies such as those by Abdissa *et al.*, (2024) in Ethiopia and Nkosi (2016) in South Africa also focused on SMEs and ICT firms, respectively, without drawing distinctions between profit-driven firms and socially oriented financial organizations like micro-finance institutions. These studies examined generic firm performance, omitting the sustainability perspective, which integrates economic, environmental, and social outcomes. This omission is critical because micro-finance firms operate at the intersection of social impact and financial performance, necessitating a more holistic performance construct.

Additionally, many past studies treated corporate entrepreneurship as a unidimensional construct, often focusing solely on innovation or risk-taking. However, corporate entrepreneurship is a multifaceted phenomenon that encompasses innovativeness, proactiveness, risk-taking, and strategic renewal. The present study addresses this gap by incorporating all key dimensions of CE and assessing their cumulative and individual impact on sustainable performance within micro-finance institutions. Moreover, the integration of ambidextrous leadership an aspect often treated separately or as an independent variable is approached here as a moderating factor. This contextual integration is largely absent in the extant literature.

Further, in several studies, leadership is addressed in isolation or narrowly conceptualized as transformational or transactional (Chang et al., 2023; Awan et al., 2018). These leadership typologies, while informative, do not fully capture the dynamic balancing act that ambidextrous leadership offers through both exploratory and exploitative behaviours. In contrast, the current study's approach of investigating ambidextrous leadership as a moderator between CE and sustainable performance offers a deeper understanding of the contingent nature of leadership in enhancing or weakening entrepreneurial effects.

Most empirical studies on corporate entrepreneurship and leadership have been conducted before the disruptive events of the COVID-19 pandemic, with few revisiting their findings in light of the massive shifts in business environments and organizational behaviour patterns. This presents a clear temporal gap. The pandemic introduced unprecedented levels of uncertainty, digital acceleration, and pressure on organizations—particularly in the financial services sector—to balance profitability

with resilience and sustainability. Yet, the literature reviewed shows minimal attempts to re-evaluate CE or leadership strategies within this new post-pandemic context.

For example, studies such as those by Umrani et al. (2018) in Pakistan and Abdulrahman & Garba (2020) in Nigeria come before the pandemic and utilize static models that do not reflect evolving managerial demands or environmental constraints. The CE-performance relationship was treated as linear and unidirectional, without factoring in post-crisis reorientations or the need for adaptive leadership mechanisms like ambidexterity.

Furthermore, even more recent studies, such as Babu *et al.*, (2024), which examined ambidextrous leadership's influence on innovative work behaviour in the IT sector, remain confined to the early 2020s. These studies did not fully capture or incorporate changes in global economic paradigms, sustainability agendas, and shifts in leadership expectations catalysed by the pandemic. Consequently, findings from these studies may not fully represent the conditions under which contemporary micro-finance institutions now operate.

In contrast, the current study was conducted in 2025, providing a timely reassessment of the CE-leadership-performance nexus under contemporary conditions. It incorporates post-pandemic dynamics, such as the rising importance of digital financial services, the push for green financing, and an increased focus on organizational resilience and stakeholder accountability—all of which are integral to sustainable performance. This makes the present research both more relevant and responsive to the current realities facing micro-finance institutions in developing economies.

An overwhelming number of CE and leadership studies have been concentrated in developed economies or large emerging markets like China, India, or Brazil. Countries in Sub-Saharan Africa, especially Kenya, are markedly underrepresented in the empirical literature. For instance, while studies such as those by Chang *et al.*, (2023) in India and Zheng *et al.*, (2017) in China offer rich insights into CE and ambidextrous leadership, they do so within vastly different institutional, regulatory, and socio-economic settings than those found in East Africa.

In the limited African studies available, such as Abdissa *et al.*, (2024) in Ethiopia or Nkosi (2016) in South Africa, the focus is often on broader SMEs or ICT sectors rather than financial inclusion-focused organizations like micro-finance institutions. Even within Kenya, relevant studies (Linyiru, 2015; Mwaniki, 2017; Bor, 2018) have focused on state corporations or medium-sized enterprises, with scant attention paid to MFIs. While these studies confirmed the positive effects of CE on performance, none contextualized their findings within the unique structural and operational characteristics of micro-finance firms, such as their dual mission of social impact and profitability.

The few Kenyan studies that have attempted to bridge this gap—such as Rono *et al.* (2021) on dynamic capabilities in food and beverage companies or Kariuki (2022) on leadership and employee retention in MFIs—still fall short of analysing how CE and ambidextrous leadership interact to influence sustainable performance. Moreover, they often overlook the moderating or mediating dynamics critical to understanding complex variable interplays.

Your 2025 study not only addresses this geographical gap but also enhances local relevance by focusing squarely on micro-finance institutions in Kenya—a country with

one of the most vibrant financial inclusion landscapes in Africa. It contributes empirical insights tailored to Kenya's socio-economic context, regulatory environment, and financial ecosystem, filling a significant vacuum in existing scholarship.

Many previous studies on CE and performance employ descriptive or correlational research designs with limited analytical robustness. For instance, studies like those of Nkosi (2016), Chang *et al.*, (2023), and Bor (2018) primarily used basic linear regression or structural equation modelling without exploring interaction effects or multilevel data structures. While SEM is powerful for exploring mediation, it is often inadequate in addressing complex moderation models—especially in hierarchical organizational settings.

In addition, several studies relied on secondary data (Provasnek *et al.*, 2017) or qualitative case studies (Piotrowska, 2023; Soares *et al.*, 2021), which while rich in depth, lack the generalizability and predictive power of advanced quantitative techniques. Others, such as Bawono *et al.*, (2022), applied PLS-SEM but did not sufficiently capture the moderating role of leadership in the CE-performance link. More critically, the statistical models used often do not control for nested data or hierarchies within organizations, leading to potential omitted variable bias and spurious relationships.

The study addresses this methodological gap by employing a hierarchical regression using Hayes Process Macro model—an advanced statistical technique capable of examining moderation effects and handling nested data structures. This enables a more precise estimation of how ambidextrous leadership influences the relationship between corporate entrepreneurship and sustainable performance across different organizational

units or firm sizes. The use of hierarchical regression also allows for the inclusion of control variables such as firm age, size, or market orientation, thus improving the model's explanatory power.

Moreover, this study goes beyond traditional variable measurements. For example, sustainable performance is operationalized as a multidimensional construct covering environmental, social, and financial aspects, reflecting a triple-bottom-line perspective. This contrasts sharply with earlier studies that often-treated performance as a single-dimensional outcome (profitability or market share). Similarly, ambidextrous leadership is measured through both "opening" and "closing" behaviours rather than treating leadership as a binary or simplistic variable.

Table 2.1: Summary of Knowledge Gaps

Author	Topic	Methodology	Findings	Knowledge Gaps	Current Study
Huang, Li, and Wang (2022)	Entrepreneurial performance and innovativeness among Chinese female entrepreneurs.	Primary data from 558 Chinese female entrepreneurs.	Psychological capital, opportunity recognition and growth mediated the innovativeness of female entrepreneurs and performance.	The study focused on direct relationship between innovativeness and sustainable performance among Chinese female entrepreneurs.	The study focused on innovativeness as variable corporate entrepreneurship while ambidextrous leadership moderates this relationship.
Adim, Tamunomiebi, Akintokunbo, and Adubasim (2018)	Performance and entrepreneurial innovativeness of women in River State, Nigeria	A cross-sectional survey approach was used to examine 329 women.	Women entrepreneurs' innovativeness had a statistical association with the creation of jobs, but the relationship was not significant with contributions to household subsistence	Main focus was the women enterprises in River State, Nigeria.	The study was done in Kenya micro-finance institutions in Kenya.
Bosire, Namusonge, and Paul (2021)	Entrepreneurial pro-activeness on youth-led micro and small businesses (MSEs) in Kenya	A descriptive research design was adopted where 771 registered you-led Jua Kali Artisans MSEs.	. Entrepreneurial finance and pro-activeness had a significant positive influence on the performance of youth-led micro and small businesses.	Examine pro-activeness in relation to youth led MSEs performance	It examined pro-activeness on sustainable performance while moderated by ambidextrous leadership.
Raham, Luna, and Ping (2021)	Risk-taking, pro-activeness, and innovativeness on the success of SMEs in Bangladesh.	A hierarchical regression analysis	SME success in Bangladesh is significantly influenced by the age of the firm, risk-taking, pro-activeness, and innovativeness	The study was done in SME in Bangladesh.	The study was done on MFIs in Kenya.
Egele, Muhammad, and Mutenyo (2018)	The performance and risk-taking of SMEs in Nigeria.	A cross-sectional research design was used.	performance of SMEs and entrepreneurial risk taking are positively and significantly correlated.	Examined. Performance SMEs in Nigeria.	It examined sustainable performance of MFIs.
Katou, Kafetzopoulos, and Vayona (2023)	Ambidextrous leadership and sustainable performance.	Using structural equation modeling.	Ambidextrous leadership and sustainable performance is favorably mediated by organizational ambidexterity and the circular economy domains of action.	Ambidextrous leadership was examined in relation to sustainable performance.	Ambidextrous leadership acted as moderator between corporate entrepreneurship and suitability performance.

Martnez-Climent, Rodriguez-Garca, and Zeng (2019)	Ambidextrous leadership, social entrepreneurship, and operational effectiveness.	Utilized structural equation modeling.	Organization's social entrepreneurship is influenced by pro-activeness, creativity, risk-taking, and reciprocity.	Examined social entrepreneurship on operational effectiveness.	The current study examined sustainable development in relation to corporate entrepreneurship.
Rodríguez-Peña (2021)	Corporate entrepreneurship and financial performance in Colombian subsidiaries.	Cross-sectional structural equation modeling with 87 Colombian subsidiaries.	Entrepreneurial orientation improved financial performance; environmental dynamism was not a significant moderator.	Focused only on financial performance; no consideration of sustainable performance or leadership effects.	Examines sustainable performance in Kenyan MFIs, introducing ambidextrous leadership as a moderator.
Provasnek et al. (2017)	Sustainable CE strategies in international corporations.	Secondary data and index analysis of top firms.	Sustainable CE contributes to innovation; entrepreneurs play a central role.	Focused on large global firms; lacked focus on small financial institutions and leadership dynamics.	Applies CE and leadership framework to Kenyan micro-finance firms using primary data.
Chang et al. (2023)	Sustainable CE performance and social capital in Indian high-tech firms.	Multilevel analysis of 282 units in 87 firms.	Transformational leadership supported internal knowledge sharing and CE.	Did not explore leadership as a moderator; focused on large tech firms, not MFIs.	Investigates ambidextrous leadership as a moderator in Kenyan MFIs.
Abdissa et al. (2024)	CE dimensions and SME performance in Ethiopia.	Mixed-method design with 173 SME respondents.	Innovation, proactiveness, and risk-taking improved general performance.	Did not focus on sustainable performance or include leadership effects.	Targets sustainable performance in Kenyan MFIs, moderated by ambidextrous leadership.
Nkosi (2016)	CE and performance in South African ICT industry.	Online survey of 114 ICT firms.	Positive link between CE and business performance.	Lacked leadership variables and sustainability orientation.	Incorporates ambidextrous leadership and a sustainability perspective in MFIs.
Umrani et al. (2018)	Relationship between CE, organizational culture, and business performance in Pakistan.	Structural equation modeling on data from middle managers in five banks.	Organizational culture moderated the CE-performance relationship.	Emphasized cultural moderators but ignored sustainable performance and sector-specific nuances.	Focuses on MFIs with ambidextrous leadership as a moderator on sustainable performance.
Abdulrahman & Garba (2020)	CE impact on organizational performance in Dangote Group, Nigeria.	Pearson correlation and multiple regression on 238 respondents.	Proactiveness positively affected performance; risk-taking and creativity did not.	Focused on performance in conglomerates; lacked sustainability and leadership dimensions.	Assesses CE dimensions on sustainable performance, moderated by ambidextrous leadership in MFIs.
Piotrowska (2023)	Determinants of CE for sustainability using Ørsted as a case.	Systematic literature review and case study analysis.	Highlighted leadership and culture as drivers of sustainability.	Relied on secondary data; lacked empirical testing and ignored moderating effects.	Employs primary data to examine leadership's moderating role in CE-sustainability link in Kenyan MFIs.

Ying & Jin (2023)	Digital transformation and corporate sustainability in China.	Two-way fixed effects model on listed firms.	Ambidextrous innovation moderated digital transformation and sustainability.	Did not study CE or financial services; focused on innovation in digital context.	Studies CE and ambidextrous leadership in the non-digital financial service sector.
Martínez-Climent et al. (2019)	Ambidextrous leadership and social entrepreneurial orientation.	Conceptual framework with empirical backing.	Found reciprocal leadership behaviors influenced social entrepreneurial culture.	Focused on social entrepreneurship, not CE or sustainable performance.	Analyzes ambidextrous leadership's effect on CE and sustainability in financial institutions.
Egwakhe et al. (2022)	Ambidextrous leadership and project sustainability performance in Chinese construction.	SEM and regression with 217 project leaders.	Leadership positively influenced project performance via ambidextrous culture.	Emphasized culture as mediator; did not explore CE or finance sector.	Focuses on ambidextrous leadership moderating CE and sustainability in Kenyan MFIs.
Katou et al. (2023)	Ambidextrous leadership and sustainable performance in Greek firms.	Structural equation modeling on public and private sector firms.	Organizational ambidexterity and circular economy mediated leadership-performance link.	Studied mediation; leadership was not tested as moderator.	Uses ambidextrous leadership as a moderator rather than mediator in CE-performance relationship.
Bawono (2022)	Ambidextrous leadership and business success in Indonesian telecoms.	Sequential explanatory mixed methods (quantitative and qualitative).	Leadership indirectly influenced performance through digital business models.	Combined design focused on digital innovation; no moderation tested.	Applies quantitative model testing ambidextrous leadership as moderator in CE context.
Azmy & Hartono (2024)	Ambidextrous leadership and employee performance in manufacturing.	Literature review approach.	Found ambidextrous leadership enhanced innovation and adaptability.	Focused on employee-level outcomes; did not test CE-performance link.	Tests CE and leadership effects at the firm level in micro-finance context.

Source: Researcher (2024)

2.5 Conceptual Framework

The independent variable of the study is corporate entrepreneurship which was measured using innovativeness, risk-taking and pro-activeness. While the dependent variable was sustainable performance: the variable was measured using economic, environmental, governance and social dimensions. The ambidextrous leadership was the moderating variable. Ambidextrous leadership was measured using transformative leadership and transactional leadership. The study used firm's size and age as control variables.

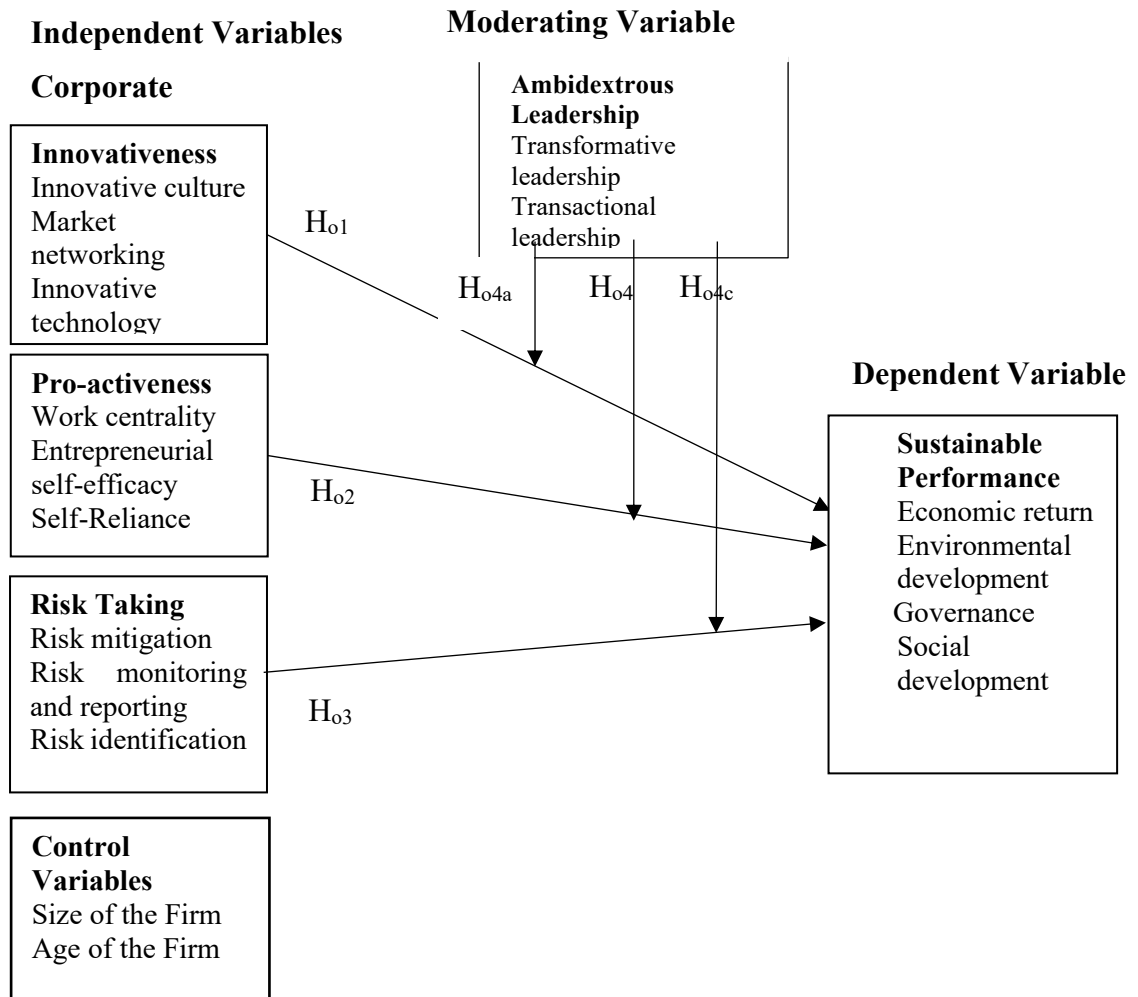


Figure 2.1: Conceptual Framework

Source: Adapted and Modified by the researcher (2024)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the research philosophy, design, target population, sampling, data collections, validity and reliability, data analysis, and ethical issues.

