TRANSFORMATIONAL LEADERSHIP, KNOWLEDGE MANAGEMENT, ENTREPRENEURIAL ORIENTATION AND ORGANISATIONAL EXCELLENCE IN THE HIGHER EDUCATION INSTITUTIONS IN NIGERIA

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ABSTRACT

The past three decades had witnessed increasing challenge to the higher education institutions especially the public-owned ones. This challenge had been for the institutions to think like the corporate enterprises towards becoming world class so as to ensure improved excellent performances. However, there had been little research on the impact of transformational leadership and knowledge management as well as the moderating role of entrepreneurial orientation on performance excellence of higher education institutions especially in Nigeria. Based on the Resource Based View and Complementary Asset Theory, this study thereby aimed to determine the significance of relationship between transformational leadership and organisational excellence, and the significance of relationship between knowledge management and organisational excellence in the public higher education institutions in Nigeria. The study further aimed to determine the moderating role of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence, and on the relationship between knowledge management and organisational excellence. Data were collected from division heads in the public higher education institutions in the North-Central and South-Western geo-political zones of Nigeria. The study employed multistage sampling procedure with the use of survey questionnaires. Out of the 480 questionnaires distributed, 383 were returned with only 372 usable giving a 77.5 percent response rate. The 372 usable responses were analyzed through SPSS 20.0. Multiple regressions were used to investigate the relationships between transformational leadership, knowledge management, entrepreneurial orientation and organisational excellence. Results showed significant positive relationships between transformational leadership and organisational excellence and between knowledge management and organisational excellence. The results also showed that entrepreneurial orientation moderates the relationship between transformational leadership and organisational excellence, and that of knowledge management and organisational excellence.

Keywords: organisational excellence, transformational leadership, knowledge management, entrepreneurial orientation

ABSTRAK

Sejak tiga dekad yang lalu, pelbagai cabaran telah timbul dalam institusi pengajian tinggi khususnya institusi awam. Cabaran ini memerlukan institusi-institusi pengajian ini berfikir secara organisasi korporat ke arah menjadikannya bertaraf dunia bagi memastikan peningkatan prestasi yang cemerlang. Namun tidak banyak kajian mengenai kesan kepimpinan transformasional and pengurusan pengetahuan serta peranan orientasi keusahawanan sebagai penyederhana terhadap prestasi kecemerlangan institusi-institusi pengajian tinggi khususnya di Nigeria. Berdasarkan Teori Berasaskan Sumber dan Teori Aset Pelengkap, kajian ini bertujuan untuk menentukan hubungan signifikan di antara kepimpinan transformasional dengan kecemerlangan organisasi dan di antara pengurusan pengetahuan dengan kecemerlangan organisasi di institusi-institusi pengajian tinggi awam di Nigeria. Kajian ini juga bertujuan menentukan peranan orientasi keusahawanan sebagai penyederhana ke atas hubungan di antara kepimpinan transformasional dengan kecemerlangan organisasi dan hubungan di antara pengurusan pengetahuan dengan kecemerlangan organisasi. Data dipungut daripada ketua-ketua bahagian di institusi-institusi pengajian awam di bahagian Utara-Tengah dan Selatan-Barat zon geo-politik di Nigeria. Kajian ini menggunakan prosedur persampelan pelbagai peringkat melalui tinjauan soal-selidik. Daripada 480 borang soal selidik yang diedarkan, 383 telah dikembalikan dengan hanya 372 yang boleh digunakan menjadikan kadar respons sebanyak 77.5 peratus. 372 respons yang boleh guna telah dianalisis melalui SPSS 20.0. Regresi berganda telah digunakan untuk menguji hubungan-hubungan di antara kepimpinan transformasional, pengurusan pengetahuan, orientasi keusahawanan dan kecemerlangan organisasi. Dapatan kajian menunjukkan hubungan positif yang signifikan di antara kepimpinan transformasional dengan kecemerlangan organisasi dan di antara pengurusan pengetahuan dengan kecemerlangan organisasi. Selain itu dapatan kajian juga telah membuktikan peranan orientasi keusahawanan sebagai penyederhana ke atas hubungan di antara kepimpinan transformasional dengan kecemerlangan organisasi dan di antara pengurusan pengetahuan dengan kecemerlangan organisasi.

Kata Kunci: kecemerlangan organisasi, kepimpinan transformasional, pengurusan pengetahuan, orientasi keusahawanan

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LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
ASUP:	Academic Staff Union of Polytechnics
ASUU:	Academic Staff Union of Universities
CAE:	Canada Award of Excellence
CBN:	Central Bank of Nigeria
CEO:	Chief Executive Officer
COEASU:	Colleges of Education Academic Staff Union
EFQM:	European Foundation for Quality Management
FGN:	Federal Government of Nigeria
FME:	Federal Ministry of Education
HEI:	Higher Education Institution
JUSE:	Union of Japanese Scientists and Engineers
KMO:	Kaiser-Meyer-Olkin
MBNQA:	Malcolm Baldrige National Quality Award
MPC:	Malaysian Productivity Corporation
MSA:	Measure of Sampling Adequacy
NBS:	National Bureau of Statistics
NBTE:	National Board for Technical Education
NCCE:	National Commission for Colleges of Education
NGO(s):	Non-Governmental Organisation(s)
NPC:	National Productivity Council (Malaysia)
NPE:	National Policy on Education

NUC:	National Universities Commission
PCA:	Principal Component Analysis
PMQA:	Prime Minister Quality Award
SSS:	Senior Secondary School
TETFund:	Tertiary Education Trust Fund
TQM:	Total Quality Management
UNN:	University of Nigeria, Nsuka

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The importance of quality products had long been acknowledged through the efforts of Union of Japanese Scientist and Engineers (JUSE) and through the publication of *In Search of Excellence* by Peters and Waterman (1982). This strive towards excellence had been further encouraged through the establishment of excellence awards by countries and organisations. These awards were in form of the Deming Prize in Japan, Malcolm Baldrige National Quality Improvements Act of 1987 in America and the European equivalent in form of European Foundation for Quality Management (MBNQA Act, 1987; EFQM, 2014). To underscore the importance of excellent performances, other countries of the World had also adapted the excellence awards systems mentioned above as organisations were expected to display excellent performances for the benefit of all stakeholders (Klefsjö, Bergquist & Garvare, 2008; Talwar, 2011). Many countries of the world had being putting measures in place towards ensuring World Class status and performances for organisations that operate in them. Higher education institutions were not excluded from this search for excellent performance.

To be able to achieve the primary aim of its establishment, every organization, either in the manufacturing or service industry (higher education institutions inclusive) must aim at ensuring excellent performances in its activities. The need for continuous improvements, especially in the higher education institutions, was more necessary with

the ever-changing and dynamic operating environment that now prevails throughout the world.

The reduction in per capita funding, increase in non-traditional students' admission into universities; concern for accountability and value for money in higher education institutions in the UK (Hodgkinson & Brown, 2003) led to the Jarratt Report of 1985. The report recommended that universities should imbibe an industrial model or "ethos" which was more or less a transfer of business principles into the higher education institutions' sector (Hardy, 1990). In fact, the importance of improvement in higher education had been recognised as early as 1992 when Barnett (1992) made a distinction between management for quality and management of quality. Lomas (2004) argued for a desire for and promotion of the idea of quality enhancement over and above quality assessment in higher education institutions. This was a serious challenge to the future of universities in the UK and elsewhere in the world.

Although the implications of the Jarrat Report of 1985 challenged higher education institutions about the need to chart a future for themselves, the desire for future look at higher education institutions did not start and end in 1985. Judd (1942) wrote on the future of American education by discussing the then present conditions of education in America and the changes that seemed certain to take place in the future. Epps (1973) wrote on the future outlook of education for black Americans. After the Jarrat report, there had been concerns for how to secure the future of higher education (Esson & Ertl, 2013); the future of traditional university experience due to the changing faces of education with respect to ICT deployment (Long, 2013) and; quality procedures in higher

education in the future in Europe (Grifoll *et, al.,* 2012). Other pre-occupations were in the area of corporatisation of the university (Robbins, 2008); internatyionalisation of higher education (Anderson, 2012); challenges in institutional research (Calderon & Mathies, 2013) and; challenges of distance education in form of massive open online courses (Fischer, 2014). Middlehurst (2001) was more concerned about the forms the current and future higher education would take in the area of new forms of providers, new media of delivery, new curricular, integrative certificates and requirements of professional certification to mention but a few. These studies look into the specific future of higher education with the aims of ensuring excellent performances in the future.

This shift in perception of excellence had been given prominence in the last three decades in the field of management theory and practice (Dawei, Alan & Simon, 2011). While discussing the survival of Polish universities, Kwiatkowski (1990) insistently argued that the future of Polish universities could only be based on sound foundation of excellence. Nigeria as a country and the higher education institutions operating in it had been affected by this search for excellence in the World.

To be able to achieve the goals of the shift in attention towards World class performance for higher education institutions and manage the challenges of this change, Lomas (2004) argued that higher education institutions required transformational leaders rather than transactional leaders. He further asserted that transformational leadership will not only engender innovation and originality, it would also provide guidance for and earning of commitment from staff of these higher education institutions. It had been found that transformational leadership could provide, not only the necessary conducive environment

for knowledge management orientation but also, implementation of any change proposed in knowledge management because of its strong antecedent in a public service organisation (Laurie & Lavigna, 2010) which public higher education institutions belong to. Lomas (2004) further argued that higher education institutions should turn to learning organisations in their efforts to improving performance (i.e. knowledge management is a necessry ingredient in excellence in higher education institutions). Campbell and Dealtry (2003) submitted that knowledge management was a vital requirement in achieving the goals of new generation of corporate universities.

Desirable as these new dispositions were in higher education institutions, it was a validated fact that organisation participants, especially leaders, must display entrepreneurial orientation if the aims, objectives and orientation of the institution would be achieved optimally (Affendy, Asmat-Nizam, Abdul-Talib, Abdul Rahim, 2011). This had thus encouraged interest in entrepreneurial orientation in organisation. Studies had been conducted on the link between entrepreneurial orientation and performance (Lumpkin & Dess, 1996); its effect on effective and efficient management of education institutions (Frank, Kokura, Lueger & Mugler, 2005) as well as its moderation effect on impact of knowledge management on innovation (Yuan, Liu, Wang, Li & Guo, 2009). Yokoyama's (2006) work dealt with interactive effect of entrepreneurship, management, governance and leadership in Japanese and UK universities. These researches showed how entrepreneurial orientation had affected organisational excellence differently. It also showed how transformational leadership on one hand and knowledge management on the

other hand had also affected excellence. These findings had impacted on the desire for excellence in higher education institution worldwide.

The current challenge before higher education institutions was that they were expected to be run like enterprises to quickly respond to the needs of the society and deliver on their mandates. They were expected to be the knowledge-mine of any society, the information clearing houses for the society and were thereby expected to be up-to-date in global best practices (Kwiatkowski, 1990). They were also expected to ensure knowledge management implementation in their institutions for the purpose of organisation excellence so as to effectively discharge the primary objectives of their existence. Thus, leaderships in higher education institutions were expected to imbibe the knowledge management orientation.

Over time, government officials, researchers, NGOs and academicians had raised concerns over the dwindling performances of higher education institutions in Nigeria as conseptualised by the different National Policy on Education (NPE). They also raised concerns over dwindling relevance of these institutions to the current knowledge-based economy World we now live in. For many years past, no Nigerian higher education institution has made it to the first one thousand six hundred (1600) in the World University ranking and none made it to the first ten (10) in Africa (Nigerian Tribune, March 2010). Although there had been some improvements as at 2014, nevertheless, no higher education institution in Nigeria had made it to the first one thousand one hundred in World ranking while only one (Obafemi Awolowo University, Nigeria) was able to

make it within the first twenty in Africa (Web Ranking of Universities, 2014) as evidenced in Appendix B.

The Federal Ministry of Education (FME) in Nigeria, commenting on the reports of the presidential visitation panels to the Federal universities in Nigeria as at 2011 lamented on the outcome of the whitepaper which impugned on the poor leadership quality in higher education institutions and low level of performance**.** The whitepaper further observed that the leadership in those institutions had devised many illegal schemes which were used by the management to abuse the University system (FME, 2011). Furthermore, it had been stated that the proprietors and leaders in these public higher education institutions in Nigeria did not possess the necessary entrepreneural orientation to be dynamic and attract funds, researches, students etc and as such they were thereby operating below excellence level (Nigerian Tribune, March 2010). The views of what a higher education institution should be, especially from the Nigerian Government perspective, had significantly contributed to the decline in Nigerian higher education system and their relevance to modern day realities (Egbokhare, 2012) even with the autonomy granted to Nigerian federal universities through government policy release in May, 2000. The executive secretary, National Universities Commission in Nigeria lamented that despite the granting of financial autonomy to Federal Universities by the Nigerian government, most universities were failing in the exercise of this right (Okojie, 2011).

Leaders in Nigerian higher education institutions were still living in the past when institution leaders were not expected to be entrepreneurially-oriented. This had made them still not prepared to provide the kind of education required in this modern

competitive World. The inability of the higher education institutions in Nigeria to provide for the modern day needs of students had resulted in Nigerian students constituting a sizeable and noticeable percentage of international students in foreign higher education institutions. The problems in Nigerian higher education institutions which had led to high international education mobility of Nigerians seeking higher education outside the shores of the country, had led to high capital flight from the country (Olabisi, 2012; Gabriel, 2011). This had consequently led to upsurge in the demand for foreign education visa from embassies and high commissions of different countries of the world (Leadership Newspaper, 2012).

The research culture had been estimated to be low in Nigerian higher education institutions as most of the needed equipment were not available and where available, were not functional while those functional were outmoded. There had been a steady decline in government financial subvention to these institutions. These had reduced the visibility of Nigerian higher education institutions in World academic landscape (Udida, Bassey, Udofia & Egbonna, 2009).

From the discussion above, there is a need for proper combination of transformational leadership moderated by entrepreneural orientation in a knowledge managing higher education institution towads ensuring organisational excellence in such higher education institutions. The need to investigate the scenario explained above serves as the motivation for the proposed study in Nigeria. This shall be done through investigation of the transformational leadership needed to introduce and implement the change towards organisational excellence focus as well as the knowledge management needed to leverage

on HEIs' community of practice. This will be furthered through the exploitation of entrepreneurial orientation needed for successful achievement of aims and objectives of these institutions.

1.2 PROBLEM STATEMENT

Nigeria (which is the country of location of the study), operates a three-tier level of educational system in form of basic, higher school and higher institutions (FME, 2014). While the basic component comprises the 9year compulsory education and the higher school of 3years is referred to as Senior Secondary School (SSS) on one hand, the higher education institutions (HEIs) on the other comprise monotechnics, polytechnics, colleges of education, universities etc.

Abudugana, (2012) observed that years back, Nigerian education system used to be atractive not to the local lecturers and students only but foreign lecturers and students too. This was due to the high quality of educational services and the efficiency with which these services were provided. In fact, he averred that before, Nigerians who craved for foreign offer of admission and pursued courses abroad, unless in areas where the trainning facility were not available in Nigeria, were seen to be "…those who have run away from the academic rigours in their country. They are not the best of the students in Nigeria". This was not the case now due to the inefficiency which was emblematic of Nigerian higher education institutions. Lecturers and students now patronised foreign higher education institutions as a response to and escape from the poor state of higher education system in Nigeria.

There had been concerns raised by government officials, government departments, researchers, private individuals and groups, NGOs and public commentators on the dwindling performances of these higher education institutions. These performances were contrary to what were conseptualised by the different National Policy on Education (NPE) in Nigeria and were far below evidences in earlier exceptional performances of these institutions. The relevance of these institutions had been questioned with respect to the current ever-dynamic, highly competitive, globalised, efficiency-demanding and knowledge- based economy World that we live in. Babalola (2007) observed that there was a complete mismatch between the graduates produced through teaching in Nigerian higher education institutions and the societal needs for the graduates. Most graduates were not employable by the society while those employable were underemployed due to inadequate relevant skill.

As an effect of the inefficiency of these higher education institutions, for some years past, no Nigerian higher education institution was among the first one thousand six hundred in the World University ranking in general and the first ten in Africa to be particular (Nigerian Tribune, March 2010). This observation was made made by the Nigerian President (Dr. Goodluck Ebele Jonathan - in his capacity as the Visitor to all Federal Universities in Nigeria), at the 41st Convocation Ceremony of the University of Nigeria, Nsuka (UNN). He then sent a wake-up call by lamenting on the dwindling fortunes in Nigerian higher education system when he declared inter alia

> …no Nigerian university is among the top 10 providers of higher education in Africa, not to mention globally.... (Nigeria) cannot be a great nation on the back of poorly trained youth. It is for this reason that the transformation

> of our nation must start in the classrooms... bringing about the desired transformation in the country and the education sector (Vanguard Jan, 30, 2012).

Although this researcher could not confirm if this wake-up call engineered Nigerian HEIs, there had been some improvements as at 2014. Despite the improvement recorded, no higher education institution in Nigeria was still within the first one thousand six hundred in World ranking. While Obafemi Awolowo University (OAU) in Nigeria is able to make it to the nineteenth position in Africa, the closest Nigerian HEIs to OAU in the 25th position in Africa (Web Ranking of Universities, 2014). This was not good for a country desirous of development and that was generally referred to as the giant of Africa.

The Nigerian President, whose main campaign vanguard and governmental one-point agenda was transformational leadership, also raised an alarm on the low level of contributions of higher education institutions to the development of the country. He underscored the importance of transformation in Nigerian education system when he averred that

> .....a sound education system is key to the transformation of Nigeria's economy to make it competitive... Transformation is not just another slogan. We cannot tolerate the attitude of "business as usual". Let me assure you that our decision to support the education sector is resolute. We will continue to work until our universities become centres of excellence. Vanguard Jan, 30, 2012).

The Federal Ministry of Education (FME) in Nigeria, commenting on the reports of the presidential visitation panels to the Federal universities in Nigeria as at 2011 expressed dismay over the outcome of the whitepaper which impugned on the poor leadership

quality in the higher education institutions and low level of performance. Rhetorically, the regulatory body flayed the management of HEIs by asking

> Who would have thought that vice-chancellors of federal universities who have acted like cry babies in their demands for increased funding would engender processes that undermine rather than enhance the quality of professional staff they hire, the excellence of teaching and research in their campuses, and indeed the overall quality of the programmes they offer?

The whitepaper further observed that the leadership in those institutions had devised many illegal schemes which were used by the management to abuse the University system thereby leading to inefficiency in these institutions. This was a confirmation of the report of the committee on needs assessment in Nigerian public Universities when it observed that the problems identified in Nigerian public universities were mere symptons. The committee placed the causes of these identified problems squarely on the factors of poor quality of leadership and governance; prioritization of resource allocation as well as limited resources (ASUU, 2014).

Furthermore, it had been stated that the proprietors and leaders in Nigerian public higher education institutions did not possess the necessary entrepreneural orientation to be dynamic and attract funds, researches, students etc all of which had contributed to below-excellence performance level (Nigerian Tribune, March 2010). Egbokhare (2012) discovered that the outdated views of what a higher education institution should be, especially from the Nigerian government perspective, had significantly contributed to the decline in Nigerian higher education system and in their relevance to modern day realities. Leaders in Nigerian higher education institutions were not expected to be

entrepreneurially-oriented so as to be prepared to provide the kind of education required in this modern competitive World. However, the Federal Government of Nigeria (FGN) granted academic, financial and institutional autonomy to federal universities through government policy release in May, 2000 and University Miscellaneous Act of 2003. The underutilisation of the financial autonomy segment of the provisions of the policy release and the Act made the executive secretary, National Universities Commission in Nigeria to lament that most universities were failing in the exercise of this right- financial autonomy (Okojie, 2011). These HEIs had continued to demand for more funding from the Federal Government of Nigeria despite the financial autonomy granted to them.

The research culture had been estimated to be low in Nigerian higher education institutions as most of the needed equipment were not available and where available, were not functional while those functional were outmoded. Research outputs had been unable to prompt in the economy, the expected innovation – based productive gains. This had reduced the visibility of Nigerian higher education institutions in World academic landscape. Over 80% of publications by faculty members in Nigerian universities were in local journals without web visibility. There were only two registered patents owned in the past three years by Nigerian academics (Udida, Bassey, Udofia and Egbonna, 2009; Ogbogu, 2013; ASUU, 2014).

Underfunding and unaccessed fundings had been a perennial problem in Nigerian higher education institutions which had contributed to their decline in performance. Governments' and government departments' financial subventions had been reducing and/or unaccessed yearly but they still constitute over 90% of the fund available in

Nigerian higher education institutions (Udida, Bassey, Udofia & Egbonna, 2009; ASUU, 2014). Although the absolute amount in funding of public higher education system had improved with the 2013 budget and the proposed 2014 budget estimates of the Federal Government of Nigeria, it was still far from the UNICEF-recommended minimum of 26%. The low-level of funding was further precipitated by limitations placed on financial autonomy and government regulations limiting the autonomy of the Nigerian higher education institutions to seek for and explore other alternative sources of funds. The problem of underfunding was also aggravated by HEIs not accessing funds allocated to them by the TETFund (Tertiary Education Trust Fund- a government agency in charge of managing 2% education tax on assessable profit on all companies operating in Nigeria). As at October, 2013, over One Hundred Billion Naira ($625m) was idle as unaccessed funding by Nigerian higher education institutions domiciled with the TETFund. The executive secretary of TETFund lamented that "Here we are with so much money to spend, and the institutional managers, for whatever reason, are unable to access these funds." Over Two Hundred and Seven Billion Naira ($1.294b) had been collected for allocation to public higher education institutions in this year - 2014 (Daily Trust, Oct. 10, 2013). Unfortunately, this funding allocated may not be optimally accessed by the HEIs as the latter did not adequately access the earlier funding allocations.

Nigerian higher education institutions had not being performing excellently in the sphere of managing knowledge which was one of the primary responsibilities for establishing them. Facilities like videoconferencing, interactive whiteboards, internet facility and automated library were mostly nonexistent and where they were available, they were

inadequate and mostly outdated. Internet facility was nonexistent or was either epileptic or slow in these HEIs. To be able to be more efficient, higher education institutions needed to have almost unlimited access to and being able to contribute to recent advances in various spheres of knowledge through participation in conferences, easy access to recent journals, patenting of inventions et cetera. All these were lacking or inadequate in Nigerian higher education institutions (Abudugana, 2012; ASUU, 2014).

Another major problem facing higher education institutions in Nigeria was the incessant strike by the staff of the public higher education institutions. Okuwa and Campbell (2011) researched on the influence of strike on the choice of higher education in Oyo state (a state in one of the two geo-political zones this study covered). They concluded that strike action which was prevalent in public higher education institutions in Nigeria, along with other variables, influenced the parents' and applicants' choice of higher education institution to attend especially between the public and private ones. This had further spilled over to the choice of higher education institutions by Nigerians who now prefer foreign offers of admission due to unpredictability in the years of completion of study at home. A 5-month strike action by the ASUU (Academic Staff Union of Universities) has just been called off; 5-month old strike by the ASUP (Academic Staff Union of Polytechnics) was still on while the COEASU (Colleges of Education Academic Staff Union) strike was still on-going. This was antithetical to excellent performance of the HEIs in Nigeria.

One of the effects of strike and inefficiency, among other problems bedevilling Nigerian higher education institutions, was high international education mobility of Nigerians

seeking higher education outside the shores of the country with attendant high capital flight from the country. Nigerian students now constituted a sizeable and noticeable percentage of international students in foreign higher education institutions. While reviewing the Institute of International Education's published Project Atlas report, Olabisi (2012) observed that there would continue to be an increase in the number of Nigerians seeking higher education admission internationally, based on inferences from the Project Atlas report. His view tallied with that of Gabriel (2011) when he analysed the penchant of Nigerian parents for foreign education for their children.

The then Governor of Central Bank of Nigeria (CBN) and current Emir of Kano, Mallam Sanusi Lamido Sanusi, commented on the urge for foreign education as a cause of capital flight in Nigeria at a book launch in Kaduna (a state capital in Northern-Eastern geo-political zone of Nigeria). He was quoted as stating, inter alia, that "...there are about 71,000 Nigerian students in Ghana alone paying about a billion US dollars annually as tuition fees" – an amount which was more than the total annual budgetory allocation by Nigerian government to all Federal Universities. This was Ghana alone, what of other countries of the World?

Gabriel (2011) further quoted Network of Migration Research in Africa as stating that 10,090 Nigerians granted visas into the United Kingdom (UK) in 2009 paid N42billion ($271m) to their host country as tuition fees. The conservative estimate of what Nigerian students paid as tuition fees in foreign schools ran into "…tens, if not hundreds of billion of dollars annually". The committee of Vice-Chancellors of Nigeria in its recent communique stated that Nigerian students paid around $10b on tuition fees globally

(Niyi, 2012). The amount paid as tuitions coupled with living and book expenses of the Nigerian students in foreign HEIs were a serious drain on Nigerian foreign exchange needed for development and was a serious capital flight from a developing economy like Nigeria. The Vice-consul of the U. S. Consulate General in Lagos (Nigeria) provided additional information on the upsurge in the number of Nigerian applicants for students' visa to the United States. She informed that Nigeria was the country in Africa with largest number of students studying in educational institutions in the U.S. (Leadership Newspaper, 2012). Due to these problems of performance, Abdulkareem and Oyeniran (2011) recommended the use of data envelopment analysis for these HEIs to solve the identified problems.

Lots of researches had been conducted on the nature, processes and impacts of organisational excellence in organisations. Denis and Rodney (2002) concentrated on the impact of organisational excellence model (which they referred to as business excellence model) on organisational and strategic decision making. They used grounded theory in examining how managers could create the excellence models in an organisation with a view to revising and improving known and applied organisational excellence models. Their contribution was not related to higher education institution.

Though the use of knowledge management for distinctive competence had been discovered to be important in organizations that sell service instead of tangible products, this study by Armstrong (2005) did not explore higher educational institutions and how knowledge management impacted on excellence of the case organisation of that study. Although Soone and Lee (2006) argued that knowledge must not only be managed but

must be properly shared, the research did not focus on knowledge sharing in higher education institutions for the purpose of organisation excellence and distinctive competence.

The positive relationship between proper knowledge management system and guarantee of competitive advantage for organisations (Solomom, Englis, Goldsmith, Valentine & Bieak, 2005; Garry & Lamont, 2003) had been documented, but nothing was stated to show how it affected organisational excellence of higher educational institutions. It did not also show how transformational leadership and entrepreneurial orientation could trigger organisational excellence to improve competitiveness within an organisation's environment. The ultimate impact of knowledge management on organisation excellence and organisational performance had been studied by several authours (James, Hoelscher & Sherrif, 2005; Karim, 2008; Ronald, 2004; Denise, Miura & Takahashi, 2007; Lee, Kim & Kim, 2011). These studies, however, did not establish any relationship between transformational leadership on organisational excellence.

Yokoyama's (2006) work dealt with interactive effect of entrepreneurship, management, governance and leadership in Japanese and UK universities, but the research was not extended to organisational excellence in those institutions and was also limited to these advanced economies which were not the same as Nigeria in their cultural and value systems. Prabhu, McGuire, Drost and Kwong, (2012) only considered entrepreneurial orientation self-efficacy as it affected proactive personality-entrepreneurial intention relationship. No research investigation known to the researcher had combined together

the four variables of investigation in this study (i.e. organisational excellence, transformational leadership, knowledge management and; entrepreneurial orientation).

This research work was aimed at tackling the shortcomings in theory, analysis, context and the outcomes of previous researches. It aimed to investigate and solve the above-enumerated problems as well as other problems associated with Nigerian higher educational institutions. It also aimed to bring the four variables together as an extension of the separate treatments previously employed by other researchers.

Consequently, the academic and the practical level of the causes and effects of lack of organisational excellence in Nigerian higher education institutions constitute problems that shall be investigated in this research work.

1.3 RESEARCH QUESTIONS

Based on the problems identified above, the following research questions would help in arriving at validated solution to the problems identified.

The research questions were

(a) Is there significant positive relationship between transformational leadership and organisational excellence in higher education institutions?

(b) Is there significant positive relationship between knowledge management and organisational excellence in higher education institutions?

(c) Does entrepreneurial orientation moderate the relationship between

transformational leadership and organisational excellence in higher education institutions?

(d) Does entrepreneurial orientation moderate the relationship between knowledge management and organisational excellence in higher education institutions?

These are the research questions that would be answered in the course of this research work.

1.4 RESEARCH OBJECTIVES

The primary objective of this research was to study the relationship between transformational leadership, knowledge management and organisations excellence with emphasis on the moderating effect of entrepreneurial orientation on such relationship. Specifically, the research objectives were:

(a) To investigate the significant positive relationship between transformational leadership and organisational excellence in higher education institutions.

(b) To evaluate the significant positive relationship between knowledge management and organisational excellence in higher education institutions.

(c) To analyse the moderating effect of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence in higher education institutions.

(d) To determine the moderating effect of entrepreneurial orientation on the relationship between knowledge management and organisational excellence in higher education institutions.

1.5 SCOPE OF RESEARCH

The scope of this study was limited to the higher education sector in Nigeria. The education sector in Nigeria comprised basic education, secondary education and higher education segments. As stated earlier, Nigeria operated a three-tier level of educational system in form of basic, higher school and higher institutions (FME, 2014). The basic comprised the 9year compulsory education, higher school of 3years referred to as Senior Secondary School (SSS) and the higher institutions which comprise monotechnics, polytechnics, colleges of education, universities et cetera.

With the establishment of the first higher education institution in Nigeria in 1934 (Yaba College of Technology) and the establishment of the first University in 1948 (University College, Ibadan- now University of Ibadan), higher education had grown in leaps and bounds. Presently, Nigeria had forty Federal Government-owned, thirty-eight state government-owned and fifty privately-owned Universities (NUC, 2014) as evidenced in Appendix C. There were also twenty-one Federal government-owned, thirty-eight state government-owned and twenty-two privately-owned Polytechnics (NBTE, 2014) as in Appendix D. There were twenty-two Federal government-owned, forty-seven state government-owned and fourteen privately-owned Colleges of Education in Nigeria (NCCE, 2014) as in Appendix E. The Universities in Nigeria could be categorized as

specialized and conventional. The Universities that were specialized were referred to as - Universities of science and technology, Universities of Education; Universities of Agriculture; Defence/Security Universities; Open University and; Petroleum University. The Polytechnics were general and not specialized while the colleges of education included general and specialized ones (specialized college of education included college of education for the handicap; for girls; for technical studies et cetera).

Although there were many types of institutions that constituted higher education institutions in Nigeria, this research was conducted in the higher education institutions sector comprising Universities, Polytechnics and Colleges of Education to the exclusion of monotechnics. These institutions were selected from two out of the six geo-political zones of Nigeria. For administrative convenience, Nigeria (a country with 36 states and a Federal Capital Territory) was divided into six geo-political zones by de facto and not by de jure. The six geopolitical zones were North-Central, North-East, North-West, South-East, South-South and South-West (Appendix F). Higher education institutions in North-Central and South-West were selected for this study. The selected institutions shall cut across the federal and state government owned institutions which constitute public education institutions in Nigeria. The targeted population was the academic staffs who were in charge of responsibility units of the selected institutions.

Table 1.1 below showed the distribution of higher education institutions in Nigeria on the basis of the sector of interest to this research. There were fifty-two institutions of interest in the North Central; thirty-three in the North east; thirty-nine in North West while there were thirty-eight in the South east; forty-nine in the South-South and; eighty in the South

West of Nigeria. The North Central and South West geo-political zones were investigated as both had over 45% of the higher education institutions in Nigeria located in them. However, out of all the institutions in the two geo-political zones, only publicly-owned institutions formed the sample frame. Thus, federal government and state government-owned higher education institutions formed the sample.

Table 1.1

Nigerian Higher Education Institution by Geo-Political Zone

Zone/Institution	University	Polytechnic	College of Education	Total	%
North-Central	22	13	17	52	17.81
North-East	13	9	11	33	11.3
North-West	16	10	13	39	13.36
South-East	18	9	11	38	13.01
South-South	22	15	12	49	16.78
South-West	37	25	18	80	27.4
Missing	0	0	1	1	0.34
Total	128	81	83	292	100

Source**:** Adapted from the websites of National University Commission- NUC (www.nuc.edu.ng); National Board for Technical Education- NBTE (www.nbte.gov.ng) and; National Commission for College of Education- NCCE (www.ncceonline.edu.ng)

Furthermore, the organisation structure of the academic staff of a typical higher education institution of interest of this study in Nigeria consisted of the policy board, head of the institution, the deputies, the deans/directors, deputy deans, heads of departments, heads of units or coordinators, directors of centres and institutes, head of statutory and non-statutory committees et cetera. In the University, the policy board was referred to as the Governing Council just like the board of directors in a company. The head of the institution in charge of the day-to-day running of the University was the Vice Chancellor with his/her deputies. Depending on the university, there were basically two deputy vice-

chancellors each for academics and administration. There could be varieties in some universities to include deputy vice-chancellor international affairs, research and innovations. There were faculties which comprised groups of departments and were headed by Deans who were assisted by the deputy deans. Postgraduate schools also had deans as heads and deputy deans as assistants. At the level of the departments, the heads were called the heads of departments (H.O.Ds.). Departments were sometimes splitted into units which were specialized area headed by heads of units or coordinators.

