EFFECTS OF STRATEGIC LEADERSHIP, ORGANIZATIONAL INNOVATIVENESS, INFORMATION TECHNOLOGY CAPABILITY ON EFFECTIVE STRATEGY IMPLEMENTATION

AHMAD ALIYU PALLADAN

DOCTOR OF PHILOSOPHY

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By

AHMAD ALIYU PALLADAN

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ABSTRACT

This study investigated the determinants of perceived organizational strategy implementation among public tertiary institutions in Nigeria. Primarily, the study explored the effects of Strategic Leadership (SL), Organizational Innovativeness (OI) and Information Technology Capability (ITC) on Effective Strategy Implementation (ESI). More precisely the direct effect of SL, OI and ITC on ESI were assessed. The study also examines the moderating effect of ITC on SL and OI on ESI. Thirteen (13) public tertiary institutions were considered by the research. One hundred and four (104) deans who serves as the research respondents were sampled out of the population total of 143 deans from the institutions. Hand delivery of questionnaires was used to solicit information from the respondents. Partial Least Squares Method (PLS 2) algorithm and bootstrap techniques were used to test the study hypotheses. The results provided support for most of the hypothesized relationship for the study. Specifically, SL, OI and ITC are found to be significant and positively affect organizational ESI. Additionally, ITC has been found to significantly moderate the relationship between SI and perceive ESI. While negative moderating effect of ITC was found between OI and perceive ESI. PIIT theory as well as Diffusion of Innovation Theory were partly considered as probable reasons for the negative finding. Therefore, significant positive effects of SL, OI and ITC suggest that the variables are important in facilitating ESI. As such, public tertiary institutions should be encouraged to demonstrate these behaviours for enhanced success of organizational strategy implementation. Enhanced success of effective strategy implementation could improve the overall effective function of the organizations. Contributions, limitations, and implications of the study were also discussed.

Keywords: strategic leadership, organizational innovativeness, IT capability, effective strategy implementation

ABSTRAK

Kajian ini meneliti penentu pelaksanaan strategi organisasi tanggapan dalam kalangan institusi pengajian tinggi awam di Nigeria. Kajian ini, khususnya, meneroka kesan kepimpinan strategik (SL), daya pembaharuan organisasi (OI) dan kebolehan teknologi maklumat (ITC) ke atas pelaksanaan strategi berkesan (ESI). Secara khususnya, kesan langsung SL, OI dan ITC ke atas ESI telah dinilai. Kajian ini juga meneroka peranan ITC sebagai penyederhana dalam hubungan SL dan OI ke atas ESI. Tigabelas (13) institusi pengajian tinggi awam telah dikaji. Seramai 104 dekan sebagai responden kajian telah disampel dari populasi seramai 143 dekan daripada institusi tersebut Borang soal selidik telah diserahkan secara terus kepada responden untuk mendapatkan maklumat. Algoritma kaedah kuasa dua terkecil separa (PLS2) dan teknik *bootstrap* digunakan untuk menguji hipotesis yang dikaji.Hasil dapatan menyokong kebanyakan hubungan yang dihipotesis dalam kajian ini. Secara khususnya, SL, OI dan ITC didapati signifikan dan berkait secara positif dengan (ESI) organisasi. Selain itu, ITC didapati menyederhana secara signifikan hubungan antara SI dengan ESI tanggapan Manakala kesan penyederhana berkesan yang negatif untuk ITC didapati antara OI dan ESI tanggapan. Teori PIIT serta Teori Diffusion of Innovation (Penyebarluasan pembaharuan) berkemungkinan boleh dianggap sebagai penjelasan untuk penemuan negatif. Oleh yang demikian, kesan positif serta signifikan SL, OI dan ITC yang terhasil menyarankan bahawa pembolehubah tersebut penting untuk melicinkan ESI. Oleh itu, institusi pengajian tinggi awam perlu didorong untuk memaparkan tingkah laku berkenaan untuk memastikan terhasilnya kejayaan pelaksanaan strategi yang berkesan yang dipertingkatkan Kejayaan pelaksanaan strategi berkesan yang dipertingkatkan boleh menambahbaik fungsi berkesan organisasi secara menyeluruh. Sumbangan, batasan dan implikasi turut dibincangkan dalam kajian ini.

Kata kunci: kepimpinan strategik, daya pembaharuan organisasi, kebolehan teknologi maklumat, pelaksanaan strategi berkesan tanggapan

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LIST OF ABBREVIATIONS

CE	Chief Executive
CEO	Chief Executive Officer
CMV	Common Method Variance
DC	Dynamic Capability
ESI	Effective Strategy Implementation
IT	Information Technology
ITC	Information Technology Capability
KBV	Knowledge Based View
LGAs	Local Government Areas
NBTE	National Board for Technical Education
NCCE	National Commission for Colleges of Education
NGN	Nigerian Naira
NPC	National Population Commission
NUC	National Universities Commission

OIV	Organizational Innovativeness
OYAGSB	Othman Yeop Abdullah Graduate School of Business
PLS	Partial Least Squares
RBV	Resource Based View
SD	Standard Deviation
SEM	Structural Equation Modeling
SLP	Strategic Leadership
SMS	Short Messaging System
SPSS	Statistical Package for Social Science
UNICEF	United Nation International Children Education Fund
US	United State
UUM	Universiti Utara Malaysia

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

One of the most central areas of concern among contemporary organizational theorists and practitioners is organizational effectiveness. A good mechanism for achieving it is effective strategy implementation (Sharbat & Fuqaha, 2014; Ali & Hadi, 2012). The dramatical changes taking place in the higher education sector globally is compelling educational managers to switch from conventional style of management to more creative and dynamic management practices. This is due to the high level of competition taking place in the sector and persistence demand for increase in quality from different stakeholders, as well as decline in government funding. This trend is pushing many higher education institutions to start adopting all the necessary measures that will enhance their performance and ensure students and stakeholder's satisfaction.

Kong (2010) posited that public non-profit organizations (public tertiary institutions inclusive) are operating in a competitive environment characterised by continuous demand of service quality from community, increasing fierce competition from private sector, declining volunteer support as well as shrinking government funding. Public institutions of higher learning are focusing on ways to render superb and high quality services to their clients as well as struggling to attain better performance (Farid, Nejati & Mirta, 2008). As a result, the focus of tertiary institutions is no longer to graduate

students only, but also improve organizational performance in all dimensions. The issue of higher educational efficiency has continued to gain more and more attention world over (Kazee, 2010). Gusau (2008) pointed out that several commissions of inquiry were established and many conferences were held to discuss issues regarding educational performance in Nigeria. The gatherings were aimed at searching for ways that will facilitate the improvement and enhancement of performance of tertiary institutions in the country (The Nigeria Education Fair, 2014).

Today, strategic management is gaining more and more importance as a tool for managing public tertiary institutions in Nigeria for better results (Omebe, & Nwogbo, 2015; Odiba, 2012). The need for strategic management practices in public tertiary institutions grew when public organizations shifted from relatively stable to more rapidly changing in response to an increasing competitive environment that are characterised by shortages of resources (Montanan & Backer, 1986; Salis, 2014). This is very timely as strategic management is needed in an environment where new forms of influence are imaging and where norms and values as well as social utility of organizations is being challenged and redefined (Ansoff, Dcelark & Hayes 1976). Ali and Hadi (2012) argued that the main challenge in strategic management process is associated with strategy execution. A good strategic plan if effectively implemented will certainly give an organization superior competitive advantage and increase its performance (Birasnav, 2014).

Strategy execution is a process by which strategies are put into concrete action through improvement of programs, budgets, and actions. The processes are often referred to as operational planning and usually comprise the allocation of day-to-day decisions in resource allocations (Wheelen, *et al*., 2015). Implementation of organisational strategy is a persistent theme in both strategic management and organizational skills. Constant academic study and empirical evidence confirm that successful strategy implementation has a momentous impact on organizational performance (Hrebiniak & Joyce, 1984), and it is fundamental for accomplishment of operational efficiency and subsequently attainment of organizational effectiveness. In line with this, Sproull and Hofmeister (1986) aver that successful strategy implementation is crucial to the smooth functioning of an organization; whereas Schilit, (1987) and Noble, (1999) corroborate that it is an indispensable essential element for the success of both public and private organizations. The successful execution of strong and hearty strategies will give organizations such as public tertiary institutions numerous competitive advantages. These advantages include high student pass rates, solve performance problem, enhancement of lecturer's competencies and reduce student's dropout rates (Giles, 1999).

Tertiary institutions in Nigeria refers to the western type of schools, which are available after colleges /secondary schools (Jaja, 2013). Tertiary education institutions of learning consist of schools such as Universities, Polytechnics, Colleges of Education and other institutions of higher learning that offers correspondence courses,

diplomas and certificates (Famade, Omiyale, & Adebola, 2015). Tertiary institutions of learning play a crucial role in supplying high level manpower for the socio-political and economic development of any country on the globe (Ekundayo & Ajayi, 2009); and also plays a prominent role in the production and spreading of information, carry out researches and trainings on issues that meet up with social demands and needs of a country (Küçükcan & Gür, 2010). Nowadays, three main parameters - creativity, innovativeness and entrepreneurship - stands out in tertiary institutions (Birinci & Eren, (2013). Additionally, it is also obvious that most of scientific breakthrough are carried out in tertiary institutions (Bülbül & Özbay, 2011).

Other gain attached to tertiary education according to Jaja (2013) is higher education bestows permanent literacy, numeracy and skills to communicate effectively, as well as provision of sound citizenship as a foundation for effective participation and positive input to the life in the society. The institutions also provide skills and techniques that improve human competencies, increases stock of knowledge and ensure its diffusion that raises the recipient's level of productivity, creativity, initiative and innovation, as well as provide prime movers and shakers of innovation in various areas of human endeavour (Hasbison, 1971). Adams (1965) further reveals that tertiary institutions brings changes in attitude of the recipient, as well as provide motivation and incentive, which lead to technological changes. Hence, proper and effective management of this institutions is very imperative.

Despite the enormous benefits that tertiary institutions offer; the public owned institutions in Nigeria are bedevilled by myriad of challenges (Oyediji, 2012). The main among these challenges is the liberalization of the tertiary education space that led to the emergence of huge number of private universities, polytechnics and colleges of education (Oyediji, 2012). This could be surmounted by using Levy's (1986) word: 'private challenges to public dominance in education'. Fehnel (2000) argued that these changes ware having serious effects on the universities and other tertiary institutions because they represent major shifts in the higher education environment that will influence the resources available to the institutions, their mission and the way they operate. The emergence of private tertiary institutions in Nigeria alongside with the opening of "corporate universities" or high talented education programmes are indeed reasons for public tertiary institution administrators and academics to discern that finally competition has emerged in the higher education sphere (Oyediji, 2012). The emphasis is now being giving to tertiary institutions on how to improve and gain more advantages that are competitive (Jaja, 2013).

Another competitive challenge facing the Nigerian tertiary institutions is the outflow of Nigerian students abroad. According to Deji-Folutile (2014), the former Nigerian central bank governor, Malam Sanusi Lamido Sanusi lamented that in Ghana alone, there are over 71,000 Nigerian students paying almost one billion US dollars annually. Furthermore, Exams Ethics International, a non- governmental organization had confirmed that the expenses of Nigerian students abroad are more than NGN1.5 trillion

annually (Nigeria Spends, 2014). Poor implementation of strategic plans in the institutions, that lead to disruption of school's academic calendar and other performance problems are the reasons behind this outflow (Nigeria Spends, 2014; Olulube, 2013). The issue of performance in Nigerian tertiary institutions has continued to attract the attention of government and the public; because the quality of some graduates being turned out from some of the institutions is said to be discriminated against in the international labour market and by foreign institutions, for those in quest of higher degrees (Okoro & Okoro, 2014). It has been documented in the extent literature that Nigerian tertiary institutions have formulated strategies, missions and visions aimed at excellence and gaining competitive advantage (Abdulkarim, Akinnubi & Oyeniran, 2012; Ezekwe & Onwe, 2014). However, these strategies are still far from been realized (Kolo, 2016). The reason for this unhealthy situation is lack of effective strategy implementation (Obanya, 2016; Odiba; 2012; Abdulkareem *et al*., 2012; Omebe *et al.* 2015). This problem among others leads to continue duplication of reforms in the institutions (Obanya, 2016).

Several strategy scholars argued that implementation of strategy is more hectic and difficult than strategy formulation. Strategy execution, argued Hrebiniak and Joyce, (1984) is much more difficult than formulation; and there is wide acceptance among scholars that this is the managerial area where many organizations fail. In the same vein, Njagi and Kombo (2014) opined that transforming strategy into action is more complex and daunting task to most firms and organizations. Ali and Hadi (2012) also

lament that the main challenge in strategic management is associated with its implementation. They then affirmed that a lot of good and sound strategies subsequently failed at the implementation level. Formulation of strategy is difficult, opined Hrebiniak (2006), but implementing strategy throughout the organization is even more difficult. Revealing figures from Gurowitz (2007) suggest that less than 10% of well-formulated strategies are effectively executed. Additionally, Judson (1991) and Speculand (2006) reported a similar result of just 10% of strategies being effectively executed. Correspondingly, Farsight, (2007) study discovers that 80% of organizations have the right strategies, but unfortunately, only 14% implement them effectively. It likewise reported that strategy implementation in Chinese firms has become a subject of discussion, with survey indicating that 83% organizations failed, and only 17% organizations were successful (Sial, Usman & Zufiqar, 2013). Thus, empirical findings on effective strategy execution are therefore far from encouraging (Cater & Pucko, 2010).

Several processes and structural measures were taken by Nigerian government to tackle the problem of efficiency in public tertiary institutions. This include the establishment of Tertiary Education Trust Fund (Tetfund) that provides more funds to the institutions, as well as passing a law that gave the institutions more autonomy. Yet, the problems in the institutions are far from being solved. Indeed, several transformation attempts may fail to deliver the expected results, if basic internal organizational competencies rooted in the institutions were not properly exploited for

good (Ibidunni, *et al*. 2016; Salau, *et al*. 2016; Palladan & Kadir, 2016; Ajayi, Odusanya, & Morton, 2017).

Numerous strategy literatures heavily emphasize the superiority of internal organizational competencies when it comes to seeking of competitive advantages (Alegre, & Chiva, 2013; Arasa & K'obonyo, 2012; Camisón & Villar-López, 2014; Chakravarty & Sambamurthy, 2013; Hung & Chou, 2013; Stettner & Lavie, 2014; Lin, & Wu, 2014; Patel, Messersmith & Lepak, 2013; Rothaermel, 2015; West & Bogers, 2014). One of the most essential organizational internal competitive superiorities is leadership style (Safarzadeh, Dahghan, Pazireh & Pouraskari, 2015). Quite number of strategic researchers and practitioners are on the agreement that strategic leaders are the backbone for any meaningful strategy implementation and organizational efficiency, (Carter & Greer, 2013; Dimitrios, Sakes & Vlachos, 2013; Goetsch & Davis, 2014; House, Dorfman, Javidan, Hanges, & de Luque, 2013; Latham, 2013; Mahdi & Almsafir, 2014; Neumann, & Neumann, 2013; Özer & Tınaztepe, 2014; Schoemaker, Krupp & Howland, 2013; Williams & Johnson, 2013).

On the other hand, organizational innovation ability (innovativeness) has been regarded as integral part of organizational competitive advantage and effective instrument for effective strategy implementation (Camisón & Villar-López, 2014; Graham, Hartley, Sørensen, & Torfing, 2013; Johnston & Bate, 2013; Woodfield, & Harrison, 2013; Simons, 2013). Hence, Hrebiniak and Joyce, (1984) aver that constant

academic study and empirical evidences confirm that successful strategy execution piloted by strategic leaders and innovation ability of an organization has a momentous impact on the organizational performance and are fundamental for accomplishment of organizational strategies.

The researcher resolved to consider strategic leadership and organizational innovativeness as variables affecting strategy implementation in Nigerian tertiary institutions because numerous scholars have argued that leadership is the top factor that retards effective strategy implementation in Nigerian for profit and non-profit organizations (Basil 2005; Moti, 2012; Asiayai, 2015; Mbat & Eyo, 2013; Mwaigene, 2015 Obasan & Ogunkoya, 2013); while innovation has been recommended as the single factor desirable to promote institutional performance in Nigerian public tertiary institutions (Radwan & Pellegrini, 2010; Bogoro, 2015).

Moreover, strategic leaders have been repetitively recognized for their decisive role in recognizing opportunities and taking positive decisions that will have positive impact on innovation process (Safarzadeh et al. 2015). Strategic leadership and organizational innovativeness are considered fundamentals for achieving and maintaining strategic competitiveness in the 21st century (Elenkov, Judge, Wright, 2005). Perhaps, the combination of strategic leadership and organizational innovativeness as independent variables and IT capability as moderator for this research is first of its kind among strategy implementation literatures in tertiary education sector.

Previous studies on strategic leadership and innovation like (Jung, Chow & Wu, 2003; Elenkov, Judge & Wright, 2005; Montes, Moreno & Morales, 2005; Jansen, Vera & Crossan, 2009; Gumusluoglu, & Ilsev, 2009: García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012; Vaccaro, Jansen, Van Den Bosch, & Volberda, 2012; Noruzy, Dalfard, Azhdari, Nazari-Shirkouhi & Rezazadeh, 2013; Anderson, Potočnik & Zhou, 2014; Aarons, Farahnak, Ehrhart & Sklar, 2014; Donate & de Pablo, 2015; Kriger, & Zhovtobryukh, 2016 and Berman, et al. 2016), have all ignored this important combination. Several researches indicated that strategic leadership, organizational innovativeness and information technology capability are significantly related to organization effectiveness (Chae, Koh, & Prybutok, 2014; Davenport, 2013; Ward & Peppard, 2016; Neumann & Neumann, 2013; Colbert, Barrick, & Bradley, 2014; Hogan & Coote, 2014).

Adoption of IT capability as moderating variable for this study is very essential. IT capability as argued Bharadwaj (2000) is organizational ability to mobilize and deploy IT based resources combined with other resources and capabilities to achieve competitive advantages. A comprehensive review of literature shows that there is inconsistency in findings regarding the relationship between strategy implementation factors and effective strategy implementation/organizational performance (e.g. Abebe & Agriawan 2014; Maryan 2012; Owolabi & Makinde 2012; Alaka 2011; Brinci & Eren 2013; Fletcher *et al.* 2000). Such inconsistent findings could be understood better with the introduction of a moderating variable (Khan & Kahlique, 2014;

Hutzschenreuter *et al*., 2007). Thus, to better comprehend the underlying causes of the inconsistency, this study resolves to examine the effect of strategic leadership and organizational innovativeness on effective strategy implementation by incorporating IT capability as a moderator on the relationship.

1.2 Problem Statement

As the world becomes more competitive by the day, tertiary institutions are left with no option but to embrace the reality. In Nigeria, liberalization of the tertiary education sector has changed the form of competitive advantage for public institutions. The liberalization leads to emergence and licencing of private universities, polytechnic and colleges of education (Oyediji, 2012). There is also intense pressure to public institutions to enhance their performance (Owoyemi & George, 2013); because there are accusations that their performance is not up to the expectation (Jaja, 2013; Kolo, 2016). These compel the institutions to search for new ways for implementing their existing strategies. Strategy implementation has been regarded as one of the good mechanisms for achieving organizational efficiency (Sharbat & Fuqaha, 2014; Ali & Hadi, 2012).

Leadership style is one of the significant factor found to influences effective strategy implementation. Strategic leadership has been regarded one of the leadership styles in management (Cannella, Hambrick, & Finkelstein, 2010; Neumann, & Neumann,

2013); and it has received huge empirical attention in relation to strategy implementation over the years (Shoemaker & Krupp, 2015). Useem (2001) posited that strategic leadership plays a significant role in determining strategic directions, establishment of balanced organizational control, effectively management of organizational resource, nourishing an effective organizational culture, ensuring proper communication and emphasizing ethical practices. Therefore, argued Hitt *et.al* (2006), each of these actions contributes positively toward effective strategy implementation. However, most of previous strategic leadership studies on strategy implementation are based on the single-actor or 'hero' leader (Kriger & Zhovtobryukh, 2013). This notion seems to be erroneous especially in the context of Nigerian tertiary institutions. People in tertiary intuitions are potential, if not actual, leaders at a time and under appropriate conditions.

Hence, this study conceptualized strategic leadership to consists of networks of actors; an approach that has something to do with distributed leadership (Pearce, 2004; Pearce & Conger, 2003; Pearce *et al*., 2008; Gronn, 2002; Mehra, Smith, Dixon & Robertson, 2006; Day, Gronn & Salas, 2004; Spillane, 2006). Thus, on this conceptualization, the middle level managers that comprise of deans, head of departments, directors etc are considered part of strategic leaders due to their enormous contribution in any organizational strategy implementation (Ezekwe & Onwe, 2014). Therefore, in this study, strategic leadership is viewed as being concerned with the leadership "of"

tertiary institutions, rather than "in" tertiary institution (Boal & Hooijberg, 2000, Özer & Tınaztepe, 2014).

Organizational innovativeness is another factor that influences organizational strategy implementation. It is defined as the thought of openness to new ideas as a characteristic of an organizational culture (Hurley & Hult, 1998). Innovation is rapidly becoming a key strategic implementation driver for organizations as we advance further into this century (Stanleigh, 2015). Innovativeness at the tertiary institutions may involve the execution of fresh technical ideas or new administrative ideas (Damanpour & Evan, 1984). Embracing and execution of a new idea in an organization, despite the time of its adoption is expected to result in an organizational change that might affect the success of organizational strategy implementation as well as its performance (Damanpour & Evan, 1984).

Previous studies in strategic management are full of numerous strategy implementation factors that were put forward by strategy scholars. Nonetheless, quite number of these studies fails to clearly show how the factors co-relate and interact during the implementation process (Kazmi, 2008; Okumus, 2001); and are heavily inclined to profit making organizations (Jiang & Carpenter, 2013). In addition, the studies are not devoid from the same weakness: 'there is no discussion of relationships among these factors, nor is there an explanation of particular form of these factors within an institutional context in terms of tertiary institutions' (Jiang & Carpenter,

2013). This will not augur well in tackling the problem of strategy implementation especially in Nigerian tertiary institutions. This is very true as strategy execution greatly differs when it comes to organizations type and size (Ranjbar & Shirazi, 2013). Thus, this study dwelt in looking at how strategic leadership, organizational innovativeness and IT capability interact to facilitate effective strategy implementation in Nigeria public tertiary institutions.

The study also assessed the impact of IT capability as a moderator on the relationship between strategic leadership, organizational innovativeness and effective strategy implementation. Ross, Beath and Goodhue (1996) posited that IT capability is the organization's ability of bringing together, integrating and deploying IT based resources with the aim of attaining organizational objectives. Previous researches on strategy implementation and organizational performance suggest inconsistency in findings (Khan & Khalique, 2014); and this inconsistency could be understanding better by employing a moderating variable (Hutzschenreuter, Pedersen & Volberda, 2007; Khna & Khalique, 2014). Moreover, based on the literature, information technology capability is found to be a popular factor that wields considerable influence on several organizational intangible resources (Asiyai, 2014; Intelligence, 2008; Ahuja, Yang & Shankar, 2009; Hackler & Saxton, 2007; Ghobakhloo, Hong, Sabouri, & Zulkifli, 2012). IT capability could more be regarded as a moderator instead of mediator, because the definition of IT capability refers to organizational ability to mobilise and deploy IT based resources combined with other resources and capabilities

(Bharadwaj, 2000). Consequently, a moderating variable is introduced to see whether the relationship between the exogenous and indigenous variables will be strengthen or weaken. Scholars argued that there is need to comprehend the essentiality of information technology in the operations of Nigerian public tertiary institutions (Bassey, Okodoko & Akpanumoh, 2009). This is very timely as maximization of IT capability in the institutions has the potential of enhancing quality of policies, as well as leading to greater and proper implementation of institutional strategies and monitoring (Yusuf, 2005; Adeoye, Oluwole & Blessing, 2013). In view of the research problem presented above, the following research questions were raised in order to find answers to them.

1.3 Research Question

Based on the above discussion on the research problem, the following questions are formulated below:

i. What is the effect of strategic leadership on effective strategy implementation?

ii. What is the effect of organizational innovativeness on effective strategy implementation?

iii. How does IT capability effect strategy implementation?

iv. Does IT capability moderate the effect of strategic leadership on effective strategy implementation?

v. Does IT capability moderate the effect of organizational innovativeness on effective strategy implementation?

1.4 Research Objectives

The main objective of the study is to examine the effect of strategic leadership and organizational innovativeness on strategy implementation in Nigerian public higher tertiary institutions, using IT capability as moderating variable. Hence the objectives of the research emanate from the research questions mentioned above. Thus, this study has the following specific objectives:

i. To determine the effect of strategic leadership on effective strategy implementation.

ii. To assess the effect of organizational innovativeness on effective strategy implementation.

iii. To investigate the effect of IT capability on effective strategy implementation

iv. To exermine the moderating effect of IT capability on the relationship between strategic leadership and effective strategy implementation.

v. To inquire on the moderating effect of IT capability on the relationship between organizational innovativeness and effective strategy implementation.

1.5 Scope of the Study

The study focuses toward investigating the effect of strategic leadership and organizational innovativeness on effective strategy implementation in public tertiary institutions in Kaduna state, Nigeria. This was done with the aid of IT capability as a moderating variable. The variables were chose based on the scope and nature of the study and fit to the public tertiary education sector. Researchers are always aspiring for appropriate trends to enhance the competitive advantages of organizations so that to make the organizations stay alive or developed (Porter, 1980). Tertiary institutions in Nigeria are at a critical history of transformation as well as facing numerous challenges. At this critical stage, effective strategy implementation in the institutions is very much needed than ever before; because efficiency is the main reason for the transformation-taking place in the sector (Enahoro & Badmus, 2013).

Effective strategic implementation can help Nigerian public tertiary institutions to revamp their performance and leap ahead of their competitors. Execution of organisational strategy is a persistent theme in both strategic management and organizational skills. Constant academic study and empirical evidence confirm that successful strategy execution piloted by strategic leaders and innovation ability of an organization has a momentous impact on the organizational performance (Hrebiniak & Joyce, 1984); and it is fundamental for accomplishment of operational efficiency and subsequently, attainment of organizational effectiveness (Cater & Puko, 2010). In

line with this, Sproull and Hofmeister (1986) aver that successful and effective strategy implementation is crucial to the smooth functioning of organizations.

Kaduna state was selected for the study because its belongs to the North-West geo-political zone of Nigeria, which happens to be the most populated zone in Nigeria (Bambale, 2013). Out of the total estimated Nigerian population of 140 million, more than 40 million resides in this zone (NPC, 2006). Kaduna state is third most populated state in Nigeria behind Kano state, which is the second, and Lagos state being the first (NPC, 2006). More so, Kaduna state is regarded as 'centre for learning' due to high concentration of public tertiary institutions in the state. The state is also called 'mini Nigeria' due to presence of diverse ethnic groups from all over the country in the state (Kanyip, 2013). The characteristic of Kaduna state reflects the diverse nature of Nigeria (Haruna, 2015). More so, the state is the centre of learning that all the 19-northern state depends on in terms of western education (ABU, 2015). Several PhD researches and other studies were conducted using Kaduna state as a study area due to its relevance. Typical examples include, from South Africa (Zubairu, 2016); United Kingdom (Ali, 2011); United State of America (Kanyip, 2013) as well as Maiwada and Pandian (1992), among others.

1.6 Significance of the Study

This study investigated the effect of strategic leadership, organizational innovativeness, IT capability on effective strategy implementation. The study is important both in theory and in practice.

1.6.1 Theoretical Significance

Theoretically, this study will contribute to strategy implementation literature in several ways. Firstly, the present study will reveal if strategic leadership, organizational innovativeness and IT capability can significantly affect effective strategy implementation. For any meaningful and strategy to be effectively implemented, a dedicated leadership must champion it (Awino, 2007), and innovation is rapidly becoming a key strategic implementation driver for organizations as we advance further into this century (Stanleigh, 2015). Studies also affirmed that information technology capability provides a foundation for attaining competitive advantage (Bhatt & Grover, 2005; Santhanam & Hartono, 2003; Ringim, 2013). Despite these benefits, strategy implementation in public organizations has received little attention from the literature, as most of the researches are concentrated in commercial organizations (Andrews, et al. 2011; Jiang & Carpenter, 2013; Shah and Nair, 2013; Sila, & Gichinga, 2016); and therefore, this study will be important in filling the gap by considering strategic leadership, organizational innovativeness and IT capability as they affect strategy implementation in public tertiary institutions. This will surely add

value to the operations and management field in relating the three variables to strategy execution in tertiary institutions.

Secondly, this research will add up to the existing literature by showing the impact of strategic leadership, organizational innovativeness and IT capability on effective strategy implementation. Previous strategy implementation studies were largely conducted in the western world and Asia (Arasa & K'obonyo 2012; Khan & Khalique 2014; Palladan, Abdul Kadir & Chong, 2016); while this study focuses on a newer non-western context. Thirdly, the study proposes a strategic leadership and organizational innovativeness model for effective strategy implementation through developing information technology capability. For the first time the current study will add to the existing body of knowledge by showing the moderating effect of IT capability in enhancing the impact of strategic leadership, organizational innovativeness on effective strategy implementation. Hitherto, Khan and Kahlique, (2014) and Hutzschenreuter, Pedersen and Volberda, (2007) called for future researches on strategy implementation to consider the inclusion of a moderating variable. This study has answered that call.

1.6.2 Practical Significance

After adding to theory, and literature expansion, this study is equally important in practical sense. Generally, this study is essential to public tertiary education institutions by providing handy information and mechanism for enhancing strategy

implementation. Findings of this study offer directions and guiding principle for the establishment of human capital policies, management practices, as well as management development programs that can help attain effective strategy implementation in public tertiary institutions as well as other public service organizations. Successful strategy implementation can further enhance effective functioning of all segments of the organization and hence overall goal attainment of the organization (Hrebiniak & Joyce, 1984). Specifically, the study provides significant managerial tips for the efficient functioning of the four category tertiary institutions (universities, polytechnics, monotechnics and colleges of education) by revealing better strategies for effective strategy implementation. Another important contribution is that of IT capability that the research employed. This study will motivate the institutions to exploit the opportunities avails by IT, since quite number of the institutions are accused of not adequately integrating IT into their operations (Ani, 2010; Edem, 2015).

The study outcome can also contribute to the economic growth of Nigeria in several ways. Firstly, the resulting consequences of the research implementation by the tertiary institutions is expected to curtail the number of Nigerian students trooping abroad for studies. This will in one way or the other reduce the huge demand of foreign currencies by the, students. Presently, the government is finding it difficult to meet their huge demands for US dollar, as well as other foreign currencies (Nwabughiogu, 2016). The foreign currency which is said to be almost two (2) billion dollars annually (Orie

2016), could now be channelled toward more viable development project in the country. This in return will certainly add up to Nigerian Gross Domestic Product (GDP).

