Entrepreneurial Orientation, Technological Capabilities, and SMEs Performance in Oyo State, Nigeria

Olatunji Alaba HASSAN
LCU/PG/000989

Being a M.Phil Post-field Presentation Submitted to the Department of Management & Accounting, Faculty of Management & Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria

In Partial Fulfillment of the Requirements for the Award of Master of Philosophy Degree (M.Phil) in Business Administration

2024

Certification

This is to certify that Olatunji Alaba HASSAN with matriculation number LCU/PG/000989 carried out this research work titled "**Entrepreneurial Orientation, Technological Capabilities, and SMEs Performance in Nigeria**" in the Department of Management & Accounting, Faculty of Management & Social Sciences, Lead City University, Ibadan, Oyo state, for the award of Master of Philosophy Degree (M.Phil) in Business Administration and that this has not been previously submitted.

…… ……

Prof. J. A. Adejuwon **Date**

Supervisor

…….. ……

Dr. T. M. Akinbo **Date**

Head of Department

Dedication

This research work is dedicated to God Almighty, and to my wife, Judith Hassan, as well as my sons, Ayomide Emmanuel Olatunji and Enoch Iyanuoluwa Olatunji.

Acknowledgement

I am delighted to express my profound gratitude to Lead City University, Ibadan, for granting me the chance to pursue my M.Phil. studies. I would like to extend my heartfelt appreciation to the University Library for its exceptional resources and unfailing assistance during my research endeavour. The intellectual growth and successful completion of this work were greatly supported by the academic environment of Lead City University.

I express my deep gratitude to my supervisor, Prof. J. A. Adejuwon, for his vital mentorship, motivation, and unwavering assistance. I wish to convey my sincere appreciation to all the academics, both affiliated with and external to the Department of Management and Accounting. I would like to express my sincere gratitude to Prof. K. A. Adeyemo, who serves as the Vice Chancellor; Prof. A. O. Oredein, the Provost of the Postgraduate College; Professor O. A. Campbell, the Dean of the Faculty of Management and Social Sciences; Dr. T. M. Akinbo, the Head of the Department of Management and Accounting; Professor G. E. Oyedokun; Dr. A. F. Igbadumhe; Dr. A. B. Onamusi; Dr. Olukayode Longe; Dr. O. J. Oladejo; Dr. O. T. Oreagba; Dr. O. O. Adepoju; and Dr. J. O. Olaleye for their invaluable contributions.

Lastly, I would want to express my deep appreciation to my beloved spouse, Judith Hassan, for her unwavering love and support, and to my sons, Ayomide Emmanuel Olatunji and Enoch Iyanuoluwa Olatunji, for their understanding and patience during my academic pursuit. Their presence in my life acts as a constant source of inspiration and motivation.

"Even though the above-mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work"

Abstract

This study explores the impact of entrepreneurial orientation and technological capabilities on the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. Using a descriptive survey research design, the study aims to address the gap in understanding how these factors interact to influence SME performance in a developing economy context. The theoretical framework integrates the resource-based view (RBV) and dynamic capabilities theory, shedding light on how organizations leverage internal resources and capabilities to gain competitive advantages. The population for this study comprises 31,739 SMEs in Oyo State, representing 4.7% of Nigeria's total SMEs, based on SMEDAN (2021). A sample size of 1,290 SMEs was determined using the Krejcie and Morgan table, and stratified random sampling was applied across the senatorial districts of Oyo Central, Oyo North, and Oyo South to ensure proportional representation. Data was collected using a well-structured questionnaire, validated through a pilot study of 129 SMEs in Ogun State, with a Cronbach's Alpha coefficient of 0.823, indicating good reliability.

The findings reveal significant relationships between entrepreneurial orientation, technological capabilities, and SME performance. In Model 1, an inverse relationship was observed between Innovativeness and SME performance, with a coefficient of -0.998 and high statistical significance ($p = 0.000$). Model 2 demonstrated a strong positive correlation between Proactiveness and SME performance ($R = 0.982$, $R^2 = 0.964$), with Proactiveness significantly enhancing model accuracy (R^2 Change = 0.889, F Change = 31,788.330, $p = 0.000$). Coefficients indicated that Proactiveness has a major positive effect on performance ($B = 5.899$, Beta = 0.960, $t = 178.293$, $p = 0.000$). Model 3 indicated a strong overall fit ($R = 0.988$, $R^2 = 0.976$), with Risk-taking negatively impacting performance ($B = -0.348$, $p = 0.000$), while Innovativeness and Proactiveness had positive effects. In Model 4, the inclusion of IT Infrastructure further strengthened the model ($R = 0.988$, $R^2 = 0.976$), with IT Infrastructure showing a minor but statistically significant positive effect (F Change = 21.044, $p = 0.000$). The final model, Model 5, explained 98.4% of the variability in SME performance, with Technology Adoption contributing an additional 0.8% ($F = 15,780.849$, $p = 0.000$), highlighting its strong positive effect on performance ($B = 2.476$, $p = 0.000$).

The study concludes that SMEs with higher levels of innovation, proactiveness, and technological investment tend to outperform their competitors. The findings suggest that SME owners in Oyo State should prioritize the development of entrepreneurial orientation and technological capabilities to enhance their performance and competitiveness in the dynamic business environment. This research provides valuable insights into the factors that drive SME success in a developing economy context, offering practical recommendations for policy and practice.

Keywords: Entrepreneurial Orientation, SMEs Performance, and Technological Capabilities

Word Count: 438

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Chapter One

Introduction

1.1 Background to the Study

The performance of small and medium-sized enterprises (SMEs) significantly influences economic growth, job creation, and poverty alleviation, especially in developing economies such as Nigeria. SMEs in Oyo State encounter significant challenges, such as restricted access to resources, intense competition, and changing technological requirements. Entrepreneurial orientation, defined by innovativeness, proactiveness, and risk-taking, is acknowledged as a crucial strategic framework that empowers SMEs to address these challenges effectively. Technological capabilities, which include the necessary skills, knowledge, and infrastructure for technology adoption and implementation, are crucial for improving operational efficiency, competitiveness, and adaptability in the contemporary business landscape. Understanding the contributions of entrepreneurial orientation and technological capabilities to the performance of SMEs is essential for policymakers, business owners, and stakeholders.

On a global scale, the significance of small and medium-sized enterprises (SMEs) in fostering economic development cannot be emphasised enough. SMEs play a significant role in the economies of industrialised countries like the United States, Germany, and Japan, contributing significantly to both GDP and employment. For example, in the United States, small and medium-sized enterprises (SMEs) make up 99.9% of all firms and employ approximately 50% of the private workforce[1]. Similarly, in Germany, small and medium-sized enterprises (SMEs), referred to as the Mittelstand, are highly praised for their exceptional ability to innovate and focus on exporting, making a substantial contribution to the country's economic strength[2].

The concept of Entrepreneurial Orientation, which encompasses innovativeness, proactiveness, and risk-taking, has been thoroughly examined in these particular situations. The experts emphasise that entrepreneurial orientation (EO) has a crucial role in determining the success of a company by allowing small and medium-sized enterprises (SMEs) to recognise and take advantage of new opportunities[3]. Moreover, the incorporation of technological capabilities, including the adoption of technology, establishment of IT infrastructure, and development of digital skills, has played a crucial role in improving the competitiveness of small and medium-sized enterprises (SMEs). In South Korea, the government's focus on technical innovation has catapulted small and medium-sized enterprises (SMEs) to the forefront of global marketplaces, especially in industries like electronics and information technology[4].

SMEs in Africa are crucial for economic development, although encountering distinct hurdles. The African Union recognises that small and medium-sized enterprises (SMEs) account for more than 80% of the continent's employment and around 50% of its gross domestic product (GDP)[5]. Nevertheless, the expansion of these entities is sometimes impeded by restricted availability of funding, insufficient infrastructure, and a deficiency in technological capacities. Notwithstanding these difficulties, specific nations have achieved notable progress in utilising entrepreneurial orientation (EO) and Technological Capabilities (TC) to improve the performance of small and medium-sized enterprises (SMEs).

In South Africa, organisations like the Technology Innovation Agency (TIA) and the Small Enterprise Development Agency (SEDA) have played a crucial role in promoting technical innovation and entrepreneurial endeavours among small and medium-sized enterprises (SMEs)[6]. In Kenya, the emergence of fintech technologies, such as M-Pesa, has drastically transformed the financial sector. This has resulted in small and medium-sized enterprises (SMEs) gaining improved

access to financial services and has also encouraged entrepreneurial endeavours[7]. SMEs play a crucial role in Nigeria's efforts to diversify and build its economy. As per the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), SMEs make up over 96% of enterprises and contribute roughly 48% to the national GDP[8]. Nevertheless, Nigerian small and medium-sized enterprises (SMEs) have numerous obstacles that hinder their success, such as insufficient access to financial resources, subpar infrastructure, and restricted technological capabilities.

The SMEs in Nigeria exhibit a strong entrepreneurial orientation characterised by a significant level of innovation and proactive behaviour. This is primarily motivated by the need to successfully traverse a difficult commercial landscape. Research suggests that Nigerian entrepreneurs frequently demonstrate a notable inclination towards creativity and risk-taking, which is essential for recognising and capitalising on emerging market prospects[9]. Nevertheless, the incorporation of technology skills continues to be a crucial obstacle. Although there have been significant progressions, such as the widespread use of digital payment methods and e-commerce platforms, the total technology infrastructure still lacks sufficient development.

The Nigerian government and corporate sector have recently launched attempts to tackle these concerns. The National Information Technology Development Agency (NITDA) has initiated various initiatives aimed at improving digital literacy and fostering technological innovation inside small and medium-sized enterprises (SMEs). The National Digital Economy Policy and Strategy (2020-2030) seeks to position Nigeria as a prominent digital economy by prioritising digital infrastructure, innovation, and entrepreneurship[10]. In addition, private sector endeavours, such as the Tony Elumelu Foundation Entrepreneurship Program, have offered guidance, instruction, and financial support to numerous Nigerian small and medium-sized enterprises (SMEs), promoting a more innovative and technologically skilled business climate[11].

Notwithstanding these endeavours, the performance of Nigerian small and medium-sized enterprises (SMEs) continues to be a combination of positive and negative outcomes, with notable differences observed among various industries and geographical areas. The agricultural sector has experienced a significant increase in creative start-ups utilising technology to enhance productivity and get better market access. Farmcrowdy and Thrive Agric utilise digital platforms to facilitate the connection between farmers, investors, and buyers, resulting in improved efficiency and profitability[12]. On the other hand, industries like manufacturing and retail are still struggling with problems due to inadequate infrastructure and limited use of technology.

Nevertheless, there is a paucity of empirical research that particularly investigates the interaction between entrepreneurial orientation (EO), technological capabilities (TC), and small and medium-sized enterprise (SME) performance in the Nigerian setting. Although the current research offers significant insights into the overall difficulties and possibilities encountered by Nigerian small and medium-sized enterprises (SMEs), there is a requirement for a more targeted examination of how entrepreneurial orientation (EO) and technological capabilities (TC) jointly impact their performance. This study aims to address this deficiency by conducting a thorough examination of these aspects, giving practical and valuable insights for policymakers, entrepreneurs, and stakeholders.

1.2 Statement of the Problem

Entrepreneurial orientation (EO) and technological capabilities (TC) are crucial factors that significantly impact the performance of small and medium-sized enterprises (SMEs) worldwide. However, there is a lack of research in this area, hindering both academic and practical understanding of these variables. Nigerian SMEs play a significant role in the country's economy,

contributing over 48% to GDP and making up 96% of all enterprises. However, they face significant obstacles that impede their expansion and long-term viability[8]. The primary issue stems from the lack of uniformity in the adoption and execution of entrepreneurial orientation among SMEs in Nigeria. In advanced economies like the United States and Germany, SMEs with strong entrepreneurial orientation tend to achieve better results compared to less entrepreneurial counterparts[1,2]. However, many SMEs in Nigeria encounter difficulties in incorporating these entrepreneurial characteristics due to cultural, educational, and infrastructural obstacles, leading to less than ideal economic outcomes.

Nigerian SMEs typically possess insufficient technological capacities, which restrict their capacity to innovate and effectively compete in both domestic and international markets[13]. South Korea and Kenya have shown that strong technology capabilities can greatly improve the performance of SMEs, while Nigerian SMEs often face a lack of access to state-of-the-art technologies and the necessary expertise to effectively utilise them, leading to reduced productivity and competitiveness. It is imperative to examine the synergistic impact of EO and TC on the operational efficiency of SMEs in Nigeria. The combined effect of entrepreneurial orientation and technology capabilities has not been thoroughly addressed in the Nigerian setting, which could have a compounded effect on SME performance. The Nigerian economic climate poses unique problems that intensify the obstacles encountered by SMEs, such as poor infrastructure, limited access to capital, and regulatory obstacles.

There is a lack of empirical evidence on the precise elements that affect the success of Nigerian SMEs, especially when considering the influence of EO and TC. The lack of sufficient data impedes the progress of creating specific policies and actions that could facilitate the growth of SMEs. An in-depth analysis that clarifies the connection between EO, TC, and SME performance is

crucial for providing policymakers, entrepreneurs, and stakeholders with valuable insights into improving the competitiveness and long-term viability of Nigerian SMEs. The performance of small and medium-sized enterprises (SMEs) in Nigeria is a complex issue, characterized by a lack of entrepreneurial mindset, limited technological prowess, and a challenging business climate. To address these issues, it is crucial to understand how entrepreneurial orientation (EO) and technological capabilities (TC) interact and impact the performance of SMEs. This research aims to address the lack of knowledge by providing evidence-based suggestions that can inform the development of effective policies and strategies to enhance the performance of SMEs in Nigeria.

The minimal presence of strong entrepreneurial orientation among Nigerian SMEs can be attributed to factors such as restricted availability of entrepreneurial education and training, risk-averse cultural norms, and insufficient support structures for innovation and creativity. In contrast, wealthy economies like the United States have abundant support systems for entrepreneurs, while Nigerian SMEs often function independently with limited assistance from institutions[1]. The ability to use technology is hindered by inadequate infrastructure, restricted availability of contemporary technology, and a scarcity of technical expertise. Countries like South Korea have had significant advantages due to massive government investments in technology and innovation infrastructure[4]. Nigerian SMEs often face challenges in inconsistent electricity provision, inadequate internet connectivity, and exorbitant expenses associated with adopting new technologies. The combined effect of EO and TC on the success of SMEs has been demonstrated in Kenya and Germany, where the incorporation of mobile technology has transformed the industry and established dominance in the market. However, the Nigerian corporate climate presents additional obstacles that impede the implementation of EO and TC.

Furthermore, the lack of available empirical data on the specific factors that impact the performance of SMEs in Nigeria hinders the development of focused and efficient interventions. Many current studies do not thoroughly analyse the relationship between EO and TC, which is essential for comprehending how SMEs succeed. This research seeks to close the gap in knowledge by providing evidence-based suggestions. These recommendations will inform policy and practice, with the ultimate goal of improving the competitiveness and sustainability of Nigerian SMEs.

1.3 Aim and Objectives of the Study

The aim of this study is to investigate the impact of entrepreneurial orientation and technological capabilities on performance of selected SMEs in Oyo State, Nigeria. The specific objectives were to:

1. investigate the relationship between innovativeness and SMEs performance in the study area.
2. assess the relationship between proactiveness and SMEs performance in the study area.
3. examine the effect of risk-taking on the SMEs performance in the study area.
4. explore the impact of IT infrastructure on the SMEs performance in the study area.
5. analyse the influence of technology adoption on the SMEs performance in the study area.

1.4 Research Questions

This study addresses the following research questions:

1. What is the impact of innovativeness on the SMEs performance within the study area?
2. How does proactiveness affect SMEs performance in the study area?
3. How does risk-taking influence the SMEs performance within the study area?
4. What is the effect of IT infrastructure robustness on the SMEs performance in the study area?
5. What is the relationship between technology adoption and SMEs performance in the study area?

1.5 Hypotheses

The following hypotheses are tested in this study:

$H_0$1: Innovativeness does not significantly impact SMEs performance in the study area.

$H_0$2: Proactiveness is not a determinant of SMEs performance in the study area.

$H_0$3: Risk-taking behaviour does not contribute significantly to SMEs performance in the study area.

$H_0$4: IT infrastructure robustness has no measurable effect on SMEs performance in the study area.

$H_0$5: Technology adoption is not significantly associated with SMEs performance in the study area.

1.6 Significance of the Study

The research on Entrepreneurial Orientation (EO), Technological Capabilities (TC), and SMEs Performance in Oyo State, Nigeria, is highly significant in various aspects, including theoretical, practical, and policy dimensions. This research aims to enhance the current literature by offering a detailed comprehension of how entrepreneurial orientation (EO) and technological capabilities (TC) intersect and impact the performance of small and medium-sized enterprises (SMEs), specifically in the setting of Oyo State, Nigeria. The proposed model would provide a comprehensive explanation of the dynamic relationship between entrepreneurial orientation and technological capabilities, filling a significant research gap. Moreover, via the process of testing or improving current theories on EO and TC, this study will create opportunities for future research in developing economies. This will establish a basis for doing comparative research in other developing nations, thus expanding the worldwide comprehension of these concepts.

The study's objective is to empower small and medium-sized enterprises (SMEs) in Oyo State by offering valuable insights into the significance of embracing an entrepreneurial mentality and utilising technology to improve their competitiveness and performance. The results will provide

practical approaches for small and medium-sized enterprises (SMEs) to enhance their activities, foster innovation, and enhance risk management. Furthermore, the research will identify and emphasise particular areas in which small and medium-sized enterprises (SMEs) in Oyo State require assistance in terms of training, infrastructure, and resources to enhance their technological capabilities and entrepreneurial mindset. This document will function as a manual for business development service providers to customise their programmes in order to fulfil the distinct requirements of small and medium-sized enterprises (SMEs) in Oyo State.

The project will offer policymakers in Oyo State empirical information regarding the primary factors that influence the performance of small and medium-sized enterprises (SMEs). This evidence will assist policymakers in designing and implementing more efficient support systems. The objective is to identify and analyse the legal, infrastructural, and financial obstacles that impede the growth of small and medium-sized enterprises (SMEs), with the aim of providing specific policy interventions to address these barriers. The study's recommendations can facilitate the development of a more favourable environment for small and medium-sized enterprises (SMEs) in Oyo State. This, in turn, can result in more job opportunities, innovation, and economic diversification. Enhanced performance of small and medium-sized enterprises (SMEs) can positively impact larger economic objectives, including poverty alleviation and sustainable development, both within Oyo State and across Nigeria.

The improved performance of small and medium-sized enterprises (SMEs) in Oyo State, resulting from the implementation of effective entrepreneurial practices and the use of advanced technology, will lead to a rise in job possibilities and income levels. This, in turn, would contribute to the reduction of poverty in the region. The study will emphasise the crucial significance of SMEs in the socio-economic structure of Oyo State, fostering wider societal acknowledgement and assistance

for these businesses. The research will present the achievements and difficulties faced by small and medium-sized enterprises (SMEs) in Oyo State. Its aim is to motivate aspiring entrepreneurs to embark on business endeavours with a strong entrepreneurial mindset and an emphasis on technology. Internationally, the findings from this research will serve as a standard for other emerging nations encountering comparable obstacles, offering a blueprint for improving small and medium-sized enterprise (SME) performance through entrepreneurial orientation (EO) and technological capabilities (TC). It will enhance the worldwide discussion on the development of small and medium-sized enterprises, specifically in the context of emerging markets.

Overall, this study aims to make substantial contributions across several domains by conducting a thorough investigation of the factors that impact the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. The findings will provide useful insights and practical recommendations that might stimulate significant change, promoting a more dynamic and enduring SME sector in Oyo State, Nigeria, and beyond.

1.7 Scope of the Study

The research examines the relationship between Entrepreneurial Orientation (EO), Technological Capabilities (TC), and the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. The study specifically focusses on SMEs located in the three senatorial districts of Oyo Central, Oyo North, and Oyo South. The research seeks to include small and medium-sized enterprises (SMEs) from many sectors, including services, agriculture, and trade, in order to understand the various economic activities and business environments in the state.

1.8 Limitations of the Study

The limitations inherent in this study will be duly acknowledged and expounded upon in the concluding section of the research report.

1.9 Operationalisation of the Research Variables

The variables in this study are classified into two - dependent and independent variables. The dependent variable is SMEs performance (Y). The independent variables are entrepreneurial orientation (X_i) and technological capabilities (W_i). These variables are operationalised as:

$Y = f(Xi, W_i)$ will be used to establish the effect of entrepreneurial orientation and technological capabilities on SMEs performance.

Where:

Y = SMEs Performance (SMEP) is measured as:

y_1 = Sales Growth (SG)

y_2 = Customer Satisfaction (CS)

y_3 = Profitability (PRT)

y_4 = Market Share (MS)

y_5 = Operational Efficiency (OE)

X = Entrepreneurial Orientation (EO) is measured as:

x_1 = Innovativeness (IN)

x_2 = Proactiveness (PR)

x_3 = Risk-taking (RT)

W = Technological Capabilities (TC) is measured as:

w_1 = IT Infrastructure (ITI)

w_2 = Technology Adoption (TA)

This study will adopt a linear regression function to express the conceptual model under the following statistical equations:

Regression Equations	Restated Equations
$Y = f(X) \rightarrow Y = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ..1	$SMEP = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$
$y_1 = f(X1, X2, X3) \rightarrow y_1 = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ...2	$SG = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$
$y_2 = f(X1, X2, X3) \rightarrow y_2 = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ...3	$CS = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$
$y_3 = f(X1, X2, X3) \rightarrow y_3 = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ...4	$PRT = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$
$y_4 = f(X1, X2, X3) \rightarrow y_4 = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ..5	$MS = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$
$y_5 = f(X1, X2, X3) \rightarrow y_5 = \beta_0 + \beta_{1X1} + \beta_{2X2} + \beta_{3X3} + \varepsilon_i$ ..5	$OE = \beta_0 + \beta_1 IN_i + \beta_2 PR_i + \beta_3 RT_i + \varepsilon_i$

Regression Equations	Restated Equations
$Y = f(W) \rightarrow Y = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 6	$\rightarrow SMEP = \beta_0 + \beta_1 TA_i + \beta_2 ITI_i + \varepsilon_i$
$y_1 = f(W1, W2) \rightarrow y_1 = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 7	$\rightarrow SG = \beta_0 + \beta_1 ITI_i + \beta_2 TA_i + \varepsilon_i$
$y_2 = f(W1, W2) \rightarrow y_2 = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 8	$\rightarrow CS = \beta_0 + \beta_1 ITI_i + \beta_2 TA_i + \varepsilon_i$
$y_3 = f(W1, W2) \rightarrow y_3 = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 9	$\rightarrow PRT = \beta_0 + \beta_1 ITI_i + \beta_2 TA_i + \varepsilon_i$
$y_4 = f(W1, W2) \rightarrow y_4 = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 10	$\rightarrow MS = \beta_0 + \beta_1 ITI_i + \beta_2 TA_i + \varepsilon_i$
$y_5 = f(W1, W2) \rightarrow y_5 = \beta_0 + \beta_{1W1} + \beta_{2W2} + \varepsilon_i$ 11	$\rightarrow OE = \beta_0 + \beta_1 ITI_i + \beta_2 TA_i + \varepsilon_i$
$Y = f(XW) \rightarrow Y = \beta_0 + \beta_1 X_1 + \beta_2 W_2 + \varepsilon_i$ ...12	$\rightarrow SMEP = \beta_0 + \beta_1 EO_i + \beta_2 TC_i + \varepsilon_i$

$y_1 = f(X_1)$

$y_1 = \beta_0 + \beta_1 x_1 + \varepsilon_i$……. Regression equation 1

$SG = \beta_0 + \beta_1 IN_i + \varepsilon_i$……(i)

The following acronyms are compiled to represent the dependent and independent variables under investigation in the present study. They are as follows:

SMEP = (SG, CS, PRT, MS, OE)

EO = (IN, PR, RT)

TC = (ITI, TA)

By substituting the acronyms of each variable in the regression model, the researcher present the following:

Hypothesis One

$y_1 = f(x_1)$

$y_1 = \beta_0 + \beta_1 x_1 + \varepsilon_i$……. Regression equation 1

$SG = \beta_0 + \beta_1 IN_i + \varepsilon_i$ ……(i)

Hypothesis Two

$y_2 = f(x_2)$

$y_2 = \beta_0 + \beta_2 x_2 + \varepsilon_i$……. Regression equation 2

$CS = \beta_0 + \beta_2 PR_i + \varepsilon_i$……(ii)

Hypothesis Three

$y_3 = f(x_3)$

$y_3 = \beta_0 + \beta_3 x_3 + \varepsilon_i$……. Regression equation 3

$PRT = \beta_0 + \beta_3 RT_i + \mu_i$……(iii)

Hypothesis Four

$y_4 = f(w_1)$

$y_4 = \beta_0 + \beta_1 w_1 + \varepsilon_i$..... Regression equation 4

$MS = \beta_0 + \beta_1 ITI_i + \varepsilon_i$ .....(iv)

Hypothesis Five

$y_5 = f(w_2)$

$y_5 = \beta_0 + \beta_1 w_2 + \varepsilon_i$..... Regression equation 5

$OE = \beta_0 + \beta_1 TA_i + \varepsilon i$.....(v)

Where β_0 is the intercept, β_i's are the slope between Y and the appropriate X_i, and ε (epsilon), is the error term that captures errors in measurement of Y and the effect on Y of any variables missing from the equation that would contribute to explaining variables in Y.

$Y = y_1 + y_2 + y_3 + y_4 + y_5$

$X_1 = x_1 + x_2 + x_3$

$W_1 = w_1 + w_2$

Multiple Regression Model

These are as stated below:

$Y = f(Xi, W_i)$

This study utilised multiple linear regression model to determine the significance of the independent variables in the dependent variable.

The multiple regressions model below will be adopted:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

Where:

Y = SMEs Performance (Dependent variable)

Xi = Entrepreneurial Orientation (Independent variable)

W_i = Technological Capabilities (Independent variable)

ε = error or residual

$\beta_0 = \beta_0$ is the regression coefficient (constant); $\beta_1, \beta_2, \beta_3 \ldots$ are the regression beta values

β_0 = the intercept expected value of y when x is equal to zero; β = the coefficient of the independent variable (it is the rate of change in y with respect to x); εi = the error term to accommodate the effect of other variables that can influence SMEs performance, but which were not included in the model.

Model 1

$Y_1 = f(Xi, W_i)$

SG= f(IN, PR, RT, ITI, TA)

SG = (IN + PR + RT + ITI + TA)

$SG = \beta_0 + \beta_1 IN + \beta_2 PR + \beta_3 RT + \beta_4 ITI + \beta_5 TA + \varepsilon$

Model 2

$Y_1 = f(Xi, W_i)$

CS = f(IN, PR, RT, ITI, TA)

CS = (IN + PR + RT + ITI + TA)

$CS = \beta_0 + \beta_1 IN + \beta_2 PR + \beta_3 RT + \beta_4 ITI + \beta_5 TA + \varepsilon$

Model 3

$Y_1 = f(Xi, W_i)$

PRT = f(IN, PR, RT, ITI, TA)

PRT = (IN + PR + RT + ITI + TA)

$PRT = \beta_0 + \beta_1 IN + \beta_2 PR + \beta_3 RT + \beta_4 ITI + \beta_5 TA + \varepsilon$

Model 4

$Y_1 = f(Xi, W_i)$

MS = f(IN, PR, RT, ITI, TA)

MS = (IN + PR + RT + ITI + TA)

$MS = \beta_0 + \beta_1 IN + \beta_2 PR + \beta_3 RT + \beta_4 ITI + \beta_5 TA + \varepsilon$

Model 5

$Y_1 = f(Xi, W_i)$

OE = f(IN, PR, RT, ITI, TA)

OE = (IN + PR + RT + ITI + TA)

$OE = \beta_0 + \beta_1 IN + \beta_2 PR + \beta_3 RT + \beta_4 ITI + \beta_5 TA + \varepsilon$

1.10 Operational Definition of Terms

Entrepreneurial orientation (EO) is the strategic approach characterised by innovation, proactiveness, and risk-taking to gain a competitive advantage and growth.

Gross Domestic Product (GDP) is the total monetary value of goods and services produced within a country.

Information Technology (IT) Infrastructure comprises hardware, software, networks, and other equipment supporting an organisation's technology needs. It includes servers, network equipment (routers, switches and firewalls), data centers (facilities that house servers), storage systems (hard drives and cloud storage), software (operating systems), workstations (desktops, laptops, mobile devices), backup solutions, and security systems (antivirus software and encryption).

Innovativeness is the firm's willingness to support new ideas, experimentation, and creative processes, potentially leading to new products or technological advancements.

Proactiveness is the firm's ability to anticipate future market opportunities and changes, often being the first to introduce new products or services.

Risk-taking is the firm's willingness to commit significant resources to uncertain opportunities.

SMEs Performance is the measure of a small or medium-sized enterprise's success, evaluated through financial outcomes, operational efficiency, market share, and growth metrics.

Technology Adoption involves learning, testing, and regular use of new technologies, influenced by usefulness, ease, and cost, leading to improved efficiency and innovation.

Technological Capabilities refer to a firm's ability to effectively utilise technology to improve processes, innovate, and enhance business performance. It is measured by technology adoption and IT infrastructure.

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Chapter Two

Literature Review

The literature for this study will consider conceptual, empirical, and theoretical reviews. This becomes vital as it helps the researcher understand and examine what has been done in existing studies given the variables under study. The order of the literature review is presented as:

2.1 Conceptual Review

2.2 Theoretical Review

2.3 Review of Empirical Studies

2.4 Conceptual Framework (Model)

2.5 Summary of Gaps in Literature

Endnotes

2.1 Conceptual Review

The interaction between the performance of small and medium-sized enterprises (SMEs), their entrepreneurial orientation, and their technological capabilities is crucial for promoting sustainable business growth and competitiveness in the current dynamic market setting. This conceptual review

seeks to investigate the impact of entrepreneurial orientation, which is defined by its characteristics of innovativeness, proactiveness, and risk-taking, on the success of small and medium-sized enterprises (SMEs). Moreover, it analyses the influence of technological capabilities on strengthening this connection, allowing small and medium-sized enterprises (SMEs) to utilise technology for enhanced operational effectiveness, market growth, and innovation.

2.1.1 SMEs Performance

SMEs performance refers to the capacity of small and medium-sized enterprises to effectively accomplish their business objectives, sustain expansion, and uphold profitability in the long run. The evaluation of this performance is commonly conducted by utilising a range of financial and non-financial indicators, such as revenue growth, profitability, market share, customer satisfaction, innovation, and operational efficiency[1]. Small and medium-sized enterprises (SMEs) are crucial components of most economies worldwide, including Nigeria. Small and medium-sized enterprises (SMEs) are commonly characterised based on factors including the number of employees and yearly turnover, with modifications specific to each country. In Nigeria, SMEs are defined by the National Bureau of Statistics (NBS) as firms that have fewer than 200 employees and an asset base (excluding land) that is valued at less than 500 million Naira[2]. These businesses are characterised by their ability to quickly adapt, limited resources, and strong client connections, creating a distinctive operational setting that encourages innovation while also posing problems.

Small and medium-sized enterprises (SMEs) are distinguished by their inherent flexibility and adaptability. SMEs have the advantage of being able to quickly adapt to market fluctuations and

meet the needs of consumers, unlike larger organisations that have more inflexible organisational systems. This agility frequently arises from flatter organisational structures, which enable faster decision-making and more immediate communication among team members. Small and medium-sized enterprises (SMEs) often cultivate strong connections with their consumers, providing tailored services that enhance customer satisfaction and foster loyalty[3]. The ability to adjust and establish close relationships with customers can greatly influence performance, particularly in dynamic markets such as Nigeria.

Various aspects can be used to identify the key characteristics of SMEs performance. Financial performance is a key measure that includes indicators such as profitability, revenue growth, and cost management. These measurements offer direct insights into the financial well-being of a small and medium-sized enterprise (SME) and its ability to maintain its operations[4]. Operational efficiency is a feature that measures how effectively a small and medium-sized enterprise (SME) uses its resources to achieve maximum production while minimising waste. This results in lower expenses and increased profitability[5]. The ability of small and medium-sized enterprises (SMEs) to come up with new and creative ideas is also a crucial factor in determining their success. These firms must possess the capacity to innovate, adjust to market fluctuations, and develop novel products or services. This is crucial for sustaining a competitive advantage and guaranteeing long-term prosperity[6]. Customer satisfaction and loyalty are additional factors that impact the performance of SMEs. When customers are highly satisfied, they are more likely to engage in repeat business and spread positive word-of-mouth, which in turn improves the market position of a SME[7].

Furthermore, a crucial aspect of strong performance in small and medium-sized enterprises (SMEs) is their market performance, which refers to their capacity to acquire and retain market share, as

well as their successful entry into new markets or segments[8]. Small and medium-sized enterprises (SMEs) offer numerous benefits, which are especially prominent in developing countries such as Nigeria. From an economic standpoint, SMEs play a crucial role in generating employment opportunities and fostering growth in the gross domestic product (GDP). The World Bank reports that small and medium-sized enterprises (SMEs) make up over 90% of firms and over 50% of global employment[9]. SMEs in Nigeria have a vital role in mitigating unemployment and fostering social stability. Moreover, small and medium-sized enterprises (SMEs) frequently serve as origins of innovation. Their capacity to explore novel concepts and methodologies can result in revolutionary products and services that propel technical progress and industry transformation[9]. SMEs provide customised customer service and establish strong local networks, which contribute to the growth of communities and enhance economic resilience[3].

There are numerous benefits to having a high performance in small and medium-sized enterprises (SMEs). Highly efficient small and medium-sized enterprises (SMEs) are strategically positioned to achieve long-term growth, enabling them to broaden their activities, venture into new markets, and enhance their competitive edge[10]. One additional benefit is the financial stability that well-performing SMEs enjoy. This stability allows them to withstand economic downturns and allocate funds towards reinvesting in their business, hence promoting future growth and innovation[4]. Consistent performance additionally improves the reputation of a small and medium-sized enterprise (SME), thereby facilitating the attraction of customers, partners, and investors[11]. Moreover, surpassing competitors can enable small and medium-sized enterprises (SMEs) to get a greater portion of the market, hence leading to heightened sales and revenue[12]. Higher employee satisfaction and retention are associated with strong performance, as successful SMEs are more inclined to provide competitive pay, perks, and a nice work environment[13].

Nevertheless, there are drawbacks linked to a significant emphasis on SME performance. An important drawback is the pressure and stress that can emerge from the persistent pursuit of excellence, which can cause burnout among small and medium-sized enterprise (SME) owners and staff, potentially leading to high employee turnover rates and a decrease in morale[14]. Emphasising performance measures might potentially lead to short-term decision-making that may not be in line with long-term strategic objectives, hence jeopardising the future prospects of the SME[5]. In addition, small and medium-sized enterprises (SMEs) frequently face resource constraints, and striving for excellent performance can put pressure on these resources, making it difficult to effectively manage both daily operations and expansion endeavours[7]. Successful small and medium-sized enterprises (SMEs) may also encounter the danger of overexpansion, where the desire to grow rapidly can result in stretching too thin and a decline in concentration on fundamental strengths[8]. In addition, outstanding performance can render SMEs more susceptible to market dynamics, as they may draw the interest of larger rivals, hence heightening the likelihood of intense competition and potential erosion of market share[10].

Customer Satisfaction

Customer satisfaction is the measure of how well an enterprise's products or services meet or surpass the expectations of its customers. Customer retention is a crucial measure for assessing the efficacy of a business's initiatives and its capacity to retain consumers[8]. Elevated levels of customer satisfaction can be indicative of robust product or service quality, efficient customer service, and a favourable overall experience for customers. Ensuring customer satisfaction has become a top priority for businesses in several industries, especially for small and medium-sized enterprises (SMEs). In the current business landscape, characterised by fierce rivalry and swiftly evolving

consumer tastes, it is imperative to adopt a strategic approach centred on customer satisfaction in order to achieve long-term success and expansion. Customer satisfaction is the consumer's evaluation of the value they received in a transaction or connection, encompassing all aspects of the customer journey, including interactions before purchase, the purchasing process, and the support provided post-purchase.

The significance of customer satisfaction cannot be exaggerated, as it directly influences customer loyalty, recurring purchases, and word-of-mouth recommendations, which are crucial for small and medium-sized enterprises (SMEs) due to their restricted marketing budgets and resources. The attributes of customer satisfaction encompass the calibre of the product or service, the customer's experience with the service, and the customer's expectations. The term "quality of product/service" refers to the degree to which a product or service meets or exceeds the expectations and standards established by the enterprise[5]. Customer service experience encompasses the interactions between customers and the support team of an enterprise, including the level of responsiveness and helpfulness exhibited in the service offered[11]. Customer expectations refer to the predetermined beliefs that customers hold regarding what they should receive, which are shaped by their past experiences, marketing efforts, and other external factors[4].

The benefits of great customer satisfaction encompass enhanced customer loyalty and retention. Satisfied customers are more inclined to persist in their purchases from the enterprise and advocate it to others[7]. Positive word-of-mouth is an advantageous outcome that can bolster the enterprise's reputation and entice new clients[8]. Increased client lifetime value is achieved by continuous recurring business and the possibility to capitalise on upselling and cross-selling prospects[15]. Additionally, a decrease in customer churn is linked to increased satisfaction, which can result in decreased expenses related to gaining new customers[5].

Customer satisfaction can have drawbacks, such as an excessive focus on customer input, which may result in the neglect of other crucial areas of the organisation, such as innovation or cost management[6]. Regularly delighted clients tend to acquire elevated expectations[12]. However, meeting or surpassing these expectations in the future might be difficult, and if not managed appropriately, it can result in disappointment. Furthermore, there may be financial consequences if organisations allocate significant resources towards increasing products, services, or customer service in order to uphold high levels of satisfaction[14]. Finally, limitations in measuring satisfaction can arise when the methodologies employed fail to encompass the complete range of client experiences or when the feedback received is not properly acted upon[10].

Market Share

Market share is the proportion of total sales in a market that is dominated by a specific enterprise or product. It is a key measure that reflects an enterprise's competitive standing and success in its industry[4]. Market share is determined by dividing an enterprise's sales by the total sales in the market. It is commonly used to evaluate the efficacy of an enterprise's marketing and commercial initiatives. Market share is a crucial factor for small and medium-sized enterprises (SMEs) as it not only indicates their previous success but also influences their future growth and sustainability. The attributes of market share encompass market penetration, competitive positioning, and sales volume. Market penetration refers to the degree to which an enterprise's offerings have been adopted by the intended market in relation to its competitors[7]. Competitive positioning refers to the assessment of an enterprise's performance in relation to its competitors, namely in terms of sales and market presence[8]. The term "sales volume" refers to the precise quantity of units that have been sold. This metric has a direct influence on the market share and offers valuable information regarding the enterprise's level of dominance in the market[10].

The benefits of having a high market share include more revenue and profitability. This is because a larger market share typically leads to higher sales volumes and the capacity to take advantage of economies of scale[5]. Having a substantial market share grants corporation enhanced market power, enabling them to exert influence over market prices and circumstances[11]. Enhanced brand awareness and customer loyalty are supplementary benefits, since a robust market presence frequently results in heightened consumer confidence and allegiance to the brand[12]. A significant market share can yield competitive advantages, such as enhanced bargaining power with suppliers and distributors, resulting in favourable terms and conditions[15].

Nevertheless, there are drawbacks linked to a substantial market share. Large market shares can lead to increased scrutiny and regulatory hazards, as regulatory bodies concerned with anti-competitive behaviours may pay closer attention to such enterprises[14]. Complacency risk refers to the potential danger that a firm may face when it becomes too comfortable with its dominant position and neglects to innovate or adjust to market developments[6]. In addition, a significant market share might result in increased operational expenses due to the necessity of substantial investments in sustaining the enterprise's position and extending its market[8]. Ultimately, the corporation may face fierce rivalry as competitors aim to capture a larger portion of the market, resulting in the adoption of aggressive competitive tactics and eventual instability in the market[10].

Operational Efficiency

Operational efficiency is the capacity of an organisation to provide products or services in a manner that minimises costs while maintaining high quality. It entails the enhancement of processes, minimisation of inefficiencies, and augmentation of production in order to attain superior performance and gain a competitive edge[7]. Enhancing operational efficiency results in increased

profitability and enhanced organisational effectiveness. Operational efficiency is key for the success of businesses, especially for small and medium-sized enterprises (SMEs). Amidst growing competition and limited resources, small and medium-sized enterprises (SMEs) can gain a competitive edge by attaining operational efficiency. This enables them to make the most of their resources, cut down on expenses, enhance quality, and boost customer satisfaction.

The attributes of operational efficiency encompass streamlined operations, resource optimisation, and ongoing development. Streamlined processes refer to the act of streamlining and enhancing workflows in order to increase productivity and decrease operational expenses[8]. Resource optimisation is the process of efficiently utilising available resources, including labour, materials, and technology, to achieve the highest possible output while minimising waste[5]. Continuous improvement refers to the ongoing evaluation and adjustment of processes in order to adapt to changing circumstances and improve performance[10]. Collectively, these attributes assist organisations in attaining operational superiority and sustaining a competitive advantage.

The benefits of having great operational efficiency are substantial. The main advantage of efficient operations is cost reduction, which leads to decreased production costs and increased profit margins[6]. Enhanced productivity is an additional benefit, resulting in elevated output levels using the same or less resources, hence enhancing overall performance[11]. Improved customer satisfaction is another advantage, as streamlined processes guarantee prompt delivery of top-notch products or services, hence enhancing customer loyalty[13]. Furthermore, enhanced adaptability is attained when organisations possess streamlined processes, enabling them to promptly react to market fluctuations and emerging prospects[12]. This flexibility can result in long-term competitive advantage and dominance in the industry.

Although high operational efficiency has its advantages, it can also have drawbacks. An excessive focus on cost reduction may result in diminished quality or employee discontent if not effectively controlled[4]. Another risk is the potential for diminished flexibility, as highly optimised processes may become inflexible and less capable of adapting to unforeseen changes or innovations[15]. Moreover, there is a possibility of reduced employee morale if efficiency initiatives result in a higher workload or greater pressure, which can negatively impact job satisfaction and performance[14]. Finally, the costs associated with the initial investment required to introduce technologies or processes that improve efficiency might be substantial, potentially acting as a hindrance for certain organisations[8].

Profitability

Profitability is the measure of a business's capacity to create profit in relation to its revenue, assets, or equity. The term refers to a significant financial measure that demonstrates how effectively a enterprise employs its resources to generate profits that exceed its expenses[1]. Profitability is a vital factor in evaluating the financial well-being and long-term viability of an enterprise. It indicates the enterprise's capacity to generate profits for its owners and allocate funds towards further expansion. The attributes of profitability encompass profit margins, return on assets (ROA), and return on equity (ROE). Profit margins represent the profitability of a business and are calculated by expressing the profits as a proportion of the sales revenue. They represent the net income that a corporation keeps after subtracting all expenses from its revenue[8].

Return on assets (ROA) is a metric that quantifies the efficiency of a corporation in utilising its assets to create profit. It is computed by dividing the net income by the total assets[6]. Return on equity (ROE) is a measure of profitability that compares the earnings generated by a firm to the

amount of capital invested by shareholders. It indicates how efficiently a enterprise utilises its invested capital to make profits[5]. Collectively, these attributes aid in evaluating the overall financial performance and effectiveness. The benefits of achieving high profitability are significant. Financial stability is a key advantage, since successful organisations experience improved cash flow, enabling them to withstand economic downturns and capitalise on fresh prospects[13].

Enhanced investment appeal is an additional benefit. Investors are inclined to finance organisations that generate profits, thereby offering more capital for the purposes of expansion and growth[7]. The capacity to reinvest in expansion is also noteworthy. Profitable corporations have the ability to allocate their earnings into research and development, marketing, and other expansion endeavours, which in turn promotes long-term prosperity[8]. Furthermore, a high level of profitability increases competitive advantage by enabling enterprises to offer more favourable pricing, engage in greater innovation, and withstand competitive challenges more successfully[15].

Although great profitability might be advantageous, it can also have drawbacks. Profitable enterprises are frequently subjected to greater taxes and regulatory control, which can result in increased attention from regulators and tax authorities[4]. Furthermore, the demand to sustain profitability might result in short-term thinking, wherein management prioritises immediate financial benefits rather than long-term strategic objectives[14]. The possibility of market saturation can occur when successful enterprises attract increased rivalry, leading to a gradual decline in profit margins over time[10]. Moreover, there is a potential danger of excessively prioritising financial performance to the detriment of other vital aspects, such as employee contentment and environmental sustainability[11].

Sales Growth

Sales growth is the term used to describe the rise in sales revenue during a defined time frame, usually assessed on a monthly, quarterly, or yearly basis. The metric is crucial for evaluating an enterprise's capacity to grow its market share, develop its customer base, and improve its financial performance[14]. Within the realm of small and medium-sized enterprises (SMEs), sales growth is frequently regarded as a key measure of corporate well-being and achievement, serving as a reflection of the efficacy of marketing tactics, product innovation, and customer relationship management. The attributes of sales growth in small and medium-sized enterprises (SMEs) encompass sustainability, consistency, and scalability. Sustainability in sales growth refers to a consistent and enduring increase in sales that does not deplete resources or compromise the quality of products and services[6]. Consistency is the capacity of a business to consistently create sales growth without substantial changes. Ensuring a steady increase in sales is crucial for preserving the trust of investors and guaranteeing a stable stream of income[8].