3.1 Research Philosophy

According to Tamminen and Poucher, (2020) "paradigm is a term used to describe a worldview that is based on philosophical presumptions about the nature of social reality". Thus, a research philosophy directs the researcher to pose particular queries and employ suitable research techniques. The positivist paradigm was used in the study because quantitative data was used to determine the direct and moderating effects of the factors being investigated. The idea of objectivism is closely related to the idea of positivism. In this type of philosophical approach, researchers offer their perspective on how to assess the social world using objectivity rather than subjectivity (Al-Ababneh, 2020).

This paradigm holds that rather than concentrating on the specifics of the research, researchers are more concerned with gathering broad knowledge and data from a sizable social sample. It holds that only information that is "factual" and derived from observation (the senses), including measurement, is reliable. The researcher's responsibility in positivist investigations is restricted to the gathering and impartial analysis of data.

This viewpoint holds that the researcher's personal beliefs have no bearing on the research endeavor. According to Rashid, *et al.*, (2021), the positivist philosophical

approach is primarily concerned with surveys, observations, and experiments that gather numerical data. This asks for more organized surveys with a bigger sample size than the equivalent paradigm.

Positivism emphasized the use of empirical data, systematic observation, and objective measurement to gain a deeper understanding of phenomena. In this study, the quantitative approach is essential for collecting and analyzing data related to variables like corporate entrepreneurship, ambidextrous leadership, and sustainable performance, allowing for statistical correlations and explanations. Qualitative methods, on the other hand, can provide a more in-depth understanding of the nuances and contextual factors associated with these concepts. Positivism was ideal for this study since the study was grounded on theories, hypotheses testing and quantitative methodologies. By adopting both approaches within the positivist paradigm, the research can provide a comprehensive and well-rounded analysis of the relationships between corporate entrepreneurship, ambidextrous leadership, and sustainable performance in Microfinance, thereby contributing valuable insights for both academic understanding and practical application in the field.

3.1.1 Research Design

Sileyew (2019) opine that research design is described as the program, framework, or plan utilized to produce solutions to research challenges. The study adopted both explanatory and cross-sectional research designs. Explanatory research design seeks to explain causal relationship between variables. In the context of this study, the design is ideal because the study sought to assess the effect of corporate entrepreneurship on sustainable performance of MFIs in Kenya and the moderating effect of ambidextrous leadership. The design enables the researcher to ascertain the mechanism or reason

behind a specific behavior, forecasting future events, and deepening comprehension of a given subject. This design aims to go beyond mere description and association by probing into the 'why' and 'how' questions, seeking to uncover causal relationships and intricate dynamics. Explanatory study is a research technique used to look into how or why something happens when there is little data available on the subject. It can aid in deepening your comprehension of a certain subject. This enabled the research to employ quantitative analysis techniques, such as inferential and descriptive statistics (Bloomfield & Fisher, 2019).

A cross-section research approach enables a researcher to obtain information at specific time, cross-sectional design is employed in social sciences and epidemiology to analyze the prevalence, distribution, and relationships of variables without following subjects over time (Mohajan, 2020). The current study extracted information from Micro-Financial Institution in Kenya. This was used to gather information on a wide range of variables simultaneously, making it suitable for studying diverse traits or characteristics within a given group. This examined the relationships between corporate entrepreneurship and sustainable performance as well as the moderating effect of ambidextrous leadership.

3.2 Study Area

The study focused on 45 Microfinance Institutions with a total of 467 branches (CBK, 2023). These MFIs are spread across various regions in Kenya, with the majority of their head offices located in Nairobi. The study specifically targeted management-level personnel, as they play a pivotal role in decision-making processes within these institutions. The list of the MFIs is shown as Appendix III.

3.3 Target Population

Target population represents all the objects or subjects that participated in achieving the desired objective of the study (Willie, 2024). The study targeted 467 branch managers who were the study's respondents.

3.4 Sampling Design

A sample size is a scientific representation of the entire population. The sample size was computed using Yamane Tore formulae (Thompson & Lange, 2011). This was given by;

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

Whereas, N=215 and e=5%

$$n = \frac{467}{1 + 467(0.05)^2}$$

A sample of n=215 was adopted.

Simple random sampling method was used in selecting the respondents from the Microfinance institutions. According to Asiamah, Mensah and Oteng-Abayie (2017) simple random sampling technique produce estimates of overall population parameters with greater precision and ensures a more representative sample is derived from a relatively homogeneous population.

3.5 Data Collection

The study used structured questionnaires to collect the data. This tool is more systematic and structured which aims at obtaining information from respondents in a

direct and open manner. Taherdoost (2016), points out that structured questionnaires are direct questions that assist in collecting quantitative data. The questionnaire is divided into section A which provide general information and section B which represent corporate entrepreneurship, section C representing ambidextrous leadership and section D representing sustainable performance. A five points Likert scale was adopted in section B, C and D where 1 is strongly disagree, 2 disagree, 3 neutrals, 4 agree and 5 strongly agree. Corporate entrepreneurship was adopted and modified from Anwar and Shah (2020). Sustainable performance questions were adopted and modified (Kocmanová & Šimberová, 2014).

3.5.1 Validity of Research Instrument

The study validated its instrument through systematic procedures to ensure it accurately measured the study's objectives. Face validity refers to the extent to which items appear, on the surface, to measure what they are intended to measure, while content validity concerns how well the items cover all relevant aspects of the construct being studied. Construct validity reflects how well the items and scales represent the underlying theoretical concepts, and criterion validity refers to the extent to which scores on the instrument relate to an external standard or outcome. In this study, items were adapted from previously validated questionnaires, reviewed by the academic supervisor and subject-matter experts, and refined after a pilot study and factor analysis, thereby strengthening face, content, construct, and criterion validity. Thus, the study validated its instrument, and all key constructs and objectives under investigation were adequately addressed by the measurement instruments.

3.5.2 Reliability of Research Instrument

According to Lechien *et al.*, (2020), reliability refers to the degree to which a measuring instrument consistently yields dependable and stable results. It reflects the internal consistency of the measurement tool across the various research variables. A measurement is deemed reliable when repeated attempts to assess the same concept produce consistent outcomes.

Before initiating the main phase of data collection, the reliability of the research instruments was evaluated by calculating Cronbach's alpha coefficients for each of the measurement scales. This was done to ensure that the instruments were capable of consistently capturing the intended data. To facilitate this process, a pilot study was conducted involving the distribution of twenty questionnaires to staff members at Juhudi Kilimo Micro-Finance. The purpose of this preliminary study was to assess the reliability of the questionnaire and refine it where necessary. Importantly, the data obtained from the pilot study was excluded from the main analysis to avoid any potential bias or redundancy.

The pilot questionnaires were carefully analyzed to determine the reliability of the instrument. If the instrument demonstrated both reliability and validity, it was then adopted for the actual fieldwork. This step was critical to enhance the accuracy and consistency of data collection in the main study.

Shrestha (2021) emphasizes the importance of evaluating the reliability of research constructs through the use of Cronbach's alpha coefficients. Conventionally, alpha values for all constructs should not exceed the commonly accepted threshold of 0.70, which is a satisfactory level of internal consistency. A pilot study plays a crucial role

in identifying and resolving any inconsistencies in the measurement items before the commencement of the full-scale research.

3.6 Data Collection Procedure

The research obtained the recommended authorization from the Moi University and NACOSTI, before data collection. The researcher engaged five research assistants who assisted in data collection. The research assistants were trained on collection and ethical considerations. The researcher and the assistants visited the microfinance The research assistants also assured the respondents of confidentiality and commences to give questionnaires using simple random method. The research assistants dropped the questionnaire and pick them at a later date to give the respondents humble time to go through the questionnaires and fill it. The collected questionnaires were organized and prepared for further analysis.

3.7 Measurement of the Study Variables

The questionnaire used in this study was structured into five sections: Section A general information, Section B corporate entrepreneurship where Part 1 Innovativeness, Part 2 Pro-Activeness, Part 3 Risk-Taking, Section C Ambidextrous leadership, Section D Sustainable performance. A 5-point Likert scale was employed for section B,C and D responses based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

3.7.1 Dependent variable

The dependent variable sustainable performance was measure using five-point Likert scale using eight items. The same measure is adopted from earlier studies (Zheng *et al.*, 2017; Katou *et al.*, 2023).

3.7.2 Independent variable

Innovativeness consisted of five questions measured using a five-point Likert scale (ordinal level) (Adim *et al.*, 2018; Boabeng & Cai 2018 & Bor 2018). Similarly, risk taking was measured using a 5-point Likert scale (ordinal level) comprising of five questions, (Adim *et al.*, 2018). Pro-activeness also consisted of five be measure using a 5-point Likert Scale (ordinal level) as adopted from earlier studies (Ogbari *et al.*, 2022; Bature *et al.*, 2018 & Bosire *et al.*, 2021).

3.7.3 Moderating variable

The moderating variable, ambidextrous leadership, was measured using eight questions on a 5-point Likert scale (ordinal level). This scale was adapted from studies by Zheng *et al.*, (2017) and Katou *et al.*, (2023), who also employed a 5-point Likert scale to assess both ambidextrous leadership and sustainable performance.

3.7.4 Control variable

The study used to control variable namely MFIs age and size. The variables were measured as follows:

3.7.4.1 MFIs age

MFIs age denotes the number of years since a microfinance institution (MFI) was incorporated (Mia, *et al.*, (2023). In this study, age was measured as the number of years elapsed from the year the MFI was incorporated to the year of data collection.

3.7.4.2 MFIs size

MFIs size denotes the scale of operations of a microfinance institution Mia, *et al.*, (2023). In this study, size was measured by the number of clients served by the MFI and categorized as micro/small ($\leq 30,000$ clients) and medium/large ($> 30,000$ clients).

Table 3.1: Measurement of Study Variables

VARIABLES	NUMBER OF ITEMS	MEASURE	SOURCES
<i>Sustainable performance</i> (Dependent variable)	8	Questionnaire items on five point Likert scale (ordinal level)	Zheng, Wu, Xie, & Xu (2017), Katou, Kafetzopoulos, & Vayona (2023). Kocmanová, & Šimberová, (2014).
Corporate Entrepreneurship (Independent Variable)			
<i>Innovativeness</i>	5	Questionnaire items on five point Likert scale (ordinal level)	Adim, Tamunomiebi, Akintokunbo, & Adubasim, (2018), Bor, (2018), Boabeng and Cai (2018)
<i>Risk Taking</i>	5	Questionnaire items on five point Likert scale (ordinal level)	Adim, Tamunomiebi, Akintokunbo, & Adubasim (2018).
<i>Pro-Activeness</i>	5	Questionnaire items on five point Likert scale (ordinal level)	Ogbari, Chima, Amaihian, & Olokundun, (2022), Bature, Sallehuddin, Rosli & Saad, (2018), Bosire, Namusonge, and Paul, (2021).
<i>Ambidextrous Leadership</i> (Moderating Variable)	8	Questionnaire items on five-point Likert scale (ordinal level)	Zheng, Wu, Xie, & Xu (2017), Katou, Kafetzopoulos, & Vayona (2023).

Source: Research (2023)

3.8 Data Analysis and Presentations

The collected data underwent a series of processes involving sorting, coding, and entry into the Statistical Package for the Social Sciences (SPSS) version 26.0. Prior to analysis, the data was carefully screened to ensure accuracy and suitability for statistical

testing. Both descriptive and inferential statistical techniques were employed in the analysis.

Descriptive statistics, including the calculation of means and standard deviations, were used to summarize the data and provide insights into the distribution of the variables. This method was selected because it offers a fundamental understanding of the characteristics of the dataset and can also reveal preliminary patterns or potential relationships among variables.

Inferential statistics were deemed appropriate for this study as they allow researchers to make data-driven conclusions and generalizations about a larger population based on sample observations. They are particularly valuable for providing explanatory insights into observed phenomena.

Inferential statistical techniques were then applied to examine the relationships between the variables and to test the study hypotheses. Specifically, multiple linear regression analysis was utilized to determine the effect of the independent variables on the dependent variable and the moderating effect of ambidextrous leadership. Additionally, correlation analysis was conducted to assess the interrelationships among the variables.

Two analytical models were developed for hypothesis testing. Model 2 was employed to test the first 3 hypotheses, which focused on examining the direct relationships among variables. Model 4 was used to test the third hypothesis, which involved testing the moderating effect. Before running the multiple regression analysis, several diagnostic tests were conducted to ensure the suitability of the data. These included tests for normality, linearity, homoscedasticity and multicollinearity. Performing these tests was necessary to confirm that the data met the assumptions required for multiple

linear regression analysis, thereby enhancing the credibility of the statistical findings and the conclusions drawn from them.

3.8.1 Moderated Multiple Linear Regression Model

Model 1 evaluated the effect of firm size and firm age on MFIs sustainable performance. Hypotheses one to three were tested using Model 2. According to Hayes (2012) beta coefficient of the interaction term between independent and moderating variable is used to test the moderating effect. In order to examine the moderating effect which relates to hypothesis 4a to 4c, model 4 was adopted using Hayes Process Macro. In order to understand the moderating variable mod graph were used to examine the nature of moderation. The multiple linear regression models used are shown below;

$$Y = \beta_0 + \beta_1 FS + \beta_2 FA + \beta_3 IN_1 + \beta_4 PA_2 + \beta_5 RT_3 + e \dots \dots \dots \text{Model 1}$$

$$Y = \beta_0 + \beta_1 FS + \beta_2 FA + \beta_3 X + \beta_4 AL + \beta_5 X * AL + e \dots \dots \dots \text{Model 2}$$

Where

Y = Sustainable performance

β_0 = Constant Term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5,$ = Beta coefficients

FS = Firm Size

FA = Firm Age

X = Variables (IN, PA, RT)

AL = Ambidextrous Leadership

X * AL = Interaction term of the predictor variable and Ambidextrous Leadership

e_i = Error Term

3.8.2 Regression Test Assumption

According to Baron and Kenny (1986), a regression is a mathematical depiction of the relationships between the exogenous and endogenous variables. Linear regression models have underlying assumptions, and failure to meet them can lead to parameter estimates that are inaccurate, inconsistent, and ineffective. The data must satisfy the following presumptions in order to do a linear regression analysis. Hence the data must satisfy the assumptions before performing regression analysis. The specific linear regression assumptions are discussed in the sub-sections.

3.8.2.1 Normality

In normality test the residuals of the variables are thought to be regularly distributed. In other words, the distribution of the errors in the value Y (the dependent variable) forecast is close to that of the normal distribution (Mishra, *et al.*, 2019). Multivariate analysis is thought to be based on the fundamental presumption of normality. The primary premise of normalcy is that all linear combinations of items and each individual item's data distribution are both normally distributed (Haire *et al.*, 2010).

Both at the univariate level and the multivariate level assumptions of normality can be tested. According to Hair *et al.* (2010), the converse is not always true, but if the variable or items fulfill multivariate normality, then they unquestionably satisfy univariate normality. In other words, the assumption of multivariate normality is not guaranteed if univariate normality exists. Shapiro Wilk was adopted in testing normality where H_0 : The variable is not normally distributed. The null hypothesis was accepted if $P < 0.05$, on the contrary, the alternative hypothesis indicated existence of Normality. Shapiro Wilk was appropriate based on its accuracy in small sample size less than 2000 objects or individuals.

3.8.2.2 Linearity

Linearity assumes that the dependent variable as a linear dependence of the predictor (independent) variables (Darlington, 1968). Multiple regressions explain the link between the dependent and the independent variables when the relationship is anticipated to be linear (Osborne & Waters, 2002). Violation of linearity may result in biased estimates of regression, including regression coefficients, standard errors, and tests of statistical significance (Keith, 2006). If the correlation between the dependent and independent variables is non-linear, regression results will inaccurately estimate the actual relationship, hence heightening the likelihood of Type I and Type II errors (Osborne & Waters, 2002). Bias often fails to reflect the genuine values of the population (Keith, 2006). Contravening this assumption jeopardises the significance of the parameters estimated in the analysis (Keith, 2006). Linearity was assessed using scatter plots and residual plots, using variable transformation as a corrective measure.

3.8.2.3. Heteroscedasticity

Heteroscedasticity refers to a situation where the variance of the residual terms is not constant across the levels of the predictor variable(s). Under the assumption of homoscedasticity, the residuals at each level of the predictor(s) are expected to have approximately the same variance; that is, for all values of the independent variables, the spread of points around the regression line should be roughly uniform. In this study, homoscedasticity was assessed using a scatterplot of standardized residuals against standardized predicted values (Field, 2020; Hair, Black, Babin, & Anderson, 2019).

3.8.2.4 Multi-Collinearity

Deng *et al.*, (2022), argue that multi-collinearity is the occurrence of significant correlations between independent variables. This implies that two or more predictors

variables should not have an exact linear connection with one another. Predictor variables are thought to not have a strong correlation. In this study, tolerance and Variance Inflation Factor (VIF) values were used to evaluate multi-collinearity.

According to Leech *et al.* (2011), a major multi-collinearity problem is revealed by a tolerance value of less than 0.1 or a VIF value more than 10. While VIF is the inverse of tolerance statistic, tolerance represents the degree of variability of the specific independent variable not explained by other independent variables. The results not had multi-Collinearity if VIF value is less than ten or tolerance is greater than 0.1.

3.9 Ethical Issues

The researcher obtained permission from Moi University to conduct the data collection for this study. Additionally, an authorization letter from NACOSTI was secured to ensure compliance with ethical and legal standards. All data collected from the respondents were treated with the highest level of confidentiality and used solely for academic purposes. The researcher ensured that the information provided by the participants accurately reflected the data collected during fieldwork, avoiding any form of manipulation or misrepresentation.

Anonymity was upheld throughout the study by refraining from recording or disclosing participants' names, ensuring their identities remained protected. The researcher emphasized the importance of confidentiality, ensuring that participants' data was never shared in a manner that could compromise their privacy or security.