Other units which were not strictly in the mainstream academics but which had academic headship due to the primary functions of higher education institutions included institutes, committees, centres et cetera. Institutes, directorates or centres included leadership institute; research innovation and development centres; entrepreneurship development centres; institute for management and business research; directorates for academic planning; centre for industrial training; centre for continuing education or distant learning, centre for special education, computer centre, directorate of management information system, centre for Ilorin studies et cetera which were some quasi-academic groups obtainable in Nigerian Universities. The heads of institutes and directorates were generally called director assisted by deputy directors. Committees on examination, staff training and development committees; disciplinary committee, examination committee, convocation committee were commonplace in Nigerian Universities. Their heads also had nomenclature like the institutes.

In comparable terms, the polytechnics and colleges of education also used Governing Council for the policy board while the head of the institution was referred to as the Rector

and Provost in Polytechnics and colleges of education respectively. Rectors and provosts had two deputy rectors and deputy provosts- each one for academics and administration. Compared to the university, polytechnics and colleges of education either used faculty or school headed by deans or directors of schools. Departments were headed by heads of department who might have heads of unit under them. For example, in college of education, there were heads of units for curriculum studies, guidance and counseling, measurement and evaluation et cetera in the department of education. In the polytechnics, department of science laboratory technology (S.L.T) often had unit heads for physics, chemistry, biology, microbiology et cetera.

A look at the Table 1.2 provided a visualization of the nature of the organisation structure of academic staff in higher education institution in Nigeria. The Table 1.2 reflected the organisation structure of academic staff of a typical higher education institution in Nigeria. There were few variations from each institution to another and from each strata to another. These variations are still within the structure in the Table 1.2. Administrative expediency sometimes determined the few variations obtainable from one institution of higher learning to another as typified in Appendix G. These groups were the sample used for the administration of questionnaires.

Table 1.2
Nature of the Organisation Structure in Higher Education Institution in Nigeria

Item/Institution	University	Polytechnic	College of Education
Policy Board/Body	Governing Council	Governing Council	Governing Council
Overall Head	Vice Chancellor	Rector	Provost
Assistants to Overall Head	Deputy Vice Chancellors	Deputy Rectors	Deputy Provosts
Group of Departments/Division	Faculty	Faculty/School	Faculty/School
Head of Group of Department/Division	Dean	Dean/Director	Dean/Director
Assistant to Head of Group of Departments	Deputy Dean	Deputy Dean	Deputy Dean
Group of related courses	Departments	Departments	Departments
Head of Related Courses	Head of Department	Head of Department	Head of Department
Distinct Related Course	Heads of Unit/Coordinator	Heads of Unit/Coordinator	Heads of Unit/Coordinator
Academic Service Units	Institute/Centre/Committee	Institute/Centre/Committee	Institute/Centre/Committee
Head of Academic Services Units	Dean/Director	Dean/Director	Dean/Director
Assistants to Heads of Academic Service Units	Deputy Dean/Deputy Director	Deputy Dean/Deputy Director	Deputy Dean/Deputy Director

On the variables of concern for investigation, organisational excellence models like European Foundation for Quality Management (EFQM); Malcolm Baldrige National Quality Award (MBNQA); Malaysian Quality Assurance (MQA) et cetera were covered. Customer results, staff results, societal results, operational results and performance results of organisational excellence were used to measure organisational excellence construct. Transformational leadership dimensions which comprised vision, inspirational communication, intellectual simulation, supportive leadership and personal recognition were also used to operationalise transformational leadership. Knowledge management

paradigm of knowledge creation, sharing, internalization, internationalisation, implementation and evaluation was also used unidimensionally. Furthermore, the five dimensions of entrepreneurial orientation of autonomy, risk-taking, competitive aggressiveness, proactiveness and innovativeness were analysis and utilised as a single construct for entrepreneurial orientation.

1.6 SIGNIFICANCE OF RESEARCH

After the successful completion of this study and its recommendations implemented, the study would be significant in many ways to properly understand the underlying relationship of transformational leadership, knowledge management and organisation excellence in general and in Nigerian higher education institutions in particular. Furthermore, the moderating impact of entrepreneurial orientation on these relationships which was needed to successfully operate in Nigerian higher education institutions would be examined. The research outcomes would deepen the skill of the researcher in the field of organisational excellence in higher education institutions and provide empirical evidence to prompt Nigerian government and all stakeholders in putting in place the necessary conducive environment for organisational excellence strategy in Nigerian higher education institutions

After the successful completion of this study and its recommendations implemented, the study would be significant in the following ways

(1) Policy Makers

(a) It would serve as empirical evidence to prompt Nigerian government into putting in place the necessary legal and economic empowerments for the

higher education institutions to operate excellently and be a source of pride to the nation, nay, the African continent.

(b) It would assist in understanding the underlying relationship between knowledge management and organisation excellence in Nigerian higher education institutions.

(c) It would assist in reducing the drain on Nigerian foreign exchange exacerbated by inefficient higher education system and also serve as a source of foreign direct investment in form of education tourism in Nigeria.

(2) Management of Nigerian Higher education institution

(a) It would help the management and leadership of Nigerian higher education institutions in determining the entrepreneurial orientation they needed to adopt for improved performance.

(b) It would help the management of the Nigerian higher education institutions in appreciating the impact of and deployment of the use of knowledge management towards becoming World Class higher education institutions.

(b) It would improve the ranking of Nigerian higher education institutions thereby providing prestige for the management of those institutions

(3) Theory

The outcome of the reseaech work will contribute to theory in the following ways

(a) The outcome would also widen the understanding of the researcher and deepen his skill in the field of organisational excellence, transformational leadership, knowledge management and entrepreneurial orientation.

(b) The findings of this study would help in building the body of knowledge in the area of organisational excellence, transformational leadership, knowledge management and entrepreneurial orientation especially with respect to developing country like Nigeria. This would help future researchers.

(c) It would help in empirical understanding of the underpinning theories with respect to higher education institutions and to the African environment.

(d) Recommendations for further studies would help in redirecting research efforts. This is especially with respect to public higher education institutions that are expected to behave more like business enterprises today.

The study was expected to contribute to the development of Nigeria in the area of eductaion. Since education provided one of the fundamental foundations for development in any nation, this would ensure that Nigeria achieved its Vision 2020:20 (i.e. being one of the 20 leading economies in the World by the year 2020).

1.7 DEFINITION OF TERMS

The underlisted terms had the following meanings in this thesis unless otherwise stated.

Organisational Excellence: This referred to best performances and satisfaction of interest of all stakeholders to an organisation on a continuous basis. It referred to both the internal and external stakeholders to an organisation regardless of whether the stakeholders were

direct or indirect or; close or far. Satisfactions of the interest of those that had a stake in the organisation must be met on a continuous basis to achieve excellence (Peters & Waterman, 1982).

Transformational Leadership: This referred to leadership that behaviourally motivated and helped the subordinates in the achievement of goals that were otherwise not thought to be achievable in an organisation. This was a leadership that went beyond "carrot and stick" approach to leadership (Bass & Bass, 2008).

Knowledge Management: This referred to all activities of an organisation in creating, documenting, sharing, implementing and evaluating the "soft" skills in an organisation for the purpose of excellent performance. It involved the community of practice of an organisation (Nonaka, 1991; Nonaka & Takeuchi, 1985).

Entrepreneurial Orientation: This referred to the predisposition of an individual, group and/or organisation towards being innovative in risk-taking activities, aggressively pursuing the goals with the aim of exploiting the available opportunity (Lumpkin & Dess, 1996).

Stakeholders: This referred to those people who had a stake in the activities of an organisation. They referred to the staff, immediate and remote community to the location of the organisation, government and government agencies, customers and non-governmental organisations. Others included the management, boards of directors, suppliers et cetera who affected, were affected or were likely to be affected by the operations of the organisation (Benneworth & Jongbloed, 2010).

Higher Education Institutions: These referred to post-secondary education institutions that provide instructions in both practical and theoretical knowledge. They included the universities, polytechnics and college of education which were refered to as tertiary education institutions (FME, 2014).

Academic Staff: This referred to employees in higher education institutions who were primarily employed for teaching, learning and research activities of the institution. They were employed on a full-time as a lecturer, research fellow or academic librarian for the purpose of achieving the primary objective of the establishment of such higher education institutions (ASUU, 2014).

1.8 ORGANISATION OF THE THESIS

This thesis was organised into five chapters which included introduction; literature review; research methodology; findings and discussion and; conclusion and recommendation. A synopsis of each of the chapters was presented in the following paragraphs.

The first chapter which was the introduction consisted of the background to the study, statement of the problem and; research questions. These were followed by research objectives, significance of the research, the scope the study covered, definition of terms and how the study was organised.

Second chapter reviewed relevant literature on the dependent, independent and moderating variables of this study. It discussed organisational excellence, its historical

development, dimensions, excellence models and critiques of different excellence models as well as organisational excellence in higher education institutions. The meaning, dimensions and relationship to organisational excellence for each variable-transformational leadership; knowledge management and; entrepreneurial orientation were discussed. Entrepreneurial orientation as a moderator was discussed. The underpinning theories of resource-based view and complementary theories were discussed to arrive at the hypothetical model for the study.

The third chapter focused on the general research design. It comprised research framework, statement of the research hypotheses as well as operationalisation of variables. It also contained measurement or instrumentation of variables and data collection procedures. After that, a description of the population of study, sampling procedures, techniques of data analysis and reliability and validity was done in this chapter.

Chapter four discussed the processes of data collection, survey response, data cleaning and descriptive statistics of the respondents which were examined. Factor analysis and correlation test for direct linear relationship were conducted. The assumptions of multiple regressions were discussed and a multiple regressions test of hypotheses were conducted. A hierarchical regression analysis was conducted and summary of findings given. All these were done using SPSS 20 version.

The last chapter was the fifth chapter in which the findings in chapter four was presented. The key findings in chapter four were presented in this chapter according to the research objectives. The significance of the findings and the theoretical, practical

and policy implications of the findings were highlighted. Recommendations for future research were stated and conclusions made.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviewed relevant literature on the dependent, independent and moderating variables of this study. It contained a detailed discussion of the concept of organisational excellence with special emphasis on its meaning, historical development and antecedents. Further review of different dimensions, models and critiques of different operational excellence models was done while the impact of organisational excellence on an organisation was discussed. Also, the concept of organisational excellence in higher education institutions was reviewed.

A discussion on the first independent variable - transformational leadership- followed. A review of the different dimensions of transformational leadership was conducted and this was followed by establishing the relationship between transformational leadership and organisational excellence. This segment was concluded by arriving at the first hypothetical relationship between transformational leadership and organisational excellence.

The concept of knowledge management was reviewed in the third segment of this chapter. After a thorough understanding of the concept of knowledge management and its dimensions, established relationship between knowledge management and organisational excellence was discussed. This then led to the discussion of a hypothetical relationship between the two concepts of transformational leadership and organisational excellence.

The moderating variable of entrepreneurial orientation constituted the fourth segment of this chapter. Entrepreneurial orientation was thoroughly discussed with further analysis of the dimensions of the concept. Established relationship between entrepreneurial orientation and organisational excellence as contained in works of past and present authors and researchers were reviewed. This was complemented by a subsection on entrepreneurial orientation as a moderating variable. On one hand, a tentative statement of hypothesized relationship of moderation effect of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence was stated. On the other hand, another hypothesized relationship of moderation effect of entrepreneurial orientation on the relationship between knowledge management and organisational excellence was stated.

Section five of this chapter focused on the theoretical framework. The two theories used were: theory of resource advantage (Resource-Based View- RBV) which was the main theory and; theory of complementary asset which served as the supporting theory. Both were used for the theoretical foundation of this thesis. The complementary asset theory which served as supporting theory was actually an extension of the resource-based theory. These underpinning theories resulted in the theoretical framework for this thesis for further investigation and conclusions at chapters four and five.

2.2 ORGANISATIONAL EXCELLENCE

2.2.1 Organisational Excellence Defined

Organisations were set up for the primary aim of achieving certain goals and objectives as excellently as possible. They were expected to excel in their performances and achievement of these goals especially in the face of dynamic and ever-changing challenges to organisation performances. In short, they were expected to have qualitative performance by ensuring that they did it right (perform efficiently) from the standpoint of all their stakeholders who were their constituents- customers, suppliers, government, employees in the organisation, shareholders as well as the general public at large (Peters & Waterman, 1982, 2004).

For many years past, total quality management had been used for improvement in organisation's competitiveness as well as efficiency and profitability in a restricted form. But this had given way to attention being shifted to business excellence due to the widened nature of requirements for quality performances by organisations (Klefsjö, Bergquist & Garvare, 2008). Business excellence was a concept that was interchangeably used with performance or organizational excellence (Kanji, 2002; Tata Ratan, 2007; Klefsjö, Bergquist & Garvare, 2008). Because this thesis was based on service industry-academic institutions- organisational excellence were used throughout.

With the seminal book titled *In Search of Excellence* by Peters and Waterman (1982), greater attention, practice and research had been focused on excellence in organisations. The book was based on data collected from sixty-two companies and the data were

distilled into eight basics expected for management excellence in organisations. This book spawned a great deal of useful research in the field of organisational excellence.

Different definitions had been advanced on the meaning of organisational excellence. Kanji (2006) quoted the European Organisation for Quality as defining organisational excellence as "The way of working which enables an organisation to achieve balanced stakeholder satisfaction (i.e. customer, employee, society and shareholder) so increasing the probability of long-term success".

Peters and Waterman (1982:12) viewed organisational excellence as depicted in an organisation that was "…adroit at continually responding to change of any sort in their environment". They went further that organisational excellence involved an organisation's ability to "…track, revamp, adjust, transform, and adapt" to shifts in customers' needs, improvement in the skills of their competitors, perturbation in the mood of the public, realignment of the forces in the international trade as well as shifts in government regulations. Organisational excellence involved exertion of extra-ordinary energy above and beyond the call of duty.

On his part, Patwardhan (2007) viewed organisational excellence as putting in place, a well-established system in an organisation and vigorously pursuing it in proactively sensing and responding to changes within an organisation immediate and remote environment. The system put in place would include the value position of customers, strategy for maintaining competitive edge, change in organizational culture, government regulations, technical requirements of job et cetera.

European Foundation for Quality Management (EFQM, 2014) defined it as ‘‘…outstanding practice in managing the organization and achieving results”. Outstanding practices were put in place by organisations to “…strive to satisfy their stakeholders by what they achieve, how they achieve it, what they are likely to achieve and the confidence they have that results will be sustained in the future”. EFQM further stated that these outstanding practices were based on a set of nine fundamental concepts which consisted of five enablers and four result criteria. These nine fundamental concepts were result orientation; customer focus; leadership and constancy of purpose; management by process and facts and; people development and involvement. Others were continuous learning; innovation and improvement and; partnership development and public responsibility.

Dawei, Alan and Simon (2011) posited that the notion of organisational excellence connoted the combination of the excellence of the internal operations of an organisation and excellence in those external performances that were measurable. This meant that organisational excellence was only achievable through efficiency in satisfaction of internal and external environmental demands on an organisation. Excellence in internal operations served as the enabler criteria while excellence in the external operations served as result criteria in the EFQM model. Klefsjö, Bergquist and Garvare (2008) took a combinational view of organisational excellence through a combination of quality excellence and excellence in finance, logistics, human resources as well as impact of organisational activities on society and nature.

Kanji (2002) believed that organisational excellence equated or was similar to TQM. On that basis, organisational excellence, like TQM was seen by him as a management philosophy fostered on organizational culture – a culture that was committed to customer satisfaction through continuously improving the organisation's activities. Kanji highlighted management philosophy, organisational culture, customer satisfaction and continuous improvements as the hallmarks of organisational excellence. This view saw all stakeholders as customers to the organisation. The Malaysian Productivity Corporation (MPC) saw it as a comprehensive management practice with standard that were developed to assist companies assess their readiness and compliance to excellence practices in those organisations' quest to enhance their business performance" (MPC, 2014).

From the discussions above, it was clear that organisational excellence comprised efficient satisfaction of all stakeholders to an organisation in a sustainable way. It was more encompassing than operational excellence because the latter was aimed at satisfaction of customers through improvements in operations of the organisations towards production of goods and services as desired by customers. The two main focus of organisational excellence were: satisfaction of stakeholders and; sustainability of satisfying the stakeholders in the future through continuous improvements. On the basis of that focus, it was pertinent to clarify the stakeholders to an organisation.

The stakeholders to an organisation were usually broadly referred to as the people who had a "stake" in it. They included the customers, employees, government, investors, suppliers, shareholders, pressure groups, press, non-governmental organisations (NGOs),

academia, etc (Benneworth & Jongbloed, 2010). Freeman and Reed (1983) as quoted by Klefsjö, Bergquist and Garvare (2008) defined stakeholders as any group or individuals that were identifiable whose activities can not only affect the achievement of an organisation's objectives but who was affected by an organisation's activities in its efforts to achieve its objectives. To them, stakeholders could affect and were affected by the achievement of an organisation's objectives. The stakeholders to an organisation were seen by EFQM (2014) as all those who had "interest" in it, its activities and achievements. Thus, anyone, group or groups of people who were concerned by organisations activities and achievements were termed as stakeholders. This definition did not state whether the interests by stakeholders were direct or indirect, critical or non-critical to achieving organisational excellence. Klefsjö, Bergquist and Garvare (2008) viewed stakeholders on the basis of the critical nature of their support and means by which they influenced an organisation's achievement. They posited that if the stakeholders were not satisfied, if they withdrew their supports it would lead to serious consequences for the organisation. They defined stakeholders as those actors that could and did provide the necessary means or support to an organisation and their supports could be withdrawn if their wants or expectations were not met by the organisation. They thereby classified stakeholders as primary (whose impacts were great) and secondary (whose impacts were not directly consequential). The secondary stakeholders could influence the primary stakeholders to act if the former's wants and expectations were not met.

Stakeholders could then be viewed as those who were interested in, could affect and/or be effected by the activities of an organisation and whose actions could have consequences on the excellent performance of the organisation. These stakeholders may be internal or external to the organisation. Some might be internal with primary or secondary impact, or external with primary or secondary impact. Organisations should find out the nature of each of the stakeholders towards determining how to appropriately respond to their needs for sustained performance. A broad view of stakeholders to a higher education institution would be discussed in section 2.2.5.

2.2.2 Historical Development of Organisational Excellence

Production began from craft where an individual utilised his skills both as a producer and as an inspector and the products were patterned towards individual customer satisfaction. With industrial revolution and full mechanisation, emphasis shifted to speed and volume which reduced, if not totally eliminated, customization. Qualities were also somehow compromised. This then necessitated the clamour for quality in production.

The movement for quality improvement started with Frederick Winslow Taylor' scientific management which incorporated time and motion study as one of its element but this led to killing of creativity and initiatives of workers. Statistical quality control which was aimed at a precise and measurable method of product and service outputs was later introduced. The concern of this earlier effort was on the measurement of and measures towards improving product quality (Patwardhan, 2007).

Later, attention shifted to general organisational improvement towards products and service quality by paying attention to the determinants of customer value. Japanese companies invited Dr Edward Deming from America in 1950 to assist and train them on how to improve quality in their operations. There were series of interactions in these Japanese companies with active involvement of shop floor personnel. This was facilitated by JUSE (Union of Japanese Scientists and Engineers). All the results of the interactions were implemented by Japanese companies (Patwardhan, 2007).

The visit of Dr. Juran in 1953 and his activities which built on the earlier work of Dr Deming finally gave birth to what was today called the Total Quality Management (TQM). With the use of techniques of quality improvement, TQM and other techniques and coupled with the establishment of Deming Prize in 1951, Japanese companies succeeded in out-competing World Class companies in product qualities and performance. This resulted in responses from countries with World Class companies (America and Europe) whose companies had been overshadowed by Japanese companies Worldwide. This subsequently triggered more improvements in and provision of excellence models in different countries of the world (Metric Consultancy Limited, 2007). The first response was the Canada Award of Excellence (CAE) Quality Award introduced in 1984 which was followed by American response in 1987 through Malcolm Baldrige National Quality Award created through the Act (Talwar, 2011).

America's response to the unique and unparalleled impact of Japanese companies' achievement and better management over and above American companies was firstly dismissive and non-surrendering. Peters and Waterman (1982) observed, after their

extensive research on excellent American companies, that their findings from the excellent companies they investigated amounted to an upbeat message. In reference to the excellent performances of Japanese companies in their management practices, they concluded on a note that there was good news from America and that good management practice as at that time (1982) was not resident only in Japan. Despite the hope raised by and complacency of Peters and Waterman (1982) observations on excellent American companies, the impact of Japanese companies' efficiency on American companies was still captured five years later in the Malcolm Baldrige National Quality Improvement Act of 1987- MBNQA. The Act stated in Sec 2(a)1 that

> The leadership of United States in product and process quality has been challenged strongly (and sometimes successfully) by foreign competition, and our Nation's productivity growth has improved less than our competitors over the last two decades.

The Act stopped short of stating the extent to which Japanese companies had overtaken American companies' markets both at home and abroad but only used a veiled reference to competition from Japanese companies by using foreign competition. With the introduction of the MBNQA, the award committee provided for seven criteria for measuring performance before the introduction of continuous innovation as the eightieth criterion. These criteria with their items were *descriptive* and not *prescriptive* as they did not state the procedures (how) for but only the desired quality outcomes for these organisations (Heaphy & Gruska, 1995).

European response was through the European Foundation for Quality Management (EFQM) which was formed when fourteen CEOs joined forces in 1988 to develop a

management tool that would increase the competitiveness of European organisations. This effort by the fourteen CEOs was supported by the European Commission through the European Quality Promotion Policy. The founding members later created what they referred to as the EFQM Excellence Model. The EFQM founding members were: AB Electrolux, British Telecommunications plc, Bull, Ciba-Geigy AG, C. Olivetti & C. SpA, Dassault Aviation, Fiat Auto Spa, KLM, Nestlé, Philips, Renault, Robert Bosch, Sulzer AG, Volkswagen (EFQM, 2014). The vision of the foundation and its award was primarily to create a World in which European organisations were recognised as the benchmark for sustainable economic growth. It had its mission as energising leaders who want to learn, share and innovate using the EFQM Excellence Model as a common framework (EFQM, 2014).

These pioneering excellence awards provided the prototype for excellence awards in different countries of the world for domestication. Thus, there were other excellence awards/models like the National Quality Award (NQA) UK; National Quality Award (NQA) Brazil; National Order of Productivity Merit Award, Nigeria; Prime Minister's Quality Award, Malaysia; National Quality Award (NQA) France; Swedish Model for Performance Excellence (SIQMPE); National Industrial Quality Award (NIQA), Israel; Thailand Quality Award; National Productivity Award (NPA) Mongolia; Australian Business Excellence Award (ABEA); to mention but a few. These awards, although primarily designed for the manufacturing sector, had been adapted for service industry especially education as in Malcolm Baldrige Education criteria for performance excellence.

These models/awards were introduced in these countries with the primary aim of making organisations in such countries to be conscious of and actually excel in their performances within their countries as well as become World Class. The awards were aimed at enabling them to favourably compete with other organisations both for intertemporal and international comparism.

2.2.3 Cores of Organisational Excellence

Peters and Waterman's (1982) *In Search Of Excellence* stipulated the cores of excellent companies of their study. The outcome was distilled into what they called "the eight basics of management excellence" that could be used to measure and/or energise an organisation for excellence performance. The eight back to basics of management excellence were: a bias for action; close to the customer; autonomy and entrepreneurship; productivity through people; hands-on, value-driven; stick to the knitting; simple form, lean staff and; simultaneous loose-tight properties.

A bias for action related to action orientation of an organisation (i.e. a desire to get things done). Although there may be need for some forms of organisation structures, the strength in excellent organisation was in providing for a wide range of action devices in form of distinctly individual techniques that were used to counter the normal tendency towards conformity and inertia in organisations. The action devices required were in the areas of experiments, management systems and organisational fluidity. All these, they opined, would trigger actions continuously and minimize (if not completely eliminate) inertia in excellent organisations.

The second management basic was termed close to the customer. They posited that excellent organisations do not just talk about closeness to customers, they did it- they exhibited customer orientation. These were organisations that were in obsession with their customers and allowed the latter to intrude into every nook and cranny of the organisation. These organisations displayed and implemented service and quality obsession, nichemanship and listened to customers. They measured the satisfaction of both the internal and external customers of the organisation. Excellent organisations used the concept of close-to-the-customer-through-service. Excellent organisations set standard of services and acted as if any failure was intolerable.

To be able to appropriately respond to customers, organisations should ensure autonomy and entrepreneurship. This management basic ensured that organisations were innovative in their operations. Autonomy ensured creativity while promotion of entrepreneurship orientation ensured needs for achievement by individuals and groups in the organisation. Excellent organisations, although big, acted as small in order to enjoy the creativity. There was authority devolution throughout the organisation as they were remarkably far down the line. They practiced radical decentralization and autonomy which usually brought about internal competition needed for entrepreneurial spirit. Excellent organisation made provisions for tolerable failure for employees for the latter to experiment their ideas.

When more autonomy was granted and entrepreneurial spirit was energized, the resultant expectation was productivity through people. This was based on trust and the assumption of McGregor theory Y people. Employees needed to be treated like grownups, partners

and not like children who could not discern the right from the wrong. They needed to be taken into confidence, regarded as the primary productive force and their esteem should be boosted for higher productivity. In short, there should be people orientation so as to be able to achieve extraordinary results for the organisation through ordinary people. Managers of excellent companies were caring, their relationship with employees were seen as filial. There was absence of rigidity in following chain of command and there were special socialisation of new entrants. With people orientation, excellent companies were measurement-happy and performance-oriented without having table-pounding managers and complicated control systems.

To excel, excellent organisations paid special attention to take advantage of and stand on what it knew best to do through hands-on, value-driven performances. Organisations made their value systems distinct from others and pursued them to the level of competitive and performance advantage. The leaderships in such organisations were expected to help in creating an exciting environment for the nurturing and maintenance of such values. The organisation used to promote, protect and shape its values through qualitative statement of organisation purpose on a long-term basis from the lowest level to the highest level in the organisation. The values were unique to the organisation in a way that prevented it from being copied by another company. This value system threw up innovation at any level in the organisation and not necessarily from the research and development division. Leaders in these organisations were expected to be master of two ends of the spectrum- ideas at the highest level of abstraction at higher levels and actions

at the most mundane level of detail at the lowest level of organisation structure. Leaders were role-models and heroes through exhibition of hands-on leadership.

The next criteria for organisation excellence by Peters and Waterman (1982), was sticking to the knitting. This had to do with diversification into familiar business. When organisations wanted to branch out, it was natural that they would perform more excellently if they stuck to the knitting- performed what they were familiar to doing before based on the organisation's skill or similarity of skills in the new venture. Organisation that wished to be excellent must enter into businesses that built on, drew its strength from and enlarged the unique competitive strength of its organisation. The organisation must build its offerings around the embedded skills within the organisation. It then means that both internal diversification and/or acquisition should be central-skill based. Even when acquiring a business, an excellent organisation didn't need to test water with both feet.

With diversification, internal or central-skill based as recommended above, came complexity of organisations. To handle this complexity, excellent organisations made use of simple forms of organisation. A dimension of the organisation structure must be made primary over and above others so as to ensure long-term level of stability. Although the dimension was made primary, it must guarantee flexibility of the organisation in responding to fast-changing conditions of the environment. This structure usually revolved around a dimension (simple) and at the same time dynamic. The primary dimension may be product, marketing, finance, customer or geographical spread. With simple structure based on high divisionalisation, fewer staffs were needed at the

corporate centre to make things tick. This structure ensured that there were few administrators and many operators. Critical functions would only be reserved for the corporate headquarters while devolving large authority to divisions. This structure allowed for stability, dynamism and entrepreneurial spirit.

The last of the eight basics was simultaneous loose-tight properties. Peters and Waterman described this as having one's cake and eating it too. Excellent organisations were rigidly controlled and at the same time allowed for innovation, entrepreneurship and autonomy with the help of the shared value system. Leaders in excellent companies used the imagery of rope. They loosened rope to give autonomy, freedom and creativity to their subordinates. The leaders also had it at the back of their minds that some subordinates would misuse the ropes to hang themselves in which case they (the leaders) displayed stern disciplinarian behaviours. The organisations had rigid (tight) values like focussness, quality, customer satisfaction, social responsibilities, efficiency in production, people etc which constituted the value set for the organisation.

With the passing of the MBNQA Act (1987) in America, the National Institute for Science and Technology (NIST), under which the award was managed, also came up with what could be referred to as the antecedents to organisational excellence. These were referred to as the core set of values as captured by Heapy and Gruska (1995) as: (a) customer-driven quality; (b) leadership improvement; (c) continual improvement learning; (d) employee participation and development; (e) fast response (f) design quality (g) prevention (h) partnership development (i) long-range look ; (j) management by fact (k) good corporate citizen and; (l) result orientation. All these values could be subsumed

under and were in alliance with the Peters and Walterman's descriptions above except that emphasis was now placed on continual improvements by organisations (this was because, most of the Peters and Walterman's excellent organisation became bankrupt after some years).

EFQM, just like the MBNQA was also a no-prescriptive model for organisation excellence as it recognised the fact that there were as many approaches to organisational excellence as possible. As such, organisational excellence could only be described based on results and not a prescription that may work in one environment and not in another environment. It used nine criteria based on five enablers and four results. The acronym MBNQA used was RADAR (**R**esult, **A**pproach, **D**eploy, **A**ssess and **R**eview) approach towards achieving organisational excellence. This approach was discussed later under the organisational excellence models and criticisms. George (1997) prescription of eight basics of organisational excellence involved leading by serving; focus through shared vision; engaging employees; knowing organisational customers; organising the system for optimisation; improve thinking process; managing by fact and aligning activities through planning. These were again, a semblance of the Peters & Waterman's basics of organisational excellence.

Kanji (2002), presented a generic model of five principles and eight core concepts of organisational excellence. These were leadership (which was prime); delight the customer (based on the concept of customer satisfaction and reality of internal customers) and; continuous improvement (as evidenced in continuous improvement cycle and prevention of high cost of rectifying a fault). Others were management by fact (measure

current performance to determine appropriate response) and; people-based management (based on teamwork and belief in people as the basis for quality performance).

It can be deduced from the review above that the seminal book of Peters & Waterman (1982) greatly influenced the core values of the organisational excellence. There were only few variations from other authors but they only enriched Peter and Walterman's earlier stipulated core values or antecedents to organisational excellence.

2.2.4 Organisational Excellence Frameworks and Critique

Organisational excellence frameworks were based on the individual model provider's views of the basic antecedents to organisational excellence. These models, it must be stated from the onset, were descriptive of organisational excellence and not prescriptive (i.e. they do not state the *hows* of organisational excellence). They were designed as frameworks with which to measure whether those organisations were performing excellently or not?

The models for review were (a) Malcolm Baldrige National Quality Award (MBNQA); (b) European Foundation for Quality Management (EFQM) and; (c) Prime Minister Quality Award (PMQA) of Malaysia. This was done, relying on the investigation by Grigg and Mann (2008) that out of the eighty nations that administered the organisational excellence frameworks, fifty were using MBNQA framework, twenty-five adopted the EFQM framework while others used other frameworks. Prime Minister Quality award was used to represent the Asian perspective of organisational excellence.

(a) Malcolm Baldrige National Quality Award (MBNQA) Framework

This award, as earlier stated, was based on the Malcolm Baldrige National Quality Improvement Act (1987) in America. The Act, among other things, established a board to manage the award. This necessitated the board to come up with the basis of the award. The award covered the manufacturing industry, service industry, small business, nonprofit or government organisations (www.nist.gov/baldrige, Jan 2014). A model for the award framework was designed as presented in Figure 2.1 below.

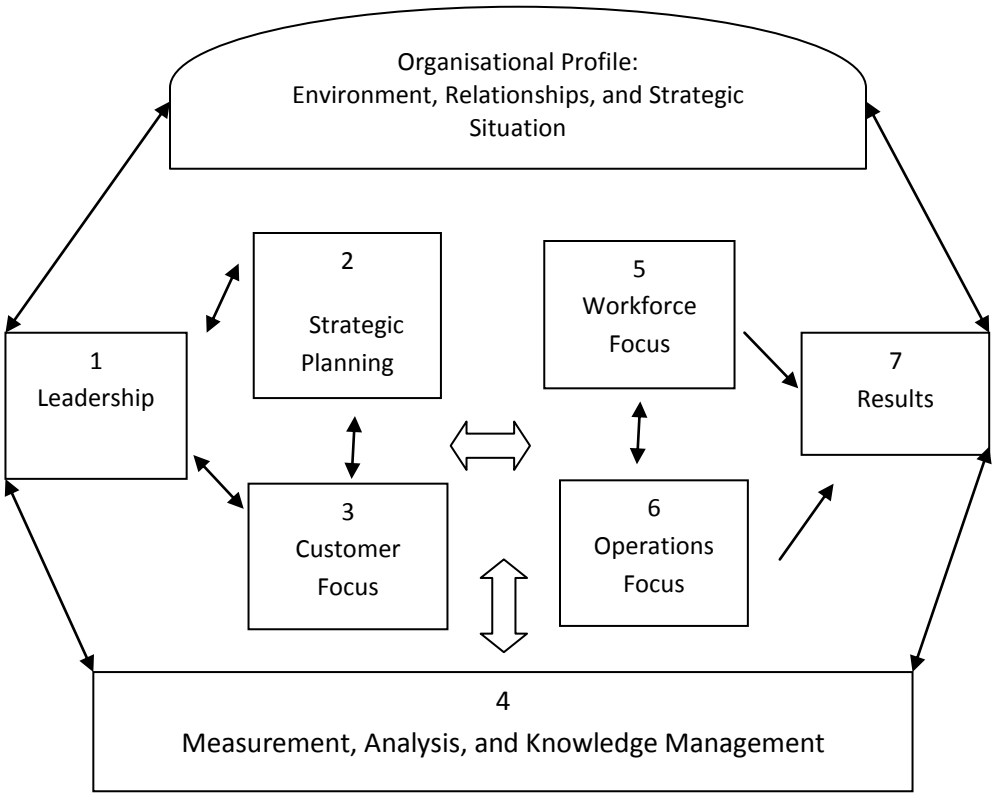


Figure 2.1
Baldrige Education Criteria for Performance Excellence Framework
Source: Adapted from MBNQA (2013)
http://www.nist.gov/baldrige/publications/education_criteria.cfm Accessed on 10/12/2013.