Secondly, the institutions will also tend to benefit from the inflow of huge resources from the new students hitherto studying abroad. This is expected to pave more ways for the institutions to provide additional state of art facilities that will enhance teaching and learning on their campuses. .

1.6 Outline of the Study

This thesis was arranged in five chapters. Chapter one dealt with the general introduction of the whole work. The chapter consist of the background to the study, problem statement, research questions, research objectives, scope of the study, and significance of the study, as well as the outline of the thesis, and finally key terms definition. Chapter two conceptualizes four constructs of the study: strategic leadership, organizational innovativeness, IT capability and effective strategy implementation. This chapter also highlights previous studies on strategy implementation from both private and public organizations. Furthermore, the potentialities of IT capability as a potential moderator on the relationship between strategic leadership, organizational innovativeness and effective strategy implementation are discussed. The chapter also considered the conceptual framework

of the study, which emanates from the literature reviewed. The direct and indirect effects among the constructs was discussed and a hypothesis was proposed for the research.

Chapter three discusses the research methodology adopted for the study. The chapter also explains the research setting, population of the study, sampling technique, method of data collection and method of data analysis. On the other hand, chapter four presented the descriptive analysis of the respondents for this study as well as empirical results, key findings and test of hypotheses of the study. Finally, chapter five provides discussions of findings, limitations to the study, directions for future research, suggestions for practice, and conclusion.

1.7. Definition of Terms

1.7.1 Strategic leadership

Strategic leadership represent the kind of leaders at all level of organization whose has the ability to forecast, envision and sustain flexibility. They think strategically and work with other fellow colleagues to initiate changes that will create a valuable future for the organization (Wendy & Lear, 2012)

1.7.2 Organizational innovativeness

Organizational innovativeness is the thought of openness to new ideas as organization's culture. Thus, innovativeness is a gauge of an organization's orientation toward innovation (Hurley & Hult, 1998).

1.7.3 Innovation

A psychological process leads to the conceptualization of a new phenomenon. The phenomenon may be new material, technique or way of doing things. Innovation has been known as a critical factor for organizations to create value and sustain competitive advantage in today's highly competitive and dynamic environment. (Moghli. Abdullah & Al muala, 2012)

1.7.4 IT Capability

It is the extents of the organizations expenses on IT infrastructure, IT consulting, maintenance of IS, computers both hardware and software, effective alignment of IT infrastructure and building an IT infrastructure, proper IS integration and increasing IT functions (Bharadwaj, 2000)

1.7.5 IT knowledge

IT knowledge connotes the technical competence that an organization possesses that enable it to operate the computer based systems and its peripherals.

1.7.6 IT Operation

This refers to how institutions utilize its IT resources for managing its students, staff and organizational information.

1.7.7 IT objects

These are the computers and other hardware's related gadgets that facilitate the operation. The IT personnel who manages handle the process also falls into this category.

1.7.8 Tertiary Institutions

Higher education institutions are schools in Nigeria above secondary schools. They include Universities, Polytechnics, Collages of educations, Monotechnics and other institutions that may be linked to them (National Policy on Education, 2004).

1.7.9 Effective Strategy Implementation

It is a vibrant, iterative and multifaceted procedure, which is encompass a series of decisions and activities by leaders and subordinates that affected by a number of interrelated internal and external factors to turn strategic formulated plans into reality in order to achieve strategic objectives. (Jalali, 2014)

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review critically the relevant literatures and theories that are related to the variables of the study. These variables are strategic leadership, organizational innovativeness, IT capability and effective strategy implementation. In essence, the chapter start with brief background of Nigeria, the country where the research is based on. This is followed by the reviews of important concepts of effective strategy implementation, then the construct of strategic leadership, organizational innovativeness and lastly information technology capability. Consequently, empirical studies that explain the relationships between criterion, moderator and predictor variables were reviewed for the purpose of the development of the research model and hypotheses.

2.2 Nigeria in Brief

Nigeria is seldom referred to as the "Giant of Africa", due to its large population and its economy (Holmes, 1987). With approximately 160 million populations, Nigeria is the most populous country in Africa and equally 7th most populous on earth. Nigeria has one of the largest populations of youth in the world (CIA factbook, 2013). The country's major tribes are Hausa, Yoruba and Ibo and other over 250 ethnic groups.

Nigeria is a multi-religious country. 50% of the population practices Islam while the remaining practices Christianity and other traditional religious (Mapsofworld, 2015). Nigeria has 36 states plus a Federal Capital Territory (FCT). Nigeria has 772 local government areas. The most populous state is Lagos, seconded by Kano, and Kaduna being the third (NPC, 2006). Kaduna and Kano are the most important states in the northern part of the country in terms of education and commercial activities respectively. The northern part represents 62% of Nigeria's total landmass (Badawi, 2009). Lagos and Rivers states are hub for economic activities in the southern part of the country.

In 2014, opined Aljazeera (2014) and Bloomberg (2014), Nigeria's economy (GDP) became the largest in Africa, with more than $500 billion. This overtook that of South Africa, hence become the 21st largest economy in the world (Aljazeera; Blomberg, 2014). More so, the debt-to-GDP ratio is 11%; i.e. 8 % below the 2012 ratio (Reuters, 2014). By 2050, Nigeria is tipped to become one of the top 20 economies in the world (TradeMark, 2012). The country's oil reserves have played a major role in its growing wealth and influence. Nigeria is an affiliate to the Commonwealth of Nations, the African Union, OPEC, and the United Nations along with other international organizations (Wikipedia, 2015).

The literacy rate for 15-24 year olds is 72.1%, just 11 % higher to the adult rate, which is 61.3%. The total enrolment ratio at secondary schools level is just 44% or 21% points below the global average, but four higher than the African Sub-Saharan average, while the lower secondary ratio is just 47 percent versus a global average of 82 percent (Wenr, 2013). At the tertiary level, the GER is just 10 percent, which is on par with the Sub-Saharan average but below the World average (Wenr, 2013).

The failure of Nigeria's education system to meet increasing demand, along with the rapid increase in the number of families that can afford to send their children overseas are the main drivers of academic mobility out of Nigeria (UNESCO, 2012). The number of Nigerian students at overseas institutions of education grew 71% between 2007 and 2010 alone (UNESCO, 2012). The UK has been a favourite destination for Nigerian students overseas, with numbers surging in recent years from 11,785 in 2008 to 17,620 in 2012, according to recent data from Britain's Higher Education Statistics Agency (Hesa, 2013). Presently, 42 percent of Nigerians overseas are at a British institution of higher education, many enrolling from popular private schools. On the other hand, the US is the second popular destination, with enrolment of Nigerian students of 3,820 in year 2000/01 and over 7,000 in 2011/12. Engineering, Business and Medical related courses continually rank as the most popular programmes among Nigerians studying in the US (Wenr, 2013). More recently, Malaysia has appeared to be another popular destination for Nigerians, particularly among those from the Muslim north. This is because Malaysia is a majority Islamic country, its low tuition

fees, as well, as an opportunity for them to earn prestigious Western degrees from one of the five foreign universities branch campuses that operate in the country (Wenr, 2013).

Tertiary institutions in Nigeria are the western type of institutions, which are available for students that successfully completed from secondary school education. The first tertiary institution to be established in Nigeria is Yaba Higher College, which was established in 1934. Jaja (2013) opined that this institution later became the nucleus of first university to be established in the country in 1960, named the University College Ibadan. After Nigerian gained independence in 1960, there was a need for the establishment of additional tertiary institutions; hence, the University of Nigeria Nsukka, Ahmadu Bello University Zaria, University of Ife, University of Lagos, were all created in 1962 (Jaja, 2013). Subsequently eight (8) additional universities were further established in the 70s. These later universities were regarded as second-generation universities (Olaniyan & Adedeji, 2007). These are the backbone of tertiary institutions in Nigeria. Presently there are fourty (40) federal universities, forty-four (44) state universities as well as sixty-eight privet universities in Nigeria (68) (NUC, 2016).

In addition, according to NBTE (2016), there are twenty-five (25) federal polytechnics, fourty (40) state polytechnics and fourteen (14) private polytechnics presently in Nigeria as at November 16, 2016. More so, Nigeria have twenty (22) federal colleges

of education, fourty seven (47) state colleges of education and fourteen (14) private colleges of education (NCCE, 2016). This is in addition to over hundred monotechnics and other training institutions. Nigeria has the largest tertiary institutions system in Sub-Saharan Africa, despite to the fact that South Africa's enrolments in tertiary institutions are higher than Nigeria's (Saint, Hartnett, & Strassner, 2003).

According to Ojudu, (2012), and Saint, Hartnett and Strassner, (2003), in 1980s, Nigeria possessed one of the best tertiary institutions in the developing world that provide instruction at an international standard in several disciplines. A typical among those institutions are the University of Ibadan and Ahmadu Bello University that earned a global recognition for research in tropical health and agriculture, respectively (Ojudu, 2012). The main reasons behind this success according to Adamu (1994) were proper funding and innovation ability of the institutions.

Although, tertiary institutions in Nigeria, enjoyed huge reputation and patronage across Africa in the 80s, but alas, the story is no longer the same. Several reasons were attributed to this decline. The most prominent among them as argued by Chikelu (2016) and Adamu (1994) is the prolong military era during the 1980s and 1990s that brought about the decay of innovation in the institutions as well as poor funding. Nigerian government have been accused of underfunding the tertiary education sector which started during the military regimes (Chikelu, 2016). Educational budgets in Nigeria are below the 26% recommended by UNESCO. This poor funding is said to

be responsible for ill-motivated academics in the country that prefer to search greener pastures at the offshore of Nigeria, thus leading to brain drain (Magida, 2013).

To tackle the afore mentioned problems, Nigerian tertiary institutions are yearning for strategic leaders that will address these problems through innovation (Ebuara, Udida, Ekpiken, & Bassey, 2009; Saint, *et al*., 2003). The present setting that was built on rigidity should be do away with. Instead, the transition towards more flexible management and governance would be assisted by a national training capacity in the institutions management, a budget allocation process that recognizes institutional performance, and financial management that empowers strategic planning and decentralized governance should be encourage (Saint, *et al.*, 2003).

2.3. 1 Definition of Strategy Implementation

Although the organizational strategy implementation construct has gained a lot of momentum for several decades now, extant literatures indicate a lack of agreement concerning not only the terminology used, but also the definition suggested of what is considered a similar construct (Noble, 1999). For example, researchers either use the word implementation (Wheelen & Hunger, 2008; Hrebiniak, 2006; Shah & Nair, 2014), while others employ the word execution (Neilson, Martin, & Powers, 2008; Richardson, 2008; Higgins, 2005), both to suggest accomplishment of organizational strategic plans. Strategy execution and implementation are sometimes interchangeably

used in the literature of strategic management. Nevertheless, for the purpose of this research, the phrase 'strategy implementation' is considered synonymously with 'strategy execution'. The latter is more predominantly used in business environment, while the former is mostly employed in academia (Fourie, 2009). Numerous perspectives were taken by different strategy gurus to define strategy implementation. Some of the definitions are highlighted below:

1. Strategy implementation is the aggregate of total activities and choices required for the accomplishment of a strategic plan. It is the process by which objectives, strategies and policies are put into action through the development of programs, budgets and procedures (Wheelen & Hunger, 2008).
2. Strategy implementation refers to the communication, interpretation, adoption and enactment of strategic plans. (Noble, 1999)
3. Implementation is a series of interventions concerning organizational structures, key personnel actions, and control systems designed to control performance with respect to desired ends. (Hrebiniak & Joyce, 1984)
4. Implementation is the process that turns plans into action assignments and ensures that such assignments are executed in a manner that accomplishes the plan's stated objectives. (Kotler, 1984)
5. It is a vibrant, interactive and multifaceted process, which comprised of a series of decisions and activities by managers and subordinates that affected by number of interrelated internal and external factors to turn strategic formulated plans into reality in order to achieve strategic objectives. (Jalali, 2014).

From the above perspectives, Hrebiniak and Joyce (1984) describe strategy execution as strategic control; Kotler (1984) opined that strategy is a process. Noble (1999) opined that strategy implementation entails communicating and interpreting of and enactment of organizational plans; while Jalali (2014) emphasize on 'vibrant, iterative and multifaceted process'. On the other hand, Thompson and Strickland (2003, p 356) defined strategy execution as "implementation and executing strategy entails converting the organizations strategic plan into action and then into results". For the purpose of this study, this definition will be employed.

2.3.2 Antecedent of Strategy Implementation

Implementation of strategies is more difficult than formulating strategies (Hrebiniak, 2008). Gurowitz (2007) opined that only fewer than 10% of well-formulated strategies are effectively executed. More so, Judson (1991) and Speculand (2006) reported a similar result of just 10% of strategies being effectively implemented. Correspondingly, Farsight, (2007) study discovers that 80% of organizations have the right strategies, but unfortunately, only 14% implement them effectively. Speculand (2009) opined that nine out of ten strategies fail to be successfully executed. He then argued that an organization may design the greatest strategy in the world but if they cannot implement it, the strategy is not worth the paper it was written on.

It obvious that implementation of organizational strategies is a complex and challenging task that can easily consume organization's majority of available energy and attention. As an organization struggles to change and develop through a strategy in execution, prior achievements are often seen as irrelevant, or worse, cast as problems that need to be excise (Direction, 2016). Ranjibar, Shiraz, and Blokk (2014) postulated that failure in strategy implementation creates problems in maintaining priorities and attaining organizational goals. Strategy implementation task is generally the most complicated and time-consuming component of strategic management (Bell, Dean & Gottschalk, 2010). In line with this, Ranjibar, *et al* (2014) declared that key reason of failure to achieve strategy goals is that leaders do not devote the same amount of time, energy and resources in managing the implementation of the strategy as they do in formulation of the strategy. They also do not appreciate that managing strategy implementation requires well-orchestrated management procedures and that they need to go beyond the normal course of business routine to make it happen. Hence, in order for organizations and businesses to realize the audacious ambitions set out for their strategies, they need to skilfully and carefully manage the way the strategy is to be executed (Getz & Lee, 2011).

Several scholars had suggested numerous factors that form a barrier to organizational strategy implementation. These factors can either be internal such as communication (Bey, Hauschild, & McAloone, 2013), organizational structure (Nazemi, Asadi, & Asadi, 2015), financial resources (Bey, Hauschild, & McAloone, 2013; Yuen & Lim,

2016), organizational culture (Andrew, 2014); staff resistance to change (Maurer, 1996; Waddell & Sohal, 1998); as well as external factors such as changes to the operating environment, unanticipated competition due to entry by new players in the industry and changes in government policies (Andrew, 2014).

Nevertheless, in difference approach, Hrebiniak (2006) argued that the main obstacles to strategy implementation are certain things, which managers mistakenly ignored. These according to him could be classified into five (5) categories as shown in (Table 2.1)

Table 2.1
Inhibitors to Strategy Implementation

Obstacles	Explanations
Manager are not trained to execute but plan	Managers have been educated to plan in major MBA programmes and not implement. Hence, they live with it even in their place of work.
Top managers task is to plan and leave the execution to the operational level	Top managers aim is to plan and think strategically, while implementation is left at the hand of the operational level. Thus, leading to the creation of two categories of workers: the planners or "smart" and "not quite smart" or doers.
Planning and execution are separate entities	Planning and execution have been isolated from one another. In fact, planning affect implementation and vise versa.
Faster is not always the best. Execution usually takes time	The implementation of strategy usually demands more time than formulation. The longer the time span, the harder it is for the managers to focus on the implementation process.

Inhibitors to Strategy Implementation (Cont.)

Obstacles	Explanations
Strategy communication becomes challenging as execution comprise more people than formulation	This presents additional problem. Thus, communication across different functional areas of the organization becomes challenging and hectic.
Implementation is a process, not action	Execution of strategy is not the result of a single decision or action. Rather it is an outcome from series of integrated decisions overtime. Implementation is a process that requires a great deal of attention to make function.

Source: Hrebiniak (2006)

2..3.3 Empirical Studies on Strategy Implementation in Nigeria

Even though several studies were carried out examining numerous factors that influence successful strategy implementation or its failure around the globe; empirical researches on strategy implementation in Nigerian context is far from being adequate. Hence, Cater and Pucko (2010) lament that empirical findings on effective strategy execution is far from being adequate. Therefore, there is a need to investigate further issues surrounding organizational strategy implementation in Nigeria for clearer understanding of the concept.

To examine related works carried out on strategy implementation in Nigeria, we will start with Lawal, Elizabeth and Oludayo, (2012) who conducted a study investigating whether strategic issues and management activities have worthwhile contribution to

successful corporate strategy implementation and organizational performance of Nestle food Nigeria PLC. Survey questionnaires were administered to hundred (100) management staff of the company. The study revealed among other things that organizations that invest in the development of knowledge-skills and stakeholder's resources are more efficient.

In a study conducted by Abdulkareem, Akinnubi, and Oyeniran (2012) looked at the relationship between strategic plans implementation and internal efficiency in Nigerian universities. Two thousand seven hundred (2700) survey were administered to lecturers that participated in the study. The findings suggest positive and significance correlation between strategy implementation and organizational performance. Responses from the survey shows that 11.5% of the respondents are on the opinion that the level of implementation of organizational strategic plans in their universities was high; while graduation rate in the same universities was also high, showing a mean of 88%. This indicates significant relationship between effectively implemented strategies and internal efficiency in the universities.

More so, Aremu, and Oyinloye in 2014 evaluated how implementation of organizational strategies in Nigerian commercial banks affect their performance. Five banks were randomly selected for the purpose and one hundred surveys were administered. The hypothesis was tested using T-test and Multiple Regression Analysis with the assistance of Statistical Package for Social Science (SPSS). Outcome

from the study shows that the implementation of strategic management practices impacted on organizational performance, and no matter how well formulated organizational strategic plans may be, if not effectively implemented, business failure is inevitable. In a study in an automobile assembling company in Anambra state by Augustine and Agu, (2013), findings suggest that employee's resistance to change as well as external factors like change in consumers consumption pattern can negatively affect successful execution of organizational strategies.

Additionally, Ikediugwu, and Chukwumah, (2015) investigated how proper implementation of strategic plans enhance secondary school principals' managerial roles in quality education service delivery. The study consists of 217 respondents drawn from public secondary schools in Anambra State, South-East, Nigeria. Data was collected using 'Schools Strategic Plan Implementation and Monitoring Questionnaire' (SSPIMQ). Research question on general perspective showed that the schools have implemented their strategies to a moderate extent as indicated by the overall mean score of 66.81. Finding from the research indicated that organizational strategy implementation by the schools under study was low. Results also revealed that schools located in the urban centres significantly differed from the rural areas in terms of strategy implementation. Proper strategic implementation is also found to reduce unethical practices in the Nigerian insurance industry. This was discovered by Alaka, Tijani, and Abass, (2011). Their study was carried out in Lagos employing a cross sectional survey research method in which eighty (80) respondents including Heads of

Departments and executive management staff of insurance companies were randomly selected.

Summing it all, although quite several empirical studies have been conducted on strategy implementation in Nigerian context, the studies did not focus on any specific factor that influence strategy implementation. Hence, this study dwelt in assessing how strategic leadership, organizations innovation ability (i.e. organizational innovativeness) and information technology capability influence strategy implementation in Nigerian public tertiary institutions. Numerous literatures reveal that leadership is the top factor that retards affective strategy implementation in Nigerian for profit and non-profit organizations (Basil 2005; Moti, 2012; Asiayai, 2015; Mwaigene, 2015); while innovation has been recommended as the single factor desirable to promote institutional performance in Nigerian tertiary institutions (Radwan & Pellegrini, 2010; Bogoro, 2015). Additionally, constant academic study and empirical evidence confirm that successful strategy execution piloted by strategic leaders and innovation ability of an organization has a momentous impact on the organizational performance (Hrebiniak & Joyce, 1984); and it is fundamental for accomplishment of operational efficiency and subsequently, attainment of organizational effectiveness.

2.3.4 Strategy Implementation Factors

Strategic management researchers have continued to show more concern on the gap between strategy formulation and strategy execution. In line with this, several implementation factors were advanced to explain success or failure of strategy implementation. One of the earlier and popular implementation studies is McKinsey's 7-S postulated by Watermann Peters and Philips in 1880. 7-S stands for: strategy context, structure, system, style, staff, skills and subordinates, as key implementation drivers. Even though Waterman *et al*. were able to define and explain these factors, they fail to clearly show how the factors co-relate and interact during the implementation process (Kazmi, 2008; Okumus, 2001).

From the extant literature, several studies have been conducted and numerous implementation factors were highlighted. Alkhadi *et al*. (2013) examined the factors responsible for strategy implementation in Saudi Arabian banks, and came up with three main dimensions: process and personnel factors, project factors and organizational factors. From Iran, Ali and Hadi (2012) suggested four (4) factors as inhibitors for effective strategy implementation in organizations. Communication, incentives, change of organizational structure and competent employees are the four (4) factors identifies by Ogunmokun and Hopper (2005) in Australia. Nyamboga and Geoge (2014) discover five key factors that hinder successful strategy implementation, namely: inadequate funding, staff shortage, lack of training, inappropriate communication and lack of IT. Yip (1992) advanced a framework comprising four (4)

factors that he argued affect organizational success in formulating and implementing strategies; organizational structure, culture, people and managerial processes. Okumus (2001) identified number of execution factors from a framework he formulated. He categorised the factors into four (4) broad categories; content, context, process and outcome. Several other implementation studies could also be found in the available strategy literatures, such as Aaltonen and Ikavaldo (2002); Linton (2002); Freeman (2003); Norzima, Soroshina and Yusof (2010); Ladani, Smith and Pretorius (2012); Chemwei, Laboo and Koech (2014), as well as Mbarka and Mugambi (2014). Okumus (2003) summarised the major findings and came up with the following eleven (11) main factors that affect strategy implementation.

i. Strategy development
ii. Environmental uncertainty
iii. People
iv. Leadership
v. Organizational culture
vi. Operational planning
vii. Organizational structure
viii. Communication
ix. Resource allocation
x. Control
xi. Outcome

The afore mentioned factors originated from commercial background, some are from empirical researches while some are not (Jiang & Carpenter, 2013). However, strategy execution greatly differs when it comes to organizations type and size (Ranjbar & Shirazi, 2013). While strategy implantation itself deserves study, the implementation context also possesses specific challenges (Lacerda, Caulliraux & Spiegel, 2014); and environment matters a lot when it comes to strategy implementation (Okumus, 2003). Nadoo & Wu (2011) opined that several factors that have been found to influence strategy execution in other sectors; may not holistically solve the problem and understanding of strategy implementation in tertiary institutions. Because strategy implementation is multifaceted and tertiary institutions are complex organizations (Nadoo & Wu, 2011).

2.3.5 Intangible assets and strategy implementation

Kaplan and Norton (2004) emphasized on the essentiality of intangible assets in strategy execution and stressed that strategy implementation depend on '...positive organizational capitals.' With 'positive organizational capitals' argued Fourie (2009), means intangible organizational resources. Intangible organizational resource includes human and information capital asset of organizations, and they form greater than 70% of the market value of an average organizations (Fourie, 2009). Consequently, strategy execution effort has to address the mobilization and alignment of these intangible assets as they influence strategy implementation (Fourie, 2009). More so, Kaplan and

Norton (2004) have categorized intangible organizational resources into three categories, namely:

i. Human capital: e.g. leadership skills, knowledge, values etc
ii. Information capital: e.g. system database, networks etc.
iii. Organizational capital: e.g. organizational culture, organizational structure, organizational innovation ability etc.

Considering the essential role of organizational intangible assets on effective strategy implementation; this study resolve to consider three of these factors as they facilitate strategy implementation in public tertiary institutions in Nigeria. These intangible assets are strategic leadership and organizational innovativeness and information technology capability. Facts from the extant literature reveals that competitive advantages rooted in organizational internal competencies plays a tremendous role in creating benefits for institutions, in contrast to its external opportunities (Arasa & K'obonyo, 2012).

2.4.1 The Concept of Strategic Leadership

Quite number of different definitions of strategic leadership are available in the extant literature. One of them is that of Finkelstein *et al.*, (2009, p.4) that focuses on "executives who have overall responsibility for an organization, their characteristics, what they do, how they do it, and particularly, how they affect organizational

outcomes". Another definition by Hitt, Ireland and Hoskisson, (2007 p.375) is "the leader's ability to anticipate, envision, and maintain flexibility and to empower others to create strategic change as necessary". The first definition by Finkelstein *et al* (2009) emphasized on 'process'. While Hitt *et al* (2007) gives more emphasis on 'behaviour' that strategic leaders should possess. These are the categorization of strategic leadership construct (Guohui, & Eppler, 2016).

On the other hand, looking at various definition of strategic leadership critically, one can categorised them into two. The first category based its definition of strategic leaders on the 'functions' the strategic leaders performed (c.f. Hilt ,*et al*. 2007; Hughes & Beathy, 2005; Ireland & Hilt, 1999; Granados, 2011); while, the second conceptualization of strategic leadership was based on 'behaviours' that strategic leaders ought to possess (c.f. Boal, 2011; Elenkov et al 2005; Grandy, 2013; Kasim, 2010). Taken it together, all the definitions give more emphasizes on the relational aspect in terms of both strategic as well as symbolic activities (Cannella, 2001); and emphasis was given based on the single-actor or hero leader (Lengnick-Hall & Lengnick-Hall, 1988; Kriger & Zhovtobryukh, 2013).

2.4.2 Dimensions of Strategic Leadership Construct

A comprehensive review of the literature on strategic leadership suggests that it is both unidimensional and multidimensional construct. For instance, House, Dorfman, Javida, Hanges and de Luque, (2013) as well as Hitt, Haynes and Serpa, (2010) suggest that strategic leadership is a unidimensional construct with leadership traits like being visionary, inspirational, having integrity etc. Other studies indicated that the variable is a multidimensional construct consisting of at least three or four dimensions (Hughes & Beathy, 2005; Boal, 2001; Grandy, 2011; Granados & Kruse, 2011; Stumpf & Mullen, 1991). While other conceptualizations depict the variable in five dimensions (Hitt *et al*, 2007; Eacoth, 2010; Devies, 2003; Shoemaker & Krupp, 2015; Nicholls, 1994). And others with six and seven dimensions (Neumann & Neumann, 1999; Elenkov *et al*, 2005; Ireland & Hilt, 1999), and lastly the ones with nine dimensions (Hitt, *et al.*, 1999).

For the purpose of this study, strategic leadership was considered as a unidimensional construct (House *et al*, 2013; Hitt *et al*, 2010). Contrary to the previous studies, this study also widened the definition of the construct to encompass the chief executive of tertiary institutions, the deans and head of departments as well as directors. This was done on the believe that a well-implemented strategy should encompass all employees on all hierarchical levels of the organization (Engberg, Hörte, & Lundbäck, 2015; Ketunen, 2009). Sila, and Gichinga, (2016) posited that without middle manager there would be a fissure between the strategic apex and the operational core, and hence, it

would be more or less impossible to execute strategies. Therefore, in this study, strategic leadership is viewed as being concerned with the leadership "of" tertiary institutions, instead of "in" organizations (Boal & Hooijberg, 2000, Özer, and Tınaztepe, 2014).

Re-conceptualization of strategic leadership for the purpose of this study is very essential, since as mentioned above, most available leadership theories are based on the single-actor or hero leader (Kriger & Zhovtobryukh, 2013). This notion seems to be erroneous especially in the context of Nigerian tertiary institutions. People in tertiary intuitions are potential, if not actual leaders at a time and under appropriate conditions. They may be entrenched in multiple, co-existing and growing networks of leadership, which form a valuable and difficult-to-copy source of social capital (Berney & Hesterly, 2010; Barney, 1991). By and large, the conceptualization is extending the thinking on strategic leadership that consists of networks of actors; an approach that has something to do with distributed leadership (Pearce, 2004; Pearce & Conger, 2003; Pearce e*t al*., 2008; Gronn, 2002; Mehra *et al*., 2006; Day et al., 2004; Spillane, 2006). Strategic leadership is versatile as it entails managing through subordinates, and assists the organisation to cope with changes that seems to be increasing dramatically in today's globalised business environment (Huey 1994). Strategic leadership demands for the capability and ability to incorporate both the inside and outside business environment of the organisation, and engage in multifaceted information processing. Several identifiable actions and features are

essential for strategic leaders as postulated by Hitt et al. (2007). These qualities contribute positively to effective strategy execution.

i. Identifying the strategic direction to follow
ii. Setting and establishing standard organisational controls
iii. Managing organisational resources effectively
iv. Maintaining an effective organizational culture
v. Emphasising on ethical practice

Strategic leaders play a significant role to play in all the afore-mentioned strategic actions. Consequently, all the above strategic actions contribute positively to organizational effective strategy execution. Hence and Glantz (2002) stress the need for organizations to find an appropriate leadership style. This is very true especially when it comes to implementation of important and daunting managerial techniques like strategy that is more about change. Bringing about change, especially in higher education institutions, is not an easy task. Because the institutions are characterised by vagueness in their mission and their tendency toward anarchy (Vroom, 1964).

2.4.3 Role of Strategic Leaders in Strategy Implementation

Leadership in general and Strategic leadership in particular, is widely regarded by numerous scholars as one of the key elements for effective strategy implementation (Akbarpour Shirazi, , & Lashkar Blooki, 2014; Bossidy & Charan 2002; Cocks, 2010;

Collins 2001; De Feo, & Janssen, 2001; Coulson-Thomas, 2013; Lynch 2006; Freedman & Tregoe 2003; Noble 1999; Thompson & Strickland 2003; Kaplan & Norton 2004; Pearce & Robinson 2007; Hrebiniak 2005; Johannsdottir, Olafsson, & Davidsdottir, 2015). While lack of leadership, specifically strategic leadership in an organisation, has been pencilled as one of the major obstacles to effective strategy execution (Alexander 1985; Beer & Eisenstat 2000; Kaplan & Norton 2004; Hrebiniak 2005; Latif, Gohar, Hussain, & Kashif, 2013; Mapetere, Mavhiki, Nyamwanza, Sikomwe & Mhonde, 2012).

