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**THE ROLE OF INNOVATIVENESS IN THE RELATIONSHIPS BETWEEN
ETHICAL SENSITIVITY, KNOWLEDGE SHARING INTENSITY, ACCESS
TO ICT AND ACCESS TO FINANCE AND SUSTAINABLE PERFORMANCE
OF SME'S**

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**DOCTOR OF PHILOSOPHY
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TO ICT AND ACCESS TO FINANCE AND SUSTAINABLE PERFORMANCE
OF SME'S**

By

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ABSTRACT

Small and Medium Enterprises (SMEs) play a dynamic role in the sustainable development of any nation. They are the core of an economic system as they provide employment and contribute to Gross Domestic Product (GDP) of a country. The sustainable performance SMEs as a strategy of national sustainable development is therefore of utmost importance. This study examines the sustainable performance of SMEs based on Triple Bottom Line (TBL) approach and the factors affecting SMEs sustainable performance as derived from Resource Base View (RBV) theory and the Dynamic Capabilities theory. More specifically, this study investigates the relationships between ethical sensitivity, knowledge sharing intensity, access to ICT, access to finance, sustainable performance in Nigeria. The moderating role of innovativeness on these relationships to sustainable performance was also examined. Data was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The study found that there are significant positive relationships between ethical sensitivity, knowledge sharing intensity, access to finance and sustainable performance of SMEs. In addition, it was also found that innovativeness positively moderates the relationship between access to ICT and sustainable performance as well as the relationship between access to finance and sustainable performance of SMEs. However, access to ICT has no significant effect on the sustainable performance of SMEs. The research recommends that SMEs should focus on securing access to finance, increasing knowledge sharing intensity, ethical sensitivity and access to ICT as well as developing innovativeness to achieve sustainable performance. This research contributes to SME literature by integrating the theories on Triple Bottom Line (TBL), Resource Base View (RBV) and Dynamic Capabilities to sustain their performance. This study benefits various stakeholders by highlighting the effects of ethical sensitivity, knowledge sharing intensity, access to ICT, access to finance and innovativeness on the sustainable performance of SMEs.

Keywords: Innovativeness, Nigeria, SMEs, sustainable performance, triple bottom line,

ABSTRAK

Perusahaan Kecil dan Sederhana (PKS) memainkan peranan dinamik dalam kemampuan pembangunan mana-mana negara. PKS merupakan teras kepada sistem ekonomi kerana berupaya menyediakan pekerjaan dan menyumbang kepada Keluaran Dalam Negara Kasar (KDNK) sesebuah negara. Oleh demikian, kemampuan prestasi PKS sebagai strategi pembangunan mampan negara adalah sangat penting. Kajian ini meneliti kemampuan prestasi PKS berdasarkan pendekatan *Triple Bottom Line* (TBL) dan faktor-faktor yang memberikan kesan kepada kemampuan prestasi PKS sebagaimana yang diperoleh daripada teori Pandangan Berasaskan Sumber (RBV) dan teori Keupayaan Dinamik. Secara khususnya, kajian ini menyelidik hubungan di antara kepekaan etika, keamatan perkongsian pengetahuan, capaian ICT, capaian kewangan; kemampuan prestasi di Nigeria. Peranan penyederhanaan inovasi ke atas hubungan-hubungan tersebut bagi kemampuan prestasi juga diselidik. Data dianalisis oleh Pemodelan Persamaan Berstruktur-Kuasa Dua Terkecil Separa (PLS-SEM). Kajian mendapati bahawa terdapat hubungan signifikan yang positif di antara kepekaan etika, keamatan perkongsian pengetahuan, capaian kewangan dan kemampuan prestasi PKS. Selain itu, inovasi juga didapati menyederhana secara positif hubungan di antara capaian kepada ICT dan kemampuan prestasi dan juga hubungan di antara capaian kewangan dan kemampuan prestasi PKS secara positif. Kajian ini mencadangkan supaya PKS memberi perhatian dalam mendapatkan capaian kewangan, meningkatkan keamatan perkongsian pengetahuan, kepekaan etika dan capaian ICT serta pembangunan inovasi untuk mencapai prestasi yang mampan. Kajian ini menyumbang kepada literatur PKS dengan menggabungkan teori *Triple Bottom Line* (TBL), teori Pandangan Berasaskan Sumber (RBV) dan teori Keupayaan Dinamik untuk kemampuan prestasi mereka. Kajian ini bermanfaat kepada pelbagai pemegang taruh dengan memberi penekanan kepada kesan-kesan kepekaan etika, keamatan perkongsian pengetahuan, capaian ICT, capaian kewangan dan inovasi ke atas kemampuan prestasi PKS.

Kata kunci: inovasi, kemampuan prestasi, Nigeria, PKS, *triple bottom line*,

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LIST OF ABBREVIATIONS

ACF	Access to Finance
AVE	Average Variance Extracted
BOA	Bank of Agriculture
BOI	Bank of Industries
CAC	Corporate Affairs Commission
CBN	Central Bank of Nigeria
CMB	Common Method Bias
CRV	Composite Reliability Value
CV	Convergent Validity
DFI	Development Finance Institutions
EP	Economic Performance
ETS	Ethical Sensitivity
EU	European Union
EVP	Environmental Performance
GDP	Gross Domestic Product
HND	Higher National Diploma
HTMT	Heterotrait-Monotrait Ratio
ICT	Information Communication Technology
KSI	Knowledge Sharing Intensity
NBCI	Nigerian Bank for Commerce and Industry
NBS	Nigerian Bureau of Statistic
NCE	National Certificate for Education
NERUND	National Economic Recovery Fund
NIDB	Nigerian Industrial Development Bank
NIXIM	Nigerian Export and Import Bank
NPC	National Population Census
NPD	New Product Design
OECD	Organization for Economic Cooperation and Development
PhD	Doctor of Philosophy
PLS-SEM	Partial Least Square- Structural Equation Modelling
ROA	Return on Asset
ROCE	Return on Capital Employed
ROE	Return on Equity
ROS	Return on Sales
RVB	Resource Based View
SD	Standard Deviation
SMEDAN	Small and Medium Enterprises Development Agencies in Nigeria
SMEEIS	Small and Medium Enterprises Equity Investment Scheme
SMEs	Small and Medium Enterprises
SP	Social Performance
SPSS	Statistical Packages for Social Sciences
TBL	Triple Bottom line Theory
UK	United Kingdom
USA	United States of America
VIF	Variance Inflated Factors

CHAPTER ONE

INTRODUCTION

1.0 Background

Small and Medium Enterprises (SMEs) have constantly maintained their renowned status globally. Their popularity has progressed over the years due to their contribution to economic growth and development. Subsequently, SMEs play role in creation of employment and assist in curbing poverty in the country. SMEs also provide an important service in the supply chain of major businesses. In addition, they add value to balance of payment (exportation incomes), per capita-income and GDP to all categories of economies. Consequently, in high income economies SMEs contribute 55% to Gross Domestic Product (GDP) and 65% employment, on the average. For instance, SMEs' contribution to the United Kingdom (UK)'s annual GDP, sums up to 54.1% while they account for 53% of total employment in the country ((Klius, Ivchenko, Ivchenko, Manukhina, & Melnik, 2021, World Bank2016, Eurostat 2015, Khan, Salamzadeh, Kawamorita, & Rethi, 2021; Yusoff, Wahab, Latiff, Osman, & Zawawi, 2020).

In middle income economy, the trend of SMEs' impact to the economic development is even higher. In another report by the World Bank in 2016, the SMEs contribute an average of about 70% to the GDP and generate 95% employment of such economies. Based on these reports, the impact of SMEs to the GDP of China is about 55% and

75% to the employment of the country. According to a report by SMEDAN (2017), the impact of Small and Medium Enterprises developing countries gives an impression of performance that is above not only that of the middle income countries but also is above the high income economies countries. An illustration of this statement is India where the SMEs account for 94% of the industries. They also constitute 31% of work force in the country.

Recent reports by World Bank have shown that, SMEs make up to 60% of total employment in emerging economies. Moreover, they also contribute 40% to national income (World Bank, 2017) and their contribution may increase when the informal ones are formalized. It is also reported that nearly all formal jobs in emerging markets are engendered by SMEs as this constitutes about 80% of new positions.

In Nigeria, SMEs contribute greatly to the nation's economic development. Their contribution to employment generation in the country was 46.45% and 25% to employment and GDP respectively as shown in Table 1.1

Table 1.1
SMEs Contribution to GDP and Employment for some African Countries

Country	Contributions to GDP (%)	Contributions to employment
Nigeria	46.45%	25%
Ghana	70%	49%
South Africa	50-60%	60%
Rwanda	20.50%	60%
Kenya	40-50%	80%

Sources: SMEDAN (2017), Muriithi (2017)

Nigeria is the largest economy in Africa and is in Western cost of Africa. It has over 170 million citizens

(World Bank 2017). Nigeria's economy grew to become the largest in 2012 with a GDP of about USD 43.3 billion (World Bank, 2017). The business environment in Nigeria was ranked 145th among 169 economies on the ease of doing business assessment. Whilst grappling with the following issues in terms starting a business, getting electricity, such as registration of estate. Others include illegal transactions across borders, protecting smaller stakeholders, accessing credit, enforcing and contracts, respectively (World Bank 2017). In terms of export, crude oil is the main export commodity and a per- capital income of about USD2, 200. Most of the populaces however, are underprivileged, or belong to non- productive economy (Gorondutse, 2014; Worldbank, 2017).

Majority of Nigerians make a living from a combination of subsistent farming and SME activities. Available information from SMEDAN (2017) revealed that SMEs in Nigeria are about 23 million out of which 92.78% are small while the remaining are medium enterprises respectfully. SMEs are the backbone of Nigerian economy, hence play an important role in country's sustainable development. They serve as an engine for job creations and growth, as they are the dominant form of business organisations in the country that account for more than 90% of undertakings (Muriithi, 2017)

Based on several studies, SME's Performance can be said to be the ability to grow, survive, and contribute in alleviating poverty through creation of employment (Lane, Pearson, & Aranoff, 2010; Wu, 2009, Group, 2013). Considering the contributions of SMEs to their respective nations' economies, it is imperative that they continue to perform and be able to sustain in the long run.

Despite the significant input by SMEs in respect of GDP in the global world, on one hand, they are also known to impact negatively on the environment (SDG, 2020). It has been established that jointly, SMEs' contribution to the world's pollution is about 70% (Hillary, 2000). More importantly, 64% of the world's air pollution comes from manufacturing companies. This is because these firms lack environmentally friendly practices in managing their businesses (Rita et al., 2018). SMEs shy away from accepting environmental practices as they are perceived to be expensive. It is therefore estimated that only 0.4% of SMEs globally, are in compliance with environmental set down rules and regulations (behjati, 2017)

In Sweden, SMEs form 99.9% of all the enterprises while contributing 40% to GDP (Tsvetkova, Bengtsson & Durst, 2020). These SMEs therefore affect the systems of every nation. Hence, they are considered as essential drivers in propagating Sustainable Development Goals (SDGs). Swedish firms are projected among the best in the Global sustainability index. This further indicates a high adoption of sustainability practices by Swedish businesses. Moreover, in research conducted by Tsvetkova, et al., (2020) the results had shown positive relationship between what motivates (Drivers) these enterprises in adopting sustainability practices such as access to market. Records have indicated that Swedish government as a key driver in propagating sustainability practices among people and firms.

The United Nations UN report recognized the remarkable effort exhibited by Swedish government towards achieving Agenda 21 and 2030 (Tsvetkova, et al., 2020). In addition to government, various networks are also involved in innovation promoting

sustainability practices such as TEM. Others are Sustainable Business Hub CSR Vastsverige. In Swedish terms, sustainable practices are perceived as showing continuous attention in environmental issues. It is also about human rights and the standard conditions of living. Sustainability also advocates for anti-corruption and doing things right. Meanwhile, gender parity inclusivity is also part of sustainability practices.

Malaysia is among the 190 countries that made a pledge in the year 2015 to achieve 17 Sustainable Development Goals (SDGs). The Malaysian ecosystem in line with prevailing situations in the world, is also confronted with huge burden of economic, environmental as well as a societal issue. Accordingly, the government came up with a 4-year development plan titled 11MP. The plan which commenced in 2016 and to end in 2020 was with a view to tackling these issues by giving more attention to people while Shared Prosperity Vision (SPV) was introduced to address the widening income differentials. This was intended to focus on green initiatives that would enhance the livelihood of its citizens. Consequently, the 17 SDGs were added in the Malaysian policy document to provide directive towards achieving the Sustainable Development 2030 Agenda (Nor-Aishah, Ahmad, & Thurasamy, 2020).

In Malaysia, recent findings indicated that SMEs activities contribute negatively to climate change, unwanted social trends, and climate change. Literature also revealed that waste generation comes in two major parts namely, Industrial and Manufacturing wastes. Plastic, paper, packaging constitutes industrial waste. On the other hand, the manufacturing sector produces bulky waste which is dumped in the environment (9).

Research has also indicated the prevalence of inadequate protection of the environment 95% of the waste is dumped openly (Nor-Aishah, et al., 2020). The consequences of these negative approach in handling waste are estimated to have an overbearing effect on the Malaysian environment in a few years to come considering the increasing rate of globalisation. This is also in cognisance of increasing trend of urbanisation and population growth that could reach 37.4 million by the year 2030.

Therefore, SMEs are supposed to show increased attention to sustainability. There is a strong reason for their needed action towards sustainability practices as their activities cannot be carried out without affecting the society. Each decision a firm takes, has an impact on the neighbouring public and stakeholders. Bhandarker (2014) testified that commercial activity brings about huge advantages while on the other hand sustainability, environmental, financial, and corporate social responsibility as the overarching umbrella and the new challenge would be how to make a business remain and sustainably profitable.

Sustainable performance can be said to be an integration of social, environmental, and economic performance. This is popularly known as Triple Bottom Line (Rashid, Jabar, Yahya, & Samer, 2015). The TBL is used to evaluate Firm's performance in terms of economy (financial), ecosystem (environmental) and social development (Rashid et al., 2015) which has the potential for greater business value, especially for manufacturing enterprises. This concept is built on the principle of Sustainable Development.

The notion of sustainable development came up to meet the needs of present generation and upcoming generation ability to meet their own needs. Therefore, the strategic practice of sustainable development is known as sustainable performance (Kocmanová & Dočekalová, 2011). Previous studies carried on this concept include that of Harmon and Auseklis (2009) Hopwood, Mellor, and O'Brien (2005) Huson, Malatesta and Parrino (2004) and Ostrom, 2009) and most of these them have depicted important activities from the regulatory factors like stakeholders and institutions while only few indicated firm's voluntary efforts thereby ensuring the success of implementing green activities.

Alternatively, the trend of SMEs performance in Nigeria seems to be poor and not sustainable. This is supported by Onugu (2005) who indicated that SMEs Performance in the country is below expectation and have failed to make a desirable impact in terms of environmental, economic and social performance. Business day newspaper reported that, about 222 SMEs had shut down their operation in 2015 (Business Day 2016). Additionally, study by Eze-Okpala (2015) reveals that, the SMEs contribution to output (GDP) is threatened. It is also argued that the SMEs contribution to the national GDP of Nigeria is poor because they are being faced with numerous challenges (Aminu, 2015; Ndubisi & Iftikhar, 2012).

Although, it has been long established that the major aim of SMEs is to generate employment, reduce poverty, create wealth, stimulate real economic growth, the current data on poverty and employment rate in Nigeria depicts an increase of the issues. SMEs in Nigeria have continued to witness widening gap in income inequality

and a reduced capacity to provide employment even with a rise in the level of poverty in the country. There is an increase of people living below poverty line of US\$ 1.25 per day from 54% to 70% between 2010 to 2013, unemployment has risen from 21.1% in 2010 to 23.9% in 2011 (SMEDAN, 2013; Worldbank, 2017).

Recent reports show contribution of SMEs to Nigerian economy has not been stable and is inconsistent. This trend does not add up to the sustainable growth of the SMEs in the long run. In Nigeria, SMEs contribution to the GDP is fluctuation over the years (SMEDAN, 2013). For instance, in 2009 SMEs contributed 37% to the GDP while it improved in 2010 to 46.5% but decreased to 30% in 2013 (NBS, 2017).

1.1 Research Problem

The problems and issues that relate to the sustainable performance of SMEs are viewed in three perspectives namely economic, environmental and social. Accordingly, the economic aspect depicts Small and Medium Enterprises (SMEs) making significant economic contributions not only in developed nations but also in emerging countries. For example, in middle income economy SMEs contributes 60% and 40% to employment generation and GDP respectively (World Bank, 2017). However, in Nigeria SMEs contribute only a 25% and 46.45% to employment and GDP respectively (SMEDAN, 2017), thereby making lower economic contribution which indicates under performance of the sector. It was revealed statistically that every year eighty percent of the prospective entrepreneurs are discouraged from establishing enterprise and thirty percent of SMEs close before their 5th anniversary (Aminu, 2015). The performance of SMEs in Nigeria are far below expectation

(SMEDAN, 2017). The under performance of the SMEs in Nigeria might be connected with the little practices of the sustainable performance by the SMEs (Kushwaha & Sharma, 2016; Martínez-Ferrero & Frías-Aceituno, 2015; Venkatraman & Nayak, 2015). Increase in the practice of sustainability by Nigerian SMEs will surely increase the survival rate of these important firms.

Similarly, the environmental dimension shows that SMEs in Nigeria produce end products and by products in solid, liquid, or gaseous forms which affect the environment negatively by polluting ground and surface water, soil and air. This is considered four times above the global health standard (World Bank, 2018). The report further revealed that, four (4) Cities in Nigeria were among the 50 urban areas with the worst ambient air pollution while the levels of pollution are increasing (World Bank, 2018). In terms of social performance indicators, reports have shown that, SMEs in Nigeria are less concerned on provision of employment and adequate staff welfare as an indication of their business performance (Brinkø, Balslev Nielsen, & van Meel, 2015; MKC, AO, & C, 2018).

Literature indicates sustainability has become a complex issue for the public (Bwise, 2018; Lin, Chang, Chang, 2014). This is because it checks the incidents that destruct the image and value of business. For instance, the discovering of inhuman work conditions in global operations such as unsustainable farming of raw materials and high carbon emissions can negatively affect business credibility (Xia, Chen, & Zheng, 2015). Current investors would not want their business activities to be responsible for destroying environment with extreme pollution (Feridun, 2006).

Though previous literature indicted that research that focused on SMEs seems to increase over the years, however, a review of the previous studies revealed that most of these studies focus only on economic aspect of performance (Almubarak, 2016; Moorthy et al., 2012; Neeta Baporikar Geoffrey Nambira Geroldine Gomxos, 2016; Suryaningrum, 2012; Zheng, Yang, & McLean, 2010). However, the review reveals very few studies view SMEs from the perspective of sustainable performance (Baumgartner & Korhonen, 2010; Bottery, 2014; Prasad & Vatsal, 2013; Sustainable & Studies, 2007; Wesarat, Sharif, & Abdul Majid, 2017).

The major challenges of SMEs performance are lack of sustainability which is supposed to ensure continued profitability and corporate existence in the competitive business environments. It was asserted that organizations should be thriving-not just to be satisfied and productive but also engaged in creating the future (Ayanda & Adeyemi, 2011).. Despite its relevance, literature relating to sustainable performance has been limited, until recently when its measures was developed by Nayak (2007). Nevertheless, investigating the factors influencing SMEs sustainable performance is inadequate in the present-day literature (Ciemleja & Lace, 2015; Cortez & Cudia, 2011; Fredrick, Ombati, Ogoro, & Edward, 2014; Martínez-Ferrero & Frías-Aceituno, 2015).

Additionally, even the few studies on SMEs sustainable performance are predominantly carried out in developed nations (Ciemleja & Lace, 2015; Golicic & Smith, 2013; Gunasekaran, Jabbour, & Jabbour, 2014; Martínez-Ferrero & Frías-Aceituno, 2015; Tisdell, 2001; WCED, 2012). Even the few studies that examined

SMEs sustainable performance in developed nations, the studies failed to conceptualize and investigate major factors responsible for SMEs sustainable performance (Bottery, 2014; Prasad & Vatsal, 2013; Sustainable & Studies, 2007; Venkatraman & Nayak, 2015). Furthermore, previous research on SMEs are mostly focused on entrepreneurship skills, training, government support, marketing, competition and SMEs financial performance (Almubarak, 2016; Moorthy et al., 2012; Neeta Baporikar Geoffrey Nambira Geroldine Gomxos, 2016; Suryaningrum, 2012; Zheng et al., 2010). Considering the importance of access to finance, ethical sensitivity, access to ICT, and knowledge sharing intensively to firm's performance, few studies examined the above-mentioned variables in different dimensions (Kauffman & Riggins, 2012; Pereira-López, 2016; Qammach, 2016; UraSingh, 2012). Therefore, previous literature indicates dearth of studies on the determinant of SMEs sustainable performance in Nigeria.

Even the past studies that empirically tested the direct relation between access to finance, ethical sensitivity, knowledge sharing intensity, access to ICT, and performance of organization's revealed an inconsistent findings (Iacovone, Pereira-López, & Schiffbauer, 2017; Riggins & Weber, 2013; Sila, 2014; Umar et al., 2012; Wu, 2009). In addition to that, previous studies by Chowhan (2016) and Swink (2000) have indicated that moderating effect of innovativeness exist on the relationships between HRM practices, strategy, and performance of SMEs. However, this study proposes to test the moderation effects of innovativeness on different variables. The highlight for the incorporation of innovativeness as a moderating variable is in line with Baron and Kenny (1986) and Jose (2015) who recommended

the use of moderating variable where relationship between variables have been in consistent.

Therefore, in addressing the above research gap identified based on the extant literature this study finds it necessary to investigate the influence of knowledge sharing intensively, access to ICT, ethical sensitivity, and access to finance on sustainable performance with innovativeness as a moderating variable.

1.2 Research Questions

This study proposes to investigate critical factors influencing the sustainable performance of SMEs in Nigeria. Specifically, the study focuses on the influence of knowledge sharing intensively, access to ICT, ethical sensitivity, and access to finance on sustainable performance of SMEs with innovativeness as moderating variable. Thus, the questions seek to be answered by the study are as follows:

- 1 Does ethical sensitivity have any relationship with the sustainable performance of SMEs in Nigeria?
- 2 Does knowledge sharing intensity have any relationship with the sustainable performance of SMEs in Nigeria?
- 3 Does access ICT have any relationship with the sustainable performance of SMEs in Nigeria?
- 4 Does access to finance have any relationship with the sustainable performance of SMEs in Nigeria?

- 5 Does innovativeness moderate the relationship between access to finance, access to ICT, Knowledge sharing Intensity, ethical sensitivity, and sustainable performance of SMEs in Nigeria?

1.3 Research Objectives

In answering the above research questions, the present study aims at achieving the following research objectives:

- 1 To examine the relationship between ethical sensitivity and the sustainable performance of SMEs in Nigeria.
- 2 To examine the relationship between knowledge sharing intensity and the sustainable performance of SMEs in Nigeria.
- 3 To determine the relationship between access ICT and the sustainable performance of SMEs in Nigeria.
- 4 To examine the relationship between access to finance and the sustainable performance of SMEs in Nigeria.
- 5 To determine the moderating effects of innovativeness on the relationship between access to finance, access to ICT, Knowledge sharing Intensity, ethical sensitivity and the sustainable performance of SMEs in Nigeria.

1.4 Scope of the Study

As a field of study, lack of information on SMEs is among the factors that might have contributed to the limited numbers of empirical studies as well as the lack of theoretical application of such factors to the SMEs. In view of the limited studies on SMEs, this

study develops on the strengths of past empirical studies on SMEs, as well as avoid the methodological weaknesses as identified in these studies.

To overcome the limitation of the theoretical framework to the understanding of SMEs, this study limits its scope in order to conceptualize the firm variables relevant to this study. The study limits its research variables to access to finance, access to ICT, Knowledge sharing Intensity, ethical sensitivity innovativeness and SMEs' sustainable performance.

This study attempted to investigate the SMEs currently operating in Kano state in Nigeria. The SMEs involved in this study are confined to only the SMEs that are registered with the Corporate Affairs Commission (CAC) and the list obtained from SMEDAN. The total number of SMEs in Kano, Nigeria, is 8286 (SMEDAN 2013). Kano was selected as sample of this study because of being it the center of commerce and terminus of trade for centuries in the African regions as well as the Arab world. In addition it has the highest number of population in the country (NPC, 2018). Furthermore, the study will investigate only those SMEs that are licensed by the CAC, and that they have been in operations for at least three years.

1.5 Significance of the Study

This study is needed and believed to be useful for the existing and new SMEs as well as the SMEs supporting agencies in Nigeria. More specifically, the study will be able to generate benefits in terms of theoretical as well as practical contributions:

1.5.1 Contributions to Theory

This study will reconfirm and emphasize the importance of triple bottom line (TBL) and resource base theory (RBV). Firstly, the study highlights the importance of TBL theory which shows sustainable performance as having three components which are economic, social and environmental. Secondly, the study also depicts the importance of RBV theory that a firm can perform as well as derive competitive advantage from their resources. The organisational resources such as knowledge, ICT, finance, and innovativeness are capable to improve performance. Therefore, our organisational performance in this study is sustainable performance which consists of economic, environmental, and social performance of SMEs.

The results of this study will contribute to the literature on SMEs. This study will attempt to provide a theoretical understanding of SMEs. It is hoped that it contributes to the conceptual and empirical development of the relationships between knowledge sharing intensity, ethical sensitivity, access to finance, access to ICT, innovativeness and sustainable performance of SMEs in Nigeria. In doing this, the study may serve to demonstrate the relative importance of variables such as access to ICT, knowledge sharing intensity, ethical sensitivity, and access to finance, innovativeness and sustainable performance of SMEs in Nigeria. In addition, the study is also considered useful in providing theoretical propositions to promote and facilitate future research in the areas of SMEs.