Voluntary participation was a key principle of the study, with informed consent obtained from all participants. This ensured that participants were fully aware of their involvement in the research and willingly agreed to participate without any form of

coercion or pressure. To protect the integrity of the data, strict measures were taken to safeguard it from unauthorized access, ensuring its security against potential breaches or misuse.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION OF FINDINGS AND DISCUSSION

4.0 Introductions

This section discusses the response rate, data screening, missing data, outliers, demographics, scatter plots, factor analysis, reliability, descriptives statistics, correlation results, assumptions of regression models, controls variables, test of hypothesis, discussion of findings and summary of hypothesis testing result,

4.1 Response Rate

The study administered a total of 215 questionnaires based on the predetermined sample size. Out of these, 198 questionnaires were returned, resulting in a high response rate of 92.1%. However, 17 questionnaires were not returned, and upon further inspection, it was found that 7.9% of the returned questionnaires were unusable due to incompleteness and partially answered questions. This led to a total of 181 valid questionnaires, representing a usable response rate of 84.2%.

In support of the response rate, Taherdoost and Madanchian (2024) contend that a response rate of 80% or above is excellent for analysis, as it reduces the likelihood of non-response bias and enhances the representation of the sample. Therefore, the 84.2% response rate in this study is not only acceptable but also favourable for statistical analysis as it ensures the reliability of the findings and generalization ensuring the findings' credibility and validity.

Table 4.1: Response Rate of Questionnaires

Response rate	Number	Percent
Administered questionnaires	215	100%
Returned questionnaires	198	92.1%
Usable questionnaires	181	84.2%
Unusable questionnaires	17	7.9%

Source: Field Data, 2024

4.2 Data Screening and Cleaning before the Analysis

Data screening and cleaning is a crucial step in the research process, as it ensures the integrity and accuracy of the datasets prior to analysis. This process involves identifying and handling missing data, outliers, and errors that could potentially distort the findings. According to Coleman (2022), effective data screening enhances the quality of statistical analysis by ensuring that only valid and reliable data is used. In this study, the screening process led to the elimination of 17 questionnaires, representing 7.9% of the total responses. By removing these unusable datasets, the study reduced the risk of biased or inaccurate results. This analysis was based on robust and clean dataset, which is essential for producing credible and valid conclusions (Soderberg *et al.*, 2021).

4.2.1 Missing Data

The missing data may occur during data entry or data processing which can affect the overall quality of data base. The primary screening which was done at entry ensured that incomplete data was eliminated to reduce imbalance of datasets. However, secondary screening of data was done after completing data entry where all data was cross-checked for missing data. This enabled the researcher to ensure that all data transferred from the questionnaires were entered to Statistical Package of Social Sciences (version 27.0) accurately. For efficient cross-checking the corresponding questionnaires were indexed while entering with respective data entering index.

4.2.2 Outliers

Outliers play a critical role in data analysis, particularly when assessing the overall fit and robustness of regression models. The outliers were also screened both from the questionnaires during entry in primary screening as well as cross-checking in the secondary screening. These errors were corrected appropriately through confirming with respective indexed questionnaires.

4.3 Demographic Characteristics Results

The demographic results show that the majority of the MFIs institutions surveyed fall under the micro and small category, accounting for 83.4% of the sample, while only 16.6% are classified as medium and large. This indicates that the microfinance landscape within the study area is dominated by medium and large institutions with limited operational capacity and outreach. Such a distribution aligns with trends in many developing economies, where micro and small-MFIs form the bulk of the sector due to their community-based models, lower capital requirements, and the relative ease of establishing medium and large-scale financial entities. The small number of MFIs in the “medium and large” category suggests slower organizational growth or barriers that hinder institutions from scaling up, such as regulatory challenges, competition, or resource constraints. This dominance of micro-MFIs has implications for the study, as it shapes the operational characteristics and capacities that underpin the findings.

The results further show that a majority of the MFIs have been in existence for a long period, with 74.6% operating for 15 years and above. Only 2.8% have existed for 0–5 years, 8.3% for 5–10 years, and 14.4% for 10–15 years. This age distribution points to a relatively mature and stable microfinance sector, where most institutions have had many years to develop internal systems, governance structures, and operational

routines. The very small proportion of younger MFIs suggests limited new entry into the sector, possibly due to more stringent regulatory requirements, market saturation, or high costs of starting and sustaining microfinance operations. Older MFIs generally have accumulated institutional experience and may therefore exhibit stronger risk management practices, more stable membership, and better-developed service delivery models.

The demographic characteristics highlight a microfinance sector composed predominantly of long-established but medium and large institutions. This combination of medium and large scale and operational longevity may significantly influence the institutions' performance, governance approaches, and strategic choices, which in turn shapes the interpretations of the study findings. The demographic profile therefore provides a useful context for understanding subsequent analyses, especially in relation to how institutional age and size affect the variables under investigation.

Table 4.2: Demographic Descriptive Results

		Frequency	Percent
MFI Size	Micro/Small	151	83.4%
	Medium/Large	30	16.6%
Age of MFI	0-5 years	4	2.8%
	5-10 years	15	8.3%
	10-15 years	26	14.4%
	15 and Above	135	74.6%

Source: Field Data, (2024)

4.4 Scatter Plots Test Results

A fundamental assumption of conventional linear regression analysis is that the relationship between the predictor variables and the outcome variable is linear. The relationship between the dependent variable and each independent variable must be linear. Scatter plots depicting the relationship between the dependent variable and each

independent variable, along with the residual plot illustrating standardized residuals against predicted values, were employed to assess the linearity assumption, as presented in the appendix iv.

Table 4.3: Demographic Information and Corporate Entrepreneurship ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Size of MFI	Between Groups	18.979	71	.267	4.817	.000
	Within Groups	6.049	109	.055		
	Total	25.028	180			
Age of MFI	Between Groups	45.713	71	.644	1.919	.001
	Within Groups	36.575	109	.336		
	Total	82.287	180			
Duration of Working within MFI	Between Groups	121.789	71	1.715	3.587	.000
	Within Groups	52.122	109	.478		
	Total	173.912	180			

Source: Field Data, 2024

4.5 Factor Analysis

Factor analysis is a statistical technique used to assess the construct validity of an instrument by identifying underlying relationships between variables and grouping them into factors. In this study, factor analysis was employed to evaluate the validity of the constructs used in measuring corporate entrepreneurship practices within MFIs. The primary goal was to confirm whether the data collected through the instrument reliably represented the intended constructs, such as innovativeness, pro-activeness, and risk-taking.

The factor loading values were examined to ensure that the principal component extraction method, combined with varimax orthogonal rotation, effectively clustered the variables into distinct components. Varimax rotation, as noted by Tabachnick and Fidell (2013), simplifies the interpretation of factor loadings by maximizing the variance of squared loadings for each factor, making the results more comprehensible. A factor loading threshold of 0.4 or higher was used to confirm the strength of the relationships between the variables and their corresponding factors, as recommended by Hair *et al.* (2010).

In addition to factor loadings, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was employed to assess whether the sample size was sufficient for factor analysis. According to Kaiser (1974), a KMO value of 0.5 or above is acceptable, indicating that the correlations between variables are strong enough for factor analysis. In this study, the KMO values met the threshold, confirming that the sample was adequate for the analysis.

Furthermore, Bartlett's test of sphericity was conducted to evaluate whether the correlation matrix was an identity matrix, which would indicate that the variables were unrelated. A significant result from Bartlett's test ($P < 0.05$) demonstrates that the correlations among the variables were suitable for factor analysis, providing evidence of high construct validity (Field, 2018). In this case, the results of Bartlett's test confirmed the appropriateness of factor analysis, indicating strong relationships among the study variables. The factor analysis results for each variable, including innovativeness, pro-activeness, and risk-taking, are presented in the following sections, offering insights into the validity of the constructs used to measure corporate entrepreneurship practices in MFIs.

4.5.1 Corporate Entrepreneurship

The questions related to corporate entrepreneurship were evaluated using factor analysis to determine whether innovativeness, pro-activeness, and risk-taking were distinct components. The results identified three components, corresponding to innovativeness, pro-activeness, and risk-taking. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.830, which exceeded the minimum threshold of 0.5, while Bartlett's Test of Sphericity was significant at less than 0.05. This indicated that factor analysis was appropriate for the three constructs, where the first component represented innovativeness, the second pro-activeness, and the third risk-taking.

Innovativeness was represented by five items, which loaded onto a factor with an Eigenvalue of 5.049, surpassing the threshold of 1.0. This was the strongest component of corporate entrepreneurship, accounting for 31.557% of the total variation. All five items had factor loadings greater than 0.5, further validating their significance in measuring innovativeness.

Table 4.4: Corporate Entrepreneurship Factor Analysis

	Component			Eigenvalues		Cronbach Alpha
	1	2	3	Total	% of Variance	
Our organization is based on innovative culture.	.794			5.049	31.557	0.745
Our MFI has reward system for any innovation idea.	.669					
Our MFI is based on networking marketing where clients are referrals.	.516					
We have adopted innovative technology to ensure efficiency at work.	.746					
Our branches and department have incorporated technology to increase the employee efficiency.	.657					
Our firm has utilized work centrality to ensure set objectives are achieved.		.691		3.892	24.327	0.759
There is autonomy at work which improves pro-activeness of the employees.		.617				
Our employees have self-efficacy which enables them to get more customer.		.635				
We ensure those who work and achieve set goals are rewarded.		.800				
We are self-reliant which drives high performance of employees.		.875				
We encourage our employees to take calculate risk-taking.			.797	1.222	7.638	0.813
We have an established risk mitigation mechanism to reduce or eliminate the risks.			.876			
Risks are monitored and report to ensure viable solution are achieved.			.902			
There are laid procedures on management and control of risks our organization.			.900			
We identify risks and control them at early stage.			.827			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.						.830
Bartlett's Test of Sphericity						1604.646
				df		120
				Sig.		.000

Source: Field Data, 2024

The second component was pro-activeness, represented by five items that loaded with an Eigenvalue of 3.892, exceeding the threshold of 1.0. Pro-activeness accounted for 24.327% of the total variance in corporate entrepreneurship. Each of the five items had factor loading above 0.5, meeting the criteria for predicting pro-activeness.

The third component, risk-taking, was also represented by five items, all of which had factor loadings above 0.5. The Eigenvalue for risk-taking was 1.222, surpassing the threshold of 1.0, and this component explained 7.638% of the variance in corporate entrepreneurship. As a result, all five items were used to measure the risk-taking aspect of corporate entrepreneurship.

4.5.2 Ambidextrous Leadership

The Kaiser-Meyer-Olkin (KMO) value was 0.764, exceeding the minimum threshold of 0.5, while Bartlett's Test of Sphericity was significant at less than 0.05. This indicated that factor analysis was appropriate for the construct representing ambidextrous leadership. The analysis yielded an Eigenvalue of 2.695, which surpassed the threshold of 1.0, explaining 53.901% of the variation in ambidextrous leadership. Out of the eight variables, seven had factor loadings above 0.5, leading to the conclusion that these seven items were suitable for measuring ambidextrous leadership.

Table 4.5: Ambidextrous Leadership Factor Analysis

	Component	Eigenvalues	Cronbach Alpha
	1	Total % of Variance	
The organization has adopted leadership that is more open	.701	2.69553.901	0.795
Employees emulate and follow their leaders guidance in achieving the organizational goals.	.793		
We have aspirational leadership that ensures employee's welfare is taken care of.	.707		
We are motivated by our leaders to achieve our individual and organization goals.	.759		
Our organization gives use autonomy to be creative and rewards use for innovations.	.717		
We have set policies and procedures that were must adhere to.			
Our leaders reward us based on achievement and performance.	.572		
Our leaders have closed behavior when it comes to achievement of the set vision of the organization.	.531		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.764
Bartlett's Test of Sphericity	Approx. Chi-Square	256.488	
	Df	10	
	Sig.	.000	

Source: Field Data, 2024

4.5.3 Sustainable Performance

According to the results presented in Table 4.6, the Kaiser-Meyer-Olkin (KMO) value was 0.794, which is above the minimum threshold of 0.5, and Bartlett's Test of Sphericity was significant at less than 0.05. This indicates that factor analysis was appropriate for the construct of sustainable performance. The Eigenvalue obtained was 2.952, exceeding the threshold of 1.0, and accounting for 59.033% of the variation in sustainable performance. Additionally, twelve items had factor loadings above 0.5, resulting in the selection of these twelve items for measuring sustainable performance.

Table 4.6: Sustainable Performance Factor Analysis

	Component 1	Eigenvalues		
		Total	% of Variance	Cronbach Alpha
Our firm has grown in profitability.	.607	2.952	59.033	0.869
Our firm has increased in number of branches..	.684			
Our firm has had a steady cash flow.	.641			
Our firm has adopted environmentally friendly loans.	.693			
Our firm has policy on environmental conservation	.663			
Our firm have reduced consumption of non-renewable resource.	.605			
Our firm provides equal opportunities to all without discrimination.	.790			
Our workers are free to participate in workers union of their choice.	.634			
Our firm provide to all stakeholders welfare facilities.	.538			
Our firm has improve community through provision of sustainable financial products.	.594			
Our firm has participated in in local community CSR activities	.674			
Our firm has responsibility for all the stakeholders safety and rights.	.670			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.794
Bartlett's Test of Sphericity	Approx. Chi-Square			323.273
	Df			10
	Sig.			.000

Source: Field Data, 2024

4.6 Reliability Analysis

Reliability is a crucial aspect of psychometric assessment, as it measures the consistency and stability of an instrument over time and across various contexts. To evaluate the reliability of the instrument used in this study, Cronbach's alpha coefficients were computed for each construct, reflecting the internal consistency of the variables. According to George and Mallery (2003), a Cronbach's alpha value of 0.70 or above is generally considered acceptable, indicating that the items within a construct are measuring the same underlying concept. The study focused on five variables:

innovativeness, pro-activeness, risk-taking, ambidextrous leadership, and sustainable performance, as detailed in Table 4.7.

Table 4.7: Reliability Analysis

Variable	Cronbach Alpha	Items
Innovativeness	0.745	5
Pro-activeness	0.759	5
Risk Taking	0.813	5
Ambidextrous Leadership	0.795	8
Sustainable Performance	0.869	12

Source: Field Data, 2024

The results revealed that all the research variables had Cronbach's alpha coefficients above 0.7, indicating that the respective items in the questionnaire were reliable. Specifically, the Cronbach's alpha coefficient for innovativeness was 0.745, for pro-activeness was 0.759, for risk-taking was 0.813, for ambidextrous leadership was 0.795, and for sustainable performance, was 0.869 where all exceeding the threshold of 0.7. Additionally, an aggregate Cronbach's alpha coefficient of 0.796 was obtained, confirming that the entire instrument was reliable.

4.7 Descriptive Statistics

Descriptive statistics, specifically the mean and standard deviation, play a vital role in summarizing and interpreting the data collected through the five-point Likert scale. These statistics assisted in assess the constructs of innovativeness, pro-activeness, risk-taking, ambidextrous leadership, and sustainable performance. The mean provided an average score for each construct, reflecting the central tendency of respondents' perceptions, while the standard deviation measured the extent of variability or dispersion around the mean, indicating the consistency of responses among participants

4.7.1 Innovativeness

Innovativeness was assessed using a five-point Likert scale, which provided the mean and standard deviation for each item. The results indicated that the Microfinance Institution (MFI) fostered an innovative culture, with a mean of 4.0718 and a standard deviation of 0.38054. Additionally, the MFIs had a reward system for innovative ideas, yielding a mean of 4.1215 and a standard deviation of 0.61158. Respondents indicated that the MFIs utilized network marketing, obtaining new clients through referrals, with a mean score of 4.1823 and a standard deviation of 0.56265. The findings also revealed that the MFIs adopted innovative technology to enhance efficiency at work, as indicated by a mean of 4.2099 and a standard deviation of 0.47153. Finally, the incorporation of technology in branches and departments to increase employee efficiency was reflected in a mean of 4.0994 and a standard deviation of 0.35127.

Table 4.8: Innovativeness Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
IN1	Our organization is based on innovative culture.	3.00	5.00	4.0718	.38054
IN2	Our MFI has reward system for any innovation idea.	2.00	5.00	4.1215	.61158
IN3	Our MFI is based on networking marketing where clients are referrals.	2.00	5.00	4.1823	.56265
IN4	We have adopted innovative technology to ensure efficiency at work.	2.00	5.00	4.2099	.47153
IN5	Our branches and department have incorporate technology to increase the employee efficiency.	3.00	5.00	4.0994	.35127

Source: Field Data, 2024

4.7.2 Pro-Activeness

The mean and standard deviation results for pro-activeness were derived from a five-point Likert scale, where 1 represented "strongly disagree" and 5 represented "strongly agree".

agree." The MFIs utilized work centrality to ensure that set objectives were achieved, with a mean of 4.0442 and a standard deviation of 0.39191. Additionally, the MFIs practiced autonomy in the workplace, which enhanced employee pro-activeness, as indicated by a mean of 4.2320 and a standard deviation of 0.57857. Employees in the MFIs demonstrated self-efficacy, enabling them to attract more customers, reflected by a mean of 4.1657 and a standard deviation of 0.52190. The MFIs also ensured that employees who met their goals were rewarded, with a mean of 4.2707 and a standard deviation of 0.59505. Finally, the MFIs fostered self-reliance among employees, contributing to improved performance, as evidenced by a mean of 4.1381 and a standard deviation of 0.49186.

Table 4.9: Pro-Activeness Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
PA1	Our firm has utilized work centrality to ensure set objectives are achieved.	2.00	5.00	4.0442	.39191
PA2	There is autonomy at work which improves pro-activeness of the employees.	2.00	5.00	4.2320	.57857
PA3	Our employees have self-efficacy which enables them to get more customer.	2.00	5.00	4.1657	.52190
PA4	We ensure those who work and achieve set goals are rewarded.	1.00	5.00	4.2707	.59505
PA5	We are self-reliant which drives high performance of employees.	2.00	5.00	4.1381	.49186

Source: Field Data, 2024

4.7.3 Risk-Taking

The mean and standard deviation for risk-taking were obtained from a five-point Likert scale. According to the results, the MFIs slightly encouraged employees to take calculated risks; however, there was considerable variation in risk-taking among the

institutions, with a mean of 3.3923 and a standard deviation of 1.04123. The MFIs established risk mitigation mechanisms to reduce or eliminate risks, which varied slightly across the institutions, resulting in a mean of 3.5249 and a standard deviation of 1.05182. Additionally, slightly more MFIs monitored and reported risks to ensure viable solutions were achieved, reflected by a mean of 3.3812 and a standard deviation of 1.12224.