Scalability refers to the ability of a business to increase its sales without a corresponding increase in expenditures, resulting in larger profit margins as sales volume increases[7]. There are many benefits to establishing significant sales growth. One of the main advantages is enhanced profitability. As sales increase, small and medium-sized enterprises (SMEs) have the opportunity to benefit from economies of scale, leading to a reduction in per-unit expenses and an improvement in profit margins[13]. Furthermore, an improved market position is an additional benefit, as continuous sales growth can enable enterprises to gain a greater market share, surpass competitors, and develop a more prominent brand presence[11]. Sales growth also promotes innovation and the development of new products. As organisations experience sales growth, they frequently allocate their profits towards research and development, resulting in enhanced products and services that more effectively cater to customer demands[14].

In addition, higher sales can yield more comprehensive customer intelligence. By obtaining additional sales data, organisations can examine client behaviour, preferences, and trends, which allows for the implementation of more focused marketing and sales strategies[8]. Finally, strong sales growth enhances financial stability by creating increased revenue, which may be utilised to repay debts, invest in new prospects, and establish a safeguard against economic downturns[10].

Nevertheless, quick sales development can also bring about drawbacks, especially for small and medium-sized enterprises (SMEs). Resource strain is a notable concern, as rapid expansion can overextend an enterprise's resources, resulting in possible difficulties with maintaining quality control, addressing customer service problems, and causing employee exhaustion[15]. Moreover, growth might entail financial hazards, especially when it is fuelled by substantial borrowing or assertive marketing and development tactics. Rapid rates of expansion can result in difficulties with cash flow, particularly if the organisation stretches its financial resources too thin[4]. Operational inefficiencies can occur when an enterprise's infrastructure and processes are inadequate to manage a higher demand, resulting in delays, bottlenecks, and diminished service quality[1]. Moreover, there is a potential danger of market saturation, which occurs when a small and medium-sized enterprise has rapid growth and acquires a significant share of a narrow market, hence limiting opportunities for future expansion[12]. Ultimately, cultural and strategic misalignment may arise when a company's rapid expansion surpasses its capacity to uphold its fundamental principles and strategic direction, resulting in possible clashes and erosion of brand identity[5].

2.1.2 Entrepreneurial Orientation

Entrepreneurial Orientation (EO) is a key concept for comprehending the strategic stance of enterprises, especially small and medium-sized enterprises (SMEs), in relation to entrepreneurship

and innovation. EO is distinguished by various fundamental aspects, such as innovativeness, proactiveness, and risk-taking. Innovativeness is the inclination of an enterprise to actively participate in and endorse new concepts, originality, trial and error, and imaginative procedures that could lead to the development of new products, services, or technological methods. Proactiveness is a characteristic of an enterprise that demonstrates a forward-thinking approach and a proactive attitude. It involves actively seeking out new opportunities and predicting future demand. Risk-taking entails the readiness to allocate substantial resources to opportunities that have a realistic likelihood of resulting in expensive failure, demonstrating an enterprise's audacity in entering uncertain markets or making major expenditures[14].

Small and medium-sized enterprises (SMEs) can benefit significantly from having a strong entrepreneurial orientation. An entrepreneurial orientation (EO) promotes an innovative culture within the enterprise, fostering the ongoing creation of new goods, services, and processes. The adoption of an innovative culture can give SMEs a distinct advantage in dynamic markets, allowing them to stand out from rivals and meet the changing demands of customers[6]. Furthermore, being proactive enables SMEs to take advantage of emerging trends and opportunities ahead of their competitors, perhaps gaining access to new markets or consumer groups. Adopting an anticipatory approach is especially advantageous in fast-paced businesses where being the first to act provides major benefits[11]. Furthermore, the propensity for risk-taking in entrepreneurial orientation (EO) allows SMEs to engage in endeavours that may be avoided by organisations that are more cautious about taking risks. This, in turn, has the potential to result in greater benefits or rewards. A strong inclination towards taking risks can lead to significant growth and market expansion, particularly when these risks are meticulously assessed and controlled[8].

Nevertheless, a high level of entrepreneurial drive is often accompanied by significant drawbacks. Foremost among these factors is the heightened susceptibility to potential hazards. Although risk-taking is an essential element of entrepreneurial operations (EO), an excessive or inadequately controlled level of risk can result in substantial financial losses or even the collapse of a corporation. Small and medium-sized enterprises (SMEs) may struggle to cope with these losses because they have fewer resources available[13]. Furthermore, the emphasis on being innovative and proactive may result in an excessive concentration on new projects, neglecting the optimisation of current operations or the maintenance of reliable revenue sources. The excessive emphasis on this matter can place a burden on the resources of the organisation and potentially lead to inefficiencies in operations or a diversion of attention from essential business tasks[11]. In addition, the excessive pursuit of new prospects can occasionally result in strategic overreach, wherein SMEs may spread their talents too thinly and struggle to effectively accomplish their objectives[7].

Overall, whereas a robust entrepreneurial mindset can offer small and medium-sized enterprises (SMEs) notable benefits in terms of innovation, market positioning, and development prospects, it also entails inherent risks and problems. Small and medium-sized enterprises (SMEs) need to effectively manage risks and maintain a strategic focus in order to fully leverage the advantages of entrepreneurial opportunities (EO) without jeopardising their long-term sustainability.

Innovativeness

In the context of small and medium-sized enterprises (SMEs), innovativeness plays a crucial role in entrepreneurial orientation. It is defined by an enterprise's readiness and capability to endorse innovative concepts, explore new methods, and create original products or services. Innovativeness is a measure of an organization's willingness to embrace change and its dedication to cultivating a

culture that promotes creativity and ongoing enhancement. Having this characteristic is crucial for small and medium-sized enterprises (SMEs) as it allows them to distinguish themselves from rivals, adapt to evolving market needs, and capitalise on fresh prospects for expansion[14].

The benefits of being innovative are significant for small and medium-sized enterprises (SMEs). First and foremost, a significant degree of innovativeness enables companies to create distinctive products and services that may better cater to specific client requirements compared to those provided by rivals. Establishing a strong market presence and increasing consumer loyalty and market share are highly dependent on this distinction[8]. In addition, innovativeness enhances internal efficiency by fostering the creation of novel procedures and technologies that can decrease expenses and enhance output. Innovative SMEs tend to be more flexible in adapting to technology developments and have a greater ability to utilise new tools and systems. This can result in improved operational efficiency and enhanced performance[6].

Nevertheless, drawbacks might also emerge from a significant emphasis on innovativeness. An important disadvantage is the inherent peril linked to innovation. Investing in research and development is necessary for the development of new products or processes, but there is no guarantee of success. Small and medium-sized enterprises (SMEs) with limited resources face a large financial risk when it comes to innovation. This risk is especially high because if the innovations are not accepted by the market or fail to generate the projected returns, SMEs can suffer significant losses[13]. Moreover, an excessive focus on innovation can detract attention and allocate resources from other vital business responsibilities, such as marketing, sales, and customer service. The misallocation of resources can lead to imbalances within the organisation, diminishing overall performance and potentially jeopardising long-term viability[7]. In addition, the relentless pursuit of

innovation can place a burden on the organisation, as employees may experience constant pressure to generate new ideas, resulting in burnout and diminished morale[11].

In essence, although innovativeness provides considerable advantages in terms of distinctiveness, effectiveness, and flexibility, it also entails notable dangers and difficulties. Small and medium-sized enterprises (SMEs) need to effectively handle their innovation endeavours by striking a balance between exploring new prospects and responsibly utilising resources and focussing on core business operations. This will allow them to optimise the advantages of being innovative while maintaining stability.

Proactiveness

Proactiveness is a key component of entrepreneurial orientation, especially important for the strategic actions of small and medium-sized enterprises (SMEs). Proactiveness is defined as the proactive approach of a company to foresee and capitalise on future market trends and new possibilities before its competitors. This characteristic encompasses the ability to proactively take action, swiftly adapt to changes in the surrounding circumstances, and consistently seek innovative methods to attain a competitive advantage. Proactiveness is a demonstration of a company's dedication to becoming a leader in the market rather than a follower. It involves positioning the company to take advantage of new opportunities before competitors do[7].

The benefits of being proactive for small and medium-sized enterprises (SMEs) are substantial. SMEs can establish themselves as pioneers and early adopters in their industry by taking aggressive measures. Proactively engaging with customers can result in the development of robust brand

awareness and loyalty, as customers frequently link proactivity with leadership and innovation[8]. Moreover, proactive small and medium-sized enterprises (SMEs) are frequently more equipped to handle market swings and unforeseen obstacles due to their prior anticipation of prospective changes and implementation of strategic strategies to tackle them. This preparedness can result in increased market resilience and the capacity to maintain operations and achieve growth even in unpredictable conditions[11]. Moreover, enterprises that take a proactive approach are more inclined to participate in ongoing learning and growth, so improving their overall competencies and positioning themselves to effectively capitalise on future market opportunities[6].

Nevertheless, there are also drawbacks linked to a significant emphasis on proactiveness. A significant disadvantage is the possibility of exceeding the available resources. Small and medium-sized enterprises (SMEs) that actively and ambitiously pursue new prospects may allocate their resources excessively, resulting in operational inefficiencies and potentially jeopardising their core business activity. This can pose significant challenges for small and medium-sized enterprises (SMEs), as they typically have restricted financial and human resources in comparison to larger companies[13]. In addition, taking a proactive strategy can occasionally lead to strategic errors if a company's predictions about market trends turn out to be inaccurate. Making decisions based on faulty assumptions can result in substantial financial losses and futile endeavours, particularly when a corporation extensively invests in a new initiative that does not correspond with real market trends[7]. In addition, the persistent pursuit of outperforming competitors can result in organisational stress, as staff may experience pressure to consistently achieve at a high level, which could ultimately contribute to burnout and elevated rates of employee turnover[11].

Overall, whereas being proactive can offer significant benefits to small and medium-sized enterprises (SMEs) in terms of market positioning, resilience, and innovation, it also presents

potential concerns concerning resource allocation, strategy precision, and employee welfare. Small and medium-sized enterprises (SMEs) need to effectively manage their proactive strategies by carefully planning and allocating resources. This will help them to optimise the advantages of being proactive while minimising any potential drawbacks.

Risk-taking

Entrepreneurial orientation, especially for small and medium-sized enterprises (SMEs), relies heavily on the willingness to take risks. It is defined by the willingness of an organisation to participate in undertakings that have unpredictable results, typically requiring a substantial allocation of resources without assured profits. Risk-taking is a manifestation of the enterprise's tendency to make daring decisions, where the desire to pursue potentially lucrative opportunities is weighed against the possibility of significant losses. The importance of this component cannot be overstated for SMEs as it forms the foundation for their capacity to innovate, venture into new markets, and eventually attain growth in highly competitive settings[8].

The benefits of taking risks for small and medium-sized enterprises (SMEs) are numerous. Firstly, engaging in risk-taking enables SMEs to be the first to enter new markets or develop innovative products and services. This can potentially help them become leaders in the market or earn a substantial competitive edge. SMEs can enhance their market share and profitability by strategically seizing opportunities presented by rising trends and unmet market needs through calculated risk-taking[7]. Furthermore, engaging in risk-taking activities cultivates a culture of creativity and adaptability within an organisation. It fosters a culture that promotes creative thinking and a willingness to experiment, leading to the development of novel ideas and enhancements that contribute to the expansion of the enterprise[11]. Moreover, companies that have a propensity for

taking risks are frequently more adaptable, able to promptly react to shifts or disturbances in the market, thereby bolstering their potential to endure and thrive in the long run[6].

Nevertheless, there are drawbacks that come with a significant emphasis on risk-taking. One of the main hazards is the possibility of substantial monetary detriment. Small and medium-sized enterprises (SMEs), sometimes constrained by limited resources, may face difficulties in dealing with the negative outcomes of unsuccessful business endeavours. These repercussions might put their financial stability at risk and potentially result in bankruptcy[13]. In addition, engaging in excessive risk-taking can lead to strategic misalignment when enterprises undertake businesses without adequately evaluating how well they connect with the enterprise's core competencies and market positioning. The misalignment mentioned can weaken the enterprise's strategic concentration and have an adverse effect on its overall performance[8]. Additionally, possessing a strong inclination towards risk might result in a tumultuous work atmosphere, characterised by frequent changes in approach or unsuccessful endeavours, which in turn generate uncertainty and tension among staff members, thereby impacting their morale and productivity[11].

However, risk-taking is crucial for small and medium-sized enterprises (SMEs) seeking to drive innovation and seize new prospects. However, it necessitates meticulous oversight and strategic deliberation. Small and medium-sized enterprises (SMEs) need to strike a balance between their willingness to take risks and the need for careful preparation and assessment of those risks. This approach allows them to take advantage of the benefits that come with risk-taking while minimising any negative consequences.

2.1.3 Technological Capabilities

Technological capabilities encompass an enterprise's proficiency in efficiently using, adapting, and innovating technologies to improve its business operations and offerings. Technological competencies are essential for generating innovation, enhancing operational efficiency, and sustaining competitive advantage in the context of small and medium-sized enterprises (SMEs). Technological capabilities refer to a variety of tasks, including as doing research and development (R&D), implementing new technologies, and incorporating technological advancements into current business models[4].

The key attributes of technological capabilities in small and medium-sized enterprises (SMEs) encompass the enterprise's aptitude to acquire and implement technological knowledge, its capacity to innovate and adopt new technologies, and its expertise in leveraging technology to improve its product and service offerings. Small and medium-sized enterprises (SMEs) that possess robust technological capabilities tend to be more agile in their operations, enabling them to promptly adapt to technological advancements and market requirements. They frequently participate in ongoing learning and innovation, utilising technology to develop distinctive value propositions that set businesses apart from competitors[8]. In addition, the firm's technological capabilities are determined by its capacity to cooperate with external partners, such as research institutes and technology providers, in order to jointly develop new technological solutions and improve innovation outcomes[14].

The benefits of having robust technology capabilities for small and medium-sized enterprises (SMEs) are substantial. First and foremost, these capabilities empower companies to optimise their operational efficiencies by automating procedures and decreasing expenses, resulting in improved profitability and competitiveness. Furthermore, technological advancements enable small and medium-sized enterprises (SMEs) to create novel products and services that cater to changing client

demands and seize emerging market prospects[4]. Technology competencies also improve an enterprise's capacity to adjust to technology disruptions and exploit digital transformation techniques, which are becoming more crucial in the contemporary corporate environment[6]. Moreover, with the allocation of resources towards technological skills, small and medium-sized enterprises (SMEs) can enhance their capacity to collect and evaluate data, resulting in enhanced decision-making processes and the implementation of more focused marketing strategies[8].

Nevertheless, there are also drawbacks linked to the establishment and sustenance of technological skills. An important disadvantage is the huge financial outlay needed to get and integrate new technologies, which can be a severe burden for small and medium-sized enterprises (SMEs) with limited resources. The expenses associated with acquiring, maintaining, and enhancing technology, as well as the requirement for proficient individuals to oversee these technologies, can place a burden on the financial assets of a small and medium-sized enterprise[4]. In addition, swift technical advancements can result in obsolescence, wherein previously state-of-the-art technology becomes outdated, compelling SMEs to consistently invest in new solutions to maintain competitiveness[10]. The ongoing demand for upgrading can lead to a reliance on technology, which may restrict the enterprise's ability to be flexible and adaptable in the event of technical failures or unmet expectations[15]. Eventually, an excessive emphasis on technology capabilities may detract attention from other vital facets of the organisation, such as customer connections and human resource development, which are equally crucial for long-term success[7].

Ultimately, technological capabilities are crucial for small and medium-sized enterprises (SMEs) aiming to develop and maintain competitiveness. However, they also present issues in terms of expenses, reliance on technology, and the potential for becoming outdated. Small and medium-sized

enterprises (SMEs) need to effectively manage their investments in technology alongside their other strategic priorities in order to optimise the advantages of technological capabilities.

IT Infrastructure

The information technology (IT) infrastructure encompasses the integrated hardware, software, network resources, and services that are necessary for the establishment, functioning, and administration of an enterprise's IT environment. This include tangible computer resources such as servers and data storage, as well as network components like routers and switches. Additionally, it covers a range of software applications and platforms that facilitate communication, data processing, and service provision[7]. Within the realm of small and medium-sized enterprises (SMEs), the IT infrastructure has a crucial role in improving operational efficiency, facilitating scalability, and promoting innovation.

The key attributes of IT infrastructure in small and medium-sized enterprises (SMEs) encompass adaptability, expandability, and dependability. Flexibility is crucial because it enables small and medium-sized enterprises (SMEs) to promptly adjust to evolving market conditions and technological progress. Small and medium-sized enterprises (SMEs) can utilise cloud computing to flexibly modify their IT resources according to demand, without requiring substantial initial investments[13]. Scalability pertains to the capacity of the IT infrastructure to expand alongside the business, accommodating higher workloads without compromising performance. This attribute is essential for small and medium-sized enterprises (SMEs) that expect swift expansion or varying workloads[8]. Reliability guarantees the consistent availability and expected performance of IT systems, minimising periods of inactivity and ensuring the uninterrupted operation of business

activities. An efficient and dependable IT infrastructure is crucial for small and medium-sized enterprises (SMEs) that heavily depend on digital tools for their day-to-day operations[4].

There are several benefits to having a strong and resilient IT infrastructure for SMEs. One notable advantage is enhanced efficiency. An efficiently built IT infrastructure eliminates repetitive processes, minimises human errors, and optimises operations, enabling SMEs to function with more efficiency[8]. Furthermore, it promotes scalability, allowing enterprises to effortlessly grow their operations without requiring substantial extra investments in IT[14]. In addition, IT infrastructure facilitates innovation by offering the required tools and platforms for the creation of novel products and services, hence promoting a culture of ongoing enhancement and adjustment[11]. In addition, IT infrastructure improves communication and collaboration inside the organisation by facilitating integrated communication tools and platforms, hence boosting efficient teamwork and expedited decision-making[8]. Additionally, it provides support for data management and security, allowing SMEs to efficiently store, process, and safeguard their data. This capability is essential for ensuring compliance and protecting sensitive information[1].

Although IT infrastructure in SMEs offers several benefits, it often comes with problems. One of the key obstacles is the expense associated with acquiring and maintaining. Constructing a comprehensive IT infrastructure necessitates a major financial commitment in terms of hardware, software, and proficient personnel, which can pose a significant challenge for SMEs with limited resources[4]. Furthermore, there is a potential danger of technology becoming obsolete, meaning that the rapid progress of technology can make current IT infrastructure outdated. This would require additional investments in upgrades or replacements[6]. Another drawback is the possibility of downtime and disruption, which refers to instances where system failures or maintenance activities might stop business operations, resulting in decreased productivity[10]. Moreover, the presence of

security vulnerabilities is a substantial danger, particularly for SMEs who may not have the necessary resources to establish extensive cybersecurity protocols. Consequently, these SMEs are more vulnerable to data breaches and cyberattacks[15]. Furthermore, the matter of complexity arises, as SMEs may find it difficult to handle and incorporate different IT components, especially if they lack dedicated IT personnel or knowledge[5].

Technology Adoption

Technology adoption in the context of small and medium-sized enterprises (SMEs) is the procedure via which these businesses obtain, implement, and utilise new technology to improve their operations, productivity, and competitive edge. Technology adoption is crucial for small and medium-sized enterprises (SMEs) since it allows them to stay up-to-date with changes in the market, enhance their operational effectiveness, and introduce new and improved products and services. It encompasses the procurement of both hardware and software, as well as the assimilation of technical procedures into pre-existing corporate frameworks[4].

The key attributes of technology adoption among small and medium-sized enterprises (SMEs) encompass a readiness to research and allocate resources to novel technological solutions, as well as the capacity to customise these technologies to suit the unique requirements of the organisation. Small and medium-sized enterprises (SMEs) that embrace technology frequently exhibit a proactive stance in recognising technological trends and recognising opportunities that can improve their business operations. These organisations are distinguished by a culture that promotes ongoing learning and innovation, frequently engaging staff in the process of adopting new technologies to guarantee smooth integration and optimal utilization[8]. Moreover, these small and medium-sized

enterprises (SMEs) frequently possess a malleable organisational framework that enables prompt decision-making and adaptation in the face of technological progress and shifts in the market[7].

The benefits of using technology for small and medium-sized enterprises (SMEs) are numerous. Adopting new technology can greatly enhance operational efficiencies by automating repetitive jobs, minimising mistakes, and improving the overall speed and quality of business processes. This can result in financial savings and enhanced profitability, enabling small and medium-sized enterprises (SMEs) to allocate funds to other strategic domains[14]. Technology adoption facilitates innovation by empowering small and medium-sized enterprises (SMEs) to create novel products and services, therefore creating additional sources of income and broadening their market presence. Moreover, the deployment of technology can boost customer experiences through the provision of superior service delivery, customised solutions, and enhanced communication channels[8]. SMEs can enhance their competitive standing in the market by maintaining technological relevance, enabling them to better address customer demands and competitive forces[6].

However, there are drawbacks linked to the adoption of technology in small and medium-sized enterprises (SMEs). One major obstacle is the exorbitant upfront expense associated with procuring novel technologies, which can pose a considerable financial strain for smaller companies operating on restricted budgets. The costs associated with acquiring technology, providing employee training, and managing and enhancing systems can place a burden on financial resources and could discourage certain SMEs from fully adopting technological improvements[4]. Additionally, there is a potential for technological obsolescence, wherein the rapid advancement of technology might make current investments obsolete. This compels SMEs to consistently invest in newer technologies in order to stay competitive[10]. One such drawback is the possible interruption to corporate operations when implementing new technology. This is because integrating new systems can be intricate and

time-consuming, frequently necessitating substantial modifications to workflows and procedures[15]. Excessive dependence on technology can result in weaknesses, such as the exposure to cybersecurity threats and unauthorised access to data, which can cause significant harm to SMEs[1]. Overall, the adoption of technology offers significant advantages for small and medium-sized enterprises (SMEs), such as improved efficiency, innovation, and competitiveness. However, it also brings about issues in terms of expenses, becoming outdated, operational interruptions, and security vulnerabilities. Small and medium-sized enterprises (SMEs) should thoroughly evaluate these aspects to strategically incorporate technology adoption in a manner that optimises advantages while minimising potential disadvantages.

2.2 Theoretical Review

The theoretical review for this research analyses two fundamental theories that are pertinent to comprehending the correlation between entrepreneurial orientation, technological capabilities, and SMEs performance in Nigeria: The Resource-Based View (RBV) and the Dynamic Capabilities Theory. These theories offer valuable insights into how enterprises utilise their internal resources and adjust their capabilities to improve their competitive advantage and performance in a constantly changing market environment. The review aims to analyse these theoretical views in order to understand how they might be applied to address the unique difficulties and possibilities encountered by Nigerian SMEs.

2.2.1 Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory, illustrated in Figure 2.1, was initially proposed by Jay Barney in 1991, posits that an enterprise's long-lasting competitive advantage stems mainly from its distinct resources and skills that possess the qualities of being valuable, rare, inimitable, and non-substitutable (VRIN)[16]. The theory suggests that these resources, whether they be physical assets such as machinery or intangible assets such as technological skill and entrepreneurial attitude, are essential for attaining exceptional business performance. Barney's Resource-Based View (RBV), asserts that organisations can achieve long-term success and growth by successfully utilising resources to develop capabilities that are hard for competitors to imitate.

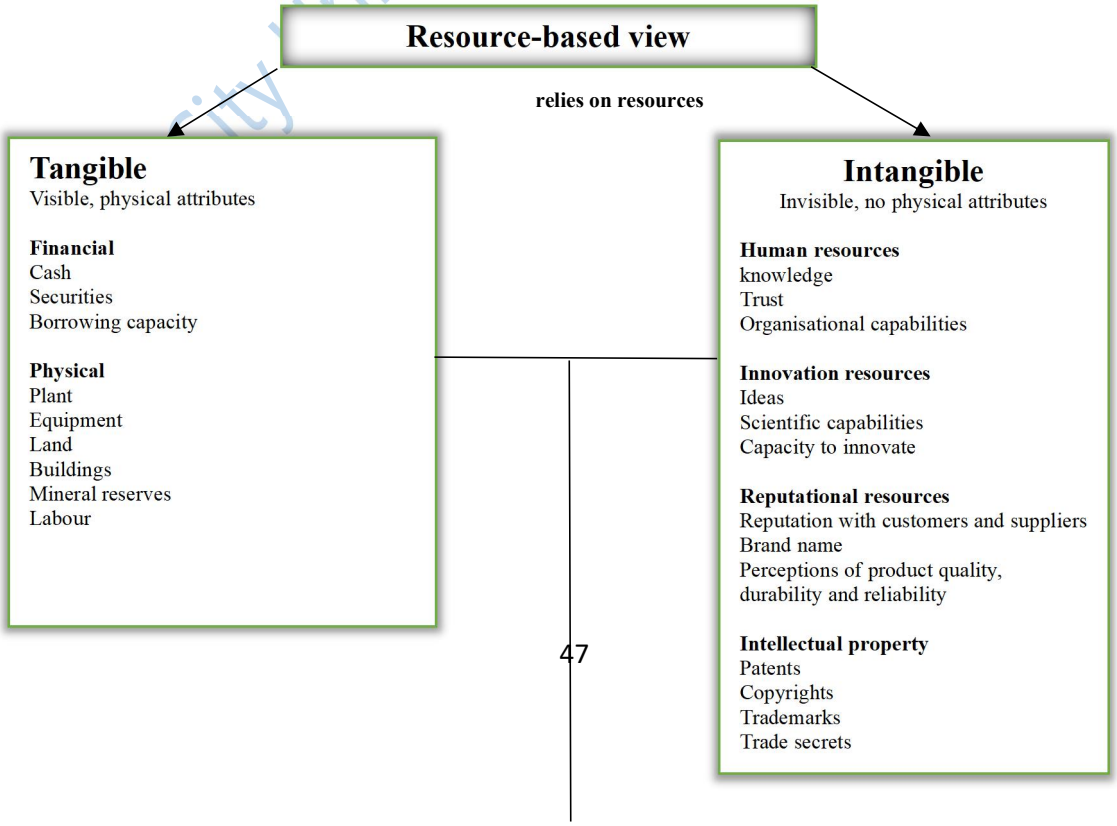
Although the Resource-Based View (RBV) has gained widespread support, it has encountered criticism from numerous experts. The scholars contend that the theory is tautological and lacks empirical falsifiability due to its definition of valuable resources based on their outcome - firm performance[17]. In addition, critics argue that RBV fails to sufficiently account for the dynamic fluctuations in external contexts that can impact the value of resources, and it also neglects to analyse the processes of resource accumulation and deployment over time. This constraint is particularly relevant in dynamic sectors where rapid technology advancements continuously reshape the competitive environment.

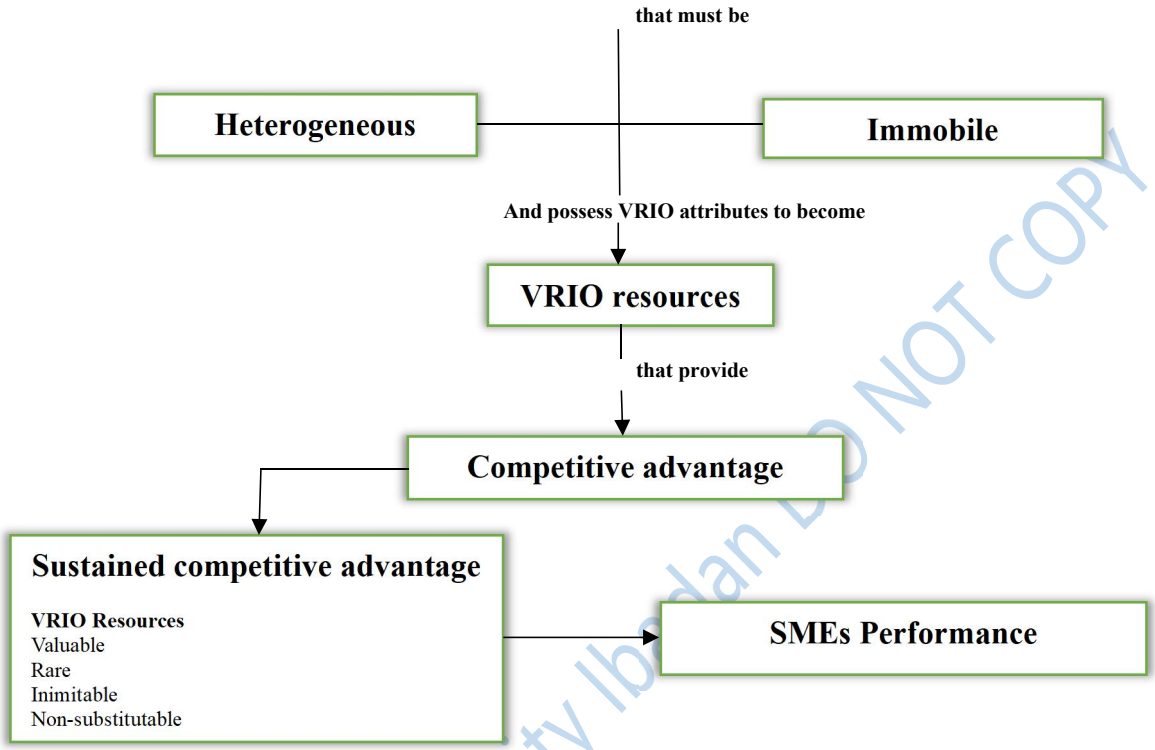
Supporters of the Resource-Based View (RBV) theory contend that despite its criticisms, the RBV offers a strong framework for comprehending how enterprises might attain and maintain a competitive edge[18,19]. The theory highlights the significance of resource heterogeneity and immobility as crucial variables in explaining variations in company performance. Advocates of RBV contend that it is crucial for managers to concentrate on developing and utilising distinctive

resources and competencies, such as technology innovation and entrepreneurial skills, that cannot be simply copied by rivals.

The RBV theory holds particular relevance in the context of this research on "Entrepreneurial Orientation, Technological Capabilities, and SMEs Performance in Nigeria." Nigerian small and medium-sized enterprises (SMEs) frequently function in fiercely competitive and resource-limited settings. The RBV theory offers a theoretical framework for understanding how small and medium-sized enterprises (SMEs) can achieve exceptional performance by harnessing and leveraging their distinctive technological capabilities and entrepreneurial orientations. The purpose of including the Resource-Based View (RBV) in this study is to analyse the impact of particular technological resources and entrepreneurial strategies on gaining a competitive advantage and achieving sustainable growth. This is particularly important for small and medium-sized enterprises (SMEs) operating in emerging markets such as Nigeria.

Figure 2.1: Resource-Based View Theory (RBV)



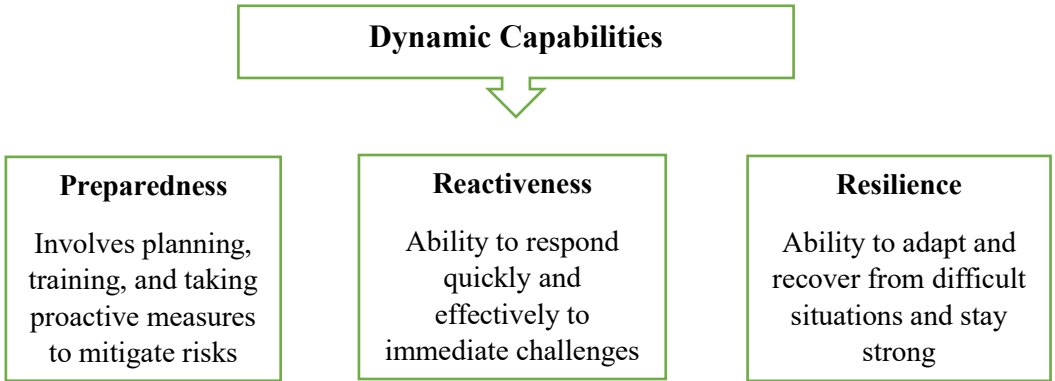


Source: Field Work by Researcher, 2024, based on Barney 1991

2.2.2 Dynamic Capabilities Theory

The Dynamic Capabilities Theory, seen in Figure 2.2, was introduced by Teece, Pisano, and Shuen in 1997, expands upon the Resource-Based View (RBV) by emphasising a firm's capacity to effectively combine, develop, and adapt both internal and external competences in response to swiftly evolving surroundings[20].

Figure 2.2: Dynamic Capabilities Theory



Source: Field Work by Researcher, 2024, based on David J. Teece, Gary Pisano, and Amy Shuen, 1997

The theory asserts that enterprises require not only significant resources, but also the ability to adapt and innovate in order to respond to technological developments and market dynamics. Dynamic capabilities are essential for achieving sustainable performance, particularly in industries characterised by rapid innovation and evolving client preferences.

However, the Dynamic Capabilities Theory has encountered criticism. Scholars contend that the notion of dynamic capacities is frequently characterised by imprecise definitions and a lack of well-defined empirical metrics, hence posing challenges in its consistent testing and application across diverse contexts[21]. Academic warns that not all organisations have the ability to create dynamic capacities due to the significant investment required in learning and adaptation[22]. This may not always be possible for small and medium-sized enterprises (SMEs) with limited resources. The theory is subject to criticism due to its intricate nature and its tendency to overlap with other management theories, without providing unique contributions.

Academics argue that dynamic capabilities are crucial for enterprises functioning in unstable contexts, in response to objections against this approach[23,24]. They contend that the capacity to adjust, create new ideas, and refresh skills enables enterprises to maintain a lasting edge in competition. Advocates highlight that dynamic capabilities offer a more profound comprehension of how enterprises may effectively traverse uncertainty and exploit technology capabilities to their benefit. This makes the theory especially applicable to industries where adaptability and innovation are crucial.

Utilising the Dynamic Capabilities Theory in the study on "Entrepreneurial Orientation, Technological Capabilities, and SMEs Performance in Nigeria" offers a valuable perspective for analysing how Nigerian SMEs might improve their performance by consistently innovating and adapting. In light of the dynamic technology environment in Nigeria, this theory elucidates how SMEs can acquire the essential skills and resources to not only endure but also prosper by utilising their entrepreneurial mindset and technological proficiencies. By incorporating this theory into the research, it provides a justification for investigating how dynamic capabilities empower SMEs to adapt to market fluctuations, generate novel prospects, and attain long-lasting competitive advantage.

2.3 Review of Empirical Studies

This review synthesises empirical studies examining the interplay between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs). Through a comprehensive analysis of current literature, the researcher aims to elucidate the combined impact of these determinants on the outcomes of small and medium-sized enterprises (SMEs). This research will offer valuable insights for both researchers and professionals who are interested in improving competitiveness in rapidly changing markets.

The researchers investigate the influence of a chief executive officer's financial literacy on technological innovation in small and medium-sized enterprises (SMEs)[4]. The results indicate that chief executive officers (CEOs) with a greater degree of financial literacy are more inclined to promote technology innovation in their companies. The main reason for this link is mostly due to the improved decision-making and strategic planning abilities that are associated with financial knowledge. Moreover, the study identifies two crucial components that play a mediating role in this relationship: management control systems (MCS) and risk-taking behaviour. CEOs who possess a high level of financial knowledge are more likely to establish effective management control systems, which in turn facilitate technological innovation. Moreover, CEOs that possess financial literacy skills are more likely to participate in strategic risk-taking, which is essential for promoting innovation[4].

However, the study recognises various constraints and deficiencies. Firstly, the research specifically examines SMEs in a particular geographic area. This may restrict the applicability of the findings to other locations or larger businesses. Furthermore, the utilisation of cross-sectional data limits the capacity to establish causal relationships, indicating that longitudinal studies may offer a more extensive comprehension of how financial literacy impacts innovation over a period of time. The study specifically focusses on the financial literacy of the CEO, without considering the financial expertise of other important members of management or staff, which could also have a substantial impact on promoting innovation. Moreover, the study specifically focuses on technology innovation and does not consider other types of innovation, such as process or business model innovation, which may potentially be impacted by financial literacy[4].

The study utilises a quantitative methodology, gathering data by conducting surveys with CEOs of small and medium-sized enterprises (SMEs). The polls evaluated multiple factors, such as the

CEO's proficiency in financial matters, the degree of technical advancement within the company, the implementation of management control systems, and the propensity for taking risks. The researchers employed statistical techniques, namely regression analysis, to investigate the role of MCS and risk-taking in mediating the connection between financial literacy and technological innovation. The authors offer multiple recommendations based on the findings. It is recommended that small and medium-sized enterprises (SMEs) allocate resources towards training programmes that focus on improving the financial knowledge of CEOs and other important members of management. This investment can result in more effective decision-making and increased support for technology advancements. It is advisable to enhance management control systems; as proficient control systems can facilitate the transformation of financial literacy into innovation.

Furthermore, the authors propose promoting a culture that actively supports strategic risk-taking, especially among CEOs who possess a strong understanding of financial matters, in order to further bolster the capacity for innovation. Finally, the paper proposes that future research should investigate the influence of financial literacy on different forms of innovation and examine the involvement of financial literacy among various members of the organisation, not only the CEO. This would offer a comprehensive perspective on the correlation between financial literacy and innovation in small and medium-sized enterprises (SMEs)[4].

The scholars explore the correlation between the technological landscape and the long-term effectiveness of oil and gas companies, employing a structural equation modelling (SEM) methodology[14]. The research findings demonstrate a substantial and favourable influence of the technology environment on the sustainable performance of these enterprises. The report specifically highlights that technological developments and the implementation of creative strategies are essential for improving the economic, environmental, and social performance of oil and gas

enterprises. The study indicates that companies in the oil and gas industry must consistently adjust to technological advancements and innovations in order to uphold and enhance their sustainable performance. The findings also highlight that technological prowess can result in enhanced resource management, heightened efficiency, and diminished environmental footprint, all of which help to the industry's sustainable development.

Although the study has provided valuable insights, it is important to acknowledge its limits and areas that require additional research. A significant constraint is the concentration on oil and gas companies in a particular geographic area, which may not comprehensively encompass the varied technical landscapes and sustainable performance patterns across different areas or countries[14]. This constraint implies that the findings may not be fully applicable to different situations or sectors. In addition, the study employs cross-sectional data, which limits the capacity to analyse changes over time or demonstrate a causal relationship between the technical environment and sustainable performance. Conducting a longitudinal study would yield a more thorough comprehension of the impact of technology improvements on sustainable results over a prolonged duration.

The research primarily emphasises the technology environment, possibly neglecting other aspects that could impact sustainable performance, such as legislative frameworks, market conditions, and organisational culture. The study utilises a quantitative research strategy and employs structural equation modelling to analyse the data. The researchers gathered data by distributing surveys to multiple oil and gas companies, with the goal of evaluating how the technology environment affects sustainable performance. Subsequently, structural equation modelling was employed to examine the postulated connections among the variables, offering a reliable analytical framework to comprehend the intricate interplay between technological capabilities and sustainability consequences[14].

Based on the findings, the authors suggest that oil and gas companies should give priority to investing in technological breakthroughs and innovations in order to improve their sustainable performance. They propose that companies should embrace novel technology and inventive methodologies that can enhance the utilisation of resources, diminish environmental repercussions, and foster economic and social sustainability. Additionally, the authors suggest that policymakers and industry stakeholders should establish favourable conditions that promote technical innovation and sustainability in the oil and gas business. This include the creation of legal frameworks that are conducive to technical advancements, the implementation of incentives to encourage investments in technology, and the promotion of collaborations among companies, academic institutions, and technology providers. The report also recommends more investigation into the role of technical environment on sustainable performance in various contexts and industries, as well as the examination of additional elements that may affect sustainability outcomes. This would enhance the comprehension of the interplay between technology and sustainability in diverse contexts[14].

The researchers examine how entrepreneurial networking and innovation affect the success of small enterprises in Uganda[11]. The results indicate that both entrepreneurial networking and innovation are essential factors in improving the performance of small enterprises. More precisely, the study demonstrates that firms that actively participate in networking activities have a higher probability of gaining access to key resources, expertise, and chances that can greatly enhance their operations and competitiveness. Moreover, the research emphasises the significance of innovation as a fundamental catalyst for corporate performance. Research has shown that small businesses that prioritise innovation demonstrate a greater ability to adjust to market fluctuations, possess better resources to fulfil client requirements, and have a higher likelihood of achieving long-term growth and profitability[11].

Notwithstanding these favourable findings, the report admits some deficiencies and constraints. A major constraint is the exclusive focus on small businesses specifically in Uganda, which may restrict the applicability of the findings to different settings or larger corporations. In addition, the study primarily focusses on the viewpoints of business owners and managers, possibly neglecting the perspectives and contributions of other stakeholders, such as employees, customers, and suppliers, who all have important roles in networking and innovation. The study's cross-sectional design imposes further constraints on establishing causal links between entrepreneurial networking, innovation, and firm performance. Therefore, it is important to exercise caution when interpreting the findings, as they may not necessarily indicate a causal relationship[11].

The study employs a quantitative research strategy, utilising structured questionnaire to collect data from small business owners and managers in Uganda. The researchers utilised a range of statistical methods, such as regression analysis, to investigate the connections between entrepreneurial networking, innovation, and business performance. By employing this method, the authors were able to measure the influence of networking and innovation on business results and pinpoint the crucial aspects that contribute to enhanced performance[11]. The authors suggest that small business owners and managers in Uganda should actively participate in networking activities to establish useful connections with other entrepreneurs, industry experts, and potential clients, based on the findings. By doing this, individuals can have access to crucial resources and information that can facilitate their ability to develop and expand their enterprises.

The report moreover proposes that small enterprises should cultivate an atmosphere of innovation by promoting imaginative ideation and the advancement of novel offerings, solutions, and methodologies. In addition, the authors suggest that governments and support organisations should establish conducive conditions for the growth of small enterprises. This can be achieved by offering

training and mentorship initiatives that prioritise the significance of networking and innovation. Further investigation is warranted to examine the effects of entrepreneurial networking and innovation in various settings, such as different regions and larger companies. Additionally, it is important to consider the viewpoints of a wider range of individuals involved in order to obtain a more holistic comprehension of the elements that affect the performance of small businesses[11].

The scholar investigates whether start-ups that prioritise environmental concerns demonstrate superior attributes in terms of innovation, growth orientation, and international focus[6]. The research findings indicate that start-ups that prioritise ecologically sustainable practices, known as greener start-ups, have higher levels of innovation in comparison to non-green start-ups. These start-ups frequently give priority to the creation of novel products and services that are in line with their environmental principles, resulting in elevated levels of creativity and innovation. In addition, the study reveals that start-ups focused on the environment exhibit a more pronounced inclination for growth, which stems from their capacity to distinguish themselves in the market and attract a growing population of environmentally aware consumers and investors. In addition, these start-ups are inclined to actively seek out global prospects, utilising their distinct positioning to enter untapped areas that have a need for environmentally-friendly goods and services[6].

Notwithstanding these favourable findings, the report admits some deficiencies and constraints. An important constraint is the emphasis on start-ups, which may not comprehensively reflect the dynamics of well-established companies that prioritise environmental concerns. The study primarily focusses on analysing the influence of environmental orientation on specific business qualities, such as innovativeness, growth, and internationalisation. However, it does not take into account other potential outcomes or factors that could affect these relationships, such as market conditions, regulatory environments, or technological capabilities. Moreover, the research is constrained to a

certain subset of start-ups, which may not accurately reflect the characteristics of all geographical areas or sectors. This restricts the capacity to apply the findings to different situations or settings. Furthermore, the study's cross-sectional design limits the ability to establish causal correlations and monitor the long-term influence of environmental orientation on start-ups[6].

The study utilises a quantitative research technique, employing a methodology that entails collecting data through surveys administered to start-up founders and management. The surveys were created to assess the environmental inclination of the start-ups, as well as their degrees of inventiveness, focus on growth, and inclination towards international markets. Subsequently, the researchers employed statistical analysis, specifically regression models, to investigate the associations among these variables. This methodology facilitated a thorough examination of the impact of environmental orientation on many dimensions of start-up quality and yielded valuable observations regarding the advantages of implementing environmentally sustainable activities[6].

The author presents a number of recommendations based on the findings. The scholar proposes that start-ups should incorporate environmental sustainability into their fundamental business strategy in order to augment their capacity for innovation, allure growth prospects, and broaden their global presence. The researcher highlights that a robust focus on the environment can be advantageous in the business world, especially as consumer and investor preferences progressively lean towards sustainability. The study suggests that policymakers and support organisations should establish conducive environments to promote the adoption of sustainable practices by start-ups. This can be achieved by offering incentives, formulating supportive regulations, and fostering collaborations between environmentally focused start-ups and other stakeholders.

In addition, the author suggests that further research should be conducted to examine the lasting effects of environmental orientation on the performance of start-up companies. This research should

also investigate other factors that might affect the connection between sustainability and business success, such as organisational culture, leadership, and stakeholder engagement. This would offer a more extensive comprehension of the advantages and difficulties linked to becoming an environmentally conscious start-up in different circumstances[6].

The scholars investigate the influence of the entrepreneurial ecosystem on the operational effectiveness of micro and small enterprises (MSEs) in the Amhara region of Ethiopia, specifically emphasising the political-legal aspect[13]. The results suggest that the political-legal climate has a substantial impact on the performance of micro and small enterprises (MSEs) in the region. More precisely, the study demonstrates that policies, rules, and legal frameworks that help; are essential in creating an atmosphere that is favourable for the expansion and advancement of these firms. It is emphasised that in a favourable political-legal climate, micro and small enterprises (MSEs) are more likely to succeed because they have better access to resources, stronger protection of their business rights, and increased chances for networking and collaboration. On the other hand, obstacles related to bureaucracy, ambiguous regulations, and a failure to implement laws that support company operations are recognised as significant barriers to the success of micro and small enterprises (MSEs), which restrict their ability to expand and maintain long-term viability[13].