The framework in Figure 2.1 was specific to educational institutions which was the same with the framework for health sector but was only different from other Baldrige non-sector-based general performance excellence framework by replacing the construct number six (operations focus) with process management. The sector-specific and non-sector-specific frameworks were largely the same in principles. A thorough analysis of the model shows bi-directional paths between the constructs. It showed that all the constructs must interact with one another to result into the organisational excellence envisaged by the organisation and the award-giving body.

The pre-1997 MBNQA framework revolved around the framework for organisational manufacturing quality but had been improved towards being an overall universal framework for organisational excellence. This also happened because the end result of the framework was primarily customer satisfaction and not general stakeholders' satisfaction (Jayamaha, Grigg & Mann, 2011). This thus led to the design of frameworks for services and the incorporation of all stakeholders in the end result of organisational excellence. Findings by Jayamaha *et al* (2011) showed that items used in MBNQA appeared to belong to several constructs and did not fit well into their categories thereby leading to high cross-loading.

Despite the few criticisms against the operations of this award, it marked its twenty-five years anniversary in 2013 after it was introduced in 1988. The award had continued to be a powerful set of guidelines for any organisation aiming towards effectiveness and excellence (Brown, 2014).

(b) European Foundation for Quality Management (EFQM) Excellence Framework

The EFQM model was based on the outcome of coming together of fourteen CEOs of big corporations in Europe in 1988 with the aim of developing a management tool that, in their opinion, would increase the competitiveness of European organisations. This was as a result of the success achieved by the Deming Prize of Japan which precipitated into Japanese quality-based offensive in the world marketplace and the evident positive results of American reaction through the Malcolm Baldrige National Quality Awards (Conti, 2007). EFQM was a membership organisation and this private organisational initiative was later officially supported by the European Commission through the European Quality Promotion Policy. The founding members: AB Electrolux, British Telecommunications plc, Bull, Ciba-Geigy AG, C. Olivetti & C. SpA, Dassault Aviation, Fiat Auto SpA, KLM, Nestlé, Philips, Renault, Robert Bosch, Sulzer AG, and Volkswagen; in conjunction with European Commission agency created the EFQM Business Excellence Model.

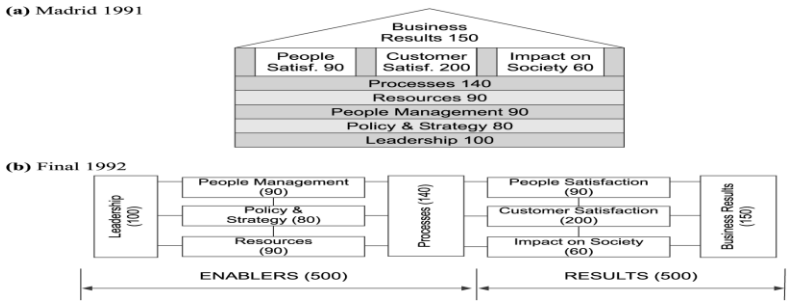


Figure 2.2
European Foundation for Quality Management (EFQM) Business Excellence Model (Initial- Madrib 1991 and Final 1992)
Source: Tito A. Conti, (2007),"A history and review of the European Quality Award Model", The TQM Magazine, 19(2), 112 – 128.

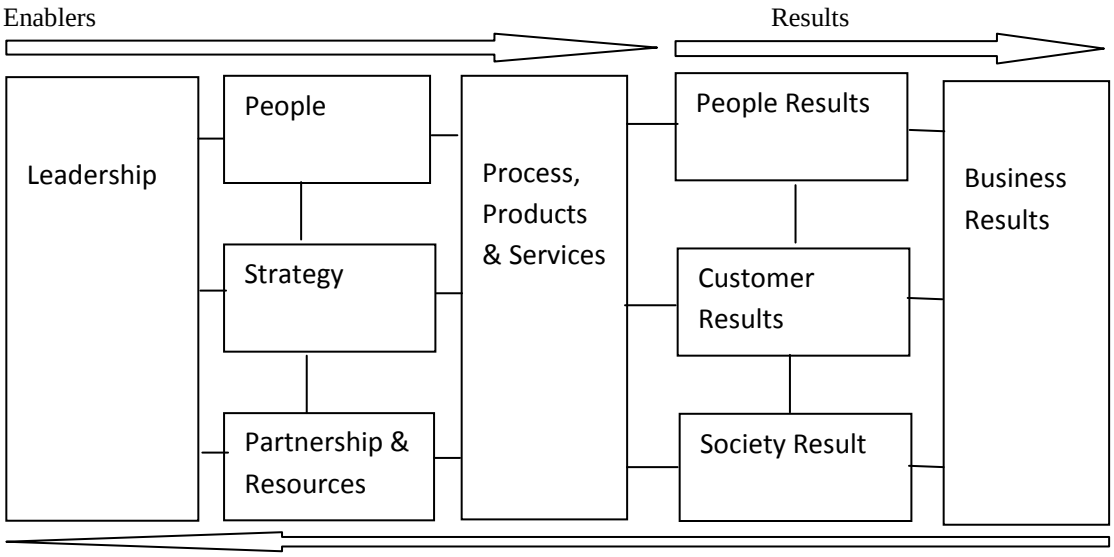


Fig 2.3

European Foundation for Quality Management (EFQM) Business Excellence Model (Latest)
Source: Adapted from http://www.efqm.org/en/tabid/132/default.aspx downloaded 26/02/2014

The model for the award was introduced in 1991 by the name *Business Excellence Model* and the first award took place in 1992. Due to criticisms and observations over time as well as need to update it in line with the business situation (Gomez, Costa & Lorente, 2011), the model was constantly redesigned and the initial and current models were as presented in figure 2.2 and figure 2.3 above. This 1992 final EFQM model was similar in all respects to the 2014 model except in the absence of criteria weight in the latter and absence of learning, creativity and innovation in the former. EFQM was based on eight fundamental values as depicted in Fig 2.4 below

Fig 2.4

EFQM Values as 8 Fundamental Concepts of Excellence
Source:http://www.efqm.org/en/PdfResources/EFQM%20Annual%20Report%202011%20v1.0.pdf

The EFQM model contained nine criteria – five criteria were enablers while the remaining four criteria were result criteria. Weight was assigned to each of the criteria. The enablers covered what the organisation does within itself. Leadership was used as the trigger for the entire internal processes towards excellence. Eskildsen and Dahlgaard (2001) found that it was the leadership that determined the internal processes of people and process management together with organisational strategy and policy. They went further that these internal processes- triggered by leadership- invariably impacted on results. This result was later corroborated by Osseo-Asare, Longbottom and Murphy (2005) who found that leadership was an imperative for successful implementation of key processes in organisational excellence in higher education institutions in the UK.

The study by Bou-Llusar, Escrig-Tena, Roca-Puig and Beltran-Martin (2005) focused on the causal relationship between the enablers and results domain in the EFQM excellence model which was found to be strongly correlated. The outcome of research on Danish

companies on criterion weights of the EFQM model (Eskildsen, Kristensen and Juhl, 2001) found that enabler and results blocks were not perceived as being of equal importance. The companies investigated did not really focus on enablers but focused more on the results in which more preference were given to customer and people results than society and key performance results.

Research designs and topics on EFQM models studies had greatly focused on the use of case studies. Kim, Kumar and Murphy (2010) work rejected the bias in the previous studies conducted and recommend research agenda on studying topics on the EFQM sub-criteria. They also recommended discussion of EFQM within the emerging themes in operations management and the need to use both qualitative and quantitative method in researching into EFQM instead of too much emphasis on the quantitative method.

(c) Malaysian Prime Minister Quality Award (PMQA)

The Malaysian version of the business excellence award was in the form of Prime Minister Quality Award popularly called MQA. The quality movement in Malaysia started through the formalised government procedures for upgrading the civil service. Some agencies established for that purpose included the Development Administration Unit (DAU) in 1968, the National Institute of Public Administration in 1972 as well as the Manpower and Administration Planning Department in 1977. The government finally established National Productivity Centre for the purpose of managing the organisational excellence award (Osman, Goon & Aris, 1998). With the launching of the first Civil Service Excellent Work Culture Award by the Prime Minister in 1989 and the

promulgation of the National Productivity Centre (Incorporation) (Amendment) Act 1991, the road to organisational excellence became clear in Malaysia.

The NPC (as it was then called) was under the Ministry of International Trade and Industry. It was responsible and reported annually to the Minister of International Trade and Industry. The Business excellence model in Malaysia was first introduced in 1990 when the then National Productivity Council (Now Malaysian Productivity Corporation-MPC) started promoting Quality Management Excellence Award (QMEA) or Prime Minister Quality Award (PMQA). Promotion of the above awards by the NPC necessitated Malaysian companies into undertaking their own business excellence journeys using TQM principles based on American MBNQA Criteria to guide the QMEA and PMQA participants. The Malaysian framework is presented below

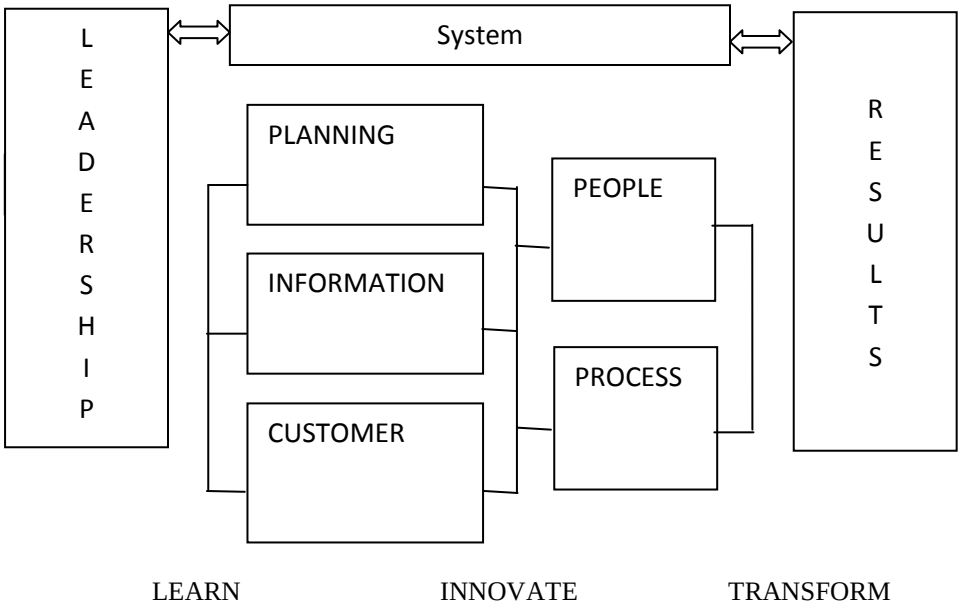


Figure 2.5
Business Excellence Framework, Malaysia
Source: http://www.mpc.gov.my/mpc/images/file/BE%20Guidebook%2023%20Ogos%202011.pdf
Accessed 20/01/2014

The business excellence framework in Figure 2.5 above comprised seven excellence indicators or dimensions viz: leadership; planning; information; customer; people; process and; results. These were then grouped under three basic elements of driver, system and results. This framework was in contrast to the EFQM model which combined the driver and system into enablers but having the other element as being the same (result).

Unfortunately, despite the implementation of this framework, a literature search of Hebscohost using "Malaysia excellence" "Malaysia quality award" and "Malaysia prime minister quality award" produced one-hundred and eleven; twenty and; one results respectively with only one article (Tuck, 2005) that discussed and analysed the Prime Minister Quality Award (Emerald, Hebscohost 1; Hebscohost 2 &; Hebscohot 3, John Wiley Online, Jstor, Sciverse, Web of Knowledge,) When this situation is contrasted with over two hundred results on MBNQA and EFQM individually, it is difficult to measure and analyse the impact of PMQA on journey to excellence in Malaysia.

Out of the excellence frameworks explained above, the European Foundation for Quality Management (EFQM) model was adapted for this study. Tan (2002) work observed and described the similarities and differences among the sixteen quality awards studied. Grig and Mann (2008) discovered in their study that out of the eighty nations that administered the organisational excellence frameworks, fifty were using MBNQA framework, twenty-five adopted the EFQM framework while others used other frameworks. Talwar's (2009) identified ninety-four business excellence frameworks in seventy-seven different countries around the world but concluded that most of them are variants or a

combinations of Malcolm Baldrige National Quality Award (MBNQA), European Foundation for Quality Management's (EFQM) and Deming Prize models.

Due to changes over time and the criticisms of the models and the award processes, Talwar (2009) further observed that, lesser differences exist among the models today. The EFQM framework was adopted due to its clear-cut provision of enablers and results. The enablers provided an easy pictorial understanding of requirements from organisations and the cause and effect relationship between what an organisation is expected to do and the end result. The framework was similar to theoretical frameworks that usually state the independent variables (enablers in this case) as they relate to the dependent variables (which are the expected outcomes of the framework). On the strength of its easy adaptability, EFQM framework was adapted.

2.2.5 Organisational Excellence and Stakeholders in Higher Education Institutions

As observed in the previous sections, every organisation must strive towards excellence in satisfying its stakeholders. It is only by satisfying these stakeholders in a sustainable way that it could become World Class. Excellence in HEIs was not easy to define because education services were intangible unlike goods that could be easily evaluated on the basis of their quality. Apart from that, excellence attributes that could be used to measure excellence and the relative weight assigned to each attribute was not constant and varied based on the viewpoints of different stakeholder (Tsinidou, Gerogiannis, & Fitsilis, 2010). On this basis, there were many dimensions to determining the excellence of a HEI.

Excellence in HEIs was differently defined as value for money, fitness for purpose, stakeholders' satisfaction and the degree to which set aims and objectives had been achieved. Based on reviews, it would be appropriate to view excellence in HEIs from the perspectives of stakeholders. Thus, who were the stakeholders to HEIs and on what basis did they view excellent performances from the HEIs?

Foster and Jonker (2003) adapted the Foley's stakeholder model of the business entreprise as a means of integration business into the society. A study by Ardi, Hidayatno and Zagloel, (2012) viewed excellence from the perspectives of one of the clienteles to HEIs (students). Their study found out that factors like faculty commitment, campus facilities, department's commitment, courtesy, course delivery and; customer feedback and improvement were good measures to predict HEIs excellence towards students' satisfaction. The factors were seen as means to and not the end of organisational excellence.

Empirical test and validation of Baldrige education criteria for performance excellence stipulated excellence in HEIs as relating to the people, students, faculty and staff focus, process management focus and organisational results focus (Badri, Selim, Alshare, Grandon, Younis, & Abdulla, 2006). However, a better stakeholder focus for excellence in HEIs was presented by Burrows (1999) while analysing the framework for profiling HEIs stakeholders. His profiling was presented in the Table 2.1 below.

Table 2.1
Stakeholder categories and constitutive groups

Stakeholder Category	**Constitutive groups, communities**
Governing entities	State & federal government; governing board; board of trustees, buffer organisations; sponsoring religious organisations
Administration	President (vice-chancellor); senior administrators
Employees	Faculty; administrative staff; support staff
Clienteles	Students; parents/spouses; tuition reimbursement providers; service partners; employers; field placement sites…
Suppliers	Secondary education providers; alumni; other colleges and universities; food
Purveyors;	insurance companies; utilities; contracted services
Competitors	Direct: private and public providers of post-secondary education
	Potential: distance providers; new ventures
	Substitutes: employer-sponsored training programmes
Donors	Individuals (includes trustees, friends, parents, alumni, employees, industry, research councils, foundations,)
Communities	Neighbours; school systems; social services; chambers of commerce; special interest groups…
Government regulators	Government regulators: Ministry of Education; buffer organisations; state & federal financial aid agencies; research councils; federal research support; tax authorities; social security; Patent Office
Non-governmental regulators	Non-governmental regulators: Foundations; institutional and programmatic accrediting bodies; professional associations; church sponsors
Financial intermediaries	Banks; fund managers; analysts
Joint venture partners	Alliances & consortia; corporate co-sponsors of research and educational services

Source: Burrows, J. (1999). Going beyond labels: A framework for profiling institutional stakeholders. *Contemporary Education*, 70(4), 5–10.

The table helped in the representation of the sage but vague idea of stakeholders to HEIs. It was like "know your stakeholders" description although not prescription of what constitutes excellence to the stakeholders. With this description, the leaders of HEIs would know the stakeholders to be able to excellently perform and provide evidence of

continuous improvements in the satisfaction of these effected and affect stakeholders. Thus, every HEI must strive to ensure not only assessment of excellence performances to these stakeholders but also assurance of the excellent performances on a continuous basis. Furthermore, the identification of these collegiate stakeholders helped in analysing the latter's interests and influences with a view to appropriately managing their influences and improve their interests.

2.2.6 Impacts of Organisational Excellence on Organisation

From the history of organisational excellence above, it was clear that the pursuit and introduction of excellence in organisations by individual organisation, groups and governments primarily focused on the achievement of satisfaction for all stakeholders to an organisation. Introducing excellence in organisations had its impacts on organisations that imbibed and implemented them.

Introduction of organisation excellence in form of TQM had been responsible for the successes of Japanese firms in the 1970s through 1980s which necessitated the reactions from America in form of MBNQA and Europe in form of EFQM award. This movement resulted into different countries pursuing organisational excellence by adapting the American MBNQA or European EFQM approach to organisational excellence. Use of organisational excellence framework and measurement yardsticks helped organisations to start quality journey (Prybutok & Cutshal, 2004; Bou-Llusar, Escrig-Tena, Roca-Puig & Beltran-Martin, 2005). According to Heaphy and Gruska (1995), organisational excellence framework and measurement criteria picked up by an organisation helped in determining if their mental model of business world (i.e., their organizational paradigm)

was consistent with the criteria. The criteria were used by organisations to generate a lively discussion of the journey that lied ahead for them. The journey was that of organisational excellence for quality performance. In fact, before the EFQM model, the MBNQA used to serve as a guide and reference for quality consultants and managers (Conti, 2007).

The use of organisational excellence framework and measurement yardsticks had helped organisations in determining areas that need improvements in an organisational performance. Blackmore and Douglas (2003) that researched on a fictitiously-named Riverbank University in North West of UK discovered that organisational excellence yardsticks used by the University had contributed towards making it a "better university" and identified areas that needed improvements. The self-assessment process of the organisational excellence models had provided organisations with measures of their strengths and areas for improvements in an objective and systematic manner (Bou-Llusar, Escrig-Tena, Roca-Puig & Beltran-Martin, 2005).

Furthermore, organisational excellence had been used in promoting and ensuring effective performances against competition both locally and globally. This was evidenced from the MBNQA Act of 1987 in US and the missions of all organisational excellence frameworks for award. The frameworks had been useful as impetus to successfully stave off competition from Japanese companies by American companies and the American success in staving off competition informed the European countries' response through EFQM (Conti, 2007). Introduction of the awards had propelled higher performances both in the private and public sectors in countries where they were introduced.

Not only that, organisational excellence frameworks and awards had been instrumental to the long-term economic development of countries. With emphasis on continuous improvements and awards based on the frameworks, countries had directed the efforts and attention of companies to the core values by assigning more weights to areas of emphasis to promote economic development. It had been discovered that desire to conform to international standards and practices, economic structure, social concerns, cultural and demographic background, total quality maturity as well as political leadership commitment and value system had determine the nature, components and weighting of quality frameworks and awards (Tan & Khoo, 2002; Tan, Wong, Mehta & Khoo, 2003).

Above were the areas in which organisational excellence had impacted on the performance and achievement of organisational goals and objectives.

2.3 TRANSFORMATIONAL LEADERSHIP

2.3.1 Transformational Leadership Defined

Leadership as an act or a concept is a complex skill that takes years to master, regardless of the proposition that some leaders are born wnile some learn how to lead. Globalisation, complexity of organisations, expectations of different stakeholders had impacted on leaders and followers. These impacts had made the leaders and followers nowadays to be under intense pressure to do more with less (Bass, Avolio, Jung & Berson, 2003). Both the leaders and followers need to be more adaptive to their environment.

To be able to do this, the leader must display transformational leadership skill. Recent leadership theories had shifted attention from leadership approach to leadership power bringing about discussions on transactional and transforming leadership. With the publication of Burns (1978) *Leadership,* a distinction was made between transactional and transforming leadership. Transactional leadership was seen as being in tandem with exchange theory where a leader and the follower discussed performance expectations and the reward that will follow suit if the requirements were fulfilled. The directives on what to achieve and the reward to be given might even come from the leader who expected the followers to perform at a specified level. The transactional leader worked within the self-interest of the group and not with what may be achievable and/or desirable by the group. In short, the self-worth of the followers was not considered (Bass & Bass, 2008). This form of leadership determined the approach to leadership style and researches in leadership up till late 1970s. This later gave way to the emphasis on transformational leadership due to the works of Bass (1985) who changed Burns (1978) transforming leadership to transformational leadership.

Burns (1978) pointed out that transforming leadership (later refined as transformational leadership) were leaders who looked for potential motives in followers, sought to satisfy higher needs, and engaged the full person of the follower. Transformational leadership took place when a leader stimulated interest among followers and colleagues with a view to making them view their work from a perspective which was different from their former perspective. The leader ensured that the awareness of the team and organisation's vision and missions was generated as he motivated colleagues to pursue interests that will

benefit the group beyond the individual (Bass & Avolio, 1994; Bass & Bass, 2008). These leaders set challenging expectations (higher purposes) for the followers and provided a conducive environment for its achievement. A transformational leader raised the level of maturity of followers towards pursuing the higher-order level of Maslow's hierarch of needs' theory. Leadership was usually based on mutual trust and respect between the leader and the follower. Behling and McFillan (1996) described the synthesis of charismatic and transformational leadership in form of demonstration of empathy; empowerment of followers; projection of self-assurance; dramatisation of organisational mission and; affirmation of collective efficacy as the hallmarks of transformational leadership. In fact, they equated charismatic leadership to transformational leadership.

2.3.2 Transformational Leadership Dimensions

Avolio, Bass and Jung (1999) had identified the conceptual organisation of transformational leadership along four correlated dimensions viz: idealised influence; individualised consideration; inspirational motivation and; intellectual stimulation behaviours. These had been expanded to include personal recognition as the fifth dimension (Rafferty & Griffin, 2004).

The idealised influence behaviour refered to followers' emotional identification with the leader. It was the relationship which existed between the transformational leaders and the followers on the basis of internalised ideological values espoused by such leaders (House, 1997). The idealised influence behaviours like trustworthiness, consistency in ethical beliefs, principles and values endeared a transformational leader to the followers. It also included the passion with which these values were pursued. The source of the influence

may be a religious, ethnic, national or linguistic ideology with which a leader was identified and which was of passionate appeal to the followers. This was referred to as value-based dimension of transformational leadership.

When a transformational leader provided supporting function to followers based on mutual trust, interpersonal warmth, provision of job security, belief in the need to mentor individuals and provided climate to grow, such a leader was referred to as exhibiting individualised consideration behaviour. The leader ensured participation and group maintanance by not criticising the subordinates in public (Bass & Bass, 2008). The leader recognised the needs of and saw the potential in every follower. He helped the follower to satisfy their needs and to realise their potentials while making allowances for the follower's nature. Such leaders usually disagreed with followers without making them feel wrong (Bracey, Rosenbaum, Sanford & Trueblood, 1990; Bass & Bass, 2008).

An organisation's vision was better expressed through leadership behaviours. When a transformational leadership espoused and exhibited his or her organisation's vision by ensuring that followers reverred them, inspirational motivation has taken place. The leader aroused action on the part of followers either through individual action or team spirit for the purpose of achieving the vision of the organisation.

Intellectual stimulation by a transformational leaders was aimed at encouraging creativity among followers while giving room for unavoidable mistakes. It had been pointed out that majority of leaders and followers believed their intellects were underutilised as much challenges were not set out for them (Avolio, 1999). Followers' intellects must be challenged into developing perspective in solving organisation problems and issues.

Followers would be seen as part-contributors to a new idea generation and solution processes as common in Japanese companies (Nonaka & Takeuchi, 1995). Whenever there were obstacles or challenges, the leader stimulated the intellect of every follower.

Personal recognition had been included as the fifth dimension of transformational leadership. Burns (1978) confirmed the interrelationship of transaction leadership and transformational leadership. This was further proved by research evidences that there was a link between transactional leadership and transformational leadership. Leadership effectivenes had been found to depend on contingent rewards to employees as there was a highly positive correlation between contingent reward and transformational leadership (Rafferty & Griffin, 2004). The latter went further to state that personal recognition occured when a leader indicated tht he or she valued individuals' efforts and rewarded the achievement of outcomes consistent with the vision through praise and acknowledgement of followers. The leader, with the aim of personally recognising follower, would negotiate and provide reward for performance with the followers.

In summary, the above were the dimensions of transformtional leadership which were based on focussed and validated researches into the construct. They provided the reflective items in the transformational leadership trajectories.

2.3.3 Transformational Leadership and Organisational Excellence

Researchers had shown the impact of transformational leadership on organisations- both public and private. The impacts of leadership had been on the basis of each of the dimensions severally and jointly. On the basis of previous studies, below were the areas in which such impacts had been documented.

Spreitzer, Perttul and Xin (2005), in their examination of traditionality on transformational leadership discovered a significant relationship between the dimensions of transformational leadership and leadership effectiveness. Despite the fact that individualised support was marginally significant, the conclusion was that all others were significant thereby confirming prior studies' result on the relationship between transformational leadership behaviours and leadership effectiveness.

Coupled with the above, transformational leadership had a positive effect on subordinates in the areas of performance appraisal, training and development needs as well as succession planning. Rafferty and Griffin (2004) work suggested that the general human resources management in an organisation could be improved upon through proper understanding and implementation of transformational leadership in organisations.

Closely linked with the above was the guarantee of employee loyalty to the organisation. When a leader intellectually stimulated followers, it brought about a positive affective attachment of followers to the outcomes of the organisational activities. This usually propelled an employee to be emotionally attached to the fate of the organisation. This loyalty and subsequent feeling of security must be balanced against further productivity to prevent a follower from being less likely to make positive contributions to the organisation (Meyer & Allen, 1997, Rafferty & Griffin, 2004).

Transformational leadership through senior management commitment had been found to have a positive effect on operational performance of organisations. Prabhu and Robson (2000) work confirmed the fact that the internal impact of leadership on operational

performance could be easily seen in an organisation. The external impact, although may be varied, the impacts were as positive as the internal impact on operational performances of organisations.

For sustainable quality in higher education institutions, transformational leadership had been found to be a necessity. There was also need to adopt deliberate approach for effective communication between the leadership and followership on the vision of the institutions while empowering staff (individualized consideration and intellectual stimulation) towards best practices and superior results. This had served as a way of standing up to the challenges of dwindling fund allocation and scarcity of teaching and research facilities (Osseo-Asare, Longbottom & Murphy, 2005).

Motivational impact of transformational leadership had been documented. It had been found that followers of transformational leaders often set high work purposes for themselves; were more committed and involved with their organisations and performed beyond social expectation (Bass & Avolio, 1989; Sparks & Schenk, 2001). Thus, to motivate followers to willingly and enthusiastically strive for higher levels of performance beyond ordinary expectation, transformational leadership had made an extra-ordinary man out of an ordinary man.

These are, by no means, the impacts transformational leadership has on organisation. The depth and extent of the impact of transformational leadership varied from one form of institution to another (civil service/military, academic and non-academic institutions, business and political leaders, health care and labour leaders etc). An organisation

desirous of being classified as World class or high performer needed to practice transformational leadership. This was why all organisational excellence frameworks utilised leadership as the spark plug of excellence programme.

It could be concluded from previous studies that leadership had a positive impact on achievement of excellence in organisation. The studies suggested that, regardless of the nature of such organisation – public service; academic; manufacturing and ; banking et cetera, transformational leadership positively impacted on the achievement of goals and satisfaction of interest of different stakeholders to such organisations. Thus, the tentative relationship between transformational leadership and organisational excellence can be stated as in the first hypothesis I below.

Hypothesis I

There is a significant positive relationship between transformational leadership and organisational excellence.

2.4 KNOWLEDGE MANAGEMENT

2.4.1 Knowledge Management Defined

The concern for knowledge as an indispensable factor for development of an economy had long been noted for over a century ago from the observation of Marshal in 1890 to the seminal work of Nonaka in 1991 (Quintas, 2002). The Second World War necessitated some skills which brought together specialists in different fields for the purpose of prosecuting the war. These skills were transferred to youths who later

graduated from higher education institutions with high skills never acquired by youths of their age in contemporary history. The improved cross-fertilisation of knowledge was accompanied by intended and unintended diffusion in new areas of knowledge. These youths, with their newly-acquired sophisticated knowledge, were later employed in the industries which had to cope with the sophisticated and dynamic knowledge already acquired by these youths.

Coupled with that, Europe and Asia which had recovered from the devastation of the World War II, were seriously rebuilding their economies necessitating the enterprises in those economies to follow suit in improving production and productivity. Their watchword then was on how to improve the quality of their products. With the invitation of Dr Deming by the Union of Japanese Scientists and Engineers (JUSE) in the 1950 and Dr Juran in later years, the experiences and insights gained by managements of those enterprises led to involvement of workers more in decisions related to their job (especially the shopfloor workers). These efforts were a way of showing their (Japanese) prowess against the Americans in the war that was won by America earlier. The outcome of this was improved productivity, improved market share of companies, quality goods et cetera.

This contrasted to the dwindling market share of American companies which were no longer efficient due to their inability to key-in into the new development and the needs of their new employees. Best management practices were emanating from Asia with the booming of Asian enterprises. This situation put pressure on the American management style which had to change due to many academic publications on the causes of decline in

American enterprises. Those companies had to discover the need and imperatives of the then knowledge economy. They later realised that quality, customer satisfaction and innovations were only possible through proper knowledge management. They had to cater for the knowledge requirements of their organisations.

Furthermore, a shift in focus from seeing labour as just one of the inputs of production to an asset which needed to be invested in and from which a high rate of return could be expect also propelled the move towards knowledge management. Organisations discovered that technology advantage was not sustainable for long-term competitive advantage but rather, they must create, retain, develop and utilise human talents and knowledge (Martensson, 2000). Organisations further realised that employees' talent needed to be managed for higher productivities. Thus, the concept of organization-specific knowledge gained the attention of scholars and practitioners in recent times more than ever before due to the reasons provided by Quintas (2002) viz;

- Increasing and demonstrable creation of wealth from knowledge and intangible asset
- Rediscovery of the primal position of people as the locus of much organisational knowledge
- Transaction in cross-boundary knowledge has grown in importance
- Unprecedented accelerated change in technology, markets and competition leading to a deep learning curve

- The dependency of innovation on knowledge creation and application without which organisations will not be able to compete favourably
- The almost limitless potentials of communication and knowledge technologies compared to limitations of information system.

DiMattia and Oder (1997) as quoted by Martensson (2000) argued that the downsizing strategy of 1980s led to loss of important knowledge and this created the need to create and store organisation important knowledge as a reusable resource for future benefit of their organisation. They further asserted the second reason as being technological development which had caused explosive growth in information resources and accelerated technological change. The importance of innovation, ideas from experience and their impact on organisation's performances had been considered over and over again. This was more important when the pre-eminence position knowledge had in today's competitive world was considered. Knowledge was being sold and bought like other commodities in the market. Thus, organizations nowadays now saw knowledge as a principal factor with which they could perform better than their competitors in the market. Even, this extends to nations of the World in terms of international influence.

There were different definitions of knowledge management since the concept gained popularity around early 1990's especially in management literature (Gordon & Grant, 2000 in Quintas op cit). Nonaka (1991) described it as the process of creating new knowledge, disseminating it widely throughout an organisation and quickly embodying such knowledge in new technologies and product. He further asserted that a knowledge-

creating company was not only limited to promoting ideals in organisations but was also much about ideas. Knowledge management was also viewed as a conscious practice by organisations to codify, store and re-use knowledge (Morten, Hansen, Nohria & Tierney (1999). Armstrong (2005) viewed knowledge management as concerning the storing and sharing of a community of practice in form of the wisdom, understanding and expertise which an organisation had accumulated about its processes, techniques and operations. He went further to stress that knowledge management concerned people in an organisation and how they acquired, exchanged and disseminated knowledge more than, but not necessarily without, the use of information technology. Scarborough, Swan and Preston (1999) defined knowledge management as focusing on the development of firm-specific knowledge and skills all of which were the outcomes of the learning processes in an organisation. It was a business focus to driving innovation through the process of proactively incentivising knowledge sharing.

All the above authorities agreed on the premise that knowledge management involved knowledge; firm-specific knowledge; storing of the knowledge; sharing of the knowledge and; the re-use of such knowledge. Knowledge was content-specific based on space and time. A knowledge that worked in an organisation and at a time may not necessarily work in the same organisation at another time or in another context (Nonaka, Toyama & Konno, 2002).