The results also indicated that the MFIs had procedures in place for the management and control of organizational risks, with a mean of 3.5028 and a standard deviation of 1.00898. Notably, risk identification and control were implemented at an early stage to mitigate their effects on the MFIs, as evidenced by a mean of 3.6464 and a standard deviation of 0.88622.

Table 4.10: Risk-Taking Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
RT1	We encourage our employees to take calculate risk-taking.	1.00	5.00	3.3923	1.04123
RT2	We have an established risk mitigation mechanism to reduce or eliminate the risks.	1.00	5.00	3.5249	1.05182
RT3	Risks are monitored and report to ensure viable solutions are achieved.	1.00	5.00	3.3812	1.12224
RT4	There are laid procedures on management and control of risks our organization.	1.00	5.00	3.5028	1.00898
RT5	We identify risks and control them at early stage.	1.00	5.00	3.6464	.88622

Source: Field Data, 2024

4.7.4 Ambidextrous Leadership

Ambidextrous leadership was analyzed using a five-point Likert scale to obtain the mean and standard deviation. The results indicated that the organization adopted a

leadership style characterized by openness, with a mean of 3.9834 and a standard deviation of 0.46518. The study revealed that employees emulated and followed their leaders' guidance in achieving organizational goals, reflected in a mean of 4.2873 and a standard deviation of 0.58243. Furthermore, the findings showed that aspirational leadership ensured the welfare of employees within the MFI, with a mean of 4.1436 and a standard deviation of 0.54907.

According to the results, the leaders motivated employees to achieve both individual and organizational goals, as indicated by a mean of 4.2431 and a standard deviation of 0.60233. The organization also fostered employee autonomy to enhance creativity and utilized rewards for innovation, with a mean of 4.1823 and a standard deviation of 0.56265. Additionally, the MFIs established policies and procedures that employees were required to adhere to, as demonstrated by a mean of 4.2928 and a standard deviation of 0.53479. Leaders rewarded employees based on their achievements and performance, which was reflected in a mean of 4.2320 and a standard deviation of 0.56889. Finally, leaders exhibited a closed approach regarding the achievement of the organization's set vision, with a mean of 3.9558 and a standard deviation of 0.74404.

Table 4.11: Ambidextrous Leadership Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
AL1	The organization has adopted leadership that is more open	1.00	5.00	3.9834	.46518
AL2	Employees emulate and follow their leaders guidance in achieving the organizational goals.	1.00	5.00	4.2873	.58243
AL3	We have aspirational leadership that ensures employee's welfare is taken care of.	2.00	5.00	4.1436	.54907
AL4	We are motivated by our leaders to achieve our individual and organization goals.	1.00	5.00	4.2431	.60233
AL5	Our organization gives use autonomy to be creative and rewards use for innovations.	2.00	5.00	4.1823	.56265
AL6	We have set policies and procedure that were must adhere to.	3.00	5.00	4.2928	.53479
AL7	Our leaders reward us based on achievement and performance.	2.00	5.00	4.2320	.56889
AL8	Our leaders have closed behavior when it comes to achievement of the set vision of the organization.	1.00	5.00	3.9558	.74404

Source: Field Data, 2024

4.7.5 Sustainable Performance

The results for sustainable performance indicated that the firm experienced growth in profitability (mean = 3.8785, SD = 0.63825). Additionally, the MFIs expanded by increasing the number of branches (mean = 3.9282, SD = 0.98338). The findings also showed that the MFIs maintained a steady cash flow (mean = 4.0497, SD = 0.93260).

In terms of environmental performance, the MFIs had adopted environmentally friendly loan products to a certain extent (mean = 3.9724, SD = 0.79883). Notably, the firms had policies in place for environmental conservation (mean = 3.9669, SD = 0.81582).

They also showed a reduction in the consumption of non-renewable energy and resources (mean = 3.8785, SD = 0.85416).

The MFIs demonstrated strong social responsibility by ensuring equal opportunities for all stakeholders without discrimination (mean = 4.0608, SD = 0.57894). The study further indicated that employees had the freedom to join a labor union of their choice (mean = 3.8840, SD = 0.72481). Additionally, welfare facilities were available for stakeholders (mean = 3.9613, SD = 0.62685).

In the area of governance, the MFIs contributed to community development by offering sustainable financial products (mean = 4.0663, SD = 0.53336). They also actively participated in local community CSR activities (mean = 4.0166, SD = 0.60987). Finally, the MFIs took responsibility for ensuring the safety and rights of all stakeholders (mean = 4.0000, SD = 0.58689).

Table 4.12: Sustainable Performance Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
EC1	Our firm has grown in profitability.	1.00	5.00	3.8785	.63825
EC2	Our firm has increased in number of branches.	1.00	5.00	3.9282	.98338
EC3	Our firm has had a steady cash flow.	1.00	5.00	4.0497	.93260
EN1	Our firm has adopted environmentally friendly loans.	1.00	5.00	3.9724	.79883
EN2	Our firm has policy on environmental conservation	2.00	5.00	3.9669	.81582
EN3	Our firm have reduced consumption of non-renewable resource.	1.00	5.00	3.8785	.85416
G1	Our firm provides equal opportunities to all without discrimination.	1.00	5.00	4.0608	.57894
G2	Our workers are free to participate in workers union of their choice.	1.00	5.00	3.8840	.72481
G3	Our firm provide to all stakeholders welfare facilities.	1.00	5.00	3.9613	.62685
S1	Our firm has improve community through provision of sustainable financial products.	1.00	5.00	4.0663	.53336
S2	Our firm has participated in in local community CSR activities	1.00	5.00	4.0166	.60987
S3	Our firm has responsibility for all the stakeholders safety and rights.	1.00	5.00	4.0000	.58689

Source: Field Data, 2024

4.8 Summary Descriptive Statistics

The descriptive statistics for transformational practices indicated that pro-activeness was the most highly adopted corporate entrepreneurship strategy in the MFIs, with a mean of 4.1702 and a standard deviation of 0.394. This was followed by innovativeness (mean = 4.1370, SD = 0.347), while risk-taking (mean = 3.4895, SD = 0.886) was the least applied. The MFIs also exhibited a high level of ambidextrous leadership (mean = 4.1651, SD = 0.372). Additionally, they demonstrated strong sustainable performance, with a mean of 3.9719 and a standard deviation of 0.473. the values of the Skewness and Kurtosis confirm that the data was normally distributed

Table 4.13: Transformation Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Innovativeness	2.80	5.00	4.1370	.34675	-.397	3.350
Pro-activeness	2.40	5.00	4.1702	.39412	-.684	3.694
Risk-Taking	1.20	5.00	3.4895	.88603	-.448	-.429
Ambidextrous Leadership	2.63	5.00	4.1651	.37214	-.851	3.347
Sustainable Performance	1.50	5.00	3.9719	.47265	-.992	3.684

Source: Field Data, 2024

4.9 Correlation Results

Pearson correlation coefficients were utilized to examine the nature and the strength of the relationship between innovativeness, pro-activeness, risk-taking, ambidextrous leadership, firm age, firm size and sustainable performance. The results are presented in Table 4.14 below. The findings revealed that innovativeness exhibited a high positive significant relationship with sustainable performance ($r = 0.769$, $p < 0.05$). While showing a low and significant relationship with risk-taking ($r = 0.424$, $p < 0.05$). In addition, pro-activeness also demonstrated a significantly high relationship with sustainable performance ($r = 0.705$, $p < 0.05$). While ambidextrous leadership had a positive and significant correlation with sustainable performance ($r = 0.597$, $p < 0.05$). Interestingly, firm size displayed a weak negative insignificant relationship with sustainable performance ($r = 0.003$, $p > 0.05$). Furthermore, sustainable performance was found to have a low positive relationship with firm age ($r = 0.289$, $p < 0.05$). These results imply that within the context of corporate entrepreneurship, innovativeness, pro-activeness, risk taking, firm age and ambidextrous leadership significantly affect sustainable performance. Whereas, firm size may not have a significant effect on sustainable performance of MFIs Kenya.

Table 4.14: Pearson Correlation Coefficients

Correlations								
		Sustainable Performance	Innovativeness	Pro-activeness	Risk taking	Ambidextrous leadership	Size of MFI	Age of MFI
Sustainable Performance	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	181						
Innovativeness	Pearson Correlation	.769**	1					
	Sig. (2-tailed)	.000						
	N	181	181					
Pro-activeness	Pearson Correlation	.705**	.673**	1				
	Sig. (2-tailed)	.000	.000					
	N	181	181	181				
Risk taking	Pearson Correlation	.424**	.419**	.366**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	181	181	181	181			
Ambidextrous leadership	Pearson Correlation	.597**	.514**	.529**	.212**	1		
	Sig. (2-tailed)	.000	.000	.000	.004			
	N	181	181	181	181	181		
Size of MFI	Pearson Correlation	.003	-.045	-.054	-.219**	.022	1	
	Sig. (2-tailed)	.969	.549	.472	.003	.773		
	N	181	181	181	181	181	181	
Age of MFI	Pearson Correlation	.289**	.174*	.232**	.102	.213**	-.086	1
	Sig. (2-tailed)	.000	.019	.002	.173	.004	.252	
	N	181	181	181	181	181	181	181

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

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

Source: Field Data, 2024

4.10 Assumption of Regression Model

The study examined the suitability of regression model by examining the assumption of linearity, normality, heteroscedasticity, multi-collinearity and auto-correlation. These assumptions are important in ordinary least squares techniques that is applied in linear regression analysis models. This was presented in the following sub-sections.

4.10.1 Test of Linearity

The linearity assumption posits a linear relationship among the variables (Young, 2017). In regression analysis, it is expected that independent variables exhibit linear connections with the response variable. This hypothesis can be verified using a residual plot. The graphic is created by plotting the standardized residuals on the y-axis and the standardized projected values on the x-axis. A supplementary horizontal line may be incorporated to facilitate the interpretation of the output. Consequently, this study utilized scatter plots to assess linearity, with the results presented in the appendix.

4.10.2 Normality

The Kolmogorov-Smirnov and Shapiro-Wilk tests were both employed to assess the normality of the variables. Given the small sample size, the Shapiro-Wilk test was considered more suitable, as it is more accurate for smaller datasets (Razali & Wah, 2011). The general rule of thumb for these tests is that non-significant results ($P > 0.05$) indicate that the data follows a normal distribution.

According to the Shapiro-Wilk test results, the variables of innovativeness, proactiveness, risk-taking, ambidextrous leadership, and sustainable performance were all statistically insignificant ($P > 0.05$). This indicates that the variables were normally distributed, as non-significant p-values suggest that the data does not deviate from normality (Ghasemi & Zahediasl, 2012).

In conclusion, both the Shapiro-Wilk and Kolmogorov-Smirnov tests confirmed that the data was normally distributed, allowing the assumption of normality to be met. This is essential for further parametric analysis, ensuring the reliability of results in studies where normality is an important consideration.

Table 4.15: Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Innovativeness	.269	181	.081	.844	181	.059
Pro-activeness	.245	181	.101	.868	181	.063
Risk-Taking	.226	181	.119	.938	181	.123
Ambidextrous Leadership	.224	181	.125	.890	181	.085
Sustainable Performance	.154	181	.133	.942	181	.142

a. Lilliefors Significance Correction

Source: Field Data, 2024

4.10.3 Heteroscedasticity

The scatterplot of regression standardized residuals against standardized predicted values shows that the residuals are scattered and not forming a pattern. This random dispersion of points around the horizontal axis, with roughly equal spread across all fitted values, indicates that the variance of the errors is approximately constant. Therefore, the assumption of homoscedasticity is considered satisfied, and the estimated coefficients and standard errors from the regression model are likely to be reliable (Field, 2018; Hair, Black, Babin, & Anderson, 2019).

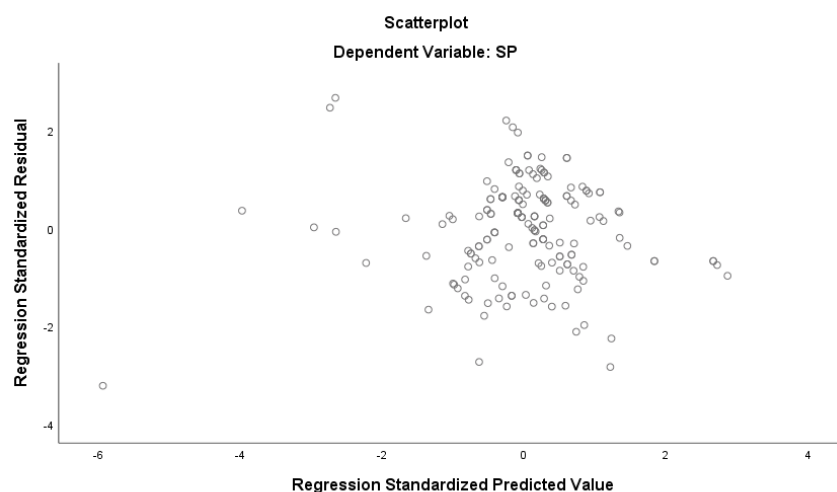


Figure 4.1: Scatterplot of Standardized Residuals Against Standardized Predicted Values

4.10.4 Multi-collinearity

The independence of the variables innovativeness, pro-activeness, and risk-taking was assessed using the Variance Inflation Factor (VIF) and tolerance values to evaluate multi-collinearity among the independent variables. Multi-collinearity occurs when two or more predictor variables in a regression model are highly correlated, which can distort the results and weaken the predictive power of the model (Hair *et al.*, 2010). The standard thresholds used in this study were VIF values less than 10 and tolerance values greater than 0.1, as recommended by researchers (Field, 2013).

Table 4.16: Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Pro-activeness	.486	2.057
	Innovativeness	.479	2.088
	Risk taking	.772	1.296
	Ambidextrous leadership	.663	1.509
	Size of MFI	.940	1.064
	Age of MFI	.928	1.077

Source: Field Data, 2024

The results, presented in Table 4.16, showed that the VIF for innovativeness was 2.088 for pro-activeness 2.057, and for risk-taking 1.296 all below the threshold of 10. This indicates that there was no significant multi-collinearity among the independent variables, as the VIF values suggest low correlation levels.

In conclusion, the low VIF values and acceptable tolerance levels confirm that multi-collinearity was not a concern in the model, allowing for more accurate estimation of the relationships between the independent variables and sustainable performance. This enhances the robustness of the regression analysis.

4.10.5 Autocorrelation

Serial correlation, also known as autocorrelation, was examined to assess whether regression model residual error was constant. Autocorrelation occurs when residuals, or error terms, are correlated across observations, violating one of the key assumptions of linear regression and potentially leading to biased estimates (Wooldridge, 2013). To test autocorrelation, the study applied the Durbin-Watson test. According to Field (2013), the Durbin-Watson statistic should ideally fall between 1.5 and 2.5 to indicate that residuals are independent and there is no autocorrelation.

In this study, a Durbin-Watson coefficient of 1.618 as shown in Table 4.20 was obtained, which falls within the acceptable range, suggesting that there is no significant autocorrelation present in the model. This indicates that the residual errors are independent, which strengthens the reliability of the regression analysis and ensures that the model's assumptions are met (Moi, *et al*, 2018). Thus, the absence of autocorrelation reinforces the validity of the regression results, allowing for more accurate interpretations of the relationships between the independent variables and the dependent variable.

4.11 Control Variable

In the analysis, the age and size of the microfinance institutions (MFIs) were included as control variables to assess their impact on the relationship between corporate entrepreneurship, ambidextrous leadership, and sustainable performance. These control variables were regressed against sustainable performance at a 5% significance level. The regression results, as shown in Table 4.17, revealed that the age and size of the MFI accounted for only 8.1% of the variation in sustainable performance ($R^2 = 0.084$).

This indicates a significant relationship between age and MFI and sustainable performance. The regression results are presented in table 4.20.

Table 4.17: Control Variable Coefficients

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285 ^a	.081	.071	.03303

a. Predictors: (Constant), Age of MFI, Size of MFI

Source: Field Data, 2024

These findings further suggest that the operational characteristics of MFIs, such as their size and age, do not significantly influence sustainable performance, aligning with some existing studies. For example, Shanker *et al.*, (2017) noted that while organizational size and age can influence innovation, they are not always strong predictors of overall performance outcomes. Similarly, Quaye and Mensah (2019) highlighted that age and size often play a minor role in organizational firm's performance.

Therefore, the weak relationship between these control variables and sustainable performance of MFIs in Kenya implies that other variables, such as corporate entrepreneurship dimensions and leadership styles, may play a more pivotal role in driving sustainable outcomes for MFIs. This finding underscores the importance of focusing on strategic leadership and entrepreneurship practices over the structural characteristics of the firm.

Table 4.18: Control Variable Model SummaryANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.017	2	.009	7.856	.001 ^b
	Residual	.194	178	.001		
	Total	.211	180			

a. Dependent Variable: SPP

b. Predictors: (Constant), Age of MFI, Size of MFI

Source: Field, Data, 2024

The analysis of variance (ANOVA) results for the control variables presented in Table 4.18 indicated that the model was a good fit for explaining the relationship between the age and size of microfinance institutions (MFIs) and their sustainable performance. The findings showed a significant F-value of 7.856, with a p-value of 0.000, which is less than the 0.05 threshold ($F=8.190$, $P=0.000<0.05$). This strong statistical significance suggests that the model effectively captures the variance in sustainable performance associated with the age and size of the MFIs, reinforcing the relevance of these control variables in understanding the factors influencing sustainable outcomes within the organization.

Further analysis of the control variable coefficients indicated that the size of the microfinance institution (MFI) had no significant influence on sustainable performance, with a standardized coefficient (β) of 0.002 and a p-value of 0.981, which is greater than the 0.05 threshold. This suggests that variations in MFI size do not significantly affect sustainable performance outcomes.