Strategic leaders in all levels of organization plays several and tremendous roles in the implementation of organizational strategies. Cater and Pucko (2010) opined that while a good crafted strategy, couple with a strong and effective and abundant skills, combine with human capital are exceptionally important resources for strategy success, poor leadership is one of the major hurdles that effective strategy execution. Lorange (1998) posited that chief executive officer (CEO) and other top management must highlight the various interfaces within the organization. One important challenge in successful organizational strategy executions is ensuring employees 'buy-in', channelling their capabilities, and understanding toward the new invented strategy. As a result, the availability of effective and strategic leadership outweighs any other factor (Rajasekar, 2014). Mullins (2005) confirms that several managerial problems have to do with psychological, physical, economic and social aspects. By putting together, a team of managers from different settings, new and advanced approaches to old

problems are often obtained. The scientific mind from each field attempts to bring out the essence of the problem and relate it structure to other similar problems.

Taylor (1995) opined that to have all employees attaining the required comprehending the organization's vision and goals, as well as providing commitment and involve actively in translating the organization's strategic plans into implementable activities, strong and decisive` leadership is indeed required to drive the course. He then concludes that strategic leaders handle radical change to achieve serious improvement in organizational performance. These kinds of leaders communicate both internally and externally with an open management style, trying to put in place a new culture in which employees will feel involved and accommodated. In their submission, Thompson and Strickland (2007) concurred on this view by heralding that strategic leaders maintain organizational creativity by taking special plans that promote, nourish and support employees who are ready to champion new ideas, better services, new products and product applications.

In his research titled 'Effect of selected variables on corporate performance', Awino (2007) said that for a strategy to be successfully executed, a dedicated leadership must champion it. He then declared that, any corporate agenda would only be a successful plan if the analysis and commitment should come from the corporate office headed by the Chief Executive (CE) and supporting team members have a holistic view of the organization and its environment. Accordingly, it is the Chief Executive and his

management team who shape and have the ultimate responsibility for achieving the strategic yearnings of the organization resource allocation, processes, and the organization's intended strategy. Beer and Eisenstat (2000) argued that poor coordination across functions and poor down-the-line leadership skills and development are killers of strategy execution. Enhancing communication within the tertiary institutions of learning plays a vital role in organizational strategy implementation. According to Beer and Eisenstat (2000), blocked vertical communication has a harmful effect on a organizations ability to implement and refine its strategy. Similarly, Foreman and Argenti (2005) investigated the relationship between organization's corporate communication functions and its strategy execution. The outcome of their research reveals that in good strategy execution CEOs focuses on branding and reputation and emphasizes internal communication. Coordination of organizational activities, streamlining of processes, couple with aligning the organizational structure, and keeping employees motivated and committed to strategy execution are key responsibilities of strategic leaders.

The Chief Executive and his top management members need to spend a lot of time understanding implications associated with changes in their area of operation and the organization general environment as well, and then map out a plan that will lead to effective implementation of the strategic plan that will suit the new situation. The involvement of the top management goes beyond strategic planning stage to include actual execution process by which the planned strategies are accomplished. According

to Curtin (1999), strategic leadership encompasses encouraging workers to perform better through communicating the value of stretched targets and providing a chance for individual and team contributions.

Lufthans (1992) suggested that leaders in any organization should show commitment, share the organization's vision, and involve employees in the process of strategy execution while listening to a mixture of possibilities. If the leaders and workers share the same values and internalize these values, the relationship between leader and employee will be strong in all situations and consequently leading to free circulation of organizational communication that will facilitate knowledge transfer. This leads to the opinion that says an effective leader has to focus on culture of the organization and influence every individual to individually focus on the organization's vision. Leader's commitment is the most obvious managerial practices that directly affect the success of the organization (Hammer & Stanton, 1995; Holland & Kumar, 1995; Guimaraes & Bond, 1996). Top management commitment contributes positively to the successful strategy implementation in public tertiary institutions. A lack of commitment in the implementation process in an organization may result in insufficient resources that affect the execution processes. Even though effective strategy implementation is agreed to be associated with good for organizational performance, the organizational leadership could influence the realization of expected results. Leaders should orient their subordinates in the same direction. Chief executives should be at the forefront in

providing vision, initiative, motivation and inspiration (Ombina, Omoni & Sipili, 2010).

Mintzberg (2004) is on the view that a good strategy execution plan depends on the learning and environment development for staff that are the true foot soldiers for the implementation. This environment for learning orientation demands emphasis on collaboration, openness, equity, trust, continuous enhancement and risk taking. In order to accomplish this, there has to be adaptation to changing environmental conditions feasible under fine leadership that ensure clear communication to subordinates with confidence and endorsement from the stakeholders. Nowadays, tertiary institutions are experiencing rigid competition for limited funding from both in and outside the country. This is pushing them to explore how management styles would affect implementation of their strategic plans, that is expect to assist them in achieving competitive advantage and remain credible to continue accessing donor's funds (Abok 2013). Implementation of organisational strategy is a persistent theme in both strategic management and organizational skills.

Additionally, Grandy (2013) in his work titled 'an exploratory study of strategic leadership in churches' which was carried out on a Canadian church using qualitative techniques for data collection suggest that over the past several years, the Church and its members have experienced a number of incremental as well as more radical changes. Much of these changes were attributed to the vision and leadership style of

the Church leader. Four strategic behaviours displayed by the leader lead to the changes. These behaviours are unsettlingly with the status quo, shared leadership, shared vision and culture of community and organizational learning. Omboi, (2011) conducted a study using survey in Meru Central District of Kenya on selected public tertiary institutions using population that made up of 136 lecturers, 30 heads of departments and 12 top managers. The study suggests that weak influence of managerial behaviours was because of the Management strategic thinking. He argued that organizational leaders co-opting the subordinates like the faculty members would lead to effective strategy implementation.

Similarly, Sila and Gichinga (2016) carried out a study on the impact of strategic leadership on the performance of public universities in Kenya. The quantitative research that administered survey to 98 respondents that include deans, head of departments and other stakeholders within JKUAT University found that strategic leadership plays a crucial role in effective strategy implementation in the institution. It is then recommended that strategic leadership in public tertiary institutions should be biased towards strategy implementation. In their study conducted in an Indonesian higher education institution, Hidaya et al. (2015) shows that the three dimensions of strategic leadership they test gives reasonable contribution to strategy implementation in the institution. The dimensions are strategic expert (strategist), change agent, and visionary leadership. The study consists of 67 respondents from different strata in the sampled institution.

In his own part Kalali *et.al (*2011) argued that failure of strategy implementation in institutions of higher learning in Iraq today comprises of sixteen factors of which leadership role count to 71%. He further laments that without proper leadership, tertiary institutions in Iraq will continue without having vision, mission, work ethics, and good strategies, adequate resources, better structures, well defined culture and many others. In another study conducted in five (5) Iranian universities, offering degrees in medicine by Abdulwahid *et.al* (2013) investigating the factors that cause the failure of strategy plans implementation in public health sectors. The study argued that leadership role is important in crafting and in strategic plans execution; and if the strategic leader did not partner the subordinates in the strategy implementation, the leadership will not be able to create a brilliant vision for any meaningful strategic program.

2.5 Organizational Innovativeness

According to Hurley and Hult (1998), organizational innovativeness is the thought of openness to new ideas as a characteristic of a firm's culture. Thus, innovativeness is a gauge of an organization's orientation toward innovation. There are requisites to organizational innovativeness. These requisites as posited Hurley and Hult (1998), include organizational culture, such as learning, participative decision-making, collaboration and support, power sharing etc. The capacity to innovate is a term firstly used by Burns and Stalker (1961), as the organizational ability to adopt or implement

new ideas, processes, or products successfully. Tertiary institutions that have a greater ability to innovate "are able to develop a competitive advantage and achieve higher levels of performance" (Hurley & Hult, 1998).

In this study, organizational innovativeness is used as unidimensional construct (Hurley & Hult, 1998). This represents the behavioural aspect of innovation of organization (Wang & Ahmed, 2004). The behavioural innovativeness reflects the 'sustained behavioural change' of the organisation leading to innovations, i.e. behavioural commitment (Avlonitis *et al*., 1994). Organizational innovativeness could be established through individual employees, teams and management, and it enables the creation of an innovative culture, the overall internal openness to new ideas and innovation in the organization. Individual innovativeness can be regarded as a normally distributed underlying personality which may be interpreted as a willingness to change (Hurt *et al*., 1977). On the other hand, team innovativeness is the team's change adaptability (Lovelace *et al.*, 2001). It is not merely a total of innovative individuals, but a synergy supported by the group dynamics. Whilst managerial innovativeness reveals management's willingness to change and commitment to promote new ways of doing things, as well as its keenness in encourage new ideas (Rainey, 1999). Behavioural innovativeness is essential factor that underscores innovative outcomes. Innovative culture serves as a vehicle of innovations, while absence of it in an organization acts as obstacle to innovations (Wang & Ahmed, 2004).

Organizational innovativeness was popularly accepted as the key critical aspect for modern organizations as it increases the chances of competitive advantage. Innovation leads to low cost of production, new valuable knowledge, new working method and new working process, which in turn would engender competitive advantage in the long term (Safarzadeh *et al.*, 2015). Innovations generates added value to organizations through strategy. Innovation in tertiary institutions could also be deployed to sustain the employees continue learning and development, through activities and schemes that focus on staff participation. As a result, innovation is an essential foundation to enhance and motivate creative thinking or value added ideas (Wingwon, 2012). According to Zahra, Ireland and Hitt (2000), innovation enables organization to provide numerous, superior and differentiated products and services that can contribute more to the organization's financial performance.

2.5.1 Types of Organizational Innovation

Innovativeness in tertiary institution could be categorised into two types; administrative innovation and technical innovation. These are the most widely used in conceptualizing and operationalization of innovation (Damanpour, 1987; Jaskyte, 2012; Obenchain, 2002). Damanpour, Walker, and Avellaneda (2009, p.655) defined administrative innovations as "pertain to changes in the organization's structure and processes, administrative systems, knowledge used in performing the work of management, and managerial skills that enable an organization to function and succeed by using its resources effectively". On the other hand, technical innovation refers to

the execution of a service, a program, or a product that is new to the organizational practice (Jaskyte, 2011). Technical innovation lies on the unique new technological content presented in the newly introduced products or process that uses new gadgets of the technological development (Wang & Ahmed, 2004).

Administrative innovation is a new administrative process, management system and staff development program taking place in an administrative component and affects a social system of an organization via organizational members and their relationships, including rules, procedures, roles and structures related to the communication and exchange among organizational members (Subramanian & Nilakanta, 1996). Administrative innovation is the main component of organizational innovation (Subramanian & Nilakanta, 1996). Kuboni (2012) emphasising on technological innovation also opined that technology is a major driver behind change, and occasionally plays a vital role in innovations in learning design and delivery. There are enormous possibilities for superior and wider-spread change with the use of contemporary technological advancements, as well as with the execution of innovative educational programs. The task is to make sure that innovation plays a positive role in improving educational opportunities for billions of people who remain under-served in a rapidly developing nation (Otara, 2012). Hence, Otara, (2012) warns that educational institutions should not been left behind in innovation mantra

2.5.2 Role of Organizational Innovativeness in Strategy Implementation

Innovation is rapidly becoming a key strategic implementation driver for organizations as we advance further into this century (Stanleigh, 2015). Innovation at the tertiary institutions level may involve the implementation of new technical ideas or new administrative ideas (Damanpour & Evan, 1984). The adoption of a new idea in an organization, regardless of the time of its adoption in the related organizational population, is expected to result in an organizational change that might affect the success of organizational strategy implementation (Damanpour & Evan, 1984).

Arvanitis, (2005) argued that information technology as an aspect of technical innovation refers to knowledge, products, processes, instruments, procedures and systems which helps tertiary institutions to produce goods and services that are at the centre of systems for finding customers (students) needs and satisfaction. Hence effective and successful implementing of strategies results from integrating and coordination of information technologic innovations in production processes, marketing, financing and personnel (Mwawasi, Wanjau & Mkala, 2013). Through this the defined organizational strategic goals may be achieved (Brynjolfsson & Hitt, 2000). Organizational innovation in terms of information technology is at the centre of systems designed for finding students and other stakeholders needs and the way to satisfy those needs.

Technological innovation in tertiary institutions facilitates connecting academics and non-academics staffs a like electronically, through email, internet, telephone, or the fax 24/7; replacing the traditional hours of eight to five, Monday through Friday (Mwawasi, Wanjau & Mkala, 2013). This will go a long way in enhancing effective strategy implementation in tertiary institutions. Institutions that are pursuing the strategy of tackling student's poor academic performance may also employ technological innovation. White and Glickman (2007) posited that in this situation, students could be allowed to access lectures before the commencement of formal classes. This will help in ensuring more homogeneous background for the students. Faculty administrators can also use technological innovation to receive immediate feedback during class meetings (White & Glickman, 2007). This will also help toward implementing performance improvement strategies.

The administrative innovation potentially promotes work redesign and work systems, skills enhancement, management systems, and changes in incentives (Yamin *et al.*, 1997). Essentially, it becomes a key determinant of competitive advantage in strategy implementation (Ussahawanitchakit, 2012). Likewise, Liao *et al.*, (2008) aver that administrative innovation is an operation with respect to planning, personnel, leadership, management, and services. These are all factors that determine effective strategy implementation. Organizational innovativeness provides the development of institutions and builds their competitive advantages (Ussahawanitchakit, 2012). Furthermore, argued Ussahawanitchakit, (2012), the institutions with greater

administrative innovation tend to attain superior competitive advantage, gain better business excellence and achieve higher organizational performance (in their strategy implementation).

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2.6 The Concept of Information Technology Capability

Ross, Beath and Goodhew in 1996, promulgated the concept of IT capability. They defined IT capability as the organization's ability to bring together, assimilate and exploit IT based resources. Bharadwaj (2000) widened the description by proposing the most accepted view of organizational IT capabilities. IT capability, argued Bharadwaj (2000) is the organization ability to mobilize and deploy IT based resources combined with other resources and capabilities. Information technology based resources comprise of technical and managerial IT skills, as well as intangible IT-enabled resources like knowledge, assets, customer orientation and synergy i.e. the sharing of resources and capabilities across organizational departments. Consequently, capabilities refer to the ability of organization to the ability of organization to combine resources to promote superior performance and achieve competitive advantage (Amit & Schoemaker, 1993). The dimension measurement of the IT capability in this research is based on IT knowledge (skills) and IT operations as postulated by Tippins and Sohi (2003). These measurement concepts are defined as thus:

2.6.1 IT Knowledge

IT Knowledge is information combined with experience, context, interpretation, and reflection that an organisation possesses that is difficult to be measured (Davenport, De Long, & Beers, 1998). IT knowledge could be defined as the extent of which organization obtain a body of technical knowledge about machineries, infrastructures or objects such as a computer-based system. On the other hand, technical knowledge is expressed as contextual based know how. IT knowledge is categorised as a subset of the more general conceptional set of knowledges.

Moreover, and in line with this, employees can be motivated to adapt to the new IT, assimilate IT knowledge and apply it in their daily work, which are of beneficial to the enhancement of the organizational performance (Shao, Feng, Hu & Liu, 2008). The Knowledge Based View (KBV), postulated that systems of knowing refers to the structures of interaction among team members for sharing their perspectives, gathering of knowledge, and development of collective understanding. It is suggested that system of knowing provides a forum for top management members to exchange their strategic IT and business knowledge ideas, and blend them together to promote higher levels of IT dissemination within the organization.

2.6. 2 IT Operations

This refers to operations techniques, made up of activities that are carried out that facilitate the achievement a particular goal. Operations techniques are manifestation of technical knowledge and skills that are the outcome of results in technical operations or skills. In this context, IT operations are the degree to which an institution utilizes IT resources within the organization for teaching and research purposes. These activities supported by skills that summarize the knowledge within the institution.

2.6.3 IT Objects

IT objects are the 'enablers' and are largely responsible for the current increases in information and communication production and ploferation (Glazer, 1991). As a tool, technical objects refer to gadgets which assist in the 'obtaining, processing, storage, dissemination, and use' of information (Martin 1988). For this research, IT is conceptualized as the objects represented by computer-based hardware, software, buildings and support personnel.

Based on the literature, information technology capability is a well-known factor that wields a momentous impact on several of organizational intangible resources. These include organizational learning (Asiyai, 2014), knowledge management (Intelligence, 2008), effective communication (Ahuja, Yang & Shankar, 2009; Hackler & Saxton, 2007), top management functions (Ghobakhloo, Hong, Sabouri & Zulkifli, 2012),

productivity (Gurbaxani, Kraemer & Melville, 2004), absorptive capacity (Bryan, Sinkovics, & Kim, 2008), competitive advantage (Ringim, Razalli, & Hasnan, 2012), organizational innovation (Intelligence, 2008). Furthermore, information technology capability is positively related to strategic leaders functions e.g. decision making (Dimitris, Sakes & Vlachos, 2013), information processing (Raddy, Srinivasu, Rikkula & Rao, 2009), knowledge management (Kamal, 2015), communication (Ahuja, Yang & Shankar, 2009). It also positively related to organizational innovativeness, e.g. flexible work arrangements and outsourcing (Gera & Gu, 2004), innovative learning (Langlois, 2001), lecturer's creativity (Bassey *et al.*, 2009). Hence, there is great tendency that organizations with high levels of IT capability are more likely to engage in more successful strategy implementation. Additionally, more empirical studies, which consist of Yongmei, Hongjian and Junhua (2008), argued that IT capability was an essential moderating variable that links IT investments to organizational success. The hypothesis was verified by sample data from leading IT firms in China. Likewise, Said, Hui, Taylor and Othman, (2009) discovered that IT capability moderates the relationship between customer-focused strategies and organizational performance by offering justifications for local government areas (LGAs) to invest in terms of resources and commitment, in adopting customer focused strategies and IT.

Despite these empirical studies on the role of IT capability in explaining variety of organizational intangible factors, extensive literature review returns no study that was carried out considering IT capability as a moderator on the relationships between

strategic leadership, organizational innovativeness and effective strategy implementation. In this study, IT capability was co-opted as moderator to see if this construct plays a significant role in strengthening the positive effect of strategic leadership and organizational innovations on effective strategy implementation.

2.7 Gaps in the Literature

From the literature review, several conclusions can be drawn. Firstly, the present study examines the moderating role of information technology capability between strategic leadership and effective strategy implementation, and the relationships between organizational innovativeness and effective strategy implementation. To date, several factors affecting strategy implementation have been studied including strategic leadership (Abdulkareem *et al*, 2012; Aremu, & Oyinloye, 2014; Atkinson, 2006; Augustine & Agu, 2013; Brauer, & Schmidt,2008; Colin Coulson-Thomas, 2013; Direction, 2016; Gardner *et. al*, 2010; Grandy, 2013; Janssen, 2001; Johannsdottir, 2015; Lawal *et al*, 2012; Lowy, 2015; Shah, & Sid Nair,2014; Sila & Gichinga, 2016; Strand, 2014; Thorpe, & Morgan, 2007), and organizational innovation (Dobni, 2010; Lendel, & Varmus, 2011; Mwawasi *et al.*, 2013; Stanleigh, 2015; White & Glickman, 2007). Despite these empirical studies, literature suggests that very few studies have looked at the effects of information technology capability on effective strategy implementation. Most of the studies on IT and strategy implementation are limited to

examining information technology (IT); while ignoring the capability. And the capability is the real facilitator of performance improvement (Tippins & Sohi, 2003).

Erstwhile researches have depended on the erroneous assumption that adoption of IT would enhance performance (Dewett & Jones, 2001). While IT can improve efficiency, it may not yield the competitive advantages, since the competing institutions could adopt the same technology. Therefore, IT-related gains can only be actualized when an institution builds IT competency (capability) and subsequently utilize it as a set of co-specialized resources to leverage other complementary resources (Tippins & Sohi, 2003). Hence, in order to better comprehend the benefits attached to IT, this study intends to ascertain the influence of information technology capability on effective strategy implementation using important constructs of strategic leadership and organizational innovativeness.

A comprehensive review of literature shows that there is inconsistency in findings regarding the relationship between strategy implementation factors and effective strategy implementation/organizational performance (e.g. Abebe & Agriawan 2013; Maryan 2012; Owolabi & Makinde 2012; Alaka 2011; Brinci & Eren 2013; Fletcher et al. 2000). Such inconsistent findings could be understood better with the introduction of a moderating variable (Khan & Kahlique, 2014; Hutzschenreuter *et al.*, 2007). Thus, to better comprehend the underlying causes of the inconsistency, this study resolves to examine the effect of strategic leadership and organizational

innovativeness on effective strategy implementation by incorporating IT capability as a moderator on the relationship.

Again, strategic leadership and organizational innovativeness are considered fundamentals for achieving and maintaining strategic competitiveness in the 21st century (Elenkov *et al.*, 2005). Perhaps, the combination of strategic leadership and organizational innovativeness as independent variables for this research is first of its kind among strategy implementation literatures in the area of tertiary institutions. Previous studies on strategy implementation in tertiary institutions like Brinci and Eren (2013); Ng'anga (2013); Shah and Nair (2014); Taylor and Baines (2012); Jiang and Carpenter (2013); Ofori and Aliagbe (2011); Noidoo and Wu (2011); Licerda, Caulliraux and Spiegel (2014); as well as other studies from other sectors have all ignored this essential combination. Hence, Crossan and Apaydin (2010) lamented that despite to the fact that organizational innovativeness has recieved an increasing number of rankings, indexes and of practitioner-based measures, it repeatedly remains cut off from the academic research.

Finally, the earlier studies on strategy implementation in tertiary institutions focuses on single category of tertiary institution (i.e conduced in, university, polytechnic or college of education). For example, Brinci and Eren (2013) investigated the impact of strategic management on organizational performance in universities in Turkey, Shah and Niar (2013) looked at strategy development and universities development in

Australia; Karemu and Goege (2014) examined the effect of strategy implementation and organizational performance in technical training institute in Kenya. Equally, Mamman and Aminu (2014) in Nigeria assessed the impact of strategic management on staff training and development in Nigerian polytechnics. For the first time, this research looks at some selected factors of strategy implementation and how they correlate and impacted on strategy implementation by taking into cognisance the whole categories of public tertiary institutions in Nigeria (i.e universities, polytechnics, monotechnics and colleges of education). Polytechnics, monotechnics and collages of education accounts for more than 50% of total enrolment in Nigerian tertiary institutions, and universities accounted for the remaining 50% (Rukayyat, 2013; Shu'ara, 2010).

2.8 Conceptual Framework

Based on the previous empirical evidences and theoretical gaps highlighted in the section above, a conceptual framework for this study was developed demonstrating the role of IT capability as moderating variable on the relationship between (1) strategic leadership; (2) organizational innovativeness and effective strategy implementation, as shown in Figure 2.1. The independent variables are strategic leadership and organizational innovativeness are unidimensional variables. Organizational strategy implementation is the dependent variable, which of course is also unidimensional

construct. IT capability being the moderator is also considered as unidimensional construct measured using three dimensions.

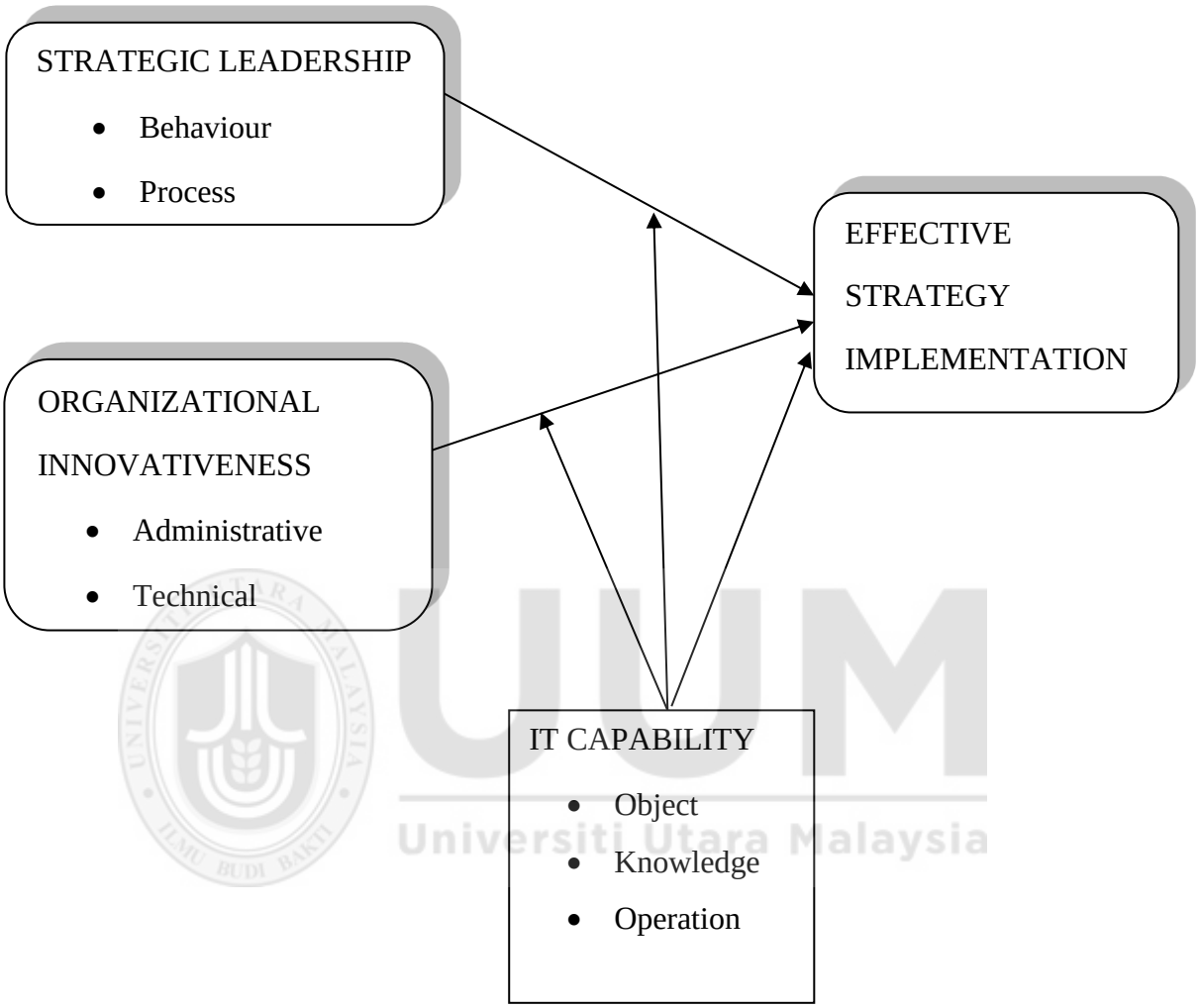

Figure 2.1

Conceptual Framework

2.9 Underpinning Theories

The safeguarding the role of IT capability on effective strategy implementation and strategic leadership/organizational innovativeness relationship can be explained from various perspectives. Thus, underpinning theories used to explain the above research framework are resource base view (RBV), dynamic capability (DC) and complementarity theory (CT). RBV is main underpinning theory for the study, while DC and CT are supporting theories.

2.9.1 Resource Based View (RBV)

Resource based view theory provides theoretical underpinnings to support the relationship between strategic leadership, organizational innovativeness, IT capability and effective strategy implementation. RVB implies that organizations can leapfrog over their rivals through developing resources that are distinctive and diversely distributed (Barney, 1991). Barney (1991) affirmed that organizations attain sustained competitive advantages by controlling atypical resources that has economic value and competitors cannot easily copy, or substitute. Consequently, an organization with these types of rare resources should be able to utilize them for their own unique organizational benefits. Amit and Schoemaker (1993) gave a more comprehensive definition of resources. They argued that resources are assets that are possessed by an organization through control or ownership; while capabilities refer to an organization's ability to bring together resources and adequately utilize them. Example using staff competency and organizational practices experiences to create a distinctively

innovative organizational culture where workers do better than their competitors. Resource-based theory treats organization as potential creator of value-added capabilities (Prahalad & Hamel, 1990; Conner & Prahalad, 1996).

Organizational resources consist of all organizational assets tangible and intangible, as well as human and nonhuman that are owned or controlled by the organization (Barney, 1991; Wernerfelt, 1984). Resources and capabilities that are precious, uncommon, difficult to imitate and non-substitutable comprise of organization's unique or core competencies (Prahalad & Hamel, 1990); hence they yield a lasting competitive advantage. Intangible organizational resources are more likely to generate competitive advantage than tangible resources (Hitt, Bierman, Shimizu & Kochhar, 2001). Distinctively, intangible organizational resources such as strategic leadership, knowledge, innovation ability, permit organization to add up value to incoming factors of production (Hitt *et al*., 2001). And they represent competitive advantages for an organization (Collis & Montgomery,1995; Bogner, Thomas & McGee,1999; Prahalad & Hamel, 1990; Post,1997; Markides,1997) Such advantage is developed over time and cannot easily be imitated. Barney (1991) argued that the resources controlled by an organization are what allow it to craft and execute strategies that consequently facilitate the organization's expansion, efficiency and effectiveness. The empirical test of resource based theory was started in the field of strategic management (e.g. Mahoney & Pandian, 1992) and was subsequently followed by other researchers in other management disciplines (e.g. Barney, 2001; Priem & Bulter, 2001; Fahy &

Smith, 1999; Foss, 1998) and information systems (e.g. Ray, Barney & Muhanna, 2004; Santhanam & Hartono, 2003; Ravichandran, Lertwangsatien & Lertwongsatien, 2005; Bharadwaj, Varadarajan, & Fahy, 1998).

2.9.1.1 RBV and Strategic Leadership

Ireland and Hitt (2005) argued that strategic leadership are source of competitive advantage. Strategic leaders in an organization that can develop the organization's capabilities would be able to sustain its competitive advantages (Mahdi & Almsafir, 2014). Numerous organizations have attempted to gain competitive advantage by exploiting resources and capabilities according to resource-based view (Barney, 1986; Prahalad & Hamel, 1990). And most strategic leaders are on the agreement that investment in organizational internal competencies and social capital can enhance their organizations' sustainable competitive advantage according to the great groups' view of strategic leadership (Ireland & Hitt, 2005) and knowledge based view (Kogut & Zander, 1992; Polanyi, 1966).

Resource based view emphasized on the essentiality of organizational internal resources; while the most significant task for strategic leaders in an organization is managing the organization's portfolio of resources effectively (Mahdi & Almsafir, 2014). Strategic leaders manage the organization's resources by turning them into capabilities, structuring the organization to use the capabilities, as well as developing

and implementing a strategy to leverage those resources to achieve a competitive advantage (Sirmon, Hitt, & Ireland, 2007). In fact, comprehending strategic leadership connotes focusing on what leaders actually do in order to create a strategically focused organization (Rumsey, 2013). Moreover, strategic leaders must be able to focus on vital organizational resources that are most likely to make a difference in the assurance of sustained future success for the organization (Mahdi & Almsafir, 2014).