1.5.2 Contributions to Practice

The empirical findings of the study are believed to be useful in developing and providing guidelines to SMEs supporting agencies, particularly those responsible for providing information, research, consulting and training services. Additionally, the finding of the study could also be useful in identifying the relevant services and assistance programs needed by SMEs, particularly those related to training in skills and knowledge, as well as consultancies services to improve their level of capabilities in order to become more competitive. Furthermore, the study could provide information concerning the current standing of the business strategies and sustainable performance of SMEs in Nigeria. In doing so, it is hoped that this study will provide SMEs with better understanding of the weaknesses and strengths that are related to lack of practices direction and control.

Lastly, it is hoped that the present study will provide owners, managers, and other stakeholders of SMEs the understanding of the importance of developing and identifying competing based and more effective strategies on their practices.

1.6 Operational Definitions of Key terms

SMEs (Small and Medium Enterprises) in this study refer to the any legal business with 1-35 number of employees and capital of N1million but less N40 million.

Ethical sensitivity in this study refers to the division of philosophy which relates to degree principles of good and bad.

Knowledge sharing intensity refers to an activity through which information, skills, or expertise is exchanged among employees or management in the organizations, in this study.

Access to ICT in this study refers to Information and Communications Technology which stresses the role of computers as well as necessary enterprise application of software and hardware in the organisation.

Access to Finance refers to the method in which SME have access to funding for the starting, operation or expansion of the business.

Innovativeness refers to the process of translating an invention into a service that creates value for which customers will pay.

Sustainable Performance in this study refers to measure the performance in terms of Triple Bottom Line (TBL) covering social economic and environmental performance of SMEs.

1.7 Organization of the Thesis

This thesis is organized and presented in five chapters. The five chapters are in the following order:

Chapter one is the introduction. This Chapter focuses on the background of the study, research problem, questions and objectives, scope, significance of the study, definitions as well as the outline of the thesis. Following is Chapter Two, the literature review. The Chapter presents the reviewed literature and past studies related and relevant to the study. Next is Chapter Three, describes the theoretical framework as well as the research methodology adopted in this study. Following is Chapter Four, which the results of the study are presented. Finally, is Chapter Five, the results are

discussed, the conclusion, contributions, implication and limitation of the study are provided and finally suggestions for future research are proposed and presented in the chapter.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature related and relevant to this study is presented in this chapter. More specifically, the chapter is separated into two sections. The first section begins with a comprehensive overview of SMEs. Specifically, the concept of SME, the SMEs in Nigeria, and SMEs performance is discussed. The second section discusses the concept of the variables adopted in this study, previous studies on SMEs, and the research problems drawn from past studies on SMEs.

2.1 The concept of SMEs

Different authors defined SMEs from different perception on different economy. The view on defining SMEs depends on not only on the size, number of employees or business capacity but also on the locations as well as the level of economic development perspective.

SMEs in the USA may be classified as small if their numbers of employees are not more than 100. In the UK, SMEs are classified into three categories. The first category is micro with less than 10 number of employees, small starting from 10 number of employees to 49 number of employees, and medium category start from 50 to 250 number of employees (Johnson, Dibrell, & Hansen, 2009).

World Bank (2013) defined SMEs as a firm having a strength of 10-300 workforce. Similarly, the OECD (Organization for Economic Cooperation and Development) described SMEs as economically free companies that are not associated to large companies. The OECD describes SMEs as a firm that engage 10 to 250 number of employees and not more than \$13.1 million (€10 million) sales or annual balance sheet total.

Similarly, the European Union (EU) defines SMEs as any firm having the number of employees between 10 to 250 with turnover from €10 to 50M (\$13.1 million to \$65.7M) or €10 to € 43M in the value of their assets. On the other hand, MIGA (Multilateral Investment Guarantee Agency) perceives SMEs as firm with up to 300 number of employees while assets value as well as turnover should not exceed \$15M (Aminu, 2015).

In another perspective, financial resources are considered in defining SMEs. For example, in the EU, SMEs need to have yearly revenue equivalent to or over Euro 40 million or a balance sheet value of Euro 27 million. Similarly, in the new emerging economies such as India, SME appears to be based on the venture in machinery and plant for manufacturing sector and on equipment for services enterprise (SMEDAN, 2013).

Based on definition by Ramukumba (2014) the SMEs are businesses with less than 250 number of employees and having less than € 50M revenue or not more than €

43M balance sheet. SME refers to firms that have less than 50 number of employees but less than €1M turnover or not more than € 10M balance sheet.

Reports have indicated various definitions relate to different countries in Africa. For instance, In Botswana, firms with the number of employees less than 25 and an annual turnover value from 60,000 to 1, 500,000 are termed as small enterprises. In Cameroon, SME is firm that has turnover value of not less than CFA 1.0 billion, and not more than CFA 500 million of accrued funds. The SME's short term credit shall not exceed CFA 200 and at least five percent of managers and owners capital are citizens of the Cameroon (BOB, 2016).

2.2 The SME-Sector in Nigeria

In the context of Nigeria, there is no strong cut definition of the SMEs. The concept differs over time and from perspectives to perceptions. Several institutions and organizations in Nigeria defined SME in dissimilar ways, however the meanings have a common measure. The commonly measures are gross output, fixed assets, and number of employees (Aminu, 2015; Anga, 2014).

In another perspective, the SMEs could be defined by using quantitative and qualitative variables. These variables are size and market share, working capital, turn over, profit number of people employed. Consequently, enterprises are classified by the National Council of Industry (2003) into three categories namely; (i) size, (ii) total cost and (iii) number of employees (Ramukumba, 2014).

One of the early definitions by CBN guideline on Dandago & Usman (2011), classified enterprises as micro with 1-10 number of employees and less than N1million capital whilst those with 11-35 number of employees and capital of N1 million but less than N40 million medium sized respectively. However, SMEs are described using asset base as categorized in the SMEDAN report (2013).

SMEs in Nigeria contribute to social stability, economic and regional development through employment generation, income distribution, use of domestic resources and exports. It is therefore believed that these SMEs serve as lifeline in the informal sector serve as the engine for economic growth and development of the country (SMEDAN, 2013).

The predicament of SMEs in Nigeria is related to causes and challenges that characterize its economy. These include high poverty level, high unemployment rate , disease and, hunger (Jonathan, 2015). The SMEs have been viewed as the safeguard for generating of employment and development technology in the country, the sector yet has had fair share of abandonment with connected unpleasant influences on the economy. The networking relationship amongst SMEs in the country is insignificant to enable them to reap the benefit of integration. This situation further worsens their competitiveness in terms of economies of scale and collective recognition in the global market.

National Policy on SMEs divides Nigerian's Enterprises into three categories (Table 2.1), mainly Micro, Small, and Medium. These enterprises are defined based on their

assets and the number of the employees, excluding land and building (SMEDAN, 2013).

SMEDAN (2013) defined SMEs as an enterprise with less than two hundred workers and total assets of not more than capital base of Five Hundred Million Nigerian Naira excluding land and buildings.

Table 2.1
Definition of SME in Nigeria

Category	Employees	Assets (NGN' millions) (excluding land and building)	Asset in USD (millions)
Micro enterprises	Less than 10	Less than 5	Less than 0.033
Small enterprises	11 – 49	5 to less than 50	0.033 to less than 0.333
Medium enterprises	50 – 199	50 to less than 500	0.333 to less than 3.333

Source: (SMEDAN (2013))

In a recent survey, PwC's survey (2020) found additional definitions of SME provided by the Bank of Industry (BOI) of Nigeria as follows:

Table 2.2
Definition of SME by Bank of Industry (BOI) of Nigeria

Category	Employees	Assets (NGN' millions) (excluding land and building)	Asset in USD (millions)	Annual Turnover (NGN' millions)	Asset in USD (millions)
Micro enterprises	Less than 10	Less than 5	Less than 0.033	Less than 20 million	Less than 0.066
Small enterprises	11 – 49	5 to less than 50	0.033 to less than 0.333	Less than 100 million	Less than 0.666
Medium enterprises	50 – 199	50 to less than 500	0.333 to less than 3.333	Less than 500 million	Less than 3.333

Source: PwC (2020) Bank of Industry Definition.

Despite these two most commonly available definitions in Nigeria, the definition of SMEDAN which is the regulatory agency of government with respect to SME, its definition is the commonly applicable in Nigeria. Thus, it is considered in this study.

2.2.1 Nigerian SMEs Environment

In Nigeria, banks were authorized to set up branches in the rural regions since 1980s, with the aim of improving access to financial services. To improve the performance of SMES investors and owners through financing in Nigeria and to also diversify the country domination of an overreliance on the oil sector, the Nigerian government has introduced different support plan programs. Based on this, the Nigerian government plan strategy for the financing of SMEs in the country are generally geared to improve the expected influence of the sector to the extension and development of the home-based economic scheme (CBN, 2014).

The survival and performance of SMEs depends on the favorable strategy and plan that can develop and drive the sector in Nigeria. The association of economic growth and SMEs performance remains complex, and that entrepreneurial skill remains a necessary factor of a country's ability to support economic growth. The importance of SMEs has continuously been perceived by the government over various strategic plans (Ayanda & Adeyemi, 2011).

In Nigeria, previous researchers have stressed the importance of enabling policy initiatives and creating a conducive environment to support entrepreneurial orientation and SMEs development. Furthermore, "the small size of SMEs creates

cost disadvantage when compared to larger corporations. SMEs do not have the same ability to stimulate the environment in their favor as larger corporation. Likewise, they cannot afford costly support services such as financial, legal, human resources and training” (Swain & Varghese, 2012). SMEs require support because they are limited in skill and capacity development.

In line with the important role played by SMEs in the economic development of Nigeria, it has encouraged the government to develop supportive model that encourage operators in the sector. Growth of SMEs largely relies on government support policies and developmental strategies, that not only create potentiality for the growth of SMEs but also act as a support to overcome crises (Trang, 2015).

The government support policies for SMEs vary from country to country due mainly to the business context, cultural differences, and level of industrialization. In developing nations many efforts and resources have been invested in establishing favorable policies geared toward improving entrepreneurship and SMEs. For instance, Malaysia, China, Brazil, Saudi Arabia, and Nigeria is not left out. However, previous studies and reports revealed that in Sub-Saharan Africa (Nigeria inclusive) the performance of government supports for SMEs are not impressive, in cases where such polices exist, they are under-utilized (CBN, 2014).

However, In Nigeria SMEs are faced with some challenges which include corruption, overbearing bureaucratic procedures, ineffective and insufficient infrastructural amenities and inconsistent government policies (SMEDAN, 2013).

Considering the importance of SMEs in the Nigerian Economy, many efforts were made towards addressing their issues and providing enabling environment for their sustainable growth and performance by the government over the years. Special schemes, programmes and policies have been mapped out as documented in NIPC (2002) to give institutional support to the sector (Oluwadare & Oni, 2016). These include financial interventions by the Central Bank of Nigeria and Development Finance Institutions, export incentives, investment promotions, technical support and training programmes for innovation, provision of Industrial Development Centres in each of the states (Lal, 2007).

The DFIs and development finance schemes include National Economic Recovery Fund (NERUND), Nigerian Export and Import Bank (NIXIM), Bank of Agriculture (BOA), World Bank SME 1and 11 loans, Bank of Industries (BOI), other Development Partners, and CBN various SME interventions were structured to provide interest rate subsidies. The funds are accessed through Commercial and investments banks for ease of administration(CBN, 2014).

To further promote the development of SMEs, Development Agency of Nigeria SMEDAN established in 2003 (SMEDAN act 2003). The agency provides information, policy development, Business Support Centres, establishment of Industrial Parks, consultation, enhanced access to finance to SMEs (SMEDAN 2013).

The provision of basic infrastructure especially electricity, business registration tax reliefs and incentives also form part of government institutional support.t of SAP, the

government recognize the raise of SMEs appropriate approach for poverty alleviation. Industrial self-reliance and accomplishing the target of employment generation in the country. Hence, the introduction of the new industrial plan (Ayanda & Adeyemi, 2011).

The outline of this policy was a sound attempt to mobilize substantial loan funds for lower industrial development from development banks, and World Bank projects. Furthermore, for the credit needs to be met in the sector, the federal government has set up some specialized financial institutions, including the Nigerian Bank for Commerce and Industry (NBCI) and the Nigerian Industrial Development Bank (NIDB). Additionally, private sector was approved by the government to establish Community Banks for the banking business.

The People's Bank and the NIDB were merged decades ago to form the Bank for Industry (BOI) while the sum of NGN 50 billion was injected. Furthermore, the Bankers Committee agreed to set 10 per cent of their pre-tax annual profits to support SMEs in the country. "The scheme is called SMEEIS (Small and Medium Enterprises Equity Investment Scheme). This 10 % profit before tax should be invested as equity investment in the SMEs. The banking industry's contribution is therefore to the federal government efforts towards stimulating economic growth and developing technology locally as well as generating employment". This Funding scheme should be in form of equity investment in qualified business. It is believed to reduce the load of interest and other financial charges of conventional

banks. The body also provides technical and managerial support, as well as advisory support to the SMEs.

2.2.2. SMEs Sustainability Global Trends Insight from Sweden, Malaysia And Nigeria.

Global trends indicate the ecosystem facing vast environmental, and societal economic challenges. The challenges include climate change, poverty, unemployment, and diseases. Others are unequal opportunities, natural disasters, conflicts, and economic crises. Although these issues are common in general, they come with different experiences in various countries and regions (SDG 2020). Consequently, 190 countries reached a common agreement to tackle 17 Sustainable Development Goals (developed by United Nations) SDGs and 169 target areas with a view to maintain an improved living for the present and future generation. These commitments aimed at transforming the world, were reviewed, and taken by 150 countries at the planet earth summit of 2019. This would also provide a road map to last 15 years to the advantage of the human planet and society (2). In a bid to ensure effective assessment, SDG Compass developed. This translates the 17 UN Sustainable Development Goals into management objectives. However, the SDG compass only focuses on large corporations hence SMEs are left out. Presently, there is little or absence of tools to link European SMEs with SDGs (SDG 2020).

Despite the immense contribution of SMEs to the GDP in the global economy, on one hand, they are also known to impact negatively on the environment (Hillary, 2000). It has been established that jointly, SMEs' contribution to the world's pollution is about

70% (Hillary, 2000). More importantly, 64% of the world's air pollution comes from manufacturing companies. This is because these firms lack environmentally friendly practices in managing their businesses (Rita et al., 2018). SMEs shy away from accepting environmental practices as they are perceived to be expensive. It is therefore estimated that only 0.4% of SMEs globally, are in compliance with environmental set down rules and regulations (Behjati, 2017,)

In Sweden, SMEs form 99.9% of all the enterprises while contributing 40% to GDP (Tsvetkova, et al., 2020). These SMEs therefore affect the social, economic, and environmental systems of their nation, hence considered very important for the propagation of Sustainable Development (Goals SDGs) in accordingly (SDG, 2020). Swedish firms are projected among the best in the Global sustainability index (SDG, 2020). This further indicates a high adoption of sustainability practices by Swedish businesses. Moreover, in research conducted by SDG (2020) results had shown positive relationship between what motivates (Drivers) these enterprises in adopting sustainability practices such as access to market. Records have indicated that Swedish government as a key driver in propagating sustainability practices among people and firms.

The United Nations UN report recognised the remarkable effort exhibited by Swedish government towards achieving Agenda 21 and 2030 (Tsvetkova, et al.,2020). In addition to government, various networks are also involved in innovation promoting sustainability practices such as TEM. Others are Sustainable Business Hub CSR Vastsverige. In Swedish terms, sustainable business is defined as having business

ethics, anti-corruption, human rights work requirements, gender equality and diversity and active concern for the environment (SDG, 2020).

Malaysia is among the 190 countries that made a pledge in the year 2015 to achieve 17 Sustainable Development Goals (SDGs) (Nor-Aishah, et al., 2020). The Malaysian ecosystem in line with prevailing situations in the world, is also confronted with huge burden of economic, environmental as well a societal issue. Accordingly, the government came up with a 4-year development plan titled 11MP. The plan which commenced in 2016 and to end in 2020 was with a view to tackling these issues by giving more attention to people (Nor-Aishah, et al., 2020) while Shared Prosperity Vision (SPV) was introduced to address the widening income differentials. This was intended to focus on green initiatives that would enhance the livelihood of its citizens. Consequently, the 17 SDGs were added in the Malaysian policy document to provide directive towards achieving the Sustainable Development 2030 Agenda (Nor-Aishah, et al., 2020).

In Malaysia, recent findings indicated that SMEs activities contribute negatively to climate change, unwanted social trends, and climate change. Literature also revealed that waste generation come in two major parts namely, Industrial and Manufacturing wastes. Plastic, paper, packaging constitutes industrial waste. On the other hand, the manufacturing sector produces bulky waste which is dumped in the environment (9). Research has also indicated the prevalence of inadequate protection of the environment 95% of the waste is dumped openly (Nor-Aishah, et al., 2020). The consequences of these negative approach in handling waste is estimated to have an

overbearing effect on the Malaysian environment in a few years to come considering the increasing rate of globalisation. This is also in cognisance of increasing trend of urbanisation and population growth that could reach 37.4 million by the year 2030.

In Nigeria, performance of SMEs in Nigeria are far below expectation (SMEDAN, 2017). The underperformance of these SMEs might be as a result of little or absence of sustainability practices (Kushwaha & Sharma, 2016; Martínez-Ferrero & Frías-Aceituno, 2015; Venkatraman & Nayak, 2015). In another perspective, the Nigerian SMEs particularly in the manufacturing sector contribute to the environment negatively by polluting ground and surface water, soil, and gas. The firms do not imbibe sustainable environmental practice treating their waste before it is finally disposed of (World Bank, 2018). There is high prevalence of air pollution in the country especially in the urban commercial / industrial cities like Kano and Lagos. In a world bank report four (4) Cities in Nigeria were among the worst air pollution (World Bank, 2018), with an increasing trend. In terms of social performance indicators, reports have shown that, SMEs in Nigeria are less concerned on provision of employment and adequate staff welfare as an indication of their business performance (Brinkø, Balslev Nielsen, & van Meel, 2015; MKC, AO, & C, 2018).

In terms of social performance indicators, reports have shown that, SMEs in Nigeria are less concerned on provision of employment and adequate staff welfare as an indication of their business performance (Brinkø, Balslev Nielsen, & van Meel, 2015; MKC, AO, & C, 2018).

In general, findings in terms of sustainability reporting also indicates the SMEs are not in compliance with world's best practices. For instance, Asaolu et al. (2011) used content analysis on data gathered from the firms' annual reports to determine the extent to which their reporting complies with global best practices in the Nigerian oil and gas sector. They discovered that the sampled companies used arbitrary and incompatible sustainability reporting metrics, and they proposed that a sustainability reporting framework based on global best practices be implemented in the Nigerian oil and gas sector. In another scenario, Umoren et al. (2018) looked into the nature of the links between environmental accounting reporting and oil company performance. They discovered no significant connections between environmental accounting/reporting and performance in a multiple regression examination of eleven (11) oil companies listed on the Nigerian Stock Exchange. They claimed that, in the interests of environmental protection and economic growth and development and recommended that the government should make environmental disclosure mandatory and penalize companies that violate the law.

Furthermore, Nigeria participated in the voluntary National Review of 2020. The government is involved in promoting the UN 17 SDGs with selected area of importance according to its current development priorities. These include poverty SDG 1 inclusive growth SDG8, Health and wellbeing SDG 3, Education SDG4, Gender equality SDG 5, and Enabling Environment of peace and security SDG16, and partnerships SDG17 (SDG 2020). SMEs are particularly involved in SDG1 which deals with poverty and inclusive growth.

2.3 Underpinning Theories

This study adopts and reviews theories that are applicable to the relationship among research variables. More specifically, the study adopts Triple Bottom Line theory and the resources-based theory to support the research proposed model. The following section discusses the theories.

2.3.1 Triple Bottom Line Theory

The Triple Bottom Line (TBL) is a concept devised by Elkington (1998). The concept basically refers to sustainable corporate performance in organisation. TBL focuses on three dimensions of an organization's operations namely; the economic, the social and the environmental (King & Lenox, 2009). It is believed that the three dimensions of sustainability became more important towards the end of the 20th century.

TBL came in place in a bid react towards the existing conflict between the development and environment. TBL encouraged organizations to focus their development on both the present and future generation. "The TBL allows organizations to monitor their actions through the development of sustainable objectives that are matched with each indicator". Furthermore, Mitchell (2014) states that in the long term for organizations to function well, there is need to take actions that can lead to sustainable management of human and natural resources. This should also be able to improve the economy and wellbeing of the society. Similarly, a triangulated approach was deployed in developing a framework on sustainability performance measurement in Brazilian organisations (Caiado et al., 2018). The study

involved the use of qualitative and quantitative methods while the data was collected through multiple channels. The findings depicted internal organizational factors as major contributors of the sustainable environment. It also showed that sustainability be attached to strategic planning were greatly affected by their internal factors. The following discussed the economic, social and environmental dimensions of the TBL.

2.3.1.1 Economic Dimension

“The proponents of the economic dimension affirm that those organizational managements have a very significant role of ensuring organization achieves good financial performance”, one of the major area of concern to the organization’s stakeholders. Waddock and Graves (1997) “assert that when the financial performance of an organization improves, it provides room for enhancing the social performance of the organization through creation of opportunities”. To measure the organizational financial performance the perceptual-based approach, accounting-based approach, and market-based approach, is applicable.

According to Raar (2001), In the market-based approach stock prices traded determine the market value of a company. This approach assumed that shareholders are the main important stakeholders of any firm. In the other hand the accounting-based approach focuses on the optimal deployment of the firm’s assets and the effectiveness as well efficiency of the firm.

Raar (2001) Indicate that in accounting-based approach some specific measures are important in fulfilling the measure of financial performance. These measures

include return on equity (ROE) and return on assets (ROA). The author further revealed that financial performance measures of a company can be classified into three main groups: firstly, ROE and ROA; Secondly, are those dealing with absolute profitability while multiple accounting-based measures are the third one.

2.3.1.2 Social Dimension

Previous researchers provide multiple definitions of social responsibility in an organization. For instance, the overall association of the corporation with all of its stakeholders can be referred as social responsibility. The stakeholders of an organization include owners or investors, competitors, employees, communities, customers, government, and supplier. Among the important issues to consider in social responsibility include environmental stewardship, investing in community outreach programmes, creating, good employee relations, and maintaining of employment and financial performance (Kothari, 2004a).

The social aspect of TBL is how companies should be socially responsible in their operations. This assertion is supported by Welford (2006) whom “assert that organizations must be socially responsible in their operation on a wide range of issues”. “These transformations are taking place rapidly thus giving rise to new stakeholders and different national legislations that are putting new expectations on business and altering how the TBL should be optimally balanced in decision making”. To develop and implement a successful business strategy in an organization there is need for community social responsibility (CSR) management

tools. This tools had been used by (Milovanović, G., Barac, N. and Andjelković, 2009) in persuading customers to keep buying.

Globally, most organizations are now undertaking CSR programmes because of their awareness that workers, neighboring community, shareholders, and customers will judge them.

2.3.1.3 Environmental Dimension

Corporate environmentalism emerged at the end of the 20th century has become popular and major area of discussion in most organizations in developed nations (Partner & Howie, 2007). Elkington (1998) revealed that defining and managing the process of environmental communications is the responsibility of business leaders. The author further warns that firms (both now and future) will be at risk of experiencing deterioration in business value if the management of firms fail to do this, “It will reduce their competitive advantage as customers will turn to companies that embrace corporate environmental responsibility”.

The need for environmental responsibility increased due to pressure from various stakeholders such as governmental, non-governmental organizations, regulatory agencies, and green consumerism. Corporate environmental otherwise known as green management is considered an important tool to organization, this raises concern to the corporate environmental factor as a dimension of sustainable performance.

In order to measure the performance of SMEs, the organisations are expected to assess the performance from the perspectives of sustainable performance (economic, social and the environmental dimension) not only from the economic performance dimension. Therefore, the following section discusses Resource Based Theory as well as Dynamic Capabilities Theory in relation with the variables of the study.

2.3.2 Resource-Based Theory

According to the resource-based view (RBV) theory, in order for organizational resources to provide competitive advantage to a firm, they need to fulfill four important resource requirements namely; valuable, rare, inimitable and non-substitutable (Barney, 1991; Mahoney & Pandian, 1992). These resources can be tangible as well as intangible and may also include; brand names, knowledge, skills, capabilities, technology, machinery, computers, efficient procedures and financial capital (Wernerfelt, 1984).

The RBV theory states that firms can derive their competitive advantage from their organizational resources that are valuable, rare, inimitable and non-substitutable. By having competitive advantage, firms are able to perform better than their competitors. In this study, ethical sensitivity, innovativeness, access to ICT, knowledge sharing intensity, and access to finance are considered organizational resources as well as capabilities. These resources have implication on the performance of the organisation, and they will impact the SMEs sustainable performance.

2.3.3 Dynamic Capabilities Theory

Teece et al. (1997) View dynamic capabilities as the ability to integrate, build, and reconfigure external and internal competencies to address rapid changing environments. Dynamism is a system that changes over time in line with a set of fixed rules that determine how one state of system moves to another state. Innovativeness enables SMEs to reconfigure their resources such as ICT, Finance, Knowledges, and human behavior such as ethics in a turbulent business environment (Kornai J. 2010). Dynamic system theory explains the movement that occurs as a result of interaction of multi sub-systems. This reaction must however be within an environment, task or individual.