(a) Types Of Organisation Knowledge

Organisational knowledge as a concept was derived from the mind at work. It was based on justified belief of an organisation and not justified true belief conception of the Western epistemology (Davenport & Prusak, 1998; Nonaka, Toyama & Konno, 2002). Organisational knowledge, especially new knowledge, usually began with an individual from whom the organisation would seek for commitment to make the knowledge available as a valuable asset to the company as a whole (Nonaka, 1991). Organisational knowledge were majorly classified into, but not limited to, explicit and implicit (tacit) knowledge on the basis of abstraction or concreteness of the knowledge. This was based on the fact that knowledge resided in human mind as an abstract concept which may be codified, used and turned again to reside in human over time. Within these two major classifications, there were four basic patterns of knowledge creation as identified in the seminal article of Nonaka (1991). He referred to the pattern of knowledge creation as spiral of knowledge such as: from tacit to explicit; from explicit to explicit; from tacit to explicit and; from explicit to tacit. Knowledge that was clearly stated, formal, and systematic and details of which could be recorded, communicated, shared, which was universal and accessible through consciousness was referred to as explicit knowledge. However, those unstated knowledge which were rooted in actions, procedures, routines, commitment, ideals, values, and emotions which were also difficult to record, were informal, hard-to-pin-down, and stored were referred to as implicit (tacit) knowledge (Nonaka & Krogh, 2009). This knowledge was personal to the originator. Tacit knowledge had been referred to as consisting of subjective insights, intuitions, and

hunches. It also included mental models, beliefs and perspectives so ingrained that organisations took them for granted, and the latter oftentimes couldn't easily articulate them (Nonaka, 1991).

Knowledge could also be viewed from the perspective of "know-how" and "know-what". Using this basis, knowledge could be embedded (Shafia, Vanani & Mirzaei, 2011), uncultured, embodied or embraced. Furthermore, it might be classified on the basis of acquiring knowledge of what will make an organisation act effectively and perform excellently. Thus, this perspective emphasised the need for organisations to have the knowledge of the customers, best practices in the industry or internationally, knowledge of the competencies and capabilities of an organisation as well as all the stakeholders to that organisation.

A concept in organisational knowledge creation theory was explicit-tacit knowledge continuum. The closer a tacit knowledge to being concretised through justification, the closer it is to being regarded as explicit and vice versa. The level of justification of an abstract belief explained the level of its explicitness or otherwise.

(b) Knowledge Management Strategies

Morten *et al* (1999) article led to the consensus among knowledge management scholars that there were two basic strategies towards knowledge management practices. This was broadly classified into personalisation and codification strategies.

Due to the fact that bulk of organisation's value-adding knowledge resided in human minds (Nonaka, 1991), that knowledge had to be buoyed up and extracted from human

minds for excellent performance. This used to be done through the pull strategy or what was popularly referred to as personalisation strategy- knowledge was tied to the person who possessed and developed it. This form of knowledge could only be shared mainly through direct person-to-person contact between the developer and the user(s). Anytime the knowledge was needed, recourse had to be made to the originator (Morten *et al* 1999). The strategies for personalised knowledge exchange had been discussed as communities of practice. This community of practice comprised identification of the expert; kicking off of meeting (interaction); analysis and action plan; implementation of knowledge transfer action and; evaluating of the knowledge exchange with a closing session and feedback (Haarmann, Kahlert, Langenberg & Muller-Prothmann, 2009; Lee, Tsai, & Amjadi, 2011). The method often adopted by organisations in sharing this form of knowledge included one-to-one session between the originator and intending user(s) of the knowledge, online community like personal blogs, informal conferences, brainstorming sessions, workshops, memoirs, telephone contacts, phenomenological research, understudy programme etc. With the development in ICT, knowledge sharing had improved through developing and maintenance of robust, highly-interactive and prompt relationship between the originator and users of personalised knowledge. Knowledge, in this form, was therefore pulled from the originator. This strategy may eventually lead to the codification of such knowledge into people-to-document.

Interaction with people as in the personalisation strategy might be converted to document to which others could refer. This capturing of organisational learning through various means was referred to as codification strategy (Teare & Rayner, 2002). It was seen as a

way of getting hands on a good deal of expert's thoughts and experiences within and outside the organisation (Shafia, Vanani & Mirzaei, 2011). Human experiences could be documented into knowledge objects like market segmentation analysis, benchmarks, memoirs, work schedules, interview guides, etc. These outputs- which were gotten from structured conversation with expert, observation and films, storytelling, networks for sharing knowledge, special meetings, virtual learning, creating situations to work together- were then stored in repositories for easy search, retrieval and re-use (Shafia, Vanani & Mirzaei, 2011). This strategy and the use of the knowledge produced from it did not mainly require a user to contact the originator of the knowledge but reference could be made to the originator if the user wished to get further clarifications and/or information. The push strategy is so referred to because knowledge is pushed from documentation or storage to intended user(s).

Researches on organisations with respect to the use of the strategies have shown that most organisations make a combination of the two strategies but use one as the main and the other as the supporting strategy.

2.4.2 Dimensions of Knowledge Management

As observed by Andreeva and Kianto (2011), dimensions of knowledge management differed from one author to the other not primarily based on the essence but by way or the level of aggregation of each author. Broadly speaking, knowledge management dimensions included knowledge creation; intrafirm knowledge-sharing; external knowledge acquisition; knowledge documentation; knowledge implementation and knowledge evaluation.

Knowledge Creation*:* This involved the development of new ideas in an organisation ranging from new ideas about products, technical processes to managerial practices. Oftentimes, organisations relied heavily on the knowledge at their disposal and slowly generated new ideas to improve organisations performance (Omerzel, Antoncic & Ruzzier, 2011). Since it had been found that there were enormous potentials to generate new ideas in organisations and deliver higher values to all stakeholders, knowledge management process put high premium on knowledge creation. This was because knowledge creation had been found to be an enabler and a necessary antecedent to organisational innovation activities. The necessary antecedents to knowledge creation included knowledge vision, driving objectives, knowledge assets, environment etc (Bratianu & Orzea, 2010).

Knowledge Sharing: It was not enough to acquire/create new knowledge in an organisation, such knowledge must be moved from the existing repositories within and between different actors, departments, groups and hierarchical levels in the organisation (Andreeva & Kianto, 2011). This involved the socialisation phase of Nonaka (1991). Increasing attention had now being placed on the importance of the concept of communities of practice on knowledge sharing activities of an organisation (Krishnaveni & Sujatha, 2012).

Necessary to the success of knowledge management programme was the concept of knowledge sharing- alternatively referred to as knowledge transfer (Krishnaveni & Sujatha, 2012). Knowledge management provided an organisation with community of practice which fostered identity, learning and commitment. However, it should not be

assumed that humans were ‘benevolent co-operators’ who would voluntarily and enthusiastically give up their private knowledge (Lam & Lambermont-Ford, 2010). An individual private asset as represented in knowledge would become a public good when such knowledge was shared.

Knowledge sharing capability in an organisation was essential to knowledge sharing. This capability referred to the ability of employees to share their work-related experience, expertise, know-how, and contextual information with other employees in the organisation through informal and formal interactions within or across teams or work units (Kim & Lee, 2006). This involved all strategies put in place by the organisation towards encouraging knowledge originators to voluntarily make their knowledge available for organisational use and; putting in place an organisation environment that was conducive to sharing of knowledge. It involved reward and security for the originator of the knowledge and provision of the necessary infrastructure for knowledge sharing. The success or otherwise of KS strategy in an organisation depended on trust, social process, previous experience, tight coupling, codification of information (McNeish & Mann, 2010); availability of KS strategy infrastructure like IT (Donate & Guadamillas, 2011); organisational context- organisational culture and structure (Kim & Lee, 2006); expert insight (Santosh & Muthiah, 2012) and; motivation (Amar, 2004; Lam & Lambermont-Ford, 2010).

Knowledge sharing provided the link between the individual knowledge and the organisation as it moved the knowledge from an individual to the organisation with a view to making the knowledge a “public good”. Information shared in the course of

routine activities was not conceptualized in knowledge sharing. The knowledge so moved provided an organisation with the competitive edge needed. Knowledge sharing programme in an organisation was likened to a cultural change where there could be pioneers and laggards. Stakeholders must be properly orientated and imbued with the cultural change envisaged and the expected goals and benefits of knowledge sharing.

Knowledge sharing behaviours in an organisation can be measured on the basis of frequency with which knowledge was shared; the quantity of the shared knowledge; the quality of the knowledge and; the time it took a knowledge originator to share such knowledge. Provision of rewards, recognition and advancements for individuals; encouragement of team works and provision of necessary ICT that aided the sharing of knowledge had great roles to play in knowledge sharing behaviours in organisations. Knowledge managers were expected to ensure proper intermediation of technology, build trust and confidence, provide necessary control, ensure knowledge copyright and establish credibility throughout the knowledge sharing programmes.

External Knowledge Acquisition: The entire knowledge needs of an organisation might not be available within it and might need to be sought from the external environment. This was referred to as external knowledge acquisition. Acquisition of such knowledge might lead to internal knowledge creation through adaptation of such externally-acquired knowledge to the internal realities of the organisation. This knowledge could be acquired through cooperation with other entities in form of collaboration, external consultancy, expert meetings, drawing on literature, business partners, poaching etc. It might also be

acquired through cross-national knowledge transfer (Kotabe *et al*, 2007) and knowledge transfer from repatriated employees (Santosh & Muthiah, 2012).

Knowledge Documentation: This is exhibited in form of organisation memory which could be accessed and utilised by current and new employees of an organisation. This was usually aimed at ensuring that knowledge created and externally acquired were not accidentally lost to the organisation. Organisation knowledge could be lost due to time (retirement, mutation etc) or through space when the knowledge which wase being used in one site of an organisation was not used or available in another site (Abel, 2008). Documentation could also be in form of knowledge maps, handbooks, memoirs, electronic database, documented organisational procedures and processes, codified knowledge in expert system and what have you. The documentation should ensure easy and efficient retrieval, reuse while eliminating the likelihood of its being made available to undesired internal and external users. Due to high rate of knowledge obsolescence, the documentation must provide for easy monitoring and update.

Knowledge Implementation: The direct utility value of knowledge could be evidenced in the utilisation of such knowledge in form of visible results, recreation and storage of further knowledge. Employees might be rewarded for the use of new knowledge, encouraged by the financial results and propelled by customer satisfaction through knowledge implementation (Xu & Quaddus, 2011). Organisations should provide a culture and structure that would encourage adoption and implementation of new knowledge. The organisation culture being referred to included organisation vision and goals, trust among employees as well as social networks while organisation structure

include (de)centralization, (in)formalization and performance-based review system (Kim & Lee, 2006).

Knowledge Evaluation: This was the last aspect of knowledge management dimension. This dimension evaluated the extent to which an implemented knowledge had been effective for the aims and objectives for which the knowledge management was implemented. The evaluation could be determined at the level of the company, individual and/or group to determine areas of improvements. The quality of work, productivity, efficiency, motivation, dynamism and competitiveness of the organisation could also be determined through this evaluation process. Appropriate measures were usually put in place to evaluate the strengths, weaknesses, opportunities and threats to successful knowledge management implementation. Prompt and adequate feedbacks were necessary on the results of the evaluation. The outcomes of knowledge evaluation were often used as inputs for further knowledge management activities.

These dimensions were not mutually exclusive but were interwoven in an organisation's knowledge management activities. Organisations must ensure an effective synergy among them to achieve the goals of the knowledge management.

2.4.3 Knowledge Management and Organisational Excellence

With the publication of Nonaka (1991) article on knowledge management in Harvard Business Review and the subsequent book on the same construct by Nonaka and Takeuchi (1995), interests of researchers, academicians, consultants had grown steadily and greatly on knowledge management. The areas of interest of the researchers,

consultants and academicians were in the nature, essence and capabilities of knowledge management. This growth of interest was evidenced in the number of articles, books, conferences, journals as well as job titles that were based on knowledge management (Serenko, Bontis, Booker, Sadeddin, & Hardie, 2010). To this end, the importance of knowledge management on organisational excellence could be discussed as hereunder.

Knowledge management had been found to be an indispensable antecedent to organisational innovation. Andreeva and Kianto (2011), in their moderated mediated analysis of knowledge management variables of knowledge processes and knowledge intensity on innovation, found that all knowledge processes impacted on innovation. They discover that knowledge creation impacted on innovation the most and it fully mediated the impact of documentation, knowledge sharing and knowledge acquisition on innovation. Thus, despite finding that knowledge creation impacted most, other processes of knowledge management also impacted on organisational innovation. Darroch and McNaughton (2002) had also found a link between the knowledge management practices of knowledge acquisition and responsiveness; and different types of innovation (incremental and radical). Knowledge dissemination was of lesser importance. Nevertheless, parts of knowledge management strategies impacted on types of innovations in organisation. Study had shown a positive relationship between knowledge input as well as knowledge absorptive capacity on innovative performance in an organisation (Tseng, Pai & Hung, 2011). All these researches discovered the impact of knowledge management on innovation.

The impact of knowledge management on organisational performance had been well documented. Moustaghfir (2008) discovered that knowledge management enabled the generation of new knowledge which invariably led to development of better organisational routine which in turn conditioned the efficiency and the effectiveness of not only business processes but also the value of firm's products and services. Lee, Kim & Kim (2011) used a partial least square method to discover knowledge management infrastructure as being relevant to organisational performance. From these, knowledge management was found to be a necessity for organisational performance.

There was also a positive impact of knowledge management strategy on organisational successful leadership transition. Organisational leadership transition referred to the succession ability of an organisation. Knowledge sharing and documentation were versatile tools in ensuring replacement of knowledge loss due to retirement or mutation and ageing. The knowledge exchange approach had been used successfully in Airbus and other aerospace industries in more than 100 cases for leadership transition from aging workers (Haarmann, Kahlert, Langenberg & Muller-Prothmann, 2009). Thus, for an organisation to be able to retain the tacit knowledge of retiring or ageing workers, it must vigorously pursue and implement knowledge management strategies especially for scarce talents.

Using an interpretive approach of qualitative method, Peet (2011) discovered that knowledge management strategy had enabled organisational generativity. Organisational generativity referred to a conscious understanding of the underlying purpose, values, capacities as well as resources that facilitated energy, coherence, aliveness and growth

within individuals and groups over time. Knowledge management had assisted in identifying key knowledge during the period of leadership transition, retrieve and document such know-how so as to minimize the negative effect of the loss of such know-how when the leaders were no longer available in the organisation.

Furthermore, knowledge management had been used by organisation for sustained competitive advantage. Adams and Lamont (2003) posited that the fact that an organisation developed competitive advantage in a specific functional area does not necessarily ensure that this competitive advantage would be stable over time. They emphasised the need for organisation to continuously manage knowledge for a sustained competitive advantage, especially, in a hypercompetitive environment.

The impacts of knowledge management on organisational excellence had made it an indispensable factor among other factors in organisation's quest for excellence. The fact presented above led to the statement of second hypothetical relationship in this study which was in relation to knowledge management and organisational excellence.

The results from previous studies above, suggested that knowledgement management had a positive impact on achievement of excellence in organisation. The studies suggested that, regardless of the nature of such organisation – public service; academic; manufacturing and ; banking et cetera, knowledge management positively impacted on the achievement of goals and satisfaction of interest of different stakeholders to such organisations. This study therefore established a tentative relationship between

knowledge management and organisational excellence which was stated as in the hypothesis II below.

Hypothesis II

There is a significant positive relationship between knowledge management and organisational excellence.

2.5 ENTREPRENEURIAL ORIENTATION

2.5.1 Entrepreneurial Orientation Defined

Since the time of Schumpeter's (1934) notion of an entrepreneur as a unique and creative individual (creative destructor) who used innovative ways of developing new products, services and techniques, interest in research in entrepreneur had grown. An entrepreneur had been seen sometimes as an individual who saw an opportunity and put in place processes to exploit the opportunity. An entrepreneur had also been seen differently by different authors. An entrepreneur had been viewed as an individual who created and extracted value from the environment (Anderson, 1995); an individual who transformed innovation into a new product in order to take advantage of an opportunity (McGruire, 2003) and; as people who were habituated to creating and innovating by building something of recognised value around an opportunity they perceived (Bolton & Thompson, 2000). From above discussions, it was clear that opportunity was at the heart of entrepreneurship (Thompson, 2002).

Entrepreneurs had been classified over time based on research. In the literature, concepts like corporate entrepreneur; social entrepreneur; productive, unproductive and destructive entrepreneur; political entrepreneur; cyberentrepreneur; ethnic or immigrant entrepreneur; criminal entrepreneur, academic entrepreneur et cetera had been mentioned. Corporate entrepreneurs, alternatively referred to as intrapreneurs, were individuals who, although not being the owner of an organisation, promoted innovations from an internal organisational perspectives by assessing potential new opportunities, aligning of available resources, exploiting and finally commercialising the opportunities assessed and exploited (Bjorkman & Sundgren, 2005; McFadzean, O'Loughlin & Shaw, 2005). Social entrepreneurs were those who had a strong commitment to helping people by creation of social capital with entrepreneurial spirit and skill. The social capitals were often created in areas where the government was unable or unwilling to help the people. The social capital comprised valuable things to the community which gave them a feel-good factor and impacted on the physical environment. Social entrepreneurs were mostly volunteers in form of non-governmental organisations (NGOs). At the heart of social entrepreneur was the ability to discover opportunity of doing good and getting on with it in innovative ways. Corporate social responsibility of firms and government agencies were included here but volunteers were majorly referred to as social entrepreneurs (Thompson, 2002).

Productive, unproductive and destructive entrepreneurs were classified on the basis of the payoffs, on the economy, of their resource allocation in the pursuit of exploitation of opportunity they discovered and the profit they gained. When entrepreneurship talent and resources were allocated to activities that maximised the production of general economic

goods, it was seen as productive. If the resources were used to maximise an economic good but if there would be higher general benefit if the same resources were used in another area, the use of the resources by the entrepreneur was seen as unproductive. However, if the resources were used with great negative consequences on general economic wellbeing but only for personal and parochial interest, the entrepreneurship efforts here was seen as destructive (Baumol, 1990). A political entrepreneur was also referred to as a bureaucratic entrepreneur. They helped in propelling new ideas through the use of political power for organisational change. They exploited opportunities in order to allocate scarce resources to outcome and preferences in the form of combining their flexible skill of intervening in political process through pushing particular political agenda; influencing political decisions and decision makers, dealing with criticism and challenge that came with the decision. They acquired and displayed the skill needed for coping with resistance to the change introduced and promoting credibility of the government policy, policy-makers and policy implementation in order to reach political objectives or goals (Bjorkman & Sundgren, 2005). They also helped in the influencing and redirection of bureaucracy towards meeting the dynamic challenges of the environment (Teske & Schneider, 1994).

Carrier, Raymond and Eltaief (2004) viewed cyberentrepreneurs as entrepreneurs whose activities were based on technology and, more specifically, internet. Their firms were founded upon e-commerce which heavily depended on exploiting the network by using internet, intranet and extranet based on electronic data interchanges (EDI). They were motivated by the need for achievement or the need to find an alternative to

unemployment, potential for higher income through supplementary works and they were averse to corporate work.

Ethnic entrepreneurs were individuals, families or groups who were into ventures which were started, run, supported, and grown based on belonging to one ethnic group. The research on ethnic entrepreneur was based on the discovery of immigrants as a source of social capital and their contributions to economic development in form of bridge between the country they had settled in and their home nation (ethnic region). The ethnic entrepreneur could either be middlemen or enclave entrepreneurs (Selvarajah & Masli, 2011). This concept of ethnic entrepreneurs grew mostly from the experience of china towns and Chinese settlements in different countries.

Criminal entrepreneurs discovered and exploited opportunities and situation from which they could make profit from criminal activities. Hedonism, hegemonic masculinity and lack of legal opportunities to pursue entrepreneurial activities had been discovered as antecedents to criminal entrepreneurship. When crime was seen as a valuable good and services which had valuable markets, criminal entrepreneurs would always create innovative ways to provide theses goods and services. They had exceptional skills of leading others and taking control of risky situations and operations (Smith, 2009; Gottschalk & Smith, 2011). They were sometimes referred to as gangster-entrepreneur, mafioso-entrepreneurs or businessmen-gangsters.

Academic entrepreneurs had been given prominence due to increased intersections of the academy (as an institutional sector) with private marketplace. This was based on the fact

that academic institutions had being finding innovative methods for survival with little reliance on governmental support and minimised oversight function of government in their activities. Academic institutions had been establishing collaborations and alliances with governmental bodies and private industries to improve their performances. Academic institutions had been using market and market-oriented responses to uncertainties in form of funding from government coupled with increasing need to become autonomous which were features of academic entrepreneurs. Most research universities operated their research teams, faculties, centres et cetera like strategic business units to improve performance and bring more funding. Academic entrepreneurs vigorously pursued corporate policy of commercialisation of services while still holding on to standards of academic performance. They were proactive, competitively aggressive and commercially-oriented in "academic products" (Mars & Rios-Aguilar, 2010; Binkauskas, 2012).

With the development of strategic management, attention of researchers shifted from entrepreneurship to entrepreneurial orientation with a view to explaining how entrepreneurs constantly behaved instead of what they do- a shift from the content theory to the process theory of entrepreneurship (Lumpkin & Dess, 1996). Research had shown that it was not enough to be involved in entrepreneurship (new entry), but there was a need to understand how entrepreneurship gave direction to and predisposed an individual to entrepreneurial achievement (Prabhu, McGuire, Drost & Kwong, 2012). This is the emphasis on entrepreneurial orientation.

Entrepreneurial orientation was viewed as a firm-level construct before it was later applied to individuals in form of dispersed entrepreneurship in an organisation. It related to a process that concerned the practices, methods and decision-making styles that managers used as a strategic choice alternative in a dynamic generative process (Richard, Barnett, Dwyer & Chadwick, 2004). Entrepreneurial orientation was a purposeful enactment of entrepreneurship. Lumpkin and Dess (1996) viewed it as the totality of not only processes and practices but also decisions that led to new entry. Li *et al.,* (2009) referred to it as a firm's strategic orientation involving capturing of specific entrepreneurial aspects of decision-making styles like being innovative, taking calculated risk and proactiveness.

Entrepreneurial orientation therefore, was the predisposition of an individual, group and/or organisation towards being innovative in risk-taking activities and aggressively pursuing it with the aim of exploiting a discovered opportunity.

2.5.2 Dimensions of Entrepreneurial Orientation

From the initial three characteristics or dimensions of entrepreneurial orientation ranging from high degree of innovativeness, risk-taking to proactiveness by Covin and Slevin (1989), the entrepreneurial orientation dimensions had been expanded to five. These dimensions included autonomy; innovativeness; risk-taking; proactiveness, and competitive aggressiveness (Lumpkin & Dess, 1996) which George and Marino (2011) referred to as concept stretching. Many studies had been conducted on entrepreneurial orientation as a construct and the first-order and second-order items but they nevertheless provided a basis for our understanding and measurement of entrepreneurial orientation in

individuals and organisations. Studies had been conducted to present these dimensions in formative and reflective manners (George & Marino, 2011).

Autonomy in entrepreneurial orientation related to self-determined and independently-minded individuals. The needs to leave secure positions to promote novel ideas and prevent inhibitions from superiors had been at the heart of innovation. Autonomy had been referred to as the independent creation and bringing forth of ideas or visions by an individual or a team and carrying out the ideas and visions through to completion (Lumpkin & Dess, 1996). The need for autonomy could be internally-generated within an organisational context whereby organisations would have intrapreneur or it may be based on personal desire to generate idea and implement it without inhibitions. It is like saying "I don't want anyone to kill my creativity". Autonomy in an organisation may be based on command mode, generative mode or crescive mode. The extent of provision of autonomy in an organisation depended on the ownership, management style, nature of the subordinate and size of such organisation.

The second dimension was innovativeness. The predisposition of an individual or organisation to engage in and support new ideas and creative process was referred to as innovativeness. It was the desire for and actual departure from the status quo and venturing beyond the present imaginable technology or performance. It was termed creative destruction by shifting attention and allocation of resources to new product or organisation. If an organisation is innovativeness by being the first-to-market in ideas, competitors were expected to respond to the actions of such organisation (Covin & Slevin, 1991). Innovativeness was a way of formulating differentiable advantage in form

of uniqueness in new venture. Innovativeness might be in form of an improvement in an old product; introduction of a totally new product; redesign of company marketing orientation or; new process or organisational re-engineering. It might even involve creation of new products or service, the competence for which may not be available in an organisation with its attendant greater risk involvement and experimentation (Atuahene-Gima & Ko, 2001).

Risk-taking was the third dimension of entrepreneurial orientation. It was the venturing into the unknown which might involve the commitment of large resources with the likelihood of failure. The risk might range from safe to highly unsafe risks (Lumpkin & Dess, 1996). There were threats and opportunities in risk-taking as a successfully-exploited risk would lead to high returns and converse was also true (Lee & Sukoco, 2011). Sometimes, the risk might be associated with non-availability of the competence needed to exploit or implement the new venture that the organisation entered into. Where there was no needed competence in an organisation, there could be risks relating to retraining, experimentation and associated lack of group cohesion by dilution of membership of the organisation through external recruitment.

Another dimension of entrepreneurial orientation was proactiveness which could be summarily called taking initiative action to exploit opportunities within a given environment. It was a first-mover action of an individual or organisation in matching its strategies to and seeking out opportunities in the environment and persisting in bringing about the change or opportunity discovered to fruition. Proactiveness entailed the disposition of not allowing the environment to inhibit achievement of organisation's

goals and objectives. It was simply the manipulation and control of one's surrounding environment by perceiving the environment and formulating and implementing appropriate and effective strategies (Fuller, Hester & Cox, 2010; Tang, Kreiser, Marino & Weaver, 2010). Proactiveness had been found to impact on job performance.

The last dimension was competitive aggressiveness which was a firm's propensity to directly and intensely challenge its competitors to be able to achieve entry or improved position as well as to outperform industry rivals in the industry marketplace (Lumpkin & Dess, 1996). Organisation could use head-to-head (offensive), market leadership, live-and-let-live, fast-follower or reactive (defensive) competitive strategy. Covin and Covin (1990) work considered the level of technological sophistication and environmental hostility as antecedents to competitive aggressiveness of small firms in relations to their performances. These antecedents determined the nature of competitive posture of firms in the environment.

The above dimensions of entrepreneurial orientation had been found to impact on individual or organisational performance in different ways. It had been found that individuals or organisations with low-level of one or more of these dimensions may be successful depending on its context, conditions and time. Lumpkin and Dess (1996) work reviewed the appropriateness or otherwise of unidimensional or multidimensional nature of the entrepreneurial orientation dimensions.

2.5.3 Entrepreneurial Orientation and Organisational Excellence

Entrepreneurial orientation had been found to impact on organisational excellence in various ways. Entrepreneurial orientation had been found to enhance the effect of knowledge management on innovations in organisation. Organizational excellence involved continuous innovation in products and strategies. Li *et al* (2009) had found entrepreneurial orientation as an organisational climate which helped in knowledge sharing and application on one hand, and innovation on the other hand.

Entrepreneurial orientation had helped social entrepreneurs in the provision of social amenities which the government had been unable or unwilling to provide but which were necessary social capitals. Thompson (2002) work on social entrepreneur had shown its effect and necessity on issues like job creation, organised help for the disadvantaged, community feel good activities etc. Furthermore, imbibing social entrepreneurial orientation by managers and organisations had helped in improving social capital and social responsibility.

The impact of entrepreneurial orientation on subordinates (an internal stakeholder) was recorded by Pearce II, Kramer and Robbins (1997). They discovered that managers with corporate entrepreneurial orientations had positive impact on employees' satisfaction especially between supervisors and other employees in the organisation. Corporate entrepreneurial orientation had also helped in progressing troubled bureaucracy organisation to a more responsive meritocracy. Thus, better performances from subordinates had been witnessed by managers of corporations that were entrepreneurially

oriented. Satisfaction of subordinates who were internal stakeholders had led to improved performances to satisfy and excel in satisfaction of other stakeholders.

In the areas of performance in raising funds, responding to industry demands, changes in market and challenges in the economy, educational institutions had exploited the opportunities provided by entrepreneurial orientation. Yokoyama's (2006) work which covered Japanese and UK universities (two universities from each country totaling four), was expositional of the entrepreneurial orientation and its impact in solving identified problems in higher education institutions. He concluded that there was a convergent trend among the four universities- the trend of entrepreneurial orientation. Despite the fact that there were significant differences in the institutional strategies applied, all the four universities had displayed different grades of entrepreneurial orientation towards organisational excellence.

Furthermore, ethnic entrepreneurial orientation had been discovered to improve performance and create a bridge between an organisation and opportunities available by building networks into underserved markets. With proper ethnic entrepreneurial orientation, organisations had been able to venture into the untapped markets, utilised the ethnic social capital, established their presence in the ethnically-dominated area and provided diverse products for improved performances. The entrepreneurial orientation of ethnic groups had also provided an impetus for entrepreneurial disposition of an individual or organisation (Sevarajah & Masli, 2011).

These were the areas in which entrepreneurial orientation had contributed to organisational excellence. These areas were not exhaustive of that impact.

2.5.4 Entrepreneurial Orientation as a Moderator

A moderator variable was that variable that was, at least the third variable, that had contingent effect on a relationship. It affected the already established relationship between two or more variables. Specifically, it was referred to as a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affected not only the direction of the relationship between an independent or predictor variable and a dependent or criterion variable but was capable of also affecting the strength of the relationship either independently or jointly (Baron & Kenny, 1986). Ramayah (undated) observed that a moderator had two impacts on the independent variable and dependent variable relationship viz: change in the strength of the relationship and; change in the form of relationship. The change may be positive or negative. Entrepreneurial orientation had been used as a moderator on its own or by the use of one or combination of more than one of its dimensions. Literature on the use of entrepreneurial orientation as a moderator had been found in the works below.

The moderating role of entrepreneurial orientation on cultural diversity and performance had been researched on by Richard *et al* (2004). They conducted a research based on a sample of seven hundred banks each with one hundred million dollars or less; between one hundred and four hundred and ninety nine million dollars and; five hundred million dollars or more in assets. In the study, they discovered that level of innovativeness of a firm highly impacted the form of relationship between diversity in management and

management. Furthermore, a marginal support was found for the impact that risk taking had on the relationship between racial diversity and performance.

Lee and Sukoco (2011) studied the impact of risk-taking as a moderator on team reflexivity on performance. In an online questionnaire that were distributed to leaders of six hundred new product development teams in Taiwan, they found that risk-taking had moderating effect on the relationship between team reflexivity and product innovation. The result conformed to the suggestion of Lumpkin and Dess (1996) that although new products may risk failure, no product will get to market without risk-taking.

The impact of entrepreneurial orientation dimension of autonomy on role-perception and outcome relationship had been found to be positive. Morris and Snyder (1979) article on a second look at the moderating impact of need for achievement and need for autonomy on role perception-outcome relationship was informative here. They found that the moderating effect of need for autonomy was strong with respect to two of the five variables of role-performance-outcome relationship in the area of high-level intersender and personal role conflict. Thus the moderating role of entrepreneurial orientation dimension had been confirmed.

The moderating impact of entrepreneurial orientation on knowledge management-innovation relationship was considered by Li *et al* (2009). In a questionnaire pilot survey of fifteen companies and final questionnaire survey of eight hundred and fifty firms in China, they found that entrepreneurial orientation was an important complementary asset to intrafirm knowledge sharing and knowledge application-innovation relationship. They recommended that entrepreneurial orientation should be used as a complementary asset in

form of moderator towards efficient knowledge sharing and knowledge application-innovation relationship.

Couple with the above, entrepreneurial orientation dimension of self-efficacy of an individual was researched into by Prabhu *et al* (2012) as it affected proactive personality-entrepreneurial intention relationship. Six hundred business graduate and undergraduate students between age seventeen and twenty seven in China, Finland, Russia and the USA were used as sample. Their findings from the use of structural equation modeling using AMOS 18 supported the moderating role of entrepreneurial self efficacy and high entrepreneurial intent and lifestyle in the sample collected.

Apart from the above, it had been concluded that EO strengthened market orientation and performance relationship (Bhuian, Menbue & Bell; 2005). In a questionnaire survey sample of one thousand hospitals in the USA, they found that market orientation was most effective when the organisations maintained a moderate level of entrepreneurship orientation. They further suggested that organisations should pay close attention to entrepreneurial orientation (as represented by organisational values and capabilities) based on their effect on organisation activities and processes.

Studies on the use of entrepreneurial orientation as a moderator were as presented above. While some researches used a higher-order dimension of entrepreneurial orientation in their analysis, other used the entrepreneurial orientation construct to arrive at their conclusions. Nevertheless, entrepreneurial orientation had been a strong moderator in different independent-dependent variables relationship.

These previous studies showed the moderating impact of entrepreneurship on the relationship between transformational leadership and achievement of excellence in organisation and the relationship between knowledge management and achievement of excellence in organisation. The studies suggested that, irrespective of the nature of such organisation – public service; academic; manufacturing and; banking et cetera, entrepreneurial orientation moderated the relationship between transformational leadership and achievement of excellence in organisation and the relationship between knowledge management and achievement of excellence in organisation. Thus, the tentative moderation relationship of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence was stated in hypothesis III below. However, the tentative moderation relationship of entrepreneurial orientation on the relationship between knowledge management and organisational excellence was stated in the hypothesis IV below.

Hypothesis III

Entrepreneurial orientation moderates the relationship between transformational leadership and organisational excellence.

Hypothesis IV

Entrepreneurial orientation moderates the relationship between knowledge management and organisational excellence.

2.6 UNDERPINNING THEORIES AND THEORETICAL FRAMEWORK

2.6.1 Introduction

There were two major theories that could be used to develop a framework for understanding how internal resources could lead to excellent performance. These were the resource-based view (RBV) interchangeably called resource-based advantage theory (Omerzel, Antoncic & Ruzzier, 2011) and complementary asset theory.