From the strategic point of view, the RBV suggests that an organization should spot out its strategically significance resources and capabilities, which are extraordinary, valuable, rare inimitable and non-substitutable (Barney, 1991). The resources as well as the capabilities would allow the organization to implement its strategy effectively and hence attain sustainable competitive advantage (Barney, 1991; Spanos & Lioukas, 2001). These resources are regarded as critical organizational resource (Welnerfelt, 1989). The responsibility as assembling these resources is the responsibility of organizations strategic leaders (Sirmon, Hitt, & Ireland, 2007). Additionally, strategic leaders play an essential role in ensuring that their organization attain competitive advantage creating superior economic value to the customers and other stakeholders, in contrast to the least efficient competitor capable of breaking even (Pereraf, 1993; Peteraf & Barney, 2003).

Mintzberg (1988) posited that crafting a strategy that demand strategic leaders to know about the business and use the knowledge and experience gathered to create strategic

differentiation. The SWOT analysis is very important and allows strategic leaders to be capable to respond to the internal and external environments by trying to create and develop new strategies that facilitate organizational survival among competitors. On the other hand, RBV approach permits strategic leaders to gain a superior understanding of market imperfections, not just on organizational resources alone, but also on products (Enriquez, 2015). Employing the RBV, strategic leaders could be more proactive and adaptive to different organizational situations (Lockett, Thompson & Morgenstern, 2009). Penrose (1959) posited that strategic leaders decisions are linked to their perceptions about the organizational resources and the external environment; and this experience is basic for strategy implementation. A strategic leader shoulders the responsible for the profitable usage of organizational available resources. Hence strategic leaders perception is an important dimension in the RBV, and their perceptions affects resource allocation, assures that resources have plenty of different usages among different organizations; supporting the heterogeneity theory that Barney held (Enriquez, 2015).

2.9.1.2 RBV and Organizational Innovativeness

A growing body of literatures suggest that resource-based view positively affects the outcome of the innovation processes in an organization (e.g., Brown Eisenhardt, 1997; Henderson & Cockburn, 1994; Leonard-Barton, 1995). These studies offer new insights into innovation versus resource based view relationship. The relationship between resource-based research and organizational innovativeness is based on the

fundamental premise that organizational resources and capabilities are those that underlie and determine organization's capacity to innovate. Within this viewpoint, organizational resources (tangible and intangible) are considered to provide the input that in turn is combined and transformed by organizational capabilities to produce innovative forms of competitive advantages. Technical resources like facilities and IT systems have also been found to positively affect innovation (Song & Parry 1997; Gatignon & Xuereb 1997; Mitchell & Zmud 1999; Liyanage, Greenfield, & Don, 1999). Carrying out innovation activities especially in tertiary education institutions in many cases requires a minimum prior investment in technical equipment, which raises the possibility of creating innovative output of increased value for the institution (Kostopoulos, Spanos, & Prastacos, 2002).

More recent research on resource based view and organizational innovativeness relationship has shifted attention from tangible organizational resources to intangible organizational resources (Kostopoulos, Spanos, & Prastacos, 2002). Intangible resources may be more vital from a strategic point of view, since they bring together more frequent the requirements necessary for producing sustainable advantage: to be valuable, rare and difficult to imitate and replace by competitors (Barney, 1991; Hitt et al., 2001). For instance, a high stock of qualified strategic leaders with advanced technical skills know-how in R&D department couple with risk taking propensity, increases the probability of organization to carry out innovative activities (Delcanto &

Gonzalez 1999; Huiban & Bouhsina, 1998; Kessler & Chakrabarti, 1999; Song & Parry, 1997)

2.9.1.3 RBV and IT Capability

Tippins and Sohi, (2003); Bhatt and Grover, (2005) initiated the enclosure of IT capabilities in their IT researches and investigated the relationships among several IT dimensions, i.e. IT capability, IT infrastructure and IT business experience as related to organizational success. The outcome of their study indicated that IT capabilities improve organizational success (e.g. Bhatt & Grover, 2005; Santhanam & Hartono, 2003; Powell & Dent-Micallef, 1997). Furthermore, findings from IT studies as conducted by scholars, like (Amado & Walczuch, 2012; Santhanam & Hartono, 2003; Bharadwaj, 2000; Quinn *et al.*, 1994; Adam, 1993; Floyd & Wooldridge, 1990) showed that IT capabilities provided a source for gaining competitive advantage by organizations.

The RBV extant literatures suggested that organizations could attain competitive advantages that are sustainable through the basis of distinct corporate resources that are valuable, uncommon, difficult to copy, and non-substitutable by other resources (Barney, 1991; Conner, 1991). On the other hand, the RBV again accept that while some resources lead to organizational performance improvement, others do not. Therefore, the main target for organizations should be is to identify and utilize the

resources that have direct impact to organizational success (Zack, McKeen, & Singh, 2009; Wade & Hulland, 2004). IT related dimensions were discussed by many scholars as well as practitioners. For example, Tippins and Sohi (2003) as well as Li *et al*., (2006) categorised information technology capability into three (3) dimensions, i.e. IT knowledge, IT operations and IT infrastructure. In their own submission, Wixom and Watson (2001) incorporated human IT resources. This was done on the argument that that: (1) Employees have crucial role to play in any system operation and can directly influence the system success or failure. (2) Skills from the knowledge management gathered by the team have a major influence over the outcomes of a project. (3) Only an experienced group can identify the requirements of complex project. Human IT resources comprise of managerial skills and technical IT skills. The managerial IT skills includes abilities like effective management of IT functions, coordination and interaction with the user community, as well as project management and leadership skills. On the other hand, IT skills represent skills, like programming, systems analysis and design, and competencies in emerging technologies (Bharadwaj, 2000).

Based on resource-based view (RBV), organizations with strong human IT resources are more likely and capable of integrating IT and business planning processes more effectively. As well as building, durable and cost effective applications that support the operational needs of the organization, communicate with different departments well, forecast the future business needs of the organization and innovates new-product

features that have value ahead of competitors (Bharadwaj, 2000). Past studies have advance several theories regarding the competitive advantage of organizations. Nonetheless, the RBV has continue to gain more ground as the view that assist in explaining the existence of organization specific assets and capabilities that are crucial in the implementation of organizational strategy and implementation (Bakar, Hashim, Ahmad, Isa & Dzakaria, 2009).

Various researchers have categorized resources into several categories. For example, Mills, Platts and Bourne (2003) opined that resources are classified as follows: (1) tangible resource, e.g. financial, organizational, physical and technological resources; (2) knowledge resources, e.g. skill and experience; (3) system and procedural resources; (4) cultural values and resources; (5) network resources and resources that possess potential dynamic capability; (6) intangible resources, e.g. innovation, human, and reputation resources. More so, Fahy (2000) classified resources into three categories: (1) tangible, (2) intangible and (1) capabilities. RBV focuses on the organization's ability to develop and deploy its internal resources (Hitt et al., 2001). The RBV was adopted as the underpinning theory for this research, which explains the relationship among organizational resources (strategic leadership, organizational innovativeness and IT capability) and effective strategy implementation (Barney, 1991; Fahy, 2000). The RBV standpoint views organizations as rent seeking elements that build up and deploy resources (assets and capabilities) to achieve a competitive advantage (Greenaway & Chan, 2005).

However, in spite of the relevancy and importance of RBV to this study, the theory is deficient in two major areas. Firstly, the RBV, like the industrial economics view, implicitly assumes stagnant equilibrium, and fails to address the needs for continuous success in a unstable environment (Teece *et al.*, 1997; Mahoney & Pandian, 1992). Secondly, the RBV centred on the difficulties and barriers in rival organizations copying, substituting or taking away resources rather than on the complementarities of resources (Mueller, 1996; Powell, 2004; Amit & Schoemaker, 1993). To address these shortcomings, two supporting theories were introduced into this study. These theories are the theory of dynamic capably and complementarity theory. The DC was considered first. The conceptual foundations of the DC theory is 'introducing the variable changing environment into the equation and focus attention on dynamic capabilities as the construct determining value creation in the organization' (Benitez-Amado, & Walczuch, 2012).

2.9.2 Theory of Dynamic Capability

Teece, Pisano and Shuen (1997); Pavlous (2004) and Eisenhardt and Martin (2000) are the proponents of the dynamic capabilities (DC) theory. The essence of the DC is due to shortcomings observed from the resource based view theory (RBV). The DC helps identify the factors that are likely to impact on organizational performance; and is gradually becoming a interdisciplinary theory of the modern institutions (Teece, 2010).

The RBV has been criticized for disregarding factors surrounding resources by assuming resources simply exist (Teece, Pisano & Shuen, 1997). Issues like how resources are developed, integrated within the organization and how they are released had been under-explored in the extant literature. Resource based view has been employed by many researchers to explore the relationship between capabilities and effectiveness. Investment on human capital that produce strategic leaders, innovation and IT is very imperative since it is a source for competitive advantage in the short-run and sustained competitive advantage in the long run (Barney, 1991).

Theory of dynamic capabilities was derived from the RBV, and gave emphases on resource reconfiguration and renewal. While RBV emphasizes on the selection of resources; realizing new types of competitive advantage through the renovation of internal based resources and competences resides to dynamic capabilities approach (Enriquez, 2015). This work employs the dynamic capability theory to support RBV and conceptualizes strategic leadership, organizational innovativeness and IT capability to address the sustainability issues of performance on effective strategy implementation in an unstable environment. In this kind of situation, IT capability is expected to help in bridging these gaps by acting as a buffer between institutional resources and the changing business environment. The dynamic resources help an organization adjust its resource mix and environment. Dynamic capabilities support the theory of RBV of the firm. In fact, DC could be seen as a complement to RBV approach (Enriquez, 2015). According to Teece, Pisano and Shuen (1990) when

refereeing to RBV in Ambrosini and Bowman (2009: p. 30): “is not only the bundle of resources that matter, but the mechanism by which organizations learn and accumulate new skills and capabilities, and the forces that limit the rate and direction of this process”.

The dynamic resources assist the organization to adjust its resource mix and hence maintain the sustainability of the organization’s competitive advantage, which if not so, it might quickly diminish. As a result, the RBV stresses the choice of resource or the selection of appropriate resources, and the DC emphasizes on resources development and renewal. Wade and Hulland (2004) argued that organizational internal resources could attain several features of dynamic capabilities, which are helpful to organizations operation in unstable environment.

2.9.3 Complementarity Theory

Advocates of theory of complementarity are Barua, Lee and Whinston (1996). The theory was originated from economics literature. The complementarity theory centred on resources that are ‘mutually complementary’ to each other. Milgrom and Roberts (1995) opined that some organizational practices and activities are mutually complementary and tend to be adopted together. Each resource enhances the contribution of the other. Hence, the aggregate impact of the resources on a system of complementary practices will be superior than the sum of its parts due of the

synergistic effects of bundling practices together. For example, in the context of strategy implementation, IT facilitates for innovative practices that leads to competitive advantage (Brynjolfsson & Hitt, 2003). Employing the complementarity theory for this study may tackle the second shortcoming of RBV – isolation of resources. RBV fails to sufficiently consider the fact that is difficult for resources to act in isolation in creating and maintaining competitive advantages (Chan *et al*., 2004; Wade & Hulland, 2004).

2.10 Hypothesis Development

Relying on the literature for this study as well as theoretical justifications, hypotheses for the study were formulated and empirically tested and validated. This study has two constructs namely strategic leadership and organizational innovativeness' as independent variables, while IT capability serves as the moderating variable and effective strategy implementation is the dependent variable. five (5) hypotheses which were concerned with relationships among the variables, were formulated and tested in this study.

2.10.1 Strategic leadership

"Leadership helps and enables followers to remain focused on objectives" (Leichtling, 2000, p28; Melilli, 2000, p,8; Schultz, 2000, p. 94). The efficacy of strategic leaders in directing and influencing others is seen in improved outputs. Again, the role of

strategic leadership in strategy implementation could not be over emphasized. Strategic leadership could be defined as "the leader's ability to anticipate, envision, and maintain flexibility and to empower others to create strategic change as necessary" (Hitt, Ireland, & Hoskisson 2007 p. 375). Strategic leadership is multifaceted activity that involves managing through others, and assists organisations to cope with change that appears to be dramatically increasing in today's global business environment (Huey, 1994). Strategic leadership requires the ability to embrace and integrate both the external and internal business environment of an organisation, and to engage and manage composite information processing. Strategic leaders are a synergistic blending of managerial and visionary leadership styles (Lear, 2012).

Ireland and Hitt (1999) posited that economy globally has created a new competitive environment in which things are constantly changing unpredictably. Revolutionary changes happen quickly, constantly, and affect virtually all segments of an organisation simultaneously (Greenwood & Hinings, 1996). These developments require organizations revolutionize their leadership style to strategic leadership in order to increase the speed of the decision-making through which strategies are formulated and executed (Kessler & Chakrabarti, 1999). The contemporary global economy is built on knowledge. Thus, in the 21st century, the organization's ability to build, share and leverage knowledge will mostly replace ownership and/or control of tangible assets as a primary source of competitive advantage (Lear, 2012). In the 21st-century knowledge based economy, competition will be multifaceted, tough and

burdened with competitive opportunities and threats (Drucker, Dyson, Handy, Saffo, & Senge, 1997). Thus, Gibney, Copeland and Murie (2009) confirmed that a style of leadership that is rooted in knowledge is the leadership style for the emerging in the knowledge-based economy.

An investigation into the extant literature in the area of strategic leadership indicated that an increasing interest in the topic (Oyedijo, 2012). Despite the long history of studies on leadership, scholars have just lately started to figure out strategic leadership as a centre of attention (Boal & Schultz, 2007). For all this while, the practice of "strategic leadership" appears to be animated by constant myths, at times created by the trade press, and at other times by the individual experience of leaders. These "myths" deserve critical scholarly enquiry (Narayanan & Zane, 2009).

Several studies have shown the positive correlation between leadership, precisely strategic leadership to strategy implementation in many organizations both for profit and public organizations. Jooste and Fourie (2009) investigated the role of different dimensions of strategic leadership in strategy execution in South African listed firms using mail questionnaire. The respondents were asked to rank their perception on the extent to which specific strategic leadership actions add positively to effective strategy execution in their organisations. A five-point Likert scale was used. The respondents viewed that determination of a strategic direction for an organisation as one of the strategic leadership actions, plays the most significant role in effective strategy

executions. Other strategic leadership roles that also played a key role in the execution process are development of human capital and exploitation and safeguarding of core competence. Measurement tools couple with leadership has strengthen strategy implementation in SMEs in South Africa as shown by a research conducted by Ladzami. Smith and Pretorious (2012). Again, Alkhadi, Asulay and Dixon (2013) investigated the main pressing factors that determined strategy execution in Saudi Arabian banks and found that leadership plays the most significant role.

On the other hand, the role of strategic leaders toward the execution of institutional strategic plans is very glaring. Shah and Nair (2014) researched strategy implementation in Australian universities. They argued that leadership that aligned itself with institutional resources led to successful execution. Ng'ang'a (2013) conducted a research on implementation of strategic plans in selected schools in Kenya. The outcome of the study reveals that leadership is the arrowhead toward the successful execution of strategies in those schools. Fuller (2012) studied the Leaders Role in Strategy Implementation in Liverpool University. He administered questionnaire to 197 respondents who made the sample population for the research. Factors like developing vision and mission, setting objectives and goals, strategy formulation, implementation of the strategy, as well as evaluating performances scored strongly on the scale of measure. This indicates that strategic leadership is cardinal in the success of a strategies tertiary institution. More so, Omboi, (2011) conducted a study using survey in Meru Central District of Kenya on selected public tertiary

institutions. Using population that made up of 136 lecturers, 30 heads of departments and 12 top managers. The study suggest that weak influence of managerial behaviours was because of the Management strategic thinking. He argued that organizational leaders co-opting the subordinates like the faculty members would lead to effective strategy implementation. Kalali, Anvari, Asghar and Karimay *(*2011) posited that, failure of strategy implementation in institutions of higher learning in Iraq today comprises of sixteen factors of which leadership role count to 71%. He further laments that without proper leadership, tertiary institutions in Iraq will continue without having vision, mission, work ethics, and good strategies, adequate resources, better structures, well defined culture and many others. In another study conducted in five (5) Iranian universities, offering degrees in medicine by Abdulwahid *et.al* (2013) investigating the factors that cause the failure of strategy plans implementation in public health sectors. The study argued that leadership role is important in crafting and in strategic plans execution; and if the strategic leader did not partner the subordinates in the strategy implementation, the leadership will not be able to create a brilliant vision for any meaningful strategic program. Thus, Mapetere (2012) concurred that besides vision creation, leadership in an organization helps to identify the relevant resources like the proper men and women for the strategy stride, promote proper desired organizational cultures and host of others. Thus, we can hypothesize that:

H1: *There is significant and positive effect of strategic leadership on effective strategy implementation.*

2.10.2 Organizational innovativeness

According to Hurley and Hult (1998), organizational innovativeness is the thought of openness to new ideas as a characteristic of organization's culture. Thus, innovativeness is a gauge of an organization's orientation toward innovation. There are requisites to organizational innovativeness as argued Hurley and Hult (1998). These organizational characteristics include organizational culture, such learning, participative decision making, collaboration and support, and power sharing etc. The capacity to innovate, is a term firstly used by Burns and Stalker (1961), as the organization's ability to adopt or implement new ideas, processes, or products successfully. Tertiary institutions that possess greater ability of innovation normally gain more competitive advantage and achieve higher levels of performance (Hurley & Hult, 1998). In this study, organizational innovativeness is used as unidimensional construct (Hurley & Hult, 1998). This represents the behavioural aspect of innovation of organization (Wang & Ahmed, 2004). The behavioural innovativeness reflects the "sustained behavioural change" of the organisation leading to innovations.

The relationship between organizational innovativeness and strategy implementation is prevailing in the extant literature. Porter (1980) introduced four generic strategies i.e. low cost, differentiation and middle of the road. Miles and Snow (1978) advocated four types of strategies. The prospector, analyser, defender and reactor.

Venkatraman (1989), on the other hand, developed measures of strategy that employ an interval scale as a replacement for of one that uses categorical variables to represent strategies. Despite the way strategy is being conceptualized for execution, innovation is a fundamental dimension of organizational strategies (Subramanian & Nilakanta, 1996). Thus, high levels of innovativeness are representative of serious creative strategies (Subranian & Nilakanta, 1996).

Arvanitis, (2005) argued that information technology refers to knowledge, products, processes, instruments, procedures and systems which helps tertiary institutions to produce goods and services that are at the centre of systems for finding customers (students) needs and satisfaction. Hence effective and successful implementing of strategies results from integrating and coordination of information technologic innovations in production processes, marketing, financing and personnel (Mwawasi, Wanjau & Mkala, 2013).

Administrative innovation is a new administrative process, management system and staff development program taking place in an administrative component and affects a social system of an organization via organizational members and their relationships, including rules, procedures, roles and structures related to the communication and exchange among organizational members (Subramanian & Nilakanta, 1996). Administrative innovation is the main component of organizational innovation (Subramanian & Nilakanta, 1996). The administrative innovation potentially promotes

work redesign and work systems, skills enhancement, management systems, and changes in incentives (Yamin et al., 1997). Essentially, it becomes a key determinant of competitive advantage in strategy implementation (Ussahawanitchakit, 2012).

Furthermore, several previous researches show positive correlation between organizational innovativeness and strategy execution. Subramanian and Nilakanta, 1996) investigated the impact of administrative dimension of innovativeness on organizational profitability strategy and found that administrative innovativeness significantly associated with organizational effectiveness measured by ROA. Purposely, organizations that employed a larger number of administrative innovations performed better than the others. Additionally, Hambrick (1983) conducted a study on defenders and prospectors strategies and their relationship with innovativeness and organizational performance. The result revealed that defenders out performed prospectors in innovative as well as non-innovative industries when cash flow and profitability were used as measures of performance.

Jiménez-Jiménez, and Sanz-Valle, (2011) examines the relationship between innovation, organizational learning and performance. The study explores the relationships using SEM with data from 451 Spanish firms. The findings indicated that both variables organizational learning and organizational innovativeness contribute positively to business performance. In another study on business, operation conducted

in Istanbul, Turkey, Gokmen and Hamsioglu (2011) discovered the existence of positive relationship between innovation ability and organisational performance.

Lim, Schultmann and Ofori, (2010) investigated the effect of innovation on performance of construction companies in Singapore, using statistical data and expert interview across 18 Organisation for Economic Cooperation and Development (OECD) countries and. The result reveals that because that constructional activities are awarded by clients based on lowest cost, innovation seems to be an unfeasible competitive strategy. Nevertheless, the study shows that construction companies can build up their competitive advantage through manipulating innovations that consumers are keen to pay for and innovations that would decrease construction costs. Using DHL as a case study, Wirtz (2011) discovered the existence of a positive relationship between network innovation, competitiveness and financial performance. Costa and Cabrel (2010) examined the effect of differentiated knowledge sources and learning processes on organizational technology capacity to innovate and competitive performance using selected export companies in Brazil. The study suggests the existence of a positive and significant relationship between knowledge, organizational innovativeness and competitive performance.

A research was conducted by Ashraf, *et al.* (2014) on mediating role of organizational innovativeness between organizational culture and organizational effectiveness in an Iranian tertiary institution. A sample of 369 respondents was included in the study.

The findings suggested that organizational innovativeness and culture were to have significant positive relationship with organizational effectiveness. There was also an empirical evidence from Aswani, (2013). He carried out an investigation on the relationship between strategic innovation and performance of public universities in Kenya. Data was collected using a structured questionnaire. Findings reveals that management aligning strategic innovation with the wider business strategy enhance organizational capability in understanding the customer insights and offer new and significant value for long term success and survival of the organization. Thus, we hypothesized that:

H2: *There is positive effect of organizational innovativeness on effective strategy implementation.*

2.10.3 Information Technology Capability

A conceptual foundation of literatures on IT attributes and strategic alignment seeks to extend the theory to the interface between IT and the implementation of organizational strategies (Benitez-Amado & Walczuch, 2012). Preliminary studies confirm that IT could help to enhance the effectiveness of the organizational decision-making process, and enable the implementation of organizational strategies (Tavakolian, 1989; Reich & Benbasat, 1996). In line with this, scholars have developed a classic line of research termed IT- strategic alignment, which examine the fit between IT and organizational strategies. This aspect of research has received substantial studies employing the conceptual foundations of resource-based theory

(Kearns & Sabherwal, 2006; Kearns & Lederer, 2003). As a result, body of literatures has extensively analyzed the relationship between IT strategic alignment and organizational performance (Chan *et al*, 1997). In general, previous empirical works have revealed that this link is positive, especially in the case of prospector and analyzer organizations (Tallon, 2007). For instance, Sabherwal and Chan (2001) establish that this relationship affected business performance in prospector and analyzer organizations, but not in defenders.

Mithas, *et al*. (2004) conceptualized IT infrastructure (IT objects) to include hardware, software, data storage, networks, information, applications, and utilities. Black and Porter (1996) emphasized that IT infrastructure ease the availability of information in enabling the performance assessment systems for constant improvement. IT object attribute has been acknowledged as one of the key dimensions of IT capability in existing information systems research (Bharadwaj 2000; Ross *et al.* 1996; Santhanam *et al.* 2003). Better IT infrastructure capabilities enable organizations to place their IT assets and data and information services to obtain information about customers as well as circulate information to customers through virtual communities, the Internet, as well as personalized information channels (Nambisan, 2002). In a study conducted on senior executives in charge for quality management from about 307 organizations, Handfield *et al*. (1999) found that information systems enhanced the effectiveness of business processes in those organizations. Equally, in the automotive industry, Srinivasan, Kekre and Mukhopadhyay (1994) reveals that IT infrastructures enhanced

process quality and output. Sambamurthy *et al* (2003) suggest that IT infrastructure have a positive impact on the quality of organizational practices and the progress of digital process capabilities. Human assets, which are trained IT staffs that provide rapid solutions to pressing business needs in an organization are equally referred as IT knowledge. Several studies have suggested that IT knowledge capabilities, or the managerial skills connected with acquisition, management and use of IT, have positive and significant impact on organizational performance (Bharadwaj 2000; Santhanam *et al*. 2003). IT knowledge is a significant enabler of process management (Davenport; 2013). An empirical research carried out in retail banking industry by Frei *et al*. (1999) reveals that IT knowledge minimized process variability by providing a common blueprint for all employees in performing their jobs; which in turn, enhanced organizational performance.

More so, the value of IT is improved when organizations use it to build up knowledge stores about its customers, and other factors that influence performance (Tippins, & Sohi, 2003). Strategy literature has recognized the role of knowledge as a central intangible resource for organizations (Grant, 1996; Leonard- Barton, 1995; Nonaka and Takeuchi, 1995; Spender, 1996). Knowledge development is a part of organizational learning. Additionally, learning is said to be essentially significant in creating sustainable competitive advantage since it deals with the method of developing organizational capability rather than focusing on gaining definite types of

knowledge (Schendel, 1996). IT relationship assets (IT operation) are effective IT-business relationship led by a proactive CEO (Liu, Lu, & Hu,2008). Thus, we asserted:

H3: *IT Capability has positive effect on effective strategy implementation.*

2.10.4 IT Capability as Potential Moderator

This study also hypothesized that IT capability moderates the relationship between strategic leadership behaviours and effective strategy implementation. Drawing from principle underlying internal organizational resources and their continuity (e.g. Barney 1991, Teecy, 1997), IT capability may serve as moderator on relationship between strategic leadership organizational innovativeness and effective strategy implementation. Li et al., (2006) also suggest that IT capability is a moderator than mediator based on resource based view theory (RBV), since the definition of IT capability entails the ability to mobilise and deploy IT based resources which is not directly affected by IT investment. Information science scholars have used resource-based theory widely since the mid-1990s (Benitez-Amado, & Walczuch, 2012). According to Wade and Hulland (2004), the theory is useful for IT research through resource attributes, which facilitates the relationship between IT resources and non-IT resources, since the resource-based theory establishes a clear link between resources and sustained competitive advantage. It is generally agreed upon by information system scholars that IT capabilities can act as key enablers of higher-order organizational capabilities or interact with other (e.g. strategic leadership and organizational innovativeness) resources to increase organizational success (Benitez-

Amado, & Walczuch, 2012). Benitez-Amado and Walczuch, (2012) also argued that quite number of scholars support the call for intervening variable, through which IT capabilities do not appear to help organization directly to improve competitive advantage, but can do so indirectly through the intervention of other important organizational capabilities. Previous studies have found that several types of these capabilities act as intermediate variables on the interface between IT capabilities and organizational success. They include firm agility (Sambamurthy *et al*, 2003), knowledge management (Tanriverdi, 2005), innovation (Benitez-Amado et al, 2010) and BPR factors (Ringim, Razalli, & Hasnan, 2015). Additionally, Benitez-Amado and Walczuch (2012) affirmed that Early research indicated that IT could help to enhance the efficiency of organizational processes in decision-making, and to facilitate the execution of corporate and business strategies.

Dimitris, Sakes, and Vlachos (2013) argued that strategic leaders must take decisions regarding organizational strategy implementation on a various issue and the information needed for those decisions are stored or available as the computer database. Thus, information technology could facilitate the decision making and makes strategy implementation quicker and easier. Incomplete information, properties, and languages of the database can produce communication problems, endanger the effectiveness of information processing, and in turn affect effective strategy implementation (Dimitris, Sakes, & Vlachos, 2013). Before the widespread use of IT, many strategic leaders found difficulties in gathering, storing, organizing and

distributing large amounts of data and information (Raddy, Srinivasu, Rikkula & Rao, 2009). Developments in computer technology made possible for strategic leaders to select the information they require, in the form best suited for their needs and time they want that will facilitate the implementation of a strategic decision. This information, opined Raddy, Srinivasu, Rikkula and Rao, (2009) are mostly current and in many cases, are needed by many people at the same time.

Online Analytical Processing (OLAP) is a capability of management, decision support, and executive information systems that enables strategic managers to interactively examine and manipulate copious amounts of detailed and consolidated data from many prospective and perspectives (Kamal, 2015). Analytical operations consist of consolidation that consists of aggregation of data. It can be simple roll-ups or complex groupings involving interrelated data (Smith, 1988). Drill-Down, on the other hand can go in the reverse direction and automatically display detailed data that comprises consolidated data. Slicing and Dicing refers to the ability to look at the database from different viewpoints. For example, one slice of a database might show all forms sales to applicant within a faculty (Kamal, 2015). Slicing and dicing allow strategic leaders to isolate the information of interest for decision-making and effective strategy execution (Kamal, 2015).

On the other hand, extant literature suggests that investment in information technology (IT) is making an important contribution to organizational innovation. OECD (2002)

argues that IT improves productivity by enabling organizational innovations. Information technology enables tertiary institutions to introduce important organizational changes in the areas of reengineering, decentralization, flexible work arrangements and outsourcing (Gera & Gu, 2004). For a successful implemention of organizational strategies that are supported by innovation, organizations need to employ IT as part of a "system" or "cluster" of mutually reinforcing organizational approaches (Milgrom & Roberts, 1990). Literature indicate that integrating IT in educational institutions has generally leads to radical shift from the traditional method of doing things to more innovative ways that are more directed/ didactic approach to a more student – centred/constructivist approach (Lopez, 2003; Kirschner & Woperies, 2003).

Langlois (2001) posited that IT in tertiary institutions of learning led to various innovations that faculties the implementation of strategies that makes teaching less expensive, enables lessons to be introduced speedily, provide consistent message, make possible working from any location anytime updating contents easily and quickly, increase learners' retention and management of large group of students. Bassey et al. (2009) argued that IT increase the productivity of lecturers and help teachers to be more effective and innovative. All will help toward achieving and implementing a strategy that a particular institution is aspiring for. More empirical studies, which include Yongmei, Hongjian and Junhua (2008) suggested that IT capability was an important moderating variable that links IT investments to

organizational success. The hypothesis was verified by sample data from leading IT firms in China. Similarly, Said, Hui, Taylor and Othman, (2009) discovered that IT capability moderates the relationship between customer-focused strategies and organizational performance by offering justifications for local government areas (LGAs) to invest in terms of resources and commitment, in adopting customer focused strategies and IT. Therefore, from the preceding discussion, the following hypotheses are advanced.

H4 *IT capability moderates the effect of strategic leadership on effective strategy implementation.*

H5 *IT capability moderates the effect of organizational innovativeness on effective strategy implementation.*

2.11 Summary of Chapter

This chapter provided an extensive review of literatures on strategic leadership, organizational innovativeness and IT capabilities in relationship to effective strategy implementation. The chapter also highlighted on the RBV, as the theory that governs the proposed theoretical framework. Strategic leadership and organizational innovativeness' are intangible resources within an organization that could be employed with the influence of IT capability to attain an outstanding success in strategy execution. IT capabilities boost organizational success through the removal of

inefficiency, minimization of long bureaucracy, enhance service reliability and minimize transactional errors (Tippins & Sohi, 2003).