Dynamic Capabilities is a framework of strategies and resources that could be channeled towards achieving set goals in an organization. These resources include tangible and intangible assets whilst some of them are replaceable others are not. Dynamic capabilities allow organizations to streamline all resources and encourages a systematic adaptation through learning. Furthermore, Dynamic capabilities accept that organizations adapt and reshape business environment to sustain organizational performance.

In this study, dynamic capabilities recognize the specific strategy as innovativeness that could be used by SMEs to deploy available resources namely, Ethics, Knowledge, ICT, and finance that allows systemic change to start from the internal business environment. The systemic change brings about uniformity across SMEs. Therefore, the use of innovativeness as moderator on Access to ICT, Access to

Finance, Knowledge Sharing Intensity, Ethical Sensitivity, determine the extent of achieving sustainable performance of the SME.

2.3.4 Other Theories

In addition to the theories discussed above which are the underlying theories of the present study, there are other theories which are used to underpin frameworks relating to SMEs sustainable performance. In this, Nimfa, Latiff, and Abd Wahab (2021) reviewed relevant theories relating to the SMEs sustainable performance including resource based view theory (RBVT), dynamic capabilities theory (DCT), institutional theory (IT), contingency theory (CT), stakeholders theory (ST), diffusion of innovation (DOI) theory and upper echelons theory (UET).

While all the above theories are relevant to the study of sustainable performance and growth of SMEs (Nimfa, et al., 2021), the current study considered the first two theories as the most relevant based on the variables that formed the framework of the study, which ultimately deal with the resources and capabilities of SMEs. Moreover, the RBV Theory and Dynamic Capabilities Theory provide better explanations on the relationship between exogenous variables and the indigenous variable as well as the justification for incorporation of innovativeness as a moderating variable. This is particularly relevant considering that RBV Theory and Dynamic Capabilities Theory can be able to explain how firms can deploy their dynamic capabilities to go beyond sustainable competitive advantages to strategic management of change and uncertainty (Cuervo-Cazurra, Newburry & Park, 2020; Schoemaker, Heaton, & Teece, 2018). Thus, considering the unstable business environment of Nigeria, these

theories are more relevant to the studies that examine that factor influencing sustainable performance of SMEs.

2.3.5 Previous Models on SME Sustainable Performance

Leveraging on the Dynamic Capabilities Theory (Teece et al., 1997) and Resource-based View (RBV) Theory (Barney, 1991; Mahoney & Pandian, 1992) several studies developed research models on the determinants that influence sustainable performance. Consistent with these theories, the models have been developed using variables that centered on resources and capabilities of firms as key determinants to sustainable performance.

Earlier of those models was that of Civelek, Çemberci, Artar and Uca (2015) deployed a “Dynamic Capabilities Theory” and proposed a model for key factors of sustainable performance of firms. These factors include knowledge creation, knowledge management, organizational knowledge production, generating organizational intelligence, managing supply chain and managing environmental uncertainty. The Civelek, et al. (2015) model is presented in Figure 3.



Fig. 2.1: Key Factors of Sustainable Firm Performance

Source: Civelek, et al., (2015)

In another effort Awuzie and Abuzeinab (2019) proposed and validated an Interactive Model for organisational factors that influences Sustainable Performance in Higher Education Institutions. In this, Awuzie and Abuzeinab (2019) deployed Interpretative Structural Modelling (ISM) Approach with six factors associated with resources and capabilities; collaboration, leadership, knowledge, behavioral, physical and communication factors that influence sustainable performance of tertiary institutions.

The Awuzie and Abuzeinab (2019) is presented in Figure 2.2 below.

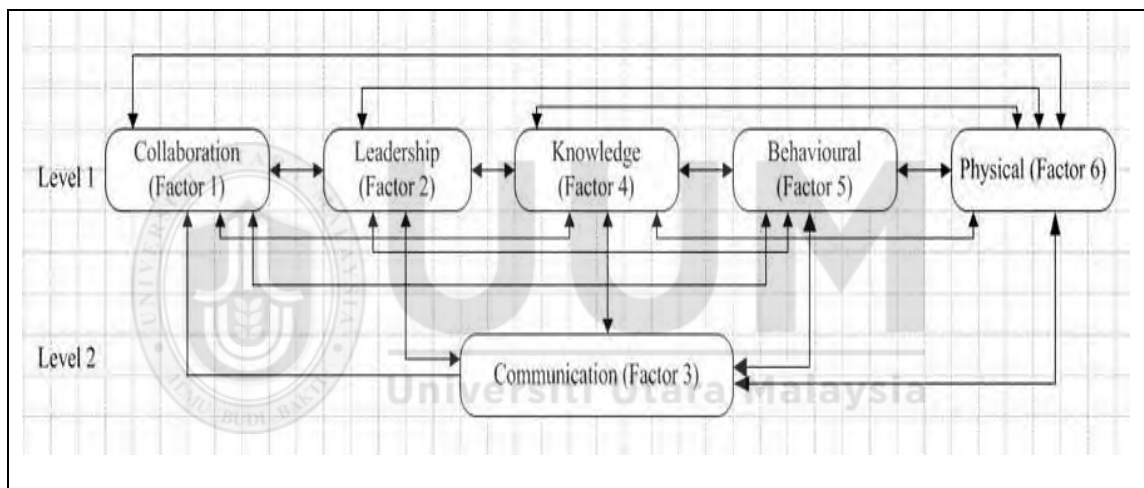


Fig. 2.2: Interactive Model for Factors Influencing Sustainable Performance
Source: Awuzie and Abuzeinab (2019)

The Awuzie and Abuzeinab (2019) revealed that the six factors interact with each other in influencing sustainable performance of tertiary institutions with communication capabilities having much interaction with other factors in influencing sustainable performance. It is important to note that the communication in the Awuzie and Abuzeinab (2019) model could be through various channels including ICT.

In their study, Appiah-Nimo and Chovancová (2020) proposed a model through the deployment of RBV Theory of Penrose (1959). The model proposed an investigation

of the influence of market orientation on sustainable firm performance with mediating and moderating effect of internal and external factors. The study considered market orientation from the perspectives of both behavioral and cultural orientations. In terms of behavioral orientations, the study considers market intelligence with respect to present and potential customers, while for cultural perspective it relates to customer orientation, competitor orientation and inter-functional coordination. Figure 2.3 depicts schematic presentation of Appiah-Nimo and Chovancová (2020) proposed model.

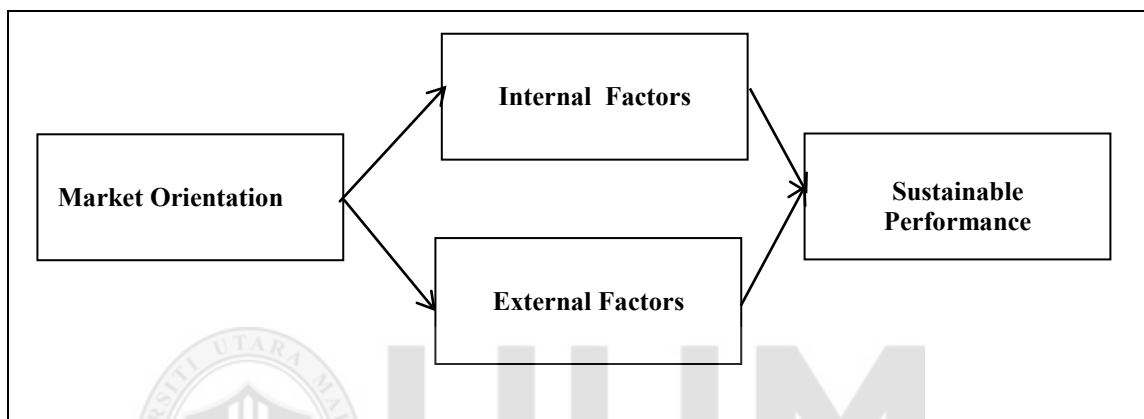


Fig. 2.3: Market Orientation and Sustainable Performance Model
 Source: Appiah-Nimo and Chovancová (2020).

The most recent model that deployed RBV Theory within the context of sustainable firm's performance is Ahmed (2021). The model deployed both internal and external factors that influence sustainable performance. In terms of internal factors, the study considered human resources practices, training and development, rewards and compensation as well as performance appraisal, while in terms of external factors it covers government policies and access to finance. The model is presented in Figure 2.3 below.

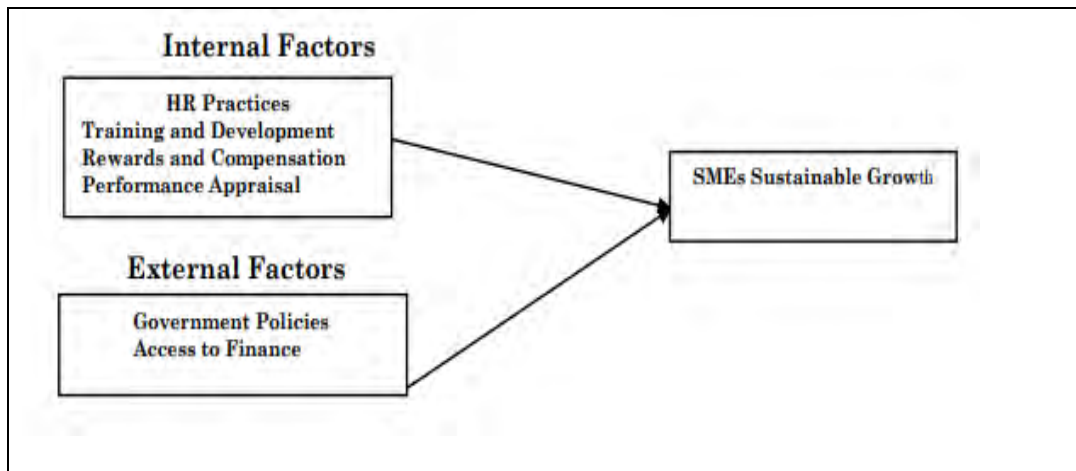


Fig. 2.4: Internal and External Factors and SMEs Sustainable Growth
Source: Ahmed (2021)

From the above review of the previous models that investigated the factors influencing sustainable performance it is clear that most of the studies deployed RBV Theory (e.g. Ahmed, 2021; Appiah-Nimo & Chovancová, 2020) and Dynamic Capabilities Theory (e.g. Civelek, et al. 2015) as underpinning theories. This in essence, justified the deployment of these theories in the current study. Moreover, all the variables proposed on the current study have been highlighted as important variables in relation to sustainable performance. These include knowledge (Awuzie & Abuzeinab, 2019; Civelek, et al. 2015), access to finance (Ahmed, 2021) and communication including ICT (Awuzie & Abuzeinab, 2019). However, the current study varies with the previous models in five important ways. Firstly, most of the previous studies with the exception of Awuzie and Abuzeinab (2019) are conceptual models with no empirical validation. Secondly, even the empirically validated model of Awuzie and Abuzeinab (2019) different analytical approaches have been applied; while the present study adopts Structural Equation Modelling (SEM), the study of Awuzie and Abuzeinab (2019) Interactive Equation Modelling (IEM).

Thirdly, the model this study considered three dimension of sustainable performance covering environmental, social and economic performance, previous studies are mostly conceptual and have no clear direction of whether validation of such models will consider sustainable performance holistically or using its three dimensions. Fourthly, the earlier study mostly studied direct relationships with no moderating and mediating relationship, even though Appiah-Nimo and Chovancová (2020) proposed the study of mediating and moderating relationships with respect to the application of RBV Theory in relation to sustainable performance. Lastly, this study concentrate on SMEs, while the only validated model of Awuzie and Abuzeinab (2019) concentrated on tertiary institutions.

2.3.6 Evolution of Sustainable Performance Models for SMEs

The evolution of models of sustainable performance for SME is an emerging issue in the literature. Malesios, De, Moursellas, Dey, and Evangelinos (2021) in their recent study on the assessment of criteria, methodology and frameworks used in examining sustainable performance of SMEs and concluded that much majority of the studies emerged around 2005 and they focused on few enablers such as lean, green and innovation which are mostly environmental issues, which clear neglect of social and economic pressures and barriers. Thus, Malesios, et al. (2021) concluded that there is a clear gap on the paucity of a holistic and robust framework relating to sustainability performance of SME. Consistent with this study, the previous model reviewed above in relation to sustainable performance are mostly conceptual with the exception of the study of Awuzie and Abuzeinab (2019) which although empirical but focused on tertiary institutions not SME, while other such as Appiah-Nimo and Chovancová

(2020), Civelek, et al. (2015) and (Ahmed, 2021) are conceptual in nature. Thus, this evidence justified the relevance of this study which focused on the factors influencing sustainable performance of SMEs.

2.4 Sustainable Performance

Sustainable performance could be perceived as the combination of environmental, social and economic performance. A method of the practice and assessment of sustainable development is also known as Sustainable performance (Kocmanová & Dočekalová, 2011). The sustainable development model prevails when the needs of the present generation is met without compromising the ability of future generation to meet their own needs. Never the less, literature has it that sustainable development phenomena came up because conventional development was not sufficient to address poverty (Kolk, 2016).

The management system of the enterprise is recognized in order to ascertain the sustainable performance of an organization (Ciemleja & Lace, 2015). This is related to offering efficient and effective sub-systems. The SMEs sustainable performance practical application needs processes that support enterprise sustainability. This process is jointly operational that emphasises management level decision to be carried out through dimensions of sustainability. Thus, SMEs sustainable performance is determined by the quality of their management and innovative potential (Ciemleja & Lace, 2015). In another study carried out on data-driven agriculture supply chain supported the use of the three (Economic, Social and Environment) arms of sustainable performance in forming a frame work (Kamble, Gunasekaran, & Gawankar, 2020)

Accordingly, various theories have evolved scenarios that advocate or describe part or all the aspects of sustainable performance. Such include the Stakeholders theory, trickledown effect theory and triple bottom line theory.

The Stakeholder's theory by Friedman (1970), is of the view that managers should attempt to balance the interests of all corporate stakeholders. The corporate stakeholders include not only financial claimants, but employees, communities, governmental officials.

By declining to identify and make the essential tradeoffs among these interests, the advocates and promoters of stakeholder theory leave business managers with a theory that makes it challenging for them to make decisions. Studies by Jensen (2002) Artiach, Lee, Nelson and Walker (2010) Martinuzzi (2005) Blodgett, Lu, Rose and Vitell (2001) and Garvare and Johansson (2010) view stakeholder theory as philosophy for sustainable performance.

To a large extent, research carried out in the area of sustainable performance laid more emphasis on macro and micro sustainable environmental practices and issues. Some of these studies were based on institutional theory and stakeholder theory while the findings depicted the basic efforts of environmental reduction activities in line with regulatory guidelines (Zailani, Jeyaraman, Vengadasan, & Premkumar, 2012).

Furthermore, trickle-down effect theory views organisation as a cross-sector social partnerships. The cross-sector social partnerships advocate the organisation to be

assessed not only financial but also considering social impact. The organisation should be effective in achieving their financial objectives while considering the societal impact. Individual interactions between and within organizations are related to partnerships. This partnership should address the 'social good' (Kolk, van Dolen, & Vock, 2010).

In recent development, multi-dimension and a balanced theory known as the Triple Bottom Line (TBL) has become more pertinent as an effective tool for measuring SMEs sustainable performance and said to give greater value to SMEs (Kamble et al., 2020; Rashid et al., 2015; Venkatraman & Nayak, 2015).

TBL provides chance for the integration of sustainable business practices that will lead to sustainable performance (Rashid et al., 2015). Though, Sustainable performance could be said to be reliant on the firm's efforts to ensure the successful implementation of green activities (Rashid et al., 2015). In an attempt to achieve sustainable performance, environmental, social, and economic dimensions must prevail (Kamble et al., 2020; Venkatraman & Nayak, 2015).

Economic performance involves the need to evaluate and analyze financial and operational indices of the organisation. Many approaches have been developed for assessing economic performance for SMEs to satisfy the desire of owners and investors of the business. The basic objectives of businesses are to increase value on a long-term basis and to maximize shareholders' return. Furthermore, the main approach in assessing economic performance is therefore classical one that relies

on the monitoring of standard indicators of the return on sales (ROS), return on capital employed (ROCE), return on equity (ROE), and return on assets (ROA) that are common for managers to evaluate economic performance of their organisation (Soh, 2005).

Social performance can be seen as the effective explanation of institutional mission into practices that are in line with the recognized social values. Social performance is about putting the institutional social mission in to practice. An important aspect of social performance is occupational health, safe company programme, and safety management procedures. The importance of the social measurement is mainly connected to human resources.

Although, economic view indicates that, the amount of work an employee achieves over a defined period determines one's performance. Yet, from the economic sight, performance can be measured through labour productivity. While, from the social point of view, a man is able and willing to perform at if he develops his personality, self-fulfillment, feels personal satisfaction, and utilizes all of his potential (Kocmanová & Dočekalová, 2011).

Environmental Performance evaluates the performance of an organization in its capability to meet with environmental standards and create high value. Consequently, firm's owners endeavour to focus on all the of environmental proactiveness and practices that present a comprehensive image of their organisation.

Previous literature reveals that, economic benefits is created through environmental creativities (Kocmanová & Dočekalová, 2011; Kushwaha & Sharma, 2016). These practices include optimization of technologies that reduces resources need. Others are environmental management systems and introduction of cleaner technologies as well as safety tools and procedures. It is expected this practice would enhance the firm's environmental image. Combination of quality and environmental management systems has brought about new culture for organisation in their relationship with their stake holders such as communities and authorities. It has also lowered deployment of assets, (Kocmanová & Dočekalová, 2011).

Based on the fact that sustainable performance encompasses of economic, social and environmental performance, researchers have shown two divergent views in examining the relationship of the components individually or collectively. For instance, studies by Rennings, Schroder and Ziegler (2003) and Connelly and Limpaphayom, (2004) has discovered an established relationship by combining each component of sustainable performance (environmental, social, and economic). However studies by other Balabanis, Phillips and Lyall (1998); Brinkø et al., (2015); and Waddock and Graves (1997) mutually argue that these components cannot be considered one-dimensional, because of their relationships with each other (Venkatraman & Nayak, 2015).

This study was carried out by embracing sustainable performance collectively in line with the previous studies (Balabanis et al., 1998; Waddock & Graves, 1997).

The study will investigate the influence of knowledge sharing intensity, ethical sensitivity, access to finance, access to ICT on the sustainable performance. The selection of these variables can be justified by three main reasons. Firstly, only fewer studies examined the relationship between these variables and sustainable performance based on its triple dimensions (Kauffman & Riggins, 2012; Pereira-López, 2016; Qammach, 2016; UraSingh, 2012). Secondly, most of those fewer studies recorded mixed results with respect to the influence of these variables on sustainable performance, which justified the need to integrate a moderating variable. Hence, the selection of innovativeness as a moderating variable in line with Chowhan (2016) and Swink (2000). Lastly, among the fewer studies, none emerged from Nigeria as most of which were conducted in developed countries. In line with these justifications, the following sections discussed the variables.

2.5 Ethical sensitivity

Ethical sensitivity is related to SMEs sustainability performance. Ethics is define as a division of philosophy which relates to principles of good and bad (Carreira FA, Guedes MDA, 2008). Principles of ethics give guidelines for Organizational culture and practices because they describe what is “right”. Ethics support businesses in taking ethical actions and making moral decisions (Smith & Barnes, 2014).

Ethical sensitivity relied on sociological and environmental components of sustainable development (firm performance). Organizational ethics integrates ethical culture and ethical climate that led to positive influence on ethical decision making. These would ultimately provide performance (Wesarat et al., 2017).

Dynamic Capability Theory (Teece et al., 1997) highlights the possible influence of ethical sensitivity on sustainable performance. The theory postulates that businesses can make an intentional usage, development, expansion and adjustment of their processes so as to establish and develop basic dynamic capabilities that enable them achieve sustainable performance (Nimfa et al., 2021). This means that in current turbulent business environment business need to have capabilities for ethical business practices which are desirable in achieving sustainable performance (Kornai, 2010; Nimfa, et al., 2021).

2.6 Knowledge Sharing Intensity

The process developed learning is known as Knowledge (Setyanti et al., 2013). It is also a process that always changes. Knowledge sharing takes place when it is conducted in a group studying through its processes of information. This may be a firm or any community. Knowledge information involves gathering, distributing, or explaining information. Knowledge can be developed officially in an organizational process. For instance, it can be sourced through surveys. Knowledge can also be acquired in an informal way. For example, a behavior in a firm, an employee may decide to read newspaper or listen to news at lunch time. Research has shown that that the essence of carrying out formal functions is to acquire knowledge (Ozkaya et al., 2015).

Huber (2015) disclosed the possibility of a low understanding in early initiatives of organisational knowledge. This may lead to a reduction in the chances of discovering

useful ideas and findings. The author was then of the opinion that learning does not require intentional behaviour.

Knowledge sharing intensity as one of the major SMEs resources, is been used previously as mediator (Setyanti et al., 2013). Previously goal orientation theory was applied to examine the relationship between the knowledge sharing intensity (mediating roles) and learning goal orientation in determining the effect on innovative performance. Knowledge sharing intensity was found to have significant relationship with performance by many earlier studies (Hulme, 2000; Ndambuki & Alala, 2014; Ozkaya et al., 2015).

Importantly, RBV theory highlights the effect of knowledge sharing intensity on SMEs sustainable performance. The theory explains the ability of SMEs to use its resources for which it has competitive advantage to achieve sustainable performance (Nimfa, et al., 2021). Specifically, the resources that can be used to achieve sustainable performance can be tangible or intangible resources which may include brand names, knowledge, skills, capabilities, technology, machinery, computers, efficient procedures and financial capital (Wernerfelt, 1984). In essence, the theory shows the importance of knowledge sharing intensity on the sustainable of performance of SMEs.

2.7 Access to ICT

Access to Information and Communication Telecommunication (ICT) refers to technologies that provide value to information through telecommunications. This

includes the cell phones, wireless networks, Internet, and other communication mediums. SMEs access to ICT play an important role on SMEs performance enhancement. ICT is an important tool that facilitate growth as the SMEs are getting matured (Kauffman & Riggins, 2012). In addition, Serrano-Cinca and Gutiérrez-Nieto (2014) revealed that adoption of ICT reduces operational costs related to business. Its adoption is needed for managing a large number of clients to enable organisation improves its efficiency.

Previous studies by Diniz, Jayo, Pozzebon, Lavoie and Foguel, (2014), Kauffman and Riggins (2012) and Abraham and Balogun (2012), revealed that one of the powerful tools for improving SMEs performance is adoption of ICT. According to Rozzani and Abdul Rahman (2013), findings of the study revealed that high installation cost and lack of participation from clients lead to rejecting of implementation of technology by SMEs which affects the demand and supply in the market.

However, Congo (2002), is in the opinion that new cost are incurred as a result of adopting new technology by SMEs, which affect the financial performance negatively however, efficient innovative banking technologies such as management information software, credit scoring technology, smart card operations and internet can contribute to a drop in administrative costs. Therefore, ICT affect the performance of SMEs in both short and long run which will influence the sustainable performance of the SMEs. In fact, many earlier studies were found to demonstrate significant relationship between access to ICT and performance

(Kagaari, Munene, & Ntayi, 2010; Diniz, Jayo, Pozzebon, Lavoie & Foguel, 2014; Yunis & Tarhini, 2017).

The influence of access to ICT on sustainable performance can also be explained by both RBV Theory and Dynamic Capability Theory. These theories highlight the importance of capabilities in influencing sustainable performance of SMEs (Nimfa, et al., 2021). An ICT can be seen as a uniqueness of resource that would lead to SMEs to have competitive advantage and enable it to achieve its objectives efficiently, which could ultimately be a sustainable performance (Nimfa, et al., 2021). Thus, access to ICT can be an important capability of a firm that can lead to sustainable performance.

2.8 Access to Finance

Access to finance is the availability of financial capital and other financial services related to business. It can also be perceived as the user-friendliness of financial capitals such as equity and debt borrowing for the SMEs. SMEDAN (2012) define Access to finance as the provision of financial facilities by financial institution. Financing may be defined as the difference between supply and demand of SMEs necessary financial resources. Therefore, it can be concluded that, access to finance as the lack of financial and non-financial barriers in accessing financial services and incomes.

Previous reports revealed that, most of the SMEs in developing nations are restricted to supply of finance resources. It also revealed that it affects the

performance of SMEs (Beck & Maksimovic, 2008). Many studies revealed that efficiency of SMEs depends not only on good practices but also on their ability to access capital (Frank, Kessler, & Fink, 2010; Zampetakis et al., 2011; Wiklund & Shepherd, 2005). Therefore, inability of SMEs to access finance can be a constraint for their sustainable performance.

However, previous studies revealed that the lack of capital by SMEs is related to SMEs peculiar features and strategic operation (Mazanai & Fatoki, 2012). It determines not only their success but various phases of their development. According to Steinerowska-streb and Steiner (2014) getting sufficient capital is determined by the firm peculiar process, characteristics, and strategic activities that mark the development of the SMEs. Beyond just the development of SMEs, substantial evidence reported significant effect of access to financial resources on the performance (Ayyagari et al., 2007; Madrara, 2012; Tchakoute Tchuigoua, 2014; Umar et al., 2012; UraSingh, 2012).

The RBV Theory also explain the capability of SMEs to access their desirable resources that can poster its growth and performance (Nimfa, et al., 2021). One of such important resources as highlighted by the theory is financial resources. This theory highlight that the firms that have more capabilities in accessing the required financial resources would likely have better sustainable performance than firms lacking such capabilities. This important theoretical insights on the relationship between access to finance and sustainable performance has been highlighted in the study of Ahmed (2021) who proposed a framework which RBV Theory as an underlying theory.

2.9 Innovativeness

invention in a goods or services that creates value for which customers will pay (Akinwale, Adepoju, & Olomu, 2017; Moradi, Velashani, & Omidfar, 2017; Swink, 2000). Also it is a characteristic of an organisation to adopt or create new product, processes, services or new ideas that are intended to increase value to customer and contribute to firm performance (Pawliczek & Kozel, 2015; Setyanti et al., 2013; Yunis & Tarhini, 2017).