In contrast, the age of the MFI demonstrated a positive and statistically significant impact on sustainable performance, with a coefficient (β) of 0.285 and a p-value of 0.000, which is less than 0.05. This finding implies that for every unit increase in the

age of the MFI, there is an associated improvement of 0.285-unit change in sustainable performance.

This result highlights the importance of organizational maturity, suggesting that older MFIs may have more established processes, greater experience, and stronger relationships with stakeholders, which contribute positively to their performance. These findings are consistent with previous research indicating that organizational age can enhance performance by allowing institutions to refine their strategies and build resilience over time (Quaye & Mensah (2019). Overall, while size may not play a significant role, the age of the MFI appears to be a critical factor in driving sustainable performance, emphasizing the need for strategic focus on the growth and development of these institutions.

Table 4.19: Regression Results

Coefficients ^a					
Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant) 1.262	.016		77.396	.000
	Size of MFI.000	.007	.002	.024	.981
	Age of MFI.014	.004	.285	3.951	.000

a. Dependent Variable: SPP

Source: Research Data, 2024

4.12 Test of Hypotheses

The multiple linear regression analysis was used to test both the direct and moderating effect. The hypotheses were tested as discussed below.

4.12.1 Testing for Direct Effect

The direct hypotheses examined the effect of corporate entrepreneurship including innovativeness, pro-activeness, and risk-taking on sustainable performance was

examined. The model summary results presented in Table 4.20 indicated a strong multiple regression coefficient ($R = 0.682$), suggesting a significant relationship between the predictors and sustainable performance. The coefficient of determination revealed that 68.2% of the variation in sustainable performance can be attributed to corporate entrepreneurship factors: innovativeness, pro-activeness, and risk-taking.

Additionally, the adjusted R^2 value of 0.683 indicates that, after accounting for the influence of other variables with low contributions to sustainable performance, approximately 68.2% of the variation in sustainable performance remains associated with corporate entrepreneurship. This adjustment highlights the robustness of the model, reinforcing the importance of these entrepreneurial dimensions in driving sustainable performance outcomes.

These results underscore the critical role that innovativeness, pro-activeness, and risk-taking play in enhancing sustainable performance, suggesting that organizations that actively engage in these entrepreneurial activities are more likely to achieve better performance outcomes. Similarly, the work of Umrani *et al.*, (2018) in Pakistan identified a direct relationship between corporate entrepreneurship and business performance, further supporting the idea that entrepreneurial activities contribute positively to organizational success. This finding is echoed in the results of the Dangote Group in Nigeria, where Abdulrahman and Garba (2020) found that pro-activeness positively influenced organizational performance, although creativity and risk-taking did not show the same beneficial effects.

Lastly, studies in Kenya, such as those by Mwaniki (2017) and Linyiru (2015), reinforce the connection between corporate entrepreneurship and improved

performance. Mwaniki found that corporate entrepreneurial initiatives in banking significantly enhanced various performance metrics, including market share and return on assets. Linyiru's findings further indicated that pro-activeness and innovation were key predictors of performance in state corporations. However, all the study related corporate entrepreneurship to performance of the organization rather than suitable performance which was the gap filled the current study.

Table 4.20: Direct Effect Model Summary

Model Summary ^b					
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.826 ^a	.682	.673	.27034	1.618

a. Predictors: (Constant), Age of MFI, Size of MFI, Innovativeness, RS, Pro-activeness

b. Dependent Variable: Sustainable Performance

Source: Field Data, 2024

The results from the Analysis of Variance (ANOVA) presented in table 4.21 revealed that the model, which incorporates innovativeness, pro-activeness, and risk-taking as predictors, demonstrated statistical significance in relation to sustainable performance, with an F-value of 75.039 and $p = 0.000 < 0.05$. This indicates a robust relationship between these corporate entrepreneurship dimensions and sustainable performance, suggesting that these variables are effective predictors of sustainability outcomes. Consequently, it can be inferred that sustainable performance is most accurately estimated through the combined influences of innovativeness, pro-activeness, and risk-taking.

Table 4.21: Direct Effect ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.421	5	5.484	75.039	.000 ^b
	Residual	12.790	175	.073		
	Total	40.211	180			

a. Dependent Variable: Sustainable Performance

b. Predictors: (Constant), Age of MFI, Size of MFI, Innovativeness, RS, Pro-activeness

Source: Field Data, 2024

The main regression results used to test the hypotheses are presented in the table 4.22.

the hypotheses are tested as follows:

Hypothesis 1 (H_0) stated that there is no statistically significant relationship between innovativeness and sustainable performance of micro-finance firms in Kenya. The coefficient associated with innovativeness ($\beta = 0.617$, $p=0.000<0.05$) had statistically significant relationship with sustainable performance. This implies that the null hypothesis was rejected since innovativeness had statistically significant impact on sustainable performance in micro-financial firms within Kenya. This implied that a unit increase in innovativeness had 61.7% increase in sustainable performance. Lintukangas *et al.* (2019) assert that innovativeness is a deeply studied notion in numerous studies, as highlighted by the comprehensive literature review conducted by Crossan and Apaydin (2010). According to Damanpour (1996) innovation is viewed as a mechanism for altering an organization, either in reaction to external environmental changes or as a proactive measure to shape the environment. Consequently, innovation is broadly defined to include various forms, such as new products or services, novel process technologies, new organizational structures or administrative systems, and new plans or programs related to organizational members. Baregheh *et al.* (2009) expanded this definition by positing that business and corporate success serves as a primary catalyst

for innovation, asserting that 'innovation is the multi-stage process through which organizations convert ideas into new or enhanced products, services, or processes to progress, compete, and effectively differentiate themselves in the marketplace.

Crossan and Apaydin (2010) defined innovation as 'both a process and an outcome,' citing factors that drive innovation, including the presence of innovation capabilities and resources within a company, the identification of market opportunities, the unpredictability of the business environment, and the changes that compel firms to innovate. Innovativeness is often regarded as essential for achieving competitive advantage and enhancing financial performance (Leal-Rodriguez, 2020). Effective utilization of a company's inventive potential enhances competitive advantage and is evident in its performance (Marques & Ferreira, 2009).

Innovation denotes the realization of original concepts within an organization (Amabile, 1983; Wang and Tsai, 2014; Pantano et al., 2018). Marketing literature emphasizes that innovation is fundamental to the transformation of the retail sector (Musso, 2010; Lin, 2015; Marín-García et al., 2020). Prior study substantiates that innovation enables organizations to confront alterations in highly dynamic (Dawson, 2000, 2013; Cao et al., 2018) and turbulent environments (Siguaw et al., 2006). Innovation is essential for economic development (Berthon et al., 2004) and the competitiveness of firms and/or sectors (Clark, 2010) due to its capacity to generate wealth and stimulate economic growth. Similarly, it has been underscored that innovation allows organizations to penetrate new market areas (Laaksonen and Reynolds, 1994), enhance competitiveness, hence bolstering growth and ensuring long-term survival.

Innovation capabilities are an intangible asset that enables firms to address competitive issues by using their strengths. Comprehending these resources enables organizations to enhance market positioning and surmount external hurdles. Innovative skills transform entrepreneurial orientation-driven strategy into sustained innovation performance. Businesses can develop innovative products and services by using robust intellectual capital, merging their entrepreneurial spirit with the increasing demand for sustainability-oriented solutions (Puspita et al., 2020). A firm's innovative capabilities have become a vital factor in determining a firm's competitive edge, especially in the ever-changing global market (Ferreira *et al.*, 2018). For firms aiming to remain pertinent, the capacity to innovate is indispensable rather than discretionary.

Furthermore, innovativeness signifies an organization's capability to continuously transform information and concepts into innovative products, processes, or systems that promote sustained growth and performance (Al-Sharif et al., 2023). As industries become increasingly technology-oriented and face intensified global competition, the ability to innovate has emerged as a critical emphasis in strategic management and innovation studies.

For microfinance institutions, innovation is essential, enabling these entities to compete with larger enterprises through agility and creative problem-solving. Microfinance institutions, sometimes impeded by limited resources and market access, rely on innovation to sustain competitiveness in dynamic environments (Alghamdi et al 2021). Augmenting their creative capacities allows MFIs to more adeptly address consumer demands, market variations, and technological advancements (Jandab et al., 2020). Furthermore, the innovative capabilities of SMEs are typically characterized by their adaptability and resourcefulness in employing limited resources (Anzules-Falcones,

Novillo-Villegas et al., 2023). While MFIs innovations are typically incremental compared to the dramatic ideas of conventional banks, their agility facilitates effective innovation despite constrained resources.

Innovativeness continuously fosters the production of new ideas essential for innovation, hence serving as a crucial instrument in enhancing competitiveness and ensuring robust financial performance (Yousaf *et al.*, 2020). To furnish empirical data that encourages organisations to embrace product innovation for enhancing their competitive advantage and financial performance, Ar (2012) did a study on this subject. The statistical results indicate that both FP and competitive capabilities are positively influenced by green product innovation. Zainurossalamia *et al.* (2016) concluded in their research that innovation positively influences competitive advantage and financial success. Implementing an efficient innovation model within a company might result in a competitive edge and enhanced financial performance.

Hypothesis 2 (H_0) postulated that there is no statistically significant relationship between pro-activeness and sustainable performance of micro-finance firms in Kenya. The regression result demonstrated that pro-activeness ($\beta = 0.349$, $p=0.000<0.05$) had statistically significant effect on sustainable performance. Therefore, the null hypothesis was rejected and alternative accepted. Therefore, pro-activeness had positive significant relationship with the sustainable performance of MFIs in Kenya. A unit increase in pro-activeness had 0.349-unit increase of sustainable performance.

The findings align with those of prior studies (Wijethilake, 2017; Dhyanasari Dewi *et al.*, 2024). Researchers contend that firms are progressively inclined to deliberately include sustainability concerns into their strategies rather than simply adhering to

regulatory mandates (Bhupendra and Sangle, 2015; Phan and Baird, 2015; Wijethilake, 2017). A proactive sustainability strategy theoretically enhances corporate sustainable performance by optimizing resource utilization, augmenting cost advantages, minimizing waste and emissions, fostering social reputation, refining customer preferences, and cultivating new innovative capabilities (Bhupendra and Sangle, 2015; Wijethilake, 2017). An active sustainability plan can enhance performance by minimizing waste and optimizing resources (Wijethilake, 2017). Previous research indicates that a proactive sustainability strategy positively influences a company's sustainable performance (Teh & Corbitt, 2015; Tjahjadi *et al.*, 2023).

Hypothesis 3 (H_0) stated that there is no statistically significant relationship between risk taking and sustainable performance of micro-finance firms in Kenya. The results indicated that risk-taking coefficient of ($\beta = 0.088$ with $p=0.029<0.05$) had positive and statistically significant relationship with sustainable performance. The null hypothesis was therefore rejected. This implied that there was a statistically significant relationship between risk taking and sustainable performance of micro-finance firms in Kenya. The findings contradict those of Younas and Zafar (2019), who reported a negative relationship, while Chong *et al.* (2028) found no significant link between risk-taking and corporate performance. A firm seeking sustainability to gain a competitive advantage must, conversely, assume risks to generate profit and maximize shareholder wealth. This study contends that risk-taking can enhance profitability; nevertheless, what is its effect on sustainability? (i.e. stakeholder apprehension). Excessive corporate risk-taking diminishes the firm's sustainability, as the underlying reason for such risk is the maximization of shareholder profit. Nonetheless, high risk necessitates increased

resources, and due to resource constraints, the corporation may diminish its sustainability efforts to prioritize the primary purpose of maximizing shareholder profit.

Moreover, Ayadi *et al.* (2014) contend that companies engage in greater risk-taking while exhibiting superior corporate social responsibility (CSR) performance, and conversely. The product features, staff relations, and many aspects of CSR are strongly correlated with risk-taking metrics. Erhemjamts *et al.* (2013) similarly identified a favorable correlation between capital spending, serving as an indicator of investment policy, and corporate social responsibility (CSR).

Table 4.22: Direct Effect Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.732	.255		-2.876	.005
	Pro-activeness	.349	.068	.303	5.157	.000
	Innovativeness	.617	.073	.502	8.412	.000
	Risk taking	.088	.040	.107	2.208	.029
	Size of MFI	.096	.056	.076	1.732	.085
	Age of MFI	.089	.031	.127	2.884	.004

Source: Field Data, 2024

4.12.2 Testing the Effect of the Moderating Variable

To examine the moderating effect of Ambidextrous Leadership on the relationship between the dimensions of Corporate Entrepreneurship (CE) namely Innovation (X_1), Pro-activeness (X_2), and Risk-Taking (X_3) and Sustainable Performance (Y), moderated by ambidextrous leadership (Z) multiple linear regression was employed using Model 1 of Hayes' PROCESS macro. This approach enables the assessment of interaction effects between independent variables and a proposed moderator. The analysis was conducted using the PROCESS macro for SPSS developed by Hayes (2018), which allows for robust estimation of moderation effects.

The use of Hayes' PROCESS macro enabled a comprehensive examination of the moderation effects. The findings provided empirical evidence on the critical role of Ambidextrous Leadership in strengthening or weakening the influence of entrepreneurial strategies on the sustainable performance of firms. This suggests that leadership flexibility and the ability to balance exploration and exploitation are pivotal for translating entrepreneurial orientation into long-term sustainability outcomes. The models were adopted to test hypotheses 4a to 4c as presented below.

Hypothesis 4a (H_0) postulate that ambidextrous leadership does not moderate the relationship between innovativeness and sustainable performance of micro-finance firms in Kenya. The results indicated coefficient that the interaction between innovativeness and ambidextrous leadership presented on table 4.23 show no statistically significant on sustainable performance ($\beta = -0.001$, SE, 0.002, $p=0.376>0.05$, LLCI = -0.005, ULCI= 0.005). Hence, the null hypothesis was not rejected. This further confirmed by R square change of 0.002 with $P=0.376>0.05$ which implied that ambidextrous leadership does moderate the relation between innovativeness of and sustainable performance of MFI firms in Kenya.

These results support the null hypothesis (H_{4a}), suggesting that ambidextrous leadership does not moderate the effect of innovativeness on sustainable performance in this context. One interpretation is that the innovative activities in microfinance institutions may not depend heavily on leadership flexibility or the balance between exploration and exploitation. Instead, innovation in this sector might be driven more by external factors such as regulation, technology access, or customer needs than by internal leadership dynamics.

Table 4.23: Ambidextrous leadership does not significantly moderate the relationship between innovativeness and sustainable performance of micro-finance firms in Kenya

	Sustainable performance					
	B	SE	T	P	LLCI	ULCI
<i>Interaction effect (IN*AL)</i>	-.001	.002	-.887	.376	-.005	.002
<i>Conditional effect</i>						
AL						
LOW	-	-	-	-	-	-
HIGH	-	-	-	-	-	-
<i>Unconditional interaction</i>						
IN*AL		R2-chng	F	df1	df2	P
		.002	.787	1.000	175.000	.376

Note(s) IN, Innovativeness; AL, ambidextrous leadership, $p < 0.05$

Source: Field data (2024)

Hypothesis 4b (H_0) state that ambidextrous leadership does not moderate the relationship between pro-activeness and sustainable performance of micro-finance firms in Kenya. According to the results presented in table 4.24 the coefficient associated with the interaction between pro-activeness and ambidextrous leadership had a statistically significant with sustainable performance ($\beta = -0.004$, $SE = 0.02$, $p = 0.030 < 0.05$, $LLCI = -0.007$, $ULCI = -0.000$, $\Delta R^2 = 0.011$). The null hypothesis was therefore rejected. Similarly, the results of confirmed by process macros indicated that the effect of pro-activeness on sustainable performance is high with low ambidextrous leadership. Figure 4.24 further demonstrates a buffering moderating effect of ambidextrous leadership on the link between pro-activeness and sustainable performance of micro-finance firms in Kenya.

Table 4.24: Ambidextrous leadership does not significantly moderate the relationship between pro-activeness and sustainable performance of micro-finance firms in Kenya.

	Sustainable performance					
	B	SE	T	P	LLCI	ULCI
<i>Interaction effect (PA*AL)</i>	-.004	.002	-2.183	.030	-.007	-.000
<i>Conditional effect</i>						
AL						
LOW	.607	0.067	9.127	.000	.476	.739
HIGH	.502	.082	6.147	.000	.341	.633
<i>Unconditional interaction</i>						
PA*AL		R2-chng	F	df1	df2	P
		.011	4.764	1.000	175.000	.030

Note(s) PA, pro-activeness; AL, ambidextrous leadership, $p < 0.05$

Source: Field data (2024)

The mod graph presented in Figure 4.1 visually supports this interpretation by illustrating a negative interaction slope, where the relationship between pro-activeness and sustainable performance declines as ambidextrous leadership increases. This indicates that ambidextrous leadership buffers the influence of pro-activeness, potentially ensuring that overly aggressive or uncalibrated proactive actions do not lead to unsustainable outcomes. The moderation thus introduces a level of strategic control and balance, which is critical in dynamic environments such as microfinance.