More so, the chapter explains the adoption of dynamic capabilities theory and theory of complementarity to address the shortcomings of RBV. This study examines the relationship between strategic leadership and organizational innovativeness as independent variables and strategy implementation as dependent variable. The review of previous literatures provides a base for the theoretical framework of the study, as well the hypotheses development in the chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The last chapter dwelt on previous researches that discussed various factor affecting strategy implementation. Specifically, more attention was given to literatures on strategic leadership, organizational innovativeness and as information technology factors as they affect strategy implementation. This chapter will discuss research methodology and procedures undertaken by the study. Categorically, the chapter will focus on the nature and philosophy of the study, population of the study, sample size and sampling technique, data collection and data analysis techniques.

3.2 Nature and Philosophy of this Study

By and large, researchers have their distinctive views about the nature of social reality or knowledge built on their philosophy. Hence, aligning research and philosophical orientation helps to elucidate a researcher's theoretical frameworks (Cohen & Vigoda, 2000). Subjectivism, positivism or realism advocates that a researcher be expected to uncover an existing reality or facts in the social environment (Creswell, 1994). Furthermore, positivist advocates that social phenomenon to be treated as an entity, in as much as possible, as natural scientists handle physical phenomenon (Creswell, 1994). This postulates that the researcher is expected to be independent minded, and

thus employ all necessary techniques that maximize objectivity and minimize the influence of the researcher in the research process. As put aptly by Creswell (1994) and concurred by different research gurus (Crotty, 1998; Neuman, 2003; Marczyk, DeMatteo and Festinger, 2005), the positivists are of the view that: (1) empirical facts differ independently from opinion, ideas or emotions. The empirical facts are collected in a free manner; (2) the analysis carried out on social reality is statistical in nature; (3) empirical facts are controlled by laws of cause and effect; (4) the methodologies adopted are highly structured and, hence allows for replication, by the same researcher, or others; (5) the social reality patterns are stable, hence lead to knowledge accumulation. For this study, the positivism philosophy is employed.

Specifically, this study is a quantitative one. Quantitative research connotes a social inquiry that uses the empirical methods and empirical statements (Cohen & Manion, 1980). Additionally, Creswell (1994) defined quantitative research as a type of research in which phenomena are explained by collection and analyzation of numerical data by using statistically based methods. Thus, this study is a quantitative in nature because it employed the use of measurement (i.e. the use of statistical tools) to understand the effect of strategic leadership, organizational innovativeness, IT capability on effective strategy implementation. More so, the study is in line with the requirements for quantitative research in which social reality is objectively determined using rigorous rules in the process of data collection and analysis (Creswell, 1994).

This study has rigorously complied with all requirements for quantitative research as discussed in the previous sections and demonstrated in chapter four (4).

3.3 Research Design

Research design refers to the presentation of arrangement, structure or technique of investigation, which looks to acquire or answer numerous research questions (Scttleworth, 200; Lesage, 2009; Freshwater, Sherwood, & Drury, 2006). According to Borg, Meridith and Gall (2008) research design is an outline and itemized arrangement for how research will be carried out. Concurred Donald (2006), research design is an outline structure; it is the 'glue' that hold all the components of a research together. As for Gall, et al. (2003), research design is an arrangement for gathering and using information, so that relevant data can be gotten with sufficient exactness or thereabout so that hypotheses could be appropriately tested. It is a structure guides the gathering and investigation of information. In his submission, Zikmund (2000) argued that the research design is a master plan that vividly identifying the methods and procedures for collecting and analysing information. Furthermore, Zikmund, (2000) and Sekaran, (2003) categorised business research into three (3) broad categories.

i. Exploratory
ii. Descriptive
iii. Causal/ Hypothesis testing

The choice to choose the type to be employed on a study depends on the comprehension and clearness of the research problem. For exploratory, is a research normally carried out to give more highlight on the issue at stake. Nevertheless, it does not give final confirmation. Thus, opined Zikmund (2000), and Sekaran (2003), a research needs to acquire the understanding of the problem before developing any model. For descriptive research, is peculiar to when some understanding for the nature of problem is available. In another word, this kind of research is carried out to provide a more specific explanation of the problem (Zikmund, 2000; Sekaran, 2003). Causal research is also known as hypotheses testing. It connotes explaining the relationship among various variables under investigation (Zikmund, 2000; Sekaran, 2003).

This research employs descriptive and causal research, since the main target of the study is to investigate the relationship between strategic leadership, organizational innovativeness, IT capability and effective strategy implementation. Descriptive research was used to highlight the characteristics of the population, like respondent, variability and characteristics for the organizations; while hypotheses testing and correlation approaches are employed to determine the relationship among the variables. The study arrangement is a cross sectional design approach. This means that data are collected only once at one point to meet the study demand (Cavana, Dehalaye & Sekaran, 2001). The merits of this approach are its more economical and it takes little time unlike longitudinal study approach.

3.4 Measurements of Constructs/Variables

In this study, questionnaire was administered to the deans of the public tertiary institutions in Kaduna state, Nigeria (see Appendix 1). The questionnaire consists of five (5) sections. Section 1 comprises of nineteen (19) items that measured strategic leadership. Section 2 consists of ten (10) questions that measured organizational innovativeness. Section 3 consists of seventeen (17) items that measure information communication capability in terms of IT object (4 items), IT knowledge (6 items) and IT operation (7) items. Section 4 consists of three (3) items that measure perceived effective strategy implementation. Section 5 encompasses questions that measured demographic variables including gender, age, rank and highest educational qualification.

Questionnaires are largely regarded as popular and fitting data collection tool for survey research (Asika, 1999). Thus, a structured questionnaire consisting of closed-ended questions with six Likert scale was used. Scholars argued that a scale between 5 to 7 points is more reliable and valid compared to shorter or longer scales (Krosnick & Fabrigar, 1997). More so, six likert scale was used to prevent the respondents from ticking a neutral point for easy choice. Krosnick (1991) also argued that when six-likert scale is used, respondents demonstrate behaviour of either survey optimizing or satisfying. Furthermore, Likert scale of 6 points had more reliability and higher trend of discrimination and reliability (Chomeya, 2010).

3.4.1 Strategic leadership

Strategic leadership is defined as "the leader's ability to anticipate, envision, and maintain flexibility and to empower others to create strategic change as necessary" (Hitt, Ireland, & Hoskisson 2007 p. 375). The measures for this construct ware measured employing the methodological approach presented by Baum, Locke and Kirkpatrick (1998) in collaboration with Bass and Avolio's (1992) Multifactor Leadership Questionnaire (MLQ) – Form 6S. The MLQ questionnaire was found to be among the best instruments as well as one of the most utilized set of measures for all leadership researches (Lowe & Galen, 1996). The MLQ instruments consist of three broad segments that represent transformational, transactional and laissez- faire leadership behaviours. However, laissez- faire behaviour segment in the MLQ questionnaire was not used, because as argued Elenkov, Judge and Wright (2005), laissez- faire leadership behaviours defy the very essence of strategic leadership. Thus, the researcher adapted sixteen (16) items from the MLQ. The visionary aspect of strategic leadership was measured using three (3) essential attributes proposed by House (1998). The items include traits like leadership brevity and clarity. Traits similar to these were used in one of the most comprehensive empirical studies of visionary leadership and found to have significant relationship with organizational effectiveness (Baum *et al*., 1998). Strategic leadership variable was assessed using a six-point rating scale of instrument scale of 1=Strongly Disagree to 6=Strongly Agree. The original measure of the instrument was reported to have cronbach alpha validity of .76 (Elenkov *et al.*, 2005). Apart from this study, several empirical studies have used the MLQ to measure different leadership behaviours (e.g. Alsayed, Motaghi

& Osman.,2012; Avolio, & Sivasubramaniam, 2003; Berson, Shamir, Avolio & Popper, 2001; Geyery, & Steyrer, 1998; Rowold, & Heinitz, 2007). Example of questions for the measurement of this variable include “My organization helps its employees to develop themselves” and “Superiors in this organization, have clear understanding of where the organization is going”.

3.4.2 Organizational innovativeness

According to Hurley and Hult (1998), organizational innovativeness is the notion of openness to new ideas as a characteristic of organization’s culture. Thus, innovativeness is a gauge of an organization's orientation toward innovation. Ten (10) indicators were adapted with little modification from Rainey (1999) and Hurley and Hult (1998) to measure this construct. The indicators are measured using six point Likert scale ranging from 1= Strongly Disagree to 6= Strongly Agree. The cronbach alpha for the original measure instruments was said to be .89 (Wang & Ahmed, 2004).

The measure serves as an indicator of the institutional innovative capacity based on specific cultures rather than as a record of all types of innovations that were obtainable in an organization (Hurley & Hult, 1998). Furthermore, Hurley and Hult (1998) argued that these measures are broader for measuring organizational capacity in

adapting innovation, as well as more superb than that of Hurley's (1995) and Deshpande, Farley, and Webster (1993). The measures are not perceptual measures, but instead reflect actual gauge of innovation (Rainey, 1999). Hence, the measures are deemed appropriate for measuring organizational innovativeness in public tertiary institutions in Kaduna state. Besides this study, other previous studies that adapt or adopt these measures for their empirical researches includes Calantone, Cavusgil, and Zhao (2002), Knowles, Hansen and Shook (2008), Renko, Carsrud and Brännback (2009) and Roehrich (2004). Few of the questions that measure this construct are: "Support is given to those who want to try new ways of doing things in my organization" and "My organization constantly seek unusual novel solutions to problems via the use of 'innovative men' within the organization."

3.4.3 IT Capability construct

IT capability construct is use as a unidimensional construct in this study. It will be measured using three dimensions. The measurements for these dimensions were adapted from Tippins and Sohi (2003). It contains seventeen (17) measurable items. The respondents are required to assess their organization on the perceived application of IT capabilities on a scale of 1=Strongly Disagree to 6=Strongly Agree. The specific dimensions are as follows:

3.4.3.1 IT Objects: This dimension measured the institutions extend extent on acquiring IT infrastructure (computers/ hardwares and softwares software/ computer accessories etc). The effective use of software tools contributes to the attainment of IT capability, which subsequently leads to successful strategy implementation. The instruments cronbach alpha was .80 (Tippins & Sohi, 2003). The indicators include: "My organization aligns its IT infrastructure and strategy implementation." and "my organization builds an effective IT infrastructure".

3.4.3.2 IT Knowledge: IT knowledge refers to the extent in which organisation develop a body of technical knowledge about IT objects such as the computer-based systems. Technical knowledge could be expressed as contextually based know how. In this study, six indicators measured IT knowledge. The indicators possess the cronbach alpha reliability of .91 (Tippins & Sohi, 2003). The list of the items below briefly presents the items for the measurement. Examples of questions in this segment are: "this organization operation's staffs are knowledgeable on IT operations" and "my organization's IT staff are qualified for the job."

3.4.3.3 IT Operations: For this study, IT Operations are the extent to which an organization utilizes IT to manage students, staff and other stakeholders' information. These activities are underpinned by skills that encapsulate theknowledge within the institution. When IT operations are able to monitor, and manage IT resources, it can align IT operations with organization operational priorities. As a result, IT operations

can streamline processes and optimize resources to help minimize costs, increase efficiency to enhance productivity. Six items measure this dimension. Their cronbach alpha reliability was .81 (Tippins & Sohi, 2003). Some of these indicators are: "my organization has access to internet such as WIFI" and "my organization WIFI internet down time is minimal."

3.4.4 Effective Strategy Implementation

These indicators measure the perceived implementation of institutional strategies. The indicators were adapted with little modification from Jooste and Fourie (2009). They consist of three (3) items. The cronbach alpha for the original measures is reported to be .95. Respondents were asked to respond to the questions by choosing one of the options available that indicated the level of the organization's perceived effectiveness in strategy implementation in the last three years using scale of 1=Strongly Disagree to 6=Strongly Agree.

3.4.5 Demographic Data

Demographic variables like gender, age, job tenure, job rank and highest educational qualifications were also included into the questionnaire. Nominal scale was used measure gender; while job tenure and age were treated as continuous variables. Gender was coded using dummy variables; "1" for males and "2" for females. The respondents were also asked to choose their educational qualification from the dummy scale that

started from “1” = First Degree, “2” = Master’s Degree, “3” = Doctorate Degree, “4” Associate professor and “5” Professor. Age was also represented using dummy variables that started from “1” = 21-30 years, “2” = 31-40 years, “3” = 41-50 years, and “4” = 51 years and above. Category of institutions was measured as “1”= University, “2”= Polytechnic, “3”= Monotechnic and “4”= College of Education.

Table 3.1
Summary of Measures and their Sources

VARIABLES	DIMENSION	NO OF ITEMS	SOURCES
Strategic Leadership	Unidimensional	19 Items	Baum et al. (1998); Bass and Avolio (1992); House (1998)
Organizational Innovativeness	Unidimensional	10 Items	Rainey (1999); Hurley and Hult (1998)
Information Technology	Unidimensional	16 Items	Tippins and Sohi (2003)
Strategy Implementation	Unidimensional	3 Items	Jooste & Fourie (2009)
TOTAL		**48 Items**	

Source: The Researcher

3.5 Pretesting the Instrument

Before going into the actual survey, the initial draft of the questionnaire was presented to some experts and their views was sought. They were kindly asked to read and go through the draft survey and see if there are any ambiguity that was not noticed by the researcher. At first, three experts, comprising a Professor, an Associate Professor, as well as a Senior Lecturer from Kaduna State University, Nigeria, Ahmadu Bello University, Zaria, Nigeria and Universiti Utara Malaysia critically examined the

quality of the survey instrument. This face validity is aimed at looking at the instrument in terms of wording, clarity, format, simplicity and ambiguity of the questionnaires (Dillman, 1991; Yaghmale, 2009). Based on these evaluations and suggestions proposed, some corrections and improvements were made. In other words, all the corrections and suggestions for improvement ware taken care of. Secondly, a total number of twenty (20) questionnaires were pilot-tested for the purpose of receiving feedbacks and comments from the respondents about the questions length, structure and wordings. The questionnaires were administered to the head of departments in one of the institutions under study.

On the process of carrying out the pilot study, some important issues were raised regarding the questionnaire by the respondents. The researcher for further action recorded the issues raised. Based on the identified issues, some changes were made on the questionnaire prior to the administering the main survey sample. A typical example of these issues includes the following. In the initial draft of the instrument, a sentence was as "in this institution, support is given to he/she who wants to try new ways of doing thing". However, since the words 'he' and 'she' are not suitable for self-rating, the item was modified as follows "in this institution, support is given to those who want to try new ways of doing things". More so, the item read, "from my experience, this institution is willing to try new ways of doing things by seeking unusual novel solutions". This was reframed as "willing to try new ways of doing things by seeking unusual novel solutions."

3.6 Population of the study

Population of the study refers to the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran & Bougie, 2010). This researcher further opined that population of the study is the group of people, events or things of interest for which a researcher wants to make conclusion based on a derived sample. The population of this study consist of all deans in all the thirteen public tertiary institutions located in Kaduna state Nigeria. The list of the institutions could be obtained at http://www.nigerianelitesforum.com/ng/youths-education-scholarships/51323-schools-colleges-and-higher-institutions-in-kaduna-state.html. As at October 21, 2015, there are thirteen (13) public tertiary institutions in the state

Table 3.2

Institution Names and their Category

S/No	INSTITUTION NAMES	CATEGORY OF INSTITUTION
1	Ahmadu Bello University	University
2	Federal College of Education	Education
3	Nigerian College of Aviation technology	Monotechnic
4	Federal College of Leather technology	Monotechnic
5	Nuhu Bamalli Polytechnic	Polytechnic
6	Kaduna State University	University
7	Kaduna Polytechnic	Polytechnic
8	Shehu Idris College of Health Technology	Monotechnic
9	College of Nursing and Midwifery	Monotechnic
10	Kaduna State College of Education	Education
11	Water Resources Institute	Monotechnic
12	Federal Cooperative College	Monotechnic
13	Nigerian Institute of Transport Technology	Monotechnic

Source: The Researcher

Kaduna state was selected for the study because its belongs to the North-West geo-political zone of Nigeria, which happens to be the most populated zone in the country. Out of the total estimated Nigerian population of 140 million, more than 40 million resides in this zone (NPC, 2006). Kaduna state is third most populated state in Nigeria behind Kano state, which is the second, and Lagos state being the first (National Census 2006). More so, Kaduna state is the centre for learning for the entire northern Nigeria, with diverse ethnic groups from all over country (Kanyip 2013). It is also the symbol of northern Nigeria (Human Right Watch 2003). It characteristics reflect the diverse nature of Nigeria (Haruna, 2015). More so, Kaduna state is the centre of learning that all the 19-northern state depends on in terms of western education (ABU, 2015). Several PhD researches were carried out using Kaduna state as a study area due to its relevance. Typical examples include, from South Africa (Zubairu, 2016); United Kingdom (Ali, 2011); United State (Kanyip, 2013) and Maiwada and Pandian (1997) among others. The population of the study based on institutions is depicted below.

Table 3.3
Institutions and their Number of Deans

Name of Institution	**Population**
Ahmadu Bello University (ABU)	12
Federal College of Education (FCE)	9
Nigerian College of Aviation Technology (NCAT)	11
Federal College of Leather Technology (COLTECH)	13
Nuhu Bamalli Polytechnic (NBP)	11
Kaduna State University (KASU)	9
Kaduna Polytechnic (KADPOLY)	15
Shehu Idris College of Health Technology (SICHS)	13

Institutions and their Population (Cont.)

Name of Institution	Population
College of Nursing and Midwifery (CONAM)	10
Kaduna State College of Education (COE)	8
Water Resources Institute (WRI)	12
Federal Cooperative College (FCC)	11
Nigerian Institute of Transport Technology (NITT)	9
Total	**143**

Source: The Researcher

Deans from these institutions served as the respondents for this study. Strategic gurus argued that taking several informed and knowledgeable respondents from an organization to serve as respondents limit the potentiality of measurement error (Bowman & Ambrosini, 1997; Snow & Hrebiniak, 1981; Hambrick, 1980; Nayyar, 1992). On the contrary, taking single respondent per institution may lead to unrealistic outcome (Bowman & Amborsini, 1997). Deans are considered here because they serve as the foot soldiers for strategy implementation in their respective institutions (Kettunen, 2002).

The thirteen (13) institutions have a total population of 143 deans dispersed in different faculties and department in public tertiary institutions that are spread across the three senatorial zones of Kaduna state. Specifically, the population comprises of 12 deans from ABU, 9 from KASU, 15 from KADPOLY, 11 from NBP, 9 from FCE, 11 from NCAT, 13 from COLTECH, 10 from CONAM, 11 from FCC, 12 from WRI, 9 from NITT and lastly 13 from SICHS. Because the study was to assess the impact of

strategic leadership and organizational innovativeness on perceived effective strategy implementation, the unit of analysis for the study was naturally the deans themselves as they represent their institutions.

3.7 Sample Size

A sample could be described is a set of individuals or participants selected from a larger population for a survey (Salant & Dillman, 1994). An optimal sample is essential for minimizing the cost of sampling error, thus indicating the need for selecting an appropriate sample size. Purposely, Salkind (2003) stress the need that an appropriate sample size is necessary for any research because too small sample size is not a good representative of the population. Too small sample size may lead to committing Type I error, which is the probability of wrongly rejecting a finding when it in fact to be accepted (Sekaran, 2003). Furthermore, Sekaran (2003) argued that too large sample size is not appropriate because of possible problem of type II error, which is accepting a finding when it is supposed to be rejected. Ticehurst and Veal (2000) have pointed the importance of determining an absolute sample size that is independent of the study population, thus indicating the need for method of determining a sample size. Thus, adequacy of sample, opined Sekaran (2003), refers to a sample to be big enough to enable estimate that is reasonable of responses and pave a way for comparative analysis.

To avoid incorrect sample size and ensure accuracy in the process of determining a representative sample size for this study, a rigorous method, which was suggested by Dillman (2000) was used. Given the population of 143, which is the total population of the respondents from the institutions, the computation of the sample could be done using the following formula as postulated by Dillman (2000) and Weaver (2006):

$$n = \frac{N(p)\,(1-p)}{(N-1)(\frac{B}{c}) \quad +(p)(1-p)}$$

n= the computed sample size needed for the desired level of precision

N= the total population size

p= the population expected to be chosen from the population

For this study, prior to the data collected, the proportion of the respondents that 'agree' or 'not agree' is not yet determined, hence the 0.5 proportion was chose instead of 0.8. Using 0.50 will eventually lead to larger sample size than using 0.80, and it always good and adequate for bigger and smaller population (Dillman, 2000; Weaver, 2006; Biemer & Lyberge, 2003). B= represent the acceptable precision or error amount in the sample. These could be measured at 0.1, 0.05, and 0.03 i.e. $\pm$ 10%, 5% and 3% respectively. For this research, the acceptable precision or error amount is set at 0.005 i.e. 5%

C= stands for Z statistics related to the confidence level of 1.96 which is equal to 95% level.

Thus: N= 143, p=0.5, B=0.05, C=1.95

$$\frac{(143)(0.5)(1-0.5)}{(143-1)\left(\frac{0.5}{1.95}\right)^2+(0.5)(1.05)}$$

$$\frac{(143)(0.5)(0.5)}{(142)\ 0.000651\ +(0.5)(0.5)}$$

$$\frac{35.75}{0.0923+0.25}$$

$$\frac{35.75}{0.3423}$$

Answer = **104**

Krejcie and Morgan, (1970) has simplified this issue by providing a good sample size table that enable good decision-making. In line with their table, the sample size for 143 is 103. Furthermore, Roscoe, (1975) ruled that a sample size greater than 30 and less than 500 are surely adequate for most researches. Once more, Hair *et al*. (2010) argued that a sample size should be more than ten times of the variables of any multivariate research. Thus, this research also satisfied this requirement because there are four (4) variables for the research. Therefore, in the present study, there are four variables and the required sample should be 40 or more.

From the results of sample size computation, this research needed 104 participants to complete the survey. As shown in the formula, the sample frame was based on +5 margin errors. As it can be seen, there is no significant difference between the determined sample size of 103 using the Krejcie and Morgan, (1970) scientific guideline and 104 determined using the method suggested by Dillman (2000). Since the aim is to have a larger sample size that represent the population of the study more, the result of 104 from Dillman (2000) computation was adopted.

3.7.1 Estimating Expected Response Rate

While computation from Dillman (2000) and Krejcie and Morgan, (1970) suggest that 104 subjects would suffice for the present study, it is worth mentioning here that response rate in the context of Nigerian is very poor even among highly educated people (Asika, 1991; Ayo & Adomi, 2007; Ofo, 1994). To minimize the low response rate further, the sample size of 104 was increased by 20% as proposed by Salkind (1997). Adding this percentage to 104 gave 124. Finally, a sample size of 124 was taken to make up of uncooperative respondents and damages questionnaires. Furthermore, the oversampling was intended to ensure that the non-response bias and non-response rate has no effect on the results. In line with Babbie's (1973) argument that said 50% response rate is considered as an acceptable rate in social research surveys; this research is meant to achieve just that.

For this study, 124 questionnaires instead of 104 were distributed among the deans of the institutions. The oversampling will minimize error in sampling and it will take care of the non-response rate issue (Hair, Wolfinbarger & Ortinall 2008). Therefore, 124 numbers of questionnaires were administered. Additionally, Alrech and Settle (1995) argued that, the lower the sample size, the higher is the tendency of error, and the higher the sample, the more accurate the result will be. The oversampling will again help in making up the possible loss because of non-cooperative subjects and damages (Salkind, 1997). More so, the oversampling was meant to ensure that the non-response bias and non-response rate would not affect the results. Consistent with Babbie's (1973) argument that 50% response rate is regarded as an acceptable rate in social research surveys.

A structured self-administered questionnaire consisting of fifty-two (52) closed ended multiple choice-questions was employed for the survey. The instrument comprises fourty nine (49) questions related to the four constructs of this study and four (4) questions related to demographical variables. All the questions were prepared in the English language. English language is the medium of communication in the instrument because it is the official language in Nigeria (Bambale, 2013).

3.7.2 Sampling Technique

The sample respondents for this study are drawn from the various institutions situated in Kaduna state. The institutions were categorized into four strata: (1) universities represented by ABU and KASU; (2) polytechnics represented by KADPOLY and NBP; (3) Colleges of Education represented by FCE and COE and (4) Monotechnics represented by NCAT, COLTECH, CONAM, FCC, SICHS, WRI, NITT (Federal Ministry of Education, 2016).

Probability sampling was employed for this study. As postulated by Sekaran (2003), probability samplings possess the advantage of given equal chance to all respondents to be selected. As it gives equal opportunity to members in each population, it also avoids bias from the side of the researcher (Salkind, 2003).

3.7.3 Proportional Stratified Sampling

The adopted sampling technique in this study (i.e. stratified random sampling) is the most appropriate technique because the aim of the study is to have samples drawn from the thirteen public tertiary institutions. Stratified random sampling is usually more appropriate for a study when a researcher is dealing with subdivided population that each subdivision need to be treated as a stratum to attained estimates of known precision (Biemer & Lyberg, 2003; Sekaran, 2003). The best and most appropriate sampling to be use for this purpose is random sampling (Sekaran, 2003; Biemer &

Lyberg, 2003). The respondents will be drawn from the stratum corresponding with the total number of elements in each stratum (Table3.4)

Table 3.4
Proportionate Stratified Sampling Table

S/NO	INSTITUTIONS NAME	INSTITUTION POPULATION	PROPORTION SAMPLING
1	Ahmadu Bello University	12	10
2	Kaduna State University	9	8
3	Kaduna Polytechnic	15	13
4	Nuhu Bamalli Polytechnic	11	10
5	Federal College of Education	9	8
6	Kaduna Sate College of Education	8	7
7	Nigerian College of Aviation Technology	11	9
8	Federal College of Leather Technology	13	11
9	College of Nursing and Midwifery	10	9
10	Federal Cooperative College	11	10
11	Water Resources College	12	10
12	Nigerian Institute of Transport Technology	9	8
13	Shehu Idris College of Health Science	13	11
	TOTAL	**143**	**124**

Source: The Researcher

Looking at the classification above, a sample of respondents were selected from each institution in proportionate to its population. The essence is to give due representation for each stratum.

3.8 Questionnaire Design

The questionnaire was designed in a booklet format with graphic designed front cover page. Research gurus opined that questionnaire format, physical arrangement of items on the pages and general appearance are important in attracting respondents and success of a study (Creswell, 2003). Moreover, a well-designed and carefully constructed questionnaire facilitates the collation and analysis of the data collected as well as increasing the response rate (Cone, 2001; Trochim, 1999). Furthermore, to increase the response rate, clear and brief instructional information, coherent arrangement of questionnaire items, transitional phrases and an aesthetic arrangement of questions appear to be rewarding (Kumar, 1999).

3.9 Pilot Study

Pilot study was carried out to establish the reliability and validity of the measures (Flynn, Schroeder & Sakakibara, 1990). This is very imperative since the original scales were all virtually developed in the United Sates (Bass & Avolio, (1992); Elenkov, 2005; Hult and Hurley, 1998; Rainey, 1999; Tippins & Sohi, 2003). In conformity with Diamantopoulos and Siguaw's (1997) suggestions, 20 questionnaires were sent out for the pilot testing to the head of departments in one of the institutions under study. However, 16 questionnaires were returned given 80% respond rate.

A PLS path modelling (1985) and using Smart PLS 2.0 software (Ringle, Wende, & Will, 2005) was used to determine the composite reliability (CR) as well as the average variance extracted (AVE) as postulated by Bagozzi and Yi (1988) and Hair et al. (2011).

Table 3.6
Reliability and Validity of Constructs

Variables	No of Indicators	AVE	CR
Effective Strategy Implementation	3	852	950
IT Knowledge	6	643	822
IT Object	4	655	972
IT Operation	7	598	868
Organizational Innovativeness	10	586	973
Strategic Leadership	19	601	982

Source: The Researcher

As depicted on Table 3.6, the composite reliability coefficient (CR) for all the latent constructs falls in between .822 and .982. Thus, each exceeding the minimum acceptable level of.70. This indicates sufficient internal consistency reliability of the measures used in the pilot study (Hair *et al.*, 2011). On the other hand, Fornell and Larcker (1981) posited that .50 or more Average Variance Extracted (AVE) score suffice.

3.10 Strategy for Data Collection

To ensure timely and quick returned of questionnaires, the method of hand delivery and collection was used. This method was reported to have been efficient especially in

areas where research culture is not well developed, like Nigeria (Ringim, 2013). The response rate of mail questionnaire in Nigeria, argued Asika (1991) is between 3% and 4%. Thus, hand-to-hand delivery was considered more appropriate and was expected to give more response rate than mail survey. Another important advantage to this method is it allowed the researcher to shed more light on any grey area that the respondents could not understand, as well as served as motivator to the respondents, as his presence is expected to encourage the respondent to respond to the questions in honest opinions (Sekaran, 2003).

The survey method was adopted to gather data in relation to strategic leadership organizational innovativeness, IT capability and effective strategy implementation. Babbie (1990) suggest three aims for survey research: (1) Description aim: these deals with information and characteristics of respondents; (2) Explanatory aim: aimed at enlightening the populace through investigating the relationship among variables; (3) exploratory aim: this consist of search for a new fact on a area. This research tends to be more descriptive a and explanatory in nature because it involves sorting out the characteristics and attribute of respondents as well as providing an insight into the investigation of the relationship among the various variables of the study.

For this study, the real data collection begins a month after the proposal defence. It lasted for seven months (i.e., December 15, 2015 to June 28, 2016). At the beginning, an official letter introducing the researcher was collected from Othman Yeop Abdullah

Graduate School of Business (OYAGSB) UUM. The letter also explains the purpose of the study. One of the serious problems came across with during the data collection exercise was related to geographical location of the institutions under study. Some of the institutions were sparsely located in remote areas of the state. A typical instance here is Kaduna Sate College of Education (COE). The institution is located as far as 208 kilometres away from the city. Another important problem worth mentioning encountered during the data collection exercise must do with the time taken before the completed questionnaires were collected back. This might not be unconnected with the nature and calibre of the respondents (deans in tertiary institutions). This problem was very glaring despite the use of SMS, Whatsapp messages, phone calls and frequent visits to the participated institutions to facilitate the data collection exercise.

3.11 Method of Data Analysis

After the completion of data collection, combinations of both descriptive and inferential statistics were employed as methods of data analysis in this study. The PLS SEM approach was employed for the analysis.