In determining the long- term success of organizations, innovation plays an important role. Innovativeness has continued to be emphasized over the years by the previous literature (Calantone, Cavusgil, & Zhao, 2002; Rubera & Kirca, 2012; Wang & Wang, 2012). This is because for an organization to achieve its organizational objectives, compete successfully in the market- place and deal with the changes happening in the business environment it needs to be innovative. (Setini, Yasa, Supartha, Giantari, & Rajiani, 2020)

A study by Janssen (2004) in a competitive environment, new invention is fundamental because it could increase the organizational, group as well as the individual levels of competitiveness. Innovativeness in relation to routing process and performance is difficult mainly for three reasons. Firstly, innovative performance depicts the firm's ability to offer new products and services in an enhanced form. These new items should be able to compete in both the new and old segments of the market (Afriyie, Du, & Musah, 2020). Innovation in an

organization is defined as innovative management and service practices. An organisation can be said to be innovative or have the ability of innovativeness based on the existence of its products and services earlier than competing brands or competitors (G. Marshall & Parra, 2019). This ability can be the outcome of the capacity and intellect of the entrepreneur or his employees. On the other hand, innovativeness could prevail due to the capacity building practices in place that would lead to a new dimension or discovery of new ideas from the employees. Nevertheless, organizational capabilities to re-enforce entrepreneurship, boost, develop, and discover existing competencies and make provision for new facilities could bring about innovativeness (Chege & Wang, 2020; Oliveira, 2018).

Secondly, innovative creativities could lead to criticism for people that are conventional and resistant to change. Thirdly, innovativeness requires considerable risk taking that may lead failure in the organisation. Previous researchers revealed that intellectual capital and knowledge in a knowledge-based economy are seen to have persistently rise as the main foundations of the competitive advantage on sustainable performance (Yunis & Tarhini, 2017).

Even the previous studies revealed an inconsistent findings in testing the direct relation between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and performance of organisations (Iacovone et al., 2017; Riggins & Weber, 2013; Sila, 2014; Umar et al., 2012; Wu, 2009; Yunis & Tarhini, 2017). Furthermore, previous study by Chowhan (2016) and Swink (2000) have revealed from their studies that innovativeness has moderating effect on the associations

between HRM practices, strategy and performance of SMEs. However, these studies suggested the moderation effects of innovativeness on the relationship between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and sustainable performance to be tested. The highlight for the incorporation of moderating variable (innovativeness) is in line with Baron and Kenny (1986) and Jose (2015) who recommended the use of moderating variable where there is inconsistency in finding on the relationship between variables. The inconsistent findings propose that the link between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and sustainable performance may be influenced by innovativeness (moderating variable).

Leveraging on the postulations of both RBV Theory and Dynamic Capabilities Theory, innovativeness can play significant role in the relationship between ethical sensitivity, knowledge sharing intensity, access to ICT and access to finance as independent variables and sustainable performance as dependent variable. The fact is that both theories emphasized on the need for SMEs to have competitive advantage (Nimfa, et al., 2021), and one important way to achieve that is through innovation such that an SME can invent new product or service that creates value for which customers will pay (Akinwale, et al., 2017).

2.10 Research Gap

Swink (2000) studies technological, innovativeness and top management support. The study was conducted in the United States. The purpose of the study was to amplify understanding of management role in new product development and to

further the development of contingency theory explaining new product success. 136 sample data were used. The findings of the study indicate that, design integration has a positive link with the design quality. However, the design integration does not affect performance. Additionally, innovativeness influences the relationship between design integration and new product design (NPD).

Slaan C. (2013) A study on examining the meta-analysis research of more than 20 years regarding environmental supply chain processes was carried out. The aim was to determine the impact of sustainable management practices on firm performance. There was a significant positive relationship between environmental supply chain with the processes in marketing, Operations, and accounting to firm performance. The study also involved the use of moderators such as firm size, time. Other moderators were sample region and industry. Yet, the result of the study also showed that sustainable supply chain management contributes to an increase in firm performance.

In another study by Ocloo, Akaba and Worwui-brown (2014), carried out in Ghana, the objectives of the study to investigate the factors challenging SMEs competitiveness and globalization. The study indicated that these competences had with relationship to the extent of technology and competitiveness of the organisations.

Rubera & Kirca (2012) carried out a meta-analysis and theoretical integration review. The result showed a direct positive relationship between innovativeness and financial position, with higher results in larger firms. There was also a direct positive relationship between innovativeness and firm value. The findings further revealed that larger firms exhibited more impact of innovativeness on financial position as well as

market position. Meanwhile smaller firms were found to have shown more impact in the relationship between innovativeness and firm value.

Another study which sought to examine the mediating effects of organizational culture on the relationship between entrepreneurial orientation, knowledge management, and business performance of SMEs in Nigeria was carried out. It was established that there is a positive significant relationship between knowledge management and entrepreneurial orientation with business performance. The findings further indicated that there is partial mediating effect of organizational culture on the correlation between entrepreneurial orientation, knowledge management, and business performance (Shehu Aliyu, Bello Rogo, & Mahmood, 2015).

Mutandwa, Taremwa and Tubanambazi (2015) in their study on factors affecting SMEs performance, quantitative and qualitative approach were used on a sample size of 52 registered SMEs to determine the relationship between employee training and development, resource management and cost control, employee motivation with business performance. Findings on the research showed a positive relationship between net income, business experience and asset size. While the study concluded that SMEs' performance was determined by marketing and entrepreneurship skill, working environment and availability of working materials and infrastructure employee business experience, materials availability (knowledge) and Performance.

Also, Lin (2014) in his study on factors affecting knowledge management in SMEs, explored the relationship between technological, organisational, environmental support with two dimensions of Knowledge management in SMEs. The objective of the study was to develop a research model to investigate the factors influencing knowledge management in SMEs. The data for the study was 119 SMEs which involve senior managers of SMEs in Taiwan. By using partial least square structural equation modelling, the findings of the study show that, technology, organisational, and environmental factors affect knowledge management of SMEs.

Another one was a study by Fatima et al (2016) on factors affecting women entrepreneurs' performance in SMEs using opportunity recognition as a mediator. The research carried out in Baharain, was able to examine the various internal and external factors influencing the performance of women entrepreneurs. Various challenges which include lack of access to financial resources, work- home conflict, were highlighted. The findings indicated, in order of ranking that industry (SMEs) characteristics, entrepreneurial goals & motivation (EGM) and legal factors had influence while opportunity recognition was found to mediate industry characteristics and EGM and industry characteristics.

Study by Neeta, Baporikar, Geoffrey, Nambira, Geroldine and Gomxos (2016) on exploring factors hindering SMEs growth; evidence from Nabia deployed a qualitative method with a case study featuring employees of two businesses. The research was based on Economic theories; Gibrats of 'law of proportionate effect' while the data collected was analysed using content and discourse analysis and

presented as pie chart. The findings depicted capital, technology, skilled workforce having positive relationships with performance while the SMEs' performance was used as a mediating variable in the relationship with growth. Education and experience were found not to be a hindrance the growth of SMEs hence a negative relationship, while the profit realized on the business did not have effect at the growth.

Caiado, Quelhas, Nascimento, Anholon, and Leal Filh (2018) in a study on sustainability measurement in Brazilian organisations, a triangulated approach was deployed in carrying out the research using qualitative and quantitative methods. The data was collected through multiple collection procedure. The findings depicted internal organizational factors as major contributors of the sustainable environment in organizations. It also showed that sustain-ability be attached to strategic planning starting from top management to lower employee. It showed the essence of using sustainable performance measurement systems in a bid to respond to external and internal forces. It also suggested that Sustainable performance measurement system be applied to serve as benchmarking for future business operations and strategies.

Considering the importance of SMEs' contribution to economic growth and development of Nigeria, as a field of study, the literature indicates that theoretical and empirical contributions in SMEs sustainable performance remained not only limited but also appeared to be neglected as well (Ciemleja & Lace, 2015; CIPD,

2012; Cortez & Cudia, 2011; Dasanayaka, 2011). More specifically, the review of the literature and previous studies on SMEs suggests the following issues:

2.10.1 Limited Focus of Previous Studies on SMEs

Although SMEs appears to have attracted increasing attention from researchers, the literature indicates that despite being an important area of study, SMEs have received limited research emphasis (Almubarak, 2016; Zakaria, Hashim, & Ahmad, 2016). Although the literature shows that the number of research that focused on SMEs seems to increase, a review of past studies highlights several limitations identified in prior research include; too much focus on access to capital, adoption of case study method, and the emphasis on issues such as knowledge management, environments, market, competition and economic factors (Caiado et al., 2018) (Almubarak, 2016; Kamunge & Tirimba, 2011; Moorthy et al., 2012; Neeta Baporikar Geoffrey Nambira Geroldine Gomxos, 2016; Suryaningrum, 2012).

2.10.2 Determinants of SMEs Sustainable Performance

The review of the literature in business organisations have shown that very few studies view SMEs on sustainable performance (Baumgartner & Korhonen, 2010; Bottery, 2014; Prasad & Vatsal, 2013; Sustainable & Studies, 2007; Wesarat et al., 2018). Additionally, even the few studies that focused on sustainable performance of SME, the studies are predominantly in developed nations (Tseng, Divinagracia, & Divinagracia, 2009; Venkatraman & Nayak, 2015; WCED, 2012). The review of the literature revealed dearth of studies in Nigeria on the determinant of SMEs sustainable performance.

2.10.3 Inconsistency in Findings of the Previous Studies on the Relationship between Factors and Performance of SMEs

Earlier studies that observed the direct relationship between the independent variables, such as access to finance, knowledge sharing intensity, access to ICT and the performance of SMEs presented inconsistent findings (Desouza & Awazu, 2006; Iacovone et al., 2017; Kauffman & Riggins, 2012; Wu, 2009). The inconsistent findings suggest that the relationship between factors and performance of SMEs may be influenced by a moderating variable, in particular, Innovativeness (Baron & Kenny, 1986; Jose, 2015). In addition, the studies by Chowhan, 2016 and Swink (2000) have found that innovativeness has moderating effect on organisational performance in investigating the influence on the relationship between the strategy and the HRM practices. On the other hand, this study proposed to test the moderation effects of innovativeness on the relationship between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and sustainable performance.

2.10.4 Previous Studies Methodological Gaps

The review of past research on SMEs shows that there are several gaps related to the methodology adopted in prior empirical studies. Among the issues identified in previous research include; lack of theoretical framework to conceptualize and investigate factors that influence SMEs sustainable performance, limited formulation and testing of research hypothesis, statistical procedures in testing of hypotheses not robust and use of small sample size, as well as lack of using Triple Bottom Line with three dimension of sustainable performance (Almubarak, 2016;

Moorthy et al., 2012; Neeta Baporikar Geoffrey Nambira Geroldine Gomxos, 2016; Zakaria et al., 2016). More recently, Malisios et al (2021) confirmed the methodological gaps in the studies relating to sustainability performance of SMEs having examined 58 studies from 2005 to 2018. Specifically, Malisios et al (2021) found a gap in the deployment of a holistic and robust framework for the analysis of the sustainability performance and its determinants as well as gaps relating to the measurement especially lack of deployment of triple indicators in measuring sustainable sustainability performance.

2.11 Summary of the Chapter

The chapter discusses the concept of SMEs both by global definitions and specific definitions in the context of this study which is Nigeria. The sustainable performance which was developed based on Triple Bottom line was also discussed. The concepts of access to finance, knowledge sharing intensity, ethical sensitivity, and access to ICT and their possible links with sustainable performance as well as the possible moderating role of innovativeness were synthesized in this chapter. Consequently, it is on this basis of this synthesis hypothesis were formulated and research framework developed with the support of triple bottom line theory, Resource-Based theory and Dynamic Capabilities Theory. The following Chapter three will describe research methodology adopted in the study as well as explains the research design, the measurement of the research variables, the questionnaire, the sampling framework and sample selection.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter provides the research methodology used in the study. Specifically, the chapter describes as well as explains the research design, the measurement of the research variables, the questionnaire, the sampling framework and sample selection, the data collection method, and the methods used to analyse and test the hypotheses developed in the study.

3.1 Theoretical Framework

As presented in this chapter, notwithstanding the increase in knowledge as well as research in SME, the concept of access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, innovativeness and sustainable performance of SMEs have not been the subject of much research. Previous studies on SMEs as indicated by literature do not offer much in integrating the practices which have significant importance to the SMEs and their sustainable performance, particularly in the Nigerian context.

In trying to narrow the research gap in the area of small and medium enterprises, this study seeks to increase our understanding of access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, innovativeness in the triple bottom line (TBL) theory, resource base theory (RVB) and Dynamic Capabilities theory by

empirically examining the variables which can influence the sustainable performance of SMEs. Based on the previous studies findings of relationships of these variables under studies, it was hypothesized that access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, innovativeness can influence the sustainable performance of SMEs.

The research model proposed in this study is developed based on the triple bottom line theory (TBL), resource-based view (RVB) and Dynamic Capabilities theory. Access to ICT, knowledge sharing intensity, Ethical sensitivity, Innovativeness and access to finance are considered organizational resources that have implications on sustainable performance.

3.2 The Research Model and Hypotheses

Figure 3.1 below shows the model proposed in the study. As shown in the research model this study has six research variables. These research variables include access to finance, access ICT, knowledge sharing intensity, and ethical sensitivity as independent variables and a moderating variable (innovativeness) and sustainable performance as the dependent variable. To test the proposed relationships between the variables, this study proposed the following eight hypotheses. Previous literature revealed the general proposition that ethical sensitivity, access to finance, access ICT, knowledge sharing intensity, innovativeness has implications on SMEs Sustainable performance. Below are the proposed hypotheses developed in the previous chapter.

3.2.1 Relationship between Ethical Sensitivity and Sustainable Performance

Several studies have revealed empirical evidence on the relationship between ethics and performance. Prior studies by Chan and Cheung (2012) and Bottery (2014) established clear empirical association between ethical sensitivity and performance. This relationship has been further established in the recent studies conducted by (Kolk, 2016) and Wesarat et al., (2017) whose results demonstrated the existence of the association between the ethical sensitivity and performance.

However, despite the importance of sustainable performance, evidence has been lacking in the extant literature on the link between ethical sensitivity and sustainable performance, most of the existing empirical evidence centered on performance not sustainable performance. Moreover, the evidence reported are mostly from developed countries and emerging Asian countries with clear paucity of evidence from developing African countries, especially Nigeria with has growing sustainable development issues in relation to SMES. Hence, the need for investigation. Consequently, the following hypothesis proposed for the study.

H1: There is positive relationship between ethical sensitivity and sustainable performance of SMEs.

3.2.2 Relationship between Knowledge Sharing Intensity and Sustainable Performance

Literature has for long documented a link between knowledge sharing intensity and performance (Hulme, 2000; Ndambuki & Alala, 2014; Ozkaya et al., 2015).

However, in a more recent study a negative but insignificant relationship was found between knowledge sharing and sustainable performance among banks in Bangladesh (Jilani, Fan, Islam & Uddin, 2020), eventually, this is not among SMEs, thus, highlighting the possibility of obtaining distinctive result.

Therefore, these conflicting evidence between knowledge sharing and performance implies the need for further investigation. It is also important to note that most of the effects of knowledge sharing were found with respect to performance not sustainable performance. Even in the study of Jilani et al (2020) it was between knowledge sharing and sustainable performance not knowledge sharing intensity. Thus, evidence did not show that the relationship between knowledge sharing intensity and sustainable performance of SMEs in Nigeria has been investigated despite growing sustainable performance issues with respect to SMEs in the country. Therefore, the above argument suggested the need for this study, hence, the following hypothesis is developed:

H2: There is positive relationship between knowledge sharing intensity and sustainable performance of SMEs.

3.2.3 Relationship between Access to ICT and Sustainable Performance

The relationship between access to ICT and performance has been proved by past studies (Kagaari, Munene, & Ntayi, 2010). Also, more studies conducted Diniz, Jayo, Pozzebon, Lavoie and Foguel (2014), Yunis and Tarhini (2017) and Aloyce and Victor, (2012) reveal the linkage between access to ICT and organisational

performance. More recently, an indirect effect of ICT was established with SMEs performance (Amoako, Huai Sheng, Dogbe, & Pomegbe, 2020).

Therefore, despite many studies in the relationship between access to ICT and sustainable development, what is lacking in the literature is the linkage between access to ICT and sustainable performance of SMEs, not only in Nigeria but also in the extant literature, which signifies the need for more empirical evidence. Hence, the following hypothesis is proposed to investigate the relationship between access to ICT and sustainable performance.

H3: There is positive relationship between access to ICT and sustainable performance of SMEs.

3.2.4 Relationship between Access to Finance and Sustainable Performance

Extant literature revealed that access to financial resources have effect on the performance of these important institutions (Ayyagari et al., 2007). Previous research revealed evidences that show the relationship between access to finance and performance (Madrara, 2012; Tchakoute Tchuigoua, 2014; Umar et al., 2012; UraSingh, 2012). More recently, Nizam, et al. (2019) established a relationship between access to finance and performance, so also Giang, et al. (2019) established the relationship between access to finance and productivity which is another form of performance.

However, despite much empirical evidence on the link between access to finance and organizational performance, much has not been written on the correlation between access to finance and sustainable performance of SMEs in the extant literature. This paucity of evidence is not only with respect to developing country such Nigeria but generally in the extant literature. Therefore, the current study proposed the following hypothesis for examination of the relationship between access to finance and sustainable performance of SMEs.

H4: There is positive relationship between access to finance and sustainable performance of SMEs.

3.2.5 Moderating Effects of Innovativeness

Several previous studies tested the direct association between access to ICT, access to finance, knowledge sharing intensity, ethical sensitivity and performance of organizations, which the results of such studies revealed inconsistent findings (Iacovone et al., 2017; Riggins & Weber, 2013; Sila, 2014; Umar et al., 2012; Wu, 2009).

Furthermore, previous study by Chowhan (2016) and Swink (2000) revealed that innovativeness has moderating effect on the associations between HRM practices, strategy, and performance of SMEs. However, this study suggested the moderation effects of innovativeness on the association between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and sustainable performance to be tested. The highlight for the incorporation of moderating variable (innovativeness

) is in line with Baron and Kenny (1986) and Jose (2015) who suggested the use of moderating variable where there is inconsistent results between variables. The inconsistent findings suggest that the relationship between access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and sustainable performance may be enhanced by the moderating variable, in particular, innovativeness.

Previous studies that examined the direct relationship between access to finance, ethical sensitivity, access to ICT, knowledge sharing intensity, and organizational performance revealed inconsistent findings (Iacovone et al., 2017; Riggins & Weber, 2013; Sila, 2014; Umar et al., 2012; Wu, 2009). Furthermore, Swink, (2000), Chowhan, (2016) and Johnson et al., (2009) have found that innovativeness has moderating effect on the associations between performance of SMEs and business practices. This is in line with Baron and Kenny (1986) as well as Jose (2015). The inconsistent findings suggest that the relationship between access to finance, ethical sensitivity, access to ICT, knowledge sharing intensity and sustainable performance may be influenced by Innovativeness (moderating variable). As a result, the following hypotheses are proposed for the study.

H5: Innovativeness moderates the relationship between ethical sensitivity and sustainable performance of SMEs.

H6: Innovativeness moderates the relationship between knowledge sharing intensity and sustainable performance of SMEs.

H7: Innovativeness moderates the relationship between access to ICT and sustainable performance of SMEs.

H8: Innovativeness moderates the relationship between access to finance and sustainable performance of SMEs.

The research model of the study which integrate access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, innovativeness and sustainable performance can be supported by the triple bottom line (TBL) theory, resource base theory (RVB) and Dynamic Capabilities theory, as well as insights from previous models that studied the factors influencing sustainable performance such as Civelek, et al. (2015), Awuzie and Abuzeinab (2019), Appiah-Nimo and Chovancová (2020) and Ahmed (2021).

The framework is also supported with empirical evidence with respect to the variables which can influence the sustainable performance of SMEs such as ethical sensitivity and SMEs sustainable performance (Chan & Cheung, 2012; Bottery, 2014; Kolk, 2016), knowledge intensity and sustainable performance (Hulme, 2000; Ndambuki & Alala, 2014; Ozkaya et al., 2015; Awuzie and Abuzeinab, 2019), access to ICT and sustainable performance (Awuzie and Abuzeinab, 2019; Diniz, et al., 2014; Yunis & Tarhini, 2017), access to finance and sustainable performance (Tchakoute Tchuigoua, 2014; Umar et al., 2012; Ahmed, 2021) as well as supports for the moderating effect of innovativeness between these four variables and sustainable performance (Baron & Kenny, 1986; Jose, 2015; Chowhan, 2016; Cabeza-García, Del Brío, & Rueda, 2019).

The framework of this study can also be supported by the recent findings from the study of Malesios et al (2021) who examined 58 studies using content analysis of articles published from 2005 to 2018 and concluded that there is lack of robust and holistic framework for the study of the determinants of sustainable performance of SMEs. Thus, the current study bridged this gap by proposing and validating a robust framework with direct and indirect (moderating) effects for the study of SMEs sustainable performance. The model is presented in Fig. 3 below:

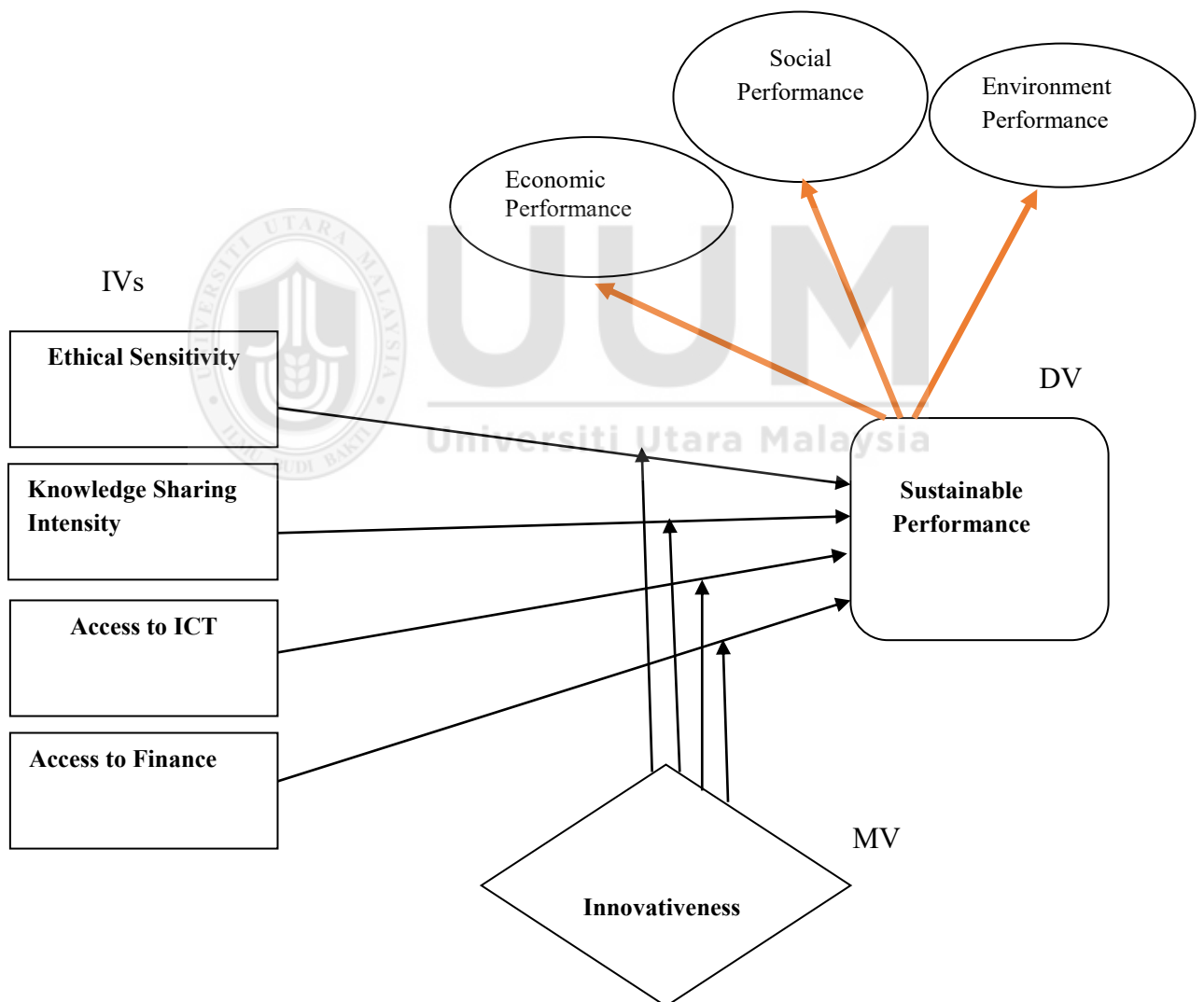


Figure 3.1: The Research Model

The research framework illustrates the relationships between access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, and innovativeness with sustainable performance of SMEs.

3.3 Research Design

Research design refers to the process that involves the entire research assumption to the method of data collection as well as analysis (Creswell, 2014). It can also be referred to as procedures and arrangement for the collection and analysis of data in a way that is relevant to the research purpose. The process of research design can be categorized into research assumption, theoretical perspective, methodology, and method adopted in solving research problem (Zikmund, Babin, Carr, & Griffin, 2013a).

Therefore, understanding the appropriateness of a research design is a key step to the attainment of research objectives (Gorondutse, 2014). It facilitates smooth conduct of various research operations, which produces an efficient result with minimal expenditure of not only effort but time and money as well (Kothari, 2004a). The research design identifies a population of the study and appropriate sampling procedure, as well as method of data analyses.