However, the study also highlights certain deficiencies and constraints. A significant drawback is the emphasis on the political-legal element of the entrepreneurial ecosystem, neglecting other crucial dimensions including economic, socio-cultural, and technological issues that can significantly impact the performance of micro and small enterprises (MSEs). The limited scope of attention may fail to consider the diverse and complex characteristics of entrepreneurial ecosystems and the interplay between different elements that influence business performance. Moreover, the research is primarily focused on the Amhara region, which could restrict the generalisability of the

results to other regions in Ethiopia or nations with distinct political and legal circumstances. The study is also dependent on data obtained at a specific moment, which restricts the capacity to evaluate alterations in the political-legal context and their enduring impact on MSE performance. The use of a cross-sectional approach in this study limits the ability to demonstrate causal links between the political-legal environment and enterprise success[13].

The study utilises a mixed-methods approach, incorporating both qualitative and quantitative data collection approaches. The researchers administered surveys and conducted interviews with owners and managers of micro and small enterprises (MSEs) in the Amhara region to collect data on their encounters with the political-legal framework and its influence on their businesses. The statistical approaches were employed to analyse the quantitative data obtained from the surveys in order to uncover patterns and correlations. On the other hand, the qualitative data collected from the interviews offered more profound insights into the specific difficulties and opportunities encountered by MSEs in the region. The authors' thorough approach enabled them to gain a more nuanced comprehension of how the political-legal ecosystem impacts the performance of MSEs[13].

The authors offer multiple recommendations based on their findings. The scholars propose that policymakers in Ethiopia should prioritise the establishment of a conducive political-legal framework for MSEs by simplifying regulatory procedures, minimising administrative obstacles, and guaranteeing the uniform implementation of business-friendly legislation. They stress the importance of implementing unambiguous and open policies that safeguard the rights of small business proprietors and streamline the process of obtaining essential resources and support services. The authors suggest creating channels for interaction between government authorities and MSE stakeholders to ensure that policies are tailored to the demands of the business sector. Moreover, the study suggests that future research should investigate how economic conditions and technology

improvements, among other elements of the entrepreneurial ecosystem, affect the performance of MSEs. Longitudinal studies are recommended to gain a deeper understanding of the ever-changing political-legal environment and its lasting impact on the growth and sustainability of businesses. The purpose of these recommendations is to improve the entrepreneurial environment in the Amhara region and assist in the growth of strong and adaptable MSEs[13].

The researchers investigate the impact of various organisational structures on the connection between entrepreneurial mindset, performance, and the external surroundings[7]. The study specifically examines the role of bricolage capability, organisational identity, and absorptive capacity. The results suggest that the ability to use available resources creatively, the sense of belonging and purpose inside the organisation, and the capacity to acquire and assimilate new knowledge are all important factors that influence how organisations use their entrepreneurial mindset to achieve exceptional performance in different contexts. The study specifically demonstrates that the ability to engage in bricolage, which entails creatively utilising existing resources in unexpected manners, enables organisations to rapidly adjust to evolving circumstances and capitalise on emerging prospects. Organisational identity, which refers to the set of values and qualities that constitute a company, has been demonstrated to have an impact on how companies perceive and react to their surroundings, ultimately effecting their performance results[7]. The absorptive capacity of an organisation, which refers to its ability to identify, integrate, and utilise external knowledge, has been shown to strengthen the firm's ability to innovate and adapt to changes in the environment, resulting in improved performance.

However, the study also highlights certain deficiencies and constraints. A significant drawback is the emphasis on particular organisational structures, which may not comprehensively encompass the intricacy and variety of elements that impact the link between entrepreneurial orientation,

performance, and the environment. In addition, the research mostly focusses on a fixed perspective on certain talents and characteristics, thus neglecting the changing nature of organisations and how these aspects develop over time. The study's scope is constrained by its dependence on self-reported data from organisations, which may include biases such as social desirability or faulty self-assessment. Moreover, the sample utilised in the study is restricted to a particular geographical and contextual setting, thus constraining the applicability of the results to other areas or industries that possess distinct environmental circumstances and organisational attributes[7].

The study utilises a quantitative research design and collects survey data from multiple organisations. The researchers employed structural equation modelling (SEM) to analyse the connections among entrepreneurial orientation, performance, environmental factors, bricolage competence, organisational identity, and absorptive capacity. By employing this approach, they were able to evaluate the intricate interplay and moderating impacts of these factors, resulting in a thorough comprehension of how diverse organisational structures influence performance in different contexts. The authors offer multiple recommendations based on the findings. The scholars propose that organisations should cultivate and strengthen their bricolage talents in order to maintain flexibility and adaptability in the presence of uncertainty and limited resources. By cultivating a culture that promotes innovation and adaptability, companies may more effectively navigate complex situations and take advantage of new prospects.

The study suggests that organisations should establish and effectively express their organisational identity. This can serve as a framework for decision-making and enhance the congruence between the firm's objectives and its activities. In addition, the authors highlight the significance of developing absorptive capacity, recommending that companies allocate resources towards training and development initiatives that improve their capacity to assimilate and utilise external knowledge.

This would enhance their ability to adapt to environmental changes and foster ongoing innovation. Further investigation is needed to examine the dynamic interactions between these organisational structures over time and in various situations, in order to gain a more comprehensive knowledge of the relationship between entrepreneurial orientation, performance, and the environment. Longitudinal studies have the potential to provide useful insights into the evolution of these characteristics and their impact on business performance over an extended period of time[7].

The scholars examine the correlation between market information and entrepreneurial attitude among small-scale honey producers in Northern Uganda[12]. The results suggest a direct correlation between the availability of market knowledge and the entrepreneurial mindset of these producers. The study demonstrates that small-scale honey producers that have improved access to market information display elevated levels of entrepreneurial orientation, which is characterised by heightened proactiveness, innovativeness, and willingness to take risks. This implies that when producers possess extensive knowledge about market trends, customer preferences, and competitive dynamics, they are more inclined to participate in entrepreneurial endeavours that can improve their competitiveness and commercial performance.

Nevertheless, the study also highlights certain deficiencies and constraints. A key constraint is the narrow scope of the study, which concentrates on a particular subset of agricultural producers, namely small-scale honey producers in Northern Uganda. This may restrict the applicability of the results to different geographical areas, agricultural industries, or types of businesses. Furthermore, the study is dependent on data that is provided by the individuals themselves, which may be influenced by biases such as the tendency to overestimate or underestimate entrepreneurial behaviours and access to market knowledge. The research also employs a cross-sectional approach, which collects data at a certain moment and does not consider changes over time or the lasting

impacts of market information on entrepreneurial orientation. This constraint hinders the capacity to create cause-and-effect links and comprehend the mechanisms by which market information impacts entrepreneurial actions in the context of smallholder agriculture[12].

The study utilises a quantitative methodology, employing structured questionnaires to gather data from smallholder honey producers in Northern Uganda. The researchers employed statistical methodologies, such as correlation and regression analysis, to investigate the connection between market knowledge and entrepreneurial attitude. This methodology enabled the authors to measure the degree to which access to market information is linked to entrepreneurial behaviours among the producers and offered empirical proof to validate the proposed relationship. The authors offer multiple recommendations based on their findings. Amuko, Kalule, and Odongo propose that measures should be taken to enhance the availability of market information for small-scale honey producers in Northern Uganda. This may entail the creation of channels for distributing information, such as mobile platforms, agricultural extension services, and producer cooperatives, which deliver up-to-date and pertinent market data to producers. Producers can enhance their business outcomes by increasing their access to market information, which allows them to make better informed decisions, uncover new market opportunities, and implement innovative methods.

The researchers suggest that governments and development organisations should prioritise enhancing the ability of smallholder producers to understand and make use of market information efficiently. This may involve implementing training programmes that improve producers' proficiency in market analysis and their capacity to proactively adapt to market fluctuations. Further investigation is needed to examine how market knowledge influences entrepreneurial orientation in various agricultural sectors and geographies. This will contribute to a more thorough comprehension of the reasons that motivate entrepreneurial behaviour among small-scale farmers.

In addition, longitudinal studies can be used to record the evolving correlation between market knowledge and entrepreneurial activity over time, providing valuable insights into the enduring advantages of market-oriented tactics for smallholder farmers[12].

The academics investigate how open innovation acts as a mediator between entrepreneurial approach, total quality management (TQM), and the performance of small and medium-sized enterprises (SMEs)[5]. The results suggest that open innovation greatly amplifies the beneficial impacts of entrepreneurial orientation and total quality management (TQM) on the performance of small and medium-sized enterprises (SMEs). The research specifically demonstrates that small and medium-sized enterprises (SMEs) who possess a robust entrepreneurial orientation, which is characterised by traits such as innovation, proactiveness, and risk-taking, have advantages when they include open innovation strategies. These activities include collaborating with external partners and sharing knowledge. This integration enables them to more effectively address market demands and enhance their competitive position.

Furthermore, the study demonstrates that the implementation of Total Quality Management (TQM) techniques, which prioritise ongoing enhancement, customer contentment, and quality oversight, also enhances performance when integrated with open innovation. Open innovation promotes the successful adoption of Total Quality Management (TQM) methods by promoting flexibility and adaptation, which in turn cultivates a culture of ongoing improvement and learning[5]. Notwithstanding these observations, the report admits certain deficiencies and constraints. A significant constraint is the emphasis on small and medium-sized enterprises (SMEs), which might not comprehensively encompass the influence of open innovation on larger corporations or in other organisational settings. The study primarily focusses on the mediating role of open innovation and

does not investigate other potential mediators or moderators that could impact the relationship between entrepreneurial orientation, TQM, and performance.

Moreover, the study focusses on certain geographic regions and collects data from SMEs, which may restrict the applicability of the results to other places or industries that have unique characteristics and market conditions. The study also depends on data provided by SME managers and owners themselves, which may introduce biases such as an inclination to over-report positive practices or outcomes. Furthermore, the use of a cross-sectional methodology in the study limits the ability to determine causality and evaluate the long-term impacts of open innovation on the performance of SMEs. The study utilises a quantitative research approach, employing a methodology that entails collecting survey data from managers and owners of small and medium-sized enterprises (SMEs). The researchers employed structural equation modelling (SEM) to examine the connections among entrepreneurial orientation, total quality management (TQM), open innovation, and small and medium-sized enterprise (SME) performance[5]. This approach facilitated a thorough analysis of how open innovation influences the relationship between entrepreneurial orientation and TQM on performance, offering a detailed comprehension of the interaction among these variables.

The authors offer various recommendations based on the findings. The scholars propose that small and medium-sized enterprises (SMEs) should actively adopt open innovation techniques in order to improve their entrepreneurial attitude and total quality management (TQM) practices. SMEs can enhance their ability to adapt and respond to market changes, resulting in improved performance results, by forming collaborative relationships, sharing knowledge, and utilising external expertise. The study suggests that small and medium-sized enterprises (SMEs) should allocate resources to

develop a culture that promotes open innovation. This may be achieved by creating an atmosphere of trust, transparency, and ongoing learning.

Policymakers and support organisations should promote open innovation by establishing forums for collaboration, implementing training programmes, and establishing networks that connect small and medium-sized enterprises (SMEs) with larger companies, research institutions, and other relevant stakeholders. Moreover, the authors advocate for additional studies to investigate the influence of open innovation in diverse organisational settings and across many industries. Longitudinal studies are recommended to gain a deeper understanding of the lasting impacts of open innovation on the performance of small and medium-sized enterprises (SMEs). These studies can also help discover other elements that might influence or modify the relationship between entrepreneurial approach, total quality management (TQM), and performance[5].

The scholars investigate the impact of social capital on innovation, marketing, and entrepreneurial orientation in small and medium-sized enterprises (SMEs) located in Ho Chi Minh City, Vietnam[8]. The results indicate that social capital has a considerable influence on key business factors. The research demonstrates that SMEs with greater levels of social capital, which refers to their networks, relationships, and trust within the business community, generally have enhanced innovative capabilities, more successful marketing tactics, and a more prominent entrepreneurial mindset. Social capital enables organisations to gain access to valuable resources, information, and support, so enhancing their capacity to innovate, develop competitive marketing strategies, and adopt entrepreneurial activities that contribute to growth and performance.

However, the report admits certain deficiencies and constraints. A significant constraint is the concentration on small and medium-sized enterprises (SMEs) in a certain geographical area, namely Ho Chi Minh City. This may not provide a comprehensive understanding of the challenges faced by

SMEs in other regions of Vietnam or in diverse countries. The limited scope of this geographic concentration may hinder the applicability of the findings to other situations characterised by distinct social, economic, and cultural circumstances. Furthermore, the study is based on cross-sectional data, which only captures information at a specific moment and does not include changes over time or the evolving nature of social capital. This hinders the capacity to create causal connections and comprehend the long-term evolution and impact of social capital on SMEs. The study also relies on self-reported data from SME owners and managers, which may introduce biases such as an inclination to overstate favourable outcomes or downplay obstacles[8].

The study adopted a quantitative methodology, utilising questionnaires to collect data from small and medium-sized enterprise (SME) owners and managers in Ho Chi Minh City. The researchers utilised statistical approaches, such as regression analysis, to investigate the correlations between social capital, innovation, marketing, and entrepreneurial attitude. By employing this method, they were able to measure the impact of social capital on key business factors and discern noteworthy trends and connections[8]. Based on the findings, the authors offer multiple suggestions. The scholars propose that small and medium-sized enterprises (SMEs) should proactively develop and utilise their social capital by nurturing robust networks, establishing trustworthy connections, and participating in cooperative endeavours with other firms and stakeholders. Through this approach, small and medium-sized enterprises (SMEs) can improve their ability to innovate, create more impactful marketing plans, and reinforce their entrepreneurial mindset.

The study suggests that governments and business support organisations should promote the growth of social capital by organising networking events, establishing forums for collaboration, and giving resources to enable small and medium-sized enterprises (SMEs) engage with important stakeholders. In addition, the authors propose conducting additional study to examine the influence of social

capital in various geographical and industry settings, as well as to explore how social capital may be efficiently cultivated and utilised to enhance the growth and performance of small and medium-sized enterprises (SMEs). Longitudinal studies have the potential to offer more profound understanding of the lasting impacts of social capital and its contribution to promoting sustainable business achievement[8].

The researchers examine the correlation between the attributes of faculty members and their inclination towards entrepreneurial endeavours inside Kuwait's higher education institutions[25]. The results suggest that specific attributes of faculty members, such as their academic credentials, career background, and personal qualities, have a considerable impact on their entrepreneurial mindset. The study demonstrates that faculty members who possess better academic degrees and a wide range of professional experiences are more likely to display a robust entrepreneurial orientation. This orientation is characterised by heightened levels of inventiveness, willingness to take risks, and proactive behaviours. Moreover, individual characteristics such as a strong sense of self-confidence and willingness to embrace novel opportunities are correlated with a favourable entrepreneurial mindset. The study emphasises that faculty members with a higher level of entrepreneurial mindset are more effective in supporting the growth of entrepreneurial programmes and activities in their institutions[25].

However, the study also highlights certain deficiencies and constraints. A significant constraint is the exclusive emphasis on faculty members inside higher education institutions in Kuwait, which may not comprehensively encompass the experiences and factors on faculty in other geographical regions or educational settings. The geographical constraint may limit the applicability of the results to other countries or regions that have distinct educational systems and cultural norms. In addition, the study is dependent on data provided by faculty members themselves, which may introduce

biases such as social desirability or mistakes in self-evaluation. The research's cross-sectional approach collects data at a single point in time, which restricts the ability to monitor changes over time or demonstrate causal correlations between faculty traits and entrepreneurial inclination[25].

The study employs a quantitative research methodology, utilising surveys to gather data from faculty members across multiple higher education institutions in Kuwait. The researchers utilised statistical methods, such as regression analysis, to investigate the connections between faculty attributes and their entrepreneurial inclination. By employing this method, they were able to measure the influence of several attributes on entrepreneurial inclination and detect noteworthy trends and associations. The authors provide many recommendations based on the findings. The scholars propose that Kuwait's higher education institutions should prioritise the cultivation and reinforcement of faculty members' entrepreneurial abilities and characteristics. This can be accomplished by implementing focused professional development initiatives, workshops, and mentoring programmes that increase the entrepreneurial skills of faculty members and foster a culture of innovative thinking.

Institutions are also urged to establish an atmosphere that cultivates entrepreneurial endeavours by offering resources, assistance, and prospects for faculty members to participate in entrepreneurial projects and initiatives. Furthermore, the study suggests that future research should investigate how faculty qualities influence entrepreneurial attitude in various educational contexts and geographies, in order to gain a more thorough knowledge of these connections. Longitudinal studies can provide valuable insights into the evolution of faculty qualities over time and their lasting impact on entrepreneurial orientation and institutional entrepreneurship[25].

The researchers explore the entrepreneurial mindset of students in well-known engineering fields, with a specific emphasis on their entrepreneurial orientation and intents[26]. The results indicate that

students in these fields typically demonstrate a strong entrepreneurial mindset, which is characterised by a proactive attitude, innovativeness, and a willingness to embrace risks. The research emphasises that engineering students who possess more robust entrepreneurial intents are more inclined to participate in entrepreneurial activities and actively pursue start-up companies. The study also reveals that being exposed to entrepreneurship courses, having access to mentoring, and participating in business networks greatly increase students' intentions and mindset towards entrepreneurship. These factors increase the probability of students choosing entrepreneurial jobs and creating innovative solutions.

However, the report admits certain deficiencies and constraints. A significant constraint is the emphasis on students from particular technical disciplines, which may not adequately reflect the entrepreneurial spirit of students in other academic subjects or disciplines. The focus on engineering students may restrict the applicability of the results to a wider range of students. Furthermore, the study is dependent on data provided by the students themselves, which may result in biases such as a tendency to present oneself in a socially desirable manner or mistakes in reporting entrepreneurial objectives and orientation. The research is limited by its cross-sectional design, which only allows for data collection at one specific moment. This limitation hinders the capacity to track changes in entrepreneurial attitude over time or demonstrate cause-and-effect links between exposure to entrepreneurship education and entrepreneurial intents[26].

The study employs a quantitative methodology, use surveys to collect data from students in important engineering disciplines. The researchers utilised statistical approaches, such as regression analysis, to investigate the connections between entrepreneurial orientation, intentions, and the factors that impact them. This approach facilitated the discovery of noteworthy determinants of entrepreneurial mindset and furnished empirical substantiation on the influence of different

elements on students' entrepreneurial intents. The authors propose many techniques to cultivate an entrepreneurial mindset among engineering students, based on their research findings. The academics propose the incorporation of additional entrepreneurship-oriented courses and hands-on experiences into engineering curricula inside educational institutions.

Options may encompass the provision of entrepreneurship training, facilitation of access to industry mentors, and promotion of participation in entrepreneurial competitions and networking events. Institutions can enhance students' exposure to entrepreneurship and provide support to better equip them for pursuing entrepreneurial ventures and developing innovative solutions. In addition, the study recommends conducting further research to investigate the entrepreneurial mindset in other academic fields and to carry out longitudinal studies that monitor changes in entrepreneurial intents over a period of time. This could offer a more holistic comprehension of how different educational and personal aspects impact the entrepreneurial mindset and aspirations among students[26].

The scholars investigate the relationship between entrepreneurial networks, entrepreneurial orientation, and the performance of small and medium enterprises (SMEs), with particular emphasis on the influence of dynamic capabilities[1]. The results suggest that both entrepreneurial networks and entrepreneurial orientation have a substantial and beneficial influence on the performance of small and medium-sized enterprises (SMEs). The study highlights the importance of dynamic capabilities, which refer to an enterprise's capacity to adjust, combine, and reorganise its resources in order to respond to evolving circumstances. These capabilities play a vital role as an intermediary factor. The study demonstrates that entrepreneurial networks and direction have a direct impact on performance, but their effects are greatly amplified by the firm's dynamic capacities. This implies that small and medium-sized enterprises (SMEs) with strong and adaptable talents are in a better position to utilise their networks and entrepreneurial mindset to achieve exceptional performance[1].

Nevertheless, the study also highlights certain deficiencies and constraints. A disadvantage of the research is its dependence on cross-sectional data, which only captures information at a specific moment and does not consider changes in dynamic capacities or performance over time. This limitation hinders the capacity to construct cause-and-effect links or study the evolution of the impact of dynamic capabilities. In addition, the study specifically examines SMEs in certain regions, which may restrict the applicability of the results to different geographical areas or industries. The utilisation of self-reported data from SME owners and managers brings possible biases, such as the possibility of overestimating the influence of networks and orientation on performance. In addition, the research does not investigate other possible factors that could affect the connections between entrepreneurial networks, orientation, and performance.

The research utilises a quantitative methodology, employing questionnaires to collect data from small and medium-sized enterprise (SME) owners and managers. The researchers employed structural equation modelling (SEM) to examine the connections among entrepreneurial networks, entrepreneurial orientation, dynamic capacities, and performance. This methodology facilitated a thorough analysis of how dynamic capabilities function as a mediator between networks and orientation, influencing performance. It provided empirical proof of the intricate interplay among these components[1]. Based on the findings, the authors suggest that small and medium-sized enterprises (SMEs) should prioritise the development and improvement of their dynamic capacities in order to effectively utilise their entrepreneurial networks and direction.

One possible approach is to allocate money towards implementing training and development initiatives that enhance the firm's capacity to adjust and reorganise its resources. In addition, small and medium-sized enterprises (SMEs) should proactively establish and sustain robust entrepreneurial networks and cultivate an entrepreneurial culture that promotes innovation and

proactive attitudes. The report additionally proposes that policymakers and support organisations should allocate resources and implement initiatives aimed at assisting small and medium-sized enterprises (SMEs) in cultivating dynamic capacities and enhancing their networks. Subsequent studies should examine the function of dynamic capacities in various industries and geographies, as well as analyse additional aspects that could potentially influence or regulate the connections between entrepreneurial networks, orientation, and performance. Longitudinal studies can provide valuable insights into the evolution of dynamic skills and performance across time, offering a greater understanding of their long-term effects[1].

The researchers examine the influence of green entrepreneurial orientation on the sustainable performance of agribusinesses in China[10]. The results indicate that embracing a green entrepreneurial mindset, which involves prioritising environmental sustainability, optimising resource usage, and using eco-friendly methods, has a favourable impact on the long-term success and sustainability of agribusinesses. The research indicates that companies with a robust green entrepreneurial orientation not only attain superior environmental results but also enhance their overall performance by enhancing operational efficiency, securing competitive advantages, and meeting sustainability-related regulatory and consumer expectations.

Notwithstanding these insights, the report admits certain gaps and limitations. A constraint is the narrow scope of agribusinesses in China, which may restrict the applicability of the results to agribusinesses in other countries that have distinct environmental rules, market conditions, and cultural backgrounds. In addition, the research is based on cross-sectional data, which only collects information at a specific moment and does not consider any changes in green practices or sustainable performance over a period of time. This hinders the capacity to create cause-and-effect links and comprehend the enduring impacts of green entrepreneurial orientation on sustainable

performance. The study also relies on self-reported data provided by agribusiness managers, which may introduce biases, such as an inclination to overestimate the influence of green practices on performance.

The research employs a quantitative methodology, utilising questionnaires to gather data from agricultural managers in China. The researchers utilised statistical methods, such as regression analysis, to investigate the connections between green entrepreneurial attitude and sustainable performance. By employing this method, they were able to measure the impact of green orientation on many dimensions of sustainable performance and detect noteworthy trends and connections. Based on the findings, the scholars suggest that agribusinesses should prioritise the incorporation of environmentally friendly entrepreneurial practices into their operations in order to improve their sustainable performance. This may entail the adoption of eco-friendly technologies, enhancing resource efficiency, and implementing green certifications and standards.

The article additionally proposes that authorities and industry organisations offer help to agribusinesses in their shift towards more environmentally friendly practices by offering incentives, guidance, and resources for sustainability projects. Further investigation is needed to examine the influence of green entrepreneurial orientation in various industries and nations in order to have a more thorough comprehension of its impact on sustainable performance. Longitudinal studies can provide valuable insights into the progression of green practices over time and their enduring advantages for corporate success and environmental sustainability[10].

The academics investigate the influence of creative culture, innovative behaviour, and social capital on the performance of small and medium-sized ICT enterprises (SMEs) in Lagos, Nigeria[15]. The results suggest that both a culture of innovation and actual inventive actions have a favourable impact on the performance of these small and medium-sized enterprises (SMEs). An atmosphere

that encourages the exploration of new ideas and provides support for creativity cultivates innovative behaviour in employees. Consequently, this improves the firms' overall performance by enhancing their capacity to innovate, adjust to market dynamics, and gain a competitive edge. Social capital, encompassing interconnected networks, interpersonal connections, and confidence within the corporate community, also exerts a substantial influence. It enables easier access to resources, information, and opportunities that enhance innovation and enhance corporate success.

However, the report admits certain deficiencies and constraints. A significant constraint is the concentration on ICT small and medium-sized enterprises (SMEs) specifically in Lagos, which might not accurately reflect the situation of ICT businesses in other parts of Nigeria or in diverse industries. The concentration of this study's focus on specific geographic areas and sectors may restrict the applicability of the results to other contexts that have distinct market dynamics and socio-economic factors. Furthermore, the study is based on cross-sectional data, which means that it only captures information at a specific moment in time. This limitation hinders the capacity to monitor any changes in creative culture, behaviour, and performance over a period of time. This constraint hinders the capacity to construct cause-and-effect links and comprehend the enduring impacts of these aspects. The study's findings are contingent upon the use of self-reported data provided by SME owners and managers. This reliance on self-reporting may introduce biases, such as a potential overestimation of the impact of innovative practices on performance[15].

The research employs a quantitative approach, utilising surveys to gather data from managers of small and medium-sized ICT enterprises in Lagos. The researchers utilised statistical methods, such as regression analysis, to examine the connections between creative culture, inventive behaviour, social capital, and performance. This methodology enabled the recognition of important indicators of performance and offered empirical proof of the ways in which these aspects interrelate.

Based on the findings, the scholars suggest that ICT SMEs should develop a robust culture of innovation and promote innovative behaviour among their staff in order to improve performance. This objective can be accomplished by establishing a conducive atmosphere that encourages originality, offering instruction and materials for inventive thinking, and promoting cooperation both internally and outside. In addition, small and medium-sized enterprises (SMEs) should utilise their social connections and relationships to establish and sustain strong networks that grant them access to vital resources and information. Policymakers and support organisations should promote the cultivation of innovative cultures and social capital by helping programmes, networking events, and resources for SMEs. Further investigation is warranted to examine the influence of these characteristics across various industries and geographical areas, in order to gain a more comprehensive comprehension of their impact on the performance of small and medium-sized enterprises (SMEs). Longitudinal studies can provide valuable insights on the evolution of innovative culture and behaviour over time, as well as their long-term impact on business success[15].

The scholars investigate how the use of big data analytics (BDA) and artificial intelligence (AI) might improve operational performance in manufacturing organisations[27]. Specifically, the study focusses on the impact of entrepreneurial orientation and environmental dynamic on this relationship. The results demonstrate that the incorporation of Big Data Analytics (BDA) and Artificial Intelligence (AI) technologies has a substantial impact on operational performance. This is achieved through enhanced decision-making capabilities, process optimisation, and improved adaptation to dynamic market situations. Furthermore, the study emphasises that an entrepreneurial mindset, characterised by creativity, proactiveness, and risk-taking, effectively moderates the connection between BDA/AI utilisation and operational effectiveness. The study also reveals that environmental dynamism, which refers to the speed of change and intricacy in the external business

environment, enhances the advantages of BDA and AI. This implies that these technologies are especially advantageous in unstable and uncertain market conditions[27].

Notwithstanding these useful insights, the study possesses various gaps and limitations. An inherent constraint is its exclusive emphasis on industrial organisations, which may not accurately reflect the diverse range of sectors that potentially encounter distinct consequences from the application of BDA and AI. The limited focus on a given sector restricts the capacity to apply the findings across a wide range of sectors. Furthermore, the study is based on cross-sectional data, which only provides a momentary view of the organisations at a specific period, limiting the ability to discern long-term consequences and causal links. The research also relies on self-reported data from managers, which could introduce biases such as an inflated perception of the advantages of BDA and AI on operational performance. In addition, the study does not consider any possible moderating factors that could affect the association between technology adoption and performance outcomes.

The study employs a quantitative methodology, utilising surveys to gather data from managers of industrial organisations. The researchers utilised structural equation modelling (SEM) to examine the connections among BDA, AI, entrepreneurial attitude, environmental dynamism, and operational effectiveness. This methodology facilitated a thorough analysis of the interplay between these factors and yielded empirical proof about the mediating and moderating impacts of entrepreneurial orientation and environmental dynamism. Based on the results, the authors suggest that manufacturing organisations should allocate resources to acquire BDA and AI technologies in order to improve their operational performance, especially in situations that are constantly changing and unpredictable. In order to optimise the advantages of these technologies, organisations should cultivate an entrepreneurial mindset by promoting innovation, proactivity, and willingness to take risks among their staff. In addition, companies should prioritise the development of skills to rapidly

adjust to evolving market conditions, utilising big data analytics (BDA) and artificial intelligence (AI) to improve their decision-making procedures and operational adaptability.

Additionally, the study proposes that future investigations should examine the influence of Big Data Analytics (BDA) and Artificial Intelligence (AI) in various industries and situations in order to gain a more thorough comprehension of their impact on organisational performance. Longitudinal studies have the ability to provide valuable information about the lasting advantages and difficulties of adopting technology. Additionally, future research could investigate other possible elements that affect the connection between BDA/AI and performance results[27].

The researchers investigate the influence of entrepreneurial orientation (EO) on project performance through the utilisation of a machine learning methodology[28]. The results suggest that the entrepreneurial approach, which is defined by traits such as innovativeness, risk-taking, and proactiveness, has a beneficial impact on project performance. Projects spearheaded by teams or managers with a robust entrepreneurial mindset tend to attain superior results in terms of efficiency, effectiveness, and innovation. The study showcases the efficacy of machine learning approaches in capturing intricate connections between entrepreneurial orientation (EO) and other aspects of project performance, providing a more nuanced comprehension of how entrepreneurial behaviours might enhance project success.

Nevertheless, these useful insights, the study exhibits various gaps and limitations. A drawback of this approach is its dependence on secondary data, which might not comprehensively encompass the special circumstances or distinct factors of individual projects that could impact the correlation between entrepreneurial orientation and performance. This constraint can impact the relevance of the conclusions to various project kinds or sectors. In addition, the study's utilisation of machine learning models, although groundbreaking, may be constrained by the calibre and extent of the

accessible data, which can impact the precision and applicability of the findings. In addition, the research fails to consider any moderating or mediating variables that may impact the association between entrepreneurial orientation and project performance, such as organisational culture or external environmental conditions[28].

The research utilises a machine learning methodology, specifically employing algorithms to analyse a substantial dataset of projects. The researchers employed supervised learning methodologies to discern trends and forecast project performance by considering different degrees of entrepreneurial inclination. This methodology enables the examination of intricate, non-linear connections between variables, resulting in a more comprehensive comprehension of how various facets of entrepreneurial orientation impact project outcomes. Based on the results, the authors suggest that organisations should encourage project teams to have an entrepreneurial mindset in order to improve performance. This can be accomplished by fostering creativity, endorsing deliberate risk-taking, and advocating for proactive decision-making among project teams.

Organisations should additionally contemplate allocating resources towards training and development initiatives that cultivate entrepreneurial abilities and mindsets among project managers and team members. Furthermore, the study proposes that future investigations should examine the influence of entrepreneurial attitude on project performance in diverse situations and industries to enhance our comprehensive comprehension of its effects. Researchers are advised to utilise a wider range of data sources and consider additional variables that could potentially impact the connection between entrepreneurial orientation and project outcomes. This will help to strengthen and improve the validity of the findings[28].

The scholars investigate how the combination of entrepreneurial attitude and absorptive capacity promotes strategic agility in innovation processes[29]. The results indicate that both entrepreneurial

orientation, which is characterised by being innovative, proactive, and willing to take risks, and absorptive capacity, which is defined as the ability to absorb, assimilate, convert, and use knowledge, are essential for attaining strategic agility in innovation. The study demonstrates that organisations possessing a robust entrepreneurial orientation are more adept at utilising their absorptive capacity, hence enabling them to promptly adjust to evolving market conditions, forecast forthcoming trends, and innovate with efficacy. By incorporating practice theory, the study emphasises that strategic agility is not solely determined by organisational resources or skills, but is also ingrained in everyday practices and routines that foster a culture of ongoing learning and flexibility.

Although the study has made valuable contributions, it also has several gaps and limitations. A drawback of the study is its exclusive focus on the relationship between entrepreneurial attitude and absorptive ability, without considering other potentially influential characteristics that could impact strategic agility, such as organisational structure, leadership style, or external market dynamics. The limited scope of attention may fail to consider the intricacy of the interactions between different components inside an organisation that impact the processes of innovation. In addition, the study is based on cross-sectional data, which only provides a snapshot of a certain moment in time. This restricts the capacity to monitor any changes in strategic agility and innovation processes over a period of time. The study predominantly relies on qualitative data, which, although providing a comprehensive understanding of the setting, may not fully encompass the range of phenomena observed in other organisations or industries, thereby impacting the generalisability of the conclusions[29].

The research used a mixed-methods approach, which combines qualitative interviews with a survey of organisations involved in innovative activities. The qualitative component employs interviews

with key informants to investigate how entrepreneurial orientation and absorptive aptitude are demonstrated in real-world situations and contribute to strategic agility. The survey data is subsequently utilised to validate these insights and evaluate the generalisability of the findings across a wider sample. This combination facilitates a profound comprehension of the mechanisms and methodologies that underlie strategic agility, while also offering actual evidence to validate the theoretical statements that have been formulated.

However, the authors suggest that organisations aiming to improve their ability to adapt and innovate strategically should encourage both an entrepreneurial mindset and a strong ability to absorb new knowledge and ideas. This can be accomplished by fostering a culture that promotes experimentation, risk-taking, and proactive behaviour, while also investing in skills that facilitate the efficient acquisition and use of new information. Organisations should prioritise the establishment of processes and routines that promote ongoing learning and flexibility, guaranteeing their ability to swiftly respond to shifting market conditions. Additionally, the study proposes that future investigations should examine the correlations between other organisational elements and strategic agility in order to gain a more all-encompassing comprehension of the factors that contribute to the success of innovation. Longitudinal studies can provide valuable insights into the development of strategic agility over time and how organisations might maintain it in the long run[29]. The scholars examine how absorptive capacity influences the connection between entrepreneurial attitude and supply chain resilience[30]. The results demonstrate that entrepreneurial attitude, encompassing innovativeness, risk-taking, and proactiveness, has a beneficial impact on supply chain resilience by empowering companies to successfully predict and respond to crises. Moreover, the research demonstrates that absorptive capacity, which refers to a company's capability to identify, integrate, and utilise external knowledge, effectively influences this connection.

Companies that possess a strong ability to acquire and assimilate new knowledge are more effective at utilising their entrepreneurial mindset to improve the ability of their supply chain to withstand and recover from disruptions. These organisations excel in obtaining new knowledge, adjusting to changes, and adopting innovative solutions, which are essential for ensuring the smooth operation of supply chains in the face of unexpected obstacles.

Although this study offers useful insights, it also has several gaps and limits. An inherent constraint of the study is its dependence on self-reported data, which could potentially be influenced by respondent bias, especially when it comes to how companies evaluate their own entrepreneurial orientation and absorptive capacity. Furthermore, this study is cross-sectional, meaning that it only collects data at one specific moment in time. This limitation prevents the examination of the dynamic features of supply chain resilience and how it varies over time in response to changes in entrepreneurial orientation and absorptive capacity. One additional constraint is the study's limited geographic scope, as it was carried out inside a specific regional setting. This may not adequately represent the wide range of supply chain situations worldwide. The conclusions of this study cannot be easily applied to other regions that have distinct economic, cultural, and regulatory circumstances, thereby limiting their generalisability[30].

The study employs a quantitative methodology, utilising a survey to gather data from managers of enterprises working within supply chains. The researchers employed structural equation modelling (SEM) to examine the connections among entrepreneurial inclination, absorptive ability, and supply chain resilience. This approach enables the analysis of intricate connections between variables and offers a strong structure for assessing the moderating impact of absorptive capacity on the primary relationship. However, the authors suggest that companies looking to improve their supply chain resilience should foster a robust entrepreneurial mindset by promoting innovation, proactive risk

management, and strategic decision-making. Furthermore, it is imperative for organisations to allocate resources towards enhancing their absorptive ability through the establishment of systems for acquiring, disseminating, and using information. These initiatives may encompass training programmes, collaborations with research institutes, and the cultivation of a culture that promotes ongoing learning.

Additionally, the study proposes that future investigations should examine the interaction between various organisational capacities and supply chain resilience in order to have a more thorough comprehension of how companies can effectively prepare for and handle disruptions. Longitudinal studies can offer more profound understanding of how the connections between entrepreneurial orientation, absorptive ability, and supply chain resilience change over time, especially in various regional and sector settings[30].

The researchers investigate the direct and configurational impacts of knowledge-oriented leadership, entrepreneurial orientation (EO), and knowledge management systems on the success of projects[31]. The results suggest that leadership focused on knowledge has a favourable effect on the success of a project, both directly and by influencing entrepreneurial orientation and knowledge management systems. Leaders who place a high importance on sharing knowledge, continuous learning, and utilising knowledge efficiently improve the organization's capacity to innovate and respond proactively to market fluctuations. As a result, this contributes to achieving successful project outcomes. The research also reveals that EO, which is defined by traits such as innovation, willingness to take risks, and proactive behaviour, has a substantial impact on the connection between knowledge-oriented leadership and the success of a project. Furthermore, the implementation of efficient knowledge management procedures, including the generation,

dissemination, and application of knowledge, is essential for maximising the advantages of both leadership and entrepreneurial orientation in order to attain project success.

Nevertheless, the study exhibits various deficiencies and constraints. An inherent constraint is the dependence on data that is reported by individuals themselves, which is susceptible to biases, especially when evaluating the efficacy of leadership and knowledge management procedures. One further constraint is the cross-sectional design, which only captures the associations between variables at a specific moment and does not account for how these correlations may change over time or in reaction to organisational changes. The study largely concentrates on project-based organisations, which may restrict the applicability of the results to other types of organisations that do not primarily function through projects or have distinct structures and operational models.

The research utilises a mixed-methods approach, incorporating both quantitative data gathered through a survey of managers and team leaders, as well as qualitative insights derived from interviews. Structural equation modelling (SEM) was employed to analyse the quantitative data and examine the direct and indirect connections among knowledge-oriented leadership, entrepreneurial orientation, knowledge management procedures, and project success. The qualitative data facilitated the contextualisation of the findings and offered more profound insights into the practical implementation of the theoretical notions. Based on the results, the authors suggest that organisations seeking to improve project performance should promote knowledge-oriented leadership that prioritises the value of information sharing, ongoing learning, and the strategic utilisation of knowledge. Leaders should be urged to foster an entrepreneurial mindset among their workforce, encouraging innovation and proactive risk mitigation.

Furthermore, organisations should establish comprehensive knowledge management procedures that enable the generation, dissemination, and use of information throughout all hierarchical levels.

The paper proposes that future research should investigate the enduring effects of knowledge-oriented leadership on project success, specifically across varied organisational contexts and industries. Additional research might investigate the interaction between various leadership styles and knowledge management approaches to enhance our understanding of how these factors influence project performance[31].

The academics investigate the impact of entrepreneurial orientation (EO) on the performance of small and medium-sized enterprises (SMEs) by analysing the interplay between balanced and mixed ambidextrous strategies[32]. The results indicate that when combined with ambidextrous strategies, EO, which encompasses innovativeness, proactiveness, and risk-taking, has a beneficial impact on the performance of SMEs. An optimal ambidextrous approach, which entails achieving a state of balance between exploitation (improving current products and processes) and exploration (pursuing new opportunities and innovations), proves highly advantageous for SMEs. This approach enables companies to utilise their current abilities while also seeking new possibilities, hence improving overall performance. The research also reveals that employing a combined ambidextrous strategy, which incorporates both exploration and exploitation operations in a comprehensive manner, can further improve the performance of SMEs by generating synergies between these two activities. The correlation between EO and SME performance is intricate and necessitates meticulous handling of the conflicts between exploration and exploitation to prevent possible drawbacks.

The report admits certain deficiencies and constraints. A disadvantage of this study is its narrow focus on small and medium-sized enterprises (SMEs) in a specific emerging economy. As a result, the findings may not be easily applicable to other contexts, especially in developed markets or countries with distinct economic and cultural dynamics. In addition, the study utilises a cross-

sectional design, which involves collecting data at a certain moment in time. This design hampers the capacity to analyse the lasting impacts of entrepreneurial orientation and ambidextrous strategies on the performance of small and medium-sized enterprises (SMEs). The study predominantly depends on self-reported data from SME managers, which could introduce biases and impact the accuracy of the findings.

The research employs a quantitative methodology by utilising a survey given to managers of small and medium-sized enterprises (SMEs) to gather data on their entrepreneurial orientation, ambidextrous tactics, and performance outcomes. The researchers utilised structural equation modelling (SEM) to examine the data and evaluate the connections between the variables. This methodology enables the analysis of intricate relationships and offers valuable insights into the effects of various strategies on the performance of small and medium-sized enterprises (SMEs). Based on the findings, the authors suggest that small and medium-sized enterprises (SMEs) should use a balanced ambidextrous strategy to improve their performance by properly handling the compromises between exploration and exploitation. Companies should cultivate a culture that promotes innovation while simultaneously improving and optimising current processes and products.

In addition, small and medium-sized enterprises (SMEs) should contemplate incorporating both exploration and exploitation activities in order to generate synergies and optimise the potential advantages they might offer. The study proposes that future research should investigate the long-term impacts of ambidextrous strategies on the performance of small and medium-sized enterprises (SMEs) in order to gain a more thorough understanding of how these strategies develop and change over time. Additional research could explore the influence of diverse cultural and economic

environments on the correlation between entrepreneurial orientation and small and medium-sized enterprise (SME) performance[32].

The scholars explore the causal relationship between entrepreneurial orientation (EO) and company success, examining the underlying mechanisms and contextual elements that influence this association[33]. The results indicate that EO has a favourable effect on firm performance by promoting a culture that encourages innovativeness, risk-taking, and proactiveness. These qualities are crucial for recognising and capitalising on new market opportunities. The study delineates multiple channels by which EO augments performance, encompassing enhanced strategic decision-making, amplified organisational flexibility, and heightened adaptability to external changes. Furthermore, the study highlights that the influence of EO on performance depends on different contextual elements, including industry dynamics, company size, and market conditions. Enterprises operating in dynamic and competitive industries typically gain greater advantages from high levels of entrepreneurial orientation (EO), as these settings necessitate continual adaptation and innovation to sustain a competitive advantage.

Although the study provides useful insights, it also has several gaps and limits. A weakness of this study is its narrow scope, which may hinder the applicability of the results to other regions with distinct cultural and economic conditions. The study predominantly relies on cross-sectional data, which captures the relationship between entrepreneurial orientation (EO) and performance at a specific moment in time. This design constrains the capacity to deduce causality and investigate the progression of the relationship between EO and performance over time. In addition, the study does not thoroughly investigate the potential moderating influences of other organisational attributes, such as leadership style or organisational structure, which could offer a more detailed comprehension of how entrepreneurial orientation affects performance.

The research employs a quantitative methodology, utilising survey data gathered from a sample of companies to quantify their levels of entrepreneurial orientation (EO) and performance outcomes. The researchers utilised regression analysis to investigate the direct impact of EO on performance and to discover relevant factors that may moderate this relationship. This methodology enables the recognition of patterns and connections between variables, offering a thorough comprehension of the mechanisms by which EO impacts organisational performance. However, the authors suggest that companies aiming to improve their performance should develop an entrepreneurial mindset by fostering a culture of innovation, promoting proactive behaviour, and endorsing prudent risk-taking. Enterprises should also consider the contextual elements that can impact the success of equal opportunity (EO), such as the dynamics of their industry and the conditions of the market, and adjust their strategy accordingly.

The study proposes that future research should investigate the long-term impact of entrepreneurial orientation (EO) on performance in order to gain a more comprehensive understanding of how this connection develops over time. Additional research should explore the influence of other organisational attributes, such as leadership style and organisational structure, on the relationship between entrepreneurial orientation (EO) and performance. This would enhance the comprehension of the various aspects that contribute to the success of entrepreneurial enterprises[33].

The researchers investigate the notion of social entrepreneurship orientation (SEO) and its impact on the success of both start-ups and existing industrial businesses[34]. The results suggest that organisations that prioritise SEO, which is defined by a firm dedication to social ideals, innovation, and proactive actions, greatly enhance their success by gaining a competitive edge through the generation of both social and economic value. Enterprises that possess a strong social entrepreneurship orientation (SEO) are more inclined to create inventive resolutions for societal

issues, effectively interact with stakeholders, and adjust to evolving market circumstances. This, in turn, improves their overall performance and long-term viability. The study also demonstrates that social entrepreneurship orientation (SEO) is especially advantageous for start-up companies, since it enables them to distinguish themselves in the market and cultivate a devoted customer base by matching their business operations with the requirements of society.

Although the study has made valuable contributions, it also has several gaps and limitations. An inherent constraint is its dependence on data provided by firm managers themselves, which could introduce partiality and impact the precision of the results. Moreover, the study largely examines enterprises that operate within specific industries and geographical regions, which may restrict the applicability of the findings to different contexts. The study's cross-sectional design limits the capacity to analyse the long-term impact of SEO on company performance and to track the evolution of SEO over time. In addition, the study does not investigate the possible difficulties and compromises that companies may encounter when incorporating SEO into their business models, which might offer a more thorough comprehension of its influence on firm success.