PLS SEM 2 technique is also referred to as the second-generation structural equation modelling (Wold, 1982). The somewhat new technique works well with structural equation models that contain latent variables and a series of cause-and-effect relationships (Gustafsson & Johnson, 2004). The PLS SEM approach is a good and

flexible tool for statistical model building as well as prediction (Ringle, Wende, & Will, 2012). Specifically, the PLS technique was used for this research because:

1. structural equations models have been demonstrated to be superior models that perform estimations better than regressions for assessing intervening variables (Brown, 1997; Iacobucci, Saldanha, & Deng, 2007; Mattanah, Hancock, & Brand 2004; Preacher & Hayes, 2004). It has been reported that PLS SEM accounts for measurement error and can provide more accurate estimates of mediating and moderating effects (Chin, 1998).

2. PLS path modelling has becomes more appropriate for real world applications and more advantageous to use when models are complex (Fornell & Bookstein, 1982; Hulland, 1999). The soft modelling assumptions of PLS technique (i.e., ability to flexibly develop and validate complex models) gives it the advantage of estimating large complex models (Akter, Ambra & Ray 2011).

3. Most social science studies, data tend to have normality problem (Osborne, 2010) and PLS path modelling does not necessarily require data to be normal (Chin, 1998). In other words, PLS treats non-normal data relatively well (Hair, Hult, Ringle & Sastedt, 2017). By and large, PLS path modelling was selected for this study to help avoid any normality problem that might arise during data analysis for the current research.

4. PLS SEM offers more meaningful and valid results, while other methods of analysis such as software package used for statistical analysis (SPSS) often result in less clear conclusions and would require several separate analyses

(Bollen, 1989). Additionally, Tabachnick and Fidel (2007) state that SEM is one of the most powerful statistical tools in social and behavioural sciences that have the ability of testing several relationships simultaneously.

Regarding this study, Smart PLS path modelling was used to establish measurement and structural models. Measurement model was used to explain or assess constructs' reliability and validity of the current study. Secondly, structural model was used to conduct bivariate correlation analysis and simultaneous regressions analyses to establish correlations, and relationship effects among constructs under investigation. Additionally, using the PLS mechanisms of algorism and bootstrapping, the effects of IT capability (medirator) on the relationship between strategic leadership, organizational innovativeness and effective strategy implementation was analysed.

3.12 Summary of Chapter

The chapter described the methodology of the employed by the study. These include the research design, measurement of variables, population of the study, sampling, data collection procedures and techniques of data analysis. The current study also employs cross sectional research design in which data collected were analysed and interpreted statistically. The unit of analysis in this study was public tertiary institutions located in Kaduna state, Nigerian. A proportionate random sampling technique was used in the study. Measurement scales from the previous studies were adapted to measure the

four constructs: strategic leadership, organizational innovativeness, IT capability and effective strategy implementation. In the next chapter, results of the analyses are presented.

CHAPTER FOUR

RESULTS

4.1 Introduction

The chapter presents the results obtained from the data analysed using PLS 2 path modelling. The chapter commence by presenting the data screening and preliminary analysis of the study. Results from the descriptive statistics for the entire latent variables were reported. Next to that is the most important, which is the main results of the present study. The results were presented in two main sections. Section one consist of the measurement model in which individual item reliability, convergent validity, internal consistency as well as discriminant validity were assessed. Section two present the results of the structural model. This comprise of level of the R-squared values, significance of the path coefficients, effect size, and predictive relevance of the model. Lastly, result that examines the moderating information technology capability was presented.

4.2 Response Rate

A total of 124 questionnaires were administered to the deans of public tertiary institutions located in Kaduna sate of Nigeria. As a strategy to achieve a high response rates, the researcher engages in follow ups as well as numerous phone calls of reminder (Traina, MacLean, Park, & Kahn, 2005; Salim Silva, Smith, & Bammer, 2002). Short

messages system (SMS) was also used (Sekaran, 2003). The researcher retrieved few of the respondents respond to the questionnaire instantly, others after some weeks, while some took several months before they were retrieved. In the end, 112 questionnaires were duly completed and returned. This represent 91.1% percent response rate. This shows the study has succeeded in attaining high response rate despite the response rate in Nigeria as lamented by the literature. Other studies conducted in Kaduna state attained similar high response rate. For example, Ishaya and Abaje (2008) indicated 95% response rate; Abaje et al. (2015) showed 90% response rate; Dahiru and Oche (2015) posed 95% response rate and lastly Nassa et al (2016) attained 98% response rate. In the end, 108 questionnaires were finally considered for analysis, as indicated in table 4.1. A total of 4 responses were excluded from the analysis because of both univariate and multivariate issues. Isolating such number of questionnaires is considered essential as they do not represent the actual sample (Hair et al., 1998).

Table 4.1
Response Rate

Response Rate	**Frequency/Rate**
No of administered Questionnaires	124
No of Returned Questionnaires	112
No of Returned Usable Questionnaires	108
No of Returned Excluded Questionnaires	12
No of Not Retuned Questionnaires	11
Response Rate	91%
Valid Response	96%

Source: The Researcher

4.3 Non- Response Bias

Non-response bias is expressed as the mostly common mistakes a researcher anticipated in estimating the characteristics of sample since some group of respondents are underrepresented because of non-response (Berg, 2002). Singer (2006) posited that there is no minimum response rate below which a survey estimates will be said that there is no biased, and no response rate beyond which it is no biased. Nevertheless, no matter how small non-response is, potentiality of having bias exist, and it is needs to be investigated (Pearl & Fairly, 1985; Sheikh, 1981). For the sake of testing non – response bias, extrapolation method was employed as suggested by Armstrong and Overton (1977). Respondents were categorised into two based on their response to survey questionnaire in which the four major study variables (strategic leadership, organizational innovativeness, It capability and effective strategy implementation).

One of the techniques available for testing non-response bias is to match up the responses of respondents to the questionnaire administered early (Lin & Schaeffer, 1995; Armstrong & Overton, 1977). The current study divided the respondents into two main segments: those who answered the questionnaire within 60 days (i.e., early respondents) and those who answered after 60 days (i.e., late respondents). Majority of the respondents in the sample; that is 71 (65.7%) responded to the within 60 days, while the remaining 37, representing 34.3% responded after 60 days. Nonetheless,

the respondents that respond late after March 2016 are a sample of non-respondents to the first questionnaire administered, and that was expected to be the representative of the non-respondents group (Oppenheim, 1966).

Table 4.2
Response Bias Test

GROUP		N	Mean	Std. Deviation	Levene's Test for Equality of Variances F	Sig.
Effective Strategy Implementation	Early response	71	3.787	1.028	1.247	.267
	Late response	37	4.059	1.278		
Organizational Innovativeness	Early response	71	3.898	.829	.910	.342
	Late response	37	3.950	1.031		
Strategic Leadership	Early response	71	4.046	.779	.206	.651
	Late response	37	4.111	.859		
IT Knowledge	Early response	71	4.317	.951	.160	.690
	Late response	37	4.435	.835		
IT Object	Early response	71	4.184	1.003	.253	.616
	Late response	37	4.192	.907		
IT Operation	Early response	71	4.205	.951	.052	.820
	Late response	37	4.073	.976		

Source: The Researcher

As depicted in Table 4.2, the results of independent-samples t-test shows that the equal variance significance values for each one of the four main study variables were greater than the 0.05 significance level of Levene's test for equality of variances as posited by Pallant (2010) and Field (2009). Thus, this indicates that the study conforms to the assumption of equal the variances between early and late respondents. Due to this, it can be concluded that non-response bias was not a major

issue in this study. More so, adhering to Lindner and Wingenbach's (2002) suggestion, since this study attained 91% response rate, it can be reaffirmed that the problem of non-response bias does not appear to be a serious concern.

4.4 Data Cleaning

Data cleaning is essential in conducting multivariate analysis. This is because for any quality and meaningful outcome from the analysis depend on the data screening and editing (Pallant, 2011). Thus, missing data and outliers were thoroughly checked and treated

Table 4.3
Missing values

Latent Variables	**Number of Missing values**
Strategic leadership	24
Organizational innovativeness	10
IT Objects	7
IT Knowledge	5
IT Operation	6
Effective Strategy Implementation	5
Total	**57 out of 5,724 data points = 0.99%**

Source: The Researcher

Moreover, researchers have argued that mean substitution is the simplest way to replace missing values, precisely if the sum of the percentage of missing data is 5% or less (Little & Rubin, 1987; Tabachnick & Fidell, 2007). Thus, in this research, randomly missing values were replaced employing mean substitution (Tabachnick & Fidell, 2007). Table 4.3 above indicate the total of randomly missing values.

4.4.1 Outliers

As posited by Byrne (2005) outliers as those cases whose contents are significantly dissimilar from the remaining given set of data. Tabachinich and Fidell (2007) recommend that identification of univariate outlier should be through observation of z score. The z score for all item must fall between the range of ±3. 29 (0.001 sig. level). According to investigation, any value exceeding ±3.29 were due to some errors of data entry. A total of 54 cases of univariate outliers was recorded. Again, Mahanalobis distance was investigated to identify multivariate outliers. Cases with Mahalanobis distance more than 71 at 0.001 degree of freedom are removed. Hence, cases 31, 33, 45, 109, 285, 298, 356, 415, 437 were deleted because they exceeded the critical value of 113.56. Mahalanobis distance was conducted again and no outlier issue was found in the data set.

4.4.2 Test of Multicollinearity

Multicollinearity is a situation where one or more exogenous latent variables become highly correlated. The existence of multicollinearity among exogenous latent variables can seriously alter the estimates of regression coefficients as well as their statistical significance tests (Hair, Black, Babin, Anderson, & Tatham, 2006). Specifically, multicollinearity raises the standard errors of the coefficients, and consequently renders the coefficients statistically non-significant (Tabachnick &

Fidell, 2007). To spot multicollinearity among the exogenous latent variables, two methods were used in the present study (Peng & Lai, 2012). Firstly, the correlation matrix of the exogenous latent constructs was investigated. Hair *et al.* (2010), argued that correlation coefficient of 0.90 and above suggest multicollinearity between exogenous latent variables. Table 4.4 shows the correlation matrix of all the exogenous latent variables.

Table 4.4
Correlations Matrix of the exogenous latent variables

Variables	**Information Communication Capability**	**Organizational Innovativeness**	**Strategic Leadership**
Information Technology Capability	1		
Organizational Innovativeness	.625**	1	
Strategic Leadership	.663**	.841**	1

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

As depicted in Table 4.4 above, the correlation between the exogenous variables were below the suggested threshold values of .90. This signifies that the exogenous latent variables were independent as well as not highly correlated.

More so, examining the of correlation matrix for the exogenous latent variables using variance inflated factor (VIF), tolerance value and condition index were look at to discover if there was multicollinearity problem. Multicollinearity is said to be a

concern if values of the VIF are greater than 5, tolerance value and less than .20 (Hair, Ringle & Sarstedt, 2011). Table 4.5 depicted the VIF values, tolerance values, and condition indices for the exogenous latent variables.

Table 4.5
Tolerance and VIF Values of the latent constructs

Dependent Variable	**Independent Variable**	**Collinearity Statistics**	
		Tolerance	**VIF**
Information Technology Capability	Organizational Innovativeness	.297	3.364
	Strategic Leadership	.297	3.364
Strategic Leadership	Information Technology Capability	.610	1.640
	Organizational Innovativeness	.610	1.640
Organizational Innovativeness	Information Technology Capability	.563	1.776
	Strategic Leadership	.563	1.776

Source: The Researcher

Table 4.5 suggest non-existence of multicollinearity among all the exogenous latent variables. Hence, multicollinearity is not an issue in the present study

4.4.3 Common Method Variance Test

Common method variance (CMV), is refers to "variance that is attributable to the measurement method rather than to the construct of interest" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). Researchers have normally agreed that common method variance is a major issue for scholars using self-report surveys (Lindell & Whitney, 2001; Spector, 2006; Podsakoff *et al*., 2003). For instance,

Conway and Lance (2010) declared that "common method bias inflates relationships between variables measured by self-reports" (p. 325).

The present study employed number of remedies to reduce the effects of CMV to barest minimum (MacKenzie & Podsakoff, 2012; Viswanathan & Kayande, 2012; Podsakoff et al., 2003; Podsakoff, MacKenzie, & Podsakoff, 2012). Toward this direction, the researcher tried to reduce the respondent's apprehension by assuring them that there is no right or wrong answer to the items in the questionnaire. They were also assured of their confidentiality in terms of their identity as well as the answers that they are going to give. Also in line with the target, scale improvement of items was used. This was attained by avoiding fuzzy concepts in the survey. To further enhance scale items, all items in the survey were put in a simple, precise and concise language.

4.5 Descriptive Statistics of the Respondents

Table 4.4 depicted the demographic characteristics of respondents. The respondents were asked to state some of their demographic information, which encompasses gender, age, education, years in office, and category of institution, portfolio.

Table 4.6
Respondents Demographic Information

	Frequency	Percentage	Cumulative Percentage
GENDER			
MALE	94	87.0	87.0
FEMALE	14	13.0	100.0
AGE			
21-30 Years	5	4.6	4.6
31-40 Years	17	15.7	20.4
41-50 Years	50	46.3	66.7
51-ABOVE Years	36	33.3	100.0
QUALIFICATION			
FIRST DEGREE	24	22.2	22.2
MASTER DEGREE	43	39.8	62.0
PHD	25	23.1	85.2
ASSO. PROFESSOR	5	4.6	89.8
PROFESSOR	11	10.2	100.0
CATEGORY OF INSTITUTION			
UNIVERSITY	16	14.8	14.8
POLYTECHNIC	19	17.6	32.4
MONOTECHNIC	60	55.6	88.0
COLLEGE OF EDUCATION	13	12.0	100.0
TOTAL	**108**	**100.0**	

Source: The Researcher

As displayed in Table 4.4, most of the respondents amounting to 94 representing 87% are males while only 14 respondents i.e 13% are females. Previous studies also indicate similar distribution as far as gender of the respondents is concerned. For instance, study by de- Lara and Tacoronte (2007) reveals that majority of faculty at a university were males with 64.6%, females stand at 35.4% only. Another reason may for males

being the dominants gender among the respondents over females may be connected to Northern Nigeria's culture, in which Kaduna State falls, where larger percentage of females are not part of the working class. Literature asserted that less than 20% of women in the North-Western Nigeria have attended school western education (UNICEF, 2007).

Concerning the age group of the respondents, 5% of the age were between 21-30 years. This was followed by those at the age group of 31-40 years representing 4.5% that stands for 17 respondents. For the age that ranges from 41-50 years, there were 50 respondents, amounting to 46.3% of the sample. The last age group ranges between 51 years and above. They represent 33.3%, which are 36 respondents. This suggest that 78% of the respondents are above fourty years of age. This may not be unconnected with portfolio of the respondents (deans in tertiary institutions). Usually one should put some reasonable number of years working before later grew an clinch exalted position in an organization.

Additionally, in terms of education qualification, Table 4.4 shows that 22.2% of the participants held first degree. Then followed by those with masters which stands at 39.8%; those with Phd degree amounted to 23.1%; while those at the professorial cadre (Associate professors and Professors) represent 4.6 and 10.2% respectively. This implies that majority of the respondents amounting to 84% either possess first or second degree. The reason behind this is the minimum teaching qualification in

Nigerian Polytechnics, Colleges of Education and Monotechnics is first degree (NBTE, 2016; NCCE, 2016). Polytechnics, Colleges of Education and Monotechnics represent 84% of institutions in this study.

Additionally, Table 4.4 suggest that the two (2) Universities located in the area under study represent only 14%. Polytechnics stand for 17.6%; followed by colleges of education with 12%; and finally, monotechnics have the highest number of 6 institutions representing 55.6%. Universities has least percentage since establishment of university is more rigorous and more capital intensive, in contrast to the establishment of Polytechnics, Colleges of Education or Monotechnics.

4.6 Latent Variables Descriptive Statistics

Descriptive statistics for the latent construct used in this study were computed in the form of means and standard deviations. The statistical values of means, standard deviation, were calculated for the independent, dependant as well as moderating constructs. The results of these statistical values are depicted in Table 4.5. All the constructs have been measured on a six-point scale.

Table 4.7
Descriptive Statistics of Constructs

Variable	N	Mean	Std. Deviation
Effec. Strategy Implementation	108	3.880	1.121
ITC Knowledge	108	4.358	.911
ITC Object	108	4.187	.967
ITC Operation	108	4.160	.957
Organizational Innovativeness	108	3.915	.899
Strategic Leadership	108	4.068	.804

Source: The Researcher

The most popular measure of central tendency is the mean, which refers to the average value of the data set (Sekaran & Bougie, 2010). Standard deviation is a measure of spread or dispersion, which gives an index of variability in the data set and it is the square root of variance. Taken together, mean and standard deviation are basic descriptive statistics for interval and ratio scales. This study used six point Likert scale, and Nik, Jantan and Taib (2010) interpretation of the level of score is adapted. They suggested that scores of less than 2.33 are low level; 2.33 to 3.67 are moderate level' while 3.67 and above are regarded as high level. Table 4. 5 above presents the mean and standard deviation of the entire variables used in this study. IT knowledge recorded the highest mean (M = 4.358, SD = 1.121) while effective strategy implementation has the lowest mean (M = 3.880, SD = 1.121). Conclusively, the entire variables mean were in the range of high level.

4.7 Assessment of PLS-SEM Path Model Results

This study employed a two-step process in evaluating and reporting the results of PLS-SEM path, as proposed by Henseler, Ringle and Sinkovics (2009). These two steps comprise of firstly assessing the measurement model, and secondly assessing the structural model.

4.7.1 Assessing the measurement model

An assessment of a measurement model connotes determining individual item reliability, content validity, internal consistency reliability, convergent validity as well as discriminant validity (Henseler *et al*., 2009; Hair *et al*., 2014; Hair *et al*., 2011;). Discriminant validity can be assessed by comparing the indicator loadings with cross-loadings (Chin, 1998). To attain sufficient discriminant validity, all the indicator loadings should be higher than the cross-loadings.

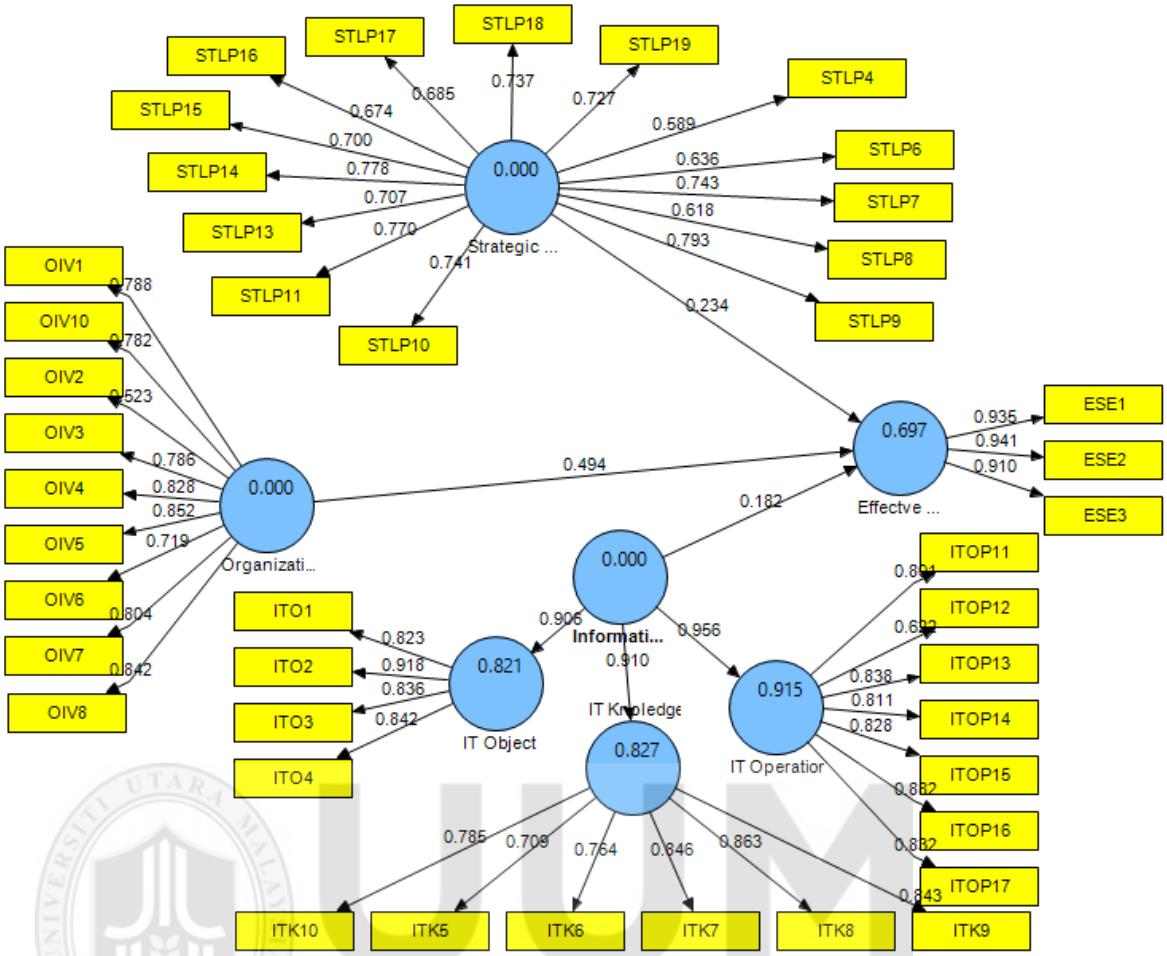

Figure 4.1

Measurement Model

4.7.2 Individual Item Reliability

The reliability of individual items was ascertained by looking the outer loadings of every construct's measure (Hair *et al.*,2014; Hair *et al.*, 2012; Duarte & Raposo, 2010). Adhering to the rule of thumb for keeping items with loadings that ranges between .40 and .70 (Hair *et al.*, 2014), it was discovered that out of 48 items, 5 items were deleted

because their loading fall short below the threshold of 0.40. Hence, in the whole model, only 43 items were retained because their loadings are above 0.50.

Table 4.8
Cross Loadings

Items	Effective Strategy Implementation	IT Knowledge	IT Object	IT Operation	Org. Innovativeness	Stra. Leadership
ESI1	**.935**	.511	.564	.648	.754	.726
ESI2	**.941**	.504	.547	.623	.732	.698
ESI3	**.910**	.455	.499	.606	.758	.723
ITC10	.538	**.785**	.624	.720	.508	.592
ITC5	.299	**.709**	.533	.500	.354	.325
ITC6	.306	**.764**	.561	.547	.368	.376
ITC7	.427	**.846**	.594	.668	.495	.542
ITC8	.410	**.863**	.567	.633	.448	.516
ITC9	.525	**.843**	.641	.713	.540	.523
ITC1	.523	.681	**.823**	.647	.451	.492
ITC2	.504	.616	**.918**	.759	.448	.511
ITC3	.492	.588	**.836**	.733	.479	.539
ITC4	.457	.622	**.842**	.694	.509	.498
ITC11	.483	.637	**.726**	**.801**	.493	.534
ITC12	.336	.606	.533	**.622**	.296	.274
ITC13	.581	.645	.701	**.838**	.529	.587
ITC14	.630	.559	.613	**.811**	.531	.502
ITC15	.609	.651	.711	**.828**	.560	.590
ITC16	.625	.693	.713	**.882**	.535	.584
ITC17	.508	.665	.655	**.832**	.492	.501

Cross Loadings (Cont.)

Items	Effective Strategy Implementation	IT Know.	IT Obj.	IT Oper.	Org. Innovativeness	Strategic Leadership
OIV1	0.651	0.466	0.429	0.477	**0.788**	0.696
OIV10	0.623	0.429	0.367	0.432	**0.782**	0.625
OIV2	0.457	0.266	0.333	0.432	**0.523**	0.444
OIV3	0.605	0.445	0.43	0.464	**0.786**	0.672
OIV4	0.746	0.55	0.597	0.601	**0.828**	0.722
OIV5	0.664	0.422	0.461	0.5	**0.852**	0.699
OIV6	0.543	0.364	0.312	0.381	**0.719**	0.602
OIV7	0.615	0.43	0.417	0.454	**0.804**	0.651
OIV8	0.663	0.535	0.442	0.518	**0.842**	0.708
STLP10	0.568	0.507	0.411	0.486	0.582	**0.741**
STLP11	0.615	0.498	0.484	0.552	0.634	**0.774**
STLP13	0.585	0.539	0.48	0.469	0.596	**0.707**
STLP14	0.58	0.433	0.406	0.493	0.658	**0.778**
STLP15	0.572	0.323	0.342	0.408	0.562	**0.767**
STLP16	0.483	0.277	0.324	0.388	0.567	**0.674**
STLP17	0.507	0.482	0.457	0.432	0.582	**0.685**
STLP18	0.587	0.514	0.576	0.605	0.684	**0.737**
STLP19	0.623	0.625	0.621	0.564	0.684	**0.727**
STLP4	0.353	0.329	0.357	0.297	0.444	**0.589**
STLP6	0.501	0.367	0.438	0.441	0.524	**0.636**
STLP7	0.527	0.404	0.376	0.407	0.613	**0.743**
STLP8	0.426	0.272	0.236	0.292	0.529	**0.618**
STLP9	0.653	0.359	0.376	0.438	0.644	**0.793**

Source: The Researcher

Convergences as well as discriminant validity are sub-categories of construct validity. It tries to find out the agreement between a theoretical concept and specific measuring instruments. Specifically, it assesses if the measurement scales correspond and act like the attributes (Tore, 2005). As posited by Hair et al., (2010), the factor loadings, average variance extracted and composite reliability are used to assessed the convergence validity. Convergence validity is attained if all the measures that imply to reflect a construct are really related.

Conventionally, individual loadings and cross loadings are first to be examined for detection of issues with any item and for being condition for establishing convergence validity. Table 4.8 displays the loadings and cross loadings of items in their respective constructs of the study. As shown in Table 4.8, all the indicators loaded on their respective constructs ranges from lower bound of 0.523 to an upper bound of 0.941. More so, all the items loaded more highly on their respective constructs compared to another construct.

Table 4.9 depicts the results of AVE calculations with resulting coefficients that range from 0.50 to 0.86, signifying that convergence validity has been attained for all the variables. By obtaining the results of the convergence validity that signifies satisfactory item loadings, composite reliability satisfactory AVE coefficients for the individual indicators, it was clearly enough to prove that the items stand for distinct latent constructs, therefore establishing their convergence valid

Table 4.9
Items loadings, Average Variance Extracted (AVE) and Reliabilities

Variable	**Code**	**Loadings**	**AVE**	**Composite Reliability**	**Cronbachs Alpha**
Effective Strategy Implementation	ESI1	0.935	0.863	0.95	0.92
	ESI2	0.941			
	ESI3	0.91			
IT Capability	ITK10	0.785	0.645	0.916	0.889
	ITK5	0.709			
	ITK6	0.764			
	ITK7	0.846			
	ITK8	0.863			
	ITK9	0.843			
IT Capability	ITO1	0.823	0.732	0.916	0.877
	ITO2	0.918			
	ITO3	0.836			
	ITO4	0.842			
IT Capability	ITOP11	0.801	0.649	0.928	0.908
	ITOP12	0.622			
	ITOP13	0.838			
	ITOP14	0.811			
	ITOP15	0.828			
	ITOP16	0.882			
	ITOP17	0.832			
Organizational Innovativeness	OIV1	0.788	0.601	0.93	0.914
	OIV10	0.782			
	OIV2	0.523			
	OIV3	0.786			
	OIV4	0.828			
	OIV5	0.852			
	OIV6	0.719			
	OIV7	0.804			
	OIV8	0.842			

Items loading, Average Variance Extracted (AVE) and Reliabilities (Cont.)

Variable	Code	Loadings	AVE	Composite Reliability	Cronbachs Alpha
Strategic Leadership	STLP10	0.741	0.503	0.934	0.923
	STLP11	0.77			
	STLP13	0.707			
	STLP14	0.778			
	STLP15	0.7			
	STLP16	0.674			
	STLP17	0.685			
	STLP18	0.737			
	STLP19	0.727			
	STLP4	0.589			
	STLP6	0.636			
	STLP7	0.743			
	STLP8	0.618			
	STLP9	0.793			

Source: The Researcher

On the other hand, discriminant validity implies that measures that should not be related are not related. To ascertain the discriminant validity, the square root of the AVE for individual construct is used (Fornell, & Larcker, 1981). The square roots of AVE coefficients are then depicted in the correlation matrix along the diagonal. The AVE squire root should be above the squared correlation estimates to give good justification of discriminant validity (Hair *et al*., 2006). More specifically, to establish sufficient discriminant validity, the diagonal elements must be greater than the off-diagonal coefficients or elements in the parallel rows and columns.

The results of the constructs discriminant validity analysis used in this study is displays Table 4.8. Beside the diagonal, the table depicts square roots of AVE for all the variables connoting higher square roots of AVE for (0.94), as well as lower AVE for (0.77). Nevertheless, all the square roots of AVE for the constructs on the table are greater than the off-diagonal elements in the corresponding rows and columns, hence, establishing a proof of discriminant validity.

Table 4.10

Latent Variable Correlations of the first-order variable

Variables	**1**	**2**	**3**	**4**	**5**	**6**
1. Effectiv Strategy Implementation	**.929**					
2. ITC Knowledge	.527	**.803**				
3. ITC Object	.578	.732	**.856**			
4. ITC Operation	.674	.791	.729	**.806**		
5. Organizational Innovativeness	.805	.569	.551	.614	**.775**	
6. Strategic Leadership	.771	.604	.596	.641	.541	**.709**

Note: The bold values across diagonal are the square root of AVE, while off diagonal values are the correlations among variables.

Conclusively, the results shown in Tables 4.6, 4.7 and 4.8 suggests that the measures for all the four constructs comprising of strategic leadership, organizational innovativeness, effective strategy implantation and information technology capability are valid measures of their respective constructs based on their parameter estimates and statistical significance (Chow & Chan, 2008).