A quantitative approach was used in this study by investigating the relationship among the variables. Quantitative research helps in the development of a mathematical model, hypotheses, and theories on a natural phenomenon. The process

in turn enables the researcher to generalize from the analyzed sample of data. Hence, the study adopted a survey method through the use of structured questionnaires which were administered to the respective respondents drawn from the SMEs owners. The variables involved in this study consist of four independent variables (access to ICT, knowledge sharing intensity, ethical sensitivity, and access to finance), moderating variable (innovativeness) and dependent variable (sustainable performance). Here the researcher employed the strategy of inquiry through survey which yielded the statistical data (Creswell, 2014).

3.4 Research Instrumentation

This section discusses how the research instruments were designed and the measurement scale used as well as testing of the instruments for validity and reliability in the study.

3.4.1 Measurement of Research Variables

As indicated earlier, the research variables in this study include access to finance, access ICT, knowledge sharing intensity, ethical sensitivity, innovativeness and sustainable performance. The section below explains how these focal research variables were measured in the study.

Table 3.1
Measurement of Variables

S/N	Measurement (Items)	Source (adapting)
	Sustainable Performannce- Economic	
1	Making profit	
2	Return on capital employed	
3	Payment of dividend to shareholders	
4	Debt to equity ratio	
5	Met up tax obligation	
6	Financially stable	Venkatraman and Nayak, (2015)

Sustainable Performannce- Social		
1	Payment of workers their entitlements	
2	Employee's retention rate	
3	Employees participate	
4	Harmonize industrial relationship	
5	Relationship monitoring with stakeholders	
6	occupation of senior management position by women.	Venkatraman and Nayak, (2015)
Sustainable Performannce- Environmental		
1	Waste recycles	
2	Waste disposal	
3	Reduction and replacement of hazardous chemicals/materials	
4	Disclose business impact on the environment	
5	Energy efficiency	
6	using renewable energy	Venkatraman and Nayak, (2015)
Ethical Sensitivity		
1	Ethical practices	
2	Guiding staff for doing the right things	
3	Ethical guideline for doing the right things	
4	Ethical practices in managing competition	
5	Ethical practices in decision making	
6	Ethical practices in managing environment	Blodgett, Lu, Rose and Vitell (2001)
Knowledge Sharing Intensity		
1	sharing with team the new working skills.	
2	Sharing working skills learned.	
3	Sharing knowledge in company.	
4	Sharing working skills if asked	
5	willingness to share working skills	
6	Exchange knowledge of working skills and information.	
7	sharing with team the new information I acquire	Liao, Fei and Chen (2007)
Access to ICT		
1	ICT infrastructure and equipment	
2	Use up-to-date software	
3	Use up-to-date hardware	
4	Access to computing facilities	
5	Access to internet facilities	
6	IT automated	
7	Access to office telephones	Okoedo-Okojie and Omoregbee (2012)
Access to Finance		
1	Financed with finance generated from retained earnings.	
2	Financed with multiple sources of finance	
3	Short run financing easily	
4	Long run financing easily	
5	Pays low interest rates charges on external financing.	
6	Information about sources of finance.	Aminu (2015)
Innovativeness		
1	Develop new products /services	
2	Upgrade existing products' appearance and value	

3	Produce specialty products	
4	Innovation in marketing techniques	
5	Innovation in production processes	
6	Invest in new research and development facilities	Johnson, Dibrell and Hansen (2009)

As shown in table 3.1, the measurements of the research variables were adapted from the previous researchers in the area of SMEs. In this study, the variable Ethical sensitivity is consisting of 6 items, the measurement were adapted from Blodgett, Lu, Rose and Vitell (2001). The knowledge sharing intensity was measured with 7 items, the measurements were adapted from Liao, Fei and Chen (2007), access to ICT consist of 6 items, the measurement was adapted from Okojie and Omoregbee (2012).

Access to finance was measured by 6 items; with the measurements adapted from Martin, Cullen, Johnson and Parboteeah (2007), innovativeness as a moderator was measured by 6 items, the measurement was adapted from Johnson, Dibrell and Hansen (2009), Sustainable performance as dependent variable consist of 18 items, divided into three dimensions of economic, environmental, and social performance. The measurements of the sustainable performance were adapted from (Venkatraman & Nayak, 2015).

3.4.2 Reliability of Research Instrument

Reliability test was conducted to ascertain how the items in the construct measuring a concept are dangled (Uma Sekaran, 2003b). Reliability of measure determines the extent to which measure are error free. Therefore, it proves the consistency of measurement across time and the items in the constructs (Uma Sekaran & Bougie,

2013). Also to reduce the problem of reliability, the measurement constructs used in the previous studies was adopted or adapted with regard to their Cronbach's Alpha. Hair, Hult, Ringle and Sarstedt (2014) posit that the reason for adopting or adapting past instrument is that their internal consistency has been confirmed based on the reliability test measured using Cronbach's Alpha.

Therefore, the required cut off criterion is 0.7 which is accepted as sufficient for empirical studies (J. Nunnally & Bernstein, 1994). This is because the closeness of Cronbach's Alpha value to 1, signifies higher the internal consistency reliability (Sekaran & Bougie, 2013). Thus, reliability analysis was conducted for all the variables in the research instruments.

3.5 Research Population and Sampling

3.5.1 Population of the Study

Sekaran and Bougie (2013) defined population as the complete group of events, people or things of concern that the researcher needs to study. The authors indicated that population is the group of people, events, or things of concern for which the researcher wishes to create a deduction based on derived sample.

The population for this study is SMEs located in Kano Nigeria. The list of the population was obtained from SMEDAN survey report of 2013. The most recent report published by SMEDAN shows the number of SMEs in Kano State stood at 8,286 SMEs (SMEDAN, 2013). Kano was chosen because it had the highest population in the country based on the last Census exercises conducted in 2006 (NPC,

2018). Furthermore, Kano has remained terminus center of trade and commerce for centuries in African regions as well as the Arab world.

3.5.2 Sample Size

A sample is a set of participants or individuals selected from the population for the intention of carrying the survey (Salant & Dillman, 1994). To minimizing the cost of sampling error, the optimal sample was achieved in this study. According to Marcoulides and Saunders (2006), Miller and Salkind (2002), “an appropriate sample size is required for any research because the small sample size is not a good representative of the population” as this may cause committing type I error. type I error signifies the probability of rejecting the null hypothesis instead of accepting it (Uma Sekaran & Bougie, 2009). On the contrary, also noted by Sekaran and Bougie (2009), a too-much sample size is not suitable as it has a problem relating to type II error which may lead to rejecting a null hypothesis when the alternative hypothesis is false.

Furthermore, for social science research, Stevens (2009) suggested a sample size of 15 participants per predictor. Though, Sekaran (2003) maintained that the sample size of between 35 - 500 participants should be adequate since it depends on the sampling method and research questions under study.

To be able to minimize the sampling errors Krejcie and Morgan (1970) present an easier way of attaining a good sample size using a given formula and a broad table regarding a specific population figure hence the stress of calculation is relieved of researchers. Krejcie and Morgan (1970) noted that an efficient and effective

method of determining sample size is required to be representative of the population under study.

As a result, the total sample size used in the study was based on the total number of the population under study that determined based on Krejcie and Morgan (1970). Accordingly, the formula for determining a good representative sample is shown below.

$$S = \frac{X^2 NP(1 - P)}{d^2 (N - 1) + X^2 P(1 - P)}$$

Where:

S= Sample size.

X^2 = chi-square table value for 1 degree of freedom at the confidence desired level (3.841).

N= Size of population.

P= the population proportion (assumed as 0.50)

d= the accuracy degree expressed as (.05)

Based on the data obtained from SMEDAN, the total number of SMEs in Kano, Nigeria stood at 8,286.

Therefore, the size of the sample for this study is.

$$S = [3.841(8286*0.5)(1-0.5)]/[0.05^2(8286-1)+3.841(0.5)(1-0.5)]$$

$$= 7956.63/21.71$$

$$= 366$$

Hence, the sample size for the study is 366 numbers of SMEs. The sample of this study is relatively homogeneous. "The homogeneity of the subject making up the

population made it possible to relax the stringent procedure required for generalization” (Babie, 1990).

Therefore, in this study inferential statistics were used to evaluate information generated from the SMEs in Kano (Hair, Black, Babin, Andersen & Tatham, 2010). As such, previous researchers have used information obtained from different surveys to generalize the findings drawn from a population sample, specifically within the limit of a given random error.

3.5.3 Sampling Techniques

Sampling techniques involves the procedure for selecting respondents or representative sample from the population (Kothari, 2004b). Sampling design also refers to the process and systems that a researcher uses to select the sample size (Cooper & Schindler, 2014a). Choosing the most appropriate sample from the population is necessary for making inferences about the population. Earlier research revealed two major methods for designing sample appropriately, namely, probability and non-probability sampling technique (Sekaran & Bougie, 2009; Zikmund et al., 2013; Creswell, 2014).

This study used the probability random sampling method. The method gave every respondent an equal chance or opportunity of being chosen as the sample object (Sekaran, 2003). There are five essential methods for choosing probability sampling: multistage sampling, systematic sampling, stratified sampling, simple random sampling, and cluster sampling (Uma Sekaran & Bougie, 2016). In comparison, non-probability sampling is biased and non-random where each member does not have a non-zero probability of being

selected (Cooper & Schindler, 2014b). Thus, “the elements of the population do not have a predetermined or known chance of being selected as subjects”. The type of probability sampling used in this study specifically was stratified random sampling method to enable the researcher to generalize the population (Bryman, 2005).

3.5.4 Estimating Expected Response Rate

Even though the sample of the population was calculated to be 366 SMEs, this study doubled the sample (366X2) to be 732 number of questionnaires distributed among the SMEs owner’s managers. The additional questionnaire is to help to make up any non-response or damage questionnaire (Salkind, 2003). In addition, the oversampling will intend to make sure that non-response rate and bias will not affect the results of the research.

3.6 Methods of Data Collection

Cross-sectional design was used in this study. Cross-sectional study entails gathering the data for a specific study. In this study, the respondents were owner’s managers the organisations. The data was collected only once at a time to meet up the research. The methods of cross-sectional survey was used for this study to evade the long-time effort burning up that longitudinal research always cost (Sekaran & Bougie, 2013). The researcher distributed the questionnaire to the respondent using hand delivery. The hand delivery method is more reliable in Nigeria as mailing and posting system is not always efficient. The method of hand delivery was deployed to ensure the conveyance to the selected respondents. Follow-ups by telephone calls and physical contact/visit were made to ensure questionnaires were filled and collected within time.

3.6.1 Questionnaire Design

A structured questionnaire containing of 61 multiple choice closed ended questions was engaged for the collection of the data. The instruments comprised questions related to six constructs of the study and 11 questions associated to demographical and company background variables. All the questions were set in the language of English. English language is an official medium of communication in Nigeria. The construct for this study includes access to finance, knowledge sharing intensity, ethical sensitivity, ICT, and innovativeness, sustainable performance.

The questionnaire is made up of seven sections. Section 1 consists of 11 questions on demographic and background of the company planned to obtain information about the participants, gender, age, highest level of education, location of business, type of business, years of business, numbers of employees, and capital of business. Section II consists of 18 items related to sustainable performance. Section III consists of 32 questions of which 6 questions to measure ethical sensitivity, 7 questions to measure knowledge sharing intensity, 7 questions to measure ICT, 6 questions to measure access to finance and 6 questions to measure innovativeness.

In addition, the questionnaire was in a pamphlet book format with a cover page. Research shows that a well- designed and carefully made questionnaire usually eases the increasing the response rate, collation, and data analysis (Cone, 2001). Furthermore, a brief, aesthetic and clear instructional information as well as sound planning of questionnaire items increase the response rate (R. Kumar, 1999).

3.6.2 Pilot/Preliminary Test Study

Pre-test study can be termed as a process by which a researcher makes changes to an instrument based on the responses from a few respondents who had evaluated and completed the instrument (Creswell, 2012). The pre-tests is aim at addressing problems of measurement error if not resolved (Blair & Conrad, 2011). In essence, a pre-test study enhances the review on the survey questionnaire with respect to avoidance of ambiguity, interpretation of questions, and technicality, (Hair et al., 2006).

Kumar, Talib, and Ramayah (2013) asserted that the aim of pre-testing a questionnaire is to confirm whether: (i) the wording of the questions is correct, (ii) the respondents have clearly understood all the questions, (iii) the sequence of questions is correct, (iv) the instructions are clear and adequate and, (v) additional questions are needed, or some questions should be eliminated. All developed scales, or items, whether adapted or adopted, was pre-tested to confirm whether the questions work precisely in a new setting with the new respondents (Kumar et al., 2013).

3.6.3 Face and content validity Testing

Face and content validity was carried out by the researcher before the pre-test study for all the proxies by evaluating the appropriateness of the items representing the operational definition of each variable. Face validity refers to the degree in which items that are projected to measure a concept actually measure such concept on its face, while content validity is the degree which measures integrate adequate items

that completely represent such concept. The questions were giving to five academicians and five expert in the industry to assess the appropriateness of proxies in representing the operational definition of each variable. This involved meeting and discussing with a some of respondents and experts in order to judge the validity of the selected proxies to measure the construct (Appendix 3) (Sekaran & Bougie, 2010).

Therefore, this research has undergone face validity by referring to academic members and industrial practitioners. Academicians commented more on the sentence structure, suitability of the construct, and to what extent the concept is measured. This study took consideration suggestions proposed by three academicians in developing research instrument. The instrument/questionnaire covered so many issues that aimed to examine the association between access to ICT, access to finance, knowledge sharing intensity, ethical sensitivity and sustainable performance. It also examined the moderating effects of innovativeness on these associations and sustainable performance of SMEs in Nigeria. The content validity of the proxies was also assessed by referring to previous studies. The researcher identified proxies that were designed to measure each of the hypothesized variables or constructs based on the works of prominent scholars, such as Aminu (2015); Blodgett, Lu, Rose and Vitell (2001); Johnson, Dibrell and Hansen (2009); Liao, Fei and Chen (2007); Okoedo-Okojie and Omoregbee (2012); Venkatraman and Nayak, (2015). Thus, a total of 61 proxies were used in the questionnaire in investigating all the variables illustrated in the theoretical framework of the study.

To ensure a good instrument and that the selected instrumentations were well-suited to the context of the study, clarity of questions were utmost to ensure an understanding of the questions. A pre-test was then performed in two steps. In the first step, convenience sampling technique was conducted with 45 Nigerian SMEs, and it was carried out the by researcher to guarantee a higher percentage of response rate. The second step dealt with the analysis of Cronbach's alpha to validate the internal reliability consistency for each of the selected instrumentations (Zikmund et al., 2013). Traditionally, coefficient alpha (α) is calculated to check for internal consistency reliability of the measures (Memon & Ting, 2017). This enabled the researcher to predict potential issues during the full-scale research. Validating the instrument is important because it refers to the degree by which the instrument is measuring what it is supposed to measure and not something else, whereas reliability measures the extent to which an instrument is error free, and hence consistent and stable across time (Uma Sekaran & Bougie, 2009).

Following Johanson and Brooks (2009) a total of 45 questionnaires were distributed for the survey. However, only 37 completed questionnaires were returned this represent a response rate of 82%. It should be noted that these 45 SMEs were not included in the actual study. A PLSpth modeling using Smart PLS 3.0 M3 software (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014) was used to determine its reliability, internal consistency and discriminant validity of the constructs used in the pilot study.

3.6.4 Reliability Testing

Reliability testing guarantees the survey instrument produces similar results across repeated measures either with a similar population or within the same population. A reliable survey is generalizable and therefore expected to reproduce similar results (Tell Delaware, 2013). There are different types of reliability tests; the most widely used technique in many types of research is internal consistency reliability (Heale & Twycross, 2015). The Cronbach's alpha coefficient test was carried out to measure the internal consistency reliability.

The conditions for assessing the reliability of the instruments was Cronbach's alpha for its internal consistency of the scales using reliability coefficients (Gliem & Gliem, 2003). In determining the reliability of the research instrument, a sample questionnaire for Cronbach's alpha test was administered to measure the reliability of the underlying dimensions of the instrument. George and Mallery (2016) provided the following rule of thumb: < 0.5 Unacceptable, > 0.5 poor, > 0.6 Questionable, > 0.7 Acceptable, > 0.8 Good, > 0.9 Excellent. Other methods such as Average Variance Extracted (AVE) and composite reliability coefficient were also used to test the reliability of the instrument. Fornell and Larcker (1981) suggested that the rule of thumb for the AVE score should be 0.5 or more. The authors further stated that adequate discriminant validity will be achieved if the square root of the AVE is greater than the correlations among latent constructs. Meanwhile, Bagozzi and Yi, (1988) suggested that at least 0.70 or more as threshold of composite reliability coefficient should be used.

Table 3.2 presents the AVE and composite reliability coefficients of the four latent constructs for the pre-test. As shown in Table 3.1, the Cronbach's Alpha coefficient exceeded the rule of thumb of 0.70 (George & Mallery, 2016). Also, the composite reliability coefficient of each latent construct was found to be within the range of 0.830 to 0.938, exceeding the minimum threshold of 0.70 which also confirmed the adequate internal consistency reliability of the construct used in the pilot study (Bagozzi & Yi, 1988; Hair et al., 2011). The table also shows that the values of the AVE were between the range of 0.526 and 0.608, suggesting acceptable values.

Table 3.2

Pilot Testing: Reliability and Validity of Constructs (n=37)

Latent variables	No. of Indicators	Cronbach's Alpha	Composite reliability	Average variance extracted
Ethical sensitivity	6	0.897	0.917	0.585
Knowledge Sharing Intensity	7	0.927	0.938	0.608
Access to ICT	7	0.863	0.892	0.526
Access to Finance	6	0.832	0.83	0.545
Innovativeness	6	0.864	0.895	0.531
Sustainable Performance	18	0.924	0.932	0.524

Table 3.3 test discriminant validity by comparing the correlations among the latent constructs with the square root of AVE. The square root of the average variance extracted (values in boldface) was compared with the correlation among the latent constructs. The table below indicated adequate discriminant validity by revealing the values of square root of the AVEs higher than the correlations among latent constructs, (Fornell & Larcker, 1981).

Table 3.3
Latent Variable Correlations (n=37)

	1	2	3	4	5	6
Ethical sensitivity	0.78					
Sustainable Performance	0.309	0.724				
Knowledge Sharing Intensity	-0.015	0.241	0.765			
Access to ICT	0.315	0.267	0.192	0.738		
Access to Finance	0.411	0.297	0.188	0.324	0.725	
Innovativeness	-0.32	-0.438	-0.293	-0.436	-0.313	0.729

“**Note:** Values in boldface represent the square root of the average variance extracted while the other values represent the correlations”.

3.7 Unit of Analysis

Unit of analysis is a clear specification of what the researcher intends to examine or conduct empirical research on, which is the main focus of the research. It can be individual, organization, group social interaction (Creswell, 2014). Thus, the study investigated the influence of access to finance, knowledge sharing intensity, ethical sensitivity, ICT, and innovativeness on the sustainable performance of SMEs. Therefore, the organizational unit was adopted as the unit of analysis in line with previous research in the area of SMEs. The organizational unit of analyses is chosen because it is more commonly used in the analyses of industrial performance (Gorondutse, 2014; Hsu, Chen, & Cheng, 2013; Rhee, Park, & Lee, 2010; Subramaniam & Moslehi, 2013).

3.8 Data Analysis Techniques

The study used Partial Least Square (PLS) Structural Equation Modeling (SEM) and Statistical Package for Social Science (SPSS). The SPSS used for descriptive statistics which involves determination of percentage, means, modes as well as the standard deviation of variables in question.

This exercise involved data preparation, entry and coding of data, which commenced immediately after data collection. SPSS was used for the data screening and preliminary test. By doing this, the response bias, missing value, outliers and normality test, factor and reliability were analyzed. To examine the relationship between access to finance, knowledge sharing intensity, ethical sensitivity, ICT, and sustainable performance as well the moderating variable innovativeness, Partial Least square (PLS) and Structural Equation Modeling (SEM) was deployed.

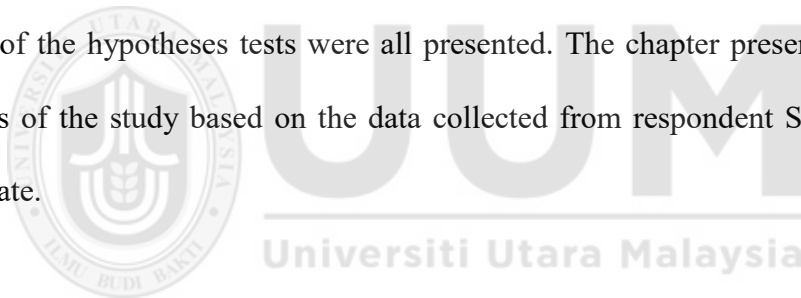
The use of PLS-SEM could be justified by the relative complexity of the research model which comprises both direct and moderating effect. This is in line with the recommendation of Hair, Hult, Ringle and Sarstedt (2014) that suggest the use of PLS in a complex-research setting. In addition, PLS-SEM enables the analysis of both direct and moderating effects in a single research model and one running, unlike SPSS that can only perform moderation effect through hierarchical regression using several models. This is because SEM enables the evaluation of the significance path coefficients, assessment of moderating effect as well as assessment predictive relevance.

In the PLS regression analyses, assessment of measurement model and the assessment of structural model were carried out. The assessment of measurement model, involves ascertaining internal consistency reliability, examining the individual item reliability, ascertaining convergent validity as well as discriminant validity". On the other hand, the assessment of the structural model involved evaluation of path coefficients, level of R^2 value, effect size, and predictive

relevance as well as the moderating effect. the study applied 5000 bootstrap sample in the assessing the significant of path coefficients, using number of valid questionnaire obtain as cases (Hair et al., 2014).

3.9 Summary

This section focuses on the theoretical framework and the research methodology adopted in conducting this study. In addition, the section explains, research variables adopted in the study, the questionnaire, the sampling framework and sample selection, the data collection method, and the statistical methods to be used in the study. The following Chapter four “presents research results of the study, descriptive statistics of demographics using reliability and validity, and finally results of the hypotheses tests were all presented. The chapter presents the research findings of the study based on the data collected from respondent SMEs located in Kano state.



CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the research findings of the study based on the data collected from the respondents. Before results presentation, initial preliminary data analysis, such as profile and description of the respondents, preliminary data screening and cleaning, discussion on the response rate, checking and replacing missing values, treatment of outlier's, running of descriptive statistics were presented.

Subsequently, the main data analysis started with measurement model analysis or goodness of measures through internal consistency reliability and construct validity analysis. Furthermore, the results of the testing of hypotheses and structural model are examined and reported (i.e., “the significance of the path coefficients, effect size, level of the R-squared values, and predictive relevance of the model”). The results of the complementary PLS-SEM analysis were finally presented, which investigates the effect of access to finance, knowledge sharing intensity, ethical sensitivity, and access to ICT, on sustainable performance with innovativeness as a moderating variable.

4.1 Respondent Profile

As shown in Table 4.1, 221. The total number of 288 respondents (76.7 percent) were male and the remaining (23.2 percent) 67 respondents were female. In terms of their age, (4.9 percent) 14 respondents were range between 21 to 30 years old, while (27.1

percent) 78 respondents were between 31 to 40 years old, in addition (55.9 percent) 161 respondents were between the age of 41 to 50 years old and the remaining (12.2 percent) 35 respondents were 50 and above years old.

With regard to the education of the respondents, 5 of the respondents had a PhD degree, 60 respondents had a master's degree, 61 had first degree or HND, while 137 respondents had NCE or Diploma and the remaining 25 respondents had a secondary certificate. As far as the export of their products and services, (13.5 percent) 39 respondents revealed that their company export their products or services while the remaining (86.5 percent) 249 of the respondents do not export their products or services.

Table 4.1
Demographic Characteristics

Profiles	Scales	Frequency	Percent (%)
Gender	Male	221	76.7
	Female	67	23.2
Age	21-30	14	4.9
	31-40	78	27.1
	41-50	161	55.9
	50 and Above	35	12.2
Position	Managing Director/CEO	193	67
	Others	95	33
Education	Secondary	25	8.7
	Diploma\NCE	162	47.5
	First Degree/HND	61	21.2
	Masters	60	20.8
	PhD	5	1.7
Age of Business	Less than 1 year	73	25.3
	2-5 years	133	46.2
	6-10 years	52	18.1
	11-15 years	30	10.4
Form of Business	Sole proprietorship	198	68.8
	Partnership	81	35
	Private Limited	7	2.1
	Public Limited	3	1

Assets	Less than 5m	164	56.9
	5m to less than 50m	91	31.9
	50m to less than 100m	21	7.6
	100m to less than 500m	10	3.5
Number of employees	10 to 49	253	87.8
	50 to 99	35	12.2
Does your company export your product	Yes	39	13.5
	No	249	86.5

4.2 Response Rate

“The response rate of the survey is a significant concern in a study because it ensures the questionnaires collected are valid for data analysis (Hair et al., 2010)”. The initial plan of the study was to carry out data collection within 2 months of commencement. However, the collection time had to be extended by additional 1 month and 32 questionnaires were received (late responses). Table 4.2 indicates, a total of **343** questionnaires were returned out of **732** questionnaires distributed. Therefore, about 47% of the distributed questionnaires and response rate 93.7 % of sample population was achieved. However, due to non-suitability of either outliers problem or not duly completed, only 288 questionnaires were used for further analysis out of the 343 responses obtained making a valid response rate of about 84% (Yehuda, Schmeidler, Wainberg, Binder-Brynes, & Duvdevani, 1998). Table 4.2 explains the details.