The research's methodology employs a quantitative approach, utilising a survey that is issued to both start-up and established industrial firm managers. The purpose of the survey is to quantify their degrees of social entrepreneurship orientation (SEO) and the resulting performance outcomes. The researchers utilised structural equation modelling (SEM) to examine the data and evaluate the connections between SEO and the success of the organisation. This methodology enables the analysis of intricate relationships between factors and offers valuable understanding of the ways in which SEO impacts the success of an enterprise. Based on the results, the authors suggest that companies looking to improve their success should embrace a social entrepreneurship mindset by integrating social values into their main business strategy and promoting a culture of innovation and

proactivity. Enterprises should proactively interact with stakeholders, such as consumers, employees, and communities, in order to gain a deeper understanding of and tackle social challenges, all while generating economic benefit.

The study proposes that future research should examine the enduring impact of SEO on company performance in order to gain a fuller comprehension of how SEO leads to long-lasting success. In addition, future study might investigate the difficulties and compromises involved in adopting social entrepreneurship orientation (SEO) in various industries and contexts. It could also examine the influence of external factors, such as market conditions and regulatory environments, on the effect of SEO on a company's success[34].

The scholars investigate the correlation between entrepreneurial orientation (EO) and the performance of Italian enterprises, with a particular emphasis on the moderating influence of competitive strategy[35]. The results suggest that entrepreneurial orientation (EO) has a favourable influence on business performance. However, the impact of EO is considerably affected by the specific competitive strategy chosen by the organisation. Companies that implement a differentiation strategy, which prioritises distinctive products and services, generally experience greater advantages from high levels of entrepreneurial orientation (EO) compared to those that follow a cost leadership strategy centred around efficiency and cost reduction. This implies that the advantages of entrepreneurial orientation (EO), such as creativity, taking initiative, and willingness to take risks, are more noticeable in situations where standing out and being innovative are crucial for establishing a competitive edge. The study emphasises the significance of aligning entrepreneurial orientation (EO) with the suitable competitive strategy in order to optimise its beneficial impact on firm performance.

Although the study offers useful insights, it also has several gaps and limits. A weakness of this study is its narrow emphasis on enterprises exclusively operating within Italy. Consequently, the applicability of the findings to different cultural and economic settings may be compromised. The study primarily focusses on conventional indicators of company performance, such as financial measurements, while neglecting other aspects such as social or environmental performance, which are becoming more important in the current economic landscape. Furthermore, the study's cross-sectional approach only allows for the examination of the relationship between entrepreneurial orientation (EO) and business performance at a certain moment, which restricts the capacity to establish causation or provide insight into how these associations develop over time. Additionally, there is a failure to consider other possible elements that could moderate the relationship between entrepreneurial orientation (EO) and performance, such as the size of the firm or the kind of industry. Considering these aspects could lead to a more detailed and comprehensive understanding of the link between EO and performance.

The research employs a quantitative methodology, utilising survey data obtained from a sample of Italian enterprises to assess their degrees of entrepreneurial orientation (EO), competitive strategy, and firm performance. The researchers utilised regression analysis to investigate the direct impact of entrepreneurial orientation (EO) on performance and to evaluate the moderating impacts of various competitive strategies. This methodology enables the detection of patterns and connections between variables, facilitating a thorough comprehension of how entrepreneurial orientation (EO) and competitive strategy intertwine to impact the success of an enterprise.

However, the authors suggest that companies aiming to improve their performance should carefully evaluate their competitive strategy while promoting an entrepreneurial mindset. For companies that want to stand out from their competitors, it is important to actively develop EO traits such as

innovativeness, risk-taking, and proactiveness. This will allow them to take advantage of special market possibilities and achieve exceptional performance. The report also indicates that companies should consistently assess their strategic alignment to guarantee that their entrepreneurial endeavours effectively bolster their competitive positioning. Future research should investigate the association between EO and performance in various cultural and economic contexts to improve the applicability of the results. Furthermore, longitudinal studies have the potential to offer more profound understanding of the dynamic relationship between EO and competitive strategy, as it evolves over time and in different market circumstances. Additional investigation into alternative moderating variables, such as the size of the company, the kind of industry, and the external environmental circumstances, could enhance our overall comprehension of the relationship between EO and the performance of the organisation[35].

The scholars examine the ways in which entrepreneurial orientation (EO) might improve the administration of innovation project portfolios[36]. The results suggest that entrepreneurial orientation (EO) has a favourable impact on the management of innovation project portfolios by promoting an innovative culture, willingness to take risks, and proactive behaviour. Companies with high entrepreneurial orientation (EO) are more capable of effectively handling a wide range of innovative projects. EO plays a crucial role in recognising and capitalising on new opportunities, while also effectively managing the risks involved. As a result, there is an increase in the coordination of projects, more efficient distribution of resources, and an overall improvement in the performance of the portfolio. The study shows that EO can serve as a catalyst for enhancing the efficiency of innovation project management by incorporating entrepreneurial abilities into portfolio management methods.

Nevertheless, the study exhibits certain gaps and limitations. A significant constraint is the concentration on a solitary industry or sector, which may restrict the relevance of the conclusions to other contexts or industries with distinct attributes. Furthermore, the study is based on cross-sectional data, which examines the connection between entrepreneurial orientation (EO) and the management of innovation project portfolios at a certain moment. This limitation hinders the capacity to evaluate the long-term impacts or variations over time. The study also fails to explore the potential difficulties or adverse consequences linked to elevated levels of EO in the context of managing innovation portfolios, which may offer a more equitable assessment of its influence.

The research employs a quantitative methodology, utilising survey data obtained from organisations involved in innovative initiatives. The researchers utilised regression analysis to investigate the correlation between entrepreneurial orientation (EO) and the efficacy of managing innovation project portfolios. This methodology allows for the recognition of patterns and connections between entrepreneurial orientation (EO) and the outcomes of portfolio management, providing valuable insights into the ways in which EO enhances project management methods.

However, the authors suggest that companies aiming to enhance their management of innovation projects should actively foster an entrepreneurial mindset. This entails promoting a willingness to take risks, cultivating a culture that values and encourages innovation, and actively seeking out and pursuing new opportunities. Companies should include these entrepreneurial skills into their project management procedures to improve the alignment of their strategies and allocation of resources. The paper additionally proposes that future research should evaluate the enduring effects of entrepreneurial orientation (EO) on the management of innovation project portfolios. It should also examine the potential difficulties and compromises that may arise from maintaining high levels of EO. Furthermore, evaluating the influence of industry-specific characteristics and external

environmental conditions could yield a more holistic comprehension of how entrepreneurial orientation impacts the management of innovation portfolios in various settings[36].

The academics investigates how the implementation of enterprise resource planning (ERP) systems and entrepreneurial orientation (EO) affect the performance of small and medium-sized enterprises (SMEs) in a South Asian economy[37]. The study specifically examines the function of organisational excellence as a mediator in this relationship. The results indicate that both enterprise resource planning (ERP) and entrepreneurial orientation (EO) have a favourable impact on the performance of small and medium-sized enterprises (SMEs). enterprise resource planning (ERP) systems improve operational efficiency and help manage resources effectively. On the other hand, EO fosters creativity, proactive behaviour, and a willingness to take risks. Organisational excellence facilitates this link by enhancing processes, cultivating a culture of ongoing development, and aligning organisational practices with strategic objectives. The study shows that combining ERP systems with a robust entrepreneurial orientation (EO) can greatly improve organisational performance by fostering the development of exceptional organisational practices.

The study exhibits various deficiencies and constraints. A constraint is the concentration on small and medium-sized enterprises (SMEs) inside a solitary South Asian economy, potentially limiting the applicability of the findings to other areas or nations with distinct economic and cultural circumstances. The study also depends on cross-sectional data, which provides a momentary view of the connections between ERP, EO, and performance, so restricting the ability to establish causality or see long-term impacts. Furthermore, the study fails to investigate the possible obstacles or difficulties that small and medium-sized enterprises (SMEs) may have while installing ERP systems or promoting entrepreneurial orientation (EO). This omission prevents a comprehensive understanding of the practical ramifications of these aspects.

The research utilises a quantitative methodology, using survey data obtained from small and medium-sized enterprises (SMEs) to examine the effects of enterprise resource planning (ERP) systems, entrepreneurial orientation (EO), and organisational excellence on performance. The researchers employ structural equation modelling (SEM) to examine the data and assess the mediating function of organisational excellence. This methodology enables a thorough analysis of the connections between the variables and offers valuable insights into how the effectiveness of an organisation impacts the relationship between enterprise resource planning (ERP), entrepreneurial orientation (EO), and small and medium-sized enterprise (SME) performance.

Based on the results, the scholars suggest that small and medium-sized enterprises (SMEs) should allocate resources to implement enterprise resource planning (ERP) systems and cultivate a robust entrepreneurial mindset in order to improve their performance. Companies should prioritise attaining organisational excellence by enhancing their processes and harmonising practices with strategic objectives. The paper proposes that future research should examine the enduring impacts of ERP and EO on the performance of small and medium-sized enterprises (SMEs) and evaluate the difficulties linked to their adoption. Furthermore, doing an analysis of the influence of various contextual aspects, like as the kind of industry or the size of the organisation, could provide a more detailed comprehension of how ERP and EO assist to achieving organisational excellence and enhancing performance in varied environments[37].

The researchers examine how entrepreneurial orientation (EO), knowledge management, and dynamic capacities influence the adoption of e-commerce among small and medium-sized enterprises (SMEs) in Indonesia[38]. The results suggest that both entrepreneurial orientation (EO) and knowledge management have a substantial and beneficial influence on the adoption of e-commerce. Furthermore, dynamic capabilities play a crucial role as a mediator in this connection.

Enterprises with a high entrepreneurial orientation (EO) are more inclined to seek out novel e-commerce solutions, while the implementation and utilisation of e-commerce technologies are facilitated by good knowledge management methods. Dynamic capabilities increase this relationship by enabling organisations to successfully adapt and respond to technical advances and market demands. The study emphasises that the integration of EO (entrepreneurial orientation), effective knowledge management, and dynamic capacities can greatly enhance the successful implementation of e-commerce in small and medium-sized enterprises (SMEs).

There are various constraints in the investigation. The main emphasis is on small and medium-sized enterprises (SMEs) in Indonesia, which may restrict the applicability of the findings to other areas or nations with distinct economic and cultural circumstances. The research's cross-sectional design acquires data at a singular moment, limiting the capacity to establish causal linkages or long-term effects. In addition, the study does not consider the various difficulties that small and medium-sized enterprises (SMEs) may encounter when adopting the technology, such as financial limitations or technological obstacles. Examining these problems would contribute to a more thorough comprehension of the factors influencing the adoption process.

The research employs a quantitative approach by utilising survey data gathered from Indonesian SMEs to evaluate the influence of entrepreneurial orientation (EO), knowledge management, and dynamic capacities on the adoption of e-commerce. The researchers utilised structural equation modelling (SEM) to examine the data and evaluate the proposed connections between the variables. This methodology enables a comprehensive analysis of both the immediate and indirect impacts of the variables being investigated, providing valuable insights into their influence on the adoption of e-commerce.

However, the scholars suggest that small and medium-sized enterprises (SMEs) should prioritise improving their entrepreneurial attitude and knowledge management procedures in order to enhance their adoption of e-commerce. Enterprises should also cultivate and exploit their ability to adapt and respond to changes in order to efficiently oversee and incorporate e-commerce technologies. The paper proposes that future research should investigate the enduring consequences of these characteristics on the adoption of e-commerce and consider the obstacles that small and medium-sized enterprises (SMEs) encounter during the adoption process. In addition, further study might encompass additional areas or sectors to investigate the wider applicability of the findings and discover techniques that can effectively tackle the specific obstacles to e-commerce adoption encountered by small and medium-sized enterprises (SMEs) in various circumstances[38].

The scholars investigate the correlation between human resource management (HRM) practices, entrepreneurial orientation (EO), and the success of an enterprise[39]. The results suggest that the implementation of HRM practices has a substantial positive impact on business performance, particularly when it is influenced by entrepreneurial orientation (EO). More precisely, human resource management strategies such as recruitment, training, and performance management have a favourable impact on entrepreneurial orientation, which in turn leads to improved company performance. The study demonstrates that human resource management (HRM) practices play a significant role in establishing an atmosphere that promotes creativity, risk-taking, and proactiveness, which are crucial elements of entrepreneurial orientation (EO). These aspects are essential for enhancing the overall efficiency of companies.

Nevertheless, the study contains various constraints. The study is conducted using a cross-sectional methodology, which allows for a brief overview of the relationships at a certain moment, but it restricts the ability to establish cause-and-effect links or observe long-term impacts. The study's

emphasis on a particular geographical or industrial setting may limit the applicability of the findings to other regions or sectors. In addition, the research fails to consider potential moderating variables or external factors that could impact the connections between HRM practices, EO, and company performance.

The research utilises a quantitative methodology, employing survey data gathered from companies to evaluate the influence of HRM practices and EO on firm performance. The researchers employed statistical approaches, specifically regression analysis, to investigate the direct and indirect impacts of HRM practices on business performance via EO. This methodology enables a comprehensive comprehension of the intricate relationship between HRM practices and EO in shaping corporate performance.

Based on the results, the researchers suggest that companies should allocate resources towards implementing efficient human resource management (HRM) strategies in order to strengthen their Entrepreneurial Orientation (EO) and ultimately improve their overall performance. Organisations should prioritise the development of HRM systems that facilitate innovation, encourage risk-taking, and foster proactive behaviours. Furthermore, the study proposes that future research should investigate the enduring effects of HRM practices on entrepreneurial orientation (EO) and performance. It should also consider various contextual elements and analyse potential moderating variables that could affect these associations. Gaining a thorough understanding of these dynamics could offer more complete insights into the ways in which HRM practices and EO contribute to the success of a company in different situations[39].

The researchers examine the role of organisational capacities in mediating the connection between organisational culture, entrepreneurial orientation (EO), and organisational performance in small and medium-sized enterprises (SMEs) in Pakistan[40]. The results suggest that the culture and

entrepreneurial orientation (EO) of an organisation have a beneficial influence on its performance. Additionally, the organization's skills play a crucial role in mediating this relationship. More precisely, a nurturing organisational culture and a robust equal opportunity framework bolster the competencies of an organisation, leading to enhanced overall performance. The study highlights the significance of promoting a favourable organisational culture and developing an entrepreneurial mindset in order to establish strong organisational skills that lead to gains in performance.

However, there are some constraints to the study. The findings of this study are derived from data collected from small and medium-sized enterprises (SMEs) in Pakistan. Therefore, it is important to note that the generalisability of these conclusions to other areas or nations with distinct cultural and economic settings may be limited. In addition, the study employs a cross-sectional methodology, which captures the associations at a certain moment and does not for the investigation of cause-and-effect correlations or long-term impacts. The study does not investigate possible external factors or contextual variables that may impact the connections between organisational culture, entrepreneurial orientation (EO), organisational skills, and performance. The research employs a quantitative approach by utilising survey data obtained from SMEs to examine the connections between organisational culture, entrepreneurial orientation (EO), organisational competencies, and performance. The researchers utilised structural equation modelling (SEM) to evaluate the direct and indirect impacts of these variables.

Moreover, the approach offers a thorough perspective on how organisational capabilities influence the effects of organisational culture and entrepreneurial orientation on performance. However, the scholars suggest that small and medium-sized enterprises (SMEs) should prioritise the development of a robust organisational culture and the promotion of an entrepreneurial mindset in order to strengthen their organisational capacities and better their performance. Enterprises should allocate

resources towards developing and utilising organisational talents in order to efficiently convert cultural and strategic advantages into improvements in performance. Future research should prioritise conducting longitudinal studies to investigate the enduring consequences of organisational culture and entrepreneurial orientation (EO) on performance. Additionally, it is crucial to analyse the influence of contextual factors in various countries and sectors. Furthermore, doing research on other possible mediating or moderating factors could offer a more profound understanding of how organisational culture and entrepreneurial orientation impact performance by means of organisational capacities[40].

The academics investigate the impact of entrepreneurial orientation (EO) on sustainable entrepreneurship in small and medium-sized enterprises (SMEs) in the United Arab Emirates (UAE)[41]. The study specifically examines the mediating effects of sustainability orientation and bricolage behaviours. The results indicate that EO has a favourable impact on sustainable entrepreneurship, and this connection is influenced by both sustainability orientation and bricolage behaviours. More precisely, small and medium-sized enterprises (SMEs) that have a greater entrepreneurial orientation (EO) are more likely to implement sustainable practices. This is achieved by having a stronger focus on sustainability and by effectively using bricolage behaviours. Bricolage behaviours refer to resourceful problem-solving and innovative approaches to overcoming limitations. The mediating impact emphasises the vital significance of sustainability orientation and bricolage in converting entrepreneurial orientation (EO) into concrete outcomes related to sustainable entrepreneurship.

However, there are several constraints in the study. The study primarily focusses on small and medium-sized enterprises (SMEs) in the UAE, which may limit the applicability of the results to other regions or countries with distinct economic or cultural circumstances. The research's cross-

sectional design acquires data at a single moment, which restricts the ability to establish causal linkages or assess long-term impacts. Furthermore, the study fails to consider possible external factors or industry-specific variables that may impact the relationships between entrepreneurial orientation (EO), sustainability orientation, bricolage behaviours, and sustainable entrepreneurship. The research utilised a quantitative methodology, collecting survey data from small and medium-sized enterprises (SMEs) to investigate the connections between entrepreneurial orientation (EO), sustainability orientation, bricolage behaviours, and sustainable entrepreneurship.

The study employed structural equation modelling (SEM) to examine the direct and indirect impacts of entrepreneurial orientation (EO) on sustainable entrepreneurship, using the identified mediators. The approach offers a comprehensive comprehension of the mechanisms by which EO influences sustainable entrepreneurship. Nevertheless, the authors suggest that small and medium-sized enterprises (SMEs) should prioritise improving their entrepreneurial orientation in order to encourage sustainable entrepreneurship. Companies should develop a robust focus on sustainability and promote resourceful and adaptive behaviours to effectively utilise entrepreneurial orientation (EO) in order to achieve sustainability objectives. Future research should conduct longitudinal studies to examine the enduring effects of entrepreneurial orientation (EO) on sustainable entrepreneurship. Furthermore, it should investigate other contextual elements that can influence these associations. By incorporating various geographical areas and sectors, the research can offer a more comprehensive outlook on the impact of EO and related factors on sustainable entrepreneurship[41].

The researchers explore the relationship between digitalisation, entrepreneurial orientation (EO), and the internationalisation of micro, small, and medium-sized enterprises (MSMEs)[42]. The results suggest that the process of internationalisation for MSMEs is greatly influenced by digitalisation

and EO. More precisely, digitalisation improves the operational efficiencies and market reach of MSMEs, enabling them to participate and compete in worldwide marketplaces. Moreover, a robust EO, which is defined by its emphasis on innovation, willingness to take risks, and proactive approach, enhances the beneficial impacts of digitalisation on the process of internationalisation. The study indicates that micro, small, and medium enterprises (MSMEs) that have a strong emphasis on entrepreneurial orientation (EO) and active involvement in digital platforms are more likely to successfully extend their business operations on a worldwide scale.

Nonetheless, there are various constraints in the investigation. The study largely concentrates on micro, small, and medium-sized enterprises (MSMEs), which may restrict the relevance of the results to larger companies with distinct resources and skills. In addition, the research utilises a cross-sectional approach, which offers a momentary depiction of the connections at a specific moment and does not provide the investigation of long-term patterns or causal effects. The study does not investigate the potential impact of industry-specific factors on the correlation between digitalisation, entrepreneurial orientation (EO), and internationalisation. The research employs a quantitative approach by utilising survey data from MSMEs to examine the connections between digitalisation, entrepreneurial orientation (EO), and internationalisation. The researchers employed statistical methodologies to assess the impact of digitalisation and executive oversight on the process of internationalisation. This technique offers a comprehensive comprehension of the immediate and reciprocal impacts of various variables.

However, the scholars suggest that MSMEs allocate resources to digital technologies and cultivate an entrepreneurial attitude in order to improve their efforts in expanding internationally. Companies should utilise digital tools to optimise operations and enhance their access to global markets with greater efficiency. In addition, fostering an entrepreneurial mindset within the company can

enhance the advantages of digitalisation, enabling a more seamless and prosperous global expansion. Future research should conduct longitudinal studies to monitor the lasting impacts of digitalisation and entrepreneurial orientation (EO) on internationalisation. Additionally, it should consider various sector settings to enhance the comprehension of these dynamics[42].

The authors investigate how entrepreneurial orientation (EO) and the availability of financial resources affect the performance of small and medium-sized enterprises (SMEs) in the United Arab Emirates (UAE)[43]. The results indicate that both entrepreneurial orientation (EO) and access to financial resources have a substantial impact on the commercial performance of small and medium-sized enterprises (SMEs). Entrepreneurial orientation (EO), which is defined by its emphasis on innovation, willingness to take risks, and proactive behaviour, has a beneficial impact on performance by promoting the development of dynamic capabilities and creating a competitive edge. Access to financial resources is essential as it provides the required money for both expansion and operational efficiency. The correlation between entrepreneurial orientation (EO) and financial resources positively impacts performance outcomes, indicating that SMEs achieve optimal results when they possess a robust EO and sufficient financial backing.

Nevertheless, the study has certain constraints. The study exclusively concentrates on Small and Medium Enterprises (SMEs) in the UAE, limiting the applicability of the results to other countries with distinct economic and cultural backgrounds. The study employs a cross-sectional methodology, which gathers data at a certain moment, hence restricting the capacity to evaluate causal connections or long-term effects. In addition, the study does not consider the particular categories of financial resources or the potential variation in their influence across other industries. The methodology employs a quantitative approach, utilising survey data obtained from small and medium-sized enterprises (SMEs) in the United Arab Emirates (UAE). The researchers utilised

statistical methods to examine the correlations between entrepreneurial orientation (EO), financial resources, and firm performance. This approach offers a comprehensive understanding of the interplay between these variables and their impact on performance.

However, it fails to account for the subtle influences of distinct financial resources or industry-specific elements. The authors suggest that small and medium-sized enterprises (SMEs) should strengthen their entrepreneurial mindset and strive to obtain improved access to financial resources in order to enhance their company performance, based on the findings. Companies should prioritise the development of innovative practices and proactive tactics, while also ensuring they have adequate financial resources to support growth and operational efficiency. Subsequent investigations could conduct longitudinal studies to analyse the enduring consequences of entrepreneurial orientation (EO) and financial resources on performance. Additionally, they could analyse the influence of diverse financial resources on small and medium-sized enterprises (SMEs) across different sectors and geographies[43].

The scholars examine the correlation between social entrepreneurship orientation (SEO) and corporate success, with a specific emphasis on the mediating influence of social performance[44]. The results suggest that social entrepreneurship orientation (SEO) has a favourable effect on the success of an enterprise, and this effect is influenced by the company's social performance. Enterprises that prioritise social entrepreneurship orientation (SEO) and emphasise the production of social value and community impact are more likely to achieve significant success. This achievement is made easier by enhancing the enterprise's reputation, stakeholder relationships, and overall efficacy in attaining social goals through increased social performance.

However, there are various constraints in the investigation. The study primarily focusses on analysing the impact of SEO on firm performance within a particular context. However, it is

important to note that the findings may not be universally applicable to various industries or geographical regions. In addition, the research utilises a cross-sectional approach, which collects data at a single moment and does not consider temporal changes or causality. The study also does not explore the precise components of social performance or how different characteristics might affect the relationship between SEO and company success in distinct ways. The research employed a quantitative approach by utilising survey data from firms to analyse the correlations between social entrepreneurship orientation (SEO), social performance, and company success. The study employed structural equation modelling (SEM) to examine the mediating influence of social performance. This strategy offers a holistic perspective on the channels through which SEO impacts success and the significance of social performance in this progression[44].

Based on the findings, the authors suggest that organisations include social entrepreneurship ideas into their company plans in order to improve their success. By prioritising social performance, such as enhancing community impact and engaging stakeholders, the good impact of SEO on total company success can be reinforced. Subsequent investigations should incorporate longitudinal studies to monitor the long-term impacts of social entrepreneurship orientation (SEO) and investigate the ways in which diverse aspects of social performance affect firm results in different environments and industries[44].

The scholars present a bibliometric analysis of academic literature on International Entrepreneurial Orientation (IEO)[45]. The study demonstrates that there has been a significant rise in research conducted in the subject over the years, particularly in publications that examine the influence of Initial Exchange Offerings (IEOs) on international business strategy and performance. The key findings of the study include the identification of authors who have a significant impact, the main journals where their work is published, and the primary research themes that emerged. These

themes include the relationship between International Entrepreneurial Orientation (IEO) and firm internationalisation, innovation, and competitive advantage. The investigation emphasises the pivotal significance of International Entrepreneurial Orientation (IEO) in improving enterprises' international performance and their ability to adapt in the global market.

Nevertheless, the study contains constraints. The analysis primarily relies on bibliometric methodologies to examine the current literature, which may not comprehensively reflect the intricacies and subtleties of particular research or the real-world implications of IEO. The emphasis is placed on collective data, which could potentially disregard emerging patterns or deficiencies in the investigation. In addition, the study lacks a comprehensive investigation of the methodological rigour or theoretical frameworks used in the examined studies. The methodology employed a bibliometric study, encompassing the evaluation and quantification of published research on IEO using diverse metrics such as publication frequency, citation analysis, and network analysis. This methodology enables a thorough examination of the research panorama, but it may not provide qualitative insights into the specific findings of each study.

The authors suggest that future study should investigate topics within IEO that have received less attention, such as its use in diverse cultural or industry contexts. Researchers should also explore the utilisation of mixed-method approaches to obtain more profound understanding of the impacts and mechanisms of IEO. To gain a more comprehensive knowledge of IEO's function in international business and its effects on firm performance, it would be beneficial to conduct longitudinal studies that span over time and encompass a wide range of geographical locations[45].

The researchers examine how entrepreneurial orientation (EO) affects the performance of small and medium-sized enterprises (SMEs), with a particular focus on the influence of marketing capacities and social media usage[46]. The results suggest that EO has a beneficial impact on the performance of

small and medium-sized enterprises (SMEs). This link is mediated by the presence of effective marketing capabilities and the use of social media. More precisely, having great marketing capabilities boosts the favourable impact of EO on performance. Additionally, utilising social media effectively enhances these advantages by enhancing market reach and increasing consumer engagement. There are several constraints in the study. The main focus of this study is on SMEs and its findings may not be applicable to larger companies or other industries. The research's cross-sectional design captures data at a certain moment, without considering the dynamic character of EO and its long-term effects. Furthermore, the study lacks an in-depth analysis of the precise elements of marketing capabilities or social media strategies that contribute to performance.

The research employed a quantitative approach by utilising survey data from small and medium-sized enterprises (SMEs) to investigate the connections between entrepreneurial orientation (EO), marketing capabilities, social media usage, and performance. The study utilised structural equation modelling (SEM) to examine these correlations and evaluate the mediating effects of marketing capability and social media usage. However, the authors suggest that small and medium-sized enterprises (SMEs) could make use of their entrepreneurial orientation (EO) by improving their marketing skills and making efficient use of social media. Implementing robust marketing strategies and actively participating on social media platforms can enable small and medium-sized enterprises (SMEs) to leverage their entrepreneurial mindset and enhance their performance. Future research should conduct longitudinal studies to evaluate the enduring impacts of entrepreneurial orientation (EO) and identify the precise components of marketing and social media strategies that contribute to the success of small and medium-sized enterprises (SMEs)[46].

The authors investigate the relationship between entrepreneurship in the informal sector, an individual's entrepreneurial orientation (EO), and the development of entrepreneurial leadership[47].

The study reveals that an individual's entrepreneurial orientation has a substantial impact on the development of entrepreneurial leadership in the informal sector. Entrepreneurs who possess elevated degrees of entrepreneurial orientation (EO) are more inclined to demonstrate leadership behaviours that actively contribute to the expansion and long-term viability of their companies. The research emphasises that the informal sector plays a vital role in fostering entrepreneurial leadership, primarily influenced by individual entrepreneurial qualities and competencies.

Nevertheless, the study had certain drawbacks. The analysis relies predominantly on qualitative data obtained from a particular geographical area, thus failing to encompass the full range of informal sector entrepreneurship in other settings. In addition, the research primarily examines individual entrepreneurial orientation (EO) and does not thoroughly consider the influence of organisational variables or external influences on the development of entrepreneurial leadership. The study's cross-sectional design restricts the capacity to evaluate temporal changes and the enduring effects of EO on leadership development. The technique utilised encompasses qualitative research methods, including interviews and case studies conducted within the informal sector. This methodology enables a comprehensive comprehension of the correlation between entrepreneurial orientation (EO) and entrepreneurial leadership. However, it may lack the potential to be applied to other settings or industries. Case studies offer in-depth and comprehensive perspectives, but they can also bring subjective prejudices.

Based on the results, the scholars suggest that policymakers and support organisations should concentrate on promoting individual entrepreneurial orientation (EO) among entrepreneurs in the informal sector. Programmes and initiatives that strengthen entrepreneurial skills and leadership traits can promote the development of entrepreneurial leadership and better the overall performance of informal sector firms. Future research should prioritise conducting longitudinal studies and

examining varied contexts to gain a comprehensive understanding of how different elements impact the growth of entrepreneurial leadership in various situations[47].

The researchers investigate the influence of entrepreneurial orientation (EO) and strategic vision on digitalisation in the financial industry, employing a contingency approach[48]. The study reveals that both EO and strategic vision have a substantial impact on the scope and efficacy of digitalisation initiatives. Enterprises that have a strong entrepreneurial orientation (EO) and a well-defined strategic vision are more capable of effectively using digital technology, resulting in enhanced performance and a competitive edge. The study emphasises that EO is responsible for driving innovative and proactive digital strategies. However, a strategic vision is necessary to guarantee that digital activities are in line with long-term goals and market demands. There are various constraints in the investigation. The study solely concentrates on the financial industry, hence potentially restricting the relevance of the results to other sectors.

In addition, the research's cross-sectional approach captures a momentary view and fails to consider the ever-changing nature of digitalisation and its long-term effects. The study predominantly depends on self-reported data, which could induce biases when evaluating the efficacy of digitalisation initiatives. The methodology employs a quantitative approach by conducting surveys among experts in the financial business. An analysis is conducted on the data to ascertain the correlations between EO, strategic vision, and the consequences of digitalisation. Although this technique offers useful insights into these relationships, it may not fully encompass the intricate nature of how digitalisation processes evolve over time. In order to fill these deficiencies, the authors suggest that financial institutions and other organisations should develop a robust EO and a well-defined strategic vision in order to effectively utilise digital technology. It is recommended that companies should synchronise their digitalisation initiatives with their long-term strategic goals

and consistently adjust their strategies in response to changing digital trends. Future research should conduct longitudinal studies and incorporate a wide range of businesses to gain a more thorough knowledge of how EO and strategic vision impact the process of digitalisation in various situations[48].

The academics investigate the influence of knowledge-based theory, entrepreneurial orientation (EO), and stakeholder engagement on the success of an enterprise[49]. The study demonstrates that companies that possess robust entrepreneurial orientation (EO) and employ effective stakeholder engagement methods, based on a knowledge-based approach, are more likely to attain superior performance levels. The results suggest that EO promotes creativity and adaptation, whereas stakeholder involvement guarantees alignment with stakeholder expectations and the acquisition of resources. The outcomes are further supported by the knowledge-based theory, which utilises organisational knowledge to improve strategic decision-making and performance.

Nevertheless, the study contains constraints. The main emphasis is on theoretical frameworks, with limited empirical validation, which could impact the generalisability of the conclusions. Furthermore, the research's cross-sectional design only captures a momentary view of the relationships, thus disregarding the dynamic and changing nature of these interactions over time. The process entails a comprehensive examination of theoretical principles along with an assessment of relevant literature. This approach offers a thorough and all-encompassing conceptual framework; however, it lacks empirical data to substantiate the theoretical claims. Future research would be enhanced by doing empirical investigations that examine these theories in other sectors and organisational environments in order to confirm the hypothesised links.

The scholars suggest that enterprises should combine entrepreneurial orientation (EO) and stakeholder engagement techniques, while utilising existing knowledge resources, in order to

improve performance. It is recommended that organisations consistently allocate resources to knowledge management methods and actively involve stakeholders in order to adjust to evolving market conditions and enhance overall results. Furthermore, it is recommended that future study prioritise longitudinal studies and empirical investigations in order to substantiate and enhance the proposed theoretical correlations[49].

The researchers investigate the impact of entrepreneurial orientation (EO) on improving marketing performance. Their research demonstrates that EO has a beneficial effect on marketing performance by influencing innovation, proactiveness, and risk-taking[50]. Companies that have higher degrees of EO are more effectively positioned to adjust to market fluctuations, create novel marketing tactics, and engage in controlled risks, all of which jointly enhance their marketing effectiveness. Nevertheless, the study has certain constraints. The research is predominantly cross-sectional, providing a limited view of the correlation between EO and marketing performance, without capturing the temporal evolution of these dynamics. Moreover, the study's concentration on a particular business or region may restrict the applicability of the results to different settings. The approach employed relies on a survey of companies, which offers quantitative insights into the correlation between EO and marketing performance. Although this approach enables a comprehensive comprehension of the patterns and connections, it falls short in providing detailed qualitative insights that could provide a more intricate grasp of the fundamental mechanisms.

The authors suggest that companies should develop a robust entrepreneurial orientation (EO) by promoting an environment that fosters innovation, encourages proactive actions, and demonstrates a willingness to take measured risks. It is recommended that organisations allocate resources towards training and development programmes in order to improve EO among personnel. Additionally, integrating EO principles into strategic planning can effectively enhance marketing effectiveness.

Future study would be enhanced by doing longitudinal studies and expanding the sample size in order to validate these findings and investigate further aspects that may impact the association between entrepreneurial orientation and marketing performance[50].

The scholars examine the impact of technology adoption and entrepreneurial orientation (EO) on the entrepreneurial endeavours of rural women in India[51]. Their research indicates that the adoption of technology has a considerable favourable effect on entrepreneurial orientation (EO) among rural women, which then leads to good implications on their entrepreneurial results. The study emphasises that women's access to technology provides them with enhanced resources and information, hence facilitating their capacity to actively participate in entrepreneurial endeavours. Nevertheless, the study is subject to some constraints. The study predominantly depends on a particular regional sample, which may not comprehensively reflect the varied experiences of rural women throughout other regions of India. Furthermore, the research is conducted using a cross-sectional design, which means that data is collected at a specific moment in time. This approach may not take into consideration any changes or advancements in technology adoption and entrepreneurial orientation that occur over time.

The methodology utilised involves conducting a survey among women living in rural areas, which yields quantifiable data regarding their utilisation of technology and EO. Although this technique provides useful insights into overall patterns and connections, it lacks the qualitative depth necessary to fully understand how the adoption of technology directly impacts entrepreneurial operations. The authors suggest that policy-makers and development agencies should improve rural women's access to technology in order to increase their economic opportunities and entrepreneurial endeavours. The recommendation is to introduce training programmes aimed at enhancing digital literacy and fostering support networks that can assist women in incorporating technology into their

enterprise operations. Subsequent studies could investigate the long-term consequences and incorporate a broader range of participants to gain a deeper understanding of how technology influences entrepreneurial orientation and entrepreneurship in various rural settings[51].

The academics explore the impact of entrepreneurial competences, entrepreneurial orientation (EO), entrepreneurial networks, and government business support on the performance of small and medium-sized enterprises (SMEs)[52]. They specifically examine how the external environment moderates these relationships. Their research suggests that although all of these elements have a beneficial effect on the performance of small and medium-sized enterprises (SMEs), the influence of these linkages is greatly influenced by the external environment. In favourable external circumstances, entrepreneurial talents and government backing have a higher beneficial impact on performance, while in tough environments, their effects are weaker. There are various constraints in the investigation. The analysis primarily depends on data from small and medium-sized enterprises (SMEs) in a particular geographic area, which may not completely reflect the range of external circumstances experienced by SMEs in various contexts. In addition, the research utilises a cross-sectional methodology, which offers a momentary depiction of the interactions rather than a perspective on how these dynamics progress over time.

The study used a quantitative methodology, utilising questionnaires to collect data on entrepreneurial competences, entrepreneurial orientation (EO), networks, and business support from small and medium-sized enterprise (SME) owners and managers. This methodology enables a comprehensive examination of connections, but it may lack the thoroughness offered by qualitative data, which could offer more intricate insights into the interplay of various components under different external circumstances. The researchers suggest that small and medium-sized enterprises (SMEs) should prioritise improving their entrepreneurial skills and establishing robust networks in

order to enhance their performance, particularly amid difficult external conditions. Additionally, they propose that government policies should be customised to offer more efficient assistance according to the distinct requirements of SMEs in varying external circumstances. In order to better understand the impact of changes in the external environment on the correlations between these variables, future study would be well-served by adopting a longitudinal approach[52].

The researchers examine the impact of digital entrepreneurship and entrepreneurial orientation on the desire of family businesses to embrace artificial intelligence (AI)[53]. They specifically analyse the function of business innovativeness as a mediator in this relationship. Their research indicates that both digital entrepreneurship and entrepreneurial orientation have a substantial impact on the intention to use AI. The function of business innovativeness is essential in moderating the relationship between these parameters and the intention to integrate AI. Family firms that have a stronger focus on digital entrepreneurship and entrepreneurial orientation are more inclined to utilise artificial intelligence (AI) if they demonstrate higher levels of innovativeness. The research is subject to many limitations, including its dependence on self-reported data provided by family company managers, which could potentially introduce bias. In addition, the research is cross-sectional, meaning it captures a single moment in time rather than studying changes over a period. Furthermore, it predominantly concentrates on family businesses, which may not be applicable to other types of enterprises. The scholars utilised a quantitative methodology by employing surveys to gather data from family business managers. The data collected focused on their digital entrepreneurship practices, entrepreneurial orientation, and innovativeness. This method is efficient in detecting correlations but may not encompass the underlying, qualitative features of how these factors interrelate. The report suggests that family firms should prioritise the development of an innovative culture in order to properly utilise their digital and entrepreneurial potential. Furthermore,

it implies that policies and assistance programmes designed to encourage the adoption of AI should prioritise improving enterprise innovativeness. Future study could investigate longitudinal studies to gain insight into the evolution of these dynamics and assess their relevance in various business contexts[53].

The study investigates the relevance of concentrating on entrepreneurial orientation (EO) at the individual level, a domain frequently overlooked in current literature that predominantly highlights organisational or group-level evaluations[54]. It posits a persuasive case that entrepreneurial orientation (EO) may be thoroughly examined from an individual standpoint, emphasising the personal elements that affect entrepreneurial behaviour and decision-making. The study reveals that individual-level entrepreneurial orientation might offer profound insights into the motivations, abilities, and hazards linked to entrepreneurship, especially during the initial phases of venture establishment. Moreover, the study reveals that individual entrepreneurial orientation strongly influences entrepreneurial success by shaping the human characteristics that foster innovation, opportunity recognition, and risk tolerance.

Notwithstanding the insights offered, the study identifies multiple deficiencies in the existing research on EO. A significant deficiency is the insufficient investigation of the correlation between individual-level entrepreneurial orientation and long-term business performance, especially regarding sustainability and expansion. The authors propose that whereas entrepreneurial orientation (EO) at the individual level is associated with initial entrepreneurial activities, its enduring impact on business outcomes has yet to be thoroughly investigated. A further gap is the absence of context-specific research that consider varying cultural, economic, and institutional settings, which may affect the manifestation and impact of individual entrepreneurial orientation on initiatives. The research necessitates a more profound comprehension of the interplay between

individual-level entrepreneurial orientation and other elements, including personal values, social networks, and external support systems[54].

The research advocates for additional examination of the long-term impacts of individual-level entrepreneurial orientation on the sustainability and scalability of entrepreneurial endeavours, considering various environmental factors that affect entrepreneurial behaviour. It recommends that researchers investigate cross-cultural and cross-sectoral studies to comprehend how diverse settings influence individual entrepreneurial orientation and its subsequent effect on entrepreneurial success. Moreover, the research promotes the creation of more sophisticated models that integrate not only the characteristics and behaviours linked to individual entrepreneurial orientation (EO) but also the interaction between EO and external contextual elements, including social and financial capital. The study advocates for the incorporation of interdisciplinary methodologies, integrating psychological and sociological viewpoints, to achieve a comprehensive understanding of entrepreneurial dynamics at the human level[54].

The authors examine the impact of big data analytics capabilities on business model innovation, with a particular focus on the mediating effect of entrepreneurial orientation[55]. The results indicate that strong talents in analysing large amounts of data have a considerable positive impact on the development of new business models. This relationship is mediated by the presence of an entrepreneurial mindset. Companies that possess sophisticated data analytics capabilities and demonstrate a strong entrepreneurial orientation are more likely to effectively innovate their business models. There are several constraints in the study. The study relies on cross-sectional data, which may not adequately capture the long-term impact of big data analytics and entrepreneurial mindset on business model innovation.

Moreover, the sample might not comprehensively encompass all industries, which could impact the generalisability of the findings. The study exclusively examines the role of big data analytics on business model innovation, without considering other technological or strategic aspects. The research employs a quantitative approach, utilising survey data to evaluate the correlations among big data analytics capability, entrepreneurial orientation, and business model innovation. This approach yields significant insights but may not fully encompass the intricacies of how these aspects interrelate in diverse organisational situations. In order to overcome these constraints, the study suggests that companies should allocate resources to enhance their big data analytics capabilities and foster an entrepreneurial mindset to stimulate business model innovation. Additional research might investigate these dynamics in other sectors and over a period of time to gain a more thorough comprehension of the ways in which big data analytics and entrepreneurial orientation contribute to the invention of business models[55].

The researchers conducted a study to investigate the correlation between an individual's entrepreneurial orientation (EO), entrepreneurship education, entrepreneurial motives, and entrepreneurial intents[56]. The research's results revealed that entrepreneurial motivations play a crucial role in moderating the relationship between individual EO, entrepreneurship education, and entrepreneurial intention. This implies that the factors motivating individuals to participate in entrepreneurship have a significant impact on moulding their intentions to become entrepreneurs. An area of deficiency noted in the study is the necessity for additional investigation into the precise categories of entrepreneurial incentives that impact entrepreneurial intents. Although the research identified a connection between these factors, gaining a more profound comprehension of the intricacies and diversities within entrepreneurial motives could offer subtler and detailed insights. The scholars employed a quantitative methodology to gather and analyse data.

Data collection for this study involved the use of surveys and statistical tools to acquire information on several factors including individual entrepreneurial orientation, entrepreneurship education, entrepreneurial motives, and entrepreneurial goals. Mediation analysis facilitated the comprehension of the fundamental mechanisms and associations among these variables. Considering the discoveries and constraints of the study, various suggestions might be proposed for future research and application. Longitudinal studies are necessary to investigate the progression of entrepreneurial motives over time and their impact on long-term entrepreneurial ambitions. Qualitative research approaches can provide detailed insights into the subjective feelings and processes associated with entrepreneurial decision-making. Furthermore, the inclusion of contextual aspects like as cultural influences or industry-specific dynamics could enhance the comprehension of entrepreneurial behaviour in a more thorough manner. Ultimately, this study provides valuable insights for educators and policymakers to develop more impactful entrepreneurship education programmes that address a wide range of motivational factors and bolster individuals' entrepreneurial intents[56].

The research examines the mediating role of green innovation and the moderating effect of resource acquisition on the relationship between green entrepreneurial orientation (GEO) and the performance of entrepreneurial businesses, focussing specifically on the influence of enterprise age[57]. It concludes that green innovation serves a crucial mediating function, amplifying the beneficial impacts of GEO on corporate performance. The research indicates that companies with a robust green entrepreneurial attitude are more likely to implement sustainable innovations, hence enhancing their overall success. The study indicates that resource acquisition, specifically financial and human resources, influences the relationship between GEO and enterprise success. Firms having superior access to resources are more likely to gain advantages from a robust GEO. The

research indicates that the age of an organisation affects the relationship, implying that older firms may more readily incorporate green innovations into their strategy owing to their established capabilities and resource foundations[57].

The study offers significant insights into green innovation and resource acquisition, however numerous shortcomings are recognised. A significant gap exists in the insufficient examination of how various resource categories (e.g., social capital, technological resources) distinctly influence the performance results of organisations with differing degrees of GEO. The research highlights an insufficient focus on external environmental elements, like regulatory frameworks and market demand for green products, which may affect enterprises' capacity to execute green technologies effectively. The study inadequately addresses firm age as a moderating variable, necessitating additional investigation into how different business lifecycle stages (e.g., startup versus maturity) affect the uptake and efficacy of green technologies. The research indicates that the unspecified geographical setting may restrict the generalisability of the findings to other locations or sectors.

The article suggests that subsequent research should investigate the particular resources that most significantly influence the relationship between GEO and company performance. It also necessitates a comprehensive analysis of external issues, like governmental rules, consumer behaviour, and industry standards, to comprehend the interplay of these aspects with green innovation initiatives. The research indicates that subsequent investigations should concentrate on the lifecycle phase of companies to enhance comprehension of the temporal evolution of green innovation adoption and its variations between nascent and mature enterprises. Furthermore, it advocates for cross-national studies to analyse how companies in diverse cultural and legislative environments engage with green innovation and GEO, so offering a comprehensive insight into the determinants affecting the performance results of entrepreneurial enterprises. Finally, the study

recommends a comprehensive examination of the precise mechanisms by which resource acquisition affects the efficacy of GEO, emphasising the interplay of various resources (e.g., financial, human, technological) with green innovation projects[57].