4.8 Assessment of Significance of the Structural Model

Having assessed the measurement model, then, the present study ascertains the structural model. The study applied the standard bootstrapping benchmark of 5000 bootstrap samples to examine significance of the path coefficients (Hair *et al*., 2014; Hair *et al.*, 2011; Hair *et al.*, 2012). Figure 4.7 and Table 4.13 thus show the estimates for the compete structural model, which consist of the moderating variable

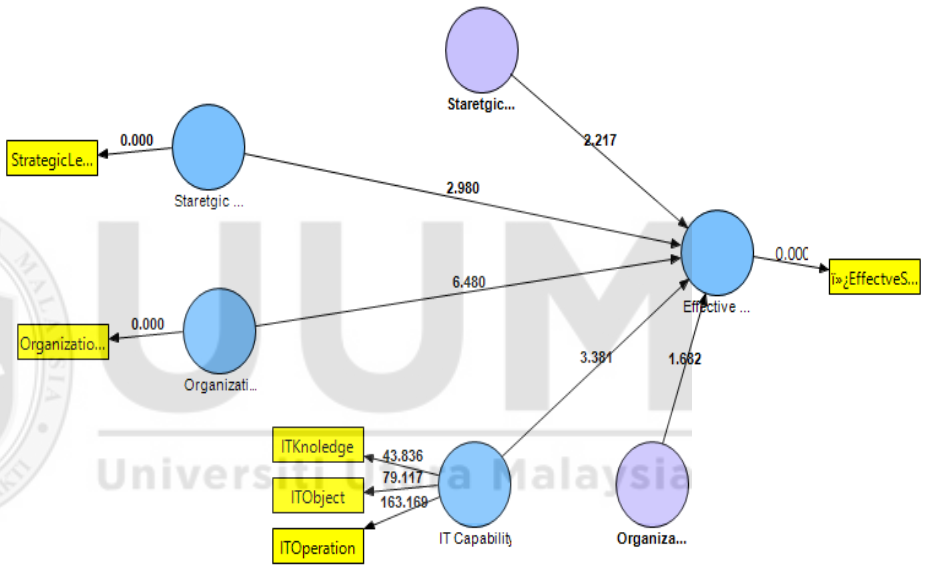

Figure 4.2

Structural Model with Moderator (Full Model)

Hypothesis 1 assumed that strategic leadership (SLP) is positively related to effective strategy implementation (ESI). The result displayed on Table 4.9, indicated that strategic leadership had a significant positive effect on effective strategy implementation at (β = .235, t = 1.861, p < .033). Hence, supporting the Hypothesis.

Table 4.11

Hypotheses Testing

Relationship	**Beta value**	**Standard Error**	**t value**	**p value**	**Decision**
Strategic Leadership -> Effective Strategy Implementation	.235	.126	1.861	.033**	Supported
Organizational Innovativeness -> Effective Strategy Implementation	.495	.122	4.051	.000***	Supported
Information Technology Capability -> Effective Strategy Implementation	.181	.087	2.083	.020**	Supported
Organizational Innovativeness * IT Capability -> Effective Strategy Implementation	-.153	.091	1.682	.048	Not supported
Strategic Leadership * IT Capability -> Effective Strategy Implementation	.226	.102	2.217	.014**	Supported

***p<.01, **p<.05

Source: The Researcher

Hypothesis 2 predicted that organizational innovativeness (OIV) has positive effect on effective strategy implementation (ESE). More so, Figure 4.2 suggest the existence of positive effect of organizational innovativeness on effective strategy implementation (β = .495, t = 4.05, p< 0.00), supporting Hypothesis 2. Again, Hypothesis 3 proposed that information technology capability (ITC) is positively related to perceived effective strategy implementation. The result again supported this preposition with value of (β = .181, t= 2.083, p< 0.020). Thus, Hypothesis 3 is supported.

On the contrary, the moderating effect of information technology capability (ITC) on organizational innovativeness (OI) and effective strategy implementation (ESI) was found to be not supporting Hypothesis 4. The result outcome on Table 4.9 shows negative effect of moderation between organizational innovativeness and effective strategy implementation at (β = - .153, t = 1.682, p < .048). On the other hand, Hypothesis 5 predicted that information technology capability (ITC) moderates the effect between strategic leadership (SLP) and effective strategy implementation (ESI). Outcomes from the result on Table 4.9 suggested positive effect on the moderation of information technology capability on the relationship between strategic leadership and effective strategy implementation (β = .226, t = 2.217, p < .014). This indicated support for Hypothesis 5.

4.8.1 Assessing the Variance Explained in the Latent Variables

Another important yardstick for examining PLS- SEM structural model is the *R*squared Value. It also called the coefficient of determination (Hair *et al.*, 2011; Hair *et al.*, 2012; Henseler *et al*., 2009). The *R*-squared value stands for the share of variation in the dependent variable that can be described by one or more predicting variable (Elliott & Woodward, 2007; Hair et al., 2010; Hair et al., 2006). Even though the acceptable level of *R2* value depends on the context of the research (Hair *et al*., 2010). However, Falk and Miller (1992) posited that *R*-squared value of 0.10 is a minimum acceptable level. Again, Chin (1998) opined that 0.67, 0.33, and 0.19 *R*-

squared value in PLS-SEM can be regarded as substantial, moderate, as well as weak, respectively. Table 4.10 depicts the *R*-squared values of the latent variable.

Table 4.12
Variance Explained

Endogenous Variable	**R Square**
Effective Strategy Implementation	.697

As shown in Table 4.10 above, the research model explains 70% of the total variance in effective strategy implementation. This indicates that the three set of the latent variables of strategic leadership, organizational innovativeness and information technology capability jointly explain 70% of the variance of effective strategy implementation. Thus, adhering to Falk and Miller's (1992) and Chin's (1998) criteria, the latent variable showed .697 or .70% acceptable levels of *R*-squared values, which was regarded as substantial.

4.8.2 Assessing the Effect Size (f2)

Effect size explains the relevant effects of an exogenous latent variable on indigenous latent variable by means of changes in the *R*-squared (Chin, 1998). The effect size could be computed using the following formula (Selya, Rose, Dierker, Hedeker, & Mermelstein, 2012; Wilson, Callaghan, Ringle, & Henseler, 2007):

Effect size: $f2$ $\frac{R2\ \text{Included} - \text{R2 Excluded}}{1 - \text{R2 Included}}$

Cohen (1988) posited that $f2$ values that stands for 0.02, 0.15 and 0.35 are having small, moderate, strong effects respectively. Table 4.11 shows the individual effect sizes of the latent variables of the structural model.

Table 4.13
f^2 - Effect Size

Endogenous Variable	**Exogenous Variable**	**R-squared Included**	**R-squared Excluded**	**f-squared**	**Effect size**
Effective Strategy Implementation	Strategic Leadership	.696	.682	.046	Small
	Organizational Innovativeness	.696	.627	.227	Medium
	Information Technology Capability	.696	.679	.056	Small

Source: The Researcher

As displayed in Table 4.11, the effect sizes for strategic leadership and information technology capability on effective strategy implementations were 0.046, and 0.056, respectively. Thus, adhering to Cohen's (1988) rule, the effects sizes of these two exogenous latent variables on effective strategy implementation could be regarded as small. On the other hand, medium effect was recorded on organizational innovativeness with the value of 0.272. Thus, based on Cohen's (1988) guidelines for interpreting effect size, the results here in suggest that the effects sizes of these three

exogenous latent variables on effective strategy implementation can be considered as small, and medium.

4.8.3 Assessment of Predictive Relevance

This study equally employed Stone-Geisser test of predictive relevance of using blindfolding procedures as suggested by Geisser, (1974) and Stone, (1974). Duarte & Raposo, (2010) argued that the test is an additional assessment of goodness-of-fit in PLS-SEM. Despite to the fact that blindfolding is used to assess the predictive relevance of the research model, it is equally important to note that Sattler, Völckner, Riediger and Ringle (2010) posted that "blindfolding procedure is only applied to endogenous latent variables that have a reflective measurement model operationalization" (p. 320). Reflective measurement model "specifies that a latent or unobservable concept causes variation in a set of observable indicators" (McMillan & Conner, 2003, p. 1). Thus, because all endogenous latent variables in this study were reflective, a blindfolding procedure was applied purposely to them.

Table 4.14

Cross Validate Redundancy (Q^2)

Total	**SSO**	**SSE**	**1-SSE/SSO**
Effective Strategy Implementation	108.000	35.137	.675

Cross-validated redundancy measuring (Q^2) was applied to examine the predictive relevance of the research model (Chin, 2010; Hair *et al.*, 2013; Stone, 1974). The Q^2

is a measure to evaluate how worthy a model is in predicting the data of omitted cases (Chin, 1998; Hair *et al*., 2014). Henseler *et al.* (2009), argued that a research model with *Q2* statistic (s) greater than zero is regarded to have predictive relevance; while a research model with higher positive *Q2* values connotes more predictive relevance. Table 4.12 depicts the outcome of the cross-validated redundancy Q^2 test. The cross-validation redundancy measure Q^2 for the endogenous latent variable is more than zero, indicating predictive relevance of the model (Chin, 1998; Henseler *et al.*, 2009).

4.9 Testing the Moderating Effect

The present study used a product indicator technique using PLS-SEM to detect and estimate the strength of the moderating effect of IT capability on the relationship between strategic leadership, organizational innovativeness and strategy implementation (e.g. Chin et al., 2003; Helm, Eggert, & Garnefeld, 2010). The product term technique is considered suitable in this study because the moderating variable is continuous (Rigdon, Schumacker, & Wothke, 1998).

Table 4.15

Hypotheses Testing - Moderating Relationship

Relationship	Beta value	Standard Error	t value	p value	Decision
Strategic Leadership * IT Capability -> Effective Strategy Implementation	.226	.102	2.217	.014	Supported
Organizational Innovativeness * IT Capability -> Effective Strategy Implementation	-.153	.091	1.682	.048	Not supported

Source: The Researcher

According to Henseler and Fassott (2010) "given that the results of the product term approach are usually equal or superior to those of the group comparison approach, we recommend always using the product term approach" (p. 721). Furthermore, to determine the strength of the moderating effects, the current study employed Cohen's (1988) guidelines for determining the effect size (Table 4.11). Information obtain from the path coefficients was employed to plot the moderating effect of on the relationship between IT capability and strategic leadership, following the procedures recommended by Aiken and West (1993), Dawson and Richter (2002) and Marcus et al., 2002).

In the current study, Hypothesis 4 stated that IT capability moderates the effect between strategic leadership and effective strategy implementation. As expected, the results displayed in Table 4.13, Figure 4.3 suggest that the interaction terms representing strategic leadership x IT capability ($\beta = .226$, $t = 2.217$, $p < 0.14$) was statistically significant. Hence, Hypothesis 4 was supported.

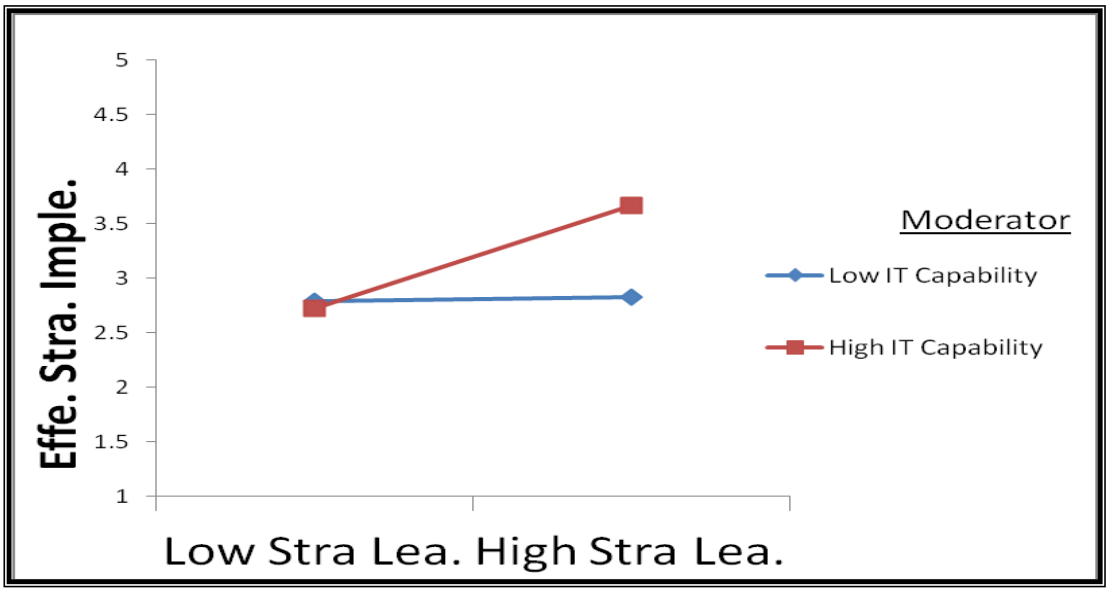

Figure 4.3

Interaction Effect of Strategic Leadership and IT Capability on Effective Strategy Implementation

4.10 Summary of Chapter

Following the assessment of significance of the path coefficients, the key findings of the study were presented in this chapter. In general, self-report techniques have offered a reasonable support for the moderation of IT capability on the effect of Strategic leadership on effective strategy implementation. Regarding the moderation of IT capability on the effect of organizational innovativeness on effective strategy implementation, the result showed negative effect.

For the direct effects of strategic leadership and effective strategy implementation; organizational innovativeness and effective strategy implementation as well as IT capability and effective strategy implementation, the results support the proposed hypotheses. The next chapter (Chapter 5) discuss the findings in details, followed by implications, limitations, suggestions for future research directions as well as conclusion.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter discuss the research findings as well as the recommendations offered by the researcher. Correspondingly, it also explains the theoretical and practical implications of the study. Limitations and recommendations for future research are also highlighted.

5.2 Recaptulization of the Study

The present study was carried out to investigate the effects of strategic leadership, organizational innovativeness, IT capability on effective strategy implementation in Nigerian public tertiary institutions. The moderation of IT capability on the effect of strategic leadership and organizational innovativeness on effective strategy implementation were equally investigated. The study also examined whether IT capability, apart from being a moderating variable has any direct effect on effective strategy implementation.

Quantitative method of data collection was adopted for the study. This involves the use of a structured questionnaire adapted from previous studies. The questionnaires were self-administered. This allows the researcher to have one on one contact with the

respondents. A total of 124 set of questionnaires were distributed to the deans of public tertiary institutions with a population of 143. Having distributed 123, 112 questionnaires were completed and retrieved, out of which 108 questionnaires were considered for further analysis. Four (4) questionnaires were considered not appropriate because of both univariate and multivariate outlier cases. The data were keyed into SPSS version 22 before later on exporting them to PLS-SEM 2. SPSS version 22 was used for checking of outliers and missing values. 57 missing values were dictated in the data set, and subsequently replaced employing mean substitution (Tabachnick & Fidell, 2007).

In relation to the causal relationship between exogenous latent variable and endogenous latent variables, the findings of this study showed that the entire three hypotheses were supported. The results of the PLS path model indicated that strategic leadership has positive effect on effective strategy implementation. Perceived organizational innovativeness was also found to have positive effect on effective strategy implementation. More so, further findings suggest that IT capability also posses positive effect on effective strategy implementation.

With respect to IT capability as the moderating variable for the study on the effect of exogenous latent variable on the endogenous latent variables, the results showed that one of the two hypotheses is positive; while the other is negative. In particular, IT capability was found to moderate the effect of strategic leadership on effective strategy

implementation. The results also revealed negetive moderation of IT capability on the effect of organizational innovativeness on effective strategy implementation.

5.3 Discussions

The discussion of the study basically focused on the research questions stated in chapter one of this study. The Research questions were answered by research objectives. The research questions are as follows:

i. What is the effect of strategic leadership on effective strategy implementation?
ii. What is the effect of organizational innovativeness on effective strategy implementation?
iii. How does IT capability affect effective strategy implementation?
iv. Does IT capability moderate the eefect of strategic leadership on effective strategy implementation?
v. Does IT capability moderate the effect of organizational innovativeness on effective strategy implementation?

5.3.1 Strategic Leadership and Effective Strategy Implementation

The first research question of the study is whether there is a significant effect of strategic leadership on effective strategic implementation. The aim of the question is to assess whether strategic leadership could be a good predictor toward effective

strategy implementation in Nigerian public tertiary institutions. This represents the first research hypothesis that, *there is a significant effect of strategic leadership on effective strategy implementation*. The effect of strategic leadership on effective strategy implementation is small with effect size of ($f2$ = .046). This is to say that strategic leaders are one of the key drivers of effective strategy implementation (Orazi & Turini 2013). Thompson *et al.* (2007) also concurred 'Weak leadership can wreck the soundest strategy; while forceful execution of even a poor plan can often bring victory' (Thompson *et al*., 2007). The finding support H1.

The finding of this study on the effect of strategic leadership on effective strategy implementation was in line with previous studies. O'Reilly et al. (2010) researched the effect of leadership alignment on strategy implementation using 313 physicians drawn from 8 hospital specialty departments in the US. The research confirmed that leader behaviour influences group and organizational behaviour. They also found that it was only when leadership effectiveness is considered at different levels of organization that significant performance improvement occurred. Then they suggest that leaders at different levels should be considered collectively to understand how leadership influences strategy implementation.

In their paper titled Making Strategy Work, Yang *et al.* (2009) posited that there are two type of implementation studies; the one that highlight the essentiality of individual factors for strategy implementation, as well as those that stress the big picture of how

the factors correlate to form a strategic implementation environment. The first involves individual factors that accelerate strategy implementation like strategy formulation process, strategy implementers; managers and employees, structure, communication activities, level of commitment for the strategic plan, relationship among different departments and different strategic levels, the employed execution tactics and the administrative system in an institution. The second stream comprises multiple factors together within a single comprehensive model or framework. Elenkov, Judge and Wright (2005) investigated the relationship between strategic leadership behaviours and executive innovation influence of top management team (TMT) as moderator. Using questionnaire administered in six countries encompassing three social cultures; the result suggests that strategic leadership behaviours have a strong positive and significant relationship with executive influence on both products and administrative innovations strategies.

Also in congruent with this finding is Grandy's (2013). In his work titled 'an exploratory study of strategic leadership in churches' which was carried out on a Canadian church. The research employed qualitative techniques where data was collected through interviews and observation. The findings indicated that over the past several years, the Church and its members have experienced a number of incremental as well as more radical changes. Much of these changes were attributed to the vision and leadership style of the Church leader. Four strategic behaviours displayed by the

leader lead to the changes. These behaviours are unsettlingly with the status quo, shared leadership, shared vision and culture of community and organizational learning.

More so, Omboi, (2011) conducted a study using survey in Meru Central District of Kenya on selected public tertiary institutions using population that made up of 136 lecturers, 30 heads of departments and 12 top managers. The study suggests that weak influence of managerial behaviours was because of the Management strategic thinking. He argued that organizational leaders co-opting the subordinates like the faculty members would lead to effective strategy implementation.

Similarly, Sila and Gichinga (2016) conducted a study on the impact of strategic leadership on the performance of public universities in Kenya. The quantitative research that administered survey to 98 respondents that include deans, head of departments and other stakeholders within JKUAT University found that strategic leadership plays a crucial role in effective strategy implementation in the institution. It is then recommended that strategic leadership in public tertiary institutions should be biased towards strategy implementation. In their study conducted in an Indonesian higher education institution, Hidaya *et al*. (2015) shows that the three dimensions of strategic leadership they test gives reasonable contribution to strategy implementation in the institution. The dimensions are strategic expert (strategist), change agent, and visionary leadership. The study consists of 67 respondents from different strata in the sampled institution.

Kalali *et.al (*2011) also reported a similar finding that failure of strategy implementation in institutions of higher learning in Iraq today comprises of sixteen factors of which leadership role count to 71%. He further laments that without proper leadership, tertiary institutions in Iraq will continue without having vision, mission, work ethics, and good strategies, adequate resources, better structures, well defined culture and many others. In another study conducted in five (5) Iranian universities, offering degrees in medicine by Abdulwahid et.al (2013) investigating the factors that cause the failure of strategy plans implementation in public health sectors. The study argued that leadership role is important in crafting and in strategic plans execution; and if the strategic leader did not partner the subordinates in the strategy implementation, the leadership will not be able to create a brilliant vision for any meaningful strategic program.

From South Africa, Jooste and Fourie, (2009) has similar finding. In the study, they conducted title: 'the role of strategic leadership in effective strategy implementation.' they affirmed that leadership, and particularly strategic leadership, is widely acknowledged as one of the key drivers of effective strategy implementation. Research from Useem (2001) is also in conformity with this finding. The study reveals that several identifiable factors characterized strategic leadership in South African public tertiary institutions. These factors include determining strategic directions, establishment of balanced organizational control, effectively management of

organizational resource, nourishing an effective organizational culture, emphasizing ethical practices.

RBV posits that sustained competitive advantages are derived from the resources and capabilities that an organization controls that are rare, important, scarce and not substitutable (Barney, 1991). These resources can be classified as tangible and intangible assets; and they include organizations intangible assets such as management skills and expertise (Barney, 19991). The emphasis on 'people' as strategically important for organizations success has contributed to the interface and inclusion of strategic leaders. Similarly, leaders have been regarded as a source of competitive advantage by numerous researchers (Finkelstein & Hambrick, 1996; Norburn & Birley, 1988; Thomas, 1988).

With its emphasis on internal organizational resources as sources of sustained competitive advantage (Barney *et al.*, 2001), the relationship between strategic leadership and effective strategy implementation is very glaring. This is very important, as the emphasis of Resource-based view in strategic literatures has been shifted away from external factors toward internal organizational resources as sources of competitive advantage (Hoskisson, Hitt, Wan & Yiu, 1999). Within an organization, strategic leaders can manoeuvre more as the external elements are beyond their control. Growing recognition on internal organizational resources as sources of competitive advantage brought legitimacy to the assertion that strategic leaders are

important to organization effective strategy implementation. Due to this, organizations are currently geared more toward gaining or building those resources that sustain competitive advantage (Ismail, Omar & Bidmeshgipour, 2010).

On the contrary to this study is a research carried out by Risseeuw and Masurel (1994) in Netherlands on small real estate firms. They reported that planning has hardly any effect on the performance of small firms. This suggest that no considerable effect of planning on performance was found. In their own part, French et al. (2004) carried out a research using 145 questionnaires in Australian small firms. The outcome of the study indicated no meaningful relationship exist between the performance measures of the firms and strategic factors like vision, mission, latent abilities, competitor orientation and market orientation.

Miller and Cardinal (1994) in an empirically tested model using meta analytic data drawn from 26 previously published researches opined that strategic planning positively influences organizational performance. They argued that the methods used by the studies on this topic were primarily responsible for the inconsistencies reported in the literature.

The implication of this finding to Nigerian public tertiary institutions is for them to strive hard in making sure that only strategic leaders are appointed at the helm of affairs

in the institutions. It does not stop at appointing CEOs alone, appointing people that possess strategic leaders qualities at all level of the institutions e.g head of departments, deans directors etc is an important thing. This will certainly go a long way in making sure that the institutional strategies are properly executed (Kettunen, 2002).

It could also be inferred from the result that, the most significant aspect of strategic leadership that has the highest contribution in the strategy implementation process in the institutions is the strategic leadership process aspect. This could be discerned from the number of items that measured the segment. In another word, out of nineteen (19) items that measured strategic leadership construct, thirteen (13) of them represent process aspect (i.e normal functions that leaders perform). This is to say that strategic leadership functions like communication, planning, organizing e,t,c. takes the centre stage as top functions that strategic leaders performed in Nigerian tertiary institutions (Ololube, Agbor, & Kpolovie, 2016; Edet & Ekpoh, 2017). Hence another policy implication for this study is the urgent need for the leadership in Nigerian tertiary institutions to imbibe the behavioural aspect of strategic leadership like doggedness, foresight, proper utilization of resources as well as other behaviours that strategic leadership stand for. By so doing, the institutions are expected to tremendously record high improvement on their strategy implementation and in intuitional performance in general.

5.3.2 Organizational Innovativeness and Effective Strategy Implementation

The second research question of this study is whether organizational innovativeness has positive effect on effective strategy implementation. The aim of the question is to investigate whether organizational innovativeness can be a good predictor toward effective strategy implementation in Nigerian public tertiary institutions. This stands for the second research hypothesis, which says *there is a significant effect of organizational innovativeness on effective strategy implementation.* The relationship between organizational innovativeness and perceived effective strategy implementation control is medium with the effect size of ($f2$ = .227). This insinuates that innovation is rapidly becoming a key strategic implementation driver for organizations as we advance further into this century (Stanleigh, 2015). The finding supports H2.

The finding of this study between organizational innovativeness and effective strategy implementation is in line with Enz, (2012). His study examines the relationship between innovation and various strategies for the implementation of two specific nationwide services in the North American hotels. The data for the study was gathered through surveys from the general manager of each hotel using a mail questionnaire. The result indicated that cost and service quality–based innovations were found to positively affect different implementation strategies, indicating that the link between implementation strategies and success depends on the type of innovation. In the hotel chain, individual counselling was found to be the most successful strategy for

implementing quality innovations. A cost-based innovation was also positively related to rewards and focus group strategy implementation. A mix of execution strategies including implementation by persuasion, leader intervention and participation was linked to service innovation success.

Similarly, research conducted in Istanbul, Turkey, by Gokmen and Hamsioglu (2011) discovered the existence of positive relationship between organizational innovation and organisational performance. Additionally, Costa and Cabrel (2010) investigated the effect of differentiated knowledge sources as well as learning processes on technology capacity to innovate and competitive performance strategies in Brazilian export companies. The outcome of the study also correlate with this study since their finding suggests the existence of a positive and significant relationship between innovative capabilities and competitive performance.

From Spain, Jiménez and Sanz (2011) obtained a similar result in their study conducted employing 451 Spanish firms. The findings showed that organizational learning and organizational innovation has positively relationship with organizational business performance strategies. Also in support is Lim's *et at* (2010) on effect of innovation on performance of construction companies in Singapore; as well as Wirtz (2011) on the relationship between network innovation, competitiveness and organizational financial performance. Then, finally, from Budros (2000) who argued that

technological and economical strategies are the major reasons why organisations innovate. All these studies are in congruent with this research.

Finally, also in support is the study carried out by Abereijo, *et al.* (2007) in Nigeria. They examined the ability and competencies of manufacturing SMEs to innovative and how the innovation affects their performance. The research used a sample of 100 respondents from different companies using questionnaire. The findings suggest that the organizations that are innovative showed that their innovative abilities were significantly related to some internal factors and consequently enhance their performances in several dimensions.

On the hand, the relationship between RBV, organizational innovativeness and effective strategy implementation is based on the fundamental premise that organizational resources and capabilities are those that underlie and determine a firm's capacity for innovation (Kostopoulos, Spanos & Prastacos, 2002). Along this line, organizational tangible and intangible resources are regarded to provide the inputs that are transformed by organizational capabilities to produce innovative forms of competitive advantage (Kostopoulos, Spanos & Prastacos, 2002). More so, growing number of literatures that embrace the RBV offers new insights to organizational innovation ability (cf, Brown & Eisenhardt, 1995; Henderson & Cockburn, 1994; Iansiti & Clark, 1994). Based on this influential perspective, the existence of variety of organizational resources and capabilities affects positively the outcome of the

innovation process. Hence, this could be employed to extend the findings on organizational innovativeness (Kostopoulos, Spanos & Prastacos, 2002). Undoubtedly, the RBV offers good directions for effective strategy implementation as it has shifted the attention towards the organization and its unique characteristics. In this vein, RBV redirects organizational innovation research as well, especially in terms of the factors that determine organizational-level innovation (Kostopoulos, Spanos & Prastacos, 2002).

The finding suggests that there is need for public tertiary institutions in Nigeria to instil further, the culture of innovation among their employees. This very essential since innovativeness in the organizations have been found to be among the important determinants of effective strategy implementation in the institutions Kwon, Kwon and Migap, (2014).

5.3.3 IT Capability and Perceived Effective Strategy Implementation

The third research question of this study is whether there is a significant relationship between IT capability and perceived organizational strategy implementation. The aim of the question is to investigate whether information technology capability can be a good predictor toward organizational effective strategy implementation in Nigerian public tertiary institutions. This stands for the third research hypothesis, which says *there is a significant effect of IT capability on effective strategy implementation.* The

relationship between IT capability andeffective strategy implementation control is small with the effect size of (*f2* = .056). This signifies that IT capability remain an integral part of functional-level strategies of an organization, and it also plays a positive role in organizational strategy implementation, with performance implications (Drnevich & Croson, 2013). The finding supports H3.

In support of this finding is the study of Alshoaibi, (1998) from Saudi Arabia. He explored the impact of information technology capability by the Saudi Arabian private sector. The study examined the impact of information technology on the organisations' strategy, structure, and people. The sample comprised of top managers from 500 companies in Saudi Arabia. Based on the research findings, the study suggests that the use of information technology in the Saudi private sector have positive impacts on the organizational strategies of the studied firms. The data also suggests that information technology usage could induce many organisations to adopt smaller and flatter structures. He also found that information technology capability can led to a more decentralised decision-making organisation. This facilitates quick decision making and in turn fast track organizational strategy implementation.

Similarly, Muthoka, *et al*. (2016) in Kenya studied the drivers of performance of strategy implementation by looking at information technology capabilities as mediating variable. The research employed descriptive as well as cross-sectional designs. Top management from selected tourism firms were considered as the

respondents. The findings indicated that automated systems contributed over 51% to performance of most tourism organizations in Kenya. Further findings suggest that information technology capability is positively and significantly related to implemented strategies as well as performance of tourism corporations in the country.

Also in support is the study of Drnevich and Croson, (2013) from the US. In their study on the role of information technology capability and business level strategy, they posited that IT capabilities remain the integral of functional-level strategies of organization, and IT capability plays numerous significant roles in business strategies, with reasonable performance implications. They also observed that IT capability enhances both the organization's ordinary capabilities and enables new capabilities. In addition, Garrison, Wakefield and Kim, (2015) examines the effect of relational, managerial and technical IT-based capabilities on cloud computing strategies success; and analyzed how the success affected organization's performance with relation to the processes and operations as supported by cloud computing. Data was collected from a sample of 302 organizations. The results suggest that relational IT capabilities are the most dominant factors that facilitated cloud success in contrast to technical and managerial IT capabilities. This also is in line with this research.

Further in congruent with this study is Setia, Venkatesh and Joglekar, (2013). They carried out a research on 170 branches of a bank in the US. The outcome of the study suggests that the impacts of information quality in capability building are contingent

on the local process characteristics. This offer implication for an organization's customer-side digital business strategy and new areas for future examination of such strategies. Finding from Liu, *et al*. (2013) in China showed that absorptive capacity and supply chain agility fully mediate the influences of IT capabilities on organizational performance.

In contrast is the results of Chae, Koh and Prybutok, (2014) on IT capability and organizational performance, their analysis indicated no significant link between IT capability and organizational performance. This contradicts the finding of the present study. The outcome of this study as explain above insinuate the essentiality of IT capability in public tertiary institutions. IT capability has been considered an integral part of tertiary institutions. And world over tertiary institutions are being redesigned to fit more into the electronic age for efficiency, since IT capability is a powerful tool for enhancing quality and performance in the institutions (Osakwe, 2012).