Table 4.2
Response Rate of the Research Instrument

Questionnaires	Response Rate	Percentage (%)
Questionnaires Distributed	732	100.0
Questionnaires not Returned	389	53.14
Questionnaires Returned	343	46.86
Returned and Not Usable	55	7.51
Returned and Usable	288	83.96 (Questionnaires Returned)

4.3 Non- Response Bias Test

“Previous studies have established that the non-respondents occasionally differ systematically from the respondents both in behaviors, attitudes, perceptions, and demographics in which any or all of which might affect the results of the study. Non-response bias is the common mistake that a researcher expects to make while estimating sample characteristics because some group of the respondents may be underrepresented as a result of non-response. Non-response bias occurs in surveys if the answers of respondents are significantly different way from that of others who did not answer. For instance, difficulty in contacting the respondents or respondents’ refusal to take part in the survey may be possible reasons for not responding (Yehuda et al., 1998)”.The issue of non-response bias arises when the answers provided between respondents and non-respondents differs (Lambert & Harrington, 1990). findings of the research and the generalization of the result to the population is affected by Non-response bias. Therefore, non- response bias test to detect such error need to be conducted before moving to the main analysis.

With regards to the possibility of non-response bias issue, time-trend extrapolation method were used in this research (Armstrong & Overton, 1977), by comparing the late and early respondents. The actual problem of non-response errors can be obtained from information given by respondents being different from those who did not respond to questions (Armstrong & Overton, 1977). Hence, it is necessary survey research like this one, to assess non-response errors before moving to the main analysis.

In this study to address the problem of non-response bias, the sample was doubled (366X2) to 732 number of questionnaires distributed among the SMEs owner's managers as suggested by up any non-response or damage questionnaire (Salkind, 2003). Consequently, the respondents were separated into two main group namely early and late respondents to test response bias.

An independent sample t-test was carried out for all variables, including the independent, moderating, mediating, and dependent variables to find out if there was any bias among the groups. "Levene's test for equality of variance was used to test whether there were variances between the early and late respondents. In addition, the two-tailed equality of means t-test was used based on Levine's test advice to identify the exact p-value associated with the hypotheses".

Table 4.3
Non-Response Bias Test

Variables	Response	N	Mean	Std. Deviation	F	Sig.
Access to Finance	Early	311	3.8	0.813	0.006	0.938
	Late	32	3.69	0.787		
Economic Performance	Early	311	3.82	0.601	0.025	0.874
	Late	32	3.68	0.606		
Environ. Performance	Early	311	4	0.661	1.941	0.164
	Late	32	3.88	0.805		
Ethical Sensitivity	Early	311	4.13	0.577	0.142	0.707
	Late	32	3.98	0.635		
Access to ICT	Early	311	4.17	0.499	1.183	0.277
	Late	32	3.95	0.656		
Innovativeness	Early	311	4.12	0.64	0.454	0.501
	Late	32	4.1	0.722		
Know. Sharing Intensity	Early	311	3.93	0.841	0.022	0.882
	Late	32	3.85	0.799		
Social Performance	Early	311	3.96	0.661	1.754	0.186
	Late	32	3.94	0.63		

Levene's Test for Equality of Variances

Table 4.3 above revealed that the group standard deviation and mean for early and late response are not very different. In Table 4.2, Levene's test results based on sustainable performance (economic, environmental, and social) to access to finance, knowledge sharing intensity, Ethical sensitivity, and access to ICT respectively, shows that the variance between the early response and late response is the same. "In general, the two-tailed t-test indicates no significant difference between early and late respondents based on the study variables".

With respect to economic performance, the standard deviation and mean of early respondents revealed no significant difference (SD=.601, M=3.82,) than the late respondents (SD=.606, M=3.68), environmental performance also reported no significant difference between the early respondents and late respondents with mean and standard deviation of early respondents (M=4.00, SD=.661) and that of late respondents as (M=3.88, SD=.805). Meanwhile, social performance with standard deviation and mean of early respondents also revealed no significant difference (SD=.661, M=3.96,) than the late respondents (, SD=.630, M=3.94). Furthermore, the result revealed that "there is no significant difference between early responses and late responses ($t=1.47$, $p<.05$)". Therefore, the null hypothesis is accepted.

Similarly, the result indicates that the early respondents based on Access to Finance (M=3.80, SD.813) and late respondents (M=3.69, SD=.787) are nearly the same. "The two-tailed t-test ($p<.05$, $t=-.37$) shows no significant difference between early respondents and late respondents. Thus, null hypothesis is accepted".

Furthermore, “results from an independent samples t-test based on Ethical Sensitivity indicates that there is no significant difference between early respondents (M=4.13, SD=.577) and late respondents (M=3.98, SD=.635). In addition, the two-tailed t-test ($t=-1.84$, $p<.05$) indicates that the variance between early respondents and late respondents is equal. Hence, the null hypothesis is accepted. The result with respect to Access to ICT indicates that early respondents (M=4.17, SD=.499) and late respondents (M=3.95, SD=.656) are similar. The result further shows that there is no significant difference between the early respondents and late respondents’ variances assumed ($p<.05$, $t=-.55$,). Hence, the null hypothesis is accepted”.

In the same way, based on Knowledge Sharing Intensity, “the independent samples t-test indicate that response of the early respondents (M=3.93, SD=.841) is the same as the late respondents (M=3.85, SD=.799). This result did not indicate any significant difference between the early and late respondents ($t=-1.50$, $p<.05$). As a result, the null hypothesis is accepted. In addition, the group mean of Innovativeness between early respondents (M=4.12, SD=.640) and late respondents (M=4.10, SD=.722) is found to be not significantly different. In the same way, there is no significant difference between the two groups ($t=1.00$, $p<.05$)”. Consequently, the null hypothesis is accepted.

4.4 Common Method Bias Test

Common Method Bias (CMB) represents one of the most frequently cited concerns among social science researchers (Campbell & Fiske, 1959; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and information systems (IS) (Malhotra, Kim, & Patil, 2006). According to (Podsakoff et al., 2003) common method bias (CMB) refers to

the variance that is perpetually attributable to the measurement procedure rather than to the actual constructs the measures represent. Common method bias is important due to the potential of biasness when assessing the connection among the theoretical constructs of the research (Podsakoff et al., 2003).

In this research, the same instruments were used in collecting data for dependent and independent variables at the same time using. As such, common methods bias could mislead the data collected. Consequently, in order to tackle this potential problem in behavioral trends, this study conducted a test to ensure that variance in observed scores and correlations are not inflated because of the methods influence.

Although, many arguments have earlier been presented on the effects of common method bias on data (Bagozzi, 2017), this study finds the issue an important consideration in its analysis. There are various processes and statistical techniques to treat common method variance. These include statistical Harman's one-factor test, clarity of questions or items, rewording questions in reverse, confidentiality of the respondents (MacKenzie & Podsakoff, 2012). In this study, un-rotated factor analysis with fifty items of all the variables were run for CMB test and ten factors were produced. However, the test revealed that none of the ten factors accounted for more than 50% of the variance. The highest single factor accounted for 19.33% as shown in the Table 4.4.

Table 4.4
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.89	25.781	25.781	12.89	25.781	25.781	9.669	19.337	19.337
2	5.488	10.976	36.757	5.488	10.976	36.757	4.866	9.731	29.069
3	3.374	6.748	43.505	3.374	6.748	43.505	4.067	8.134	37.203
4	2.918	5.836	49.341	2.918	5.836	49.341	4.035	8.07	45.273
5	2.46	4.92	54.261	2.46	4.92	54.261	2.547	5.093	50.366
6	1.859	3.718	57.979	1.859	3.718	57.979	2.461	4.922	55.288
7	1.531	3.061	61.041	1.531	3.061	61.041	2.226	4.453	59.741
8	1.308	2.616	63.657	1.308	2.616	63.657	1.427	2.853	62.594
9	1.156	2.313	65.97	1.156	2.313	65.97	1.395	2.79	65.384
50	0.067	0.133	100						

Extraction Method: Principal Component Analysis.

4.5 Data Examination, Screening and Preparation

To address the research objectives and questions of the study through statistical analysis, some preliminary analyses were needed to be performed first (Pallant, 2007). However, “to carry out such preliminary analyses, the data should be keyed and coded into a specific data file of a researcher choice, this depends on the requirements of the study”. SPSS v23 was used in this study for coding and screening, and preliminary analysis of data. In Addition, data screening of data is an essential step for effective analysis, using PLS SEM package.

The study conducted the following data screening in an attempt to detect “potential violation of basic assumptions related to the application of multivariate techniques” (Joe F. Hair et al., 2011) . These include the analysis of missing value, outliers’ assessment and multicollinearity test. Furthermore, preliminary data analysis allows the researcher to have a better knowledge of the data collected. The following section describes the data screening conducted in this study.

4.5.1 Analysis of Missing Data

The missing value “is one of the most pervasive problems in data analysis, its seriousness depends on the pattern of missing data, how much is missing, and why it is missing” (Tabachnick & Fidell, 2007 p. 62). Before conducting any analytic procedures “it is statistically important to check for missing values because some statistical packages (e.g., SmartPLS)” will not function effectively even with a single data missing. Consequently, vital information could be lost due to overlooking cases with missing, which results to increases standard errors and minimizes the statistical power (Dong & Peng, 2013).

The indication of a missing data is when a respondent failed to provide an answer to one or more questions hence making the data collected not appropriate for subsequent analysis (Hair et al., 2010). “In view of the effect of missing data in the analysis, steps were taken by the researcher to prevent the problem of missing data right from the field of data collection in an effort to decrease their rate”. On receipt of the answered questionnaires’, the researcher promptly checked from beginning to end of the questionnaires to check if all questions were answered properly.

Though in making a valid statistical inference there is no acceptable percentage of missing values in a data set, previous researches have indicated that missing rate of less than 5% is non-significant (Schafer & Olsen, 1998; Tabachnick & Fidell, 2007).

In this study, none of the indicators had 5% of missing values from the preliminary analysis and the total percentage of missing value shows 0.0019% as shown in table 4.5 Hence, missing values were replaced through SPSS v (50 items x343) using mean replacement. According to Hair, Hult, Ringle, & Sarstedt,(2014), when there are less than 5% missing values per item it should be replaced using mean. Table 4.5 below shows the number of missing values.

Table 4.5
Missing Value Analysis

Variables	Missing Values
Access to Finance	5
Economic Performance	0
Environmental Performance	7
Ethical Sensitivity	2
Access to ICT	8
Innovativeness	11
Know. Sharing Intensity	0
Social Performance	0
Total Missing Values	33
Total Data Points (50 items x343 respondents)	17,150
Percentage Missing	0.0019%

4.5.2 Assessment of Outliers

Another important step of data screening apart from missing data is the treatment and assessment of outliers, which are likely to have a substantial negative impact on the outcomes. Outliers are extreme scores or values of data sets with uncommonly low or high value, that may have significant effects on the analysis and the result of the study (Hair et al., 2010). To ensure further data screening, treatment and assessment of both univariate and multivariate outliers were conducted in this study. Outliers manifest as unusual high or low value. Hence, their appearance makes the assessment stand out from the remaining (Berlan, Corliss, Field, Goodman, & Bryn Austin, 2010; Schuenemeyer, Murtagh, & Heck, 2006). In this study, univariate and multivariate

outliers were checked. “Based on the analysis of frequency of the variables, there was no any value found to be outside the expected range”. SPSS were used in checking univariate outliers to detect cases with large z-score values. In detecting potential univariate outliers cases standardized z-score values of more than ± 3.29 ($p < .001$) were considered as recommended by Tabachnick and Fidell (2007). Table 4.6 below revealed no cases of univariate outliers were identified.

Table 4.6
Univariate Outliers

Variables	Items	Outliers	Total
Access to Finance	ACF 1	97,98,180,85,111,276	9
	ACF 2	47,20,12	
Economic Performance	EP 1	55	4
	EP 2	68	
	EP 5	27	
	EP 6	51	
Environ. Performance	EVP3	37,5,57,59,1,13,15,36,6	16
	EVP 4	22,14,10,322	
	EVP5	40,9,43	
Ethical Sensitivity	ETS 1	84,67,2,61	6
	ETS 3	72	
	ETS 4	46	
Access to ICT	ICT 1	319	12
	ICT 2	77	
	ICT 3	79,74,82,78,23,80	
	ICT 5	25	
	ICT 6	81,30	
	ICT 7	7	
	Innovativeness	NIL	
Know. Sharing Intensity	KSI 3	44	2
	KSI 5	73	
Social Performance	SP 1	326,71,66,32	6
	SP 4	28	
	SP 5	83	
Total			55

4.5.3 Normality Test

Normality is of the most important postulation in multivariate analysis (Hair et al., 2010; Tabachnick & Fidell, 2007). Normality deals with the nature of data distribution for an individual construct and its association with a normal distribution (Barbara G. Tabachnick & Fidell, 2007). Normality can often be addressed prior to hypothesis testing through data screening procedures. The normal distribution of the data was assessed in the study to ensure that it is not too far from being normal.

The normal distribution is a key assumption for structural equation model and statistical analysis (Joe F. Hair et al., 2011). Although PLS-SEM is a non-parametric statistical method and does not require data to be distributed normally, the package presents a “lenient model that makes no assumptions about the normality of the data distributions”. It is therefore necessary to check if the data is extremely non-normal data. This is also necessary in order to avoid problem in assessing the standard errors and parameters that may be inflated in bootstrapping process. Curran *et al.* (1996) and West *et al.* (1995) argue that Skewness values should be less than 2 and less than 7 for Kurtosis. In another perspective Kline (2011), revealed that absolute value of greater than 3 for Skewness and greater than 10 for Kurtosis may depict a problem while values above 20 may indicate a more serious problem.

Consequently, the “statistical method of Skewness and Kurtosis (Curran, West, & Finch, 1996; Kline, 2015; Schuenemeyer et al., 2006; Tabachnick & Fidell, 2007)”

was used to assess normality distribution of data in this study. The normality result “in this study on absolute values of the Skewness and Kurtosis revealed that all the items are within the acceptable range of < 2 and < 7 , respectively”. The results are presented in the table 4.7.

Table 4.7
Skewness and Kurtosis

Variables	N	Min	Max	Mean	SD	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	SE	Statistic	S E
Access to Finance	288	2	5	3.97	0.675	-0.712	0.144	0.621	0.286
Economic Performance	288	2	5	3.92	0.485	-0.186	0.144	0.964	0.286
Environ. Performance	288	3	5	4.15	0.451	-0.182	0.144	0.81	0.286
Ethical Sensitivity	288	3	5	4.22	0.434	0.408	0.144	-0.139	0.286
Access to ICT	288	3	5	4.23	0.391	0.177	0.144	-0.092	0.286
Innovativeness	288	3	5	4.16	0.633	-0.363	0.144	-0.839	0.286
Know. Sharing Intensity	288	2	5	4.09	0.647	-1.344	0.144	3.093	0.286
Social Performance	288	3	5	4.03	0.594	-0.059	0.144	-1.076	0.286

The values of skewness are found to be below 2; while the values of kurtosis are below 7 in Table 4.7 above. However, Field (2009) revealed that large sample size reduces the standard errors, which in increase the value of the kurtosis and skewness statistics. Therefore, it is more important to look at the shape of the graph rather than looking at the value of the Kurtosis and Skewness statistics. Against this background, the present study also employed a histogram to check the normality of the data collected (Barbara G. Tabachnick & Fidell, 2007). See figure 4.1 below for details

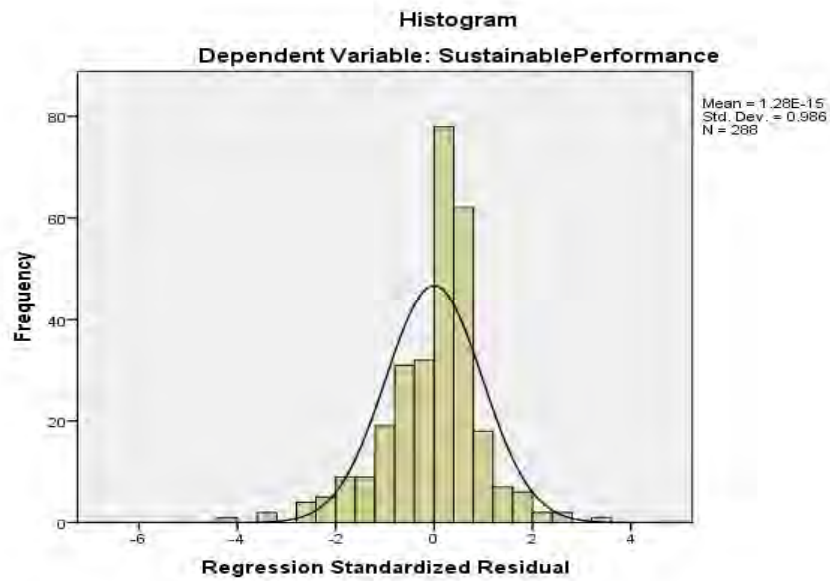


Figure 4.1
Histogram for the Normality Test

4.5.4 Multicollinearity

Multicollinearity refers to a situation in which two or more exogenous latent constructs become extremely correlated. Multicollinearity problem “occurs when the independent variables are highly correlated to each other (Hair et al., 2010; Tabachnick & Fidell, 2007)”. “The presence of multicollinearity among the exogenous latent constructs can substantively alter the estimates of regression coefficients and their statistical significance tests” (Chatterjee & Hadi, 2006).

To detect multicollinearity, the correlation matrix as well as the examination of the correlation matrix of the exogenous latent constructs were performed. The result of the correlation matrix shows 0.70 in the table 4.7 which indicates there was no multicollinearity among the exogenous latent constructs (Hair, Black, Babin & Anderson, 2010).

Table 4.8
Pearson Correlation Matrix

Constructs	ETS	SP	KSI	ICT	ACF	IN
Ethical sensitivity	0.78					
Sustainable Performance	0.309	0.724				
Knowledge Sharing Intensity	-0.015	0.241	0.765			
Access to ICT	0.315	0.267	0.192	0.738		
Access to Finance	0.411	0.297	0.188	0.324	0.725	
Innovativeness	0.320	0.438	0.293	0.436	0.313	0.729

Following the examination of the correlation matrix, the variance inflated factor (VIF) and tolerance value were examined. Table 4.9 shows the result of all the VIF are less than 5 and the tolerance values greater than 0.20. This is an indication that multicollinearity did not exist among the exogenous latent constructs in this study (J. F. Hair, Ringle, & Sarstedt, 2011).

Table 4.9
Multicollinearity Test based on Tolerance and VIF Values

Variables	Collinearity Statistics	
	Tolerance	VIF
Access to Finance	0.319	3.139
Economic Performance	0.788	1.269
Environmental Performance	0.373	2.68
Ethical Sensitivity	0.284	3.527
Access to ICT	0.291	3.438
Innovativeness	0.923	1.084
Knowledge Sharing Intensity	0.237	4.218
Social Performance	0.882	1.133

4.6 PLS Result

Presentation of the factor analysis results is reported in this section where the study evaluates the validity and reliability of the construct measures. The outer model indicates the unidimensional nature of the study variables, in terms of factor analysis. The structural models were evaluated to determine the associations between the latent variables.

After the checking and screening of the data as described in the previous discussion, the outer model and inner model were assessed (Henseler, Hubona, & Ray, 2016b; Schuenemeyer et al., 2006). “PLS-SEM was used in this study to evaluate both the outer model (measurement model) and the inner model (structural model) or what is otherwise called the outer model’s validity and reliability (Ramayah, Lee, & In, 2011)”. The two-step approach for reporting the results of PLS analyses as summarized by (Henseler, Ringle, & Sinkovics, 2011) is graphically displayed in Figure 4.2 below:

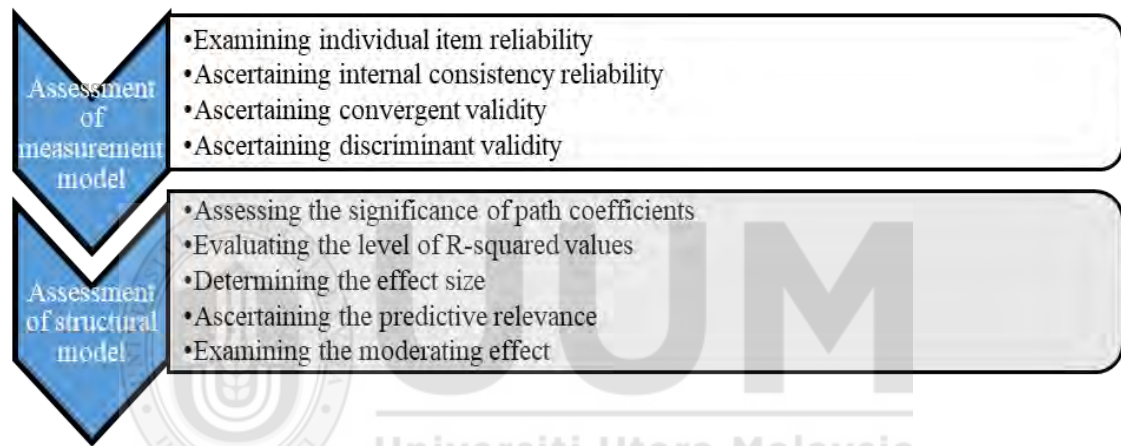


Figure 4.2
A Two-Step Process of PLS Path Model Assessment
 Source: Henseler et al. (2009)

Hence, SmartPLS 3.0 by Hair et al., (2014) was used to find causal connection among the constructs in these theoretical models. Six exogenous latent variables are considered in this study which include four independent variables (Access to Finance, Knowledge Sharing Intensity, Ethical sensitivity, Access to ICT) and innovativeness (moderating variable) in business. The endogenous variables in this study are the dependent variable (Sustainable performance); social performance, economic performance, environmental performance.

4.6.1 Assessment of Measurement Model

To assess the measurement model, previous research suggests the researchers to look at the average variance extracted (AVE), indicator loadings, and composite reliability (CR) values to measure the convergent validity (CV). The research first assessed the loadings of the indicators to ensure that they were equal or greater than threshold of 0.6 (Chin, Gopal, & Salisbury, 1997; Gholami, Sulaiman, Ramayah, & Molla, 2013), the CR value should be above 0.7 and above 0.5 for AVE. Therefore, Composite Reliability (CR) which gives a value that indicates reliability and internal consistency was therefore used to determine suitability of the outer model which deals with the measurement of the components.

Hence, the validity and reliability of the measures reveal the nature of association among constructs. Furthermore, the degree to which the same constructs are related to each other was checked based on convergent validity indicator average variance extractor threshold of 0.50 and above (J. F. Hair et al., 2014; Henseler et al., 2016b).

Table 4.10 revealed the “composite reliability value (CRV) of all constructs is greater than 0.70 (0.784 to 0.944) Henseler et al., (2016). Loading of all items is greater than 0.40 and the Average Variance Extracted (AVE) values of all constructs are also greater than 0.50”. The results revealed statistically satisfied convergent validity criteria recommended (J. Nunnally & Bernstein, 1994). However, from the 50 items of the variables, 18 were deleted because their loadings were below the threshold of 0.40 ((Joe F. Hair et al., 2011).

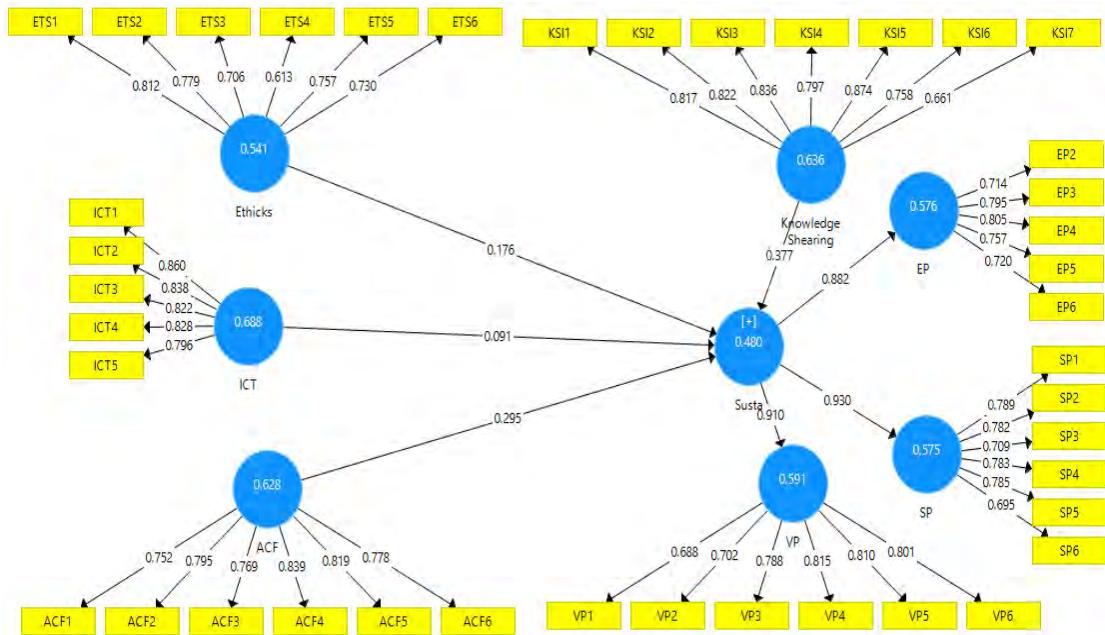


Figure 4.3 Measurement Model (Algorithm)

4.6.1.1 Indicator Loadings, Reliability and Convergent Validity Values

Table 4.10 shows Indicator Loadings, Reliability and Convergent Validity Values of the research variables. The result indicates that the indicator loadings, reliability and convergent validity values fulfilled the criterion of the measurement model (Hair, Hult, Ringle, & Sarstedt, 2014).