2.6.2 Resource-Based View (RBV)

The concern of strategic management experts from the start was on how organisations could have sustainable competitive advantage (SCA) in the marketplace based on the strategy adopted by the organisation (Clulow, Gerstman & Barry, 2003). Research had been conducted on impact of structure on strategy based on contingency theory (Pertussa-Ortega, Molina-Azorin & Claver-Cortes, 2010). Further studies were concentrated on the impact of internal resources and capabilities of an organisation on sustainable competitive advantage especially because these resources and capabilities were under the control of the organisations (Cunha, 2009). Later studies concluded that it was not all resources in an organisation that contributed to the success of firms' sustainable competitive advantage in equal manner (Bakar & Ahmad, 2010). This thus led to analysing organisations based on the need to focus on the resources and the way they were applied and combined to give the organisations the competitive advantage (Peteraf, 1993). The focus was on explaining the cause of difference between the high-performing organisations and low-performing ones based on the bundle of resources they possessed at the marketplace (Zubac, Hubbard & Johnson, 2010). These resources and capabilities

provided organisations with the means to exploit opportunities and/or neutralise any threat to them. This was the thrust of the resource-based view (RBV) of organisations.

With the publication of Wernerfelt (1984) article on *A Resource-based View of the Firm,* attention had been focused on the impact of resources as a strategic advantage towards achieving competitive advantage and organisational excellence (Zubac *et al*, 2010). It was a theory based on the idea of looking at organisations as possessing a broader set of resources than the traditional categorisation of land, labour and capital which were the factors of production. He made four propositions viz:

(1) By looking at organisations on the basis of resources provided a better insight into the organisation than looking at it traditionally in form of land, labour and capital.

(2) Different types of resources that could lead to higher profits could be identified in an organisation.

(3) Striking a balance by an organisation with respect to exploitation of its existing resources and development of new ones lied at the heart of an organisation strategy.

(4) When a firm (organisation) acquired another one firm, the acquiring company can be seen to have purchased a resource bundle for the purpose of applying it to higher profit.

Thus, Wernerfelt (1984) defined resources of an organisation as anything that could be thought of as a strength or weakness. It was seen as including participants, social structure, technology and goals of an organisation that could be deployed to the institutional, technical, managerial and worldwide needs of that organisation (Nobre & Walker, 2011). Resources that would lead to competitive advantage and organisational excellence must be such that can guarantee barriers to competitors just like structural industry-level entry barrier that would make an organisation to be attractive for accruing higher rents. These special resources were somehow semi-permanent and industry-specific with inbuilt mechanism of isolating others into the industry (Teece, Pisano & Shuen, 1997). Bakar and Ahmad (2010) classified these resource into six as physical; reputational; organisational; financial; human intellectual and; technological. The resources that constituted advantages to an organisation could be due to first mover or attractiveness advantage.

(a) First mover advantages:- This occurred when an organisation was the first to acquire a resource which will affect the cost and/or revenues of those that might want to acquire it later. In fact, the advantageous position of the first mover would adversely affect the late acquirer, provided everyone acted rationally and there was entry barrier in a market. This was called a resource position barrier advantage.

(b) Attractiveness advantage, on the other hand, referred to class of resources around which position barrier were built. These resources were limited in the short-run but can be renewed and expanded incrementally just as they were

self-reproducing; durable; appropriable; substitutable and; competitive (Peteraf, 1993; Clulow *et al*.; 2003). These resources included

(i) Physical (machineries with their excess capacity; buildings, vehicles);

(ii) Reputation (like customer loyalty, goodwill, status in the society);

(iii) Finance (ease of access to capital fund, credit sales);

(iv) Production experience (rate of successful projects, less of rework on product or services, unpatented ideas, human intellectual);

(v) Technology (leadership in innovation, research & development breakthroughs);

(vi) Organisational (distribution networks, dynamic organizational structure)

(vii) human (skills, entrepreneurial orientation; inelastic mobility of manpower etc)

The basic principle behind the resource-based view was that, an organisation should identify these resources, renew and expand them incrementally, invest heavily in them and, isolate others from them. The resources must be made scarce, imperfectly tradable

and imperfectly imitable. As long as an organisation did these, it would continue to enjoy sustainable performance excellence (Pertusa-Ortega *et al*, 2010).

2.6.3 Theory of Complementary Assets

This theory was an extension of the resource-based theory or view of organisation's competitive and excellence strategy. As observed earlier by Bakar & Ahmad, (2010) in the RBV, all resources and capabilities of an organisation used not to affect its competitive and organisational excellence in equal ways. Organisations, therefore, needed to identify the core resources as well as the complementary resources- which would facilitate optimum benefit from the deployment of the core resources. Complementary assets were those assets that moderated the relationship between core asset(s) and the criterion variable or outcome desired. According to Teece (1986), these assets had limited ability to bring about the desired outcome but can be combined with other core (main) assets for optimum effect. Complementary assets were required to capture the benefits associated with the core assets. In short, complementary assets provided the hygiene and conducive environment within which the core assets festered (Hidding, Wilson, Williams & Kuncheria, 2008; Lai, Chiu & Liaw, 2010).

Complementary assets were broadly classified into three as (a) generic, (b) specialized and (c) co-specialized. According to Teece (1986), generic complementary assets were not critical and needed not be adjusted together with the core asset. Because they were general purposes assets, they could be contracted for in the market. They were readily available for use by all competitors in a market. Specialized complementary assets were those that brought about unilateral dependency whereby either a firm's core resources

depended on it or it depended on the firm's core resources. Co-specialised resources brought about bilateral dependency where both the firm's core resources and that resource depended on each other. It was a symbiotic relationship where none could do without the other.

It had been discovered that complementary assets had positive moderating roles on organisation's core resources especially where protection of intellectual property and appropriability was high. It could be used to stave off competition and excel more than competitors. Also, the strength of first-mover or follower advantage depended on the nature of appropriability and the nature of the complementary asset that the first-mover or the follower possessed (Hidding *et al*., 2008). Furthermore, complementary assets had been found to be used by established pharmaceutical firms to create alliance with innovators of new products and prevented their displacement by new entrants into the industry (Rothaermel, 2001). These complementary assets had been leveraged by established firms to create competitive advantage and organisational excellence in marketplace (Tripsas, 1997).

2.6.4 Hypothesised Theoretical Framework for the Research

The theoretical framework for this thesis used resource-based theory as the main theory and the complementary assets theory as supportive to the main theory. The independent variables were the transformational leadership and knowledge management while the dependent variable is organisational excellence. The moderating variable was the entrepreneurial orientation of the organisation. Transformational leadership and knowledge management were expected to act as reflective items to directly impact on

organisational excellence. They were viewed as the core assets of the higher education institutions. On the other hand, entrepreneurial orientation reflective items were viewed as complementary assets and expected to affect the relationship between transformational leadership and knowledge management with organisational excellence.

The resource-based view of organisations stipulated the use of those resources which an organisation had comparative advantage in as being core. Transformational leadership and knowledge management were seen as the core assets (resource) that higher education institutions were expected to exploit to achieve excellence performances. To be able to optimally exploit those resources, another resource (entrepreneurial orientation) must be brought in as a complementary asset to the core assets (transformational leadership and knowledge management) for optimum excellent performance of the higher education institutions under investigation.

The hypothesized theoretical framework was as presented below

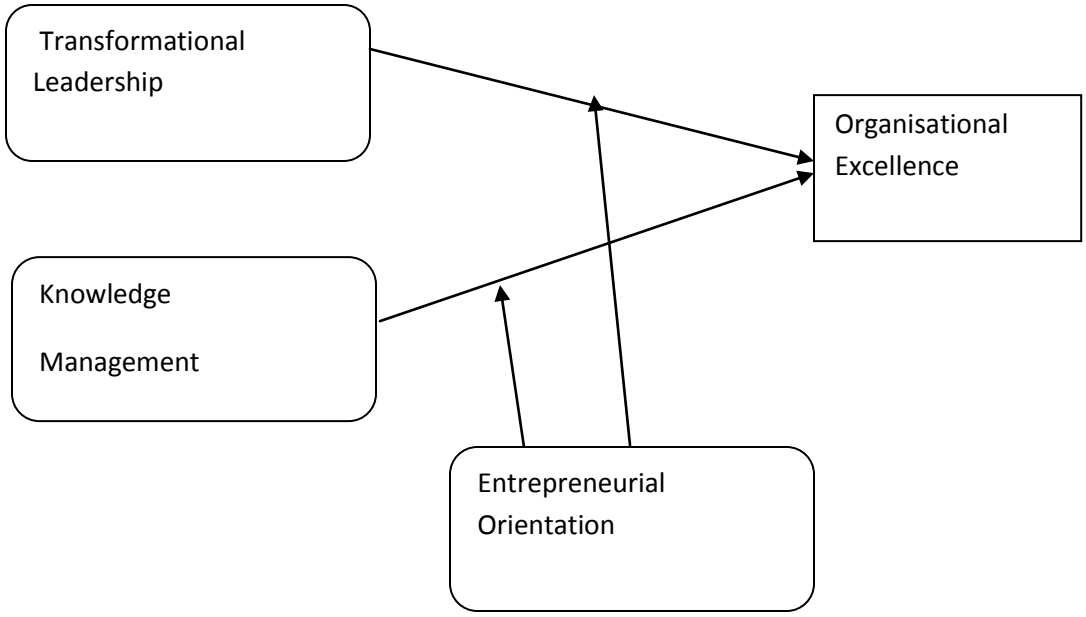


Fig 2.6: Hypothesised Model of Moderating Impact of Entrepreneurial Orientation on Transformational Leadership and Knowledge Management on Organisational Excellence

Source**:** Author.

2.7 CONCLUSION

This chapter discussed the dependent variable of organisational excellence with emphasis on its nature and excellence frameworks. Discussion of the meaning, dimensions and importance of the independent variables of transformational leadership and knowledge management as well as the moderating variable of entrepreneurial orientation followed. The use of entrepreneurial orientation as a moderating variable was also discussed. The main theory of resource-based view and the supporting theory of complementary asset were discussed which led to the hypothesised theoretical framework.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter was dedicated to the general research design. It consisted of research framework, statement of the research hypotheses as well as operationalisation of variables. Furthermore, discussions on measurement or instrumentation of variables and data collection procedures followed. After that, a description of the population of study, sampling procedures, techniques of data analysis and reliability and validity were done.

3.2 RESEARCH FRAMEWORK

Researchers conducted research to achieve certain goal and objectives. To be able to achieve such goals, the researchers used to organize the research activity in such a way that was likely to lead to achievement of such research aims. This was being referred to as research design/framework. The research framework stipulated how a researcher intended to go about data collection and analysis activities. It was the roadmap of a research which stated what would and what would not be observed (Davis, 2005; Easterby-Smith, Thorpe & Jackson, 2008). The type of investigation, location of the investigation, extent of researcher's interference, the time horizon of the research were all embedded in research framework (Sekaran & Bougie, 2013). Although there were many factors that affected a research framework (like research questions and objectives), philosophical foundation of the researcher about reality and how it could be observed-positivism and social constructionism- greatly affected the design. These philosophical antecedents of epistemology and ontology affected research design by using different

approaches, peculiar to them, towards theory development and testing in their research processes (Crowther & Lancaster, 2009). The two main philosophical divides in social science research, as parenthetically stated above, were positivism and social constructionism.

3.2.1 Review of the Philosophical Divides in Social Science Research

As observe earlier, the two main philosophical divides in social sciences research were positivism and social constructionism. There were, however, different variants of each of these two main philosophical divides.

The social constructionists believed that though the positivist philosophy may be useful in subjects of exactitude as in natural sciences, it was not adequate for seeking knowledge in the social sciences. They argued that reality was not external and objective but was constructed and given meaning by the people with which such reality was related. The society made meaning of a reality based on shared experience through language. Thus, reality was as interpreted by the people and the reality may and need not be universally acceptable or applicable. A researcher was expected to gather data for the purpose of appreciating, understanding and explaining peoples' interpretation of reality. The researcher should be part of what was being observed and his/her interest must be the driver for what he/she aimed to theorise. Concepts used in social constructionism was value-ladden with respect to the stakeholders while the complexity of the whole situation were involved in analysis instead of resorting to reductionism. On that strength, a small numbers were being used to appreciate the subjective realities instead of using large

sample which usually compromised the in-depth analysis of that reality. A social constructionist used qualitative methods.

The qualitative methodology had a long history and tradition in the social sciences-business, marketing, sociology, anthropology, political science et cetera (Cassell, Symon, Buehring & Johnson, 2006 and; Vaivio, 2008). Authors had suggested the importance and necessity of qualitative methodology in social sciences in order to gain more insights into the results got from quantitative methods (Boje, 2001; Prasad & Prasad, 2002). Since the social sciences involved the subjective realities of our World of Reality, it had been argued that quantitative methods could only provide a limited understanding of social sciences issues and the most appropriate methodology of capturing an in-depth analysis of such realities was the qualitative methodology (Cassell, Symon, Buehring & Johnson, 2006; and Juhani, 2008).

The positivists, on the other hand, believed that to get the knowledge of social world which existed externally, the reality must be measurable in an objective manner. Ontologically, reality was external and objective while, epistemologically the significance of knowledge acquired depended on observation of the external reality. This was the thrust of the proponents of quantitative methodology to research. The positivists further posited that the observer of a reality should be independent, his interest should be irrelevant to the reality being observed and any explanation of reality must demonstrate causality of cause and effect. The unit of analysis should be reduced to the simplest form while concepts must be defined and measurable in quantitative terms. They went further to posit that representative samples were required for the purpose of generalisation of

results through statistical probability. In short, the methodology adopted in positivism was quantitative in nature through deductive approach.

The fields of research, including social sciences, had been predominated by quantitative techniques/methods and methodology. This was as a result of arguments which were historical, social and practical in nature (Cassell *et al.*, 2006; Dallas & Grimmer, 2007). It was found out that editors of journals of business - accounting as a case study with the exception of *Accounting, Auditing & Accountability Journal* (AAAJ) - did not have a strong opinion with respect to giving pre-eminence to or specially promoting the use of qualitative methods and methodology in accounting (Henk & Helden, 2012).

The positivist ontology had greatly affected the use of quantitative methods in social sciences due to the requirement of knowing the World of Reality with some degree of certainty (Dallas & Grimmer, 2007). This had made quantitative method more visible than qualitative method coupled with the fact that certain factors had contributed to enhancing this pre-eminence. These factors that made quantitative methos more visible than qualitative method were summarized by Symon and Cassell (1999) as: the role of epistemology gatekeepers (journal editors etc) and; unavailability of alternative methodology in management publications. Other factors were the need to conform to journal requirements for publications which were based on quantitative mindset and; need for justification of the method or methodology used in carrying out a research.

Due to the strenghts and weaknesses of these two divides, a mixed method had been canvassed by some authorities. This was aimed at fully exploiting the strenght of each of

the methodology and minimise, if not eliminate, the weaknesses of each of the methodologies.

For the purpose of this thesis, the positivist philosophy was adopted. This was due to the strenght of quantitative methodology in making the results of the research more generalisable and replicable. Not only that, institutions which had relative dissimilarities and environmental conditions were investigated in this study. Furthermore, groups' and multigroups' interactions were involved in this research and these interactions were only best captured through quantitative methodology. There was also the need to remove the interference of the researcher in the observations and outcomes of the research. Thus, the methodology adopted was quantitative through quantitative data collection. The data analysis and hypothesis testing were statistically conducted. Justifications were also made through statistical validity and reliability.

3.3 STATEMENT OF RESEARCH HYPOTHESES

After having established the variables in a research and discussed the logical relationship among them through reasoning in a theoretical framework, the corollary was to make tentative statements to predict what the relationship looked like and what the expected result from the data to be collected would be. This was referred to as statement of hypothesis. Sekaran and Bougie (2013) defined a hypothesis as a statement which was tentative, yet testable, which also predicted what a researcher expected to find in the empirical data collected or to be collected. It was a supposition or proposition that was yet to be proved but which explained a fact or phenomenon tentatively. It was a research tool that was used to further define research problem (Davis, 2005; Hair, Money,

Samouel & Page, 2007). The hypotheses were based on *a priori* theoretical work. In sections 2.3; 2.4 and; 2.5 in chapter two, the relationships between the variables had been developed and hypothesis stated at the end of each section. While the first two hypotheses were nondirectional, the last two were based on conditional statements. Thus, the hypotheses tested were four as stated below.

Hypothesis I

There is a significant positive relationship between transformational leadership and organisational excellence.

Hypothesis II

There is a significant positive relationship between knowledge management and organisational excellence.

Hypothesis III

Entrepreneurial orientation moderates the relationship between transformational leadership and organisational excellence.

Hypothesis IV

Entrepreneurial orientation moderates the relationship between knowledge management and organisational excellence.

These above-stated four hypotheses were tested to determine whether they were fully or partially accepted or rejected.

3.4 OPERATIONALISATION OF VARIABLES

As observed in 3.2 above, using quantitative approach involved objective measurement of variables. This was needed for the purpose of testing the hypotheses stated. Since most of the concepts in social sciences research were abstract in nature, they needed to be reduced to observable behaviours or characteristics for measurement in a tangible ways (Sekaran & Bougie, 2013). Operationalisation was aimed at stating how the variable were measured or manipulated and was also necessary due to the need to eliminate the likelihood of confusion in the meaning of and what was being communicated through variables ((Davis, 2005; Crowther & Lancaster, 2009).

There were many steps involved in operationalisation of variable such as: definition of the construct; the content of the measure – instruments like item, questions etc which were derivable from a unidimensional or multidimensional concept; a response format and; assessment of the validity and reliability of the instruments. However, some instruments might have been standardized to be valid and reliable over time. A researcher oftentimes needed to adapt them to the constructs under investigation (Sekaran & Bourgie, 2013).

This study used validated instrument from empirical articles in scientific journals. Each of the four constructs in the thesis were fully operationalised under the next section.

3.5 MEASUREMENT OF VARIABLES/INSTRUMENTATION

As discussed in chapter two sections 2.2; 2.3; 2.4 and; 2.5, the variables in this thesis were organisational excellence, transformational leadership, knowledge management and; entrepreneurial orientation.

Organisational excellence was operationalised based on definition by Peters and Waterman (1982) as in Chapter One. The validated instrument that was designed by Bou-Llusar, Escrig-Tena, Roca-Puig & Beltran-Martin (2008) was adapted for the items. The instrument was based on their adaptation of the European Foundation for Quality Management (EFQM) excellence criteria. The instruments were developed by selecting most relevant of all the items in an original questionnaire about quality practices which were elaborated by the authors of the EFQM excellence criteria. Out of the thirty-two items scales of result criteria developed by Bou-Llusar *et al*. (2008), this thesis adapted twenty-one of them because others items had lower than .5 Cronbach's Alpa result. This not only helped in providing opportunity to accommodate other variables in the thesis it also prevented discouragement in response which was sometimes caused by too long a questionnaire with many items.

Rafferty and Griffin (2004) operationalised transformational leadership as a combination of items on vision, inspirational communication, intellectual stimulation, supportive leadership and, personal recognition. This validated instrument was adapted for this study. There were a total of fifteen (15) items that were used to measure the transformational leadership construct. They all had more than .5 Cronbach's alpha result as suggested by Hair *et, al.* (2013). However, there was only one item, out of the fifteen items, which had a reversed-scoring. All the items were adapted for the purpose of collecting data related to transformational leadership.

Nonaka and Takeuchi (1995) operationalised knowledge management with respect to knowledge creation, documentation, sharing, implementation and evaluation. This

operationalision was used. The factor interpretation of knowledge acquisition at individual level, knowledge storage, measurement of the efficiency of knowledge management implementation, knowledge transfer and knowledge acquisition at firm level designed by Omerzel, Antoncic and Ruzzier (2009) were adapted to fit into the knowledge management dimensions stated earlier. Furthermore, Andreeva and Kianto (2011) items on intra-organisational knowledge sharing and application; knowledge creation; knowledge storage and documentation and; knowledge acquisition were adjusted and adapted. Thus, the two validated scales on knowledge management were re-arranged and adapted to operationalise knowledge management for the purpose of collecting relevant data. Twenty-two items were adapted from the instruments.

Lumpkin and Dess (1996) operationalised entrepreneurial orientation through the five dimensions of autonomy, innovativeness, risk-taking, proactiveness and competitive aggressiveness. These were applied in this study. Different items had been developed on each of the dimensions, a summary of which had been done by George and Marino (2011). Their study discussed the use of entrepreneurial orientation variables in both formative and reflective models. The relevant contribution in their study with respect to this section was on the provision of the validated works on researches on each of the dimensions. Miller and Friesen (1982, 1983) separate items were adapted for innovation and risk-taking while Morris and Paul (1987) items on proactiveness were also adapted. Furthermore, Lumpkin and Dess (2001) items on competitive aggressiveness and Alexandrova (2004) items on autonomy were adapted for this thesis. There were a total

of sixteen items adapted for entrepreneurial orientation scales from different authors mentioned above.

These variables were measured as operationalised above. In all, apart from the demographic data, the items in the questionnaire were seventy-four broken down as follows: twenty-one for organisational excellence; fifteen for transformational leadership; twenty-two for knowledge management and; sixteen for entrepreneurial orientation. These validated instruments were used to measure the variables in this thesis for the purpose of collecting relevant data needed to answer the research questions, test the research hypothesis and achieve the research objectives. The measurements were depicted as in the table 3.1 below.

Table 3.1

Operationalisation of Measurement of Variables

VARIABLE	OPERATIONAL DEFINITION	NO OF ITEMS	SOURCE OF ADAPTATION
Organisational Excellence	Peters & Waternan (1982)	Items 1 - 21	Bou-Llusar, Escrig-Tena, Roca-Puig & Beltran-Martin (2008)
Transformational Leadership	Rafferty and Griffin (2004)	Items 1 - 15	Rafferty and Griffin (2004)
Knowledge Management	Nonaka & Takeuchi (1995)	Items 1 - 22	Omerzel, Antoncic and Ruzzier (2009); Andreeva and Kianto (2011)
Entrepreneurial Orientation	Lumpkin & Dess (1996)	Items 1 - 3 (Autonomy); Items 4 - 6 (Innovation); Items 7 - 10 (Risk-Taking); Items 11 - 13 (Competitive Agressiveness); Items 14 - 16 (Proactiveness)	Alexandrova (2004) - Autonomy; Miller and Friesen (1982) - Innovation; Miller and Friesen (1983) - Risk-Taking; Lumpkin and Dess (2001) - Competitive Agressiveness; Morris and Paul (1987) - Proactiveness

While reviewing quality and business excellence from the previous researches it was discovered that business excellence has been seen as a holistic concept (instead of a

collection of sub-concepts). In the same review, it was found that all successful organisations had used business excellence holistically by aligning all their policies, practices and procedures to it (Brown, 2013). In a research conducted to determine a business excellence model for implementation for high-class Greek hotels, it was found that a hotel needed to satisfy all of these dimensions so as to achieve business excellence instead of separating or differentiating among them. In fact, almost every hotel manager in the study considered almost every sub-criterion of organisational excellence as almost important in achieving business excellence (Politis, Litos, & Grigoroudis, 2009).

The use of unidimensional scale for transformational leadership was supported by the works of Walumba, Wang, Lawler and Shi (2004, 2005), Berson and Linton (2005), Nguni, Sleegers and Denessen (2006) and Emery and Barker (2007). These studies were conducted in the banking and financial service industry, education sector, food and banking service industry as well as research and development environment. They all found out that, transformational leadership was better used as a unidimensional construct instead of multidimensional construct as these dimensions hung together to determine transformational leadership.

In an ethnographic exploration of knowledge practices within the Queensland music festival, it was found that identifying and articulating knowledge management into tacit and relational dimension (or any dimension) was often difficult (Stadler, Reid, & Fullagar, 2013). A study of Crisplant (a Danish contract company) showed that knowledge management was a day-to-day activity of the company with emphasis on all, not specified, aspects of knowledge management strategy. Using three perspectives of

artifact orientation, process orientation and autopoietic epistemology, Christensen and Bang (2003) found that all dimensions of knowledge management were combined in Crisplant without separation into dimensions.

This unidimensional approach to the variables was to satisfy the principle of parsimony of a good scientific research (Hair, Money, Page & Samouel, 2007; Sekaran & Bougie, 2013). Parsimony criteria stated that a good research must adopt simplicity of explaining a problem or phenomenon as well as generating the solutions for the problem. Instead of using a complex approach to an issue whose results would be sub-optimal, a research should adopt the simplest model that would generate optimal result. This was the criteria that guided the use of unidimensionality for the variables.

The demographic section consisted of eight questions. The section elicited response from respondents on their age, gender, official position in the institution, institution in which they were currently working, highest academic qualification they had obtained, their years of experience in higher education institution, status in their institution and; the number of subordinates under them.

The Likert 7point scale measurements with a response format ranging from strongly disagree to strongly agree was adopted for the variable. The response format for the demographic variables used choice of one of the multi-choice alternatives.

3.6 DATA COLLECTION

Data collection had to do with the procedures through which a researcher gathered the necessary data for the purpose of analysis and a test of the hypotheses all of which helped in answering the research questions for the study. Data could be gathered through

primary and/or secondary sources. The nature of the research questions, (non)availability of data, likely cost of the research, researcher's skills and expertise, researcher's preferences, ethical and legal issues were factors that affected the choice of either primary or secondary data. Furthermore, a study's need for new insight and greater confidence in research outcomes, time needed for the research, need for closeness to reality and efforts needed are some of the reasons that used to determine the use of either or a combination of the two methods of data collection (Easterby-Smith *et al*., 2008; Crowther & Lancaster, 2009).

Data could also be classified as qualitative and/or qualitative depending on the methodology adopted. Another classification was whether the data was internal or external to the organisation. Whichever form it took, data used to be collected for the purpose of being able to answer the research questions, test hypotheses and to have a better understanding of issues under investigation.

Primary Data

These were data collected first-hand by the researcher for the specific purpose of the study with respect to the variables under investigation. Primary data were usually under the control of the researcher with respect to the structure of the sample and the data collected. This data did not actually exist until it was gathered. It could be internal or external to an organisation under investigation but must be relevant to the investigation at hand. Primary data could be collected through survey instruments, observations, focused group, videoconferencing, Delphi techniques, panel, interviews, and unobtrusive

measures (Shekaran & Bougie, 2009; Crowther & Lancaster, 2009). Survey instrument of questionnaire was used in this study.

Questionnaire Design

The questionnaire was designed by breaking it into sections. There was a covering letter to introduce the researcher, the purpose of the study; motivation for the respondents with a view to encouraging improved participation and reduce non-response. The covering letter also provided opportunity for clarification and; contained the necessary ethical assurances. Section A-D comprised questions relevant to the research topic while SECTION E contained questions on demographic data. The sections A-D included Section A which was on organisational excellence; Section B on transformational leadership; Section C on knowledge management and, Section D on entrepreneurial orientation.

The demographic questions requested for data on age, gender, marital status, years in service, job status, income, etc. Questions that related to the research topic were adapted from validated empirical researches from previous studies as stated in 3.5 above. The decision to use any item was based on the validation of the item from the report of empirical investigation. The questionnaires used Likert 7-point measurement scale to get the appropriate responses and provide for different degrees of feelings of the respondents based on their level of agreeableness on the question.

All these constituted the measurement instruments for the purpose of eliciting the needed data from the respondents. This helped in answering the research questions, testing of hypotheses and achievement of the objectives of the study.

Secondary Data

These were data that had existed but not collected by the researcher for the purpose of the current investigation. The data were, however, relevant to current investigation. They could be externally or internally gathered and might also be qualitative or quantitative in nature. These were data common data used in economics, finance and accounting which used statistics gathered from bond markets, national and international governments, stock market, companies' annual reports, World Bank, International Monetary Fund, United Nation et cetera for the analysis of issues under investigation (Hair *et al*., 2010). Secondary sources had being in use in the business and management researches with the use of company handbooks, sales records, labour turnover record etc. Secondary data used not to lend themselves to immediate analysis in the format in which they were presented and used not to fit the need of the researcher in the format it was presented. A researcher needed to re-enter the data and convert them into a format suitable for analysis for his/her current investigation.

For the purpose of this thesis, both primary and secondary data were used. Since the research design was quantitative in nature, survey instrument of questionnaire was used. Details of the questionnaire construction were as discussed under the section on instrumentation above and data collection below. Secondary data were also used to complement the primary data. These included data from government agencies, individuals, and bodies inside and outside Nigeria which were relevant to the topic of investigation.

3.7 POPULATION OF STUDY

Population of study referred to complete set of units of analysis that a researcher was investigating within a time frame and defined extent. It could either be finite (closed) or infinite (exhaustive). Using a complete enumeration (census) of the population of study involved cost, time, effort, availability of respondents for participation et cetera.

The population of this study comprised all academic staff of public higher education institutions in Nigeria. As noted in chapter one, Nigeria (from where the unit of analysis for this thesis was selected) operated a three-tier level of educational system in form of basic, higher/secondary school and higher institutions (FME, 2014). The basic comprised the 9-year compulsory education, higher school of 3years referred to as Senior Secondary School (SSS) and the higher institutions which comprised monotechnics, polytechnics, colleges of education, universities etc.

With the establishment of the first higher education institution in 1934 (Yaba College of Technology) and the establishment of the first University in 1948 (University College, Ibadan- now University of Ibadan), higher education had grown in leaps and bounds. Presently, there were fourty federal government owned, thirty-eight state government owned and fifty privately-owned Universities in Nigeria (NUC, 2014). The numbers of polytechnics were twenty-one, thirty-eight and twenty-two owned by the federal government, state governments and the private individuals respectively (NBTE, 2014). The ownership structure of colleges of education was twenty-two for federal government, forty-seven for state governments and fourteen as privately-owned (NCCE, 2014). All of

these institutions were spread throughout the six geo-political zones or three regions of the country.

Table 3.2
Cadre of Academic Staff in Nigerian Universities, Polytechnics & Colleges of Education

UNIVERSITY	POLYTECHNIC	COLL OF EDUC
Professor	Chief Lecturer	Chief Lecturer
Associate Prof/ Reader	Principal Lecturer	Principal Lecturer
Senior Lecturer	Senior Lecturer	Senior Lecturer
Lecturer I	Lecturer I	Lecturer I
Lecturer II	Lecturer II	lecturer II
Assistant Lecturer	Lecturer III	Lecturer III
Graduate Assistant	Assistant Lecturer	Assistant Lecturer

Source: Adapted from the salary table from the National Salaries, Income and Wages Commission (2013)

The staffs of public higher education institutions in Nigeria were broadly classified into academic staff, senior and junior non-academic staff. The cadre of academic staffs was shown in Table 3.2 in descending order.

The total population of the academic staff in Nigerian public higher education institutions was presented in the Table 3.3 below. The population of the study was 66,392 of all academic staff in all public higher education institutions in Nigeria.

Table 3.3
Faculty Staff in Nigerian Higher Education Institutions

System	Academic	No. Required	Shortfall
Colleges of Education	11,256	26,114	14,858(56.9%)
National Teachers Institute	6,526	7,000	474 (06.8%)
Poly/Monotechnics	12,938	30,016	17,078 (56.9%)
Universities	30,452	50,000	19,548 (39.1%)
NOUN	5,220	15,000	9,780 (65.2%)

*****2007 System wide Staff Audit
Source: Shu'ara J. (2010) Higher Education Statistics - Nigerian Experience in Data Collection, UNESCO: Institute of Statistics Workshop on Education Statistics in

Anglophone Countries, Windhoek

3.8 SAMPLING

Since it may be difficult or practically impossible for complete enumeration of the population, sample was being used from which inferences about the population could be drawn. The sampling unit referred to a group from any of the institutions and at group level. The sample subjects were academic staffs who were heads of different groups in the public higher education institutions in Nigeria. The sample fame was the list of all academic staff of all the public higher education institutions in Nigeria.

The sampling design was based on multistage sampling method. The population was first aggregated and clusters of the elements were based on two geo-political zones (North-Central and South-West). This was later divided into strata of universities, polytechnics, and colleges of education. There was systematic selection of institutions from each of these strata. After this, there was a random sample of the elements from each strata. This ensured that every element of the strata had known and equal chance of being selected in the population. This was meant to prevent bias against any member of the population strata and was used to make best for generalisability of the result obtained (Sekaran & Bougie, 2013). Furthermore, this sampling process ensured more gathering of more information from intra-strata homogeneity and between-group heterogeneity.

The sample size used was three hundred and eighty-two (382) since the population size was between 50,000 and 75,000 for representativeness and generalisability. This was based on Krejcie and Morgan (1970).

3.9 DATA COLLECTION PROCEDURES

After having properly concluded the sample which was used for the research, the next process was to determine how data was gathered from the sample. This was the task of data collection. Data collection procedures referred to means through which a researcher gathered the necessary data for the research under investigation. The data may be gathered internally or externally as primary or secondary and; quantitative or qualitative. The data collection methods that could be used included interviews, questionnaire and/or observation. The choice or combination of any depended on certain factors primarily based on cost, skill, data accessibility, time required, methodological design of the researcher, demands by external body to the researcher et cetera.

For the purpose of data collection, a total of four hundred and eighty questionnaires were distributed to respondents who were academic staff and heads of groups in public higher education institutions in the South-West and North-Central geo-political zones of Nigeria.The level of aggregation of data collection was organisational. The data from faculties/ colleges, departments, institutes, centres, committees et cetera were collected from each university, polytechnic and college of education. These are aggregated and the aggregate for each institution was aggregated for all the instutions which were used for data collection. Thus, the unit of analysis for the research was orgsnisational. The respondents were heads of groups who represented the As such, the respondents were Deans/Director of academic departments; Heads of departments/units; heads of institutes, heads of centre; heads of committees and; deputy deans/Deputy directors.