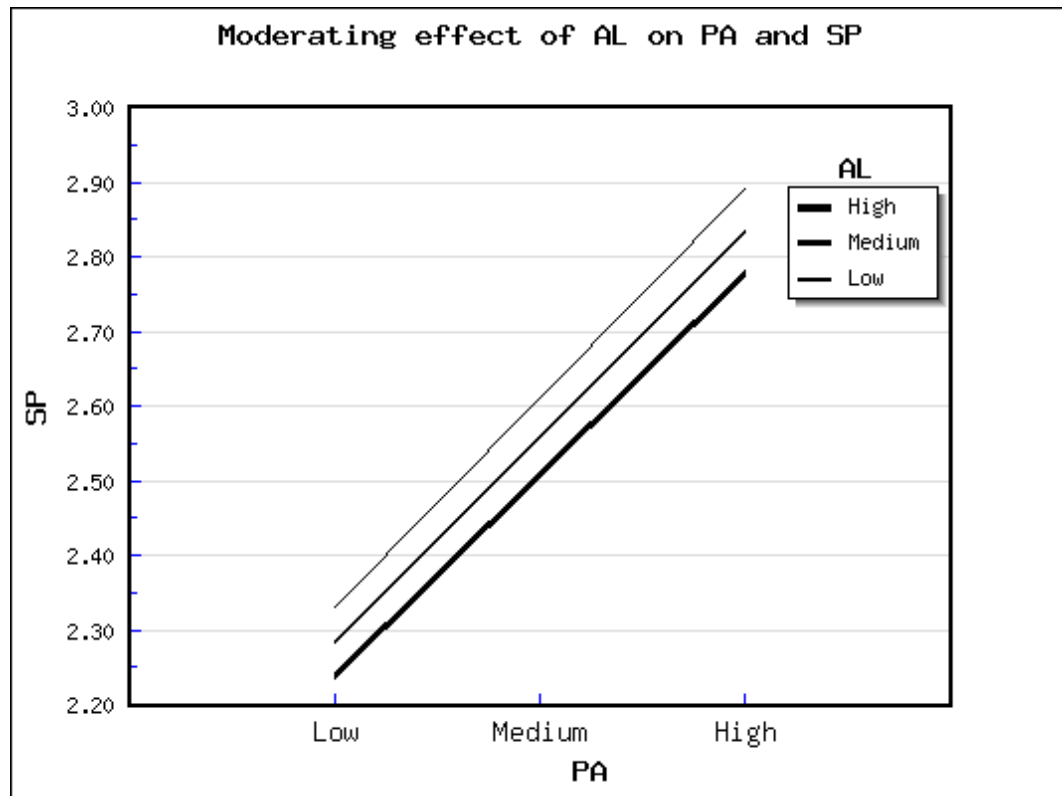


Figure 4.2: Mod graph for moderating effect of ambidextrous leadership on proactiveness and sustainable performance

Hypothesis 4c (H_0) proposed that ambidextrous leadership does not moderate the relationship between risk-taking and sustainable performance of micro-finance firms in Kenya. Based on the results presented in table 4.27 the coefficient associated with the interaction between risk taking and ambidextrous leadership had a statistically significant with sustainable performance ($\beta = -0.004$, $SE = 0.02$, $p = 0.011 < 0.05$, $LLCI = -0.007$, $ULCI = -0.001$, $\Delta R^2 = 0.020$). Hence, the null hypothesis was rejected. Similarly, the results of Hayes process macros indicated that the effect of risk takings on sustainable performance is high with low ambidextrous leadership. Hence, ambidextrous leadership practices do not favour risk-taking aspect of corporate entrepreneurship resulting to favourable sustainable performance.

However, without an ambidextrous leadership, risk-taking had low impact on the sustainable performance of firms.

Table 4.25: Ambidextrous leadership does not significantly moderate the relationship between risk-taking and sustainable performance of micro-finance firms in Kenya

	Sustainable performance					
	β	SE	t	P	LLCI	ULCI
<i>Interaction effect (RT*AL)</i>	-.004	.002	-2.587	.011	-.007	-.001
<i>Conditional effect</i>						
AL						
LOW	.347	0.062	5.638	.000	.225	.468
HIGH	.193	.049	3.925	.000	.096	.291
<i>Unconditional interaction</i>						
RT*AL		R2-chng	F	df1	df2	P
		.020	6.690	1.000	175.000	.011

Note(s) RT, Risk taking; AL, ambidextrous leadership, $p < 0.05$

Source: Field data (2024)

Figure 4.25 illustrates a buffering moderating effect of ambidextrous leadership and risk-taking concerning sustainable performance in micro-finance firms. Prior to the introduction of ambidextrous leadership, risk-taking exhibited a negative and statistically insignificant influence on sustainable performance. This suggests that without effective leadership practices, the propensity for firms to engage in risk-taking behavior may not translate into tangible benefits for sustainable performance. However, the introduction of ambidextrous leadership dramatically shifted this dynamic.

After moderating the relationship with ambidextrous leadership, the results revealed a negative and statistically significant contribution of risk-taking to sustainable performance. This transformation indicates that ambidextrous leadership fosters an

environment where risk-taking is not only encouraged but also aligned with strategic objectives, thereby enhancing the overall performance of micro-finance institutions. The acceptance of the alternative hypothesis, which posits that ambidextrous leadership negatively moderates the relationship between risk-taking and sustainable performance, underscores the critical role that leadership plays in navigating uncertainty and leveraging opportunities for growth.

This finding highlights the importance of ambidextrous leadership in cultivating a culture that embraces calculated risks. By promoting an adaptive and innovative mindset, such leadership enables organizations to capitalize on emerging opportunities while managing potential threats. The significant shift from negative to positive impacts of risk-taking on sustainable performance underlines the necessity of effective leadership in guiding firms through complex and dynamic environments.

This finding reinforces the critical role of leadership agility and balance in shaping how entrepreneurial behaviors translate into organizational outcomes. Specifically, ambidextrous leaders help steer high-risk strategies toward responsible and sustainable implementation, a necessity for microfinance institutions operating in dynamic and often uncertain economic environments.

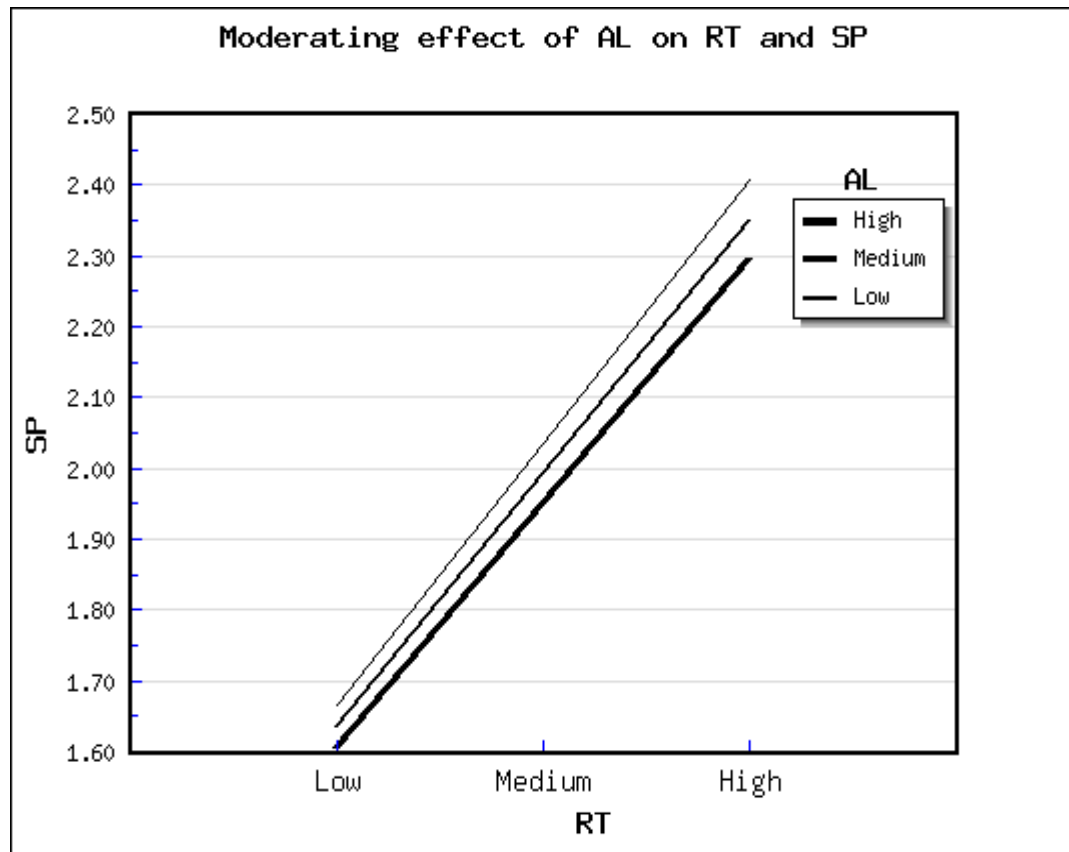


Figure 4.3: Mod graph for Moderating Effect of Ambidextrous Leadership on Risk-Taking and Sustainable Performance

The implications of the mod graphs and moderation analysis reveal that ambidextrous leadership plays a differentiated role across the three entrepreneurial orientation constructs innovativeness, pro-activeness, and risk-taking. For innovativeness, the findings indicate that ambidextrous leadership does not significantly moderate its relationship with sustainable performance. This suggests that innovation has a direct influence on sustainability, possibly due to its integration into institutional culture and operations, thereby requiring less dynamic leadership intervention to yield positive outcomes. In contrast, pro-activeness showed a significant interaction with ambidextrous leadership. The mod graph illustrated a stronger effect of pro-activeness on sustainable performance when ambidextrous leadership was low, implying that proactive behavior can serve as a strategic driver in the absence of highly flexible

leadership. However, under high ambidextrous leadership, the influence of pro-activeness appears moderated, likely because such leaders emphasize balanced and measured responses to emerging opportunities rather than aggressive, unfiltered action.

The most compelling insight emerged from the relationship between risk-taking and sustainable performance. The graph results revealed that firms with low ambidextrous leadership and high risk-taking performed significantly worse than those with lower levels of risk-taking. This suggests that without the guiding influence of effective leadership, risk-taking can lead to volatility and inefficiency, ultimately undermining sustainability. Conversely, organizations exhibiting high levels of ambidextrous leadership and high risk-taking achieved notably better outcomes. These firms were able to outperform their peers, indicating that ambidextrous leadership provides a strategic framework that transforms risky ventures into calculated, goal-aligned initiatives. By fostering a culture of innovation, adaptability, and learning, ambidextrous leaders can harness risk-taking as a powerful driver of sustainable performance rather than a destabilizing force.

Therefore, the findings suggest that ambidextrous leadership serves as a critical moderator, particularly in managing the dynamic and potentially disruptive nature of pro-activeness and risk-taking. It enhances the firm's capacity to leverage entrepreneurial behaviors in a way that aligns with long-term sustainability goals. In this context, ambidextrous leadership is more than a support function; it is a strategic asset that enables firms to navigate uncertainty, capitalize on opportunities, and implement entrepreneurial strategies with precision. Cultivating such leadership within microfinance institutions is essential not only for organizational resilience but also for

achieving balanced growth across economic, social, and environmental dimensions of performance.

The fourth objective was to establish the moderating effect of ambidextrous leadership on the relationship between corporate entrepreneurship given by (4a) innovativeness, (4b) pro-activeness and (4c) risk-taking on sustainable performance of micro-financial firms in Kenya. In other to examined this relationships, model 3, 4 and 5 were used for objective 4a, 4b and 4c so as to test H_{04a} , H_{04b} , H_{04c} , respectively.

The results revealed that ambidextrous leadership did not significantly moderate the relationship between innovativeness and sustainable performance, as evidenced by the interaction term's p-value exceeding the 0.05 threshold. This implies that innovativeness directly influences sustainable performance without being contingent on leadership flexibility.

However, for proactiveness, the interaction term was statistically significant, indicating that ambidextrous leadership moderates the relationship between proactiveness and sustainable performance. Interestingly, the conditional effects analysis showed that the impact of proactiveness on sustainability was stronger under low levels of ambidextrous leadership. This suggests that proactive strategies may independently drive sustainability when leadership flexibility is lacking, but their relative importance diminishes when ambidextrous leadership is high.

The most significant moderating effect was observed in the relationship between risk-taking and sustainable performance. The results and mod graph clearly showed that organizations characterized by high ambidextrous leadership and high risk-taking achieved better sustainable performance than their counterparts. This reinforces the

notion that ambidextrous leadership transforms risk-taking into a strategically aligned and productive endeavor, enabling firms to pursue bold initiatives while maintaining operational balance and long-term sustainability.

4.13 Discussion of the Findings

The first objective was to establish the relationship between innovativeness and sustainable performance of Micro-finance firms in Kenya.

These results align with the theoretical framework presented by Barbieri-da-Rosa *et al.*, (2022), who assert that innovativeness is a crucial component of entrepreneurial orientation necessary for achieving sustainable performance. Although they noted the lack of a clear relationship between innovativeness and sustainable performance.

In line with the findings of Huang, *et al.*, (2022), the relationship between innovativeness and entrepreneurial performance was reported among Chinese female entrepreneurs. In their study, innovativeness of female business owners and their performance was mediated by factors such as psychological capital and growth opportunities. While Falahat, *et al.*, (2018) examined entrepreneurial innovativeness in the context of small and medium-sized enterprises (SMEs) in Malaysia, found a significant and positive effect on various performance metrics.

Similarly, Adim *et al.*, (2018) examined the performance of female entrepreneurs in Nigeria, highlighting the association between innovativeness and job creation, although the link to household subsistence was less pronounced. Additionally, Onyenma (2019) examined small and medium-sized businesses in Nigeria, found a positive association between innovativeness and performance metrics such as customer satisfaction and social impact. This support the notion that innovativeness not only drives performance

but also enhances overall organizational effectiveness, which is echoed in the current research on microfinance institutions.

Furthermore, Bor (2018) demonstrated the significant effect of entrepreneurial innovativeness on corporate performance among medium-sized businesses in Kenya. This further emphasizes the robustness of innovativeness as a key driver of performance, which resonates with the current findings regarding sustainable performance in microfinance institutions. In conclusion, the results of this study strongly support the assertion that innovativeness significantly contributes to sustainable performance in microfinance firms in Kenya. Arguably, by enhancing an innovative culture MFIs can enhance their economic, social and environmental performance.

The second objective sought to assess the relationship between pro-activeness and sustainable performance of Micro-finance firms in Kenya. The positive and significant coefficient indicates that pro-activeness plays a critical role in enhancing the sustainable performance of micro-finance institutions (MFIs) in Kenya. Pro-activeness, which refers to the proactive behavior of organizations in anticipating market trends, responding to opportunities, and implementing innovations, is vital for long-term sustainability in a competitive environment. This finding aligns with the entrepreneurial orientation literature, where pro-activeness is recognized as a key determinant of organizational success.

The findings of this study are consistent with those of Linton (2019), who emphasized that pro-activeness, along with risk-taking and innovativeness, differentiates between the characteristics of process and performance in newly established firms. Similar to

Linton's assertions, the current study focused on pro-activeness as a variable of corporate entrepreneurship, highlighting its independent effect on sustainable performance. Conversely, Bosire *et al.*, (2021) studied the effect of entrepreneurial pro-activeness on youth-led micro and small enterprises in Kenya found that lack of adequate pro-activeness is related to low performance. Their results reinforce the notion that fostering pro-active behaviors can significantly enhance firm performance.

In the same study, Wambugu, *et al.*, (2015) found that pro-activeness was a significant predictor of performance in small and medium-sized agro-processing firms in Kenya. This result supports the idea that pro-active strategies lead to improved organizational performance while Mumaraki *et al.*, (2018) further demonstrated that pro-activeness positively influenced the performance of healthcare facilities, mirroring the current study's findings and indicating that proactive approaches are critical across various sectors, including micro-finance.

While, Alobari *et al.*, (2019) highlighted a significant links between financial performance and sustainability in Nigerian microfinance institutions, reinforcing the argument that organizational practices, including pro-activeness, directly affect performance outcomes. Furthermore, Beisenbina *et al.*, (2023) noted the growing interest in sustainable investments and the performance of MFIs, suggesting that pro-active approaches toward sustainability can enhance financial and social outcomes.

The positive relationship between pro-activeness and sustainable performance indicates that micro-finance institutions in Kenya can achieve enhanced sustainability by fostering a proactive strategy. This aligns with existing literature, suggests pro-activeness as a critical determinant of organizational success in various sectors.

Arguably, future research may explore the specific mechanisms through which proactiveness influences sustainable performance in MFIs and examines the role of ambidextrous leadership in moderating this relationship.

The third objective assessed the relationship between risk-taking and sustainable performance of micro-finance institutions (MFIs) in Kenya. The results revealed a statistically significant and positive relationship, indicating that risk-taking contributes positively the sustainability of MFIs in the Kenya.

These findings align with those of Ifeoma et al. (2019), that, emphasized that risk-taking is a key driver of long-term sustainability. Despite noting barriers such as limited infrastructure and high taxation, the author concluded that fostering an entrepreneurial spirit supported by a willingness to take calculated risks is vital for organizational growth. Hence, even in the face of similar environmental constraints, Kenyan MFIs can benefit from engaging in measured risk-taking as part of their corporate entrepreneurship strategy.

The positive effect further resonates with Kafidipe *et al.*, (2021), who found that enhanced risk management and governance systems improves financial performance. This suggests that the Microfinance Institutions can gradually develop or adopt internal risk governance frameworks that allow them to pursue growth opportunities while managing associated uncertainties thereby translating risk-taking strategies into sustainable performance.

From a global perspective, Raham *et al.*, (2021), who studied of SMEs in Bangladesh, found that risk-taking significantly influenced firm performance when embedded within effective leadership and organizational support systems. Similarly, Boabeng and

Cai (2018) reported a positive link between risk-taking and firm performance in developing economies, underlining that risk-oriented strategies can lead to enhanced competitiveness and innovation when appropriately executed.

While, Kiptoo *et al.*, (2021) reported that efficient risk management was instrumental in improving financial performance among Kenyan insurance firms. This supports this study's findings that MFIs that engage in risk-taking tend to engage in credit assessment have diversified product portfolios, or agile lending models that enable them to mitigate downside risks while capitalizing on emerging market opportunities.

While Egele *et al.*, (2018) and Wambugu *et al.*, (2015) also reported a significant link between risk-taking and SME performance in Nigeria and Kenya respectively; While MFIs often operate under tighter regulatory scrutiny social impact mandates, the positive association indicates that risk-taking possibly in product development, credit innovation, or technological adoption can coexist with and contribute to long-term sustainability even within such constraints.

Freeman's (1984) asserts that managers must account for the needs of all societal pillars involved with the enterprise, whether directly or indirectly, and that these needs should be strategically aligned with their interests. Cornell and Shapiro (1987) assert that companies possess implied agreements with indirect owners, and the value of the firm is contingent upon its capacity to fulfil these contracts. Moreover, failing to fulfil a contract may result in financial and reputational penalties from stakeholders. It has been argued that companies emphasizing sustainability or corporate social responsibility should strive to balance the interests of all stakeholders, including owners, when allocating resources. This equilibrium is essential as all resources (e.g., capital markets,

product markets, and labour markets) are governed by diverse stakeholders that the firm must engage to achieve its objectives. This equilibrium of interests can be achieved through stakeholder management, wherein we identify project areas where direct and indirect stakeholders share shared interests.