The research reveals that entrepreneurial orientation has a considerable impact on the performance of small and medium-sized enterprises (SMEs), with structural infrastructure capability playing a vital role as a mediating element[58]. The study emphasises that small and medium-sized enterprises (SMEs) with a strong entrepreneurial mindset tend to achieve better results, mainly because of their improved structural abilities. These abilities help them allocate resources effectively and make strategic decisions. Nevertheless, the study has certain constraints that require careful evaluation. An important limitation is the restricted geographic scope of the research, which may hinder the applicability of the findings to different situations or businesses.

Moreover, the dependence on self-reported data from small and medium-sized enterprises (SMEs) may generate biases, hence impacting the veracity of the findings. The authors also recognise the necessity of conducting longitudinal research in order to gain a deeper understanding of the interplay between entrepreneurial orientation and performance as they evolve over time. The research technique utilised a quantitative approach, employing surveys to gather data from small and medium-sized enterprises (SMEs) in the specified region. An organised survey was conducted to collect information on entrepreneurial mindset, capacity for structural development, and measures of performance. The data were further examined utilising statistical methodologies to authenticate the hypothesised associations between the variables.

In order to improve the practical applications of the research, the authors suggest that small and medium-sized enterprises (SMEs) should prioritise the development of their structural infrastructure capacities in order to successfully utilise their entrepreneurial attitude. SMEs can enhance their

overall performance by allocating resources to the development of systems and procedures that foster innovation and strategic agility. Moreover, the authors propose that policymakers should establish a conducive atmosphere that promotes entrepreneurial endeavours and facilitates the growth of infrastructure within SMEs to stimulate economic expansion[58].

The research explores the mediating influence of absorptive capacity on the connection between information sharing and entrepreneurial orientation (EO), while also assessing the moderating impact of opportunity recognition[59]. The results demonstrate that absorptive capacity serves a crucial mediation function, enhancing the influence of knowledge exchange on entrepreneurial orientation. This indicates that companies with greater absorptive capacity are more proficient at converting external knowledge into actionable insights, hence improving their entrepreneurial orientation. Moreover, opportunity recognition was identified as a moderating factor in the relationship between knowledge sharing and entrepreneurial orientation (EO), suggesting that firms adept at identifying and capitalising on opportunities can more efficiently utilise shared knowledge to enhance innovation and performance. The study highlights the significance of absorptive capacity and opportunity detection in cultivating a dynamic and proactive entrepreneurial perspective.

The study offers significant insights on absorptive capacity and opportunity awareness, although some shortcomings are identified. The research predominantly emphasises internal business skills, while giving less consideration to external environmental elements that could affect information sharing and entrepreneurial orientation, including market conditions and regulatory frameworks. Furthermore, the study fails to differentiate between various forms of knowledge (e.g., tacit versus explicit) and their individual effects on absorptive capacity and entrepreneurial orientation (EO). The impact of information sharing across many industries remains inadequately examined, as

results may change markedly based on the industry environment. The influence of leadership and organisational culture on enhancing absorptive ability and opportunity recognition is inadequately explored, indicating that these elements may be pivotal in the process yet remain superficially examined. Ultimately, the cross-sectional design of the study restricts the capacity to establish causal inferences, whereas longitudinal studies could yield more thorough insights into the evolution of these associations over time.

The paper suggests that subsequent research should investigate the impact of external environmental elements on the interplay between information sharing, absorptive capacity, and entrepreneurial inclination. Comprehending the influence of market dynamics, technical innovations, and regulatory frameworks may offer a more comprehensive context for the results. Furthermore, subsequent research should differentiate between various forms of knowledge (e.g., tacit and explicit) to evaluate their distinct impacts on absorptive capacity and entrepreneurial orientation. The influence of leadership and organisational culture warrants further examination to comprehend their impact on the absorptive capacity and opportunity recognition processes inside organisations. Moreover, it is advisable for future study to utilise longitudinal approaches to more effectively assess the enduring impacts of information sharing and absorptive capacity on entrepreneurial orientation, together with the dynamic progression of opportunity recognition over time. Finally, research across several industries would facilitate the generalisation of findings and elucidate sector-specific dynamics that may affect the link between these variables[59].

The research reveals that entrepreneurial attitude has a substantial impact on business performance in several cultural settings, particularly in China, Mexico, and Spain[60]. The multigroup analysis discloses that although there is a general positive correlation between entrepreneurial orientation and business performance, the intensity and characteristics of this correlation differ among the three

nations. Chinese enterprises had a greater dependence on innovation as a catalyst for success, in contrast to Mexican and Spanish firms, which displayed more significant impacts from risk-taking and proactivity. Nevertheless, the research does have certain gaps and limits. An important constraint is the presence of potential cultural biases in the study, as the authors note that their findings may not be completely applicable to other nations or regions beyond the three that were specifically examined. Furthermore, due to the cross-sectional nature of the data collection, the study only represents a single moment in time, thus missing out on the changing dynamics of entrepreneurial attitude and its influence on performance. Moreover, the dependence on self-reported measurements may induce biases, hence impacting the precision of the findings.

The research employed a quantitative methodology, utilising questionnaires to collect data from firms in the three nations. The authors developed structured questionnaires to evaluate several aspects of entrepreneurial orientation and enterprise performance. The data collected were analysed using multigroup structural equation modelling to examine the linkages and variations across different cultural contexts. Based on the authors' findings, it is advised that enterprises customise their entrepreneurial methods to match the particular cultural and economic environments in which they function. For example, Chinese enterprises may gain advantages by giving priority to innovation projects, whereas firms in Mexico and Spain could concentrate on risk management and aggressive market participation. In addition, the authors propose that policymakers take into account the cultural aspects of entrepreneurship when developing assistance programmes for small and medium-sized enterprises (SMEs). This will ensure that these initiatives are tailored to the specific context and are successful in promoting entrepreneurial development[60].

The study establishes a robust and affirmative correlation between entrepreneurial self-efficacy and entrepreneurial orientation (EO)[61]. This emphasises the crucial roles these factors play in the growth

and establishment of small and medium enterprises (SMEs). The study shows that entrepreneurs with higher levels of self-efficacy are more likely to have a more EO. This, in turn, has a favourable effect on different elements of SME performance. These findings indicate that promoting self-assurance and conviction in one's entrepreneurial skills can result in increased levels of innovation, proactivity, and willingness to take risks, which are crucial for the development and long-term success of SMEs. Notwithstanding these observations, the study exhibits various deficiencies and constraints. A significant constraint is the concentration on a particular geographical location, which may limit the relevance of the results to other regions or sectors. Moreover, the study heavily depends on self-reported data, which gives rise to questions regarding possible biases and inaccuracies in the responses. The cross-sectional design's limitation lies in its inability to establish causation, as it just catches a snapshot in time rather than monitoring changes over an extended duration[61].

The research technique used a quantitative approach, where standardised questionnaires were used to collect data from a sample of entrepreneurs who own small and medium-sized enterprises (SMEs). The instruments assessed levels of entrepreneurial self-efficacy and direction. Subsequent research was conducted to investigate the links between these factors and their consequences for small and medium-sized enterprise (SME) development. The author's findings suggest that entrepreneurship development programs should prioritise the improvement of self-efficacy in both aspiring and existing entrepreneurs. This may entail implementing training and mentoring programs with the specific goal of fostering self-assurance and enhancing abilities. Moreover, it is advisable for policymakers to establish favourable conditions that enable entrepreneurs to easily obtain resources, establish connections, and receive training. This will ultimately empower entrepreneurs

to embrace a more dynamic entrepreneurial mindset, leading to the development of small and medium-sized enterprises[61].

The research examines the impact of institutional assistance on agricultural entrepreneurial performance, emphasising the mediating function of entrepreneurial orientation (EO)[62]. The findings indicate that institutional support is essential for improving farm entrepreneurial performance by positively affecting the entrepreneurial orientation of farm managers. The research emphasises that institutional support mechanisms - including government policies, financial access, training programme, and infrastructure - facilitate the cultivation of a proactive and innovative entrepreneurial approach. This therefore enhances agricultural production by fostering increased risk-taking, innovation, and proactive behaviours among farm entrepreneurs. The study indicates that entrepreneurial orientation (EO) mediates the relationship between institutional support and farm performance, implying that institutional support improves EO, subsequently resulting in superior entrepreneurial outcomes.

Notwithstanding the significant contributions, the study reveals multiple deficiencies. A significant restriction is the concentration on a particular agricultural sector, which may preclude the generalisation of the findings across diverse farming situations. The study focusses exclusively on institutional assistance, neglecting exogenous factors like market conditions, consumer behaviour, and global agricultural trends that could significantly affect farm performance. Moreover, although entrepreneurial orientation is recognised as a mediator, the study fails to thoroughly investigate the influence of other possible mediators or moderators, including technological adoption, social capital, or leadership styles, which could also impact the relationship between institutional support and farm performance. A further limitation is the dependence on cross-sectional data, which restricts the capacity to determine causation among institutional support, entrepreneurial orientation, and

agricultural performance. Longitudinal study may yield more substantial insights into the temporal dynamics of these interactions. The research mostly examines institutional assistance in a general context, lacking an analysis of the distinct contributions of various types of institutional support (e.g., financial versus non-financial).

Future research ought to investigate the influence of institutional support across various agricultural sectors and geographies to improve the generalisability of the results. Moreover, broadening the study to incorporate additional external elements such as market dynamics, consumer preferences, and environmental constraints will yield a more holistic understanding of farm performance. Investigating additional mediators or moderators, including technological adoption, leadership styles, and networks, would enhance comprehension of the mechanisms by which institutional support influences farm performance. Longitudinal studies are advised to elucidate the changing dynamics of the interaction among institutional support, entrepreneurial orientation, and farm performance over time, hence offering deeper insights into causal relationships. Moreover, subsequent research could distinguish among different types of institutional support to evaluate their respective impacts on farm performance. Qualitative research could enhance quantitative findings by offering greater insights into the particular obstacles encountered by farm entrepreneurs in efficiently utilising institutional support[62].

The research establishes a robust association between entrepreneurial orientation and competitive advantage, which has a substantial impact on the performance of small and medium enterprises (SMEs)[63]. The study illustrates that small and medium-sized enterprises (SMEs) with greater degrees of entrepreneurial orientation, which is defined by innovativeness, proactiveness, and risk-taking, generally experience superior growth and personal wealth results. These findings indicate that promoting an entrepreneurial attitude can result in increased competitiveness and improved

performance measures in the small and medium-sized enterprise (SME) industry. Although the study provides significant insights, it also admits certain gaps and limits. An important constraint is the dependence on self-reported measures, which may introduce prejudice and impact the precision of the data concerning entrepreneurial orientation and performance. Furthermore, the research generally concentrates on particular sectors, hence limiting the generalisability of the findings to a wider array of industries. The study's cross-sectional design restricts the capacity to show causal correlations over time, as it only captures a single instant rather than longterm patterns.

The research adopted a quantitative methodology, using structured questionnaires to collect data from a sample of small and medium-sized enterprises (SMEs). The authors employed statistical tools to analyse the gathered data in order to investigate the connections between the concepts of entrepreneurial orientation, competitive advantage, and different performance indicators, such as business growth and personal wealth. Based on their research, the authors suggest that small and medium-sized enterprises (SMEs) should develop a robust entrepreneurial mindset in order to improve their competitive edge and achieve better performance results. They propose the implementation of entrepreneurial training programs to provide business owners with the essential skills and mindset. In addition, governments should strive to create a conducive climate for small and medium-sized enterprises (SMEs) by offering them access to resources, funding, and mentorship programme. These initiatives can facilitate the development of innovative and proactive business strategies, thereby promoting the growth and long-term viability of the SME sector[63].

The research presents the notion of "entrepreneurial entropy," a theoretical framework elucidating how resource depletion, especially due to elevated entrepreneurial orientation (EO), might result in organisational failure[64]. The principal conclusion of the study is that although entrepreneurial orientation can stimulate innovation, risk-taking, and proactive behaviours that foster business

growth, an overemphasis on these aspects without a judicious distribution of resources may result in organisational entropy. The authors contend that companies with elevated entrepreneurial orientation may encounter resource depletion, hence hastening organisational demise. This notion questions the conventional belief that entrepreneurial attitude invariably contributes to company success. The paper examines how organisational dynamics and internal decision-making processes might intensify this phenomenon, resulting in the depletion of essential resources required for continuous growth and survival.

The research provides significant insights into entrepreneurial entropy, however major gaps persist. A notable weakness is the absence of empirical evidence to substantiate the theoretical framework. The notion of entrepreneurial entropy is introduced as a novel framework for comprehending business failure, however it remains predominantly unexamined in practical contexts. Additional study is required to substantiate the idea and evaluate its relevance across various industries and organisational sizes. The study inadequately addresses how organisations might decrease entrepreneurial entropy, resulting in a significant void in practical assistance for managers. The influence of external factors, such as market conditions or economic recessions, on the intensification of resource depletion is not thoroughly examined, which could offer a more comprehensive perspective on corporate failure. Moreover, the study fails to distinguish among various forms of entrepreneurial orientation (e.g., innovativeness, risk-taking, proactivity), which could exert disparate influences on resource depletion and organisational results.

Subsequent research ought to concentrate on empirically examining the concept of entrepreneurial entropy to enhance comprehension of its practical ramifications. Longitudinal research may facilitate the monitoring of high entrepreneurial orientation's effects over time, providing a more precise understanding of resource depletion inside organisations. Future studies should examine

measures to mitigate entrepreneurial entropy, including improved resource management, strategic planning, and the equilibrium between innovation and resource conservation. An in-depth examination of the external environment's influence on resource depletion could enhance the framework, particularly in unstable market situations. Furthermore, researchers ought to investigate various forms of EO to ascertain if specific elements of entrepreneurial orientation (EO) exert a more pronounced influence on entrepreneurial entropy than others. It would be beneficial to examine the organisational structures and leadership styles that could assist organisations in mitigating the adverse impacts of excessive entrepreneurial orientation[64].

The research examines the COVID-19 pandemic as an external catalyst for entrepreneurship, emphasising the significance of entrepreneurial self-efficacy (ESE) and entrepreneurial orientation (EO)[65]. The primary conclusion of the research indicates that during the pandemic, entrepreneurs demonstrating elevated self-efficacy and entrepreneurial orientation were more adept at navigating the hurdles presented by the crisis. The authors discovered that although COVID-19 caused substantial disruptions, it simultaneously fostered chances for creativity, risk-taking, and proactive behaviours, which are fundamental components of entrepreneurial orientation. The study emphasises that entrepreneurial self-efficacy, which denotes an individual's confidence in their capacity to execute entrepreneurial tasks, was a vital factor that empowered entrepreneurs to navigate the unpredictability and challenges posed by the epidemic. The pandemic served as a catalyst for individuals with elevated levels of ESE and EO, augmenting their ability to capitalise on emerging possibilities.

Nevertheless, its significant contributions, the study has some deficiencies. The research identifies the significance of entrepreneurial self-efficacy and direction in enhancing resilience during the pandemic; however, it does not provide a thorough examination of how these components differ

across various industries or geographies. The study primarily relies on a general background, neglecting to investigate industry-specific problems that may have influenced entrepreneurial actions variably. The study also did not investigate the long-term impacts of the pandemic on entrepreneurial orientation and self-efficacy. It is crucial to ascertain if the pandemic's external facilitator effect is transient or if it results in enduring behavioural modifications among entrepreneurs. The research fails to thoroughly examine the potential adverse effects of increased entrepreneurial orientation, including risk-taking behaviours that may result in overextension or burnout. Moreover, the study depends on self-reported data, which may be prone to bias, especially in evaluating entrepreneurial self-efficacy.

Future research should investigate the variation in the relationship between entrepreneurial self-efficacy and entrepreneurial orientation across other sectors, especially those significantly affected by the epidemic, such as hospitality and retail. Longitudinal studies may be beneficial in assessing if the increased entrepreneurial mindset induced by the pandemic results in enduring changes in entrepreneurial behaviours. Researchers ought to examine the possible drawbacks of elevated entrepreneurial orientation during crises, assessing whether excessive risk-taking or an undue focus on innovation may prove damaging in the long term. Conducting studies in several cultural contexts would be advantageous to comprehend the influence of social norms and values on entrepreneurial self-efficacy and direction, particularly in response to external shocks such as the epidemic. Moreover, subsequent research should integrate objective metrics of entrepreneurial performance, including revenue growth or business survival rates, to corroborate the self-reported results. Finally, examining the impact of external support systems, including government regulations and financial aid, may yield a more thorough comprehension of how entrepreneurs manage crises[65].

The investigation reveals a notable and favourable correlation between entrepreneurial approach and enterprise performance among Malay-owned small and medium enterprises (SMEs) in Malaysia[66]. The research suggests that the aspects of entrepreneurial orientation (EO), such as innovativeness, proactiveness, and risk-taking, have a vital role in influencing several performance measures, such as profitability and market competitiveness. These findings indicate that SMEs that embrace a proactive and innovative mindset are more likely to attain long-lasting growth and triumph in their specific sectors. However, the study also highlights certain deficiencies and constraints. A key constraint is the concentration on a particular demographic group, namely Malay-owned SMEs, which could restrict the applicability of the results to a wider array of SMEs in Malaysia or other cultural settings. In addition, the research mainly depends on quantitative data collected through questionnaire, which may not fully encompass the complex qualitative factors that influence the relationship between EO and corporate performance. The study's cross-sectional approach limits the capacity to establish causal linkages across time, as it simply provides a glimpse of the current status of these firms.

The research utilised Partial Least Squares (PLS) analysis to assess the data obtained from structured questionnaires distributed to a sample of small and medium-sized enterprises (SMEs) owned by Malays. By employing this approach, the researchers were able to successfully examine the connections between entrepreneurial orientation and performance metrics, offering valuable insights into the dynamics within this particular company context. The authors suggest that Malay-owned SMEs should actively develop an entrepreneurial orientation in order to improve their overall business performance, based on their research findings. They propose efforts including training programs that specifically target the enhancement of entrepreneurial innovation and risk management abilities. Moreover, the authors highlight the significance of establishing a nurturing

environment for SMEs by implementing government policies and providing resources that promote entrepreneurship. This would ultimately lead to a more favourable atmosphere for SMEs to prosper and make substantial contributions to the nation's economic sustainability[66].

The research reveals a noteworthy correlation between entrepreneurial orientation (EO) and the performance of small and medium-sized enterprises (SMEs)[67]. It is observed that learning orientation plays a vital role as a mediator in this relationship. The study emphasises that some aspects of EO, such as being innovative, taking risks, and being proactive, have a good impact on the success of SMEs. This effect is even stronger when there is a strong focus on learning. This indicates that SMEs that place importance on both entrepreneurial and learning orientations are more capable of adjusting and succeeding in competitive markets. Although the study provides significant insights, it also admits certain gaps and limits. A significant constraint is the dependence on a particular setting, which could limit the relevance of the results to SMEs in different locations or industries. In addition, the study utilises a cross-sectional design, which means that it collects data at a certain moment in time. This design restricts the ability to evaluate long-term impacts or establish cause-and-effect links. The researchers also highlight that the emphasis on quantitative indicators may fail to consider the subtle, qualitative components of how learning orientation functions inside SMEs.

The research employed a systematic survey disseminated to a subset of small and medium-sized enterprises (SMEs), with data analysed using statistical methods to investigate the connections between entrepreneurial orientation, learning orientation, and performance. By employing a quantitative methodology, the authors were able to establish connections and evaluate the influential function of learning orientation with great effectiveness, thereby offering a well-defined structure for comprehending the underlying dynamics. Based on their research, the scholars suggest

that small and medium-sized enterprises (SMEs) should aggressively promote both entrepreneurial and learning orientations in order to improve their performance. They propose the implementation of training and development programs with the goal of fostering innovative capabilities and promoting a culture of ongoing learning. Moreover, the authors propose that government and industry stakeholders should implement supportive policies and initiatives to create a favourable environment for entrepreneurial experimentation and learning. This will enable small and medium-sized enterprises (SMEs) to better overcome challenges and take advantage of opportunities[67].

The investigation reveals that technology, entrepreneurship, and consumer attitudes have a substantial influence on firm success[68]. The study shows that enterprises that successfully utilise technical improvements and cultivate an entrepreneurial mindset are more likely to attain superior performance levels. Furthermore, the research emphasises the significance of favourable consumer attitudes, indicating that companies that actively interact with their consumers and comprehend their preferences can improve their market standing and overall efficiency. Nevertheless, the study also highlights certain deficiencies and constraints. A constraint exists due to the dependence on a particular geographical environment, potentially limiting the applicability of the results to companies operating in other areas or industries. In addition, the study utilises a cross-sectional design, which gathers data at a certain moment, hence posing difficulties in establishing cause-and-effect links or monitoring changes over a period of time. The authors also acknowledge that an emphasis on quantitative data may disregard qualitative aspects that play a role in corporate performance, such as organisational culture and employee engagement.

The research employed a methodology that includes gathering data via structured questionnaires distributed to a sample of enterprises. Subsequently, the data was subjected to statistical analysis in order to evaluate the correlations between technology, entrepreneurship, customer sentiments, and

performance. By employing a quantitative method, the authors were able to establish significant correlations and get valuable insights into the interaction between these variables. The scholars' findings suggest that organisations should prioritise the incorporation of technology and entrepreneurship into their strategy frameworks in order to improve performance. They recommend investing in training programmes that cultivate employees' technological abilities and entrepreneurial mindset. In addition, the writers highlight the significance of comprehending and tackling consumer sentiments through focused marketing tactics and customer engagement activities. By cultivating a culture that supports innovation and is highly sensitive to consumer needs, enterprises can greatly enhance their competitive edge and overall success[68].

The research found a significant link between the acquisition of technology and the performance of small and medium enterprises (SMEs)[69]. The study specifically emphasised the role of innovation and export activities, as well as the perceptions of owner-managers, in mediating this correlation. The study demonstrates that small and medium-sized enterprises (SMEs) that actively adopt new technologies tend to achieve superior performance, particularly when they are also involved in innovative activities and exporting their products. Moreover, the attitudes and opinions of owner-managers have a substantial impact on the adoption and utilisation of these technologies, ultimately affecting the overall success of the organisation.

Although the study provides significant insights, it also admits certain gaps and limits. An important constraint is the emphasis on a particular geographic area, which could impact the relevance of the results to small and medium-sized enterprises (SMEs) operating in different environments or industries. In addition, the study's cross-sectional design only collects data at one specific moment, which restricts the potential to establish cause-and-effect linkages or notice long-term patterns. The authors also highlight that the dependence on quantitative metrics may not

adequately reflect the qualitative subtleties of owner-manager opinions and their influence on technology acquisition.

The research utilised a survey that was issued to a subset of small and medium-sized enterprises (SMEs). The data collected from the survey was then analysed using statistical methods to investigate the connections between technology acquisition, innovation, export activities, and the overall performance of the firms. The utilisation of this quantitative methodology offered a systematic structure for comprehending the underlying dynamics and enabled the writers to pinpoint significant correlations among the variables. Based on their research, the authors suggest that small and medium-sized enterprises (SMEs) should make technology acquisition a top priority in order to improve their performance. It is recommended that companies invest in training and development programs to promote innovation and provide owner-managers with the essential skills and expertise to effectively implement technology. In addition, the authors argue for a legislative climate that is supportive and promotes small and medium-sized enterprises (SMEs) to participate in exporting and adopt technology improvements. This would result in a more competitive business environment that benefits the entire sector[69].

The study found that the use of digital technology by small and medium enterprises (SMEs) had a significant influence on sustainability and value creation[70]. The study highlights that entrepreneurial orientation plays a moderating role in this relationship, suggesting that small and medium-sized enterprises (SMEs) with a proactive and innovative entrepreneurial mindset are more likely to effectively utilise digital technologies for sustainable practices and enhanced performance. The researchers found that implementing such adoption not only enhances operational efficiency but also fits with broader sustainability aims, ultimately leading to competitive advantages in the marketplace. However, the report also emphasises specific shortcomings and limitations. An

inherent limitation of the study is its restricted scope, since it solely concentrates on a specific sample of small and medium-sized enterprises (SMEs).

Consequently, the generalisability of the findings to other industries or geographic regions may be constrained. Moreover, the research mostly employs a cross-sectional technique, which captures a single moment in time and may not adequately represent the dynamic nature of technology adoption or the expanding entrepreneurial environment. The authors recognise that their utilisation of self-reported data from surveys may create biases, as respondents' perspectives of the impact of digital technology may vary. The study involved conducting a systematic survey to collect data from multiple small and medium-sized enterprises (SMEs). The data was analysed using statistical methods to examine the relationships between the adoption of digital technology, sustainability, value generation, and entrepreneurial orientation. Through the utilisation of a quantitative approach, the authors successfully established meaningful correlations and gained vital insights into the interaction of various variables[70].

The findings of the research showed a noteworthy correlation between entrepreneurial orientation and the performance of small and medium-sized enterprises (SMEs), with marketing capabilities and social media usage playing a vital role as intermediary factors[71]. The study shows that small and medium-sized enterprises (SMEs) that have a strong entrepreneurial orientation are more likely to have improved marketing abilities, which in turn has a beneficial impact on their overall performance. Moreover, the proficient utilisation of social media as a marketing instrument enhances this connection, enabling small and medium-sized enterprises (SMEs) to target wider demographics and interact more efficiently with their clientele[71].

Nevertheless, the report admits certain deficiencies and constraints. A significant constraint is the dependence on a particular sample, which may not comprehensively depict the varied landscape of

small and medium-sized enterprises (SMEs) across various sectors or regions. This level of specificity may limit the capacity to apply the findings to a broader audience. In addition, the study has a cross-sectional design, which means that it collects data at a certain moment in time. This design restricts the capacity to make conclusions about cause and effect relationships or to detect changes that occur over time. The authors also highlight that the study predominantly emphasises quantitative data, possibly neglecting qualitative perspectives on how entrepreneurial orientation and social media usage are perceived and implemented within SMEs.

The research methodology employed in this study consisted of administering a well-organised questionnaire to a subset of SMEs. The collected data was then analysed using statistical methods to investigate the connections between entrepreneurial orientation, marketing capacities, social media usage, and performance results. By employing a quantitative methodology, the authors were able to detect meaningful connections and describe the underlying mechanisms that influence the performance of SMEs. The scholars suggest that SMEs should prioritise improving their entrepreneurial orientation in order to better their performance outcomes, based on their research findings. The recommendation is to allocate resources towards enhancing marketing capabilities and successfully utilising social media platforms to optimise consumer engagement and expand market presence. Moreover, the authors support the implementation of training programmes that provide SME owners and managers with the necessary skills to effectively navigate the digital landscape. This will promote a culture of innovation and adaptability, which can result in long-lasting competitive advantages in a rapidly evolving business environment[71].

The authors' findings indicate that small and medium-sized enterprises (SMEs) should give priority to the use of digital technology as a strategic initiative to enhance sustainability and create value. The authors suggest that fostering an entrepreneurial culture within the organisation can amplify the

benefits of embracing technology, encouraging innovation, and actively engaging in sustainable practices. Furthermore, the authors advocate for the adoption of policies and allocation of resources that support the digitalisation of small and medium-sized enterprises (SMEs). This will assist small and medium-sized enterprises (SMEs) in overcoming the challenges associated with adopting new technology and positioning themselves strategically in an increasingly competitive business environment[71].

The research examines the correlation between entrepreneurial orientation (EO) and the performance of small and medium enterprises (SMEs) in Ghana, emphasising the mediating role of network ties in this relationship[72]. The research findings indicate that entrepreneurial orientation, encompassing dimensions like risk-taking, proactiveness, and innovativeness, positively affects SME performance. Moreover, the study emphasises the significance of network connections - both formal and informal - in augmenting the efficacy of entrepreneurial orientation. It discovered that SMEs with robust network connections are more inclined to utilise resources, seize new opportunities, and adeptly manage challenges, thereby enhancing their overall performance. The research indicates that the impact of network connections is especially pronounced for enterprises functioning in resource-limited settings, as these connections can offer essential assistance in knowledge, funding, and market entry.

Although the study offers significant insights, it contains numerous deficiencies. A significant limitation is the cross-sectional design of the data collection, which constrains the capacity to draw causal inferences regarding the relationship among entrepreneurial orientation, network ties, and SME performance. Longitudinal research could offer a better understanding of how these interactions evolve over time and if network ties remain consistently impactful as SMEs grow. The study predominantly concentrates on the Ghanaian context, potentially constraining the

applicability of the findings to other developing economies or regions with distinct institutional or cultural settings. The significance of digital networks and social media platforms in enhancing entrepreneurial endeavours and SME performance remains inadequately examined, despite their growing importance in the global business environment. The study ultimately neglects to consider the potential challenges that SMEs encounter in forming and sustaining network ties, including the resource demands of networking and the risks linked to excessive dependence on particular networks.

Future research should implement a longitudinal design to investigate the enduring impacts of entrepreneurial orientation and network ties on SME performance. This would facilitate a more profound comprehension of the interactions among these variables and their long-term sustainability. Researchers could also expand the scope of the study to include other emerging economies with varied institutional frameworks, which would assist to assess the robustness of the findings across diverse situations. Moreover, considering the growing significance of digital platforms and online communities, future research should investigate the impact of digital network connections - such as those established via social media or professional networks like LinkedIn - on the performance of SMEs. Additionally, study might focus on the hurdles SMEs encounter in creating network relationships, such as financial limits, cultural differences, or access to technology, and explore solutions to overcome these challenges. Lastly, policy implications should be studied, with an emphasis on how governments and institutions may support SMEs in creating and exploiting networks to increase their entrepreneurial capacities and performance[72].

The research examines the correlation among green entrepreneurial orientation (GEO), technological green innovation (TGI), and the influence of resource orchestration capabilities in enabling these dynamics[73]. The results indicate that a robust GEO correlates positively with the

adoption of environmentally sustainable technology advancements. The research highlights that resource orchestration capabilities - specifically the capacity to efficiently organise, deploy, and reconfigure resources - are essential for facilitating green innovation. The research emphasises that companies with exceptional resource orchestration skills can more effectively incorporate green entrepreneurial methods into their operations, hence improving their sustainability initiatives and overall innovation capacity. The study identifies a positive feedback loop in which GEO impacts green innovation, subsequently enhancing the firm's entrepreneurial mindset and contributing to sustained competitive advantage.

Notwithstanding the excellent insights offered, numerous gaps persist in the research. The study primarily examines the direct correlation between GEO and green innovation, neglecting to investigate the potential impact of external factors, such as regulatory frameworks, market demand for eco-friendly products, or societal influences, on this relationship. The research also overlooks the potential hurdles and constraints encountered by organisations in effectively organising resources for green innovation, particularly in the setting of small and medium-sized enterprises (SMEs) that may lack adequate financial or managerial resources. A further deficiency is the emphasis on a narrow array of technological advancements, neglecting the enormous variety of green technology applicable across various industries. The study's sample and geographic focus may restrict the generalisability of the findings to enterprises in diverse institutional or cultural contexts, where resource orchestration and innovation capacities may vary.

Future study should expand its focus to examine the influence of external factors—such as governmental policies, consumer trends, and competitive pressures—on the relationship between GEO and green innovation. Comprehending these external factors can contextualise the findings and offer a more holistic perspective on how organisations might synchronise their entrepreneurial

orientation with green innovation. Moreover, subsequent research should investigate the obstacles encountered by SMEs in adopting green innovations, especially in terms of resource orchestration, and determine solutions that smaller enterprises might utilise to surmount these issues. Research should encompass a wider spectrum of green technological innovations, such as renewable energy solutions, sustainable manufacturing processes, and waste minimisation technologies, to provide a more comprehensive understanding of how various innovations contribute to environmental sustainability. Ultimately, investigating the influence of international or cross-cultural contexts would facilitate the evaluation of whether the findings are consistent across varied markets and industries, thus broadening the relevance of the study's conclusions on a global scale[73].

The researchers examine the impact of socio-technological elements on the alteration of urban environments[74]. The results suggest that technological improvements, together with changing social behaviours, have a profound impact on urban environments by restructuring spatial arrangements and transforming the dynamics of urban life. The study emphasises the role of digital technologies and enhanced connectivity in fostering novel modes of social engagement and the restructuring of communal areas. Furthermore, it is observed that these modifications frequently result in the merging of physical and digital realms, giving rise to hybrid landscapes that defy conventional urban planning principles. Notwithstanding these observations, the study has various constraints. The research largely concentrates on particular urban areas, which may restrict the applicability of its findings to other regions with distinct socio-technological circumstances. In addition, the study heavily depends on qualitative data, which may not fully encompass the extent of quantitative changes taking place in metropolitan areas. Another constraint is the absence of longitudinal data, which may offer a more thorough comprehension of the enduring effects of socio-technological developments on urban environments.

The study utilises a technique that incorporates a literature review, case studies, and qualitative analysis of urban environments impacted by socio-technological transformations. This hybrid methodology enables a comprehensive investigation of the phenomena, yielding a detailed account of how technology and social variables converge to shape urban growth. The authors suggest that urban planners and policymakers should incorporate socio-technological dynamics into their planning procedures in order to effectively adapt to the changing character of urban environments. They propose that forthcoming urban construction should integrate adaptable architecture capable of accommodating technological breakthroughs and evolving social requirements. Furthermore, there is a demand for more extensive, interdisciplinary investigation to gain a deeper understanding of the intricacies of socio-technological elements and their lasting consequences on urban settings[74]. The scholars explore the intricacies of uncertainty, information, and risk in global technology competitions[75]. The findings indicate that countries involved in technological races encounter substantial obstacles as a result of the considerable uncertainty and insufficient information concerning their competitors' capability and intentions. The presence of ambiguity frequently results in strategic choices that can either heighten tensions or foster collaboration, contingent upon the perceived level of risk and the accessibility of dependable information. The study further indicates that the existence of asymmetrical information can intensify competition and distrust among states, potentially resulting in hostilities. Nevertheless, the research exhibits several gaps and limitations. A significant constraint is the dependence on theoretical models and simulations, which may not comprehensively encompass the intricacies and subtleties of actual international relations and technical competitiveness. In addition, the study predominantly concentrates on state actors, disregarding the impact of non-state groups, such as multinational firms and international organisations, which can also exert substantial influence on technology races.

Another constraint arises from the presumption of rational conduct among participants, which may not consistently apply in the realm of global politics, where choices are frequently impacted by various irrational elements and domestic political issues. The study utilises a methodology that combines game theory models and simulations to examine the strategic interactions between countries in technological races. The authors investigate the impact of different levels of uncertainty and information availability on decision-making processes and the probability of conflict or collaboration by using several situations as models.

The methodology enables a methodical analysis of the determinants that influence competition in the field of international technology advancement. Based on the results, the researchers suggest that governments should give priority to enhancing openness and information-sharing systems in order to decrease uncertainty and alleviate the dangers linked to technology competitions. They propose the establishment of international accords or frameworks to promote cooperation and build confidence among states that are in competition with each other. Furthermore, the study proposes conducting additional empirical research to confirm the theoretical models and investigate the influence of non-state players on the dynamics of international technology races. This would enhance the comprehension of the various factors that influence technical competition and the likelihood of conflict in the global sphere[75].

The academics investigate the correlation between the technological capabilities of the government and the utilisation of public-private partnerships (PPPs) for the provision of digital services in Chinese cities[76]. The results indicate that cities with greater levels of government technology capacity are more inclined to participate in public-private partnerships (PPPs) for digital services. This can be ascribed to the governments' excellent technological abilities and understanding, which allow them to interact effectively with private sector partners. In addition, the study reveals that

cities with strong technology infrastructures are more capable of using the knowledge and skills of private organisations, hence improving the overall effectiveness and excellence of digital service provision. The authors also emphasise that political backing and the economic climate at the local level are crucial in enabling these collaborations.

Notwithstanding these observations, the study exhibits various gaps and limitations. A significant constraint is the concentration on Chinese cities, which may restrict the applicability of the results to other situations characterised by distinct political and economic conditions. In addition, the study is based on cross-sectional data, which fails to reflect the dynamic fluctuations in technological capacity and its long-term effects. Additionally, there is a failure to consider the diverse range of digital services offered through PPPs, which may have various impacts on the results of these collaborations. Furthermore, the study fails to thoroughly investigate the difficulties and obstacles encountered by communities with limited technology capabilities in establishing successful public-private partnerships.

The research approach employed in this study entails a rigorous quantitative examination of data obtained from a comprehensive survey conducted in 300 cities across China. The authors employ a statistical model to analyse the relationship between the technological capabilities of governments and the probability of participating in public-private partnerships (PPPs) for the provision of digital services. This method enables them to account for additional factors, such as levels of economic growth and political backing, in order to isolate the influence of technological competence on the formation of public-private partnerships (PPP). The data is enhanced with case studies of specific locations to offer qualitative insights into the practical elements of these collaborations.

The scholars suggest that governments, especially those with limited technology capabilities, should allocate resources to develop their technical expertise and infrastructure. This will enable them to

effectively participate in successful public-private partnerships (PPPs). They propose the development of policy frameworks to assist in the implementation of capacity-building projects and the exchange of knowledge between the public and private sectors. Moreover, the report recommends conducting additional research to investigate the influence of various forms of digital services and the lasting consequences of public-private partnerships (PPPs) on the outcomes of public service delivery. Gaining a comprehensive understanding of these factors could assist policymakers in developing more efficient approaches to harnessing public-private partnerships in the era of digital technology[76].

This research investigates the notion of organisational ambidexterity in nascent SMEs, particularly addressing the perceived discord between entrepreneurial orientation (EO) and process enhancement[77]. The findings indicate that although entrepreneurial mindset fosters innovation and growth in nascent organisations, it may be at odds with process improvement initiatives that necessitate more stability and efficiency. The research indicates that entrepreneurial orientation (EO), defined by risk-taking, proactivity, and innovativeness, frequently results in dynamic transformations within the organisation, which may disrupt the systematic enhancements required for operational efficiency. The research indicates that young SMEs may find it challenging to reconcile the pursuit of new opportunities with the necessity to enhance and optimise existing processes, thus impeding long-term sustainability.

The findings indicate that organisational ambidexterity, defined as the simultaneous exploration of new opportunities and exploitation of current capabilities, may be more challenging for younger enterprises to attain due to resource limitations and insufficient organisational maturity. This creates a conflict between the entrepreneurial impetus for expansion and the necessity for solid, efficient operations that can facilitate scale. The investigation into the discord between entrepreneurial

orientation and process enhancement in nascent small and medium-sized enterprises uncovers multiple deficiencies in the existing research. A significant gap exists in comprehending how the intrinsic attributes of new SMEs - such as resource constraints, organisational culture, and leadership styles - interact with these conflicting aims. Furthermore, the research fails to examine external factors, including market conditions or industry-specific challenges, that could affect the equilibrium between entrepreneurial orientation and process enhancement. The emphasis on young SMEs within a particular environment restricts the applicability of the findings to more established enterprises or those functioning in diverse sectors. Moreover, the study fails to investigate viable solutions or methods that could facilitate young SMEs in attaining ambidexterity or alleviating the conflict between entrepreneurial orientation and process enhancement.

Future research should examine how the distinctive traits of new SMEs - such as their entrepreneurial culture, leadership, and resource allocation strategies - affect their capacity to reconcile entrepreneurial orientation with process enhancement. This research may investigate how leadership styles and organisational practices might either intensify or mitigate the conflict between innovation and efficiency. Moreover, subsequent research might investigate the influence of external factors, including market dynamism, competitive pressure, or regulatory changes, on the manner in which young SMEs navigate the tension between pursuing new possibilities and enhancing procedures.

To address the highlighted incompatibilities, the report recommends that new SMEs implement techniques for incremental innovation and progressive process enhancement. This may entail concentrating on incremental enhancements while also cultivating an entrepreneurial mindset that promotes development and new opportunities. Finally, subsequent research should examine the influence of organisational ambidexterity on the growth trajectory of nascent SMEs and determine

if firms that effectively combine exploration and exploitation are more favourably situated for sustained success[77].

The scholars examine how strategic human resource management (HRM) and entrepreneurial orientation (EO) impact the development of dynamic capacities and innovation in small and medium-sized enterprises (SMEs)[78]. The results indicate that both strategic human resource management (HRM) and entrepreneurial orientation (EO) play a significant role in the advancement of dynamic capacities, which subsequently promotes innovation in small and medium-sized enterprises (SMEs). Strategic human resource management (HRM) strategies, such as talent development and performance management, have been shown to improve the capacity of small and medium-sized enterprises (SMEs) to detect, capture, and adapt resources in order to respond to changing circumstances. Entrepreneurial orientation, which is defined by its innovativeness, proactiveness, and risk-taking, enhances the development of dynamic capabilities by fostering a culture of inquiry and experimentation. The study highlights the importance of SMEs possessing robust dynamic capabilities in order to effectively innovate and sustain a competitive advantage in their specific markets.

Notwithstanding these perceptive discoveries, the investigation possesses some constraints. A significant constraint is the cross-sectional design, which hinders the capacity to establish a causal relationship between strategic HRM, EO, dynamic capacities, and innovation. Furthermore, the study is dependent on data provided by SME managers themselves, which could potentially create bias in their responses. Another constraint is the concentration on SMEs from a singular nation, potentially restricting the applicability of the results to other settings or areas characterised by distinct economic circumstances and cultural influences. The study does not consider the potential

moderating influences of external environmental factors, such as market volatility or technological change, which could affect the relationships being evaluated.

The research employs a quantitative methodology by utilising a survey that is issued to managers of small and medium-sized enterprises (SMEs). A total of 400 small and medium-sized enterprises (SMEs) were surveyed to gather data. The linkages between strategic human resource management (HRM), entrepreneurial orientation (EO), dynamic capacities, and innovation were analysed using structural equation modelling (SEM). The approach enables the analysis of intricate connections and offers a strong statistical foundation for the study's findings, but contingent on the calibre and veracity of participant responses. Based on the results, the authors suggest that small and medium-sized enterprises (SMEs) should give importance to incorporating strategic human resource management (HRM) practices and fostering an entrepreneurial mindset in order to improve their ability to adapt and respond to changes. This entails allocating resources towards the growth and advancement of employees, cultivating an environment that promotes ongoing education, and building a mindset that embraces taking calculated risks and driving innovation.

The authors propose that politicians and business support organisations should offer resources and training programmes to assist small and medium-sized enterprises (SMEs) in cultivating these competences. Additionally, it is suggested that future studies utilise longitudinal designs in order to gain a deeper understanding of the cause-and-effect linkages and to investigate the impact of external environmental factors on the interaction between strategic HRM, EO, dynamic capacities, and innovation[78].

The academics investigate how entrepreneurial orientation (EO) can strengthen the resilience capabilities of small and medium-sized enterprises (SMEs) amid the COVID-19 pandemic[79]. The results suggest that small and medium-sized enterprises (SMEs) who possess a robust

entrepreneurial orientation, which is characterised by being inventive, proactive, and willing to take risks, were more successful in building resilience capacities to overcome the challenges posed by the pandemic. These talents encompassed traits such as versatility, nimbleness, and the capacity to adjust to swiftly evolving circumstances. The study emphasises that small and medium-sized enterprises (SMEs) with an entrepreneurial attitude were more inclined to adopt innovative solutions, adapt their business models, and take advantage of new opportunities. This enabled them to handle the uncertainties caused by the COVID-19 issue with greater effectiveness.

Notwithstanding these useful findings, the study is subject to several limitations. A primary constraint is its narrow focus on a particular setting, namely the COVID-19 pandemic, which may restrict the generalisability of the results to other crises or scenarios. Furthermore, the study's cross-sectional approach precludes the investigation of the temporal evolution of EO and resilience capabilities, and it does not show a causal relationship between these variables. The research also relies on self-reported data provided by management of small and medium-sized enterprises (SMEs), which may be influenced by bias. Additionally, the sample is constrained by geography, potentially impacting the applicability of the findings to small and medium-sized enterprises operating in diverse geographies or under varying economic circumstances. The study employed a quantitative methodology, utilising a survey that was issued to managers of small and medium-sized enterprises (SMEs). A sample of 150 small and medium-sized enterprises (SMEs) was used to collect data, and the correlations between entrepreneurial orientation and resilience capabilities were analysed using structural equation modelling (SEM).

The methodology offered a statistical framework for comprehending the role of EO in enhancing resilience during a crisis. However, its effectiveness relies on the precision and truthfulness of the respondents' self-evaluations. Based on the results, the authors suggest that SMEs should actively

develop an entrepreneurial mindset in order to enhance their ability to endure and react to crises. This encompasses the promotion of a culture that values and supports innovative thinking, the encouragement of proactive actions, and the acceptance of carefully considered risk-taking. The study also recommends that politicians and business support organisations establish initiatives and allocate resources to assist SMEs in cultivating these entrepreneurial characteristics. Moreover, it is recommended that future research incorporates longitudinal studies to investigate the temporal dynamics of EO and resilience qualities, as well as to assess the generalisability of these findings across other contexts and crises. Additionally, incorporating a broader range of participants could improve the overall applicability of the findings[79].

The researchers investigate how information technology (IT), absorptive capacity, and dynamic capabilities affect the performance of an enterprise[80]. The results suggest that the use of information technology has a substantial impact on the performance of a company by increasing productivity and enabling the development of new ideas. Absorptive capacity refers to a firm's capability to identify, integrate, and utilise external knowledge. It has been observed that absorptive capacity plays a beneficial role in influencing the connection between information technology (IT) and firm performance. This implies that firms with greater absorptive capacity are more adept at utilising IT to achieve better results. Furthermore, the firm's performance is also positively influenced by dynamic capabilities, which pertain to the firm's capacity to effectively incorporate, construct, and adapt internal and external competences in order to effectively respond to constantly evolving settings. The study demonstrates that companies with robust dynamic skills are more capable of adjusting to market fluctuations and maintaining a competitive edge.