Many of the questionnaires were personally administered while some were administered through contact persons. The researcher went to the institutions and administered the questionnaire personally to many of the respondent. However, few were administered through contacts person for the purpose of being able to get more responses and covering the sample. The researcher contacted the respondents and the contact persons were also used to assist in reminding the respondent and get the returned questionnaire. There were follow-up personal visits to the respondents. These visits yielded positive results on improved response rate as will be found out in the discussion on survey response.

The methodology of this thesis was quantitative and the quantitative method of questionnaire survey was used to collect the primary data needed. The secondary data used included the relevant statistics and information on higher education and academic staff in Nigerian higher education institutions as provided by the relevant authorities.

3.10 TECHNIQUES OF DATA ANALYSIS

Different techniques could be adopted in the analysis of data collected which included the use of mean, standard deviation, mean deviation, correlation analysis, regression analysis and others. Exploratory factor analysis was conducted using the principal component method. These techniques had been integrated into the statistical package for social sciences (SPSS- 20). Due to the improvements in the SPSS programme especially in the analysis of multivariate structural equations, SPSS version 20 was used.

The new package had adequate provisions for bootstrapping to improve probabilistic measurement and; missing value analysis to determine the extent and pattern of missing

values et cetera. There were provisions for twenty-five iteration in factor analysis by default. These improvements had increased the robustness of the package. The data was analysed by following the specific procedures stipulated by Pallant (2013) for relevant analyses to answering research questions and testing for the hypotheses. Due to the fact that this study was interested in moderation analysis, the SPSS 20 programme was adequate in performing the analyses needed for moderation relationship.

3.11 TEST OF VALIDITY AND RELIABILITY

Validity referred to the accuracy with which results reflected predicted reality. The aim of validity was to ensure that the measurement items measured and described what they were supposed to measure and describe without any contradiction. Even to the social constructionists, although validity was seldom used, they were also concerned with assuring and demonstrating the quality of their design. That was why they used criteria like authenticity, plausibility and criticality as advanced by Golden-Biddle and Locke (1993) and constant comparison, comprehensive data treatment, refutability and tabulation as discussed by Silverman (2000).

In the positivist paradigm, which was the methodology adopted by this researcher, validity was measured through internal and external validity (Easterby-Smith *et al*., 2008). Crowther and Lancaster (2009) and Hair *et al*., (2010) mention content, predictive, construct, face and concurrent validities as well as convergent and discriminant validity as different forms of validity that were being used in quantitative methodology. To ensure

validity of the instruments, the researcher used validated measurement as noted in 3.5 above and scale validation through SPSS 20.

The essence of quantitative paradigm was that of getting similar results from the same method in different occasions or circumstances. The more the results were similar, the more reliable was the method of collecting the data. Reliability related to the consistency of results. Reliability were being tested for through test-retest, alternative-forms or internal consistency. Since multi-item scale was used in this research, internal consistency reliability test was conducted to ensure that the result obtained would be consistent when applied in different situation.

3.12 CONCLUSION

This chapter had discussed the research design, statement of hypotheses, population of study, data collection procedures and the sampling procedures. It also discussed data analysis procedure, operationalisation of the variables, validity and reliability test that would be used in subsequent chapter.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter discussed the processes followed in data collection, treatment and analysis of findings. Issues discussed included explanation of the processes involved in data analysis and the nature of survey response including non-response bias. It proceeded further to state the data cleaning processes of detection of error, missing data and outliers. Not only that, the descriptive statistics of the respondents were discussed after which the assumptions of multiple regressions were explained. After factor analysis and correlation test for direct linear relationship, multiple regressions test of hypotheses were conducted. A hierarchical multiple regression was conducted and summary of findings given. All these were done using SPSS 20 version.

4.2 SURVEY RESPONSES

For the purpose of data collection, a total of four hundred and eighty questionnaires were distributed to respondents who were academic staff and heads of groups in public higher education institutions in the South-West and North-Central geo-political zones of Nigeria. The four hundred and eighty questionnaires were distributed as follows: one hundred and forty to Universities; two hundred to Polytechnics and one hundred and forty to colleges of education.

Out of the four hundred and eighty questionnaires distributed, three hundred and eighty three were returned. Out of the returned questionnaires, eleven cases were removed as unusable because they had up to 15% missing data based on the rule of thumb as

suggested by Hair, Black, Babin and Anderson (2010). The usable cases were three hundred and seventy-two which were used for the purpose of data analysis.

There had been different suggestions on how to improve response rate. These included the use of carefully written cover letter that explained the purpose of the survey; stated the provision of confidentiality and anonymity of the respondents and; use of visually appealing questionnaires. Other suggestion included avoidance of surveys that had a heavy response burden; use of simple and easily understood statements; inclusion of information about a contact person if there were questions and; following-up to nonresponders with letters or emails (Welch & Barlau, 2013). Furthermore, there could be incentives to the respondents to encourage their response. These incentives could be in form of direct or indirect financial incentive or promise of provision of certain facilities (to serve as leverage) with a view to encouraging improved response rate.

The researcher provided the cover letter on the questionnaire with the promise of confidentiality; availability of the report of the research when completed and requested; contact persons (my supervisor and me) with our phone numbers and e-mails in case of any further enquiries and; provision of branded biros as incentive to respondents. Furthermore, respondents were informed that the rate of response will determine the researcher's effort in providing two sets of PC system to a nursery/primary school which was in need of them for academic activities. The statements used were simple and easily understood while the questionnaire was designed with visual appeal in full colour separation. There were several follow-up visits to the respondents which paid off with improved response rate.

The required sample size for this study, based on the population was three hundred and eighty-two faculty members who were in charge of groups in public higher education institutions under investigation. This was based on the recommendations by Krejcie and Morgan (1970). Higher numbers of survey instruments were administered which was four hundred and eighty with a view to improving the response rate. At the end of the data administration and collection, three hundred and eighty-three questionnaires were returned making 79.79% response rate while ninety-seven were unreturned. Out of the three hundred and eighty-three returned questionnaires, eleven were found unusable while three hundred and seventy-two were usable constituting 77.50% valid response rate. This is depicted below:

Table 4.1
Summary of the Questionnaire and the Response Rate

ITEM	REMARKS	% OF DISTRIBUTED QUESTIONNAIRES
Sample size of the study	382	
Distributed Questionnaires	480	
Returned Questionnaire	383	79.79
Unreturned Questionnaires	97	20.21
Usable Questionnaires	372	77.5
Unusable Questionnaires	11	2.29

On response rate, the consensus in survey research was that a response rate of 50% was considered adequate, 60% was good enough and 70% very good for analysis (Babbie and Mouton, 2001). Thus, the response rate was very good for analysis and the three hundred and seventy-two valid responses were used for analysis in this study.

When data is collected, there are cases of missing values which may affect the number of cases included in specific analysis. There may or may not be need to replace missing values based on recommendations by Pallant (2013) and Taberchnick and Fidell (2014) as explained in the section on missing data below. Thus, statistical analysis could be conducted using three different options as suggested by Pallant (2013). These options were: exclude cases pairwise; exclude cases listwise and; replace with mean.

In this study, the method used was exclude cases pairwise which excluded the case (person) only if the case had missing data that was required for the specific analysis. However, if that same case had the necessary information for specific analysis, it would be included in such an analysis. Using this option, there could be differences in the total summary of cases in analysis and the usable questionnaires depending on the effect of missing data from the cases. Thus, the total number of cases in some analyses might be lower but could not be higher than the total number of usable questionnaires (three hundred and seventy-two).

4.3 NON-RESPONSE BIAS

In social science researches, it was a common phenomenon to experience non-response among the sample for data collection. Non-response arised when a member of sample unit did not respond to survey. It is referred to as the failure of the researcher to obtain survey data from some sampled respondents (Welch & Barlau, 2013; Groves & Brick; 2013). This in itself might not be a problem or source of concern to a researcher unless there was a non-response bias. Non-response bias occurred when those that did not respond to the survey were different in some systematic way from those who responded

to the survey and this can question the validity of the findings by making it a convenient and not probability sampling (Olson, 2006; Israel, 2013; Welch & Barlau, 2013). Nonresponse bias was usually linked to the theory of leverage-salience in survey methodology (Groves & Peytcheva, 2008).

Non-response occurred in survey through either or a combination of factors like not-at-home- maybe on vacation or with different schedule from the researcher's visit; refusal- maybe due to apathy, fear of compromise of privacy; management witch-hunting et cetera or; inability to answer- maybe due to temporary incapacitation or infirmy. It could also occur for other reasons when a respondent was not found- maybe due to death; non contact due to research design and; movement from location without a forwarding address et cetera (Israel, 2013). Some researchers ignored this non-response bias with its attendant problems while the general approach was to treat it by examining the effect of the non-response with respect to the data that would be used for analysis.

There were different forms of options available to the researcher in responding to non-response. These included, but not limited to, throwing the data away; generalisation of the results to the respondents only; assuming that there is no response bias and generalise to the population. Other options included a call back on nonrespondents; comparism of data in hand on respondents and nonrespondents- if those data are available; comparing characteristics of early respondents with late respondents and; increasing mailings or contact efforts (Israel, 2013). Thus, the non-response bias study techniques included benchmarking (comparison to other estimates); use of estimates based on variables available on sample; studying variation within the respondent set (early responders and late responders) and; altering the weighting adjustments.

Wave analysis of early and late respondents was used to study whether there was variation within the respondents' set in this study (independent-samples t-test). The valid early responders were two hundred and ninety-six while the valid late responders were seventy six. A new variable titled response time was created for the group by using zero (0) to represent early responders and one (1) to represent late responders. The analyse-compare means-independent samples T-test procedures for independent-samples t-test as recommended by Pallant (2013) was followed. The result of the test was shown in Table 4.2a-b below.

From Table 4.2a, the group statistics for early and late responders were presented with their mean scores. In Table 4.2b, the Levene's test for equality of variance was presented. The Levene's test showed whether the variation of scores for the early and late responders was the same. From the equality of variance assumed, the significance level at 95% level of confidence is .468 which was larger than .05 meaning that the variation of the group was the same. Thus, the assumption of equal variance was not violated.

Table 4.2a
Group Statistics for Early and Late Responders in Nonresponse Bias Test

Group response		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Transformational Leadership	.00 Early Responders	271	66.9299	18.0298	1.09523
	1.00 Late Responders	71	70.7465	17.1762	2.03844

Furthermore, the Table 4.2b showed that there was no significantly significant difference between the early and late responders as depicted in the value of .11 and .10 sig. (2 tailed)

column. The values were above the required cut-off of .05. The two values corroborate the value of the significance test.

Table 4.2b
Independent Samples T-Test for Equality of Variance for Early and Late Responders

Transformational leadership	**t**	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
						Lower	**Upper**
Equal variances assumed	-1.60	340	0.11	-3.82	2.38	-8.50	0.87
Equal variances not assumed	-1.65	113.79	0.1	-3.817	2.314	-8.4	0.77

To determine the effect size of the independent samples test (the magnitude of the difference between the early and late responders), the Eta squared effect size statistics was used and was calculated as below

$$\text{Eta squared} = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

Replacing with appropriate values we had,

$$\text{Eta squared} = \frac{-1.603^2}{-1.603^2 + (271 + 71 - 2)}$$

$$\text{Eta squared} = \frac{2.5696}{2.5696 + 340}$$

$$\text{Eta squared} = 0.0075$$

Since effect size were classified as small if it is .01; moderate if it is .06 and large if it is .14, the effect size of .007 was lesser than .01 and thus, the effect size was small and negligible.

Benchmarking procedure was also used to determine non-response bias. An examination of the executive summary of the report of committee on needs assessment in Nigerian universities showed that the ratio of male faculty members to female faculty members was 83% and 17% respectively (ASUU, 2014). This was comparable to the profile of the respondents in this study with 79.3% for male and 19.9% for female while .8% was missing. From the annual abstract of statistics released in 2010 by the National Bureau of Statistics (the official national statistics office in Nigeria), out of the 27,482 academic staff in Nigerian University as at then, twenty-two thousands, eight hundred and fifty-eight were males while four thousands, six hundred and twenty-four were females representing 83.17 for males and 16.83 for females. This also fell within the region of the male/female dichotomy of demographic data collected in the course of this research.

From the non-response bias analysis, the result was that there was insignificant difference between the data collected and nonresponse. Thus, proceeding with further analysis based on the data available made the result obtained generalisable for the population and not restricted to the respondents only.

4.4 DATA CLEANING

Data screening was done after examination of basic descriptive statistics and frequency distributions of the data imputed. Values that were found to be out of range or

improperly coded were detected (Hair *et al*., 2010).

4.4.1 Detection of Error and Missing Data

(a) Error

Error was a reality in the process of data entry especially when the data was large with many items for the variables under investigation. Errors were values that were not valid because they fell outside the range of possible values for a variable and/or item in the investigation under consideration. These errors were corrected as they could have distorted the results of the statistical analysis and could have been a source of outliers (Hair *et al*, 2010; Pallant, 2013, Tabachnick & Fidell, 2014). To check for errors involved checking for the frequencies for each of the variables to determine values outside the valid range, finding the location of the error and correction of the error.

The procedures stipulated by Pallant (2013) for checking for error by adopting the analyse- descriptive-frequency was used. After these procedures, it was discovered that case fifty item 10 in transformational leadership scale had twenty-four as value; case seventy-seven item 9 in entrepreneurial orientation scale had fifty-three as value and; case one hundred and twenty item 12 in organisational excellence had sixty-seven as value. Others are case one hundred and forty-four item 4 in transformational leadership scale had forty-four as value while case one hundred and ninety-three item 22 in knowledge management scale had forty-four as value. Not only that, case two hundred and forty-six had fourteen as value under the variable STATUS; case two hundred and ninety-one item 9 in organisational excellence scale had seventy-three as value; case three hundred and nine item 21 in organisational excellence scale had sixty-six as value

and lastly; case three hundred and seventy had 22 as value under the variable POSITION.

These errors were corrected using the second procedure stipulated by Pallant (2013). This procedure involved data-sort cases-variable-ascending or descending order procedures. The descending order was used and the errors were corrected by referring to the pre-numbered raw data collected.

(b) Missing Data

Missing data was a real, common and almost unavoidable phenomenon especially when conducting research with human beings as in social science research (Byrne, 2010; Hair *et al*, 2010; Pallant, 2013; Tabachnick & Fiddel, 2014). It used to occur when data was incomplete i.e. where valid values for one or more variables were not available for the purpose of analysis or maybe due to no value or no admissible value (Cordeiro, Machas & Neves, 2010; Hair *et al*, 2010; Tabachnick & Fidell, 2014). Missing data might be viewed either as a curse or an available goldmine of untapped resources depending on a researcher's perspective (Byrne, 2010:353). Missing data could sometimes be under the control of the researcher if it was based on the researcher's design- in this kind of situation the missing data was ignorable. Missing data might be beyond the control of the researcher in which case the missing data was not ignorable (Byrne, 2010; Hair *et al*, 2010).

Missing data used to occur due to certain factors like lack of understanding of the question by the respondent, refusal to answer sensitive questions, unwillingness to participate more in the research, lack of opinion or insufficient knowledge on the item et

cetera (Tabachnick & Fidell, 2014). A researcher needed to determine the extent, nature and impact of the missing data for the sake of analysis.

The extent of the missing data could be determined through running a descriptive analysis of determining the percentage values of missing data for each of the variables for analysis. Furthermore, the nature of missing data must were verified to determine whether it had a random or systematic pattern. Byrne (2010) stated that, a researcher must determine whether the nature of the missing data was missing completely at random (MCAR); missing at random (MAR) or; not missing at random (NMAR, i.e. systematic). The impact of the missing data must also be assessed before a remedy was found to it.

Due to the fact that missing data could reduce the sample size available for analysis and seriously bias the conclusions drawn from empirical studies, they must be addressed for purpose of further data analysis. For this purpose, Hair *et al* (2010), proposed a four-step process of treating missing data such as: determining the type of the missing data; determining the extent of the missing data; diagnosing the randomness of the missing data and; selecting the imputation method. Imputation referred to the process of replacing the missing data value based on the valid values of other cases and/or variable in a sample. Hair *et al* (2010) further stated rules of thumb in the treatment of missing data such as: missing data under 10% for an individual case or observation could be generally ignored if not systematic and if cases with no missing data were sufficient to run the analysis and; variables with as little as 15% missing data were candidates for deletion but any variable with higher level (20% to 30%) could be remedied. Tabachnick & Fidell (2014) suggested that if a variable was critical to analysis, a dummy variable must be

used to code the missing scores and replace it with mean substitution so as to preserve the variable for the purpose of future analysis of cases and variables.

The descriptive statistics of frequency test was run to detect missing data. Furthermore, missing value analysis was run to determine the pattern of the missing data as contained in Appendix H.

The result of the descriptive statistics showed that only transformational leadership 1 item had no missing value while the missing values for other variables range between one to fifteen and highest of thirty-four. The variable on the number of subordinates had the highest missing value of thirty-four which was less than 10% of the cases (9.1%). Since that variable (number of subordinates) was not critical for future analysis of multilevel group analysis and the valid three hundred and thirty-eight cases were sufficient for analysis, the item was retained and imputation was not done. Furthermore, based on the missing value analysis in Appendix H, the missing values were not systematically missing (i.e. missing at random) which did not necessitate any treatment because it would not impact on the statistical results of the analysis and was thereby ignorable. Since the data was missing at random (distinct from other data set), missing values were ignorable and there was no need for replacement because there was no need for likelihood inference as the missingness will contribute only to the sampling variance (Little & Rubin, 2002, NORC.org). Furthermore, since the variable on number of subordinates was a categorical variable and not a quantitative variable, estimate statistics and imputation of missing data could not and was not used because one can only estimate statistics and impute missing data for variables that were quantitative (IBM Corporation; 1989, 2011).

4.4.2 Outliers

In data screening processes, another vital aspect was treatment of outliers. Data points that lied a long way away from the bulk of the data or outside a determined distance from centre of the data were referred to as outliers. Outlier might be univariate when it related to data from a case or observation in relation to a variable or it can be multivariate if a case or observation contained a strange combination of points on two or more variables. These data points (outliers) were substantially different from other data in a data set based on a variable or a combination of values and they often distorted the result of the data under analysis (Hair *et al*, 2010; Wold, Eriksson & Kettaneh, 2010; Tabachnick & Fidell, 2014). Just as the case of missing data as stated above, outliers could be beneficial or be a curse depending on the information they provided.

Outliers could happen due to procedural error ranging from data entry error to data coding mistake; occurrence of extraordinary event; extraordinary observation and/or; uniqueness in combination of values across variables despite falling within the range of valid responses.

An examination to detect multivariate outlier could be conducted through Mahalanobis D^2 measure in boxplots. After the SPSS analysis, the researcher may need to view the difference between the original mean and 5% trimmed mean to determine the influence of outliers on the general observations. If there was no significant difference between the original means and the 5% trimmed mean, it meant that the outliers did not have any strong influence on the mean of the observations. In that case, the researcher might not need to delete the outliers. The decision to retain or delete an outlier was usually left to

the researcher but Hair *et al* (2010:67) strongly believed that outliers "…should be retained unless demonstrable proof indicated that they were truly aberrant and not representative of any observations in the population." Retention of the outliers was more important if the outliers fell within the range of valid scores.

The information that indicated the likely impact of outliers on organisational excellence variable was shown in the descriptive statistics output of normality test on total score for organisational excellence scale as shown in the Table 4.3a below

Table 4.3a
Descriptive Statistics on Total Score of Organisational Excellence

		Statistic	Std. Error
Mean		106.8200	1.22819
95% Confidence Interval for Mean	Lower Bound	104.4030	
	Upper Bound	109.2370	
5% Trimmed Mean		107.8926	
Median		112.0000	
Variance		452.536	
Std. Deviation		21.27289	
Minimum		27.00	
Maximum		144.00	
Range		117.00	
Interquartile Range		31.00	
Skewness		-.748	.141
Kurtosis		.181	.281

The mean score was 106.82 while the 5% trimmed mean was 107.8926. The two means were very similar indicating that outliers (case 44, 99 & 190 as in the boxplot) did not have a problematic impact on the statistical results of subsequent analysis (Appendix I).

The descriptive statistic from the test for normality also showed the influence of extreme observations on the statistical result through a comparism of the mean with the 5% rimmed mean for total scores on transformational leadership scale as show in Table 4.3b

below. The mean and the trimmed mean were 67.7222 and 68.4971 respectively both of which were very similar. Just as in the outcome on organisational excellence above, this meant that outlying cases did not constitute any problem in the statistical result for transformational leadership scale as in Appendix J.

Table 4.3b

Descriptive Statistics on Total Score of Transformational Leadership

		Statistic	Std. Error
Mean		67.7222	.96784
95% Confidence Interval for Mean	Lower Bound	65.8185	
	Upper Bound	69.6259	
5% Trimmed Mean		68.4971	
Median		72.0000	
Variance		320.354	
Std. Deviation		17.89843	
Minimum		18.00	
Maximum		100.00	
Range		82.00	
Interquartile Range		27.00	
Skewness		-.643	.132
Kurtosis		-.457	.263

The descriptive statistics from the total score for knowledge management in table 4.3c below indicated that the mean 97.8447 and 5% trimmed mean of 98.7542 were very similar meaning that the outlying case 100, wasn't a problem to the statistical analysis on total scores for knowledge management as in Appendix K.

Table 4.3c
Descriptive Statistics on Total Score of Knowledge Management

		Statistic	Std. Error
Mean		97.8447	1.32079
95% Confidence Interval for Mean	Lower Bound	95.2457	
	Upper Bound	100.4436	
5% Trimmed Mean		98.7582	
Median		101.0000	
Variance		539.047	
Std. Deviation		23.21739	
Minimum		29.00	
Maximum		146.00	
Range		117.00	
Interquartile Range		31.50	
Skewness		-.631	.139
Kurtosis		-.196	.276

Lastly, Table 4.3d below showed the descriptive statistics on the test for normality for entrepreneurial orientation.

Table 4.3d
Descriptive Statistics on Total Score of Entrepreneurial Orientation

		Statistic	Std. Error
Mean		74.4234	.88370
95% Confidence Interval for Mean	Lower Bound	72.6851	
	Upper Bound	76.1618	
5% Trimmed Mean		75.1473	
Median		76.0000	
Variance		260.046	
Std. Deviation		16.12594	
Minimum		21.00	
Maximum		112.00	
Range		91.00	
Interquartile Range		22.00	
Skewness		-.657	.134
Kurtosis		.295	.266

Both means were also similar which indicated there was no problem with further

statistical analysis despite the outliers (cases 20, 100, 144 and 154) as in Appendix L.

With the above analysis, the data for this study is already prepared in a clean form for further analysis.

4.5 DESCRIPTIVE STATISTICS - PROFILES OF RESPONDENTS

The fifth part of the questionnaire (Section E) generated information on selected socio-demographic and job-related characteristics of the respondents. The section consisted of eight questions to elicit demographic and job-related information about respondents' gender, age, highest academic qualification, institution they are currently working in, years of experience in higher education institution, official position in the institution, status in the institution and; the number of subordinates under them.

The descriptive analysis was run through the analyse-descriptive-frequency procedures stipulated by Pallant (2013). The results of the descriptive analysis of the demographic profile of the respondents are shown in the Table 4.4 below.

There were 371 valid responses while 1 is missing out of the 372 respondents on age. Respondents whose age range fall into 40 < 50 have the highest percentage of 38.81% followed by those in the age range of 30 < 40 with 33.42%. Respondents that fall in the age range of 50 < 60 followed with 18.87% of valid responses. Respondents with age range of 20 < 30 were 6.5% and last 2.43 % for age range of 60 year and above. From the data above, it showed that over 70% (i.e. 72%) of the respondents fell within the age range of 30 < 50.

Table 4.4
Profile of Respondents

Variable	Description	Frequency	Percent
Age	20 < 30	24	6.5
	30 < 40	124	33.4
	40 < 50	144	38.8
	50 < 60	70	18.9
	60 yrs and above	9	2.4
	Total	**371**	**100.0**
Gender	Male	295	79..95
	Femae	74	20.05
	Total	**369**	**100.0**
Position	Dean/Director	26	7.0
	Head of Dept/Units	145	39.1
	Head of Institutes/Centres	36	9.7
	Head of Committees	74	19.9
	Deputy/Subdean/Vice	90	24.3
	Total	**371**	**100.0**
Institution of Work	University	99	26.9
	Polytechnic	190	51.6
	College of Education	79	21.5
	Total	**368**	**100.0**
Length of service	0 < 5yrs	108	29.2
	5yrs < 10yrs	88	23.8
	10yrs < 20yrs	115	31.1
	20yrs < 30yrs	49	13.2
	30yrs < 40yrs	7	1.9
	40yrs and above	3	.8
	Total	**370**	**100.0**
Educational Level	Degree or equivalent	60	16.6
	Post-Graduate Diploma	24	6.6
	Masters	221	61.2
	M. Phil	19	5.3
	PhD	37	10.2
	Total	**361**	**100.0**
Status	Prof, Associate Prof, Chief Lec & Principal Lec	75	21.0
	Senior Lec (Univ., Poly & CoE	49	13.7
	Lec I, Lec II, Asst Lec & Grad Asst (Univ)	66	18.5
	Lec I, Lec II, Lec III & Asst Lec (Poly & CoE)	167	46.8
	Total	**357**	**100.0**
Number of Subordinates	5-10subordinates	94	27.8
	11- 20subordinates	89	26.3
	21 – 30	48	14.2
	31 – 40	44	13.0
	41 – 50	39	11.5
	Above 50	24	7.1
	Total	**338**	**100.0**

It must be noted that the retirement age for academic staff in Nigerian higher education institutions was 65 for general regardless of the year of service. However, 70yrs was the retirement age for a faculty member who had being a full professor for ten years as at age 65yrs which qualifies him/her for 70yrs retirement age.

On the gender of the respondents, the total valid respondents were 369 while 3 were missing. Faculty members were predominantly male with 79.95% of valid responses while women were 20.05%. This was uncommon in Nigeria where academics, especially at higher education institutions, were male-dominated.

The respondents occupied different positions in their institutions as contained in Table 4.5c below. The highest percentage of respondents was over 39% for Heads of departments or units, followed by Deputies/Deputy Deans/Vice who were 24.26% of the valid respondents which was higher than the heads of committees who constituted 19.95% of valid respondents.

Heads of institutes/centres made up to 9.7% of valid respondents while the lowest percentage of 7.01% was for the respondents who were either Deans or Directors depending on the nomenclatures. It was no surprise that the heads of department/units constituted the highest percentage because the occupants oftentimes were the middle cadre faculty members in the organisation structure and the office was usually a testing ground for higher responsibilities.

The scope of the study was restricted to the public universities, polytechnics and colleges of education which constituted the public higher education institutions of interest with emphasis on the North-Central and South-Western geo-political zones of Nigeria.

Marginally, more than half of the valid respondents (51.63%) were faculty members in the polytechnics, 26.9% in the University while 21.47% were working in the colleges of education. This might not be unconnected with the number of sample unit allocated to each strata of the education system in the North-Central and South-West of Nigeria based on the percentage of each strata in the population of higher education institutions in the geo-political zones under consideration.

On the number of years spent in the higher education institutions, over 31% of the valid respondents had spent between 10 to 20 years in higher education institution while over 29% had just spent between 0 to five years. Respondents who had spent between 5 to 10 years constituted 23.78% which was higher than those who had spent between 20 to 30 years were 13.24%, those who had spent between 30 to 40 years were 1.9% and 40years and above were .81%). Thus, majority fall within 0yr to 20yrs of length of service (84.1%) in their respective institutions.

Analysis of the highest educational qualifications of the respondents showed that masters degree holders constituted 61.22% of valid respondents, degree or equivalent had 16.22%. The percentage of holders of PhD was 10.25% compared to holders of post-graduate diploma (6.65%) and Masters of Philosophy (5.26%). On the whole, holders of Masters, Masters of Philosophy and PhD constituted 76.73% of the valid respondents. This may be unconnected to the fact that Master degree is majorly the minimum academic requirement for upward movement to senior lecturer and above in Polytechnics and colleges of education, while PhD is majorly the minimum academic requirement for movement to senior lecturer and above in the university.

The status of respondents also showed differences among the respondents. While those below status of senior lecturer in polytechnics and colleges of education constituted the majority with 46.78%, those above senior lecturers cadres in the university, polytechnic and colleges of education (Professor, Associate Professor, Chief Lecturer and Principal Lecturer) followed with 21.01% of the valid respondents. Respondents below senior lecturer cadre in the university were 18.9% which was higher than senior lecturers (13.73%) in all polytechnics and colleges of education under consideration.

This was in congruence to the report in the 2010 annual abstract of statistics from the National Bureau of Statistics- the official national statistics organ of the Nigerian government.

The last item on the deographic data was the number of subordinates. The valid number of respondents showed that respondents with between 5-10 subordinates constituted a little over one quarter of the valid respondents (27.81%) which was marginally higher than respondents with 11-20 subordinates under them (26.33%). The percentage for respondents with 21-30 subordinates was 14.20%, for 31-40 subordinates was 13.02% while the percentages for respondents with 41-50 subordinates and above 50 subordinates were 11.54% and 7.10% respectively. It thus meant that more than half of the respondents (54.14%) had between 5-20 subordinates under them.

These were the profile of respondents whose responses to the questions on the variables of concern will be further analysed. Furthermore, the profiles of the respondents would be used for further analysis for the multilevel modeling in correlation and regression

analysis.

4.6 ASSUMPTIONS OF MULTIPLE REGRESSIONS

For a researcher to be able to measure the impact of one or more variables on another, multiple regressions was being used as a statistical technique for the analysis. The multiple regressions analysis could only be valid if some assumptions were satisfied before the analysis. The assumptions were normality; linearity; homoscedascity and; multicollinearity.

4.6.1 Normality

In a population, the attributes or characteristics of the population were usually normally distributed. By this, it meant that most people will cluster around the mean of the population. Be that as it may, a truly representative sample of the population was expected to reflect or follow the same pattern of distribution of the population to be able to accurately predict the population. This ensured that the properties of the population were not underrepresented or overrepresented in the sample and the sample mean was close to the range of the mean of the population (Sekaran & Bougie, 2013). Normality was used to describe the nature of data on the basis of their symmetry – greater frequency of data in the middle with little data towards the extremes. Normality of data could be determined trough skewness and kurtosis.

Normality was regarded as the most fundamental assumption behind data analysis in multivariate data analysis (Hair *et al*, 2010). Univariate normality for each of the variables in a multivariate data used to be sufficient for multivariate analysis instead of multivariate

normality unless under extreme and uncommon conditions. Though, the detrimental effect of non-normality were always diminished with large samples, it used to be always desirable to test for normality for stronger analysis (Hair *et al*, 2010). Although there were many ways of determining normality, the use of expected normal probability plot and detrended expected normal probability test were described as being better than frequency histogram because the scores in the data were sorted and ranked in the plot (Tabachnick & Fidell, 2014). This method of determining normality was adopted by this study. The analyse-descriptive-explore procedures for testing the normality of data by Pallant (2013) were adopted for each of the variables.

The normal Q-Q plot in Appendix I showed that the data was relatively normal as the observed values were closer to the expected normal value. The observed value plot gave almost a straight line. In the social sciences research, it is not expected to have data that will generate a perfect straight line. Thus, the data on organisational excellence was normal. This was further evidenced by the detrended normal Q-Q plot where bulk of the plots clustered around zero point and within the range of +/- 1.96 as shown in Appendix I.

The univariate normality for transformational leadership was depicted in the normal Q-Q plot in Appendix J. In the plot, the observed values to the expected normal values did not substantially differ as it was possible to draw a straight line though but not a perfect straight line. That meant that the points of each of the Q-Q plot lied close to their respective diagonal lines, thus it was approximately normal. The detrended normal Q – Q

plot for the transformational leadership also had majority of the plot of points clustering around +/- 1.96 as in Appendix J.

The normality test for knowledge management was shown in Appendix K through the normal Q-Q plot. Just like the two earlier variables discussed, the plot depicted the expected normality with the observed value for knowledge management which showed a rough straight line to the expected normal observation. The detrended normal Q-Q plot also revealed the cluster of majority of the plots around zero showing little deviation from expected observation as shown in Appendix K.

Also, the outcome of the normality plot for entrepreneurial orientation was as presented in Appendix L through the normal Q-Q plot. The plot showed the plot of observed values of entrepreneurial orientation to the expected normal value. The two were similar with little variance. The observed value plot did not give a curvilinear shape but an almost a straight line. As observed in previous normality test for other variables, the detrended normal Q-Q plot showed the plots clustering around zero as in Appendix L (Detrended normal Q-Q plot for entrepreneurial orientation).

From the visual inspection of the normal Q-Q plots and the detrended normal Q-Q plots for the variables as contained in Appendices I - L, the variables under consideration had data that were within the range of normality in social science research. Thus, the data was normal and fit to proceed for further analysis.

4.6.2 Linearity

Linearity of relationship as an assumption in multiple regressions was used to represent the degree to which the change in the dependent variable was associated with the

independent variable. It showed the degree to which relationship between variables could be shown in a straight line. Linearity was the basis for correction which was, in turn, critical for regression analysis. Since multiple regression models was based on linearity of multivariate relationships, the linearity assumption was essential (Hair *et al*, 2010, Tabchnick & Fidell, 2014). Linearity could be determined through examination of scatter plots or linearity residual plot (Hair *et al*, 2010; Pallant, 2013). Visual examination of the plot would show a rough straight line and not a curve. If this ws not the case, corrective actions needed to be taken through data transformation. The linearity test was conducted through the graph-legacy diagrams-scatter/dot-simple scatter procedures in SPSS 20.