The equitable allocation of resources in these regions will reduce both reckless risk-taking that encompasses disproportionate distribution of resources to direct owners and excessive risk aversion which means extravagant allocation of funds to indirect owners. While, Stulz (2015) contends that no enterprise can augment its income, broaden its operations, and achieve growth without undertaking value-enhancing risks. Faccio et al. (2011) and Bromiley (1991) similarly contend that enterprises must undertake risks to enhance profitability and expand in size. Nonetheless, excessive risk-taking is not advantageous for them (Bouteska & Regaieg, 2020; Kumar & Kumar, 2024; Umeaduma, 2024).

Excessive risk-taking and unhealthy practices diminish the financial stability of enterprises and adversely affect overall economic growth (IMF, 2016). Scholars of sustainability have attributed the erosion of community, both socially and environmentally, to the corporate group in pursuit of profit. The global business community can significantly contribute to sustainability on Earth (Elkington, 1997). This is why firms are urged to adhere to the principles of sustainability (Lenssen et al., 2014). Embracing value-enhancing risk while maintaining sustainability is a challenging yet vital component of corporate decision-making. Previous studies also suggest that risk-taking is a costly phenomenon (Banerjee & Gupta, 2017). This research diverges from prior studies. Two perspectives exist about the relationship between a firm and its stakeholders that compare of “resource-based view,” and the

“resource-dependent view.” The resource-based approach pertains to the resources owned by the organization, while the dependent view focuses on resources acquired from the external environment (Wronka & Szymaniec, 2012; Kessler & Dopson, 2008). Barney (1991) asserts that for a corporation to enhance its competitiveness, it is essential to utilize current resources efficiently.

The findings demonstrated that risk-taking is a significant driver of sustainable performance among Kenyan micro-finance institutions. This implies that MFIs willing to engage in calculated risks are more likely to innovate, expand outreach, and adapt to market changes factors crucial for long-term sustainability. These findings reinforce the importance of cultivating an internal culture and leadership philosophy that supports strategic risk-taking, supported by appropriate risk governance mechanisms. Future research may delve deeper into the types of risk-taking behaviors that are beneficial to MFIs and how contextual factors such as regulation, digitalization, and market competition influence the risk and performance relationship.

The fourth objective examined whether ambidextrous leadership moderates the relationship between corporate entrepreneurship and the performance of micro-finance institutions (MFIs) in Kenya. The findings revealed that ambidextrous leadership did not moderate the relationship between innovativeness and sustainable performance, but it moderates the relationship between risk-taking and pro-activeness and sustainable performance of MFIs.

These results contribute to the growing discourse on the contingent nature of leadership effectiveness in entrepreneurial settings. Rodríguez-Peña (2021) highlights the role of environmental and contextual factors in moderating corporate entrepreneurship

dynamics in emerging economies like Colombia. Similarly, the Kenyan context appears to limit the impact of ambidextrous leadership on some entrepreneurial dimensions particularly innovativeness and pro-activeness suggesting that external constraints such as regulatory environments, resource limitations, or market volatility may dilute the potential benefits of adaptive leadership styles.

This perspective aligns with Provasnek *et al.*, (2017), who argue that entrepreneurial strategies must be integrated within a broader sustainability framework to yield meaningful performance outcomes. The authors contend that without organizational alignment and systemic support, leadership efforts alone, regardless of their adaptability may not sufficiently influence outcomes such as innovation or proactive market engagement.

On the other hand, the significant moderating effect of ambidextrous leadership on risk-taking pro-activeness is supported by Chang *et al.*, (2023). They posit that transformational leadership facilitates sustainable performance by promoting employee learning and innovation. In high-risk decision-making environments, such as those typical of MFIs. Leaders who balance exploitative and explorative approaches can better manage uncertainties and empower their teams to navigate complex operational landscapes.

Moreover, Umrani *et al.*, (2018) highlight the role of organizational culture as a key moderator in the corporate entrepreneurship and performance relationship. This suggests that ambidextrous leadership may only be effective when nested within a supportive cultural context that values innovation, learning, and adaptability.

In conclusion, the study underscores the selective effectiveness of ambidextrous leadership in the Kenyan MFI sector. While it did not significantly strengthen the impact of innovativeness, it was crucial in enhancing risk and pro-activeness related performance outcomes. These findings suggest that leadership interventions in MFIs should be context-sensitive and complemented by enabling organizational cultures and external support structures. Future research could explore the interplay between leadership, organizational culture, and institutional environments to better understand the conditions under which corporate entrepreneurship drives sustainable performance in emerging markets.

4.14 Summary of the Hypothesis Testing Results

The summary of the hypothesis test results is presented in Table 4.26. Hypothesis testing was conducted at a significance level of 5%. In this study, a p-value of less than 0.05 was interpreted as indicating a statistically significant relationship; implying the rejection of the null hypothesis. This approach allowed for the identification of meaningful associations between variables within the models. Conversely, when the p-value exceeded 0.05, the relationship was deemed statistically insignificant, leading to the acceptance of the null hypothesis. This systematic method not only clarifies the criteria for determining statistical significance but also enhances the rigor of the analysis, providing a clear basis for understanding the relationships explored in the study.

Table 4.26: Summary of Hypothesized Testing Results

No.	Hypothesis	β / $R^2\Delta$	p-value	Decision
H01	There is no statistically significant relationship between innovativeness and sustainable performance in micro-finance firms in Kenya.	$\beta = 0.617$	0.000	Rejected
H02	There is no statistically significant relationship between proactiveness and sustainable performance in micro-finance firms in Kenya.	$\beta = 0.349$	0.000	Rejected
H03	There is no statistically significant relationship between risk-taking and sustainable performance in micro-finance firms in Kenya.	$\beta = 0.088$	0.029	Rejected
H04a	Ambidextrous leadership does not significantly moderate the relationship between innovativeness and sustainable performance of micro-finance firms in Kenya.	$\beta = -0.001$ ($R^2\Delta = 0.002$)	0.376	Not rejected
H04b	Ambidextrous leadership does not significantly moderate the relationship between proactiveness and sustainable performance of micro-finance firms in Kenya.	$\beta = -0.004$ ($R^2\Delta = 0.011$)	0.030	Rejected
H04c	Ambidextrous leadership does not significantly moderate the relationship between risk-taking and sustainable performance of micro-finance firms in Kenya.	$\beta = -0.004$ ($R^2\Delta = 0.007$)	0.011	Rejected

Source: Field Data, 2024

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The chapter provides a summary of study's findings. The regression results were used to make the conclusion of the study which was also guided by the objectives. This section suggests areas of further research and the limitations of the study.

5.1 Summary of the Findings

The main objective of the study was to examine the direct effect of corporate entrepreneurship on sustainable performance and the moderating effect of ambidextrous leadership. The dimensions of corporate entrepreneurship components that were examined include innovativeness, pro-activeness and risks taking. The study also examined the moderating effect of ambidextrous leadership on the relationship between corporate entrepreneurship (innovativeness, pro-activeness and risk taking) and sustainable performance of MFIs in Kenya.

5.1.1 Relationship between Innovativeness and Sustainable Performance

The first objective examined the relationship between innovativeness and sustainable performance. The hypothesis tested whether there was a significant relationship between innovativeness and sustainable performance. The findings revealed a statistically significant positive relationship, leading to the rejection of the null hypothesis. This indicates that increased innovativeness in MFIs positively impacts their sustainable performance.

According to the findings microfinance institutions (MFIs) that fostered an innovative culture through reward systems for new ideas and effective network marketing through client referrals tend to be more sustainable. The MFIs also adopt innovative technologies to enhance workplace efficiency, with branches and departments incorporating technology to improve employee productivity will report improved performance.

5.1.2 Relationship between Pro-Activeness and Sustainable Performance

In the second objectives sought to which assess the relationship between pro-activeness and sustainable performance of MFIs in Kenya. Hypothesis testing revealed a statistically significant positive relationship between pro-activeness and sustainable performance, resulting in the rejection of the null hypothesis. This implies that increased pro-activeness in MFIs leads to a notable improvement in their sustainable performance.

The results indicated that microfinance institutions (MFIs) utilized work centrality to achieve objectives, encouraged autonomy to enhance employee pro-activeness, and fostered self-efficacy, which helped employees attract more customers. MFIs also rewarded employees who met set goals and promoted self-reliance, leading to improved performance.

5.1.3 Relationship between Risk-Taking and Sustainable Performance

The third hypothesis examined the relationship between risk-taking and the sustainable performance of microfinance institutions (MFIs) in Kenya. Hypothesis testing showed a statistically significant and positive relationship between risk-taking and sustainable performance. This indicates that MFIs that proactively embraced and managed risk

were more likely to experience improved sustainable outcomes. Consequently, the null hypothesis was rejected, confirming that risk-taking has a significant impact on the sustainable performance of MFIs in Kenya.

The findings revealed that employees engaged in calculated risk-taking, with notable variations in risk-taking practices across different institutions. MFIs had established risk mitigation mechanisms, regularly monitored and reported risks, and implemented structured procedures for risk management and control. Early identification and control of risks were emphasized to minimize potential negative impacts.

5.1.4 Moderating effect of ambidextrous leadership on the relationship between innovativeness and sustainable performance

This objective examined whether ambidextrous leadership moderated the relationship between innovativeness and sustainable performance in microfinance institutions (MFIs) in Kenya. The results revealed that the interaction term between innovativeness and ambidextrous leadership was not statistically significant. As a result, the null hypothesis was not rejected, confirming that ambidextrous leadership does not moderate the relationship between innovativeness and sustainable performance in MFIs. This indicates that the presence of ambidextrous leadership did not significantly influence the effect of innovativeness on sustainable performance.

5.1.5 Moderating effect of ambidextrous leadership on the relationship between pro-activeness and sustainable performance

This objective assessed whether ambidextrous leadership moderated the relationship between proactiveness and sustainable performance among MFIs in Kenya. The findings showed a statistically significant interaction between proactiveness and

ambidextrous leadership. Therefore, the null hypothesis was rejected, suggesting that ambidextrous leadership plays a moderating role in how proactiveness affects sustainable performance in MFIs. Despite the negative coefficient, the significance of the interaction term indicates that ambidextrous leadership does moderate the relationship between proactiveness and sustainable performance.

5.1.6 Moderating effect of ambidextrous leadership on the relationship between risk taking and sustainable performance

This objective explored the moderating role of ambidextrous leadership in the relationship between risk-taking and sustainable performance in MFIs. The analysis revealed a statistically significant moderating effect, indicating that ambidextrous leadership significantly influences the strength of the relationship between risk-taking and sustainable performance. Thus, the null hypothesis was rejected, confirming that ambidextrous leadership moderates the relationship between risk-taking and sustainable performance. Although the interaction term had a negative coefficient, the overall effect of risk-taking on sustainable performance remained positive and significant even in the presence of ambidextrous leadership. This implies that ambidextrous leadership plays a nuanced role in shaping how risk-taking behavior contributes to sustainability outcomes in MFIs.

5.2 Conclusion

The main purpose of this study was to assess the link between corporate entrepreneurship, ambidextrous leadership and sustainable performance of MFIs in Kenya. The findings of this study revealed that the dimensions of corporate entrepreneurship (innovativeness, risk taking and pro-activeness) had a positive effect on sustainable performance of MFIs in Kenya, while ambidextrous leadership had a

moderating effect on the relationship between pro-activeness, risk taking and sustainable performance of MFIS. In terms of the relationship between innovativeness and sustainable performance, the findings revealed a clear positive impact. MFIs that fostered an innovative culture through reward systems, network marketing, and the adoption of technology experienced improved efficiency and performance. This confirmed the critical role of innovation in driving sustainable performance, leading to the rejection of the null hypothesis. The study underscores the importance of promoting innovation within MFIs to enhance their long-term success.

Similarly, the relationship between pro-activeness and sustainable performance of MFIs was positive & significant. MFIs that encouraged autonomy, work centrality, and self-efficacy among employees saw improved performance outcomes. By fostering a proactive culture and rewarding goal achievement, MFIs were able to better attract and retain customers, which significantly boosted their sustainable performance. The rejection of the null hypothesis in this case reinforces the value of proactive practices in ensuring organizational growth and sustainability.

Similarly, the relationship between risk-taking and sustainable performance was significant. While MFIs implemented risk mitigation mechanisms and procedures to manage risk, the findings revealed a statistically significant effect of risk-taking on sustainable performance. This led to the rejection of the null hypothesis, suggesting that risk-taking, on its own contributes meaningfully to the sustainable performance of MFIs. The results point to the need for more structured risk management practices to make risk-taking a viable driver of performance.

Regarding the moderating effect of ambidextrous leadership, the study revealed varied outcomes. Ambidextrous leadership did not significantly moderate the relationships between innovativeness and sustainable performance. This suggests that ambidextrous leadership, which balances exploration and exploitation, does not play a crucial role in enhancing the effects of innovativeness and pro-activeness in MFIs. The null hypothesis was not rejected, indicating that ambidextrous leadership did not moderate the relationship.

However, ambidextrous leadership was found a moderating effect on the relationship pro-activeness risk-taking and sustainable performance. The introduction of ambidextrous leadership significantly improved the positive effects of pro-activeness and risk-taking on sustainable performance, leading to the rejection of the null hypothesis. This highlights that while risk-taking alone might not be sufficient to drive sustainable performance, combining it with ambidextrous leadership can create a more positive effect on MFIs.

Therefore, the study demonstrates that innovativeness, and pro-activeness are key drivers of sustainable performance in MFIs, while risk-taking and pro-activeness requires the support of ambidextrous leadership to be effective. The findings suggest that while ambidextrous leadership may not always enhance the effects of innovativeness, it plays a crucial role in leveraging the potential benefits of risk-taking and pro-activeness for MFIs economic, social, environmental and governance performance.

5.3 Study Contribution

5.3.1 Theoretical Implication

The Innovation Theory of Entrepreneurship emphasizes the role of innovation in achieving competitive advantage and enhancing organizational performance. The study's results support this theory by demonstrating a statistically significant positive relationship between innovativeness and sustainable performance of microfinance institutions (MFIs) in Kenya. This suggests that an innovative culture within MFIs characterized by reward systems for new ideas, adoption of advanced technologies, and continuous improvement plays a crucial role in enhancing long-term sustainability. The finding reinforces the theoretical perspective that innovation is not only a driver of profitability but also a fundamental pillar for ensuring organizational resilience, adaptability, and sustainable success.

The ambidextrous leadership theory posits that effective leadership involves the dynamic balancing of exploration (pursuing new opportunities and innovations) and exploitation (refining existing capabilities and improving operational efficiency). This study's findings partially support this theory. While ambidextrous leadership did not significantly moderate the relationship between innovativeness and sustainable performance, it significantly moderated the relationship between risk-taking, pro-activeness and sustainable performance. This suggests that ambidextrous leadership becomes especially relevant in contexts where strategic risk-taking and pro-activeness is present. Leaders capable of simultaneously managing stability and change enable MFIs to leverage on risk-taking and pro-activeness more effectively toward sustainability. The findings extend the theory by indicating that the moderating value of ambidextrous leadership may vary depending on which entrepreneurial orientation

dimension it interacts with being most impactful in enhancing the outcomes of risk-based and pro-active strategic actions.

The Triple Bottom Line Theory advocates for evaluating organizational success through financial, social, and environmental dimensions. The study aligns with this theory by focusing on sustainable performance as a multi-dimensional construct. The positive relationships observed between innovativeness, proactiveness and risk-taking and sustainable performance affirm that MFIs can achieve greater long-term success when they integrate sustainability into their strategic focus. Furthermore, the enhanced impact of risk-taking and pro-activeness when supported by ambidextrous leadership indicates that strategic decisions must consider more than just economic gain they must also be guided by socially and environmentally responsible leadership. This finding highlight the importance of leadership in aligning entrepreneurial practices with broader sustainability goals.

5.3.2 Practical Implication

The study demonstrated that innovativeness had a strong positive and significant influence on the sustainable performance of microfinance institutions (MFIs). This underscores the importance for MFI managers to intentionally cultivate a culture of corporate innovativeness. Practical steps include establishing reward systems for creative contributions, investing in modern technologies that streamline operations, and strengthening network marketing to broaden market reach. Such initiatives not only enhance operational efficiency but also position MFIs to respond adaptively to changing customer needs and competitive pressures, ultimately boosting long-term sustainability.

Similarly, the positive and significant relationship between pro-activeness and sustainable performance calls for management to foster an environment that promotes initiative-taking and forward-thinking behavior among employees. Creating a workplace that values employee autonomy, self-efficacy, and proactive decision-making can empower staff to seize market opportunities and address challenges early. In addition MFIs should establish clear communication of performance goals, structured incentives for goal achievement, and mechanisms for staff participation in decision-making are critical for embedding a proactive culture that drives sustained performance improvements.

Unlike previous assumptions, the study found that risk-taking has a positive and statistically significant relationship with sustainable performance. This suggests that calculated risk-taking—supported by sound risk management frameworks—can be a driver of organizational growth and innovation. MFIs should not avoid risk altogether but rather adopt structured mechanisms such as risk identification systems, regular risk audits, and real-time monitoring to ensure risks taken are strategic and manageable. Embracing well-informed risk-taking enables MFIs to innovate, enter new markets, and develop products that address emerging client needs.

Importantly, the findings emphasize the critical role of ambidextrous leadership in enhancing the outcomes of risk-taking strategies. While ambidextrous leadership did not significantly moderate the impact of innovativeness or proactiveness, it significantly enhanced the positive effect of risk-taking on sustainable performance. This implies that leaders who balance exploratory (innovation-driven) and exploitative (efficiency-driven) practices are better positioned to harness the benefits of risk-taking without exposing the institution to undue vulnerability.