In this study, Composite Reliability (CR) was examine for internal consistency reliability with coefficient of 0.60 or greater was considered acceptable (Hair et al., 2014; Henseler, Hubona, & Ray, 2016; Peterson & Kim, 2013) and Cronbach’s alpha coefficient above 0.6 as recommended by Nunnally and Bernstein (1994).

Next step is the assessment of “convergent validity, this refers to the extent to which measures of the same constructs that are theoretically related to each other are

related” (Henseler et al., 2011). AVE is used to assess convergent validity using a threshold value of 0.50 and above (Hair et al., 2010; Henseler et al., 2009). “An AVE of 0.50 means that the constructs account for 50% of the variance in its indicators, which is considered adequate” (Hair et al., 2014).

Table 4.10
Indicator Loadings, Reliability and Convergent Validity Values

Variables	Collinearity Statistics	
	Tolerance	VIF
Access to Finance	0.319	3.139
Economic Performance	0.788	1.269
Environmental Performance	0.373	2.68
Ethical Sensitivity	0.284	3.527
Access to ICT	0.291	3.438
Innovativeness	0.923	1.084
Knowledge Sharing Intensity	0.237	4.218
Social Performance	0.882	1.133

Similarly, Average Variance Extracted in this study assessed discriminant validity as advised by (Fornell-Lacker Criterion), Cross Loadings, and Heterotrait-monotrait (HTMT). “Discriminant validity is established when the value of the square root of AVE of each construct is higher than the construct’s highest correlation with any other latent construct (Hair et al., 2014; Henseler et al., 2009)”. In this study, therefore, discriminant validity was assessed by using Heterotrait-monotrait (HTMT).

Table. 4. 11
Heterotrait-Monotrait Ratio (HTMT)

	CF	P	S	ICT	SI	P	P
CF							
P	0.783						
S	0.827	0.713					
CT	0.868	0.786	0.76				
SI	0.9	0.805	0.75	0.862			
P	0.856	0.9	0.736	0.757	0.842		
P	0.839	0.818	0.763	0.728	0.83	0.892	

4.6.1.2 Linearity Assessment

Table 4.12 shows the result of each tolerance and VIF of the research variables. Each of the results of the tolerance is greater than 0.2 and each of the result of the VIF are less 5. This fulfilled the conditions of the linearity assessment.

Table 4. 12
Linearity Assessment

Constructs	Tolerance	VIF
Access to Finance	0.353	3.713
Ethical Sensitivity	0.377	2.184
Access to ICT	0.298	3.030
Knowledge Sharing Intensity	0.246	3.411

4.7 Assessment of the Structural Model

This involved “evaluating the structural model’s predictive abilities and relationships between the constructs. The fundamental criteria for evaluating the structural model in PLS-SEM are the significance of the path coefficients, coefficient determination (R^2), the effect size (F^2) and predictive relevance (Q^2) (Hair et al., 2014). To test Hypotheses 1 to 8 comprehensively, this study carried out a systematic model

analysis of the structural model to provide a detailed picture of the results”. In addition, in assessing the significance of the path coefficients this study applied the standard bootstrapping procedure with a number of 5000 bootstrap samples and 343 number of cases in the original sample (Hair, Hult, Ringle, & Sarstedt, 2017; Henseler et al., 2009).

4.7.1 Hypotheses Testing

The hypotheses of the study involved testing the relationships among access to finance, access to ICT, knowledge sharing intensity, ethical sensitivity, innovativeness, and sustainability performance. The hypotheses were tested using the Smart PLS 3, through bootstrapping method. The statistical significance of the relationships between access to finance, access to ICT, Knowledge sharing intensity, Ethical sensitivity, innovativeness and performance was determined by the “path coefficients derived from the bootstrapping method”. “T-values and P-values of the path coefficients were used as base in determining the statistical significance of the relationships between these variables”. “Two-tailed test was adopted in this study based on the following T-values and P-values; T-value (± 1.96) and P-value (0.05) and T-value (± 2.57) and P-value (0.01)”.

4.7.2 Direct Relationship

A systematic model analysis of the structural model was conducted in this study. This provided a clear “picture of the results and to test hypotheses” 1 to 4 (H1, H2, H3, and H4) in the research. “An evaluation of the direct relationships between the independent variables and the dependent variables was carried out in order to assess the inner model”. Specifically, “the significance of the relationship was examined on

PLS-SEM bootstrapping procedure” in the Smart PLS 3.0. Cases used in analysis were same as the original ones while 5,000 remained constant as bootstrapping samples (Hair, Ringle, & Sarstedt, 2011; Hair Jr. *et al.*, 2013).

Table 4.13 presents the regression results between knowledge access to ICT, sharing intensity, ethical sensitivity, access to finance, and sustainability performance. The results of the analyses indicate positive relationships of access to finance, ethical sensitivity, knowledge sharing intensity, with the sustainability performance. The results are ($\beta = 0.295$, $t = 3.678$, $p < 0.000$), ($\beta = 0.176$, $t = 3.01$, $p < 0.003$), ($\beta = 0.377$, $t = 4.833$, $p < 0.000$) and respectively. However, the analyses of the data indicate no relationship exist between access to ICT and sustainable performance.

Table 4.13
Regression Result I (Direct Effects)

	Hypothesized Relationship	Beta	SE	T Value	P Values	Decisions
H1:	Ethical Sensitivity -> Sustainable Performance	0.176	1.802	3.01	0.003	Supported
H2:	Knowledge Shearing Intensity -> Sustainable Performance	0.377	0.989	4.833	0.000	Supported
H3:	Access to ICT -> Sustainable Performance	0.091	0.233	1.317	0.188	Not Supported
H4:	Access to Finance -> Sustainable Performance	0.295	2.011	3.678	0.000	Supported

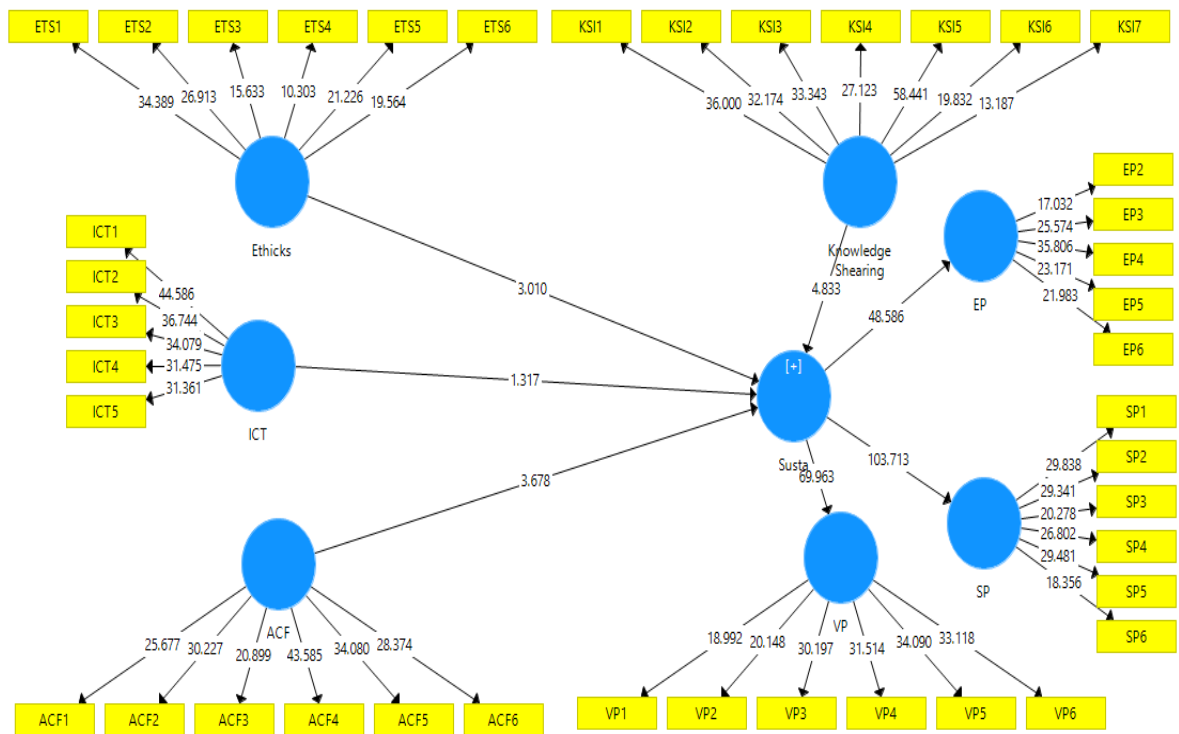


Figure 4.4
PLS-SEM Bootstrapping

4.7.3 Moderating Effect Results

The results presented in table 4.14 and figure 4.4 showed “the moderating effect of innovativeness on the relationship between access to ICT, knowledge sharing intensity, ethical sensitivity, access to finance and sustainable performance”. More specifically, the results show that innovativeness moderates the relationship between access to ICT and sustainable performance. Similarly, innovativeness moderates the relationship between access to finance and sustainable performance. This indicated in table 4.15 as ($\beta = -1.632$, $t = 1.476$, $p < 0.07$) and ($\beta = 0.881$, $t = 1.411$, $p < 0.080$) respectively as well as figure 4.3 and 4.4. However, innovativeness does not moderate relationship between ethical sensitivity and the knowledge sharing intensity on the sustainable performance.

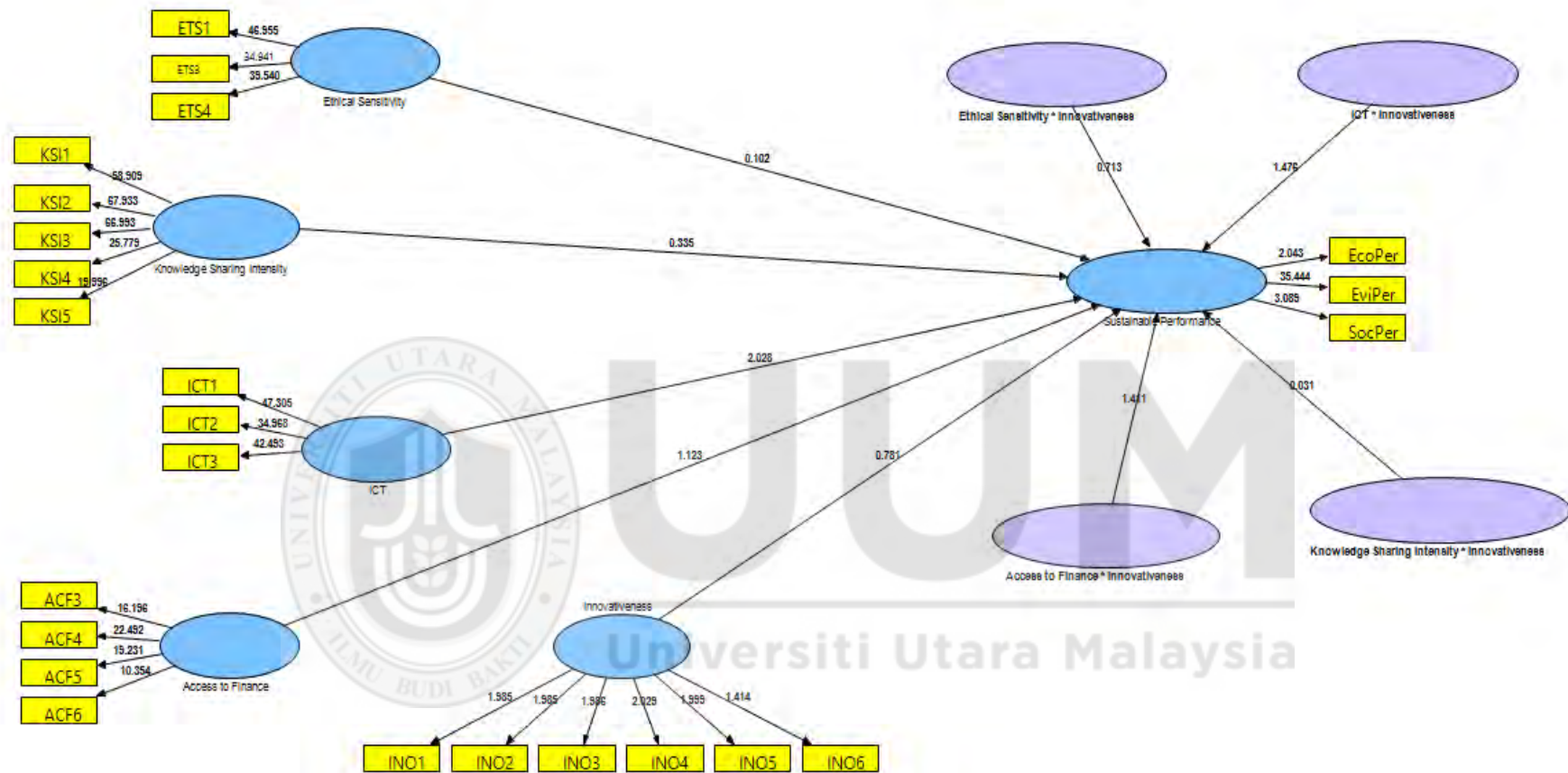


Figure 4.5
Regression Result II (Moderating Effect of Innovativeness)

Table 4.14

Regression Result II (Moderating Effect of Innovativeness)

No.	Hypothesized Relationship	Beta	SE	T Stat	P value	Decision
H5	Ethical Sensitivity * Innovativeness -> Sustainable Performance	0.789	1.107	0.713	0.238	Not Supported
H6	Knowledge Sharing Intensity * Innovativeness -> Sustainable Performance	-0.025	0.783	0.031	0.487	Not Supported
H7	Access ICT * Innovativeness -> Sustainable Performance	-1.632	1.106	1.476	0.07	Supported
H8	Access to Finance * Innovativeness -> Sustainable Performance	0.881	0.624	1.411	0.08	Supported

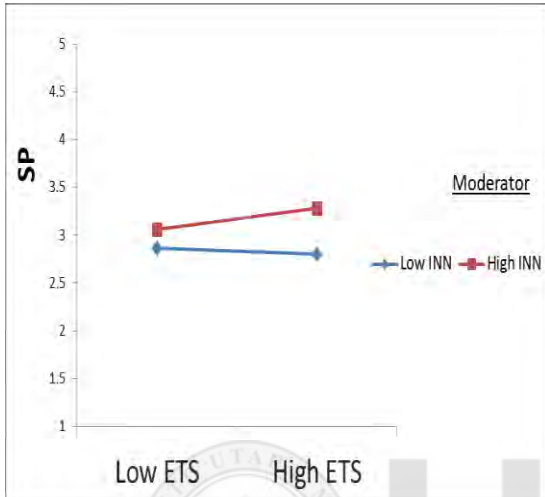


Figure 4.6

Moderation Graph of Interaction Ethical Sensitivity to Finance and Innovation on performance

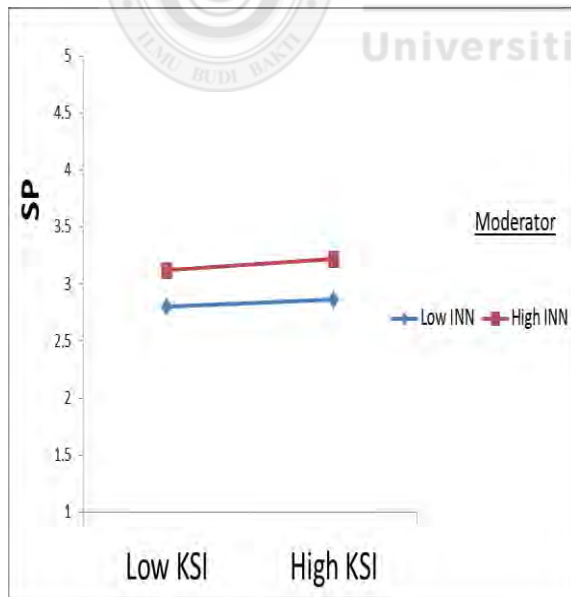


Figure 4.7

Moderation Graph of Interaction KSI to Finance and Innovation on performance

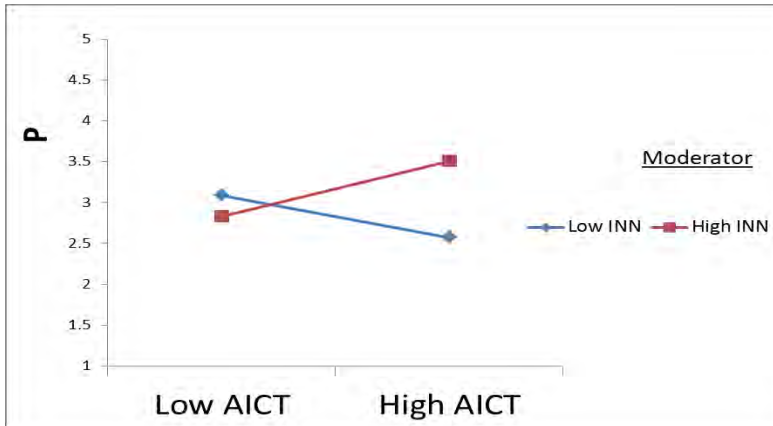


Figure 4.8
Moderation Graph of Interaction Effect of Access to ICT and Innovation on performance

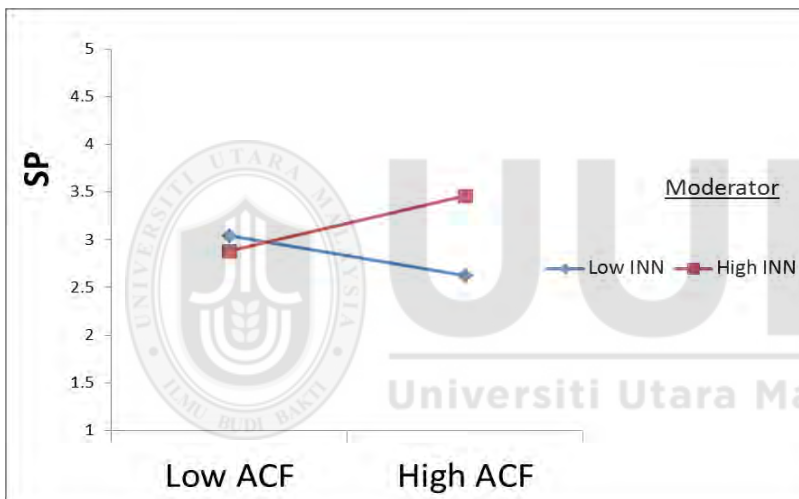


Figure 4.9
Moderation Graph of Interaction Effect of Access to Finance and Innovation on performance

4.8 Coefficient of Determination (R^2) and Effects Sizes

This section discusses R^2 and effect sizes of the model. The essence of testing the R^2 to assess the contribution of the variables to the latent constructs. The process helps in assessing the regression functions goodness of fit (Backhaus, Erichson, Plinke, & Weiber, 2018). Contrary to the covariance methods, the PLS approach does not allow

only statistical test to measure the calibrated model's overall goodness. This is majorly due to the postulation of distribution free variance. Consequently, R^2 serves as a – parametric test that can be used to assess the structural model's quality. This is because is reasonable metric for deciding the structural model or inner model as the dependent variables determination coefficient (R^2).

Accordingly, the assessment of model's excellent in respect of multiple regression coefficients can be determined based on the path coefficients direction and significant level (Hair et al., 2011) . Therefore, R^2 can be said to be accurate term and can presume values between 0 and 1. Similarly, Backhaus *et al.* (2003) attest that no generalizable report can be made about adequate yardstick value of R^2 . Hence, the better the R^2 is, the bigger the percentages of variance explained. R^2 values for dependent latent variables are hereby in line with to Cohen,(2000) as follows:

Table 4.15
Regression Result II (Moderating Effect of Innovativeness)

R₂	Variance explained (%)
Substantial	0.26
Moderate	0.13
Weak	0.02

“Having assessed the coefficient of determination of the endogenous constructs, the next criterion assesses the effect size (F^2) as suggested by Hair et al. (2013). Effect size is the difference in R^2 between the main effects when the particular exogenous construct is in the model and when it is omitted from the model”.

Table 4.16 below indicates the effect size of each of the research variables in the model. Knowledge sharing intensity having the medium effect size of 0.788. Ethical sensitivity, access to ICT and access to finance have small effect size as 0.849, 0.073 and 0.0328 respectively.

Table 4.16
The Effect Size

R-squared	R-squared Included	R-squared Excluded	f-squared	Effect size
Ethical Sensitivity	0.329	0.272	0.0849	small
Knowledge Sharing Intensity	0.329	0.209	0.1788	Medium
Access to ICT	0.329	0.28	0.073	small
Access to Finance	0.329	0.307	0.0328	Small

4.8.1 Effect Size of Moderator

Table 4.17 indicates the effect size of innovativeness as moderator in the model. The moderator effect size is at 0.1148. This indicates a small effect size in the research model.

Table 4.17
Effect Size of Moderator - Innovativeness

R-squared	R-squared Included	R-squared Excluded	f-squared	Effect size
Innovativeness	0.329	0.252	0.1148	Small

4.8.2 Predictive Relevance

Another assessment of the structural model involves the model's capacity to predict. "Having assess the level of the R^2 value of the model and the effect size (F^2) of all the exogenous latent variables on the endogenous latent variable, it is suggested that researchers should consider evaluating the predictive relevance of the model by evaluating the level of predictive relevance (Q^2) value (Geisser, 1974; Stone, 1974). The value of Q^2 revealed how well the observed values had formed the model as well

as its parameter estimations (Chin, 1998)”. Hair et al. (2010) assumed that the model should be able to effectively predict each dependent latent variable indicator.

Table 4.17 indicate the predictive reverence of the overall model. The predictive relevance shows as 0.329. This indicates that, the model cover about 33% of the factors influence the sustainable performance.

Table 4.18
Predictive Relevance

Total	SSO	SSE	1-SSE/SSO
Sustainable Performance	4896	3287.5	0.329

4.9 Discussion

In this study, the research variables; access to ICT, ethical sensitivity, access to finance, knowledge sharing intensity and innovativeness influence the sustainability performance of the SMEs in Nigeria.

The results of the study indicate that knowledge sharing intensity, ethical sensitivity, and access to finance relate to the sustainable performance significantly. The findings also depict innovativeness has moderating effects on the relationship between access to ICT and sustainable performance of the SMEs. Furthermore, the findings show innovativeness moderates the relationship between access to finance and the sustainable performance of the SMEs. Accordingly, the following section discusses the results of the study.

4.9.1 Relationship between Ethical Sensitivity and Sustainable Performance of SMEs

The results show “significant positive relationships between ethical sensitivity and sustainable performance of the SMEs ($\beta = 0.176$, $t = 3.01$, $p < 0.003$)”. The result of the analyses is at the expected direction. “The findings of this study attest with previous research that provided evidence that indicate the linkage between ethical sensitivity and organizational performance (Chan Cheung 2012; Bottery, 2014)”. “The finding of the study is also in line with the findings of more recent studies by Kolk, (2016) and Wesarat et al., (2017) have also demonstrated the existence of the relationship between the ethical sensitivity and sustainable performance”.

4.9.2 Relationship between Knowledge Sharing Intensity and Sustainable Performance of SMEs

The results show significant positive relationships between knowledge sharing and sustainable performance of the SMEs ($\beta = 0.377$, $t = 4.833$, $p < 0.000$). The result of the analyses is at the expected direction. The findings of this study is in line with the past studies that indicate the linkage between knowledge sharing intensity and performance (Afriyie et al., 2020; Hulme, 2000; Ndambuki & Alala, 2014; Ozkaya et al., 2015).

4.9.3 Relationship between Access to ICT and Sustainable Performance of SMEs

The results show no significant relationships exist between access to ICT and sustainable performance of the SMEs ($\beta = 0.091$, $t = 1.317$, $p < 0.188$). The result of the analyses is not at the expected direction.

The findings of this study agrees with findings of some past studies that indicate that access to ICT does not improve the small business performance (Kauffman & Riggins, 2012; Riggins & Weber, 2013).

4.9.4 Relationship between Access to finance and Sustainable Performance of SMEs

The results show “significant positive relationships between access to finance and sustainable performance of the SMEs ($\beta = 0.295$, $t = 3.678$, $p < 0.000$)”. The result of the analyses is at the expected direction. The findings of this study confirm by the “findings of previous research that provided the evidence that indicate the linkage between access to finance and performance” (Madrara, 2012; Tchakoute Tchuigoua, 2014; Umar et al., 2012; UraSingh, 2012; Yusoff et al., 2020).

4.9.5 Moderating Effects of Innovativeness on Ethical Sensitivity and Sustainable Performance of SMEs

The result showed that, innovativeness does not moderate the relationship between ethical sensitivity and sustainable performance of SMEs indicates as ($\beta = 0.789$, $t = 0.713$, $p < 0.238$). Thus, the finding is not at the expected direction. This is in line with previous study by Chang (2011).

4.9.6 Moderating Effects of Innovativeness on Knowledge Sharing Intensity and Sustainable Performance of SMEs

The result showed that, innovativeness does not moderate the relationship between knowledge sharing intensity and sustainable performance of SMEs indicates as ($\beta = -$

0.025, $t = 0.031$, $p < 0.487$). Hence, the finding is not at the expected direction. This is in line with research by Wang and Wang (2012).

4.9.7 Moderating Effects of Innovativeness on access to ICT and Sustainable Performance of SMEs

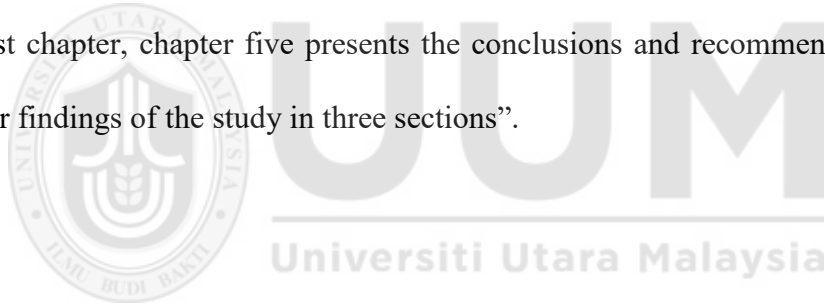
The result showed that, innovativeness moderates the relationship between access to ICT and sustainable performance of SMEs indicates as ($\beta = -1.632$, $t = 1.476$, $p < 0.07$). Hence, the finding is at the expected direction this is in line with finding of previous study (Afriyie et al., 2020; Klius et al., 2021). The findings of this study is agrees with the findings of previous studies that shows innovativeness has a moderating effect on organisational performance (Johnson et al., 2009).