The output of the scatter plot for transformational leadership as presented in Appendix J plots showed a rough straight line and not a curve. This meant that the residuals of transformational leadership had a straight-line relationship with the predicted values of dependent variable (organisational excellence). Thus, there were a linearity of relationship between the dependent variable of organisational excellence and the independent variables of transformational leadership. The data thereby satisfied the linearity assumption of multiple regressions.

Also, the output of the scatter plot for knowledge management as presented in Appendix K plots showed a rough straight line and not a curve. This meant that the residuals of knowledge management had a straight-line relationship with the predicted values of dependent variable (organisational excellence). Thus, there were a linearity of relationship between the dependent variable of organisational excellence and the

independent variables of knowledge management. The data thereby satisfied the linearity assumption of multiple regressions.

Furthermore, the output of the scatter plot for entrepreneurial orientation as presented in Appendix L plots showed a rough straight line and not a curve. This meant that the residuals of entrepreneurial orientation had a straight-line relationship with the predicted values of dependent variable (organisational excellence). Thus, there were a linearity of relationship between the dependent variable of organisational excellence and the independent variables of entrepreneurial orientation. The data thereby satisfied the linearity assumption of multiple regressions.

From the discussion above, the scatter graph plots I Appendices J – L showed a rough straight line and not a curve. This meant that the residuals had a straight-line relationship with the predicted values of dependent variable (organisational excellence). Thus, there were a linearity of relationship between the dependent variable of organisational excellence and the independent variables of transformational leadership, knowledge management and entrepreneurial orientation from each of the scatter plots. The data thereby satisfied the linearity assumption of multiple regressions.

4.6.3 Homoscedasticity

This assumption related primarily to the dependent variable. It was the assumption that, across the range of independent variables, the dependent variable(s) must exhibit an equal level of variance. (Hair *et al*., 2010). In an IV-DV relationship, the dependent variable varied as the independent variable was varied or manipulated. It thus meant that the variance of the dependent variable was not explained by concentration on a limited number of the independent variable values. This

allowed for a fair test of the relationship.

Homoscedasticity was also tested through scatter plot diagram of standardized residuals. Since SPSS used standardized residuals for the scatter plot, based on Appendices J - L, the homoscedascity assumption had been met.

The independent variables varied, the dependent variable varied just to show that each of the independent variables contributed to the variation in the dependent variable. Thus, the assumption of homoscedasticity was fulfilled for the independent variables.

4.6.4 Multicollinearity

Multicollinearity simply referred to the extent to which a variable could be explained by another variable in an analysis. It related to the degree of correlation of the conceptual model i.e. multicollinearity problem only related to the data and not model specification. Multicollinearity problem usually arise when the various independent variables were closely correlated with each other and the correlation values exceeded .90 (Hair *et al*., 2010). When a single independent variable was actually a combination of other independent variables, this is a case of singularity. Either multicollinearity or singularity was disliked in multiple regression analysis. Examination of the correlation matrix for the independent variables would show the presence of multicollinearity or not. When the correlation matrix showed .90 and above, there was a problem of multicollinearity. Tolerance value and variance inflation factor (VIF) statistics in collinearity statistics were used to help in identifying multicollinearity.

The value of tolerance usually ranged from zero to one. Tolerance value of one indicated that the variable had no correlation with other variables, and a value of zero indicated

that it was fully correlated. Any tolerance value of less than .10 showed too high collinearity thus multicollinearity was present in the independent variables and could be a problem for the analysis. The tolerance value should be in-between and should be high for a small degree of multicollinearity. VIF was the opposite of tolerance value. The rule of thumb for tolerance value was .10 and for VIF 10. The VIF that was close to one showed little or no multicollinearity. The lesser the value from ten the better the VIF was. The analyse-regression-linear procedure for simple regression analysis in SPSS 20 was used. The output of the regression coefficient with the collinearity statistics was presented in Table 4.5a-b below.

Table 4.5a
Pearson Correlation Statistics for the Variables

	Organisational Excellence	**Transformational Leadership**	**Knowledge Management**	**Entrepreneurial Orientation**
Organisational Excellence	1			
Transformational Leadership	0.696	1		
Knowledge Management	0.698	0.8	1	
Entrepreneurial Orientation	0.698	0.749	0.831	1

From the correlation matrix of the analysis of the independent variables in Table 4.5a, the values ranged between .696 and .831 with none up to .90. This meant that there was no case of high multicollinearity among the independent variables. Furthermore, Table 4.5b showed that the tolerance values for transformational leadership variable was .337; for knowledge management was .238 and; for entrepreneurial orientation was .290 all of which were above the .10 rule of thumb.

From the same Table 4.5b, the VIF for transformational leadership was 2.967; for knowledge management was 4.209 and; 3.453 for entrepreneurial orientation variables all of which were lesser from 10. These showed that the data satisfied the assumption of multicollinearity in multiple regression analysis based on values of correlation matrix and the regression coefficients of tolerance value and VIF (Appendix M).

Table 4.5b
Collinearity Statistics Showing the Tolerance Values and Variance Inflation Factor

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	Transformational Leadership	0.696	0.266	0.182	0.337	2.967
	Knowledge Management	0.698	0.147	0.098	0.238	4.209
	Entrepreneurial Orientation	0.698	0.235	0.159	0.29	3.453

a. Dependent Variable: Organisational Excellence

4.7 FACTOR ANALYSIS

To be able to understand the structure and interrelationship of variables in a multivariate data analysis situation, factor analysis used to be conducted. Factor analysis could be used for the purpose of exploration or confirmation as well as to determine whether the information can be summarised into smaller set of factors or components. Factor analysis was conducted to be able to determine the goodness of fit of the data for further analysis. Factor analysis had been a technique that primarily defined the underling structure of a data matrix, reduced a number of large variables into smaller ones, provided operational definition for a variable and tested theory about the nature of an underlying process (Hair *et al*., 2010; Pallant, 2013; Tabachnick & Fidell, 2014). The results of factor analysis were

discussed in the following sections on the basis of each variable.

Factor analysis was used to reduce a large number of variables and to summarise the degrees of correlations among the items and variables (Hair *et al.,* 2010; Pallant, 2013). Factor analysis technique assumed that there were only a few basic items and dimensions that underlied attributes of a certain construct or variable to be measured. These basic items and dimension were then correlated with the attributes to identify the basic items and dimensions.

To determine whether the measurements had construct validity, exploratory factor analysis was conducted for all items measuring the constructs such as organisational excellence, transformational leadership, knowledge management and entrepreneurial orientation. Exploratory Factor Analysis (EFA) was performed using the principal component analysis (PCA) that had been in use to find uncorrelated linear combinations of observed variables. Factor loadings of factor analysis used to indicate the correlation between every attribute and each score. The principle had been that, the higher the factor loading the more significant that attribute was in explaining the factor matrix (Hair *et al*., 2010, Tabachnick & Fidell, 2014).

Before a researcher embarked on factor analysis, the data must be suitable for such analysis by satisfying the criteria of sample size and the structure of relationships among the items or variables. Furthermore, to conduct appropriate factor analysis, another requirement that needed to be met was that, at least a variable under study must be of interval scale (Hair *et al*., 2010; Tabachnick & Fidell, 2014). In this study, all of the variables used (except the demographic variables which were not of primary concern for

the immediate analysis) were measured using an interval scale in form of Likert's 7point scale.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) test and Bartlett's test of sphericity had been in use to test the suitability of proceeding with factor analysis. If there was a small value on the KMO test, it indicated that the factor analysis might not be a good option.

Hair *et al*. (2010) stated that the KMO measures of sampling adequacy index values range from zero to one which can be interpreted as follows: .90 or above- marvelous; .80 or above- meritorious; .70 or above- middling; .60 or above- mediocre; .50 or above- acceptable but miserable; and below .50- unacceptable. However, MSA used to increase directly with sample size; average correlation and number of variable but inversely with number of factors.

The appropriateness of factor analysis technique could also be determined by using the Bartlett test of sphericity and its significance level to indicate a structure of relationship among variables in an identity matrix. If the Bartlett test value was significant (that is, its associated probability was less than .05) then it would be nice to treat the correlation matrix as an identify matrix (where the diagonal elements were one and the off diagonal elements were zero). Thus, further analysis could be conducted. It means that when the value of sphericity was large and the associated significance was small, that meant less than .05, then further use of factor analysis was suitable. Items were screened out using the procedure as recommended by most researchers (Hair *et al*. 2010; Pallant, 2013; Tabachnick & Fidell, 2014).

4.7(a) Factor Analysis for the Variables

Factor Analysis on Organisational Excellence

Exploratory factor analysis for organisational excellence was exhibited in Table 4.6a. One item that had been deleted because it did not load on one factor extraction. Other items that loaded from .562 to .776 were retained.

The result in the same Table 4.6a indicated that the Kaiser- Meyer- Olkin (KMO) measure of Sampling Adequacy (MAS) for organisational excellence showed the value of .931 which was marvelous and appropriate for factor analysis (Hair *et al*., 2010; Pallant, 2013; Tabachnick & Fidell, 2014). From the observed value of Bartlett's sphericity, the result showed that the value was large (3723.621) with associated significance level of 0.000 which was very low. Thus, both results (KMO measure of sampling adequacy and Bartlett's test of sphericity) demonstrated that the items remaining obviously met the conditions for factor analysis.

Table 4.6a
Factor Analysis for Organisational Excellence

Items	**Factor Loading**
My institution has become more efficient in the discharge of its responsibility to students	0.776
My institution has become more efficient in the discharge of its responsibility to staff	0.769
Through deliberate and conscious effort of my institution, knowledge of efficient operation management has improved among staff in my institution	0.754
Staff have high commitment to my institution	0.751
Staff are willing to work extra time with a view to achieving the goals of my institution	0.728
The services provided by my institution has improved students' satisfaction	0.71
Staff opinions are being used to improve work performance in my institution	0.707
Staff share the values of my institution	0.699
Staffs are willing to identify and provide solution to work problems in my institution	0.698
My institution has been able to attract more students interested in seeking for offer of admission	0.657
Staffs in my institution always show high level of initiative	0.656
My institution has contributed to socio-economic development of the immediate society.	0.629
The society in which my institution is located has benefited from modernity through the activities of my institution	0.62
Services provided to students are better in my institution than other similar institutions	0.62
Staff training and development has improved in my institution	0.614
Companies, institutions et cetera are now willing to give consultancy jobs to my institution	0.592
My institution has been able to drastically improve its revenue base apart from the subvention from government	0.592
Even, if given opportunity of other jobs, staffs are willing to remain in my institution	0.578
Communication with students in my institution has improved over time (e.g. SMS, students' e-mail services, robust and interactive institution portal et cetera)	0.569
The activities of my institution have reduced the crime rate in the environment	0.562
Eigen Value	9.131
Percentage of Variance explained (%)	43.483
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.931
Bartlett's Test of Sphericity approx Chi-square	3723.621
Df	190
Sig.	0

Extraction Method: Principal Component Analysis. 1 Component Extracted

Since this factor analysis was conducted through principal component analysis using Kaiser normalisation, the requirement was that any PCA result with an eigen value of more than 1.0 meant the data was significant and could be used for extracting factors (Hair *et al*., 2010).

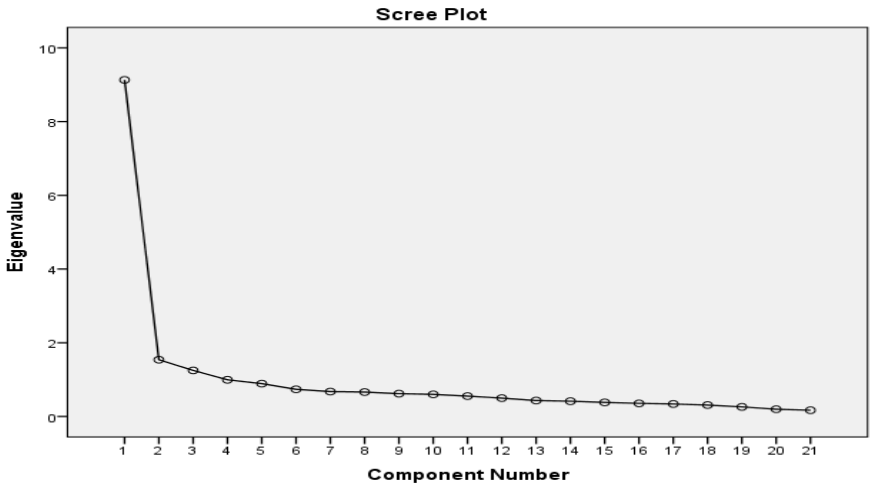


Fig 4.1
Scree Plot for Organisational Excellence

Although there were three factors loading with an eigen value of greater than one, the Scree plot in Figure 4.1 showed that the plot sloped steeply downward from first factor to second factor before it slowly became approximately horizontal. Thus from table 4.6a, the minimum factor loading after one component extraction showed a factor loading from .562 to .776.

The table 4.6b below showed the summary of organisational excellence variable before and after item deletion.

Table 4.6b

Summary of Organisational Excellence Variable Before And After Item Deletion

Variable	No of Items Before Deletion	No. of Items Deleted	No. of Items after Deletion	Reasons for Deletion
Organisational Excellence	21	1	20	No Loading

The Table 4.6b showed that organisational excellence variable had twenty-one items while one item was deleted after one factor extraction leaving twenty items for further analysis. The one item deleted was the question sixteen (My institution has provided more opportunity for people in the immediate environmental to get advantage of higher institution training) due to no factor loading as contained in the Appendix N.

Factor Analysis on Transformational Leadership

Exploratory factor analysis for transformational leadership was exhibited in Table 4.7a. One item that had small factor loading (< .50) was deleted. Items that loaded from .664 to .853 were retained, as shown in Table 4.7a.

The result in Table 4.7a indicated that the Kaiser- Meyer- Olkin (KMO) measure of Sampling Adequacy (MAS) for transformational leadership showed the value of .943 which was marvelous and appropriate for factor analysis (Hair *et al*., 2010; Pallant, 2013; Tabachnick & Fidell, 2014).

Table 4.7a
Factor Analysis for Transformational Leadership

Item	Factor Loading
I always ensure that the interests of staffs are given due considerations	0.853
If the quality of work of my subordinate improves, I acknowledge such improvements	0.851
I behave in a manner that is thoughtful of my subordinates' needs	0.828
I have a clear sense of where I want this institution to be in the next four years	0.821
I have a clear understanding of where we are going in this institution	0.813
I personally compliment my subordinates whenever they do an outstanding work	0.812
Whenever any of my subordinates does a better than average job, I always commend such act	0.802
I say things that make academic staffs feel proud to be part of this institution	0.8
I always challenge my subordinates to always think about old problems in new way so as to solve them	0.792
Before I act, I consider the feelings of subordinates towards that action	0.787
Whenever there is a change in the system of operation, I always encourage the staff to see the change as being full of opportunities instead of threats	0.773
Work units always get positive comments from me	0.737
I had ever proposed ideas to my subordinates that forced them to rethink some things that they had never questioned before	0.676
I had being challenging my subordinates to rethink some of their basic assumptions about their work	0.664
Eigen Value	8.877
Total Variance Explained (%)	59.178
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.943
Bartlett's Test of Sphericity approx Chi-square	4247.104
Df	105
Sig.	0

Extraction Method: Principal Component Analysis. A 1 component extracted

From the observed value of Bartlett's sphericity, the result showed that the value was large (4247.104) with associated significance level of 0.000 which was very low and appropriate. Thus, both results (KMO measure of sampling adequacy and Bartlett's test of sphericity) demonstrate that the items remaining obviously met the conditions for factor

analysis. Since this factor analysis was conducted through principal component analysis using Kaiser normalisation, the requirement was that any PCA result with an eigen value of more than 1.0 meant the data was significant and could be used for extracting factors (Hair *et al*., 2010).

Although there were two factors loading with an eigen value of greater than 1, the Scree plot in Fig 4.2 showed that the plot sloped steeply downward from first factor to second factor before it slowly became approximately horizontal. Thus from Table 4.7a, the minimum factor loading after one component extraction showed a factor loading from .664 to .853. The total variance explained by the one component factor extracted was 59.178%.

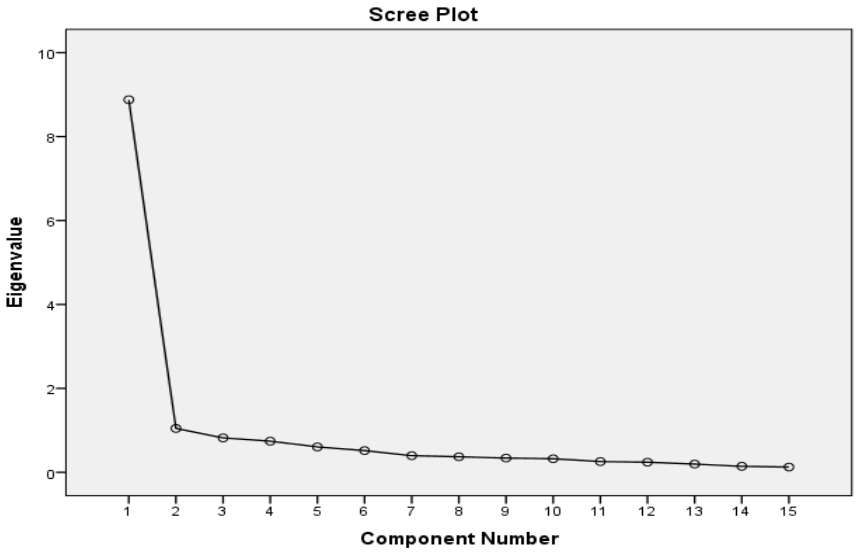


Fig 4.2
Scree Plot for Transformational Leadership

The table 4.7b below showed the summary of transformational leadership variable before and after item deletion.

Table 4.7b
Summary of Transformational Leadership Variable Before and After Item Deletion

Variable	No of Items Before Deletion	No. of Items Deleted	No. of Items after Deletion	Reasons for Deletion
Transformational Leadership	15	1	14	Small Loading

The table 4.7b showed that transformational leadership variable had fifteen (15) items while one item (I have no idea of where my institution is going) was deleted after factor extraction leaving fourteen items for further analysis. The one item deleted was due to small factor loading of -.421 which was <.5 requirement as shown in Appendix O.

Factor Analysis on Knowledge Management

Exploratory factor analysis for knowledge management was shown in Table 4.8a. Three of the items were deleted because they had no factor loading under one factor extraction. The remaining items loaded from .540 to .825 and were retained, as shown in Table 4.7a.

The result in Table 4.8a indicated that the Kaiser- Meyer- Olkin (KMO) measure of Sampling Adequacy (MAS) for knowledge management showed the value of .947 which was marvelous and appropriate for factor analysis (Hair *et al*., 2010; Pallant, 2013; Tabachnick & Fidell, 2014). From the observed value of Bartlett's sphericity, the result showed that the value was large (5266.357) with associated significance level of 0.000 which was very low. Thus, both results (KMO measure of sampling adequacy and Bartlett's test of sphericity) demonstrated that the items remaining obviously met the conditions for factor analysis.

Table 4.8a
Factor Analysis for Knowledge Management

Items	**Factor Loading**
My institution has a way of monitoring how new knowledge that is applied impact on operational efficiency	0.825
When a research or task is successfully achieved, my institution ensures that the processes followed are stored	0.816
Staffs in my institution are encouraged to apply in practice the new knowledge they acquire Staffs in my institution are encouraged to apply in practice the new knowledge they acquire	0.806
My institution has a way of determining how new knowledge impact on value-adding by staffs	0.805
My institutions makes regular comparism of its activities with other strong academic institutions that provide similar and competitive services	0.804
My institution has a well-organised documentation of the knowledge possessed by the staff	0.802
My institution has successfully applied its knowledge experiences in work process	0.785
My institution provides an environment that enables knowledge transfer between individuals and departments	0.776
Useful proposals from employees are rewarded in my institution	0.775
Staffs in my institution are encouraged to attend presentation of innovations by co-staff or by outsiders	0.769
My institution has indicators to monitor the relationship between investment in human capital and returns on it	0.754
My institution encourages academic staff to publish their breakthroughs	0.744
My institution regularly organises conferences for individual achievers to publish their achievements	0.722
My institution encourages staffs to practice and do research, write papers on issues relating to my institution	0.716
My institution knows how to successfully exploit the potentials of the staffs	0.709
My institution successfully applies past experiences in addressing new challenges	0.684
My institution has an efficient and functional IT system for data storage, retrieval and re-use by staffs	0.655
Academic staffs are provided with internet facilities for knowledge acquisition in my institution	0.637
My institution encourages off-the-job training	0.54
Eigen Value	10.698
Total Variance Explained (%)	48.628
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.947
Bartlett's Test of Sphericity approx. Chi-square	5266.357
Df	231
Sig.	0

Extraction Method: Principal Component Analysis. A1 factor extracted

Since this factor analysis was also conducted through principal component analysis using Kaiser normalisation, the requirement was that any PCA result with an eigen value of more than 1.0 meant the data was significant and could be used for extracting factors (Hair *et al*., 2010). Although there were two factors loading with an eigen value of greater than one, the Scree plot in Figure 4.3 showed that the plot sloped steeply downward from first factor to second factor then to third factor before slowly getting approximately horizontal.

Thus from Table 4.8a, the factor loading after one component extraction showed a factor loading from .540 to .825. The total variance explained by the one component factor extracted was 48.628%.

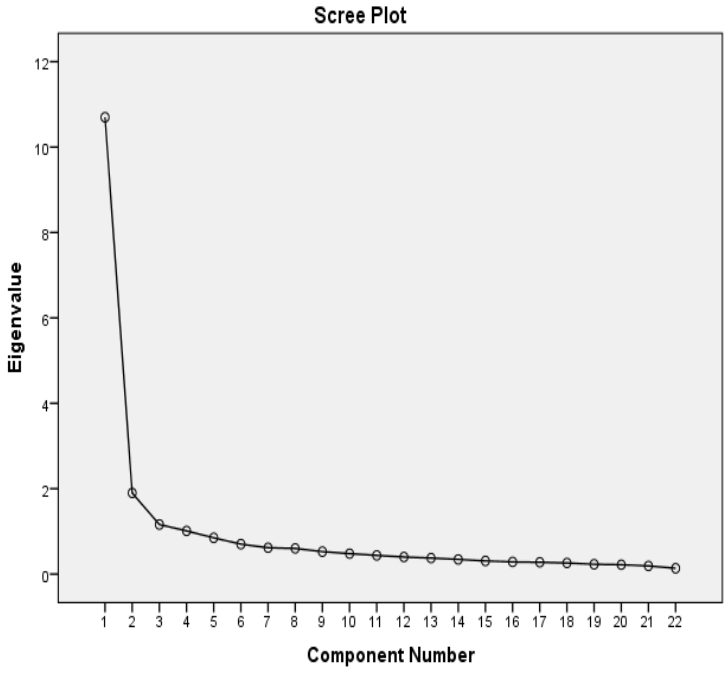


Fig 4.3
Scree Plot for Knowledge Management

The Table 4.8b below showed the summary of knowledge management variable based on

one factor extraction with three items deleted.

Table 4.8b
Summary Of Knowledge Management Without Item Deletion

Variable	No of Items On Scale	No. of Items Deleted	No. of Items after Deletion	Reasons for Deletion
Knowledge Management	22	3	19	No Loading

The Table 4.8b showed that knowledge management variable had twenty-two items while three of the items were deleted after one factor extraction leaving nineteen items for further analysis. The items that were deleted were questions 12, 13 and 14. The questions were:

Q12: Staffs hide their knowledge from other staffs because they believe if they hide the knowledge, it will increase their competitive advantage.

Q13: Most staffs in my institution do not possess the sufficient communication skills needed to transfer what they know to others.

Q14: Based on the experience over time, the culture in my institution does not encourage knowledge dissemination

All the remaining items were retained based on their factor loadings with their one factor extraction (See Appendix P).

Factor Analysis on Entrepreneurial Orientation

Exploratory factor analysis for entrepreneurial orientation was presented in Table 4.9a. Three of the items were deleted because of their factor loading of <.50. The items loaded from .614 to .795 which were all retained, as shown in Table 4.9a.

Table 4.9a
Factor Analysis for Entrepreneurial Orientation

Item	Factor Loading
There exists a very strong emphasis on and acceleration in research and development, intellectual leadership, and innovation in my institution	0.795
Cautious and pragmatic approach is used by my institution to adjust to any problem	0.787
My institution is always in active search for big opportunities	0.771
Staffs are encouraged in my institution to seize and explore "chancy" opportunities	0.767
My institution always respond to actions initiated by other institutions especially in the provision of educational services	0.73
My institution adopts a very competitive (i.e. undo other similar institutions) posture in its policies and activities	0.716
Bold and wide-ranging acts are viewed as useful and are a common practice in my institution	0.714
There is a culture of strong proclivity to high risk projects (with chances of very high returns) in my institution	0.704
There have been new educational services introduced in my institution in the past four years compared to similar other institutions in the immediate environment	0.695
My institution allows and encourages staff to develop the will to be self-directed in the pursuit of opportunities	0.673
New educational services introduced by my institution have always been dramatic (e.g. changes from analogue to digital operations	0.667
When confronted with decision-making situations involving uncertainty, my institution usually adopts a cautious "wait and see" posture in order to minimize the probability of making costly decisions	0.626
There is a high level of delegation of authority to the departments, faculties and task units in my institution	0.614
Eigen Value	7.113
Total Variance Explained (%)	44.456
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.929
Bartlett's Test of Sphericity approx. Chi-square	2586.328
Df	120
Sig.	0

Extraction Method: Principal Component Analysis. A1 components Extracted

The result in Table 4.9a indicated that the Kaiser- Meyer- Olkin (KMO) measure of Sampling Adequacy (MAS) for transformational leadership showed the value of .929

which was marvelous and appropriate for factor analysis (Hair *et al*., 2010; Pallant, 2011; Tabachnick & Fidell, 2014). From the observed value of Bartlett's sphericity, the result showed that the value was large (2586.328) with associated significance level of 0.000 which was very low. Thus, both results (KMO measure of sampling adequacy and Bartlett's test of sphericity) demonstrated that the items remaining obviously met the conditions for factor analysis.

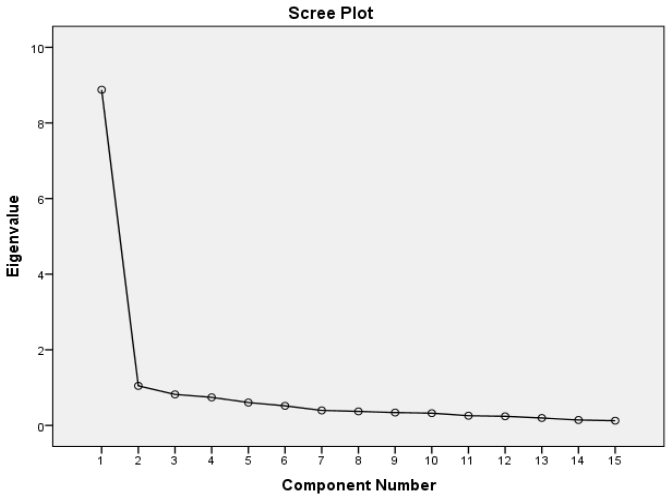


Fig 4.4
Scree Plot for Entrepreneurial Orientation

Since this factor analysis was conducted through principal component analysis using Kaiser normalisation, the requirement was that any PCA result with an eigen value of more than 1.0 meant the data was significant and could be used for extracting factors (Hair *et al*., 2010). Although there were two factors loading with an Eigen value of greater than one in the total variance explained output in SPSS, the Scree plot in Fig 4.4 showed that the plot sloped steeply downward from first factor to second factor before it slowly became approximately horizontal. Thus from Table 4.9a, the minimum factor loading

after one component extraction showed a factor loading from .614 to .795 on the first factor. The total variance explained by the one component factor extracted was 44.456% as in Appendix Q.

The Table 4.9b below showed the summary of entrepreneurial orientation variable before and after items' deletion.

Table 4.9b
Summary of Entrepreneurial Orientation Variable Before and After Item Deletion

Variable	No of Items Before Deletion	No. of Items Deleted	No. of Items after Deletion	Reasons for Deletion
Entrepreneurial Orientation	16	3	13	Small Loading

The Table 4.9b showed that entrepreneurial orientation variable had sixteen items while three of the items were deleted after one factor extraction thereby leaving thirteen items for further analysis. The items deleted were as below

Q3: New venture innovators are shielded from the organisational and resource constraints in my institution

Q15: Decision-making in my institution is always an outcome of compromise of conflicting demands

Q13: My institution always wants to avoid clashes with other similar institution in the areas of new educational services, administrative techniques as well as operating technologies.

The remaining items were retained based on their factor loadings with one initial factor extraction as in Appendix Q.

4.7(b) Reliability Test

Reliability analysis was conducted with the aim of testing the internal consistency of the measures before launching the questionnaire to the respondents using Cronbach's Alpha. This had been the most frequently used reliability measure by researchers to test the internal consistency of instruments and it was also used in this study. The most common way of measuring internal consistency using the Cronbach's alpha coefficients always indicated the average correlation among all items of the scale (Pallant, 2013). Moreover, reliability test was undertaken to evaluate the goodness of the measurement by determining the internal consistency of the measurement items as the items were grouped under one factor.

Some scholars (Hair *et al*., 2010; Pallant, 2013) suggested that a research should have a Cronbach's alpha coefficients above .70 of a scale. Sekaran (2013) also opined that a Cronbach's alpha slightly lower than .60 was considered to be poor and those in the .70 was acceptable and those over .80 were good. In this study, the recommendations suggested by the scholars were applied. The analyse-scale-reliability procedures were followed to conduct the reliability of the scale and the output was summarised in the Table 4.10 below.

Table 4.10
Reliability Analyses

Factor	**Number of Items**	**Cronbach's Alpha**
Organisational Excellence	20	0.935
Transformational Leadership	14	0.953
Knowledge Management	19	0.955
Entrepreneurial Orientation	13	0.922

Table 4.10 above summarised the reliability examination of the scales after taking into

consideration of the dropped items. As shown, the Cronbach's alphas values for all factors ranged from .922 to .955. These results showed that all factors of organisational excellence, transformational leadership, knowledge management and entrepreneurial orientation had acceptable internal consistency.

4.8 CORRELATION TEST

A researcher might be interested in exploring the relationship between sets of multiple dependent and independent variables so as to examine the strength and direction of the linear relationship between them. In this kind of situation, correlation analysis were often used (Hair *et al*., 2010; Pallant, 2013, Tabachnick & Fidell, 2014). Correlation analysis facilitated the exploration of linear interrelationship between two sets of variable. This analysis was capable of using both metric and non-metric data to explore the relationship. Correlation analysis is one of the most general multivariate techniques as it provides multiple functions (orthogonal) that depicts the independent relationships between variables in a data set (Hair *et al*., 2010; Tabachnick & Fidell, 2014). The loading of each function indicated the variable's contribution to the relationship. The correlation might be positive or negative, strong or weak. Correlation analysis helped in limiting the probability of committing a type I error where a significant relationship might be found when actually there was none. Furthermore, it helped in better reflecting the reality of a research study. To obtain correlation of the data under consideration, a bivariate association was conducted to compute Pearson's correlation coefficient with significance levels.

Pearson correlation coefficients could only take one value in between one and minus one. The strength of the relationship between two variables was determined by the magnitude

of the absolute value of the coefficient (i.e. the -/+ sign needed to be ignored). When the value was either one or minus one, it meant that the variables could be determined exactly interchangeably (i.e. one could represent the other), and the value zero indicated no relationship between the two variables. The recommended guideline to interpreting the strength of the relationship between two variables (r) by Cohen (1988) was presented by Pallant (2013) as shown in Table 4.11 below.

Table 4.11
Cohen and Pallant Guideline of Correlation Strenght

r Value	Strenght of Relationship
r = ± .10 to .29	Small
r = ± .30 to .49	Medium
r = ± .50 to 1.0	Large

The summary of the Pearson correlation between the independent variables and dependent variable under study was depicted in the Table 4.12 below

Table 4.12
Pearson Correlations for Independent Variable and Dependent Variable

VARIABLE	**Organisational Excellence**	**Transformational Leadership**	**Knowledge Management**	**Entrepreneurial Orientation**
Organisational Excellence	1			
Transformational Leadership	.711**	1		
Knowledge Management	.743**	.803**	1	
Entrepreneurial Orientation	.673**	.730**	.840**	1

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

Table 4.12 showed the relationship among all variables in the study. The correlation

coefficients (r) given in Table 4.12 indicated the strength of the relationship between the variables and the correlation coefficient for all latent variables. All the correlations were found under the threshold of .90 thereby eliminating high multicollinearity (Hair *et al*., 2010). On the overall, the correlation values of the variables showed correlation coefficients values of above .5 that ranged from .673 to .840 (Appendix R).

These results indicated high correlation between variables. Specifically, the relationship between organisational excellence and transformational leadership was r = .711; between organisational excellence and knowledge management was r = .743; between organisational excellence and entrepreneurial orientation was r = .673. Furthermore, the relationship between transformational leadership and knowledge management was r = .803; transformational leadership and entrepreneurial orientation was r =.730 and; knowledge management and entrepreneurial orientation was r = .840. The r values which ranged from .673 to .840 which was above .5, showing highly strong relationship among the variables. Since the coefficients in Table 4.12 showed higher than .5, it meant that the variables largely influenced each other as stated in Table 4.11 above.