MFIs should therefore invest in developing leadership capacity that supports agility, adaptability, and dual strategic thinking. Leadership training programs, mentorship, and performance evaluation systems that recognize versatility and learning agility will help cultivate ambidextrous leadership capabilities at all organizational levels. In conclusion, MFIs that aim to improve their sustainable performance should integrate innovation, proactiveness, and calculated risk-taking into their strategic approach—supported by ambidextrous leadership, especially when navigating uncertainty and risk.

5.3.3 Policy implication

The results of the study have significant implications for policymakers as well. For instance, as the economy and competition evolve, microfinance institutions must improve their corporate entrepreneurship strategies. The absence of effective corporate entrepreneurship might impede the performance and accelerate market evolution of MFS. Fundamentally, microfinance institutions must possess entrepreneurial acumen, risk tolerance, and a focus on innovation to maintain competitiveness. Enhancement of innovativeness necessitates continuous education and the integration of technology, which should be promoted by management. Policymakers should prioritize staff training, research and development, and a culture of creativity to foster innovative capabilities. By doing so, MFIs may enhance their innovation and sustainability outcomes. This strategy necessitates risk-taking and acquisition of resources to explore new prospects and mitigate entrepreneurial uncertainty. Policymakers must promote innovation and entrepreneurship within microfinance institutions. Supplying microfinance institutions with financial resources, technology, and proficient personnel may enhance their innovation and market competitiveness. To promote sustainable innovation in microfinance institutions, policy frameworks must incorporate corporate

sustainability performance. These traits may signify a company's enduring innovative efficacy.

5.4 Recommendations

First, given the strong positive and significant relationship between innovativeness and sustainable performance, MFIs should institutionalize a culture of continuous innovation. This involves not only maintaining but creating a reward systems that recognize creativity and solution-driven thinking among employees. MFIs should invest in advanced technologies that optimize service delivery, reduce costs, and improve client experience. Additionally, embracing network marketing strategies including client referrals, digital engagement platforms, and community-based outreach. This can help scale innovation-driven growth. Embedding innovation as a strategic pillar will enhance the long-term sustainability and competitive positioning of MFIs in the dynamic financial sector.

Second, based on the positive link between proactiveness and sustainable performance MFIs should strengthen organizational structures that promote pro-activeness among employees. Management should cultivate an environment where autonomy, initiative, and ownership are encouraged at all levels. This includes training staff in strategic thinking, setting transparent performance goals, and offering incentives for initiative and goal achievement. In addition, equipping employees with resources and decision-making authority will promote proactive client engagement, operational responsiveness, and service innovation—key factors in enhancing sustainable performance.

Third, although risk-taking showed a statistically significant positive relationship with sustainable performance, its effect was enhanced by ambidextrous leadership.

Consequently, MFIs should embrace structured, well-informed risk-taking rather than avoiding risk altogether. This means investing in robust risk management systems, including early risk detection, scenario analysis, and dynamic response mechanisms. Risk-taking should be encouraged within a framework of strategic alignment, ensuring that each calculated risk supports institutional goals and long-term stability.

Fourth, the role of ambidextrous leadership as a critical moderator particularly in the relationship between risk-taking, pro-activeness and sustainable performance signals the need for deliberate investment in leadership development. MFIs should design programs that build dual leadership capabilities: the ability to explore new opportunities (exploration) while maximizing existing capabilities (exploitation). Leaders must be agile, flexible, and capable of managing complex trade-offs. MFIs should incorporate ambidextrous leadership training into professional development, mentorship, and performance appraisal systems.

Fifth, even though ambidextrous leadership did not moderate the relationship between innovativeness and sustainable performance, it should still be viewed as a strategic enabler of resilience and innovation in volatile environments. MFIs are advised to adopt leadership models that support continuous learning, adaptive strategy execution, and cross-functional collaboration. This can enable organizations to respond effectively to change, even if direct statistical effects on certain variables are not always immediately evident.

In summary, MFIs should pursue a multi-dimensional strategy that leverages innovativeness and proactiveness while encouraging responsible risk-taking, and builds leadership capacity that can balance short-term performance with long-term strategic

exploration. These efforts will collectively position MFIs for enhanced sustainable performance, resilience, and inclusive financial growth.

5.5 Further Research Recommendations

Future research could explore how other forms of leadership managing conflicting demands affect the relationship between various strategic practices (innovativeness, pro-activeness, risk-taking) and sustainable performance. Similarly, the study focused on MFIS. Hence other study may look into how studies may explore the relationship between corporate citizenship, ambidextrous leadership and sustainable performance among other forms of businesses such as banks, manufacturing firms, construction firms etc.

Finally, the study used quantitative approaches. Studies can also explore other methodologies such as case studies and interviews for deeper insights. Future studies can also make attempts to generalize the findings in other jurisdictions. This may help in understanding the managerial motives in embracing corporate entrepreneurship and ambidextrous leadership.

The study focused on one dimension of leadership, ambidextrous leadership. Further studies may explore other form of leadership and how they moderate corporate entrepreneurship and sustainable performance e.g. servant leadership.

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APPENDICES

Appendix I: Introduction Letter



Tel: 0722271134
0722685969
0715245347
Fax No: (053) 43047
Telex No. MOIVARSITY 35047

P.O. Box 3900
Eldoret.
Kenya

RE: MU/SBE/PGR/ACD/21B

DATE: 9th May, 2024

TO WHOM IT MAY CONCERN:

RE: BEATRICE JEPKEMBOI BOR- PHD/BM/6058/22

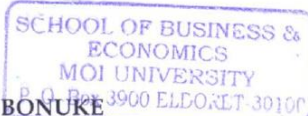
The above named is a bonafide student of Moi University School of Business and Economics, undertaking **Doctor of Philosophy in Business Management** degree; specializing in **Strategic Management**.

She has successfully completed her coursework, defended her proposal, and is proceeding to the field to collect data for her research titled: *"Corporate Entrepreneurship, ambidextrous Leadership and Sustainable Performance of Micro-Finance Firms in Kenya."*

Any assistance accorded to her will be highly appreciated.

For any additional information, do not hesitate to get in touch with the undersigned.

Yours faithfully,



PROF. RONALD BONUKE
POSTGRADUATE CHAIR, SCHOOL OF BUSINESS AND ECONOMICS

/vc



(ISO 9001:2015 Certified Institution)

Appendix II : Letter of introduction

Dear respondent.

RE : LETTER OF INTRODUCTION

My name is Beatrice Jepkemboi Bor, a PhD student at Moi University School of Business and Economics. As part of the PhD programme, I am currently doing my PhD dissertation entitled " *Corporate entrepreneurship, ambidextrous leadership and sustainable performance of micro-finance firms in Kenya.*"

I am respectfully asking for your help in responding to this questionnaire. The information you provide will be treated with the utmost confidentiality and will be used exclusively for academic purposes. Furthermore, the data collected will be exclusively utilized for academic purposes, and participation in this study is voluntary.

I look forward for your cooperation.

Yours sincerely,

Beatrice Jepkemboi Bor

SECTION A : GENERAL INFORMATION*Instructions*

Please mark the correct answer in the following check box.

No.	QUESTION	RESPONSE
1	Size of MFI?	☐ Micro/Small<30,000 ☐ Medium/Large>30,000
2	Age of the MFI?	☐ Less than 5 years ☐ 5– 9 years ☐ 10 – 14 years ☐ 15 and above

SECTION B: CORPORATE ENTREPRENEURSHIP

Please select the most appropriate response based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

PART 1. Innovativeness

		SD	D	N	A	SA
		1	2	3	4	5
IN1	Our organization is based on innovative culture.					
	Our MFI has reward system for any innovation idea.					
IN2	Our MFI is based on networking marketing where clients are referrals.					
IN3	We have adopted innovative technology to ensure efficiency at work.					
IN4	Our branches and department have incorporated technology to increase the employee efficiency.					

Part 2. Pro-Activeness

Please select the most appropriate response based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

		SD	D	N	A	SA
		1	2	3	4	5
PA1	Our firm has utilized work centrality to ensure set objectives are achieved.					
PA2	There is autonomy at work, which improves pro-activeness of the employees.					
PA3	Our employees have self-efficacy which enables them to get more customers.					
PA4	We ensure those who work and achieve set goals are rewarded.					
PA5	We are self-reliant which drives high performance of employees.					

Part 3. Risk-Taking

Please select the most appropriate response based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

		SD	D	N	A	SA
		1	2	3	4	5
RT1	We encourage our employees to take calculate risk-taking.					
RT2	We have an established risk mitigation mechanism to reduce or eliminate the risks.					
RT3	Risks are monitored and report to ensure viable solutions are achieved.					
RT4	There are laid procedures on management and control of risks our organization.					
RT5	We identify risks and control them at early stage.					

SECTION C: AMBIDEXTROUS LEADERSHIP

Please select the most appropriate response based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

		SD	D	N	A	SA
		1	2	3	4	5
AL1	The organization has adopted leadership that is more open					
AL2	Employees emulate and follow their leaders guidance in achieving the organizational goals.					
AL3	We have aspirational leadership that ensures employee's welfare is taken care of.					
AL4	We are motivated by our leaders to achieve our individual and organization goals.					
AL5	Our organization gives use autonomy to be creative and rewards use for innovations.					
AL6	We have set policies and procedure that were must adhere to.					
AL7	Our leaders reward us based on achievement and performance.					
AL8	Our leaders have closed behavior when it comes to achievement of the set vision of the organization.					

SECTION D: SUSTAINABLE PERFORMANCE

Please select the most appropriate response based on agreeability scale where 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A) and 5= Strongly Agree (SA).

	In the last five years	SD	D	N	A	SA
	Economic Sustainable Performance	1	2	3	4	5
EC1	Our firm has grown in profitability.					
EC2	Our firm has increased in number of branches.					
EC3	Our firm has had a steady cash flow.					
	Environmental Sustainable Performance	SD	D	N	A	SA
		1	2	3	4	5
EN1	Our firm has adopted environmentally friendly loans.					
EN2	Our firm has policy on environmental conservation					
EN3	Our firms have reduced consumption of non-renewable resource.					
	Governance Sustainable Performance	SD	D	N	A	SA
		1	2	3	4	5
G1	Our firm provides equal opportunities to all without discrimination.					
G2	Our workers are free to participate in workers union of their choice.					
G3	Our firm provides to all stakeholders welfare facilities.					

	Social Sustainable Performance	SD	D	N	A	SA
		1	2	3	4	5
S1	Our firm has improve community through provision of sustainable financial products.					
S2	Our firm has participated in in local community CSR activities					
S3	Our firm has responsibility for all the stakeholders' safety and rights.					

Adopted and Modified from Frare and Beuren (2022)

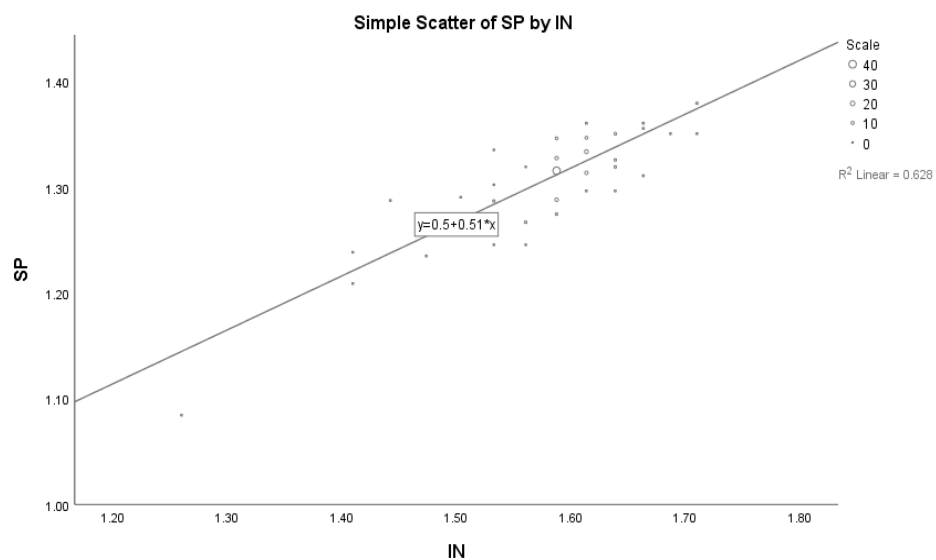
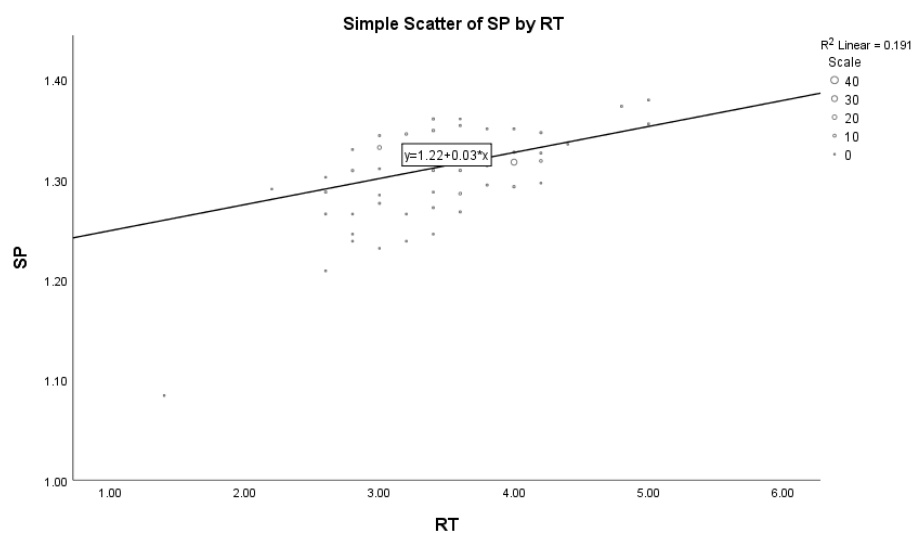
Thank You

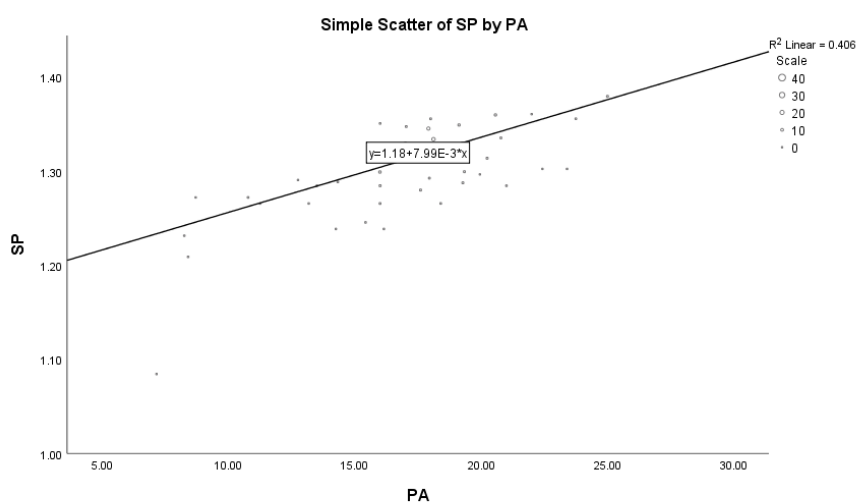
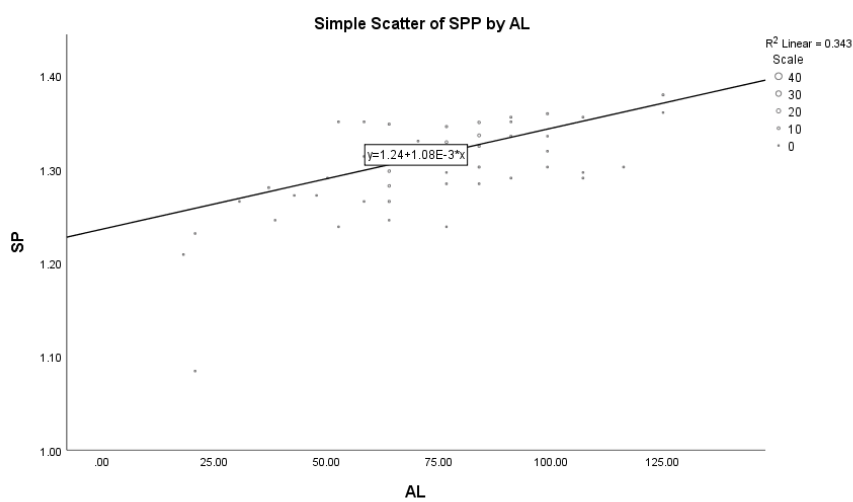
Appendix III: List of Licensed MFIs

1	Faulu Microfinance Bank Limited
2	Kenya Women Microfinance Bank PLC
3	Salaam Microfinance Bank Limited
4	SMEP Microfinance Bank PLC
5	LOLC Kenya Microfinance Bank PLC
6	Rafiki Microfinance Bank Limited
7	Branch Microfinance Bank Limited
8	Sumac Microfinance Bank Limited
9	U & I Microfinance Bank Limited
10	Umba Microfinance Bank Limited
11	Choice Microfinance Bank Limited
12	Caritas Microfinance Bank Limited
13	On It Microfinance Bank Limited
14	Muungano Microfinance Bank PLC
15	ECLOF Kenya LTD
16	Vision Fund Kenya
17	BIMAS Kenya LTD
18	Letshego Kenya
19	Zenka Finance
20	Yehu Microfinance
21	Fin Credit Services Ltd
22	Juhudi Kilimo Co. Ltd
23	Musoni Kenya
24	Select Financial Services
25	Green Fedha
26	Platinum Credit LTD
27	Habitat for Humanity
28	Real People
29	Neema HEEP Ltd (Health Education & Empowerment Program)
30	Hand in Hand Eastern Africa

31	Premier Credit Ltd
32	Money Worth Investment Ltd
33	Hazina Development Trust Ltd
34	Springboard Capital
35	Progressive Credit
36	Longitude Finance
37	Jiwezeshe
38	ASA Kenya
39	Kipepeo Solutions
40	Liberty Africa
41	Diversity Microcredit
42	My Credit
43	PAWDEP (Pamoja Women Development Programmed)
44	Momentum Credit
45	Ushindi Bora Ltd

Appendix IV: Scatter Plots





Appendix V: NACOSTI

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