5.3.4 Moderating Effect of IT Capability on the relationship Between Strategic Leadership and Perceived Effective Strategy Implementation

Information technology capability (IT capability) is defined as the organization's ability to bring together, integrate and deploy IT based resources (Ross, Beath & Goodhue, 1996). This study proposes IT capability as a moderator on the relationship between strategic leadership and perceived effective strategy implementation; as well

as the relationship between organizational innovativeness and perceived organizational strategy implementation. By and large, IT capability as a moderator on the relationship between strategic leadership, organizational innovativeness and effective strategy implementation variables supports the RBV literatures rooted on the difficult to copy organizational attributes that are considered essential drivers of organization's performance (Conner, 1991; Bharadwaj, 2000). Researchers have employed the RBV perspective to link IT capability to the success of knowledge management (Gold et al., 2001; Khalifa & Liu, 2003; Lee & Choi, 2003), business process reengineering (Ringim, 2013) and organizational performance (Bharadwaj, 2000; Tippins & Sohi, 2003; Li *et al.*, 2006).

Following this argument, the fourth research question was whether IT capability moderates the effect of strategic leadership on perceived effective strategy implementation. In line with this research question, the fourth objective of this study was to examine the moderating role of IT capability on the effect of organisational strategic leadership on effective strategy implementation.

5.3.4.1 Moderating Effect of IT capability on the Relationship between Strategic Leadership and Effective Strategy Implementation

The fourth research question of this study is whether IT capability moderates the effect of strategic leadership on effective strategy implementation. The aim of the question

is to investigate whether information technology capability can be a moderator on the relationship between strategic leadership and perceived organizational strategy implementation in Nigerian public tertiary institutions. This stands for the fourth research hypothesis, which says *IT capability moderate the effect of strategic leadership on effective strategy implementation.* The moderating effect of IT capability on the relationship between strategic leadership and organizational strategy implementation has the beta value of (ß= .226). This shows that the finding supported H4.

With the result of this finding as shown above, it indicated that strategic leadership has both a direct and indirect significant effect on effective strategy implementation success of the public tertiary institutions. The indirect effect is through IT capability. The finding also suggests that public tertiary institutions that have excellent strategic leaders would also need a strong IT capability that would facilitate the attainment of higher level of strategy implementation.

The previous studies by Shao, *et al*. (2010) indicated that the interaction between head of information competence and strategic leaders moderates the relationship between IT investments and organizational performance. This further explains the presence of the IT paradox based on the RBV. Additionally, study has shown that the head of information's strategic IT knowledge and interaction with the organization's strategic

leaders has a positive influence on the distribution and integration of IT within the organization (Armstrong & Sambamurthy, 1999; Smaltz & Sambamurthy, 2006).

The moderating effect of IT capability on the relationship between strategic leadership and the strategy implementation is again consistent with previous RBV literatures that suggest IT payoff and RBV literature provides a theoretical rationale for how IT capability moderates the relationship between IT investment and organizational operations (Yongmei, Hongjian, & Junhua, 2008). To some degree, the influence that IT investment has on human-IT resources and IT-enabled intangibles affects organizational strategy implementation". Nonetheless, these relationship is moderated by the IT capability, meaning that no matter how much an organization spends on IT, improve in strategy implementation will not be realistic without advancing IT capabilities.

Furthermore, the moderating effect of IT capability on other strategic leaders attribute like commitment and being ability to change have been found in the extant literature. Ghobakhloo, *et al*. (2012) argued that top management's commitment and perceived behaviour over IT, directly affect the adoption of IT into organization's strategy implementation. When the level of top management commitments is low in terms of IT adoption, the impact overall impact of IT capability will receive less emphasis and in turn less performance in organizations strategies. However, maximum performance on organizational strategies are attained if the top management emphasis more IT

capability (Ringim, 2011). This is consistent with the argument postulated by Barney, Wright, and Ketchen (2001) who opined that synergy between two or more resources will create a sustainable competitive advantage for an organization.

The moderating effect of IT capability on the relationship between strategic leaders ability to lead change and overall strategy implementation and organizational performance was reported by Hong and Kim (2002); Ahmed, Zbib, Arokiasamy, Ramayah and Chiun (2006). More so, change initiative was found to moderate the relationship between resistance to change and users satisfaction. When Change management is extreme, the users may not be happy with it. This in turn will lead to lower employee's performance. This indicates that managing the change carefully by acknowledging resistance as natural and expected, giving due concern to employees, having regular communication and ensuring everyone's participation. For all the afore mentioned strategic leaders functions IT capability plays a very prominent role in ensuring speedy generation and transmission of information that lead to quick and intelligent decision making that lower the organizational resistance (Durowoju, Onuka, & Ajisegiri, 2013).

Taken it together, the result indicated that the level of achievement in organizational performance on strategy implementation may be dependent to the extent of IT capability. A higher level of IT capability may lead to a higher level of success in organizational strategy implementation. To assess organizational IT capability in

terms of competency needed to look beyond specific technology, but three IT dimensions: IT objects, IT knowledge and IT operations. As IT capabilities are resources that facilitates effective collection and utilization of information (Bharadwaj, 2000). Floyd *et al*. (1990) firmly asserted that IT capabilities boost service reliability, minimize transaction errors and increase consistency in organizational strategies and performance. Other researchers posited that capabilities could contribute in facilitating service quality through superior individualized services, and in creating knowledge link for identifying and sharing organizational expertise (Adam, 1993; Quinn *et al*., 1994).

5.3.4.2 Moderating Effect of IT Capability on Organizational Innovativeness and Effective Strategy Implementation

The fifth research question of this study is whether IT capability moderates the relationship between organizational innovativeness and effective strategy implementation. The aim of the question is to investigate if information technology capability can be a moderator on the relationship between organizational innovativeness and effective strategy implementation in Nigerian public tertiary institutions. This stands for the fifth research hypothesis, which says *IT capability moderates the effect of organizational innovativeness on effective strategy implementation.*

Unexpectedly, the present study did not find support for this hypothesis (H5), which says IT capability moderates the relationship between organizational innovativeness and strategy implementation. The beta value for the hypothesis is (ß= -.153). Several possible reasons could be attributed to this lack of support for the hypothesized relationship.

One of the likely attributable factors is institutional CEOs innovativeness, both in general and on IT specific terms. PIIT refers to Personal Innovativeness in IT, which happens to be a reliable predictor of users' attitude regarding the simplicity of use and efficiency of new technologies (Nov & Ye, 2008). PIIT connotes "the willingness of an individual to try out any new information technology" (Agarwal & Prasad, 1998). Agarwal and Prasad (1998) argued that PIIT is a major determinant of IT acceptance by moderating in Perceived Usefulness (PU), compatibility and Perceived Ease of Use (PEOU). Thatcher and Perrewe, (2002) posited that a highly innovative CEO with superior level of PIIT is more likely to look for thought-provoking experiences, and equally having more confidence in his capability to use IT. Conversely, CEOs with low level of PIIT are more likely to display general computer anxiety, and might have less tolerance for risk.

In Nigerian context, studies by Ololube, Ubogu, and Ossai, (2007), and Ndidi and Ifeoma, (2010) posited that managers of tertiary institution in Nigeria are yet to integrate IT fully into their organizational daily activities. This might partly explain

this negative relationship. Innovative CEO would prefer to employ distinctive and risky solutions such as IT that alter the structure in which a problem is generated. Hence, CEOs' ambition to be more innovative will speed up the process of IT adoption in implementing organizational strategies (Qureshi & York, 2008). Therefore, it can be inferred from the above that 'stress' is important in innovativeness in both general terms, and PIIT on CEO perception and system acceptant. Scott and Walczak (2009) firmly assert that CEO with higher level of PIIT would possess superior cognitive absorption and display higher computer self-efficiency.

Another probable reason is based on diffusion of innovation theory (Roger, 2003). The theory is regarded as the most suitable for investigating the acceptance of technology in tertiary institutions (Parisot, 1995; Medlin, 2001). Since majority diffusion researches engage technological innovations, Rogers (2003) used the word "technology" and "innovation" as synonyms (Sahin, 2006). Thus, "a technology is a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome" (p. 13). It consists of two aspects: hard and softwares. While hardware is "the tool that embodies the technology in the form of a material or physical object," software is "the information base for the tool" (Rogers, 2003, p. 259). Since software (as IT operation) has a low level of observability, its rate of adoption by the tertiary institutions in innovation and strategy implementation processes may be quite slow (Sahin, 2006).

5.4 Implications of the study

The results from this study posit several implications to practitioners and academicians. These implications are equally serves as recommendations to practitioners and a contribution to the body of knowledge for academia. The implications as highlighted below are categorized into managerial and theoretical implications.

5.4.1Theoretical implications

Conceptual framework of this study was rooted on the past empirical evidences as well as theoretical gaps noticed in the literature. This was supported and explained using three theoretical perspectives: resource based theory (Berney, 1986, Deirickx & Cool, 1989 and Warnerfelt, 1984), dynamic capability theory (Teecey, 1998; Teece & Pisamo, 1994) and complementarity theory (Barua, Lee & Whinston, 1996). This study has offered a theoretical implication by providing more empirical evidence in the domain of resource based view theory. The RBV posits that internal resources influence organizational success. In the context of this study, strategy implementation factors (strategic leadership, organizational innovativeness and IT capability were considered as resources. The study has extended the theory of resource-based view by examining strategic leadership, organizational innovativeness on broader forms of organizational strategy implementation. This study found that strategic leadership and organizational innovation ability are significantly related to effective organizational

strategy implementation, while IT capability was equally significantly related to the implementation.

Previous studies have made no specific attempt to examine the role of IT capability in strategic leadership, organizational innovativeness – strategy implementation relationship, especially in public tertiary institutions setting. Thus, this study has tried to establish a link to investigate the moderating effect of IT capability. Even though this study is new in terms of identifying the role of IT capability on the activities of tertiary institutions in Nigeria, it is still guided by the RBV (Barney, 2001) and other similar researches.

Additionally, the present study has also provided empirical evidence on the significant role of IT capability as a moderator on the relationship between strategic leadership, organizational innovativeness and organizational strategy implementation. While most previous studies (e.g., Johannsdottir *et al*., 2015; Safdari *et al*., 2014; Latif, *et al.*, 2013; Mapetete et al., 2012; Cater & Pucko, 2010) have largely focused on exploring the direct linkage between strategic leadership and strategy implementation as well as organizational innovativeness and strategy implementation. This study integrated IT capability as a moderator on these relationships because IT resources that influence organizational competitive advantage is moderated by IT capability (Yongmei, *et al*. 2008).

This study, to the author's best knowledge, is the first empirical research to study the moderating effect of IT capability of the relationship between strategic leadership, organizational innovativeness and strategy implementation in Nigeria. Thus, this study adds to the existing knowledge of strategic management studies on the combined effect of strategy implementation factors and IT capability and its impact on organisational strategy implementation. The results from the study suggest support for the interaction effect of strategic leadership variable and IT capability implementation. More so, the combination of strategic leadership, organizational innovativeness and IT capability and assessing their direct effect on strategy implementation is another important thing. From this, it should be appreciated that the role of these three management constructs complemented each other.

5.4.2 Methodological Implications

This study also poses several methodological contributions. One of the contributions lies in examining the criterion variables by means of situation specific measure. Explicitly, the present study investigates strategic leadership constructs based on 'single actor' behaviours assessed by Elenkov, Judge and Wright, (2005) in multinational corporations as well as the MLQ by Bass and Avolio (1992). This study removed all irrelevant items from the above constructs. By so doing, the study purified and tested the measures in assessing strategic leadership construct in Nigeria as being concerned with the leadership "of" tertiary institutions, rather than "in" in tertiary

institutions (Boal & Hooijberg, 2001; Özer & Tınaztepe, 2014). This is culturally different from the settings in which these measures were initially developed.

Additionally, this study also has another methodological implication by using PLS path modeling to examining the psychometric properties of each latent variable. The present study has succeeded in assessing psychometric properties of each latent variable in terms of convergent validity, and discriminant validity. Psychometric properties examined were individual item reliability, average variance explained (AVE) and composite reliability of every latent variable. Convergent validity was examined by assessing the value of AVE for each latent variable. More so, the discriminant validity was determined by evaluating the correlations among the latent variables with the square roots of AVE. The result of the cross-loading matrix was also examined to find support for discriminant validity in the conceptual model. Thus, this study has managed to use one of the stronger approaches (PLS path modeling) to measure the psychometric properties of each latent variable showed in the conceptual model of this study.

5.4.3 Managerial and Policy Implications

The findings from this study empirically proved the significant and positive relationship between some factors that determine effective strategy implementation in Nigerian public tertiary institutions. These findings reveal that strategic leadership,

organizational innovativeness and IT capability are positively related to effective strategy implementation. The research also proved that the information technology capability was found to moderate the relationship between strategic leadership and effective strategy implementation. In regard to moderating role of information technology capability on the relationship between organizational innovativeness and organizational strategy implementation, the study found negative and insignificant relationship.

By and large, the results from this study confirmed that the three variables (strategic leadership, organizational innovativeness and IT capability) contributed towards successful and effective strategy implementation. Thus, Nigerian public tertiary institutions should hasten in considering these variables as essential tools for effective organizational strategy implementation. Special consideration needs to be given to these specific implementation factors, as they are associated with strategy implementation success. This is very essential since it has been established that strategy implementation initiative that is supported by IT is essential for organizational success (Ward & Peppard, 2016)

The findings from the study on the moderating effect of IT capability as an element of strategy implementation have several vital implications on strategy implementation. The main managerial implication is the interaction between strategic leadership and IT capability in achieving successful organizational strategy implementation. The

effect of IT capability as a moderator has a significant positive association between strategic leadership and effective strategy implementation. Institutions should take cognisance to these interactions as they can boost performance through successful strategy implementation. Thus, Nigerian public tertiary institutions wish to improve on their overall performance on strategy implementation should consider adoption of IT capability alongside with strategic leadership. In attaining successful strategy implementation, public tertiary institutions should focus on training and educating their employees on newly introduced IT operational processes. As training and education are the key components of successful implementation (Zairi & Sinclair, 1995). It is necessary to educate people on IT-related innovations for competitive advantage, because of the potentiality of IT in shaping and re-shaping of organizational activities and operations (Bruss & Roos, 1993).

The findings of this study would be of importance to policy makers especially regulatory bodies like the Nigerian Universities Commission (NUC), National Board of Technical Education (NBTE) as well as the National Commission for Colleges of Education (NCCE). These bodies shoulder the responsibilities of regulating the activities of the tertiary institutions considered in this study. NUC, NBTE and NCCE are bodies that design the future programs for the tertiary institutions in Nigeria. The federal and state ministries of education in Nigeria would equally benefit from the outcome of the present study, as it will serve as a guide in resource allocation and offer a guideline to the institutions especially when it comes to funding on ICT. While some

of the institutions are complaining of funds for acquiring IT facilities, other are being accused of failing to exploit the facilities provided on their campuses. Thus, through seminars, workshops and sensitization visits by the ministries, the managers of such institutions may wake up form their slumber.

The findings would equally assist the institution by giving them an empirically tested outcome on some determinants of strategy implementation. This would help the institutions in developing and nurturing good policies that will lead to emergence of strategic leaders at all levels of the organizations well as formulating policies that will breeds innovative attitude among employees in the institutions. This is very essential, as the resulting consequences will assist the institutions to gain more potential competitive advantage in this critical situation where competition is becoming tenser in the Nigerian tertiary education sphere due to high proliferation of private universities. The findings would also serve as a frame of future reference to academia, students and other stakeholders; it would equally help in making relevant recommendations.

Another important practical contribution of this study has to do with it economic contribution. Through proper execution of strategic plans by Nigerian tertiary institutions their performance will surely improve (Owolabi 2011); and this will attract more and more student both from outside and within Nigeria. Hence this means more revenue to the institutions. Additionally, the outflux of Nigerian students abroad could

also be curtailed. This suggest that the money they spent while they are abroad will now be channelled into the Nigerian economy and subsequently boost the Nigerian Gross Domestic Product (GDP).

5.5 Limitations of the Study

The present study is not without some limitations. The first limitation is that, even though there are so many variables that affect organizational strategy implementation, this study limited to only strategic leadership, organizational innovativeness and information technology capability. One other shortcoming of this study is that, data was collected only in one state of Nigeria- Kaduna, which might not be generalized. Similarly, this research was cross sectional in nature. It involves data collection within five to six months, which can be considered as short period due to limited resources and time. Sekaran (2003) opined that one the shortcoming of cross – sectional study is it is inability to prove cause and effect association among variables.

The present study depends on the perception of faculty and college deans in the public tertiary institutions regarding their how to turn on automatic spell check in word strategy implementation. This is quite common in social science research, but the response of the deans may not necessarily be a precise reflection of reality. There is the likelihood and tendency that the data collected may reflect some degree of confidence of the respondents who might have their own perceptual biases and

cognitive shortcomings in assessing their own institutions. Despite these inadequacies, the present study is a good attempt to investigate the relationship between strategic leadership, organizational innovativeness, information technology capability and effective strategy implementation in Nigerian public tertiary institutions. This study is the first of its kind, and its findings suggest some level of significant positive relationship between the constructs studied.

5.6 Suggestions for Future Research

To surmount the limitations associated with this research, the study recommends that future studies be conducted using other variables such as organizational learning orientations, organizational structure, and so on as they relate to strategy implementation in Nigerian public tertiary institutions. More so, there is need for future empirical studies on strategic leadership, organizational innovativeness, information technology capability and strategy implementation that will cover the whole six geopolitical zones of Nigeria for the sake of generalization.

Since this study is cross - sectional in nature, future studies may consider collecting data over a prolonged period of time, i.e. longitudinal data collection. Additionally, the present study uses only deans from monotechnics, polytechnics, colleges of education and universities as respondents. Future studies may consider management

members, directors or coordinators rating of public tertiary institutions strategy implementation.

This study uses quantitative research design; future research may consider a qualitative approach or a mixed/triangulation design. Precisely, qualitative interview could be carried out with participants who may give a better understanding of the relationships among the constructs under study. The present study also suggests a comparative study between Nigeria and other developing economies, which may provide insight and facilitate the comparative among countries. Lastly, this study suggests the use of statistical package for social sciences (SPSS) method for data analysis in the future studies.

5.7 Conclusions

In conclusion, this study has provided more evidence to the growing body of knowledge in relationship to the moderating role of IT capability on the relationship between strategic leadership, organizational innovativeness and strategy implementation. Results from the study give support to the key theoretical propositions. Precisely, the present study has succeeded in answering all the research questions as well as the objectives despite some of limitations. While there have been, numerous studies investigating the factors that affect strategy implementation,

however, the current study addressed the theoretical gap by incorporating IT capability as a significant moderating variable for strategic leadership.

This study also lends theoretical and empirical support for the moderating role of IT capability on the relationship between strategic leadership, organizational innovativeness and strategy implementation. The study was also successful in to evaluating how IT capability theoretically moderates the relationships between the exogenous and endogenous variables. Again, the theoretical framework has added to the domain of resource based view theory and dynamic capability theory as well as complementarity theory by examining the influence of strategic leadership, organizational innovativeness on effective strategy implementation.

Furthermore, the results from the study provide some essential practical implications to institutions and managers. On the other hand, limitations of the current study, several future research directions were proposed. Finally, this study has added valuable theoretical, practical, and methodological implications to the growing body of knowledge in the field to strategic management, technology management, human resource and psychology.

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APPENDIX I

SURVEY QUESTIONNAIRE

Dear Respondents.

I am a PhD (Strategic Management) research student at the above-named university, currently undertaking a research titled: 'Effects of Strategic Leadership, Organizational Innovativeness and Information Technology Capability on Effective Strategy Implementation'. I would appreciate if you will assist by providing objective and sincere answers to all the questions here in; as there is no right or wrong answer. The researcher assures you that; your identity and the information given will be strictly and confidentially handled and use ONLY for research purposes. We highly appreciate your co-operations. Thank you in anticipation of your response.

Yours Sincerely,

Ahmad Aliyu Palladan
PhD Student
E-mail: aapalladan@live.com
Mobile:08033004199, +60149536526

Dr Kadzrina Binti Abdul Kadir
Main Supervisor
E-mail: kadzrina@uum.edu.my
Mobile: +60134106048

Dr Chong Yen Wen
Co- Supervisor
E-mail: chongyen@uum.edu.my
Mobile: +60162880289

Section One: Strategic Leadership

The following describe statements about strategic leadership attitudes in your organization. Please indicate the extent to which you agree or disagree with the statements based on the scales provided.

Strongly Disagree	**Slightly Disagree**	**Disagree**	**Slightly Agree**	**Agree**	Strongly Agree
1	**2**	**3**	**4**	**5**	6

Statements		**Level of Agreement**					
STLP1	Employees in my organization feel good to be around their superiors	1	2	3	4	5	6
STLP2	Superiors in my organization commincate in simple word that is easy to understand.	1	2	3	4	5	6
STLP3	In my organization, employees are able to think about old problems in new ways.	1	2	3	4	5	6
STLP4	My organization help employees to develop themselves.	1	2	3	4	5	6
STLP5	Employees in my organization are told what to do if they want to be rewarded for their work.	1	2	3	4	5	6
STLP6	My organization is satisfied when its employees meet an agreed standard.	1	2	3	4	5	6
STLP7	Employees in my organization have complete faith on their superiors.	1	2	3	4	5	6
STLP8	Superiors in my organization have appealing images about what its employees can do.	1	2	3	4	5	6

STLP9	Superiors in my organization provide workers with new ways of looking at puzzling things.	1	2	3	4	5	6
STLP10	Superiors in thos organization communicate to their subordinates about their performance.	1	2	3	4	5	6
STLP11	Superiors in this organization provide rewards when employees reach their goals.	1	2	3	4	5	6
STLP12	As long as things are working, my superiors in this organization do not try to change anything.	1	2	3	4	5	6
STLP13	Employees in my organization are proud to be associated with the organization.	1	2	3	4	5	6
STLP14	My organization help employees find meaning in their work.	1	2	3	4	5	6
STLP15	My organization gets it employees to rethink ideas that they had never questioned before.	1	2	3	4	5	6
STLP16	In my organization, personal attention is given to those staffs that seem rejected.	1	2	3	4	5	6
STLP17	In my organization, employees are told the standards they have to know to carry out their work.	1	2	3	4	5	6
STLP18	Superiors in my organization, have clear understanding of where the organization is going.	1	2	3	4	5	6
STLP19	Superiors in my organization have clear sense of where he/she want the organization to be in the next five years.	1	2	3	4	5	6

Section Two: Organizational Innovativeness

The following statements describe about your organization's attitudes towards innovation. Please indicate the extent to which you agree or disagree with the statements based on the scales provided.

Strongly Disagree	**Slightly Disagree**	**Disagree**	**Strongly Agree**		
1	**2**	**3**	**4**	**5**	**6**

Statements		**Level of Agreement**					
OIV1	In my organization, support is given to those who want to try new ways of doing things.	1	2	3	4	5	6
OIV2	My organization is very cautious in adopting innovative ideas.	1	2	3	4	5	6
OIV3	My organization is willing to take risks to seize and explore 'chancy' growth opportunities.	1	2	3	4	5	6
OIV4	My organization actively responds to the adoption of "new ways of doing things" from other similar institution.	1	2	3	4	5	6
OIV5	My organization constantly seeks unusual, novel solutions to problems via the use of 'innovative men' within the organization.	1	2	3	4	5	6
OIV6	My organization tolerates individuals who do things in a different way.	1	2	3	4	5	6
OIV7	My organization is always willing to try new ways of doing things by seeking unusual novel solutions.	1	2	3	4	5	6
OIV8	My organization people are encouraged to think and behave in original and novel ways.	1	2	3	4	5	6

OIV9	In my organization, when we see new ways of doing things, we embrace them lastly.	1	2	3	4	5	6
OIV10	In my organization, when we cannot solve a problem using conventional methods, we improvise on new methods.	1	2	3	4	5	6

Section Three: Information Communication Capability.

The following statements assess the performance of Information technology in your organization. You are required to rate your organization on I.T Capability (in terms of I.T Knowledge and I.T Operations). Please indicate the extent to which you agree or disagree with the statements based on the scales provided.

Strongly Disagree	**Slightly Disagree**	**Disagree**	**Slightly Agree**		**Strongly Agree**		
1	**2**	**3**	**4**			**5**	**6**
Statements			**Level of Agreement**				
IT Objects:							
ITO1	My organization I.T infrastructures are sufficient.		1	2	3	4	5	6
ITO2	My organization I.T. Infrastructures are effecient.		1	2	3	4	5	6
ITO3	My organization has a budget for the purchase of updated hardwares for operational processes.		1	2	3	4	5	6
ITO4	My organization has a budget for the purchase of updated softwares for operational processes.		1	2	3	4	5	6
IT Knowledge:			1	2	3	4	5	6
ITO5	My organization operation's staffs are knowledgeable on I.T operations		1	2	3	4	5	6
ITO6	My organization staffs of I.T department are qualified for the job.		1	2	3	4	5	6
ITO7	My organization I.T networking engineers are professionally qualified		1	2	3	4	5	6
ITO8	My organization has computer expertise as consultants.		1	2	3	4	5	6
ITO9	My organization I.T staffs are proactive.		1	2	3	4	5	6

ITO10	My organization I.T staffs attend training courses regularly.	1	2	3	4	5	6
IT Operations:							
ITO11	My organization has effective internet access such a WIFI.	1	2	3	4	5	6
ITO12	My organization WIFI internet down time is minimal.	1	2	3	4	5	6
ITO13	My organization has computerized some of its academic activities.	1	2	3	4	5	6
ITO14	My organization has computerized some of its administrative activities.	1	2	3	4	5	6
ITO15	My organization I.T operations supports students needs	1	2	3	4	5	6
ITO16	My organization I.T operations supports staff needs	1	2	3	4	5	6
ITO17	My organization I.T policy is in line with local educational regulatory guidelines.	1	2	3	4	5	6

Section Four: Perceived Effective Strategy Implementation:

The following describe statements about perceived effectiveness of strategy implementation in your organization in the last five years. Please indicate the extent to which you agree or disagree with the statements based on the scales provided.

Strongly Disagree	**Slightly Disagree**	**Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**

Statements		**Level of Agreement**					
ESE1	My organization is successful in implementing it strategies.	1	2	3	4	5	6
ESE2	In my organization, there is no gap between formulation and implementation of strategies.	1	2	3	4	5	6
ESE3	My organisation is good in formulating strategies as in implementing them.	1	2	3	4	5	6

Section Five: Background information, kindly tick (√) as appropriate.

DMO1: Gender:

Male [ ]

Female [ ]

DMO2: Age:

21 – 30 [ ]

31 – 40 [ ]

41 - 50 [ ]

51 – Above [ ]

DMO3: Educational Qualification:

First Degree [ ]

Master Degree [ ]

PhD [ ]

Associate Prof. [ ]

Professor [ ]

DMO4: Portforlio:

Dean [ ]

Others [ ]

DMO5: Type of Educational Institution:

University [ ]

Polytechnic [ ]

Monotechnic [ ]

College of Education [ ]

APPENDIX II

MISSING VALUE OUTPUT

Result Variables					
Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
		First	Last		
STLP1_1	2	1	108	108	MEDIAN(STLP 1,ALL)
STLP2_1	2	1	108	108	MEDIAN(STLP 2,ALL)
STLP4_1	2	1	108	108	MEDIAN(STLP 4,ALL)
STLP5_1	3	1	108	108	MEDIAN(STLP 5,ALL)
STLP6_1	3	1	108	108	MEDIAN(STLP 6,ALL)
STLP7_1	3	1	108	108	MEDIAN(STLP 7,ALL)
STLP8_1	1	1	108	108	MEDIAN(STLP 8,ALL)
STLP9_1	1	1	108	108	MEDIAN(STLP 9,ALL)
STLP10_1	1	1	108	108	MEDIAN(STLP 10,ALL)

STLP11_1	1	1	108	108	MEDIAN(STLP 11,ALL)
STLP12_1	1	1	108	108	MEDIAN(STLP 12,ALL)
STLP15_1	1	1	108	108	MEDIAN(STLP 15,ALL)
STLP16_1	2	1	108	108	MEDIAN(STLP 16,ALL)
STLP18_1	1	1	108	108	MEDIAN(STLP 18,ALL)
OIV2_1	1	1	108	108	MEDIAN(OIV2, ALL)
OIV3_1	3	1	108	108	MEDIAN(OIV3, ALL)
OIV4_1	1	1	108	108	MEDIAN(OIV4, ALL)
OIV5_1	3	1	108	108	MEDIAN(OIV5, ALL)
OIV6_1	1	1	108	108	MEDIAN(OIV6, ALL)
OIV9_1	1	1	108	108	MEDIAN(OIV9, ALL)
ITO1_1	1	1	108	108	MEDIAN(ITO1, ALL)
ITO5_1	2	1	108	108	MEDIAN(ITO5, ALL)
ITO6_1	1	1	108	108	MEDIAN(ITO6, ALL)
ITO7_1	1	1	108	108	MEDIAN(ITO7, ALL)

ITO8_1	1	1	108	108	MEDIAN(ITO8, ALL)
ITO9_1	4	1	108	108	MEDIAN(ITO9, ALL)
ITO10_1	1	1	108	108	MEDIAN(ITO10 ,ALL)
ITO12_1	2	1	108	108	MEDIAN(ITO12 ,ALL)
ITO14_1	2	1	108	108	MEDIAN(ITO14 ,ALL)
ITO15_1	1	1	108	108	MEDIAN(ITO15 ,ALL)
ITO17_1	2	1	108	108	MEDIAN(ITO17 ,ALL)
ESE1_1	1	1	108	108	MEDIAN(ESE1, ALL)
ESE2_1	1	1	108	108	MEDIAN(ESE2, ALL)
ESE3_1	3	1	108	108	MEDIAN(ESE3, ALL)

APPENDIX III

SMART PLS OUTPUT

Overview of Measurement Model

	AVE	Composite Reliability	R Square	Cronbachs Alpha	Communality	Redundancy
Effective Strategy Implementation	0.862908	0.949695	0.696550	0.920443	0.862908	0.175359
IT Knowledge	0.645349	0.915743	0.827447	0.889076	0.645349	0.531627
IT Object	0.732076	0.916031	0.820556	0.877177	0.732076	0.600390
IT Operation	0.649188	0.927720	0.914721	0.907772	0.649188	0.592588
Information Communication Capability	0.573618	0.957870		0.952987	0.573618	
Organizational Innovativeness	0.600937	0.930318		0.914202	0.600937	
Strategic Leadership	0.503299	0.933722		0.923275	0.503299	

APPENDIX IV

BLINDFOLDING PROCEDURE OUTPUT

CV Redundancy

	Redundancy
Effective Strategy Implementation	0.175359
IT Knowledge	0.531627
IT Object	0.600390
IT Operation	0.592588
Information Communication Capability	
Organizational Innovativeness	
Strategic Leadership	