4.9.8 Moderating Effects of Innovativeness on access to finance and Sustainable Performance of SMEs

The result showed that, innovativeness moderates the relationship access to finance and sustainable performance of SMEs indicates as ($\beta = 0.881$, $t = 1.411$, $p < 0.080$). Therefore, the finding is at the expected direction. The findings of this study is agrees with the findings of previous studies by Swink, (2020) and Chowhan, (2016) that found that innovativeness has moderating effect on the associations between business practices and performance of SMEs.

4.10 Chapter Summary

This chapter presented the statistical analysis of quantitative data collected through questionnaire distributed in Kano state. “The chapter also presented the results of the response rate test and test of non-response bias. Next, the initial data examination and data screening were conducted, including missing value analysis, assessment of outliers, tests of normality and multicollinearity assessment”. Then, “sample characteristics were presented, followed by the measurement model as well as the structural model. The two models which were assessed on PLS-SEM method using the SmartPLS 3.0. Subsequently, results from hypotheses testing based on the evaluation of the inner model are reported. The chapter also presented the discussion of the research results. Following is the last chapter, chapter five presents the conclusions and recommendation regarding the major findings of the study in three sections”.



CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter presents the conclusions and recommendation regarding the major findings of the study in three sections. The chapter begins by providing a summary of the study followed by conclusions of the study. The contributions, implications, limitations of the study as well as suggestions for possible further research in the area of small and medium enterprises (SMEs) are identified and explained in the third section.

5.1 Summary of Study

This study investigated SMEs in Nigeria from the perspective of sustainable performance. The study attempted to examine the influence of access to finance, access to ICT, knowledge sharing intensity, ethical sensitivity, innovativeness on the sustainable performance of SMEs. More specifically, the primary objective of the study was to examine empirically the influence of “ethical sensitivity, knowledge sharing intensity, access to ICT, access to finance, innovativeness on the sustainable performance of SMEs in Nigeria”.

This study was a cross-sectional sample survey of registered SMEs that operated in Kano, Nigeria. The primary data for the study was collected from the SMEs by using

structured questionnaires. The questionnaires were distributed to the owner and managers of the SMEs that were registered with the Kano State Ministry of Commerce and Industries the data in this study was gathered from a total of 288 SMEs in Kano, Nigeria. This study primarily attempted to answer the following research questions:

1. Does ethical sensitivity have any relationship with sustainable performance of SMEs in Nigeria?
2. Does knowledge sharing intensity have any relationship with the sustainable performance of SMEs in Nigeria?
3. Does access to ICT have any relationship with the sustainable performance of SMEs in Nigeria?
4. Does access to finance have any relationship with the sustainable performance of SMEs in Nigeria?
5. Does innovativeness moderate the relationship between ethical sensitivity and sustainable performance of SMEs in Nigeria?
6. Does innovativeness moderate the relationship between knowledge sharing intensity and sustainable performance of SMEs in Nigeria?
7. Does innovativeness moderate the relationship between access to ICT and sustainable performance of SMEs in Nigeria?
8. Does innovativeness moderate the relationship between access to finance and sustainable performance of SMEs in Nigeria?

In addition, the above research questions, the eight research hypotheses developed for the study included the following:

Hypothesis 1: There is positive relationship between ethical sensitivity and sustainable performance of SMEs.

Hypothesis 2: There is positive relationship between knowledge sharing intensity and sustainable performance of SMEs.

Hypothesis 3: There is positive relationship between access to ICT and sustainable performance of SMEs.

Hypothesis 4: There is positive relationship between access to finance and sustainable performance of SMEs.

Hypothesis 5: Innovativeness moderates the relationship between ethical sensitivity and sustainable performance of SMEs.

Hypothesis 6: Innovativeness moderates the relationship between knowledge sharing intensity and sustainable performance of SMEs.

Hypothesis 7: Innovativeness moderates relationship between access to ICT and sustainable performance of SMEs.

Hypothesis 8: Innovativeness moderates relationship between access to finance and sustainable performance of SMEs.

Based on the empirical results of the statistical analyses of the data collected in the study, the following section discusses and provides the conclusions of the major findings that hold significant importance in this study.

5.1.1 Summary of Results

The results of analyses of the data collected from the 288 respondents supported the five hypotheses from the eight hypotheses developed in the study. Table 5.1 summarizes the results of the eight hypotheses that were tested in the study. As indicated in Table 5.1 the results supported hypotheses 1, 2, 4, 7 and 8.

Table 5.1
Summary of the Research Results

	Hypothesis Statement	Decision
H1:	<i>There is positive relationship between ethical sensitivity and sustainable performance of SMEs.</i>	Supported
H2:	<i>There is positive relationship between knowledge sharing intensity and sustainable performance of SMEs.</i>	Supported
H3:	<i>There is positive relationship between access to ICT and sustainable performance of SMEs.</i>	Not Supported
H4:	<i>There is positive relationship between access to finance and sustainable performance of SMEs.</i>	Supported
H5:	<i>Innovativeness moderates the relationship between ethical sensitivity and sustainable performance of SMEs.</i>	Not Supported
H6:	<i>Innovativeness moderates the relationship between knowledge sharing intensity and sustainable performance of SMEs.</i>	Not Supported
H7:	<i>Innovativeness moderates relationship between access to ICT and sustainable performance of SMEs.</i>	supported
H8:	<i>Innovativeness moderates relationship between access to finance and sustainable performance of SMEs.</i>	supported

5.1.2 Discussion of Findings

Hypothesis H1 proposed that there is positive relationship between ethical sensitivity and sustainable performance of SMEs. The result revealed significant positive relationship between ethical sensitivity and sustainable performance of SMEs. This finding implied that SMEs' that are more ethically sensitive would be more likely to depict high level of sustainable performance. This finding coincides with that of Wesarat et al., (2017) who found that SMEs with high level of ethical sensitivity record more sustainable performance. The consistency between the result of the current study and the previous

study could be explained by the fact that ethics have now become part of business practices as firms around the world continue to develop code of ethics to avoid business failure.

Hypothesis H2 postulated that there is positive relationship between knowledge sharing intensity and sustainable performance of SMEs. The finding from this study confirmed this postulation, the result revealed significant positive relationship between knowledge sharing intensity and sustainable performance of SMEs in Nigeria. This finding implied that SMEs who intensively involve in sharing of information, skills and expertise would be more likely to portray more sustainable performance. The result from hypothesis corroborates with the recent finding of Afriyie et al., (2020) who established that firms that display high intensity for knowledge sharing depicts significant level of performance.

Hypothesis H3 projected that there is positive relationship between access to ICT and sustainable performance of SMEs. The finding from this hypothesis revealed insignificant relationship between access to ICT and sustainable performance of SMEs. This implied that even when SMEs have access to ICT that could not have strong impact of their sustainable performance. The findings of this study contradicts that of Yunis and Tarhini (2017) who found significant relationship between access to ICT and sustainable performance. However, the finding agrees with findings of some past studies that indicate that access to ICT does not improve the small business performance (Kauffman & Riggins, 2012; Riggins & Weber, 2013). Nevertheless, this finding is

surprising considering that access to ICT provides firms with valuable information, increasing knowledge as well as enhanced relationship between SMEs, its customers and suppliers, and it also enhance efficiency as well as cost reduction.

Hypothesis H4 postulates that there is positive relationship between access to finance and sustainable performance of SMEs. The result support the postulation of this hypothesis, it revealed that access to finance have significant positive relationship with SMEs' sustainable performance in Nigeria. This implied that the more SMEs access adequate finances, the high the likelihood to fund their business ideas and achieve sustainable performance. This finding is consistent with that of previous research such as Tchakoute Tchuigoua (2014) and Yusoff et al. (2020) who confirmed the positive impact of access to finance on SMEs' sustainable performance. The consistency of the findings of this study with that of previous research can be explained by the fact that access to finance is an important issue of concern globally among SMEs as shown in previous studies (Mazanai & Fatoki, 2012).

Hypothesis H5 proposed that Innovativeness moderates the relationship between ethical sensitivity and sustainable performance of SMEs. However, the finding of the study failed to support this postulation, it revealed that Innovativeness does not moderate relationship between ethical sensitivity and sustainable performance of SMEs in Nigeria. This implied that Innovativeness could not further strengthen the existing direct relationship between ethical sensitivity and sustainable performance. It could be contributed to the strong effect of ethical sensitivity in influencing performance. This is

in line with previous study by Chang (2011) which showed that ethical sensitivity is strong determinant of SMEs, such that it may not be further strengthened through the intervention of another variable. This could not be surprising considering that emergence of business ethics as a strong pillar that protect business against failure and eventually ensure its sustainable performance.

Hypothesis H6 projected that Innovativeness moderates the relationship between knowledge sharing intensity and sustainable performance of SMEs. The finding from this study failed to support this hypothesis, it revealed that Innovativeness does not moderate relationship between knowledge sharing intensity and sustainable performance of SMEs in Nigeria. This finding implied that Innovativeness could not alter the existing relationship between knowledge sharing intensity and sustainable performance of SMEs due to its strength. This outcome can be supported by the insight from Wang and Wang (2012) which highlights that when firms intensified their knowledge sharing, such could have strong implication of their performance, thus, in such a situation it could be unlikely for such strong effect to be altered by intervention of any variable within such relationship.

Hypothesis H7 proposed that Innovativeness moderates the relationship between access to ICT and sustainable performance of SMEs. The finding supports the postulation of this hypothesis, it revealed that Innovativeness moderates the relationship between access to ICT and sustainable performance of SMEs. This implied that Innovativeness alters the existing direct relationship between access to ICT and sustainable performance

of SMEs which was insignificant thereby making the ICT to indirectly have significant effect on sustainable performance of SMEs through interaction with Innovativeness. This finding is consistent with the highlight from previous studies (Afriyie et al., 2020; Klius et al., 2021), which indicates the possibility of Innovativeness to have indirect effect organisational performance (Johnson et al., 2009). This finding could not be surprising considering that even when firms have access to ICT, if it is not deployed in an innovative way, it could not have strong impact on SMEs performance. However, as shown by this finding when SMEs have access to ICT and use it in an innovative way it can strongly affect their performance.

Lastly, hypothesis H8 proposed that Innovativeness moderates the relationship between access to finance and sustainable performance of SMEs. The finding from this study supports the postulation of this hypothesis, it revealed that Innovativeness moderates the relationship between access to finance and sustainable performance of SMEs in Nigeria. This finding implied that sustainable performance of SMEs could be more likely improved through the innovative use of finances accessed by SMEs. This finding agrees with that of Swink (2020) and Chowhan, (2016) who found that innovativeness has moderating effect on the relationships between business practices and performance of SMEs. This could not be surprising because firms could be more likely to portray better sustainable performance when the access the required financing and use it in an innovative way.

5.2 Research Contributions.

There are significant theoretical contributions of this study. By conducting the sample survey and providing empirical data from actual SMEs, this research has extended the knowledge regarding the relevance and applicability of sustainable performance to the SMEs in Nigeria.

From the theoretical perspective, the study has increased our knowledge regarding the relative contributions of access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT, and innovativeness to the sustainable performance. More specifically, at the theoretical level, this study reinforces the importance of triple bottom line theory in SMEs research. In addition, this research has also furthered our understanding and knowledge regarding the effects of the moderating variables-innovativeness on the relationship between access to finance and access to ICT to the sustainable performance SMEs. This study reconfirms our knowledge of dynamic capabilities theory by demonstrating the ability to integrate, build and reconfigure internal and external competencies.

5.2.1 Theoretical Contribution

A thesis, the idea of which is a collection of evidence concerning the issues being studied, is the product of both literature as well as empirical investigations. The strength of a thesis primarily rests upon its ability to provide new contributions to the body of knowledge. As far as the present thesis is concerned, in this matter, the study is offering the following:

a. Probably one the comprehensive study of SMEs in Nigeria:

1. Identifies some of the most important research issues on performance SMEs in the Nigerian context. Previous studies do not adequately address the issues of SMEs performance. Most of the studies view performance from conventional perspectives. However, these studies address the issues by assessing SMEs from sustainable performance outlook which are social, economic and environment.
2. Solves some of the methodological problems found in previous studies on SMEs. As indicated in chapter 2, previous studies on SMEs in Nigeria have not adequately addressed methodological problems such as the use of theoretical framework and testing of hypotheses. This study contributes by developing a robust framework and hypotheses to solve the research issue

b. Pioneers the study on the application of sustainable performance to the SMEs in Nigeria:

1. Adopts the triple bottom line theory to the study of SMEs in the Nigerian context. As noted in chapter two, previous studies on SMEs appears not to focus on practices of sustainability.
2. Produces a research model of sustainable performance with three components namely, social economic and environment. In addition, the model combines access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and innovativeness. Very few past studies have examined multiple variables and their relationships with the performance of SMEs.

3. Produces results that shed light on sustainable practices adopted by SMEs in Nigeria, these practices are social, economic and environment.
4. Produces results that show sustainable performance of SMEs is related to the four areas of practices. The practices are access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT, and innovativeness.
5. Produces results that indicate independent-dependent relationships are moderated by innovativeness.

5.2.2 Practical Contribution

The results of this study revealed that sustainable performance is relevant and applicable to SMEs and large firms. “This research indicate that sustainable performance consists of three dimensions as economic, social and environment is influenced by sustainable business practices”. The findings of the study present remarkable implications for various lowing groups of people and institutions involved with Small and Medium Enterprises (SMEs).

Additionally, academicians in the areas of SMEs need to be made aware of the importance of sustainable performance as a field of study as well as sustainable business practice. Findings of the study suggest the theoretical as well as the practical relevance of sustainable practices in the SMEs.

The findings of the study provide evidence to trainers regarding the use of more practical approaches and models in training SMEs, particularly among the owners and managers of SMEs. This study provides a starting point for the adoption of the triple

bottom line in the SMEs. The study provides opportunity for trainers and teachers in business disciplines to learn as well as understand the significance of the innovativeness as moderating variable.

The findings of the study suggest that business practices- sustainable performance relationship is moderated by innovativeness. In view of this, owner and managers of SMEs should focus on adopting of access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT and innovativeness to improve their sustainable performance. “Given the train of the performance of SMEs in Nigeria which appears to be poor and not sustainable, the study reveals business practices that would enhance the economic, social and environment components of sustainable performance to be improved as well as better chances to withstand in the long run”.

In addition, owner and managers must be aware of the need to match access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT with increase in the innovation in their business place for their businesses to remain in business and perform better. As sustainability become a very sensitive issue for the public which check mate incidents that harm the business image and value, owner managers should focus on adoption of the revealed business practices to salvage it image and to remain in business.

5.3 Policy Recommendations

Understanding the concept of sustainable performance is of great value to not only to the SMEs, but also the government supporting agencies such as Small and Medium Enterprises Development Agencies in Nigeria (SMEDAN), Development Finance Institutions (DFI), Central Bank of Nigeria (CBN), Nigerian Bureau of Statistic (NBS) and Ministry of Commerce and Industries. Although, the government measures the performance of SMEs in Nigeria, sustainable performance has not been considered as measure in determining performance of SMEs. Therefore, this study reveals sustainable performance as standard criteria for measuring the performance of SMEs.

In order for SMEs to become more successful, the government agencies should focus on training SMEs related to factors that impact on the sustainable performance of SMEs as revealed by this study. The factors are access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT, and innovativeness.

5.4 Limitations and Future Research

The nature of the research questions of this study needs broad contact with as many managers and owner of business in a limited environmental setting. Getting the SMEs to participate in the research was the major problem that this study faced, particular among the new SMEs. When contacted, many of them are not willing to participate. The following limitations of this study should be considered when interpreting and conclusions the results of this study.

Difficulty in selecting the number of SMEs in the industry for this study is the first limitation of the study. The number of firms surveyed in this study may be small. Although the final sample size consisted of only 288 SMEs participated in the study. Self-reported data in performance measures used in the study is the second limitation of the study. Hence, the reliability and accuracy of the data used in the study entirely depended on the information received by the respondents. The above limitations were judged to be unavoidable. However, some of these limitations might be overcome if the future researchers could involve more SMEs to participate.

As indicated earlier, despite the relevance and applicability of sustainable performance to SMEs, empirical research in this area of study is still limited. This research suggests opportunities for researchers interested in further exploring the notion that SMEs could be studied from the perspective of sustainable performance.

The conclusions of this study suggest that access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT, and innovativeness to a certain extent influence the sustainable performance of SMEs in Nigeria. The research indicate level of R^2 to be 0.329 which infer that about 33% of the factors that influence the sustainable performance of SMEs is discovered by this study. Notwithstanding these conclusions, opportunity for more empirical research is therefore available to explore other variables that influence the sustainable performance of SMEs.

Studying other variables that can affect the sustainable performance of the SMEs presents a good starting point for future research in SMEs. Undoubtedly, the other relevant aspects of the sustainable performance as suggested in the literature, which is not address in this study, would present as research opportunities to be investigated further.

Future research in sustainable performance of SMEs should also attempt to incorporate additional moderating variable such as government regulation. This might help to indicate stronger moderating effects of the other organizational and external factors and might also possibly give insight in the industry effects on the performance of the SMEs.

Finally, this research is an attempt to empirically test business practices variables (such as access to finance, knowledge sharing intensity, ethical sensitivity, access to ICT, innovativeness) that can influence the sustainable performance of SMEs in the context of the triple bottom line. “The significant findings among these variables provide the insights into some of the factors influencing sustainable performance that may be used as the starting pointing for understanding SMEs in Nigeria as well as in providing the direction for future research in this area of study.

5.5 Conclusion

This study tested eight research hypotheses which were derived from previous theoretical and empirical research. The hypotheses stated that access to finance,

knowledge sharing intensity, ethical sensitivity, and access to ICT are related to the sustainable performance of SMEs and that innovativeness moderate the relationship between access to finance, knowledge sharing intensity, ethical sensitivity, and access to ICT, and the sustainable performance of SMEs.

The empirical analyses of the data obtained from the 288 SMEs which participated in this study indicate statistically significant results regarding the testing of most of the research hypotheses. Further, these results are consistent with the findings of previous studies as well as they reinforce the importance of triple bottom line theory. More specifically, this present study provides the following conclusions:

- 1 The sustainable performance of the SMEs tends to be related the ethical sensitivity, knowledge sharing intensity and access to finance adopted by these enterprises. That is, the sustainable performance as measured by Economic, Social and Environmental components (performance). This finding is also consistent with many of the earlier studies which found similar significant results.
- 2 With regards to innovativeness as moderator, the results indicate “moderating effect on the relationship between that access to ICT and sustainable performance. Likewise, the relationship between access to finance and sustainable performance is moderated by innovativeness”. This finding adds supports to the earlier studies.

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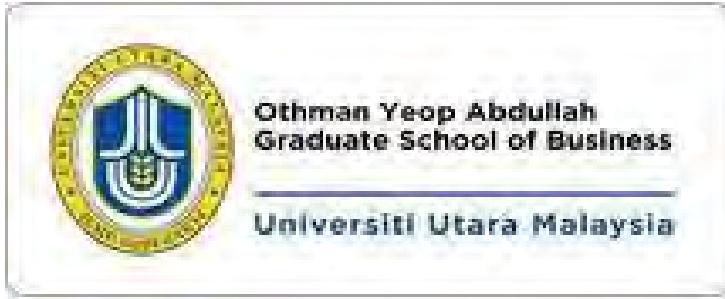
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APPENDIX

ACADEMIC QUESTIONNAIRE



Dear MD / CEO,

ACADEMIC RESEARCH QUESTIONNAIRE

I am a doctoral student at the above-named university, currently working on my PhD thesis title “Ethical sensitivity, Knowledge Sharing Intensity, Access to ICT, Access to Finance and Sustainable Performance of SMEs in Nigeria: The Moderating Effect of Innovativeness”

Thank you in advance for taking your valuable time to fill in this questionnaire. Please be assured that your responses will only be used for academic purpose. Hence, your identity will never be known throughout any part of the research process.

Thank you very much in anticipation of your responses.

Yours sincerely,

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SECTION I: Background of Respondent

Please fill in the information relating to your background and tick (√) the most appropriate answers where applicable.

Name of your Business _____

1. What is your gender?

- Male
- Female

2. How old are you? ____ years old

3. What is your position in the company?

- Managing Director/CEO
- Others (Please Specify) _____

4. What is your highest education qualification?

- PhD
- Master's Degree
- First Degree
- Diploma/NCE/ its equivalents
- Secondary School Certificate
- Others (Please Specify) _____

5. When was your business established? _____

6. What is your legal form of your organization?

- Sole proprietorship
- Partnership
- Private limited company
- Public limited company
- Others (specify) _____

- 7 What is the current paid up capital of the firm? _____
- 8 How many full time employees did your company have when it first started its business operations _____ employees
- 9 Currently, how many full time employees does your business have? _____
- 10 Does your company export any of your products/services?
 Yes
 No
- 11 If yes, state the name the product/service.....

SECTION II: Sustainable Performance

Please provide the following information on current sustainable performance of your firm. The information is related to financial, social as well as environmental measurement of your organisation (Please be assured that all information given in this questionnaire is for the sole purpose of this research only and it **WILL NOT** be disclosed to any other party). Please use the following scales to indicate your level of agreement each statement:

Strongly disagree 1 2 3 4 5 strongly agree

	Economic Performance					
12	My organisation is making profit	1	2	3	4	5
13	My organisation's return on capital employed is high	1	2	3	4	5
14	My organisation pays top dividend to shareholders	1	2	3	4	5
15	My organisation's debt to equity ratio is low	1	2	3	4	5
16	My organisation met up tax obligation	1	2	3	4	5
17	My organisation is financially stable	1	2	3	4	5
	Social Performance					
18	We pay all our workers their entitlements	1	2	3	4	5
19	We have good employee's retention rate	1	2	3	4	5
20	My organisation employees participate in management decisions	1	2	3	4	5
21	We enjoy harmonize industrial relationship with employees	1	2	3	4	5
22	We adhere to relationship monitoring with stakeholders	1	2	3	4	5
23	We encourage the occupation of senior management position by women.	1	2	3	4	5

	Environmental Performance	1	2	3	4	5
24	We emphasize on waste recycle	1	2	3	4	5
25	We have regulations that guide our organisational waste disposal	1	2	3	4	5
26	We emphasize on reduction and replacement of hazardous chemicals or materials	1	2	3	4	5
27	We periodically disclose our business impact on the environment	1	2	3	4	5
28	We increase energy efficiency	1	2	3	4	5
29	We use renewable energy in our operations					

SECTION III:

Instructions: Below are statements that describe how you may think about your organisation right now. Please use the following scales to indicate your level of agreement each statement: **Strongly Disagree 1 2 3 4 5 Strongly Agree**

No	Ethical Sensitivity					
30	My organisation considers ethical practices in dealing with customers	1	2	3	4	5
31	My organisation provides guidelines to the staff for doing the right things	1	2	3	4	5
32	I follow ethical guideline for doing the right things in my organisation	1	2	3	4	5
33	My organisation considers ethical practices in managing competition	1	2	3	4	5
34	My organisation considers ethical practices in decision making	1	2	3	4	5
35	My organisation considers ethical practices in managing environment	1	2	3	4	5
Knowledge Sharing Intensity						
Strongly disagree 1 2 3 4 5 Strongly agree						
36	I often share with my team the new working skills that I learn.					
37	My team often share with me the new working skills that they learn.	1	2	3	4	5
38	Sharing knowledge with my team is regarded as something normal in my company.	1	2	3	4	5
39	My team often share with me the working skills they know when I ask them.	1	2	3	4	5

40	I often share with my team the working skills I know when they ask me.	1	2	3	4	5
41	Our company staff often exchange knowledge of working skills and information.	1	2	3	4	5
42	I often share with my team the new information I acquire	1	2	3	4	5
ICT		Strongly disagree 1 2 3 4 5 Strongly agree				
43	Our organization has the necessary ICT infrastructure and equipment	1	2	3	4	5
44	The organization use up-to-date hardware	1	2	3	4	5
45	The organization use up-to-date software	1	2	3	4	5
46	We have access to computing facilities	1	2	3	4	5
47	We have access to internet facilities	1	2	3	4	5
48	Our business is IT automated	1	2	3	4	5
49	Our employees have access to office telephones	1	2	3	4	5
Access to Finance		Strongly disagree 1 2 3 4 5 Strongly agree				
50	Our enterprise is financed with finance generated from retained earnings.	1	2	3	4	5
51	Our enterprise is financed with multiple sources of finance	1	2	3	4	5
52	Our enterprise gets short run financing easily	1	2	3	4	5
53	Our enterprise gets long run financing easily	1	2	3	4	5
54	Our enterprise pays low interest rates charges on external financing.	1	2	3	4	5
55	There is sufficient information about the sources of finance.	1	2	3	4	5
Innovativeness		Strongly disagree 1 2 3 4 5 Strongly agree				
56	We develop new products /services	1	2	3	4	5
57	We Upgrade our existing products' appearance and value	1	2	3	4	5
58	We produce specialty products	1	2	3	4	5
59	We ensure Innovation in production processes	1	2	3	4	5
60	We use Innovation in marketing techniques	1	2	3	4	5
61	We Invest in new research and development facilities	1	2	3	4	5

Thank you very much for your time and effort used in completing this questionnaire.