Nevertheless, these observations, the study has various constraints. The study largely concentrates on enterprises operating in a certain geographic area and industry, which may restrict the

applicability of the results to different situations. The study utilises a cross-sectional research approach, which precludes the investigation of temporal changes or the discovery of causal links between the variables. Moreover, the dependence on self-reported data provided by company managers may induce response biases, which could significantly impact the accuracy of the conclusions. The study employs a quantitative methodology, utilising a survey-based approach to gather data from 200 organisations spanning different industries. The study employed structural equation modelling (SEM) to examine the interconnections among information technology, absorptive capacity, dynamic capacities, and business performance. This statistical methodology enabled the analysis of intricate linkages and offered valuable insights into the ways in which many variables interact to impact the success of an enterprise.

Based on the findings, the authors suggest that companies should allocate resources towards information technology and prioritise the development of their ability to effectively utilise IT in order to enhance their performance. Furthermore, it is imperative for companies to cultivate dynamic competencies in order to sustain competitiveness in swiftly evolving contexts. The study recommends that managers cultivate a culture of perpetual learning and adaptation in order to enhance these qualities. Future study should employ longitudinal designs to evaluate the progression of these associations over time and contemplate broadening the sample to encompass organisations from diverse areas and industries to augment the generalisability of the findings[80].

The scholars provide a comprehensive analysis of the contribution of micro, small, and medium-sized enterprises (MSMEs) to the sustainable development of Sub-Saharan Africa, with a particular emphasis on Ethiopia[81]. The results suggest that micro, small, and medium-sized enterprises (MSMEs) have a crucial impact on stimulating economic expansion, generating job prospects, and promoting innovation within the area. Furthermore, they play a crucial role in fostering social

integration by offering employment opportunities to marginalised demographics, such as women and young individuals. Moreover, the research emphasises that MSMEs play a significant role in fostering sustainable development in Sub-Saharan Africa through the promotion of eco-friendly practices and the use of local resources. This, in turn, supports the overall objectives of sustainable development in the region.

Nevertheless, the report highlights certain deficiencies and constraints that impede the potential of MSMEs in the region. A major obstacle is the limited availability of financial resources, which impedes the capacity of micro, small, and medium-sized enterprises (MSMEs) to grow and invest in cutting-edge technologies. Additional obstacles encompass deficient infrastructure, restricted market accessibility, poor governmental backing, and a dearth of proficient workforce. In addition, the regulatory framework in numerous Sub-Saharan African nations, such as Ethiopia, is sometimes perceived as onerous and intricate, which further restricts the expansion and progress of micro, small, and medium-sized enterprises (MSMEs). The study also highlights the absence of comprehensive data on MSMEs, which hinders the ability to create effective policies and provide support.

The research used a systematic review methodology to analyse the available literature and evidence from Ethiopia. The writers undertook a comprehensive examination of a range of scholarly articles, reports, and other pertinent materials that investigate the contribution of MSMEs to sustainable development. The report offers a thorough analysis of the contributions, difficulties, and possibilities for MSMEs in the region by combining data from various sources. The study's conclusions suggest implementing several measures to bolster the contribution of MSMEs to sustainable development. It implies that governments in Sub-Saharan Africa, especially Ethiopia, should prioritise the establishment of a conducive atmosphere for micro, small, and medium-sized

enterprises (MSMEs) by streamlining legislation and minimising administrative obstacles. Enhancing the availability of financial resources through customised financial products and services for micro, small, and medium-sized enterprises (MSMEs) is equally important.

The article promotes the need for the establishment of infrastructure and the implementation of training and capacity-building initiatives to improve the capabilities of MSME operators. In addition, cultivating collaborations across the private sector, government, and non-governmental organisations can assist in tackling the obstacles encountered by MSMEs and promoting their sustainable growth and advancement. Subsequent investigations should prioritise the collection of more extensive data on micro, small, and medium-sized enterprises (MSMEs) to enhance policymaking and bolster support mechanisms[81].

The research examines the mediating and moderating impacts of green absorptive capacity and green entrepreneurial orientation on company environmental performance[82]. The results indicate that green absorptive capacity - characterized as a firm's capability to integrate and utilise environmentally pertinent knowledge - positively affects the correlation between green entrepreneurial attitude and environmental performance. The research indicates that companies with greater green absorptive ability are more inclined to convert their environmental entrepreneurial orientation into successful environmental practices. The moderating effects indicate that the association between green entrepreneurial attitude and corporate environmental performance is more pronounced when organisations possess a high level of green absorptive capacity, highlighting the significance of knowledge absorption in promoting sustainability activities.

The article emphasises the significance of green entrepreneurial approach, defined as a company's proactive involvement in environmental matters, innovation, and sustainable practices. Companies with a robust green orientation are more inclined to invest in sustainable technologies and eco-

friendly processes, resulting in enhanced environmental performance. The study offers significant insights into the connections among green absorptive capacity, green entrepreneurial attitude, and environmental performance; nonetheless, it reveals some research gaps. The study fails to consider industry-specific differences in green absorptive capacity and entrepreneurial inclination. Diverse industries may encounter distinct levels of environmental issues and demonstrate various capacities for green innovation and performance. The study primarily examines the direct and indirect correlations among the variables, neglecting to consider the broader contextual elements that may affect these dynamics, like regulatory frameworks and market forces.

The research has a limited geographical reach, focussing predominantly on enterprises within particular regions or sectors, which may restrict its relevance to other areas or categories of firms. The study fails to examine the long-term implications of green absorptive capacity on corporate environmental performance, resulting in a deficiency in comprehending the sustainability of these practices over time. Subsequent research ought to expand this study by examining the contextual elements that affect the interrelations among green absorptive ability, entrepreneurial orientation, and environmental performance. Analysing the impact of varying regulatory frameworks, market needs, or competitive pressures on enterprises' green innovation strategies could yield a more nuanced comprehension of these processes. A longitudinal study should be conducted to evaluate the enduring effects of green absorptive capacity on environmental performance and to ascertain whether the favourable outcomes are sustained over time.

Moreover, subsequent research might investigate how various businesses or sectors demonstrate disparate levels of green absorptive capacity and entrepreneurial orientation, perhaps aiding in the formulation of sector-specific initiatives to improve corporate environmental performance. Subsequently, additional research should investigate how companies might cultivate or enhance

their green absorptive capacity via training, collaborations, or investments in environmental technologies, thereby offering pragmatic insights for organisations seeking to bolster their sustainability initiatives[82].

The research examines the influence of entrepreneurial orientation (EO) and entrepreneurial leadership (EL) on the performance of small and medium-sized firms (SMEs) in Surakarta, Indonesia[83]. The results demonstrate that both Entrepreneurial Orientation (EO) and Entrepreneurial Leadership (EL) significantly enhance the performance of Small and Medium Enterprises (SMEs). Entrepreneurial orientation, encompassing a firm's innovativeness, risk-taking, and proactiveness, is demonstrated to augment competitive advantage and foster corporate success. Moreover, entrepreneurial leadership, defined by the capacity to guide and motivate teams towards creative and adaptive tactics, is essential for the enduring success of SMEs. The research indicates that robust entrepreneurial leadership enhances the impact of entrepreneurial orientation on company performance, fostering a more dynamic and resilient corporate environment.

The research indicated that the interplay between EO and EL substantially influences decision-making processes, aiding SMEs in overcoming problems and seizing opportunities. Small and medium enterprises (SMEs) guided by entrepreneurial executives exhibit more adaptability and responsiveness to market fluctuations, a quality that is especially advantageous in the dynamic business landscape of Surakarta. Notwithstanding the excellent insights offered, some deficiencies persist in this research. A significant weakness is the study's concentration on SMEs inside a single city, Surakarta, which constrains the applicability of the findings to other locations or nations. Diverse geographical regions may exhibit distinct business climates, regulatory frameworks, and cultural settings that could affect the interplay between entrepreneurial orientation, entrepreneurial leadership, and small and medium-sized enterprise performance.

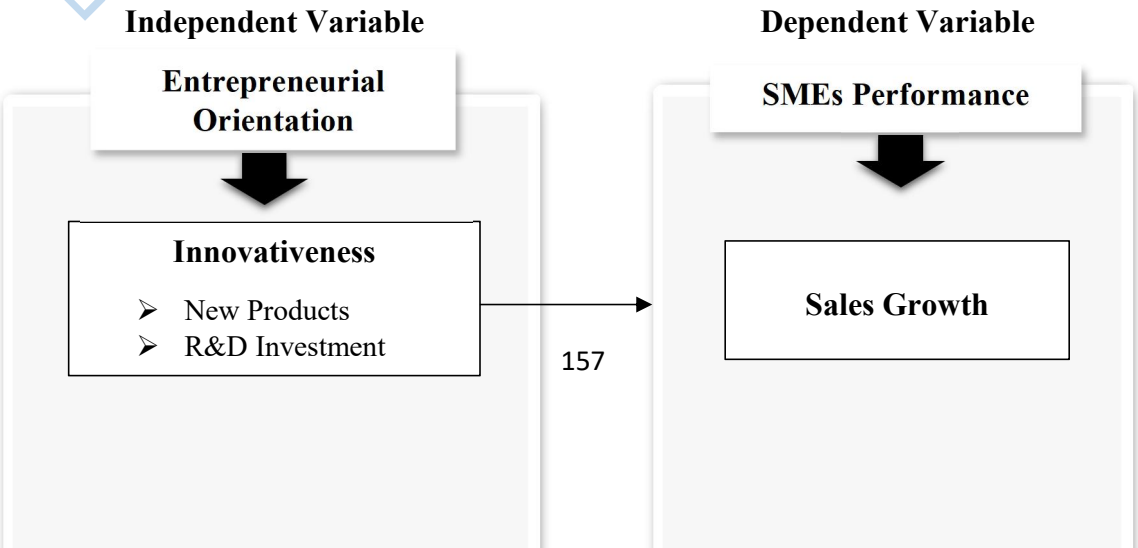
Furthermore, although the study emphasises the beneficial impacts of Entrepreneurial Orientation (EO) and Entrepreneurial Leadership (EL), it fails to examine the possible hurdles or obstacles that small and medium-sized enterprises (SMEs) can encounter in executing these strategies. Comprehending the limitations - such as constrained resources, regulatory obstacles, or insufficient professional leadership - may provide a more equitable perspective. Moreover, the study fails to consider the long-term viability of the leadership styles or potential changes in entrepreneurial orientation over time, particularly in reaction to external disruptions such as economic downturns or pandemics. Subsequent research may broaden the study's scope by incorporating SMEs from many areas, industries, and cultural backgrounds, so offering a more thorough comprehension of the influence of EO and EL on SME performance across varying contexts. Analysing SMEs in Surakarta alongside those in other cities or countries would facilitate a more nuanced comprehension of the relationship between entrepreneurial orientation, entrepreneurial leadership, and organisational success across diverse contexts[83].

Additionally, subsequent research could explore the obstacles that SMEs have in implementing entrepreneurial orientation and leadership techniques. Recognising particular impediments - such as resource limitations, leadership deficiencies, or challenges in market entry - would facilitate the formulation of actionable strategies to surmount these hurdles. Longitudinal studies may be undertaken to evaluate the durability of entrepreneurial leadership and orientation across time, particularly during phases of economic instability or global disruptions such as COVID-19. This research would elucidate how SMEs can sustain and modify their entrepreneurial strategies to guarantee enduring growth and resilience. Finally, next study may investigate the influence of digital transformation and innovation on the efficacy of entrepreneurial orientation and entrepreneurial leadership in improving SME performance, as both elements are gaining

significance in the contemporary corporate environment. This would assist SMEs in effectively managing technology transitions and maintaining competitiveness in a swiftly changing market[83].

In conclusion, the review of empirical studies on entrepreneurial orientation (EO), technological capabilities (TC), and SMEs' performance underscores the pivotal role of EO dimensions such as innovativeness, proactiveness, and risk-taking in driving SMEs' competitiveness and sustainability. Similarly, technological capabilities have emerged as critical enablers of productivity and market responsiveness, particularly in dynamic and resource-constrained environments like Oyo State, Nigeria. Studies consistently highlight the synergy between EO and TC in fostering superior organizational performance, with numerous empirical works confirming their positive impact on financial, operational, and market-based outcomes. However, the literature also reveals some gaps, including the EO-TC-SME performance relationship remaining underexplored, particularly with regard to institutional supports, digital transformation, and resource accessibility. These dimensions are critical for understanding the dynamics of SMEs in contexts like Oyo State, Nigeria, where structural and resource challenges often prevail.

2.4 Conceptual Framework (Model)



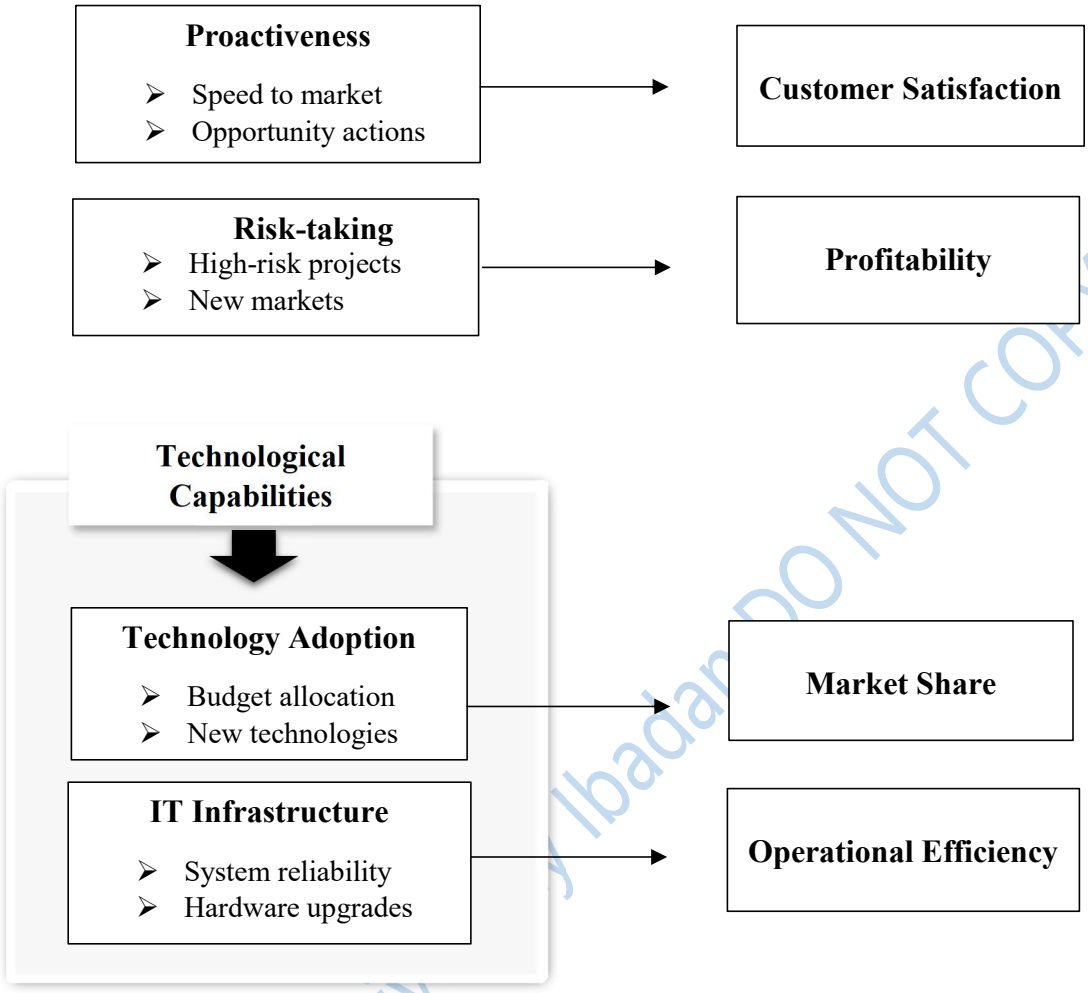


Figure 2.3: Conceptual Model

Source: Field Work by Researcher, 2024

The conceptual model for this study is based on the existing literature on entrepreneurial orientation, technological capabilities and SMEs performance. The independent variables in this model are entrepreneurial orientation and technological capabilities, while the dependent variable is SMEs performance. The researcher has designed a framework to illustrate the relationship between these variables, as they are interdependent. Entrepreneurial orientation is measured in terms of innovativeness, proactiveness, and risk-taking, while technological capabilities are measured using Information Technology (IT) Infrastructure and technology adoption. The dependent variable,

SMEs performance, is measured in terms of sales profits, customer satisfaction, profitability, market share, and operational efficiency. The diagram provided above represents this conceptual framework.

2.5 Summary of Gaps in Literature

The research reveals a strong correlation between entrepreneurial orientation (EO) and the performance of small and medium-sized enterprises (SMEs). Learning orientation plays a crucial role in this relationship, with aspects of EO such as innovation, risk-taking, and proactiveness positively impacting SMEs' success. However, the study has limitations, such as its dependence on a specific setting and its cross-sectional design. The researchers suggest that SMEs should promote both EO and learning orientations to improve performance. They recommend implementing training and development programmes, supportive policies, and supportive policies to create a conducive environment for entrepreneurial experimentation and learning[67].

The study reveals that technology, entrepreneurship, and consumer attitudes significantly impact firm success. Enterprises that effectively utilize technical improvements and cultivate an entrepreneurial mindset are more likely to achieve superior performance levels. Positive consumer attitudes can improve market standing and efficiency. However, the study has limitations, such as its geographical dependence and cross-sectional design. The researchers suggest prioritizing technology and entrepreneurship in strategy frameworks, investing in training programmes, and understanding consumer sentiments through targeted marketing and customer engagement activities. A culture that supports innovation and is sensitive to consumer needs can significantly enhance an enterprise's competitive edge and overall success[68].

The investigation reveals a strong correlation between technology acquisition and the performance of small and medium enterprises (SMEs). It highlights the role of innovation, export activities, and owner-managers' perceptions in mediating this relationship. SMEs that adopt new technologies tend to achieve superior performance, especially when involved in innovative activities and exporting their products. The attitudes and opinions of owner-managers significantly impact the adoption and utilization of these technologies, ultimately affecting the organisation's success. However, the study has limitations, such as its geographic focus and cross-sectional design. The authors recommend prioritizing technology acquisition, investing in training and development programmes, and promoting a supportive legislative climate for SMEs to participate in exporting and adopting technology improvements[69].

The research reveals that SMEs' adoption of digital technology significantly impacts sustainability and value creation. Entrepreneurial orientation plays a role in this relationship, suggesting proactive and innovative SMEs are more likely to use digital technologies for sustainable practices. This adoption enhances operational efficiency and aligns with broader sustainability goals, leading to competitive advantages. However, the study's limitations include its limited scope, cross-sectional technique, and potential biases due to self-reported data. Despite these, the study provides valuable insights into the interaction of various variables[70].

The research reveals a significant correlation between entrepreneurial orientation and the performance of small and medium-sized enterprises (SMEs). Strong entrepreneurial orientation leads to improved marketing abilities, which in turn improves overall performance. Social media usage enhances this connection, allowing SMEs to target a wider demographic and interact more efficiently. However, the study has limitations, such as a specific sample and a cross-sectional design. The research methodology used was a questionnaire, and the findings suggest that SMEs

should prioritize improving their entrepreneurial orientation, allocate resources towards enhancing marketing capabilities, and implement training programmes to navigate the digital landscape. The authors also advocate for the adoption of policies and resources that support digitalization, enabling SMEs to overcome challenges and position themselves strategically in an increasingly competitive business environment[71].

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Chapter Three

Methodology

This chapter presents the research methodology used to examine the relationship between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. The methodology offers a comprehensive account

of the research design, study population, sample size, and sampling strategies employed to assure the reliability and validity of the research findings.

3.1 Research Design

The study used a descriptive survey research design. This approach is suitable as it enables the gathering of data from a substantial number of participants, offering a comprehensive understanding of the relationship between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs). The descriptive survey methodology allows the researcher to collect information on current conditions and analyse patterns that arise in the data, making it appropriate for investigating the dynamics within small and medium-sized enterprises (SMEs) in Oyo State[1].

3.2 Population of the Study

The population under consideration for this study consists of all small and medium-sized enterprises (SMEs) located in Oyo State, Nigeria. The data presented in Table 3.1, derived from The 2021 National MSME Survey done by SMEDAN and NBS, indicates that Oyo State is home to a total of 31,739 SMEs, which represents 4.7 percent of Nigeria's 670,477 SMEs. The extensive demographic data guarantees that the study encompasses a wide range of characteristics of small and medium-sized enterprises (SMEs) in the state, establishing a strong basis for analysis[2].

Table 3.1

State/Country	Total No. of Small Enterprises	Total No. of Medium Enterprises	Total No. of Small and Medium-size Enterprises	Percentage of SMEs
Oyo	30,417	1,322	31,739	4.7
Nigeria	617,248	53,199	670,447	100

Source: SMEDAN 2021

3.3 Sample and Sampling Techniques

This study employed a convenience sampling technique to select a sample size of 1,290 small and medium-sized enterprises (SMEs) across the three senatorial districts of Oyo State: Oyo Central, Oyo South, and Oyo North. The use of convenience sampling was justified by practical constraints, including time, resources, and accessibility to participants, allowing for the inclusion of readily available SMEs. The sample was distributed proportionally to ensure representation: 645 SMEs (50%) from Oyo Central, 387 SMEs (30%) from Oyo South, and 258 SMEs (20%) from Oyo North. This allocation reflected the relative concentrations of SMEs in the districts, ensuring a balanced representation. Although non-probabilistic, this approach provided a practical means of capturing diverse perspectives while addressing logistical challenges. The chosen sample size aligns with recommendations for reliable statistical analysis, enabling the identification of meaningful relationships and trends relevant to SMEs in Oyo State[3].

3.4 Description of the Research Instrument

A structured questionnaire was the main research instrument employed for data collection in this study. The questionnaire was created with the purpose of collecting extensive data on the entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs) in Oyo State. The survey comprised of closed-ended questions, facilitating the quantitative analysis of the data. The questionnaire was segmented into four distinct sections: Section A concentrated on demographic data; Section B evaluated entrepreneurial orientation; Section C gauged technological capabilities; and Section D examined the performance of SMEs. The questions were formulated using established scales from prior research and customised to suit

the specific circumstances in Nigeria, guaranteeing their pertinence and lucidity. Participants were instructed to evaluate each item using a 6-point Likert scale, which included the options "Strongly Agree," "Agree," "Partially Agree," "Partially Disagree," "Disagree," and "Strongly Disagree." The selection of this scale was made in order to accurately measure the level of agreement or disagreement, enabling a detailed comprehension of the participants' perceptions and attitudes towards the constructs under investigation[4].

3.5 Validity of Research Instrument

To ensure the accuracy and reliability of the research tool, a pilot study was conducted in the three senatorial districts of Ogun State: Ogun Central, Ogun East, and Ogun West in Nigeria. The pilot study included 129 small and medium-sized enterprises (SMEs), which accounted for 10 percent of the total 1,290 SMEs in the overall study sample. The pre-testing phase facilitated the improvement of the questionnaire by detecting and resolving any ambiguities, unclear questions, and any concerns pertaining to the response structure. The feedback provided by the participants in the pilot study was utilised to make essential modifications, guaranteeing that the final instrument precisely captured the structures being assessed[5].

3.6 Reliability of the Research Instrument

The research instrument's reliability was evaluated using Cronbach's Alpha Coefficient. The questionnaire demonstrated a Cronbach's Alpha Coefficient of 0.823, indicating a strong degree of internal consistency among the items in the instrument. The coefficient indicates that the questionnaire items effectively measured the concepts of entrepreneurial orientation, technological

skills, and SMEs' performance, assuring that the obtained data was reliable and consistent[6].

3.7 Data Collection

The data for this study were obtained through the distribution of a self-administered questionnaire to a selected sample of 1,290 small and medium-sized enterprises (SMEs) across the three senatorial districts of Oyo State. The questionnaire was shared via both Google Forms and physical distribution to ensure broad accessibility. Of the total respondents, 903 (70% of the sample) completed the questionnaire through Google Forms, while 387 (30% of the sample) responded via the physical distribution method. To ensure accuracy, only physically distributed questionnaire that were correctly answered were sorted and recorded. The data collection process spanned four weeks, during which trained research assistants facilitated the dissemination and retrieval of the questionnaire. They also conducted follow-up visits to encourage participation and ensure a high response rate. Additionally, research assistants provided clarification where necessary to ensure precise completion of the questionnaire.

3.8 Data Analysis

The data obtained from the surveys were examined using descriptive and inferential statistical techniques. The demographic characteristics of the respondents and the primary variables of interest were summarised using descriptive statistics, which included frequencies, percentages, means, and standard deviations. Regression analysis, a form of inferential statistics, was used to test the hypotheses and investigate the connections between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs). The data analysis was performed utilising SPSS version 20.0, guaranteeing the correctness and dependability of the

outcomes, resulting in a thorough comprehension of the aspects that impact the performance of small and medium-sized enterprises (SMEs) in Oyo State[8].

Endnotes

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Chapter Four

Results and Discussion of Findings

This chapter presents an overview of the findings from the study conducted on Entrepreneurial Orientation, Technological Capabilities, and their influence on the performance of Small and Medium Enterprises (SMEs) in Oyo State, Nigeria. The analysis examines the data gathered from

different small and medium-sized enterprises (SMEs), emphasising significant patterns and connections identified within the framework of the research goals. This discussion will analyse these findings, connecting them to current literature and theories, and offering insights into how entrepreneurial orientation and technology capabilities enhance the success of small and medium-sized enterprises (SMEs) in the region.

4.1 Demographic Data Analysis

The sample comprised 1,290 small and medium-sized enterprises, selected to precisely reflect the population distribution in the three senatorial districts of Oyo State in Nigeria: Oyo Central, Oyo North, and Oyo South. In this way, a comprehensive and fair demographic representation was ensured.

Analysis of Variables

The purpose of the variable analysis was to examine the relationships between demographic and professional factors, including gender, age, educational attainment, job level, length of service, and awareness of organisational activities & performance. An examination of gender distribution was carried out to explore any possible discrepancies in performance results between male and female participants. Statistical analysis was performed to investigate the effect of various age groups on job performance and to assess the impact of educational background on overall performance. The study also included job level, analysing performance standards across different hierarchical roles within the business. An analysis was conducted to ascertain whether the duration of employment is correlated with enhanced performance outcomes. Ultimately, the study examined the entire performance by integrating these factors to deliver a comprehensive understanding of the factors that influence employee efficiency and achievement in the enterprise. The findings provide useful understanding of

how these variables interact and contribute to the overall performance, highlighting significant areas for potential improvement and regulatory concerns.

Table 4.1: Analysis of Variables

Variables	Frequency	Percentage
Gender		
Male	959	74.3
Female	331	25.7
Age bracket		
21- 30	124	9.6
31- 40	263	20.4
41- 50	171	13.3
51- 60	597	46.3
61- 65	135	10.5
Educational attainment		
ND/NCE	399	30.9
Bachelor's Degree/HND	339	26.3
PGD/Master's Degree	489	37.9
Ph.D.	21	1.6
Others	42	3.3

	Frequency	Percentage
Job level		
Top management	313	24.3
Middle management	662	51.3
Operational management	315	24.4
Length of service		
Below 5yrs	144	11.2
6-10yrs	453	35.1
11-15yrs	597	46.3
16yrs +	96	7.4
Awareness of organisational activities & performance		
Average	44	3.4
Above Average	96	7.4
Good	298	23.1
Very Good	732	56.7
Excellent	90	7.0
Outstanding	30	2.3

Source: Field Work by Researcher, 2024

The demographic data analysis, as shown in Table 4.1, uncovers a heterogeneous collection of individuals distinguished by criteria including gender, age, educational attainment, employment position, tenure, and awareness of organisational activities & performance.

Figure 4.1 displays a pie chart that illustrates the distribution of respondents based on their gender. The chart indicates that the bulk of the participants are male, accounting for 74.3% (959 respondents) of the sample, whereas females make up 25.7% (331 respondents).

This substantial discrepancy underscores the predominance of males in the respondent population, as males constitute about 75% of the entire sample.

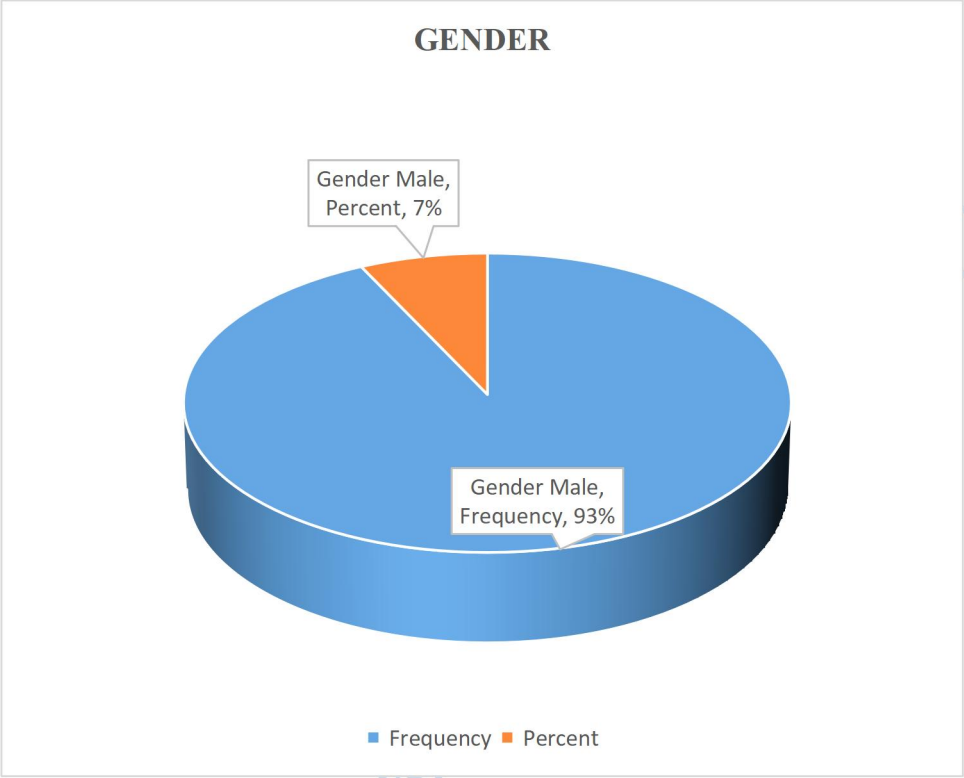

Figure 4.1

Figure 4.2 displays a bar chart that illustrates the age distribution of respondents according to their age categories. Out of the total respondents, 46.3% correspond to the age range of 51-60, which includes 597 persons. The secondary largest demographic consists of individuals aged 31-40, with 20.4% (263 respondents). The age group of 61-65 years old accounts for 10.5% (135 respondents), while the segment of 41-50 years old forms 13.3% (171 respondents). The age group representing the youngest responders, 21-30, accounts for 9.6% (124 individuals).

The findings of this study suggest that the sample population exhibits an advantage towards older participants, namely those aged 51-60, while younger age groups constitute a lesser proportion of the overall population.

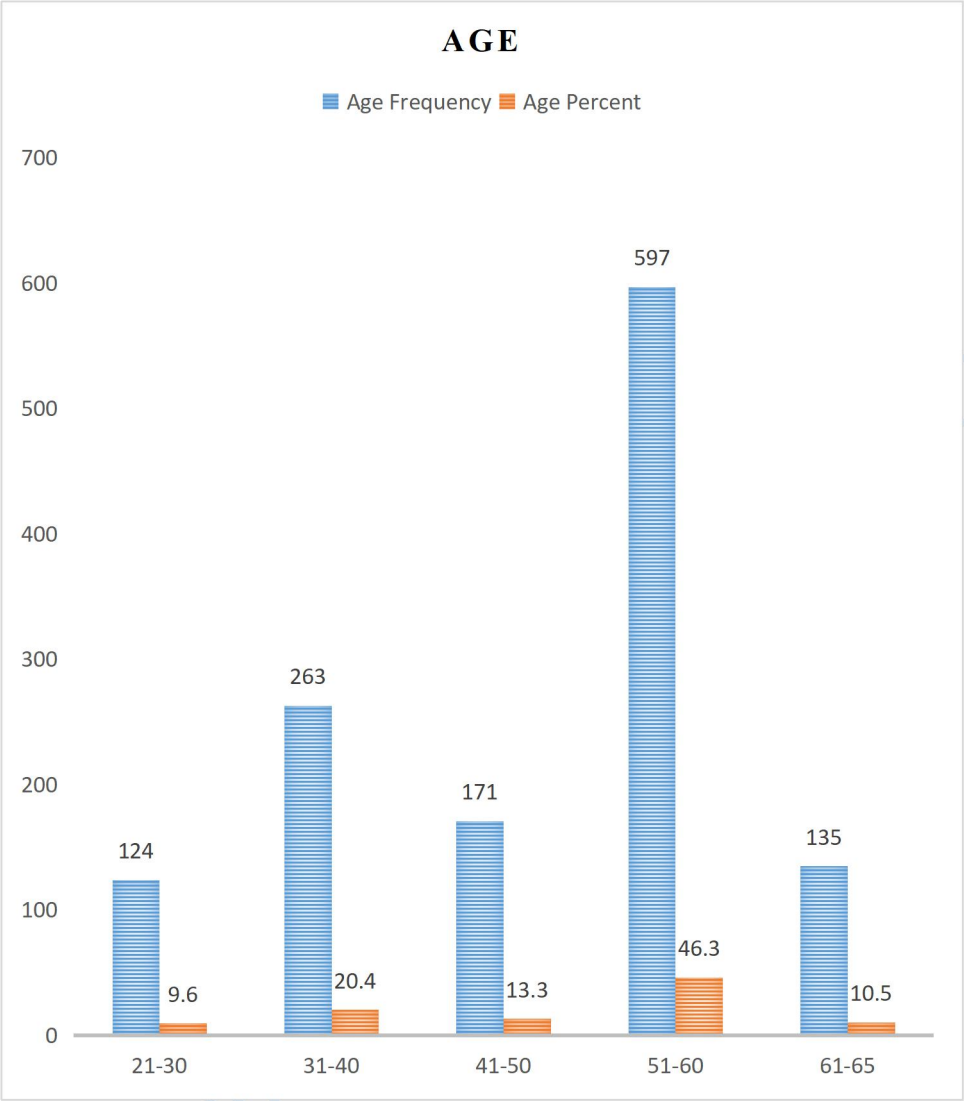

Figure 4.2

Figure 4.3 represents a bar chart illustrating the distribution of respondents according to their level of education achieved. 37.9% (489 persons) of the respondents have a Higher Education Diploma (PGD) or Master's Degree. The next group consists of those with ND/NCE qualifications, accounting for 30.9% (399 respondents). The proportion of respondents with a Bachelor's Degree or HND is 26.3% (339), but only 1.6% (21 respondents) possess a Ph.D. The category labelled as "Others," encompassing alternative educational credentials, accounts for 3.3% (42 respondents).

Analysis of the data reveals that a significant portion of the sample population possesses postgraduate qualifications, while a lesser proportion holds doctoral degrees.

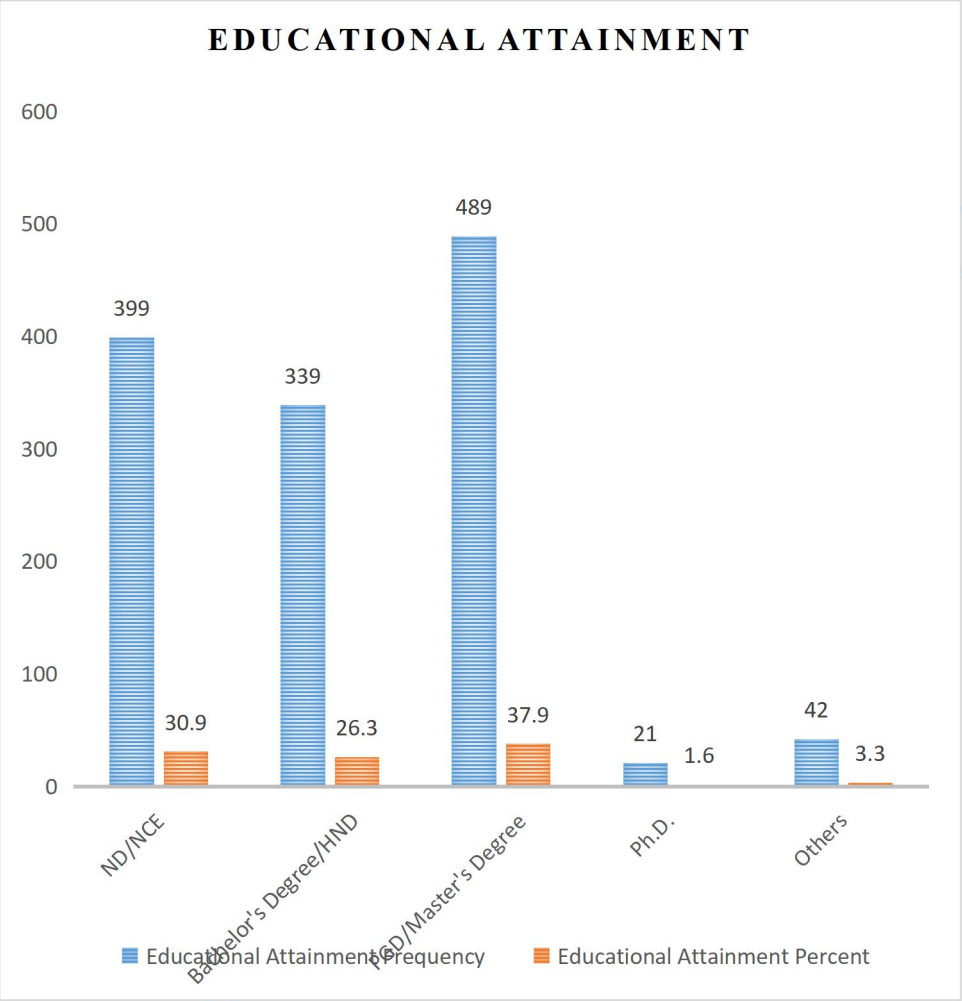

Figure 4.3

The pie chart depicted in Figure 4.4 presents the distribution of respondents based on their work level. The bulk of the participants, specifically 51.3% (662 respondents), hold jobs in middle management. The operational management category accounts for 24.4% (315 respondents), whereas the senior management jobs are held by 24.3% (313 respondents).

The observed distribution reveals an even distribution of responders between middle and top management, with middle management constituting the most substantial category.

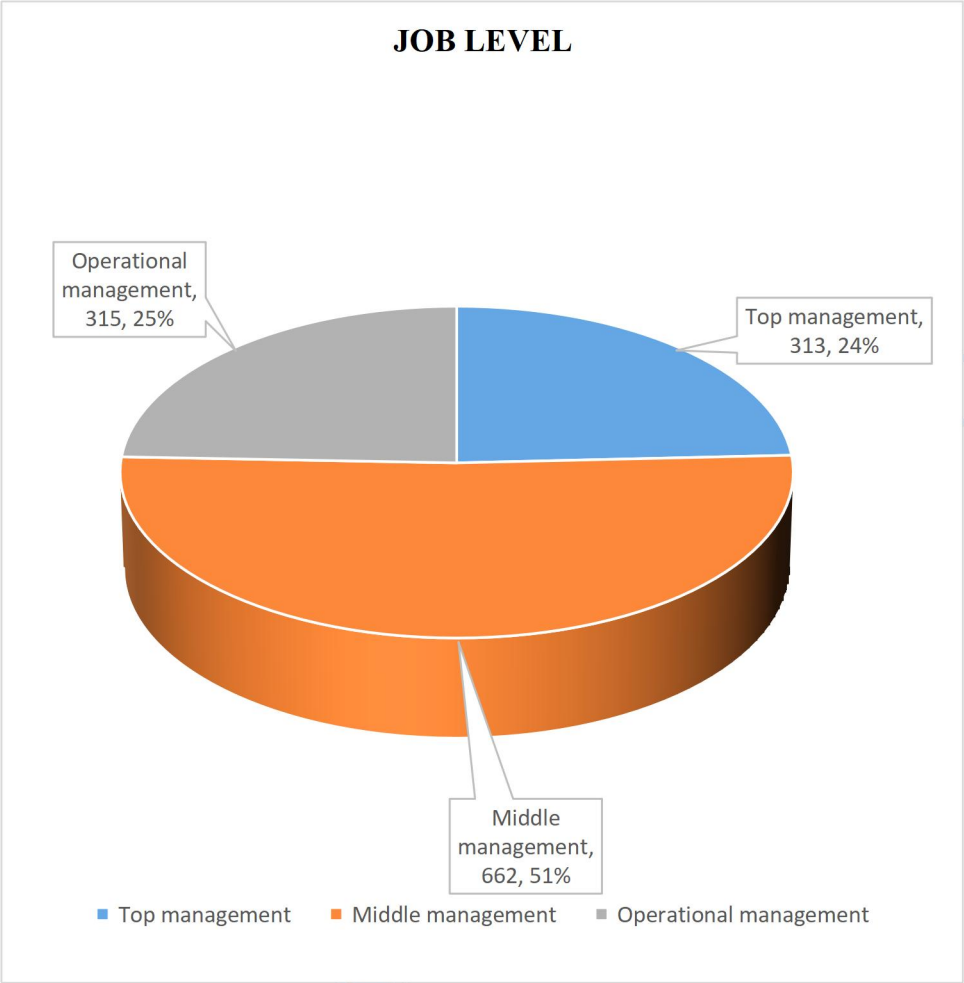

Figure 4.4

The length of service of respondents is symbolised by the pie chart in Figure 4.5. The most significant cohort, including 46.3% (597 participants), has accumulated 11-15 years of service. The proportion of respondents with 6-10 years of service is 35.1% (453 respondents), whilst 11.2% (144 respondents) have been employed by their organisations for fewer than 5 years. Only a few, specifically 7.4% (96 respondents), have accumulated 16 years or more of service.

This data reveals that a substantial majority of the participants possess a considerable amount of service experience, ranging from moderate to long-term. Specifically, almost half of the respondents have served for 11-15 years.

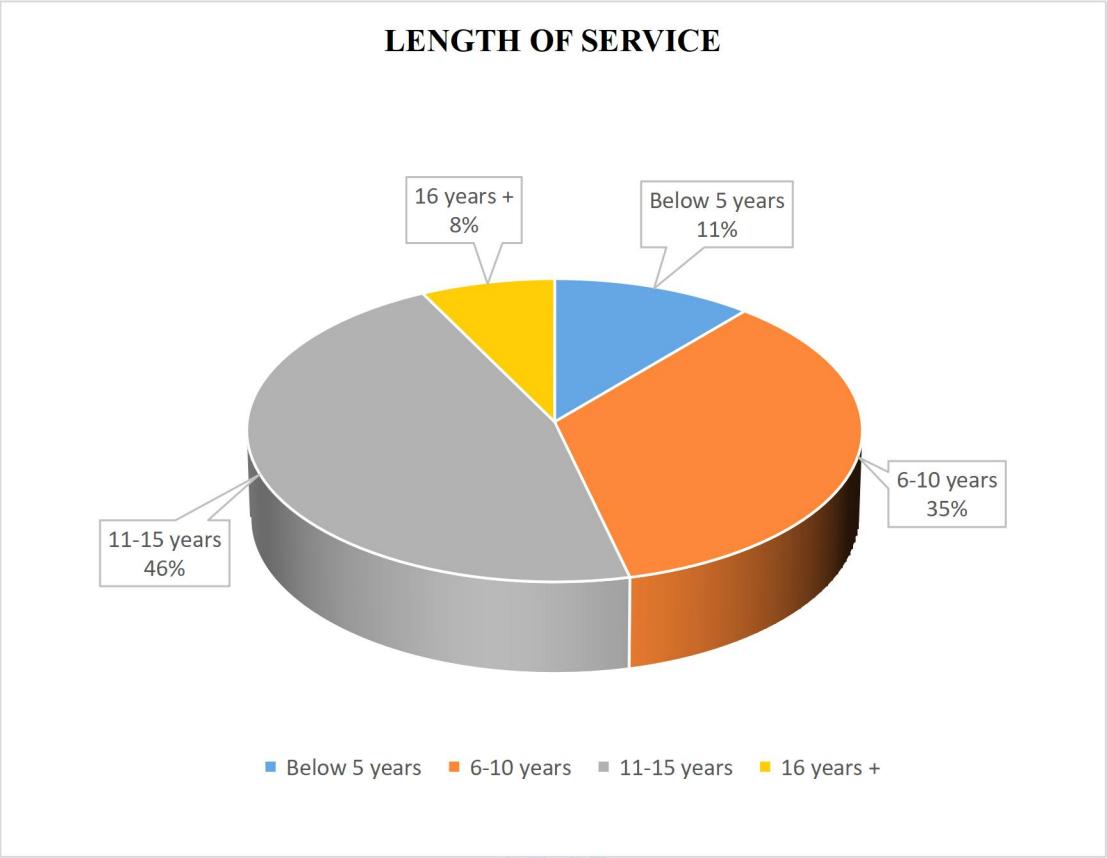

Figure 4.5

Figure 4.6 displays a bar chart that depicts the respondents' level of awareness regarding their organisational activities and performance. A majority of respondents, specifically 56.7% (732 individuals), assessed their awareness as "Very good." Furthermore, 23.1% (298 respondents) indicated a level of awareness classified as "Good". A lower proportion, specifically 7.4% (96 participants), assessed their level of awareness as "Above average," and 7.0% (90 participants) reported having "Excellent" awareness. In terms of representation, the categories "Average" and "Outstanding" had the lowest percentages, with 3.4% (44 respondents) and 2.3% (30 respondents) respectively.

The data indicates that the majority of respondents had a significantly high level of awareness about their organisation's activities and performance, with most falling into the "Very good" and "Good" categories.

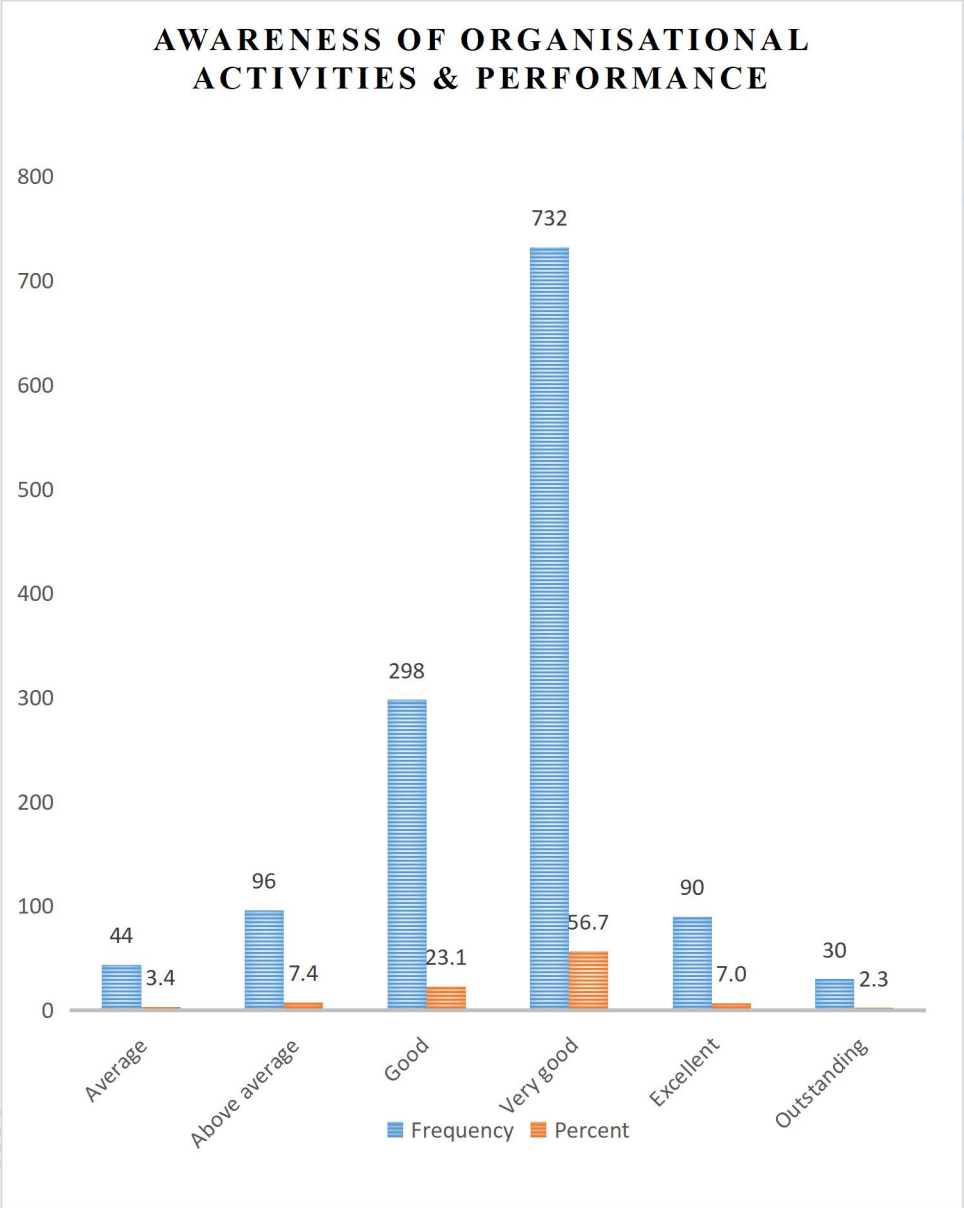

Figure 4.6

In general, the demographic data indicates a highly educated, experienced, and mostly male worker, who possess a significant level of knowledge about organisational operations and performance.

4.2 Presentation of Data

This study provides a comprehensive analysis of the research questions, hypotheses, and findings. This systematic approach allows for a comprehensive analysis of the gathered data, facilitating a deeper understanding of the research methodology and results.

4.2.1 Research Questions

This study investigates the following research questions:

1. What is the impact of innovativeness on the SMEs performance within the study area?
2. How does proactiveness affect SMEs performance in the study area?
3. How does risk-taking influence the SMEs performance within the study area?
4. What is the effect of IT infrastructure robustness on the SMEs performance in the study area?
5. What is the relationship between technology adoption and SMEs performance in the study area?

Research Question 1

What is the impact of innovativeness on the SMEs performance within the study area?

4.2.2 Hypotheses

Hypothesis 1

$H_0$1: Innovativeness does not significantly impact SMEs performance in the study area.

This was tested using Hierarchical Multiple Regression (HMR) and the test result is presented on Table 4.2.

The findings from Model 1 in Table 4.2, suggest that there exists a moderate correlation between Innovativeness and the dependent variable, as quantified by a R value of 0.275. The R Square value of 0.076 indicates that the model accounts for 7.6% of the variability in the dependent variable. The

Adjusted R Square, which takes into consideration the number of predictors, falls extremely near to 0.075, indicating a slight modification from the R Square value. The Adjusted Standard Error of the Estimate is 27.522, representing the mean difference between the observed values and the anticipated values.

The inclusion of Innovativeness into the model yields a significant R Square Change of 0.076, indicating that this predictor explains a substantial amount of the variability in the outcome. The F Change statistic of 105.213, with degrees of freedom df1 = 1 and df2 = 1288, indicates that including Innovativeness greatly enhances the model's ability to explain phenomena systematically. The statistical analysis reveals that the impact of Innovativeness is statistically significant, as evidenced by a Sig. F Change value of 0.000. In general, although Innovativeness has a moderate level of explanatory power, its influence is statistically significant, indicating its key role in comprehending the variability in the dependent variable.

Table 4.2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.275[a]	.076	.075	27.522	.076	105.213	1	1288	.000
2	.982[b]	.964	.964	5.431	.889	31788.330	1	1287	.000
3	.988[c]	.976	.976	4.449	.012	632.314	1	1286	.000
4	.988[d]	.976	.976	4.414	.000	21.044	1	1285	.000
5	.992[e]	.984	.984	3.628	.008	618.611	1	1284	.000

a. Predictors: (Constant), Innovativeness
b. Predictors: (Constant), Innovativeness, Proactiveness
c. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking
d. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking, ITInfrastructure
e. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking, ITInfrastructure, TechnologyAdoption

Source: Field Work by Researcher, 2024

The analysis of variance (ANOVA) results for Model 1 in Table 4.3, indicate that the regression model is statistically significant in elucidating the variability in the dependent variable. In the regression analysis, the Sum of Squares is 79,695.616 with 1 degree of freedom (df), and the Mean Square is likewise 79,695.616. The F statistic of 105.213, in conjunction with a significance level of 0.000, suggests that the model exhibits statistical significance. This implies that the predictor variable of Innovativeness has a substantial influence on the dependent variable.

After accounting for 1,288 degrees of freedom, the residual sum of squares is 975,621.842, resulting in a Mean Square of 757.470, which represents the unexplained variance. The aggregate sum of squares is 1,055,317.458, considering 1,289 degrees of freedom, therefore indicating the entire variance present in the data. The findings validate that although the model accounts for a certain amount of variation, a significant fraction remains unexplained, indicating that other factors outside Innovativeness impact the dependent variable. Furthermore, the model exhibits statistical significance in elucidating the correlation between Innovativeness and the dependent variable.

Table 4.3

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79695.616	1	79695.616	105.213	.000[b]
	Residual	975621.842	1288	757.470		
	Total	1055317.458	1289			
2	Regression	1017354.865	2	508677.432	17245.077	.000[c]
	Residual	37962.593	1287	29.497		
	Total	1055317.458	1289			
3	Regression	1029868.085	3	343289.362	17346.994	.000[d]
	Residual	25449.374	1286	19.790		
	Total	1055317.458	1289			
4	Regression	1030278.150	4	257569.537	13218.291	.000[e]
	Residual	25039.308	1285	19.486		
	Total	1055317.458	1289			
5	Regression	1038419.375	5	207683.875	15780.849	.000[f]
	Residual	16898.083	1284	13.161		
	Total	1055317.458	1289			

a. Dependent Variable: SMEsPerformance
b. Predictors: (Constant), Innovativeness
c. Predictors: (Constant), Innovativeness, Proactiveness
d. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking
e. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking, ITInfrastructure
f. Predictors: (Constant), Innovativeness, Proactiveness, Risktaking, ITInfrastructure, TechnologyAdoption

Source: Field Work by Researcher, 2024

Within Model 1 of Table 4.4, the constant term yields an unstandardised coefficient (B) of 135.139, accompanied by a standard error of 2.237. With a t-value of 60.415 and a significance level of 0.000, this constant term is highly significant, indicating that it considerably deviates from zero. The 95% confidence interval for the constant is between 130.751 and 139.528, indicating that it is probable that the actual value of the intercept lies within this range.

An unstandardised coefficient (B) of -0.998 with a standard error of 0.097 is observed for the predictor variable, Innovativeness. A t-value of -10.275 and a significance level of 0.000 provide

statistical evidence of the relevance of this coefficient. A coefficient with a negative sign signifies an inverse correlation between Innovativeness and the dependent variable. The coefficient's 95% confidence interval is measured from -1.188 to -0.807, indicating a 95% level of confidence that the actual impact of Innovativeness on the dependent variable is within this range. The standardised coefficient (Beta) of -0.275 suggests a moderate negative influence of Innovativeness on the response variable. Overall, these findings indicate that although Innovativeness has a substantial impact on the dependent variable, its influence is negative, implying that greater levels of Innovativeness are linked to lower values of the dependent variable.

Table 4.4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	135.139	2.237		60.415	0.000	130.751	139.528
	Innovativeness	-.998	.097	-.275	-10.257	.000	-1.188	-.807
2	(Constant)	-5.643	.905		-6.238	.000	-7.418	-3.868
	Innovativeness	-.342	.020	-.094	-17.512	.000	-.381	-.304
	Proactiveness	5.899	.033	.960	178.293	0.000	5.834	5.964
3	(Constant)	-19.562	.925		-21.151	.000	-21.377	-17.748
	Innovativeness	.124	.025	.034	5.075	.000	.076	.172
	Proactiveness	7.447	.067	1.212	110.727	0.000	7.315	7.579
	Risktaking	-1.375	.055	-.282	-25.146	.000	-1.482	-1.267
4	(Constant)	-19.815	.919		-21.551	.000	-21.618	-18.011
	Innovativeness	.159	.025	.044	6.247	.000	.109	.209
	Proactiveness	7.427	.067	1.208	111.030	0.000	7.295	7.558
	Risktaking	-1.680	.086	-.345	-19.561	.000	-1.849	-1.512
	ITInfrastructure	.292	.064	.067	4.587	.000	.167	.416
5	(Constant)	-12.642	.809		-15.631	.000	-14.228	-11.055
	Innovativeness	-.282	.027	-.078	-10.291	.000	-.336	-.229
	Proactiveness	4.351	.135	.708	32.150	.000	4.085	4.616
	Risktaking	-.508	.085	-.104	-5.990	.000	-.675	-.342
	ITInfrastructure	.057	.053	.013	1.082	.279	-.047	.162
	TechnologyAdoption	2.476	.100	.349	24.872	.000	2.281	2.671

a. Dependent Variable: SMEsPerformance

Source: Field Work by Researcher, 2024

Test for Hypothesis 1

In order to test Hypothesis 1, which suggests that there is no substantial correlation between Innovativeness and the performance of SMEs, we analyse the outcomes obtained from Model 1. Based on the Model Summary shown in Table 4.2, the F Change value is 105.213 at a significance level of 0.000, suggesting that the model is statistically significant in its whole. This is further corroborated by the ANOVA results, where the significant level is likewise 0.000, therefore validating the efficacy of the model in elucidating the variability in the performance of SMEs.

More precisely, the Coefficients table indicates that the coefficient for Innovativeness is -0.998, accompanied by a t-value of -10.275 and a significance level of 0.000. The presence of this negative coefficient and its statistical significance reveal a substantial correlation between Innovativeness and the success of SMEs.

Based on these findings, we reject the null hypothesis and accept the alternative hypothesis, definitively establishing a substantial correlation between Innovativeness and the performance of SMEs in the study area.

Research Question 2

How does proactiveness affect SMEs performance in the study area?

Hypothesis 2

$H_0$2: Proactiveness is not a determinant of SMEs performance in the study area.

This was tested using Hierarchical Multiple Regression (HMR) and the test result is presented on Table 4.2.

The findings in Model 2 demonstrate a highly significant correlation between the predictors (Innovativeness and Proactiveness) and the dependent variable. A correlation coefficient of 0.982 shows a significant correlation, while a coefficient of determination (R Square) of 0.964 says that

96.4% of the variability in the dependent variable can be accounted for by these two predictors. Even after considering the number of predictors, the Adjusted R Square remains constant at 0.964, indicating that the model's fit is strong.

With a Standard Error of the Estimate of 5.431, the observed values show minimal deviation from the predicted values, indicating a very accurate model. The R Square Change of 0.889 indicates that including Proactiveness into the model substantially enhances the explained variance, hence refining the model's ability to make accurate predictions. The F Change value of 31,788.330, with degrees of freedom 1 = 1 and degrees of freedom 2 = 1,287, and a significance level of 0.000, provides definitive evidence that Proactiveness has a substantial positive impact on the model.

Overall, the results suggest that both Innovativeness and Proactiveness exert a profound and considerable influence on the dependent variable, with the model accounting for almost all of the variability. The statistical significance of the F Change (p = 0.000) emphasises the crucial role of Proactiveness in contributing to the model's explanatory power.

ANOVA

The analysis of variance (ANOVA) results for Model 2 in Table 4.3, indicate that the regression model, which incorporates Innovativeness and Proactiveness as predictors, effectively accounts for the variability in the dependent variable. Using 2 degrees of freedom, the Sum of Squares for the regression is 1,017,354.865, while the Mean Square for the regression is 508,677.432. With a significance level of 0.000, the F statistic of 17,245.077 indicates that the model is highly statistically significant, implying that the combination of Innovativeness and Proactiveness has a considerable impact on the dependent variable.

The residual sum of squares is 37,962.593 calculated using 1,287 degrees of freedom. This leads to a significantly reduced Mean Square of 29.497, indicating a minimal level of unexplained variance. The cumulative sum of squares remains at 1,055,317.458, indicating the total variance present in the data.

These results indicate that include both Innovativeness and Proactiveness in the model significantly enhances the explanation of the dependent variable, since the predictors account for the much majority of the variance. The remarkably low residual variance validates the robust predictive capability of the model.

Coefficients

The coefficients in Model 2 in Table 4.4, offer valuable information pertaining to the influence of Innovativeness and Proactiveness on the dependent variable.

An unstandardised coefficient (B) of -5.643 with a standard error of 0.905 is observed for the constant. The obtained t-value of -6.238, together with the significance level of 0.000, provides strong evidence that the constant is statistically significant and not equal to zero. The determination of the 95% confidence interval for the constant indicates that the actual value of the intercept falls within the range of -7.418 to -3.868.

With a standard error of 0.020, the unstandardised coefficient for Innovativeness is -0.342, and the standardised coefficient (Beta) is -0.094. The obtained t-value of -17.512 and the calculated significance level of 0.000 indicate that there is a statistically significant, if modest, negative impact of Innovativeness on the dependent variable. The 95% confidence interval for Innovativeness is within the range of -0.381 to -0.304, suggesting a high level of consistency in this impact.

Nevertheless, proactiveness exhibits a robust positive correlation with the dependent variable. The unstandardised coefficient of the variable is 5.899, given a standard error of 0.033. The standardised coefficient, denoted as Beta, is 0.960. The statistically significant t-value of 178.293 and the significance level of 0.000 provide strong evidence that Proactiveness has a significant and large positive effect on the dependent variable. The Proactiveness estimate is quite precise, as seen by the 95% confidence interval ranging from 5.834 to 5.964.

To summarise, whereas Innovativeness has a very minor negative impact, Proactiveness has a strong and statistically significant positive influence on the dependent variable, establishing it as the main catalyst in the model.

Test for Hypothesis 2

In order to test Hypothesis 2, which investigates the statistical influence of Proactiveness on the performance of SMEs, we analyse the outcomes obtained from Model 2.

Based on the Model Summary presented in Table 4.2, the R value of 0.982 and the R Square of 0.964 suggest that Proactiveness, together with Innovativeness, accounts for 96.4% of the variability in the performance of SMEs. The R Square Change of 0.889, accompanied by a F Change of 31,788.330 and a significance level of 0.000, provides strong evidence that the inclusion of Proactiveness substantially enhances the informative capability of the model.

The ANOVA findings in Table 4.3, provide empirical evidence supporting the relevance of the model. The F statistic of 17,245.077 and the Sig. value of 0.000 indicate that the entire model is statistically significant in elucidating the relationship between the predictors and the performance of SMEs.

According to the Coefficients in Table 4.3, Proactiveness has a substantial positive unstandardised coefficient (B) of 5.899, accompanied by a standardised coefficient (Beta) of 0.960. The obtained t-value of 178.293 and the designated significance level of 0.000 offer compelling evidence that Proactiveness exerts a highly significant and beneficial impact on the performance of SMEs. The 95% confidence interval for Proactiveness is extremely constrained, spanning from 5.834 to 5.964, hence emphasising the accuracy of this estimation.

We reject the null hypothesis and accept the alternative hypothesis based on these results, indicating a significant and substantial positive correlation between Proactiveness and SMEs' performance in the studied area.

Research Question 3

How does risk-taking influence the SMEs performance within the study area?

Hypothesis 3

$H_0$3: Risk-taking behaviour does not contribute significantly to SMEs performance in the study area. This was tested using Hierarchical Multiple Regression (HMR) and the test result is presented on Table 4.2.

The findings in Model 3 indicate a robust correlation between the predictors (Innovativeness, Proactiveness, and Risk-taking) and the dependent variable. The correlation coefficient of 0.988 suggests a very strong connection, while the coefficient of determination (R Square) of 0.976 indicates that 97.6% of the variability in the dependent variable can be accounted for by these three predictors. The Adjusted R Square value remains constant at 0.976, indicating that the model remains well-founded even when Risk-taking is included.

The Standard Error of the Estimate is 4.449, indicating a negligible difference between the observed and projected values, therefore providing evidence of the model's precision. A R Square Change of 0.012 indicates a small but statistically significant improvement in explaining the variance via the incremental contribution of Risk-taking to the model. The F Change of 632.314, taken with degrees of freedom 1 and 286 and a significance level of 0.000, provides evidence that the inclusion of Risk-taking greatly improves the model.

Collectively, the findings indicate that Innovativeness, Proactiveness, and Risk-taking exert a substantial influence on the dependent variable. Risk-taking, in particular, makes a modest yet noteworthy contribution to the total explanatory capacity of the model. The statistical significance of the F Change ($p = 0.000$) emphasises the contribution of Risk-taking in enhancing the model's fit even further.

ANOVA

The analysis of variance (ANOVA) results for Model 3 in Table 4.3, indicate that the regression model, which incorporates Innovativeness, Proactiveness, and Risk-taking as predictors, accurately accounts for the variability in the dependent variable. In the regression analysis, the Sum of Squares is 1,029,868.085 with 3 degrees of freedom, whereas the Mean Square is 343,289.362. The F statistic of 17,346.994, at a significance level of 0.000, provides evidence that the model is statistically significant in its intact form.

A residual Sum of Squares of 25,449.374 with 1,286 degrees of freedom yields a much reduced Mean Square of 19.790, suggesting that the unexplained variance is negligible. The cumulative Sum of Squares remains at 1,055,317.458, indicating the total variation present in the data.

These findings indicate that the bulk of the variation in the dependent variable can be accounted for by the combination of Innovativeness, Proactiveness, and Risk-taking, leaving very little variance unexplained. The extremely significant F statistic highlights the robust explanatory capability of the model, therefore verifying that the combined impact of these three phenomena on the result is both big and statistically significant.

Coefficients

A comprehensive analysis of the coefficients for Model 3 in Table 4.4, reveals the precise influence of Innovativeness, Proactiveness, and Risk-taking on the dependent variable.

The unstandardised coefficient (B) for the constant element is -19.562, with a standard error of 0.925. The statistical importance of the constant is indicated by the t-value of -21.151 and a significance level of 0.000. The 95% confidence interval for the constant falls across the range of -21.377 to -17.748, indicating a statistically significant difference between the intercept and zero.

The variable of innovativeness has a positive unstandardised coefficient (B) of 0.124, accompanied by a standard error of 0.025. Additionally, it has a standardised coefficient (Beta) of 0.034. Based on the obtained t-value of 5.075 and the significance level of 0.000, it can be concluded that Innovativeness is a statistically significant predictor, however its impact is somewhat modest. The 95% confidence interval for Innovativeness is situated between 0.076 and 0.172, suggesting a reliable and statistically significant positive impact.

The variable of proactiveness has the highest predictive power in the model, as indicated by its unstandardised coefficient (B) of 7.447 and standardised coefficient (Beta) of 1.212. A significance level of 0.000 and a t-value of 110.727 indicate a significant and large positive impact of Proactiveness on the dependent variable. The tight 95% confidence interval for Proactiveness, which ranges from 7.315 to 7.579, provides further confirmation of its robust and accurate influence.

Conversely, the variable Risk-taking exhibits a negative unstandardised coefficient (B) of -1.375, accompanied by a standard error of 0.055. Additionally, it possesses a standardised coefficient (Beta) of -0.282. The obtained t-value of -25.146, together with a significance level of 0.000, provides strong evidence that Risk-taking exerts a statistically significant negative impact on the dependent variable. The 95% confidence interval for Risk-taking falls between -1.482 and -1.267, signifying a stable and statistically significant negative correlation.

To summarise, Innovativeness has a modest yet noteworthy positive influence, Proactiveness has a substantial and prevailing positive impact, and Risk-taking has a very significant negative influence on the dependent variable. Collectively, these elements offer a thorough elucidation of the variability in the model.

Test for Hypothesis 3

In order to test Hypothesis 3, which investigates the presence of a substantial correlation between risk-taking and the success of SMEs, we scrutinise the outcomes obtained from Model 3.

The Model Summary presented in Table 4.2, has a R value of 0.988 and a R Square of 0.976, indicating that 97.6% of the variability in the performance of SMEs can be accounted for by the combined factors of Innovativeness, Proactiveness, and Risk-taking. The R Square Change of 0.012, together with a F Change of 632.314 ($p = 0.000$), suggests that including Risk-taking into the model has a substantial impact on the explained variance, albeit it is somewhat little in comparison to the other explanatory factors.

Statistical analysis of variance (ANOVA) results in Table 4.3, provide additional evidence of the importance of the whole model. The F statistic of 17,346.994 ($p = 0.000$) indicates that the

predictors, including Risk-taking, effectively account for the variability in the performance of SMEs.

The table of coefficients in Table 4.4, reveals that the unstandardised coefficient (B) for Risk-taking is -1.375, whereas the standardised coefficient (Beta) is -0.282. The obtained t-value of -25.146, together with the significance level of 0.000, offers compelling evidence that Risk-taking exerts a substantial adverse influence on the performance of SMEs. The 95% confidence interval for Risk-taking falls between -1.482 and -1.267, showing the consistent and statistically significant nature of this adverse impact.

We reject the null hypothesis (H_{03}) and accept the alternative hypothesis (H_{13}) based on these findings. There exists a notable correlation between Risk-taking and the performance of SMEs. However, this correlation is negative, suggesting that greater levels of Risk-taking are linked to lower performance in the designated research region.

Research Question 4

What is the effect of IT infrastructure robustness on the SMEs performance in the study area?

Hypothesis 4

$H_0$4: IT infrastructure robustness has no measurable effect on SMEs performance in the study area.

This was tested using Hierarchical Multiple Regression (HMR) and the test result is presented on Table 4.2.

The findings of Model 4 indicate that the inclusion of IT Infrastructure as a predictor, in conjunction with Innovativeness, Proactiveness, and Risk-taking, has a highly robust correlation with the dependent variable. The correlation coefficient (R) stays constant at 0.988, suggesting a strong correlation. Additionally, the R Square value of 0.976 indicates that 97.6% of the variability

in the dependent variable can still be properly described by the model. The Adjusted R Square value of 0.976 indicates that the model's overall explanatory power remains consistent even after include IT Infrastructure.

The Standard Error of the Estimate is 4.414, suggesting a negligible deviation between the observed and predicted values, therefore demonstrating the accuracy of the model. The R Square Change is 0.000, indicating that the inclusion of IT Infrastructure has a negligible impact on the model's capacity to account for random variation. Nevertheless, the F Change of 21.044, computed with degrees of freedom 1 and 285 and a significance threshold of 0.000, indicates that this addition remains statistically significant.

These data indicate that although IT Infrastructure plays a role in the model, its impact is somewhat minor in comparison to other variables such as Innovativeness, Proactiveness, and Risk-taking. Nevertheless, the statistical significance of its contribution suggests that it has a substantial impact on the overall correlation with the dependent variable.

ANOVA

The analysis of variance (ANOVA) results for Model 4 in Table 4.3, indicate that the inclusion of IT Infrastructure, in conjunction with Innovativeness, Proactiveness, and Risk-taking, effectively accounts for the variability observed in the dependent variable. A regression with 4 degrees of freedom yields a Sum of Squares of 1,030,278.150 and a Mean Square of 257,569.537. Given a significance level of 0.000, the F statistic of 13,218.291 indicates that the model is extremely significant.

After accounting for 1,285 degrees of freedom, the residual Sum of Squares is 25,039.308, resulting in a Mean Square of 19.486. This low residual variance indicates that the model is a good fit for the data, with little unexplained variation.

Overall, the results confirm that the variability in the dependent variable may be significantly explained by the combination of Innovativeness, Proactiveness, Risk-taking, and IT Infrastructure. The high F statistic and low residual mean square highlight the model's outstanding prediction ability and accuracy, while the significance level of 0.000 validates the reliability of these findings.

Coefficients

The coefficients for Model 4 in Table 4.4, shows the statistical significance of Innovativeness, Proactiveness, Risk-taking, and IT Infrastructure on the dependent variable.

The constant has an unstandardised coefficient (B) of -19.815, supported by a standard error of 0.919, and a t-value of -21.551, which is statistically significant (p = 0.000). The 95% confidence interval for the constant falls between -21.618 and -18.011, suggesting a statistically significant negative intercept.

The unstandardised coefficient (B) for Innovativeness is 0.159, with a standard error of 0.025. The standardised coefficient (Beta) is 0.044, and the t-value is 6.247 (p = 0.000), indicating that there is a modest yet statistically significant positive impact of Innovativeness on the dependent variable. The 95% confidence interval, which spans from 0.109 to 0.209, provides evidence supporting the beneficial influence of Innovativeness.

The variable of proactiveness remains the most significant predictor, as indicated by its unstandardised coefficient (B) of 7.427 and standardised coefficient (Beta) of 1.208. The statistical significance of the t-value of 111.030 (p = 0.000) highlights the robust positive correlation between

Proactiveness and the dependent variable. The tight confidence interval, which spans from 7.295 to 7.558, provides more evidence of the significant impact of Proactiveness.

A negative unstandardised coefficient (B) of -1.680, a standard error of 0.086, and a standardised coefficient (Beta) of -0.345 are associated with the variable Risk-taking. A statistically significant negative impact of Risk-taking on the dependent variable is indicated by the t-value of -19.561 ($p = 0.000$). The confidence interval, which spans from -1.849 to -1.512, consistently indicates a substantial negative effect of Risk-taking.

The unstandardised coefficient (B) for IT Infrastructure is 0.292, accompanied by a standard error of 0.064. According to the standardised coefficient (Beta) of 0.067 and the t-value of 4.587 ($p = 0.000$), it can be concluded that IT Infrastructure has a modest yet statistically significant positive impact on the dependent variable. The 95% confidence interval, ranging from 0.167 to 0.416, provides robust evidence supporting the consistency of this positive correlation.

To summarise, the findings indicate that Innovativeness and IT Infrastructure have modest yet noteworthy positive effects on the dependent variable. Conversely, Proactiveness has a robust positive influence, whereas Risk-taking has a substantial negative impact. The findings highlight the different levels of impact that each factor has on the dependent variable, with Proactiveness being the dominant predictor.

Test for Hypothesis 4

The results derived from Model 4, which include IT Infrastructure as an additional predictor, offer significant support for the testing of Hypothesis 4. Based on the Model Summary, the R Square value of 0.976 suggests that 97.6% of the variability in the performance of SMEs can be accounted for by the combined factors of Innovativeness, Proactiveness, Risktaking, and IT Infrastructure. An

analysis of variance (ANOVA) shows a very significant F-value of 13,218.291 (p = 0.000), suggesting that the entire model, which includes IT Infrastructure, is statistically significant.

Regarding the coefficients related to IT Infrastructure, the unstandardised coefficient (B) is 0.292, accompanied by a t-value of 4.587 and a significance level of 0.000. Information Technology Infrastructure has a favourable and statistically significant effect on the performance of small and medium-sized enterprises (SMEs). Despite its small size, the standardised coefficient (Beta) of 0.067 suggests that IT Infrastructure significantly influences the prediction of SMEs' performance. The 95% confidence interval for IT Infrastructure is between 0.167 and 0.416, which further supports the observed positive impact.

The results indicate that we reject the null hypothesis (H_{04}) and accept the alternative hypothesis (H_{14}), therefore establishing a statistically significant correlation between IT Infrastructure and the performance of SMEs in the research area. Despite its relatively lesser effect size in comparison to other predictors such as Proactiveness, the relationship is both positive and statistically significant.

Research Question 5

What is the relationship between technology adoption and SMEs performance in the study area?

Hypothesis 5

$H_0$5: Technology adoption is not significantly associated with SMEs performance in the study area.

This was tested using Hierarchical Multiple Regression (HMR) and the test result is presented on Table 4.2.

The Model Summary for Model 5 demonstrates the influence of including Technology Adoption as an independent variable, in addition to Innovativeness, Proactiveness, Risk-taking, and IT Infrastructure. The correlation coefficient (R) of 0.992 suggests a highly robust positive relationship

between the predictors and the dependent variable. The R Square value of 0.984 indicates that 98.4% of the variability in the dependent variable can be accounted for by this model, indicating a significant level of predictive power. The Adjusted R Square value of 0.984 provides evidence that the model maintains its performance consistently even after accounting for the number of predictors. The Standard Error of the Estimate is 3.628, indicating the minimal residual errors and the precision of the model in forecasting the dependent variable. The addition of Technology Adoption results in a revised R Square value of 0.008, indicating that this variable adds an extra 0.8% to the explanation of variance. As evidenced by the F shift value of 618.611 at a significance level of 0.000, this shift is statistically significant, albeit minor. This validates that incorporating Technology Adoption greatly enhances the model's predictive capacity for the dependent variable.

In summary, the findings suggest that the inclusion of Technology Adoption, Innovativeness, Proactiveness, Risk-taking, and IT Infrastructure in the model significantly improves its ability to predict outcomes. This model effectively accounts for almost all the variation in the dependent variable with a high level of statistical significance.

ANOVA

The analysis of variance (ANOVA) results for Model 5 in Table 4.3, which incorporates Innovativeness, Proactiveness, Risk-taking, IT Infrastructure, and Technology Adoption as predictors, indicate that the model has a high level of significance. Indicating the overall variance in the dependent variable, the total sum of squares is 1,055,317.458.

Based on the regression sum of squares of 1,038,419.375, it can be concluded that the model's predictors account for the bulk of the variance in the dependent variable. A regression with 5 degrees of freedom yields a mean square of 207,683.875, which corresponds to an F-value of

15,780.849. The high F-value, together with a significance level of 0.000, provides evidence that the model is statistically significant and effectively matches the empirical data.

The residual sum of squares, which quantifies the component of variance that cannot be explained, is 16,898.083 with 1,284 degrees of freedom. The calculated mean square for the residuals is 13.161, suggesting that the amount of variability in the dependent variable that cannot be accounted for by the model is somewhat minor.

In summary, the ANOVA findings indicate that the model including all five predictors offers a very precise and statistically significant explanation of the dependent variable, leaving little of the variance unexplained.

Coefficients

Table 4.4 displays the regression coefficients of Model 5, which include Innovativeness, Proactiveness, Risk-taking, IT Infrastructure, and Technology Adoption as predictors. These coefficients offer valuable insights into the specific impact of each component on the overall model. With all predictor variables maintained constant, the constant (B = -12.642, p = 0.000) signifies that the dependent variable would have a baseline value of -12.642. This finding is statistically significant, as indicated by the t-value of -15.631.

The negative coefficient (B = -0.282) of innovativeness indicates a modest yet statistically significant negative effect on the dependent variable. The t-value is -10.291 and the 95% confidence interval is between -0.336 and -0.229. The effect is further emphasised by the standardised Beta coefficient of -0.078, but its influence is somewhat marginal in comparison to other variables.

There exists a significant positive correlation between proactiveness and the dependent variable, as indicated by a B value of 4.351 (p = 0.000), a t-value of 32.150, and a Beta of 0.708. The results suggest that proactiveness has a substantial impact on performance, as evidenced by the large effect size indicated by the confidence interval (4.085 to 4.616).

Risk-taking, as indicated by a negative B value of -0.508 (p = 0.000), exerts a statistically significant but somewhat adverse effect on the dependent variable. In this context, the t-value of -5.990 and a Beta of -0.104 provide evidence that increased levels of risk-taking can decrease performance, with a confidence range ranging from -0.675 to -0.342.

Contrarily, the influence of IT Infrastructure on performance is not statistically significant (B = 0.057, p = 0.279), as evidenced by the t-value of 1.082 and a confidence interval that intersects zero (-0.047 to 0.162). This observation implies that the IT infrastructure does not exert a significant impact on this particular paradigm.

Ultimately, the influence of Technology Adoption on performance is highly significant, as evidenced by a B value of 2.476 (p = 0.000), a t-value of 24.872, and a Beta of 0.349. These findings validate that the adoption of technology has a crucial role in determining performance, as indicated by the confidence interval of 2.281 to 2.671.

In general, the variables of Proactiveness and Technology Adoption have the most significant positive influence on the dependent variable. Conversely, Risk-taking has a negative effect, while IT Infrastructure seems to have a very insignificant impact.

Test for Hypothesis 5

The hierarchical regression analysis results for Model 5 offer valuable insights into the correlation between the adoption of technology and the success of small and medium-sized enterprises (SMEs).

Based on the Model Summary shown in Table 4.2, the whole model demonstrates a robust fit, as evidenced by a R value of.992 and a R Square of .984. This indicates that 98.4% of the variability in SMEs performance can be accounted for by the predictors, which include technology adoption. The model's merit is validated by the F Change value of 618.611 with a p-value of .000, indicating a substantial enhancement in the prediction of SMEs performance when technology adoption is included.

The ANOVA presented in Table 4.3, provides additional evidence for the importance of the whole model, as indicated by a F value of 15,780.849 and a p-value of .000. This suggests that the predictors together exert a very significant influence on the dependent variable, SMEs performance.

The Coefficients presented in Table 4.4, indicates that there is a strong and statistically significant correlation between technology adoption and the performance of SMEs. The unstandardised coefficient for technology adoption (B = 2.476) and its t-value of 24.872 (corresponding to a p-value of .000) indicate a substantial impact of technology adoption on the performance of SMEs. The 95% confidence interval for the B value of technology adoption is between 2.281 and 2.671, validating the accuracy of the estimate.

The results indicate that we reject the null hypothesis (H_{05}) and accept the alternative hypothesis (H_{15}), so establishing a substantial correlation between the use of technology and the performance of small and medium-sized enterprises (SMEs) in the study area.

4.3 Discussion of Findings

A thorough understanding of the impact of entrepreneurial orientation and technological capabilities on SMEs performance in Oyo State, Nigeria is obtained through hierarchical regression analysis of Models 1 to 5. In Model 1, the results indicate a substantial inverse correlation between

innovativeness and the success of SMEs. Specifically, a lower degree of innovativeness is linked to superior performance. Nevertheless, when more variables were included in later models, the correlation between innovativeness and performance became positive but less strong. This suggests that although innovativeness is significant, its impact on improving performance may differ based on other variables.

The impact of proactiveness on the performance of small and medium-sized enterprises (SMEs) is robust and consistently beneficial across all models. The data demonstrates that proactive behaviour plays a crucial role in driving performance, as enterprises that effectively predict market trends and take action before their competitors are more likely to achieve superior results. The Model 5 analysis revealed that the highest standardised coefficient for proactiveness indicates that proactivity plays a crucial role in the development of SMEs in Oyo State. Conversely, investing in risk was shown to have a substantial adverse effect on the performance of small and medium-sized enterprises (SMEs). The results indicate that engaging in excessive risk-taking can have negative consequences, as it was consistently linked to poorer performance in all experimental models. This suggests that small and medium-sized enterprises (SMEs) in Oyo State can gain advantages from adopting a more prudent and strategic attitude towards risk, since assuming excessive risk can have detrimental effects on enterprise results.

The robustness of IT infrastructure, as seen in Model 4, exhibits a positive and statistically significant correlation with the performance of SMEs. This implies that enterprises with more robust IT infrastructure generally achieve superior performance. Despite the relatively lesser effect size in comparison to proactiveness, the results underscore the need of establishing strong technology basics for achieving economic success. In the final model, it was shown that the use of technology has a substantial and beneficial impact on the performance of small and medium-sized

enterprises (SMEs). The significant impact of technology adoption underscores its crucial function in stimulating growth and enhancing competitiveness in the small and medium-sized enterprise (SME) sector. The integration of novel technology facilitates enhanced operational efficiency and sustained competitiveness for enterprises in a swiftly changing market.

In addition to contributing to the greater body of literature on this topic, the results of this study on entrepreneurial orientation, technological Capabilities, and SMEs performance in Oyo State are consistent with both the Resource-Based View (RBV) and Dynamic Capabilities Theory. The results underscore the need of being proactive, adopting technology, and having a strong IT infrastructure in enhancing the performance of small and medium-sized enterprises (SMEs). This highlights the ability of internal resources and competencies to get a competitive edge.

Consistent with other research emphasising the crucial significance of forward-looking strategies in improving enterprise performance, proactiveness appeared as the most important determinant of success[1,2]. The beneficial influence of proactiveness reinforces the Resource-Based View (RBV) by demonstrating the strategic utilisation of internal resources to predict market evolutions, therefore establishing a competitive advantage. Furthermore, this discovery aligns with Dynamic Capabilities Theory, which suggests that companies need to consistently adjust to external changes in order to maintain their success. Small and Medium Enterprises (SMEs) in Oyo State seem to gain advantages from this proactive strategy, which is consistent with wider scholarship on entrepreneurial orientation.

The robust positive correlation between the adoption of technology and performance, as shown in Model 5, reinforces the idea that utilisation of new technologies is essential for improving operational efficiency and competitiveness. This result aligns with the earlier research that

highlighted the significance of digital technology in generating value for small and medium-sized enterprises (SMEs)[3].

Technological adoption, when analysed from the perspective of Dynamic Capabilities Theory, allows enterprises to adapt their resources in order to meet changing market requirements. This outcome is consistent with the established research that has shown the beneficial influence of IT implementation on enterprise performance[4]. Analysis revealed that the IT infrastructure had a favourable, but less significant, impact on performance. This discovery strengthens the Resource-Based View (RBV) by indicating that although a strong IT infrastructure is crucial for achieving favourable enterprise outcomes, it is not the exclusive factor influencing performance. Instead, it enhances other entrepreneurial attitudes such as proactiveness and technology adoption. Furthermore, the research studies emphasised the need of integrating internal technological resources with an entrepreneurial mindset to improve performance[5,6].

Conversely, the adverse effect of risk-taking on the success of small and medium-sized enterprises (SMEs) contradicts the common assumption in studies on entrepreneurial orientation that risk-taking is universally advantageous. The findings of this study contradict previous research that have shown a favourable correlation between risk-taking and performance[7,8]. In the specific setting of Oyo State, it seems that engaging in excessive risk-taking could have negative consequences, perhaps because of the volatile business climate in Nigeria, where high-risk approaches may result in unmanageable financial losses.

Although there are some noticeable differences, the results of this study are consistent with other prior research studies on entrepreneurial orientation and SME performance. The substantial positive influence of innovativeness, proactiveness, and technology adoption on the performance of small and medium-sized enterprises (SMEs) aligns with the findings of research that indicate

entrepreneurial orientation, along with structural infrastructure, improves firm performance[1]. Likewise, the research studies emphasised the crucial significance of proactive strategies and willingness to take risks in influencing the success of small and medium-sized enterprises (SMEs), especially in settings with limited economic resources[2,9]. The similarities seen in past studies and the present research underscore the significance of dynamic capacities and entrepreneurial behaviours in stimulating the growth of small and medium-sized enterprises (SMEs).

Nevertheless, the study reveals a contrasting relationship between risk-taking and the success of SMEs, which contradicts previous research investigations that have shown risk-taking to have a favourable impact on business outcomes[8,10]. The disparity may be ascribed to contextual variations, such as the particular economic and cultural environment of Oyo State, Nigeria, which can deter excessive risk owing to the unpredictability of profits in an emerging economy. Moreover, the lack of observed impact of IT infrastructure on performance contradicts previous research that emphasised the significance of technology capabilities in improving company performance[10]. This observation suggests that, although IT infrastructure is of utmost importance, other elements such as technology adoption have a more profound influence in this particular situation. Although the results confirm the applicability of entrepreneurial orientation theories such as the Resource-Based View and Dynamic Capabilities Theory, the deviations from prior studies indicate that the impact of these entrepreneurial factors on SME performance may be influenced by local conditions, industry-specific elements, and strategic priorities.

The findings of this study have several significant implications for both theory and practice. This study enhances the existing knowledge on entrepreneurial orientation by highlighting the significance of proactiveness and technology adoption as pivotal factors influencing the performance of small and medium-sized enterprises (SMEs), particularly in resource-limited

settings such as Oyo State. This aligns with the principles of the Resource-Based View (RBV) and Dynamic Capabilities Theory, which highlight the deliberate use and ongoing adjustment of internal resources to gain a competitive edge. Through the demonstration of the crucial significance of these elements, the research enhances the comprehension of the interaction between entrepreneurial strategies and technological capabilities in shaping business results.

From a practical viewpoint, the findings indicate that small and medium-sized enterprises (SMEs) should give priority to proactive tactics and the implementation of new technology in order to improve their performance. In order to enhance efficiency and competitiveness, policymakers and company owners should prioritise the reinforcement of IT infrastructure and the promotion of technological integration. However, the results also warn against excessive risk-taking, indicating that small and medium-sized enterprises (SMEs) in unstable situations may need to adopt more deliberate strategies to risk management.

Overall, this study provides practical insights for entrepreneurs, business managers, and policymakers to improve the performance of small and medium-sized enterprises (SMEs) in Nigeria by utilizing entrepreneurial mindset and technology skills. The study confirms that SMEs' performance is significantly influenced by their entrepreneurial orientation, particularly proactiveness and adoption of technology. It supports theories like the Resource-Based View and Dynamic Capabilities Theory, and enhances understanding of their manifestation in the Nigerian corporate environment. The results challenge the assumption that all dimensions of entrepreneurial orientation, including risk-taking, are beneficial, suggesting a context-specific approach to entrepreneurial strategy.

Endnotes

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Chapter Five

Conclusion

This chapter provides a concise overview of the study's results, conclusions, and implications, elucidating the impact of entrepreneurial orientation and technological capabilities on the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. Furthermore, it emphasises the contributions made to the enhancement of knowledge and offers suggestions for stakeholders and directions for future research.

5.1 Summary of Findings

The research demonstrated numerous significant findings concerning the correlation between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs) in Oyo State. The most notable factor that contributed to improved performance was proactiveness, highlighting the need of companies' capacity to foresee and react to market changes in a proactive manner. The discovery lends credence to both the Resource-Based View (RBV) and Dynamic Capabilities Theory by demonstrating the indispensability of internal strategic capabilities in sustaining a competitive advantage. Furthermore, the incorporation of modern technologies by small and medium-sized enterprises (SMEs) was crucial in enhancing their

operational efficiency and overall competitiveness. While IT infrastructure significantly contributed to performance, its effect was primarily supplementary, indicating that although it is crucial, it is not alone enough to propel achievement.

An unexpected discovery was the adverse effect of risk-taking on the performance of SMEs. Contrary to the prevailing belief that risk-taking is an essential component of entrepreneurial success, the research revealed that excessive risk-taking, particularly in the unpredictable Nigerian business climate, might result in unmanageable financial losses. Hence, it is imperative to adopt a more prudent strategy towards risk within the framework of small and medium-sized enterprises (SMEs) in Nigeria. Collectively, the results underscore the vital importance of being proactive and adopting technology in promoting the success of small and medium-sized enterprises (SMEs). They also indicate that maintaining a balanced approach to risk is essential.

5.2 Conclusion

This study confirms that entrepreneurial orientation, particularly proactiveness and technology adoption, significantly influences the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. The results suggest that small and medium-sized enterprises (SMEs) that take initiative in their market strategy and embrace appropriate technologies are more likely to maintain their competitiveness and enhance their overall performance. Although a strong IT infrastructure is essential, it must be synergised with other entrepreneurial approaches like innovation and proactiveness to achieve maximum performance optimisation.

Furthermore, the study highlights the need of caution in relation to risk-taking within the Nigerian SME environment. Contrary to the conventional perspective in entrepreneurial orientation literature, excessive risk-taking in the volatile and often uncertain business environment might actually harm

firm success. These findings offer important considerations for policymakers and SME managers aiming to improve company performance by prioritising important aspects such as proactiveness and technology adoption, while adopting a more strategic approach to risk minimisation.

5.3 Recommendations

Based on the results of this study, it is possible to provide numerous practical recommendations to improve the performance of small and medium-sized enterprises (SMEs) in Oyo State by adopting entrepreneurial orientation and technological capabilities.

1. Emphasise Proactiveness: Small and medium-sized enterprise (SME) owners should give priority to proactive measures, such as predicting market trends and consumer needs. Success in this endeavour can be attained by consistent market research, meticulous strategic planning, and ongoing adjustment to shifts in the corporate landscape.

2. Invest in Technology Adoption: Small and medium-sized enterprises (SMEs) should actively embrace digital transformation by implementing cutting-edge technology to enhance operational efficiency and competitiveness. Sustained modernisation of IT systems and comprehensive training of personnel in the efficient use of new technology would significantly improve performance.

3. Enhance IT Infrastructure: Although the adoption of technology is essential, a strong and resilient IT infrastructure is as fundamental. It is imperative for SMEs to guarantee the dependability, scalability, and security of their IT systems in order to facilitate expansion and innovation. This encompasses strategic investments in cloud solutions, cybersecurity, and other vital IT services.

4. Implement Risk Management Strategies: Considering the adverse consequences of risk-taking identified in the research, small and medium-sized enterprises (SMEs) in Oyo State should establish thorough risk management frameworks. The primary objective of these strategies should be to detect, evaluate, and reduce risks, so assuring that decisions are properly planned and in line with operational objectives.

5. Government and Policy Support: Policymakers should support the development of small and medium-sized enterprises (SMEs) by establishing a conducive atmosphere that encourages the use of technology and facilitates innovation. These measures encompass offering monetary incentives, subsidies for technology investment, and promoting partnerships between small and medium-sized enterprises (SMEs) and technology suppliers to decrease obstacles to digital transformation.

5.4 Contribution to Knowledge

This study offers substantial contributions to the existing literature by investigating the relationship between entrepreneurial orientation, technological capabilities, and the performance of small and medium-sized enterprises (SMEs) in Oyo State, Nigeria. This study provides significant conceptual and empirical insights, which contribute to our comprehension of these dynamics specifically in the Nigerian setting. This study contributes to the knowledge of how entrepreneurial orientation and technological capabilities impact the success of small and medium-sized enterprises (SMEs), especially in the setting of a developing economy.

This research presents a complete framework that combines the components of entrepreneurial orientation, namely proactiveness, innovativeness, and risk-taking, with technological aspects such as IT infrastructure and technology adoption. This model offers a holistic approach to understanding the elements that contribute to the success of small and medium-sized enterprises

(SMEs). The study confirms the theoretical significance of the Resource-Based View (RBV) and Dynamic Capabilities Theory by demonstrating that internal capabilities and adaptability are crucial for sustaining competitiveness in dynamic business environments.

The study presents empirical findings that demonstrate the influence of particular entrepreneurial orientations on the performance of small and medium-sized enterprises (SMEs) in Nigeria. This unique data-driven perspective is essential for driving future research and policy development targeted at aiding medium-sized enterprises (SMEs).

5.5 Suggested Areas of Further Research

This research focusses on important elements of entrepreneurial orientation and technological capabilities. However, more investigation is needed to get a more thorough understanding of how these factors impact the performance of small and medium-sized enterprises (SMEs). In order to more accurately depict the dynamic character of entrepreneurial orientation and its influence on performance over time, future study should use longitudinal methodologies. By broadening the research population to encompass small and medium-sized enterprises (SMEs) from other regions of Nigeria or other emerging countries, the generalisability of the results would be improved.

An integrated mixed-methods approach would provide a comprehensive understanding by combining qualitative insights into entrepreneurial strategy with quantitative data. Subsequent investigations should focus on sector-specific dynamics, as the impact of entrepreneurial orientation and technology adoption may vary among industries such as manufacturing, services, and agriculture.

In conclusion, this chapter underscores the significance of entrepreneurial orientation and technological capabilities in enhancing the performance of small and medium-sized enterprises (SMEs) and offers practical recommendations for future study in this area.

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Appendix I

Questionnaire
Lead City University Ibadan
Department of Management & Accounting

Dear Respondent,

As part of my Master of Philosophy degree in Business Administration, I am conducting research on **"Entrepreneurial Orientation, Technological Capabilities, and SMEs Performance in Oyo State, Nigeria."** This study is primarily for academic purposes, and I assure you that any information you provide will be kept strictly confidential. If at any point you feel uncomfortable continuing, you are free to withdraw your consent without any obligation.

Attached below is the questionnaire designed to gather insights related to this study. Please take a moment to select the option that best reflects your personal views.

Thank you for your participation.

Olatunji Hassan

Section A: Demographic Information

Please carefully go through each item and tick (√) as appropriate.

1. Gender

1. Male

2. Female

2. What is your age bracket?

1. 21-30
2. 31-40
3. 41-50
4. 51-60
5. 61-65

3. What is your highest academic qualification?

1. ND/NCE
2. Bachelor's Degree/HND
3. PGD/Master's Degree
4. PhD
5. Others (please specify)

4. Job Level

1. Top management
2. Middle management
3. Operational management

5. Length of Service

1. Below 5 years
2. 6-10 years
3. 11-15 years
4. 16 years +

6. Kindly rate your knowledge of the overall organizational activities and performance of your enterprise:

☐ 1 - Very poor ☐ 2 - Poor ☐ 3 - Fair ☐ 4 - Below average ☐ 5 - Average

☐ 6 - Above average ☐ 7 - Good ☐ 8 - Very good ☐ 9 - Excellent ☐ 10 - Outstanding

Section B: Entrepreneurial Orientation

The statement in this section concerns entrepreneurial orientation dimensions as applicable to your enterprise. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organisation by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Strongly agree; 5 = Agree; 4 = Partially agree; 3 = Partially disagree; 2= Disagree; 1 = Strongly disagree

I	**Innovativeness** To what extent, does your enterprise do the following in relation to entrepreneurial orientation?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	We develop new products regularly.	6	5	4	3	2	1
2	Our enterprise values creativity.	6	5	4	3	2	1
3	We adopt new technologies quickly.	6	5	4	3	2	1
4	Innovation is encouraged here.	6	5	4	3	2	1
5	We are open to new ideas.	6	5	4	3	2	1
II	**Proactiveness** To what extent, does your enterprise do the following?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	We lead market trends.	6	5	4	3	2	1
2	We actively seek new opportunities.	6	5	4	3	2	1
3	Our enterprise is forward-thinking.	6	5	4	3	2	1
4	We anticipate market needs.	6	5	4	3	2	1
5	We are quick to exploit new markets.	6	5	4	3	2	1
III	**Risk-taking** To what extent, does your enterprise do the following?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	We take calculated risks.	6	5	4	3	2	1

2	Our enterprise invests in high-risk projects.	6	5	4	3	2	1
3	We embrace uncertainty in business.	6	5	4	3	2	1
4	We are bold in decision-making.	6	5	4	3	2	1
5	Our enterprise is open to risks for growth.	6	5	4	3	2	1

Section C: Technological Capabilities

The statement in this section concerns technological capabilities dimensions as applicable to your enterprise. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organisation by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Strongly agree; 5 = Agree; 4 = Partially agree; 3 = Partially disagree; 2= Disagree; 1 = Strongly disagree

IV	**IT Infrastructure** To what extent, does your enterprise do the following in relation to technological capabilities?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	Our IT infrastructure is reliable.	6	5	4	3	2	1
2	We have up-to-date IT systems.	6	5	4	3	2	1
3	Our IT systems support our operations.	6	5	4	3	2	1
4	We regularly upgrade our IT equipment.	6	5	4	3	2	1
5	Our IT infrastructure meets our needs.	6	5	4	3	2	1
V	**Technology Adoption** To what extent, does your enterprise do the following?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	We quickly adopt new technologies.	6	5	4	3	2	1
2	Our enterprise embraces digital tools.	6	5	4	3	2	1
3	We invest in the latest software.	6	5	4	3	2	1
4	New technologies improve our processes.	6	5	4	3	2	1
5	Our employees adapt well to new tech.	6	5	4	3	2	1

Section D: SMEs Performance

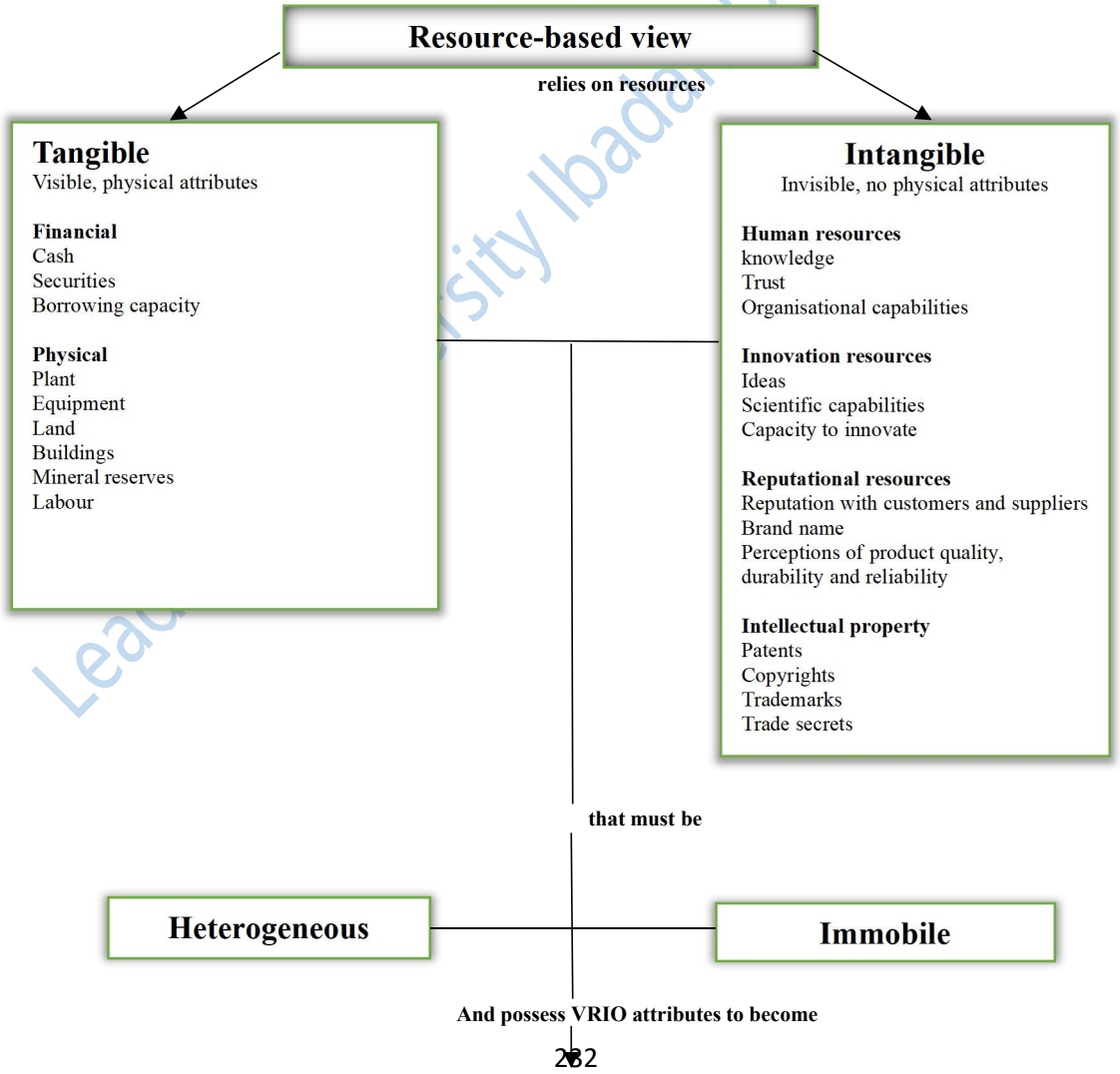
The statement in this section concerns SMEs Performance dimensions as applicable to your enterprise. Using the six-point Likert-type-scale provided, please indicate the extent to which each statement applies to your organisation by selecting one of the options provided (6, 5, 4, 3, 2, 1).

6 = Strongly agree; 5 = Agree; 4 = Partially agree; 3 = Partially disagree; 2= Disagree; 1 = Strongly disagree

VI	**Sales Growth** To what extent, does your enterprise do below?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	Our sales have been increasing steadily.	6	5	4	3	2	1
2	We frequently meet our sales targets.	6	5	4	3	2	1
3	Our sales team is effective.	6	5	4	3	2	1
4	We experience consistent revenue growth.	6	5	4	3	2	1
5	We achieve high sales volume.	6	5	4	3	2	1
VII	**Customer Satisfaction** To what extent, does your enterprise do below?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	Our customers are highly satisfied.	6	5	4	3	2	1
2	We receive positive customer feedback.	6	5	4	3	2	1
3	Our customer service is excellent.	6	5	4	3	2	1
4	We have a loyal customer base.	6	5	4	3	2	1
5	Customer complaints are rare.	6	5	4	3	2	1
VIII	**Profitability** To what extent, does your enterprise do below?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	Our profit margins are strong.	6	5	4	3	2	1
2	We consistently achieve our profit goals.	6	5	4	3	2	1
3	Our profits have been growing.	6	5	4	3	2	1
4	We have a high return on investment.	6	5	4	3	2	1
5	Our cost management is effective.	6	5	4	3	2	1

IX	**Market Share** To what extent, does your enterprise do below?	SA	A	PA	PD	D	SD
1	Our market share has increased.	6	5	4	3	2	1
2	We lead in our market segment.	6	5	4	3	2	1
3	Our market position is strong.	6	5	4	3	2	1
4	We outperform competitors.	6	5	4	3	2	1
5	We are recognised in our industry.	6	5	4	3	2	1
X	**Operational Efficiency** To what extent, does your enterprise do below?	**SA**	**A**	**PA**	**PD**	**D**	**SD**
1	Our operations are highly efficient.	6	5	4	3	2	1
2	We minimise waste in our processes.	6	5	4	3	2	1
3	Our processes are streamlined.	6	5	4	3	2	1
4	We optimize resource usage.	6	5	4	3	2	1
5	Our operations are cost-effective.	6	5	4	3	2	1

Appendix II



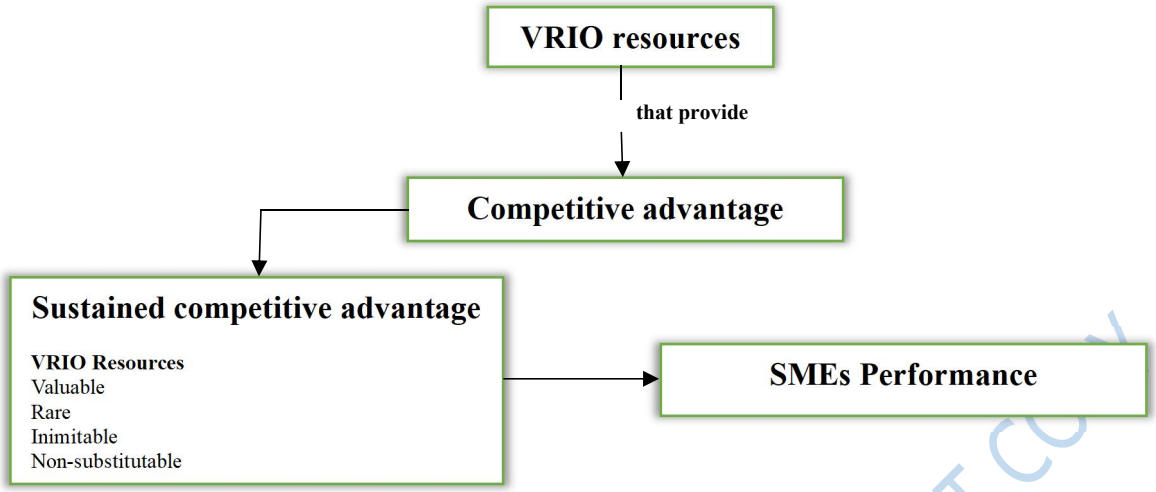


Figure 2.1: Resource-Based View Theory (RBV)

Appendix III

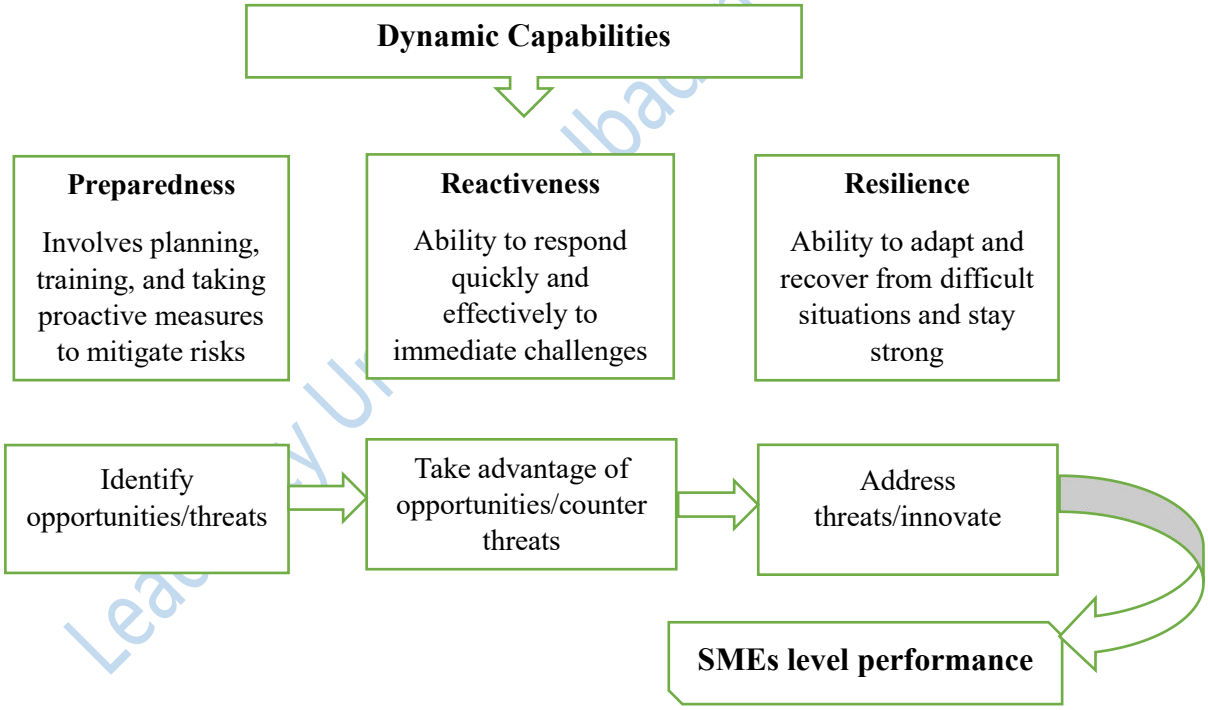
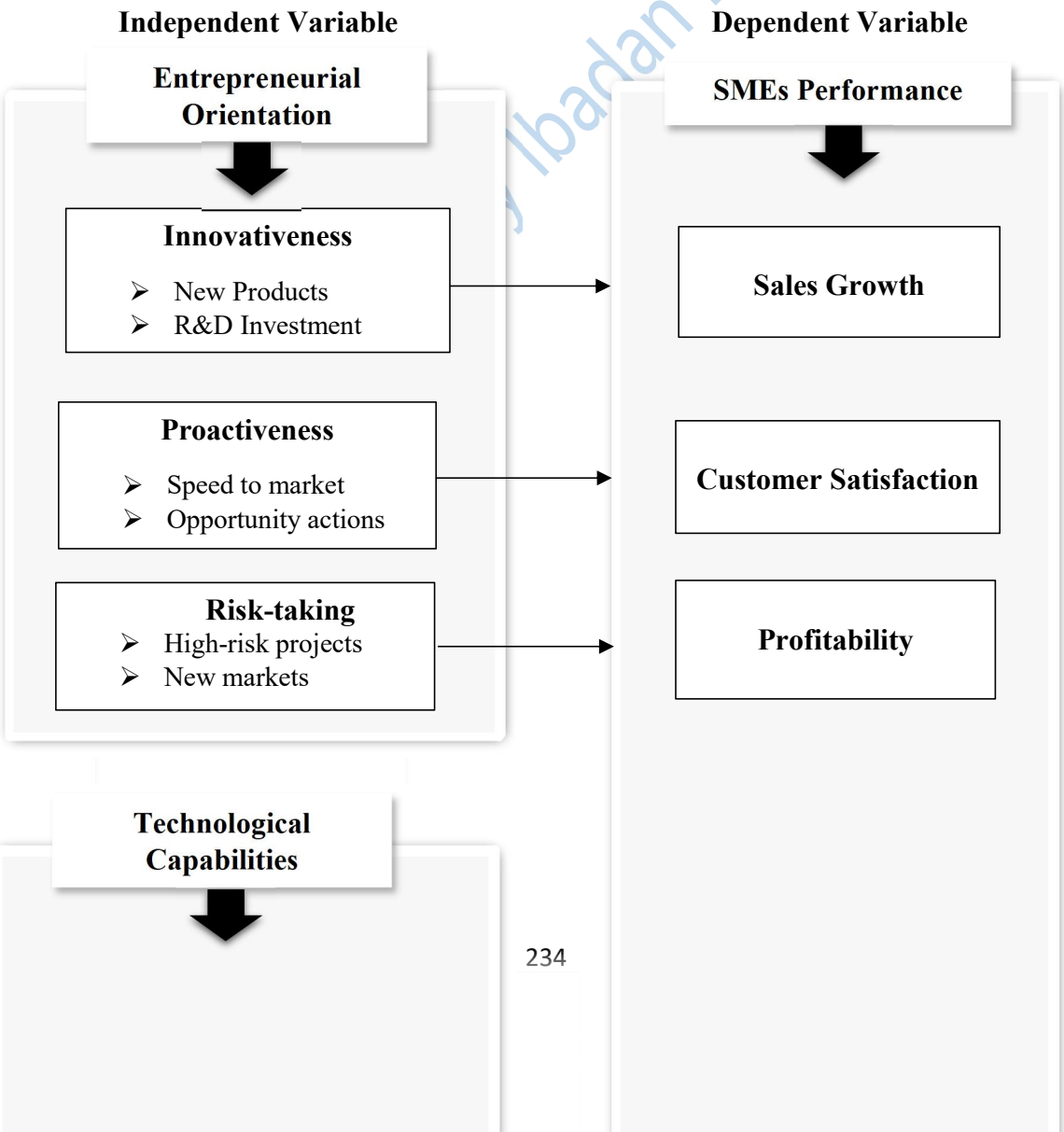


Figure 2.2: Dynamic Capabilities Theory

Appendix IV



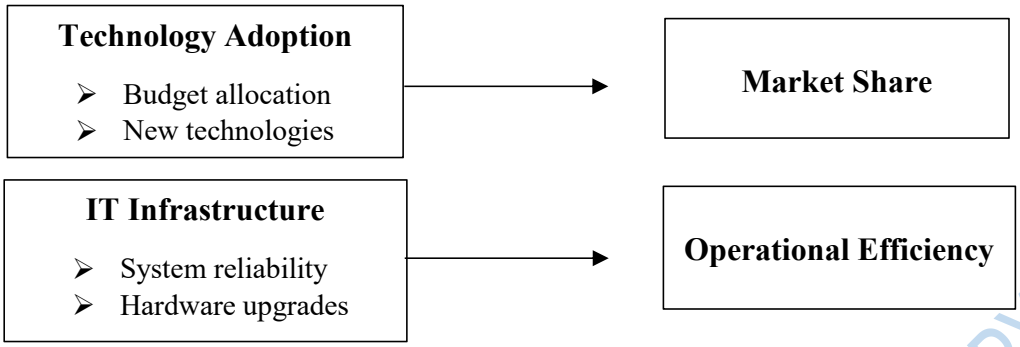


Figure 2.3: Conceptual Model

Appendix V

Charts of Demographic Characteristics of the Study Respondents

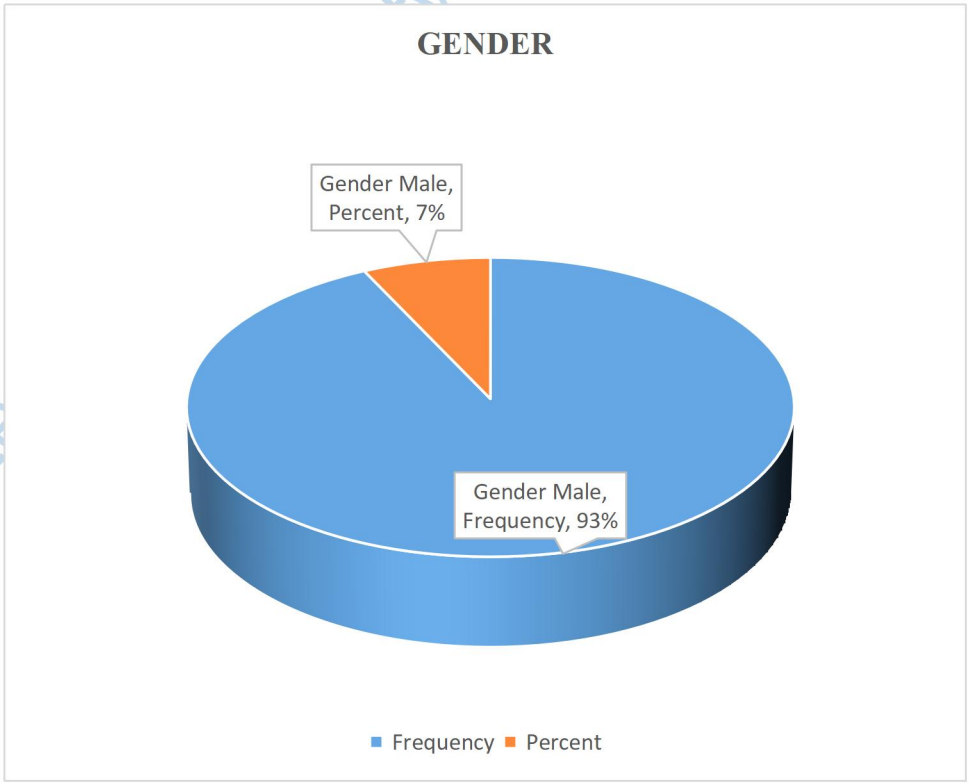


Figure 4.1

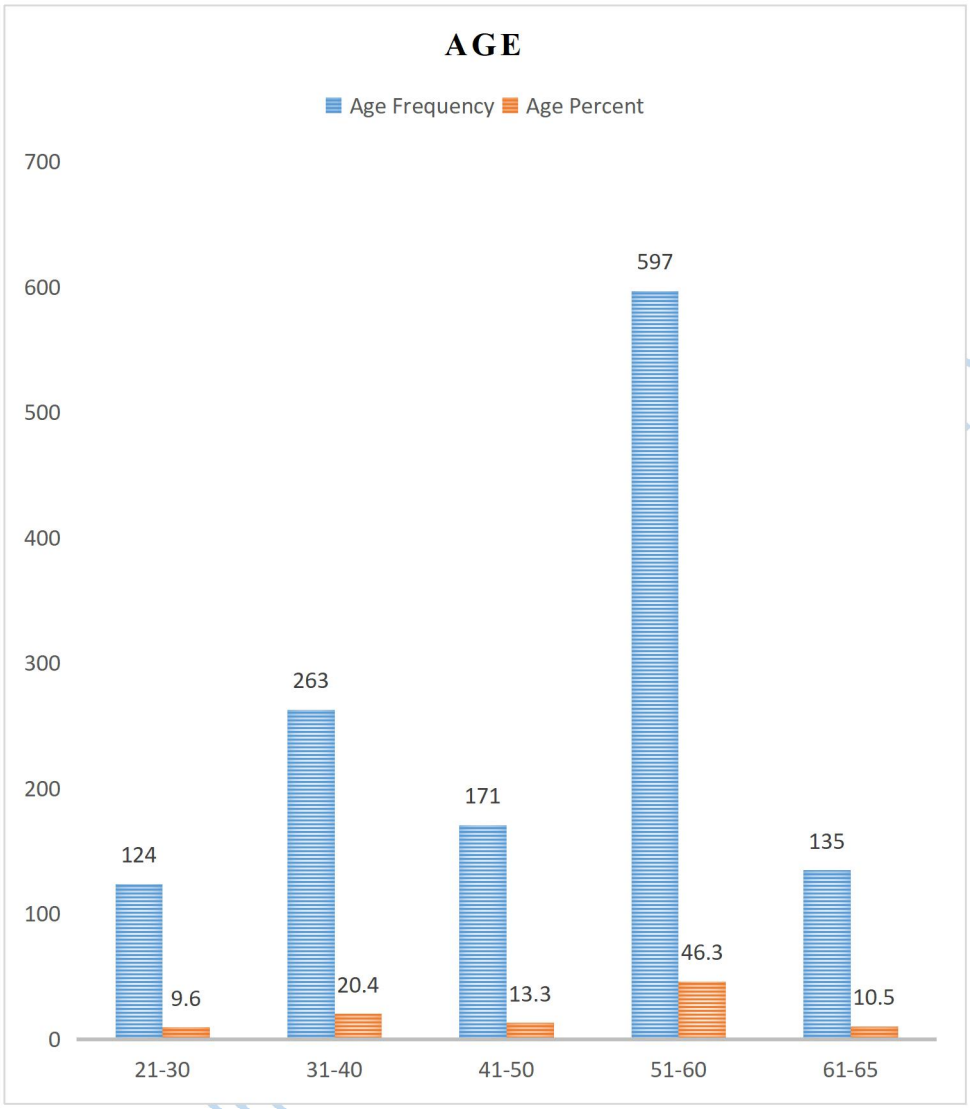


Figure 4.2

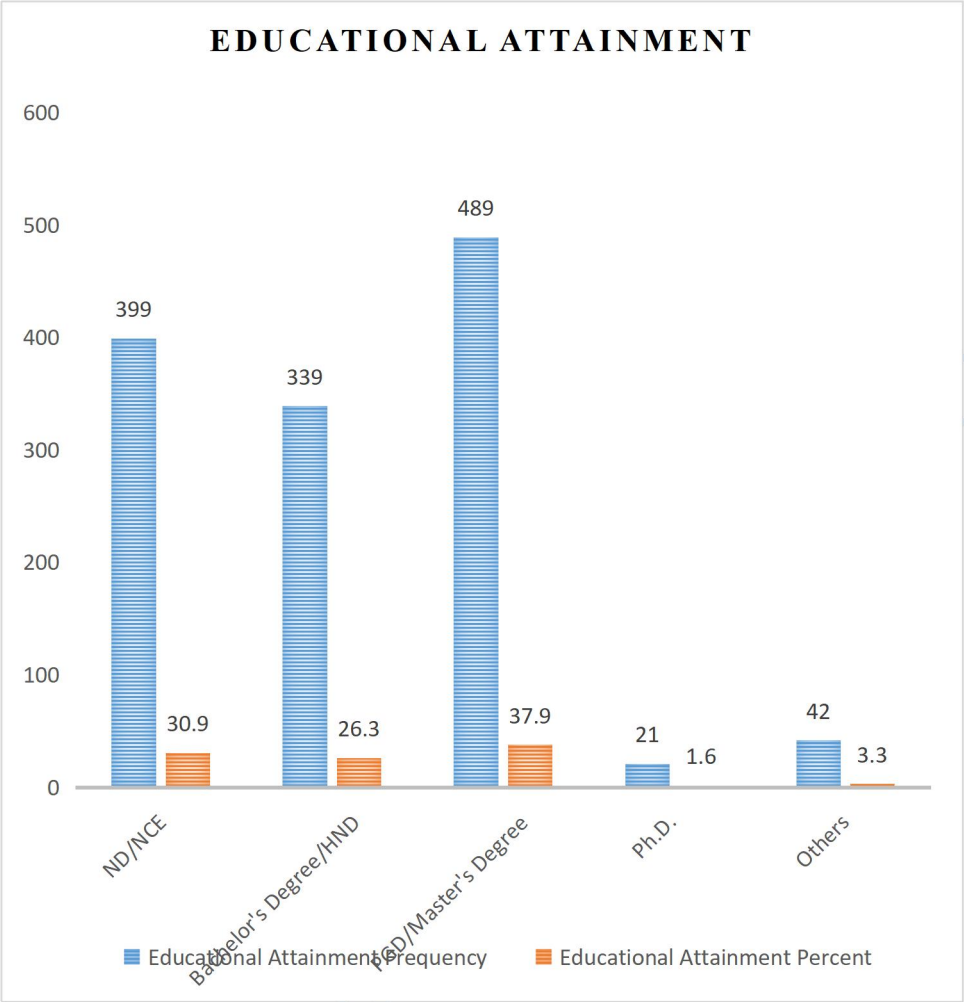


Figure 4.3

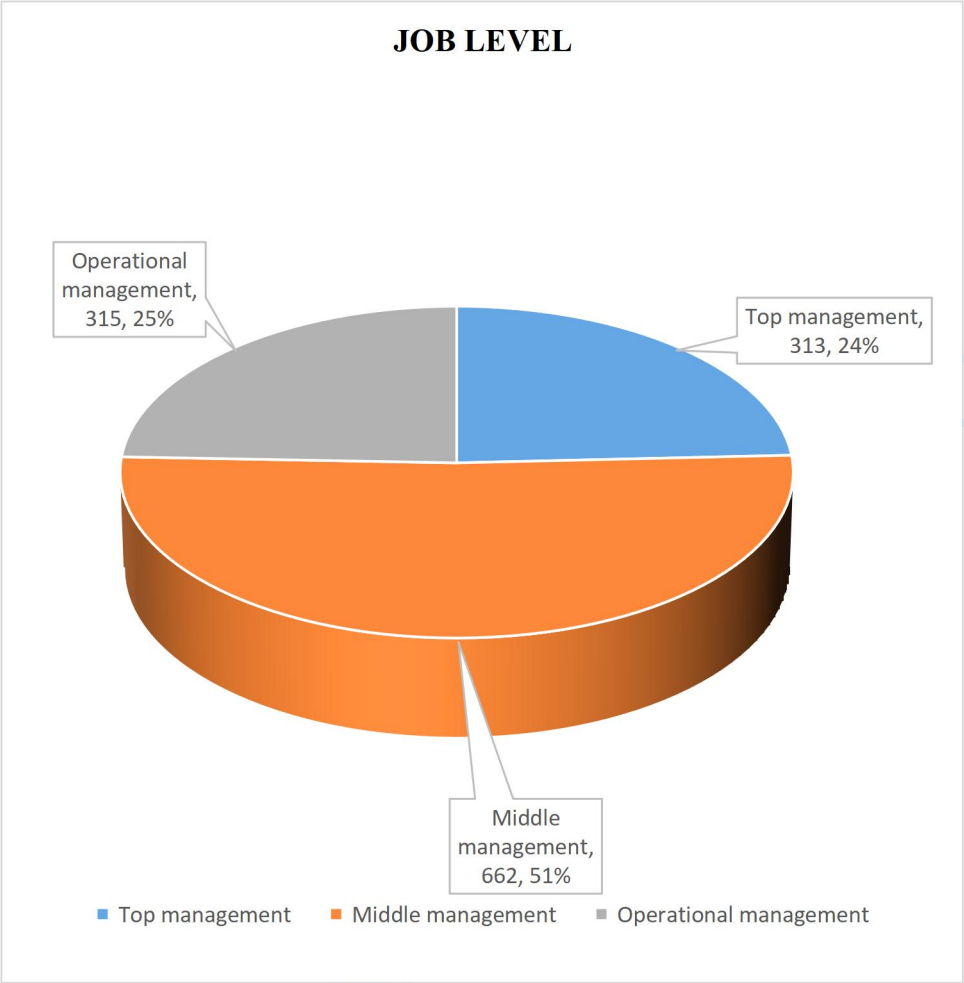


Figure 4.4

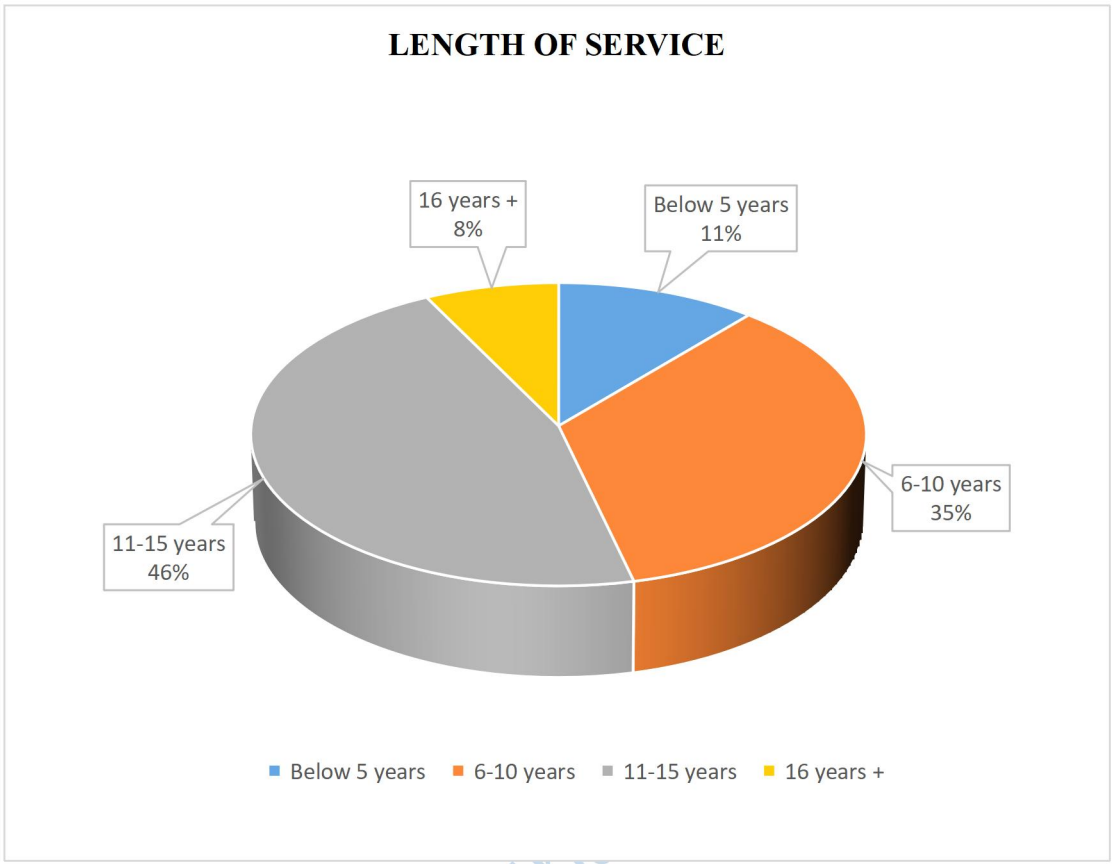


Figure 4.5

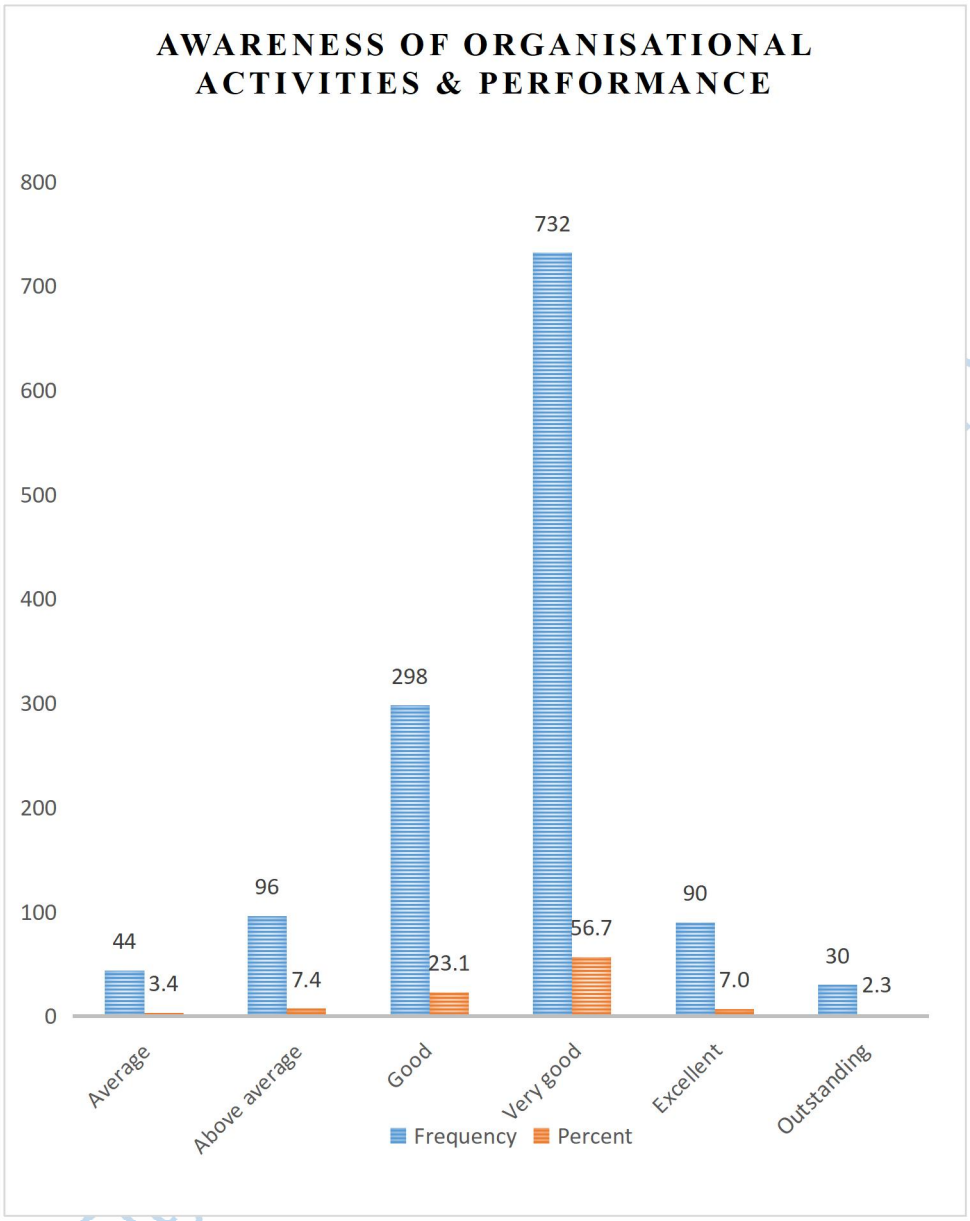

AWARENESS OF ORGANISATIONAL ACTIVITIES & PERFORMANCE
800
700
600
500
400
300
200
100
0
44
3.4
96
7.4
298
23.1
732
56.7
90
7.0
30
2.3
Average
Above average
Good
Very good
Excellent
Outstanding
Frequency
Percent

Figure 4.6

Lead City University

Biodata

A. Personal Data

1. Full Name: Hassan Olatunji Alaba

2. Address: S7/1313 Off James Akinwumi Adekoya Street, Olorunsogo Felele, Ibadan

3. E-mail Address: olatunjihassan10@gmail.com

4. Phone Number: 07061540291

5. Date of Birth: 15 May, 1972

6. Place of Birth: Ijebu Ode

7. Nationality: Nigerian

8. Name & Address of Next of Kin:

Name: Hassan Judith

Address: S7/1313 Off James Akinwumi Adekoya Street, Olorunsogo Felele, Ibadan

B. Educational Background

Institutions Attended with Dates & Qualifications

1. Bishop Akinyele Independence Primary School, Oke-Ado, Ibadan (1979-1985)

2. Methodist High School, Ibadan-Lagos Expressway, Ibadan (1985-1991)

3. University of Ibadan, B.Sc. (1996-2002)

4. Lead City University, MBA (2019-2020)

5. Lead City University, M.Phil. (2021-2024)

C. Working Experience with Dates

Lead City University

Pursuing a Ph.D. in Business Administration (Current)

Nigerian Tribune
Sales & Marketing Executive (2013 - 2020)

Starcomms Plc
Key Account Manager (2006 - 2013)

D. Publications

Chapters in Book

Hassan, Olatunji A., & Oyesola Rasheed O. "Government Policies and Entrepreneurial Development in Nigeria." Chapter 3 in Environmental Factors and Entrepreneurship Development. OGE Business School Publisher, 2023. ISBN 978-978-59453-4-8. https://doi.org/10.5281/zenodo.10323486; https://doi.org/10.5281/zenodo.10323487.

Hassan, Olatunji A., & Jacob Dele O. "Globalisation, Government Support and Entrepreneurial Development in Nigeria." Chapter 2 in Entrepreneurship and Business Environment. OGE Business School Publisher, 2023. ISBN 978-978-59453-5-5. https://doi.org/10.5281/zenodo.10320909; https://doi.org/10.5281/zenodo.10320910.

E. Referees

Pastor Segun Olatunji (PhD)
RCCG, Winners' Assembly, Oyo Province 10 Headquarters
Oyo State
08055001730

Prof. J. A. Adejuwon (PhD)
Department of Management & Accounting
Faculty of Management & Social Sciences
Lead City University
Oyo State
08033715590

_____ _____

Signature **Date**

The University Compliance Certification

This is to certify that the thesis by **Olatunji Alaba HASSAN (LCU/PG/000989)** in the Department of Management and Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan is in full compliance with the approved University Format and Style.

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Signature **Date**