To get an idea of how much variance two variables shared, one needed to calculate the coefficient of determination. This was done by squaring the r and multiplying by 100. The r^2 was shown in the Table 4.13 below as derived from Table 4.12 above

Table 4.13
Squared Correlation of the Variable to Get the Coefficient of Determination

VARIABLE	Organisational Excellence	Transformational Leadership	Knowledge Management	Entrepreneurial Orientation
Organisational Excellence	1			
Transformational Leadership	0.5055	1		
Knowledge Management	0.552	0.6448	1	
Entrepreneurial Orientation	0.4529	0.5329	0.7056	1

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

From the Table 4.13 above, organisational excellence and transformational leadership shared almost 51% of their variance; organisational excellence and knowledge management shared more than 55% of their variance while organisational excellence and entrepreneurial orientation shared above 45% of their variance. Furthermore, transformational leadership and knowledge management shared close to 64.5% of their variance; transformational leadership and entrepreneurial orientation shared over 53% of their variance and; knowledge management and entrepreneurial orientation shared an approximate of 71% of their variance. This was quite a respectable amount of variance explained.

To determine the main effect of the moderating variable, partial correlation was used. This allowed for exploring the relationship that existed between two variable while controlling for the effect of the other variable (the third variable which was the moderator) which had an influencing or contaminating impact on the relationship. The moderator's effect on zero-order correlation between the independent and dependent

variables was removed. This had helped in determining the main effect of the moderator on the correlation (Pallant, 2013; Jose, 2013; Tabachnick & Fidell, 2014).

This study explored the relationship between transformational leadership and organisational excellence while controlling for the effect of entrepreneurial orientation on the first path equation. It also explored the relationship between knowledge management and organisational excellence while controlling for the effect of entrepreneurial orientation in the second path equation. The results were presented in Tables 4.14a for transformational leadership and organisational excellence and; table 4.14b for knowledge management and organisational excellence controlling for entrepreneurial orientation in each case. Details are in Appendix S - T.

From Table 4.14a below, when the effect of entrepreneurial orientation was not controlled, the correlation between transformational leadership and organisational excellence was .711. When the effect of the moderator (entrepreneurial orientation) was controlled, the correlation between transformational leadership and organisational excellence fell to .435. The difference between the two correlations (.711 - .435) was .276 which was large (Pallant, 2013). This showed that the observed relationship between transformational leadership and organisational excellence was due majorly to entrepreneurial orientation.

Table 4.14a

Partial Correlation of Transformational Leadership and Organisational Excellence Controlling for the Effect of Entrepreneurial Orientation

Control Variables			Organisational Excellence	Transformational Leadership	Entrepreneurial Orientation
-none-[a]	Organisational Excellence	Correlation	1		
		Significance (2-tailed)			
		Df	0		
	Transformational Leadership	Correlation	0.711	1	
		Significance (2-tailed)	0		
		Df	276	0	
	Entrepreneurial Orientation	Correlation	0.673	0.73	1
		Significance (2-tailed)	0	0	
		Df	271	306	0
Entrepreneurial Orientation	Organisational Excellence	Correlation	1		
		Significance (2-tailed)			
		Df	0		
	Transformational Leadership	Correlation	0.435	1	
		Significance (2-tailed)	0		
		Df	270	0	

a. Cells contain zero-order (Pearson) correlations.

From Table 4.14b below, when the effect of entrepreneurial orientation was not controlled, the correlation between knowledge management and organisational excellence was .743. When the effect of the moderator (entrepreneurial orientation) was controlled, the correlation between knowledge management and organisational excellence fell to .443. The difference between the two correlations (.743 - .443) was .300 which was a large effect (Pallant, 2013). This showed that the observed relationship between knowledge management and organisational excellence was due majorly to entrepreneurial orientation.

Table 4.14b

Partial Correlation of Knowledge Management and Organisational Excellence Controlling for the Effect of Entrepreneurial Orientation

Control Variables			Organisational Excellence	Knowledge Management	Entrepreneurial Orientation
-none-[a]	Organisational Excellence	Correlation	1		
		Significance (2-tailed)			
		Df	0		
	Knowledge Management	Correlation	0.743	1	
		Significance (2-tailed)	0		
		Df	260	0	
	Entrepreneurial Orientation	Correlation	0.673	0.84	1
		Significance (2-tailed)	0	0	
		Df	271	286	0
Entrepreneurial Orientation	Organisational Excellence	Correlation	1		
		Significance (2-tailed)			
		Df	0		
	Knowledge Management	Correlation	0.443	1	
		Significance (2-tailed)	0		
		df	259	0	

a. Cells contain zero-order (Pearson) correlations.

4.9 MULTIPLE REGRESSIONS (TEST OF HYPOTHESES)

4.9(a) Moderation and Regression Analysis

Moderation

The concept of moderation was popularized by the seminal article of Baron and Kenny (1986). Although the article was primarily meant for psychology researchers, the definitive knowledge contained therein had formed the basis for not only moderation analysis but also mediation analysis in the social sciences. It contained the guidelines for the mediation and moderation analyses (Jose, 2013).

Barron and Kenny (1986) defined a moderator (moderating variable) as any variable that affected the direction and/or strenght of the relation between an independent, or predictor, variable and a dependent, or criterion, variable. The procedure for analysis they recommended was ANOVA that would yield an interaction term between the moderator and another independent variable (both were independent variables). This was recommended to be conducted to determine whether the interaction was statistically significant or not. ANOVA was only useable if the independent variables were categorical. When, at least, one independent variable was continuous, multiple regressions was the appropriate tool of analysis. They conceptualized four scenarios of moderation analysis as shown below

Table 4.15
Scenarios of analysis for mediation and/or moderation by Baron and Kenny (1986)

		Moderating Variable	
Independent Variable		Categorical	Continuous
	Categorical	1	2
	Continuous	3	4

From Table 4.15 above, the only scenario in which ANOVA was applicable was scenario one when the two predictors were categorical while multiple regressions could only be applied in the remaining scenarios.

Baron and Kenny (1986) stipulated that it was desirable that there was no correlation between the moderation and the independent variable. This, they advised, was aimed at eliminating the issue of multicollinearity. It was a suggestion but not a condition for moderating analysis. However, if the test of multicollinearity had been conducted, as had been done in previous section, the researcher could proceed to moderation analysis (Jose, 2013).

Multiple regression analyses had been performed for getting answers to research

questions of a study. As preconditions for conducting multiple regression analysis, certain assumptions about the relationship between the dependent variable and the independent variables needed to be met. These assumptions included normality; linearity; constant variance of the error terms and; independence of the error terms (Hair *et al*., 2010; Pallant, 2013, Tabachnick and Fidel, 2014). Since these assumptions had all been met with the results obtained in the previous sections, it meant that multiple regressions analysis was appropriate. Multiple regressions are being used to explain the relationship between a single dependent (criterion) variable and several independent (predictor) variables.

There were few common approaches that were used for multiple regressions analysis such are standard regression, hierarchical or sequential, and stepwise regression (Pallant, 2013; Hair *et al*. 2010, Tabachnick & Fidell, 2014). To do a moderation analysis, hierarchical regressions had often been used. In hierarchical or sequential multiple regressions, variables were always used in the equation in form of steps or blocks in a predetermined order. It was like "forcing" certain variables so as to statistically control them. In the next step, the possible effects of certain variables would be removed so as to determine if the remaining variables would be able to explain the variances in the dependent variable (Pallant, 2013; Hair *et al*, 2010; Tabachnick & Fidell, 2014). In this research a hierarchical regression method was conducted to test the relationship between organisational excellence and transformational leadership as moderated by entrepreneurial orientation on one hand and; organisational excellence and knowledge management moderated by entrepreneurial orientation on the other.

4.9(b) Answers to Research Questions

Research Question One

The first research question was aimed at examining the significance of the positive relationship between transformational leadership and organisational excellence in higher education institutions in the study. It was stated as below:

> Is there significant positive relationship between transformational leadership and organisational excellence in higher education institutions?

This question was answered from the output of the regression analysis depicted in table 4.16 below.

Table 4.16
ANOVA Output Depicting the Relationship Between Transformational Leadership and Organisational Excellence[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63688	2	31844	157.328	.000[c]
	Residual	50803.6	251	202.405		
	Total	114492	253			

a. Dependent Variable: Organisational Excellence
c. Predictors: (Constant), Transformational Leadership, Entrepreneurial Orientation

Table 4.16 above showed that there was a significant positive relationship between transformational leadership and organisational excellence. In the model, the result was that F (2,251) = 157.328, p <.001. In the model summary table in Appendix U, the adjusted R Square for model 1 was .504. This was further confirmed in the Coefficients table with Beta Value of .711 which was significant at .000. This showed that a change in the transformational leadership variable led to a significant positive change in the level of

organisational excellence that was achieved.

Research Question Two

The second research question aimed at examining the significance of the positive relationship between knowledge management and organisational excellence in higher education institutions in the study. It was stated as below:

> Is there significant positive relationship between knowledge management and organisational excellence in higher education institutions?

This question was answered from the output of the regression analysis depicted in the Table 4.17 below.

Table 4.17

ANOVA Output Depicting the Relationship Between Knowledge Management and Organisational Excellence[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62570.2	2	31285.1	155.77	.000[c]
	Residual	49206.2	245	200.842		
	Total	111776	247			

a. Dependent Variable: Organisational Excellence
c. Predictors: (Constant), Knowledge Management, Entrepreneurial Orientation

Tabled 4.17 above showed that there was a significant positive relationship between knowledge management and organisational excellence. In the model, the result was that $F(2,245) = 155.770$, $p<.001$. In the model summary table in Appendix V, the adjusted R Square for model 1 was .550. This result was further confirmed in the Coefficients table

with Beta Value of .743 which was significant at .000. This showed that if there was a change in the knowledge management variable, it led to a significant positive change in the level of organisational excellence that was achieved.

Research Question Three

The third research question was aimed at examining the significance of the relationship between entrepreneurial orientations as it moderated the positive relationship between transformational leadership and organisational excellence in higher education institutions in the study. It was stated as below:

> Does entrepreneurial orientation moderate the positive relationship between transformational leadership and organisational excellence in higher education institutions?

This question was answered from the output of the regression analysis in Table 4.18.

Table 4.18
Anova Output Depicting the Moderation of Relationship Between Transformational Leadership and Organisational Excellence[a] *by Entrepreneurial Orientation*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65944.4	3	21981.5	113.196	.000[d]
	Residual	48547.2	250	194.189		
	Total	114492	253			

a. Dependent Variable: Organisational Excellence

d. Predictors: (Constant), Transformational Leadership, Entrepreneurial Orientation, Transformational Leadership and Entrepreneurial Orientation

Table 4.18 above showed that there was a significant relationship between transformational leadership and organisational excellence as moderated by

entrepreneurial orientation. In the model, the result was that F (3,250) = 113.196, p<.001. In the model summary table in Appendix U, the adjusted R Square for model 3 was .576. This result was further confirmed in the Coefficients table with Beta Value of .941 which was significant at .001. This showed that if there was a change in the moderation of the relationship between transformational leadership and organisational excellence by entrepreneurial orientation, this would lead to a significant positive change in the level of organisational excellence that will be achieved.

Research Question Four

The fourth research question was aimed at examining the significance of the relationship between entrepreneurial orientations as it moderated the relationship between knowledge management and organisational excellence in higher education institutions in the study. It was stated as below

> Does entrepreneurial orientation moderate the positive relationship between knowledge management and organisational excellence in higher education institutions?

The output of the regression analysis depicted below was used to answer this question.

Table 4.19
ANOVA Output Depicting the Moderation of Relationship Between Knowledge Management and Organisational Excellence[a] by Entrepreneurial Orientation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64620	3	21540	111.454	.000[d]
	Residual	47156.4	244	193.264		
	Total	111776	247			

a. Dependent Variable: Organisational Excellence
d. Predictors: (Constant), Knowledge Management, Entrepreneurial Orientation, Knowledge Management and Entrepreneurial Orientation

Table 4.19 above suggested that there was a significant positive relationship between knowledge management and organisational excellence as moderated by entrepreneurial orientation. In the model, the result was that F (3,244) = 111.454, p<.001). In the model summary table in Appendix V, the adjusted R Square for model 3 was .573. This result was further confirmed in the Coefficients table with Beta Value of .835 which was significant at .001. This showed that if there was a change in the moderation of the relationship between knowledge management and organisational excellence by entrepreneurial orientation, this would lead to a significant positive change in the level of organisational excellence that would be achieved.

The significance level was analysed using 1-tailed in the output. Since the research questions were directional, the results of the significance were retained. If the research questions were not directional, the significance level would have to be converted to 2-tailed.

4.9(c) Determining the significance of variance due to the interaction effect

To determine the significance of the change in variation as a result of the interaction effect, the Tables 4.20a-b showed the significance for variation due to interaction of entrepreneurial orientation and transformational leadership on one hand (Table 4.20a) and that of entrepreneurial orientation and knowledge management on the other hand (Table 4.20b).

Table 4.20a
Significance of Variance of Organisational Excellence[d] Due to Interaction of Entrepreneurial Orientation and Transformational Leadership

Model	R	Change Statistics				
		R Square Change	F Change	df1	df2	Sig. F Change
1	.711[a]	0.506	257.847	1	252	0
2	.746[b]	0.051	28.584	1	251	0
3	.759[c]	0.02	11.62	1	250	0.001

a. Predictors: (Constant), Transformational Leadership
b. Predictors: (Constant), Transformational Leadership, Entrepreneurial Orientation
c. Predictors: (Constant), Transformational Leadership, Entrepreneurial Orientation, Transformational Leadership and Entrepreneurial Orientation
d. Dependent Variable: Organisational Excellence

From Table 4.20a, it showed that there was a potential significant moderation between entrepreneurial orientation and transformational leadership on organisational excellence. This was because the interaction of entrepreneurial orientation and transformational leadership accounted for a significant more variance (Model 3) than just transformational leadership and entrepreneurial orientation by themselves (Model 2), i.e. R^2 change = 0.020, p= 0.001.

From Table 4.20b, it showed that there was a potential significant moderation between entrepreneurial orientation and knowledge management on organisational excellence because the interaction of entrepreneurial orientation and knowledge management accounted for a significant more variance (Model 3) than just knowledge management and entrepreneurial orientation by themselves (Model 2), i.e. R^2 change = 0.018, p= 0.001.

Table 4.20b
Significance of Variance of Organisational Excellence[d] Due to Interaction of Entrepreneurial Orientation and Knowledge Management

Model	R	Change Statistics				
		R Square Change	F Change	df1	df2	Sig. F Change
1	.743[a]	0.552	302.781	1	246	0
2	.748[b]	0.008	4.478	1	245	0.035
3	.760[c]	0.018	10.606	1	244	0.001

a. Predictors: (Constant), Knowledge Management
b. Predictors: (Constant), Knowledge Management, Entrepreneurial Orientation
c. Predictors: (Constant), Knowledge Management, Entrepreneurial Orientation, Knowledge Management and Entrepreneurial Orientation
d. Dependent Variable: Organisational Excellence

4.9(d) Determination of Contribution of each Variable to the Final Equation

To determine how well the contribution of each of the variables to the final equation was, the detail in Tables 4.21a-b summarised the result of all the variables entered. Table 4.21a showed that the interaction of entrepreneurial orientation and transformational leadership contributed highest in the equation with standardized coefficient Beta of .941 and sig.; .001; followed by transformational leadership with Beta .471 and sig.; .000 and lastly entrepreneurial orientation with Beta .329 and sig.; .000

Table 4.21a

Summary of Contributions of Each Variable to the Final Equation of Transformational Leadership, Entrepreneurial Orientation and Organisational Excellence[a]

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		13.448	0
	Transformational Leadership	0.711	16.058	0
2	(Constant)		8.598	0
	Transformational Leadership	0.471	7.66	0
	Entrepreneurial Orientation	0.329	5.346	0
3	(Constant)		6.218	0
	Transformational Leadership	-0.108	-0.598	0.551
	Entrepreneurial Orientation	-0.09	-0.66	0.51
	Transformational Leadership and Entrepreneurial Orientation	0.941	3.409	0.001

a. Dependent Variable: Organisational Excellence

Thus, the direct (main) effect of transformational leadership (as IV) and entrepreneurial orientation (Moderator Variable - ModV) were both significant (Model 2). The interaction term (the product of entrepreneurial orientation and transformational leadership) also had significant effect on the indirect relationship as in model 3. Thus, all the variables in the Table 4.21a had unique contributions to the final equation.

The two main effects were positive- meaning that more transformational leadership was associated with more organisational excellence- just as more entrepreneurial orientation was associated with more organisational excellence. Furthermore, the interaction term of transformational leadership and entrepreneurial orientation was associated with more organisational excellence. These were main and indirect effects of the variables in moderation of the relationship.

Table 4.21b below showed that the interaction of entrepreneurial orientation and knowledge management contributed highest in the equation with standardized coefficient Beta of .835and sig.; .001; followed by knowledge management with Beta .604 and sig.; .000 and lastly entrepreneurial orientation with Beta .165 and sig.; .035. Thus, the direct effect of knowledge management (IV) and entrepreneurial orientation (Moderator Variable - ModV) were both significant (Model 2). The interaction variable (the product of entrepreneurial orientation and knowledge management) also had significant effect on the indirect relationship as in model 3. Thus, all the variables in the Table 4.21b had unique contributions to the final equation.

Table 4.21b
Summary of Contributions of Each Variable to the Final Equation of Knowledge Management, Entrepreneurial Orientation and Organisational Excellence[a]

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		13.619	0
	Knowledge Management	0.743	17.401	0
2	(Constant)		9.992	0
	Knowledge Management	0.604	7.726	0
	Entrepreneurial Orientation	0.165	2.116	0.035
3	(Constant)		6.994	0
	Knowledge Management	0.115	0.683	0.495
	Entrepreneurial Orientation	-0.204	-1.49	0.138
	Knowledge Management and Entrepreneurial Orientation	0.835	3.257	0.001

a. Dependent Variable: Organisational Excellence

The main effect was positive- meaning that more knowledge management was associated with more organisational excellence- just as more entrepreneurial orientation was

associated with more organisational excellence. Furthermore, the interaction term of knowledge management and entrepreneurial orientation was associated with more organisational excellence. Thus, there were main and indirect effects of the variables in moderation of the relationship.

4.9(e) Test of Hypotheses

Hypothesis I

This hypothesis stated that there is a strong positive relationship between transformational leadership and organisational excellence. The result in table 4.21a suggested that for every unit increase in transformational leadership, there was an expected increase of .471 in organisational excellence. That showed a significant positive of transformational leadership and organisational excellence. This hypothesis was supported.

Hypothesis II

This next hypothesis stated that there is a strong positive relationship between knowledge management and organisational excellence. The result in Table 4.21b suggested that for every unit increase in knowledge management, there was an expected increase of .604 in organisational excellence. That showed a significant positive of knowledge management and organisational excellence. This hypothesis was thus, supported.

Hypothesis III

The third hypothesis stated that entrepreneurial orientation moderates the relationship between transformational leadership on organisational excellence. The result in Table 4.21a suggested that for every unit increase in the interaction of entrepreneurial

orientation with transformational leadership, there was an expected increase of .941 in organisational excellence. That showed a significant positive of the interaction term of transformational leadership and entrepreneurial orientation and; organisational excellence. This hypothesis was also supported.

Hypothesis IV

The last hypothesis was that entrepreneurial orientation moderates the relationship between knowledge management on organisational excellence. The result in table 4.21b suggested that for every unit increase in the interaction of entrepreneurial orientation with knowledge management, there was an expected increase of .835 in organisational excellence. That showed a significant positive of the interaction term of knowledge management and entrepreneurial orientation and; organisational excellence. This last hypothesis was also supported.

Table 4.22 below showed the summary of the hypotheses tested, the significance and the finding.

Table 4.22
Summary of the Hypotheses Tested by Using Regression

HYPOTHESIS	SIGNIFICANT	FINDING
H1	Yes	Supported
H2	Yes	Supported
H3	Yes	Supported
H4	Yes	Supported

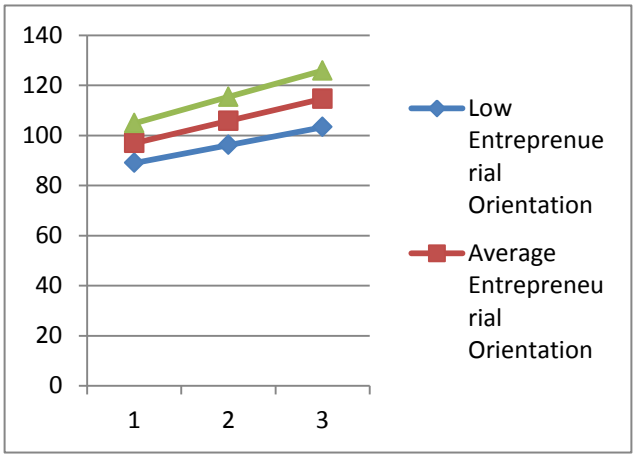
4.9(f) Graphing the Moderation Effects

Graphing the main and indirect effects of the models, the Hayes PROCESS of the analyse-regression add-on procedures to SPSS was used. The output for each of the independent variables was as presented in the tables 4.23a and 4.23b below.

Table 4.23a
Data to Visualize the Conditional Effect of Transformational Leadership on Organisational Excellence (Based on Process by Hayes, 2014)

Transformational Leadership	Entrepreneurial Orientation	yhat
-17.839	-16.191	89.0158
0	-16.191	96.9361
17.8393	-16.191	104.856
-17.839	0	96.1745
0	0	105.769
17.8393	0	115.363
-17.839	16.1905	103.333
0	16.1905	114.602
17.8393	16.1905	125.87

The values in the yhat column of Table 4.23a showing interaction at 95% level of confidence was used to plot the interaction plot from excel. The output was as in Fig. 4.5 below. Figure 4.5 below showed an enhancing effect that as transformational leadership and entrepreneurial orientation increased, organisational excellence increased. There was no level of transformational leadership (whether low, average or high) that was similar to entrepreneurial orientation.



Low TL Average TL High TL

Fig 4.5a
Interaction effect between Transformational Leadership and Organisation Excellence

The values in the yhat column in Table 4.23b showing interaction at 95% level of confidence was used to plot the interaction plot from excel. The output was as in Figure 4.7b below.

Table 4.23b
Data to visualize the conditional effect of Knowledge Management on Organisational Excellence (Based on Process by Hayes, 2014)

Knowledge Management	**Entrepreneurial Orientation**	**yhat**
-23.653	-16.476	89.2188
0	-16.476	99.8294
23.6533	-16.476	110.44
-23.653	0	93.5583
0	0	105.529
23.6533	0	117.5
-23.653	16.476	97.8978
0	16.476	111.229
23.6533	16.476	124.561

Figure 4.6 below showed an enhancing effect that as knowledge management and

entrepreneurial orientation increased, organisational excellence increased. At all levels (low, average and high) of knowledge management, none were similar to entrepreneurial orientation.

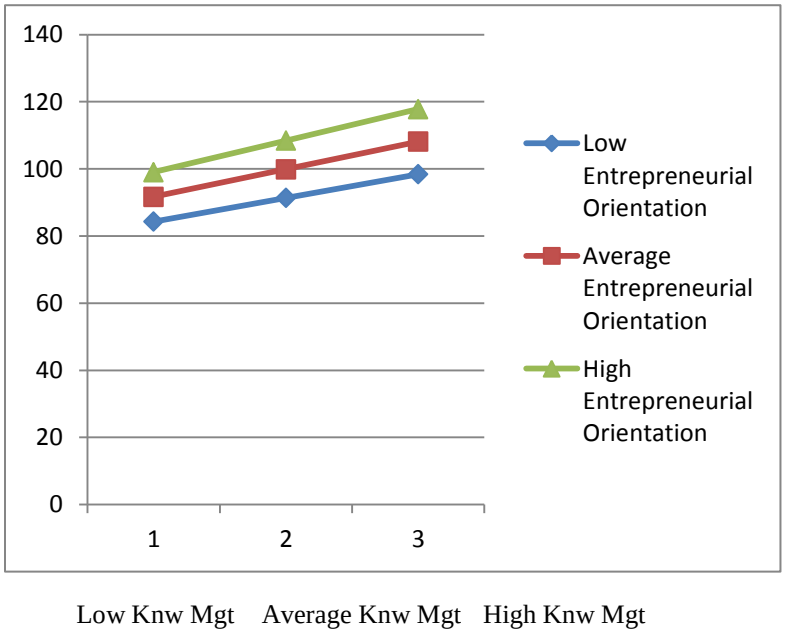


Fig 4.6
Interaction effect between Knowledge Management and Organisation Excellence

4.10 SUMMARY

This chapter had presented not only the processes of data collection but also data treatment, analysis and findings. Issues presented included the processes used in data collection and the nature of survey response including non-response bias. Error detection, missing data and outliers' treatment were conducted with a view to treating and cleaning the data. Furthermore, the descriptive statistics of the profile of the respondents was conducted, after which the assumptions of multiple regressions were explained. These assumptions were met before proceeding with the further analysis of the data. Factor

analysis was conducted which necessitated the deletion of some items in the scale. Correlation test for direct linear relationship was conducted while a hierarchical multiple regressions test of hypotheses was conducted and a brief summary of findings given. All these were done using SPSS 20 version with the PROCESS add-on by Hayes, especially to generate data needed for visualization of the effects.

All the research questions were answered positively and the four hypotheses were supported by the findings from the study. The next chapter dealt with the findings, discussions and recommendations for the study.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presented a summary of findings in chapter four with respect to the moderating role of entrepreneurial orientation on transformational leadership, knowledge management and organisational excellence. It discussed the key findings according to the research objectives. Apart from that, the significance of the findings - the theoretical, practical and policy implications were also highlighted. The chapter also made recommendations for future research. Lastly, an overall conclusion was drawn on the research work with respect to the findings, objectives, significance and recommendations of the study.

5.2 RECAPITULATION OF THE STUDY'S FINDINGS

The study sought to investigate the relationship between transformational leadership and organisational excellence on one hand, and the relationship between knowledge management and organisational excellence on the other. It also sought to investigate the moderating role of entrepreneurial orientation on each of the relationships. The study did a response bias analysis which found out that the response bias was of small effect. It also examined the underlying internal structure of each of the variables – organisational excellence; transformational leadership; knowledge management and; entrepreneurial orientation. This was done through principal components analysis in factor analysis. The underlying internal consistency of these unidimensional variables were confirmed after

some items were deleted through one component extraction. Furthermore, the internal consistency of the scales was examined using the Cronbach's alpha. The scales' internal consistencies were confirmed through the Cronbach's alpha coefficient values that ranged from .922 to .955. The scales were thus reliable for the purpose of proceeding with further analysis.

As stated in chapter four, a total of four hundred and eighty questionnaires were distributed to respondents for the purpose of data collection. These respondents were academic staff members and heads of groups in public higher education institutions in the North-Central and South-Western geo-political zones of Nigeria. After the distribution, only three hundred and eighty-three questionnaires were returned, eleven of which were removed as unusable because they have up to 15% missing data. This decision was based on the rule of thumb as suggested by Hair, Black, Babin and Anderson (2010). Therefore, only three hundred and seventy-two properly filled, returned and usable questionnaires were used for the purpose of data analysis.

5.3 DISCUSSION OF FINDINGS

The focus of this section was a discussion of the totality of findings of the study and direction of future researches. To do this, the key objectives of this study are restated as below:

(a) To determine the significant relationship between transformational leadership and organisational excellence in higher education institutions.

(b) To determine the significant relationship between knowledge management

and organisational excellence in higher education institutions.

(c) To determine the moderating effect of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence in higher education institutions.

(d) To determine the moderating effect of entrepreneurial orientation on the relationship between knowledge management and organisational excellence in higher education institutions.

To be able to achieve these four main objectives, equivalent number of research questions were raised. These questions were pointers that assisted in being able to achieve the study objectives. The research questions raised are also stated below:

(a) Is there significant relationship between transformational leadership and organisational excellence in higher education institutions?

(b) Is there significant relationship between knowledge management and organisational excellence in higher education institutions?

(c) Does entrepreneurial orientation moderate the relationship between transformational leadership and organisational excellence in higher education institutions?

(d) Does entrepreneurial orientation moderate the relationship between knowledge management and organisational excellence in higher education institutions?

The sections that followed explained in details the findings of each of the hypotheses tested and how the research objectives had been accomplished.

5.3.1 First Objective

The first objective of the present study was to determine the significant relationship between transformational leadership and organisational excellence in higher education institutions. To achieve this objective, the first hypothesis was tested. The first hypothesis stated that there is a relationship between transformational leadership and organisational excellence. The result in table 4.21a suggested that for every unit increase in transformational leadership, there was an expected increase of .471 in organisational excellence. That showed a significant positive of the relationship between transformational leadership and organisational excellence.

This finding was in consonance with the finding by Ardi, Hidayatno and Zagloel (2012) who investigated the relationship among quality dimensions in higher education institutions. They found out that commitment of faculty's top management (leadership) to quality (a requirement in organisational excellence) strongly influenced commitment of other units in a higher education institution. This was important when there was a strive towards quality service delivery in such higher education institutions.

Investigation of the perspectives of UK Vice-Chancellors on the challenges of leading universities in a knowledge-based economy by Bosetti and Walker (2010) discovered that Vice-Chancellors had introduced transformational leadership. They did this through helping colleagues to understand the nature of competitiveness of the education market and shifting colleagues' thinking on how the institution needed to be managed. They further found that leaders ensured raising subordinates' aspirations about what the institution could achieve (intellectual stimulation) and the leader also formulated a strategic vision that subordinates were willing to implement (shared vision).

These results suggested a strong positive relationship between transformational leadership and organisational excellence. This is not surprising because leadership plays an important role in providing direction to achievement of organisational goals. A transformational leader would be able to get relatively difficult jobs done because of his ability to stimulate subordinates. This is because, the leader can not do it alone since management presupposes getting things done through people. A non-transformational leader would not be able to behaviourally motivate subordinates in getting things done.

Furthermore, a transformational leader would ensure minimal resustance to change as envisaged in the new future for higher education institution. A leader who enjoys the confidence and cooperation of his or her followers would be able to get changes through and excellently implemented than a non-transformational leader. This is more important, especially in higher education institutions which do not have a strict command structure like the army or other private sectors.

Thus, it was not unexpected that transformational leadership had a strong positive impact on achievement of organisational excellence in the study. The context of the study was higher education institutions with a long history of exercise of individual freedom which can be properly channeled for organisational excellence through transformational leadership.

5.3.2 Second Objective

The second objective of this study was to determine the significant relationship between knowledge management and organisational excellence in higher education institutions. This was explained through testing the second hypothesis which stated that there is a relationship between knowledge management and organisational excellence. The result in Table 4.21b suggested that for every unit increase in knowledge management, there was an expected increase of .604 in organisational excellence. That showed a significant positive of knowledge management and organisational excellence.

The finding of this research was confirmed by the findings of Crossman and Clarke (2010). They used stakeholders' perception to investigate the link between internationalisation of knowledge experience and its impact on the achievement of excellence of graduates in universities. The results from their research concluded that international experience for academics in higher education institutions improved forging of networks, provided opportunities for experiential learning, acquisition and the development of soft skills which were related to many issues including way of thinking. In fact, the knowledge internationalisation provided opportunities to put both the higher education institution and the stakeholders into spaces and exposed them to global

thinking thereby making them World class.

Shoham and Perry (2009) investigated technological and organizational change management in Israeli universities with the use of knowledge management as a mechanism. Their investigation revealed that there was mapping of existing knowledge among the committees in higher education institutions studied which led to cooperative learning. Knowledge management helped in encouraging experimentation and led to cooperation and support. It also eased staff anxieties about the future and increased their commitment to the change in form of World class vision of the higher education institutions studied.

Research on utilisation of communities of practice in the humanities at two universities in South Africa confirmed that knowledge management through communities of practice was not only a source of competitive advantage but also a source of learning (Ngulube, 2009). This was a confirmation of the result of this study that knowledge management has a positive correlation with excellence in higher education institutions, especially in the area of competition.

Serrano-Velarde and Krücken (2012) investigation of the challenges of cross-sectoral knowledge transfers between private sector consultants and public universities provided a slightly different result from the result of this study. They used sociological neo-institutionalism and the systems theory perception of the higher education institutions to carry out their study. They found lots of obstacles to knowledge transfer activities between the academia and the external consultants due to obstructive structural features of these higher education institutions.

The result of the current study was however contrary to the findings by Dora and Hussin (2012) when they investigated the impact of training on the dissemination and application of knowledge using academicians in university in Malaysia. They found that academics in the higher education institutions investigated did not feel comfortable asking for or sharing information especially due to cultural factor. This negatively impacted on performance excellence in the HEIs studied.

Research conducted to investigate the impact of social capital on knowledge sharing as determinants of academic performance provided a contradictory support for this study (Aslam, Shahzad, Syed, & Ramish, 2013). While the investigation found support for impact of trust, shared vision and shared language on knowledge sharing, their results also showed a negative correlation between higher level of knowledge sharing and academic performance.

The result of finding on knowledge management and organisational excellence in this study was confirmed in some studies, partially confirmed in some while it was rejected by some studies. This may be unconnected with certain factors that were not considered by this study. The support and contrary support found could be due to the context of the research and the level of educational advancement within each context. While some universities might be exposed to high level of internationalisation, ICT deployment, inter-institutional collaborations, some were not. This could account for the differences in the outcome of the result. Furthermore, it was not enough to share knowledge, higher education institutions needed to share relevant knowledge for excellence. Knowledge sharing was not an end in itself, it should be seen as a means to an end.

Furthermore, as knowledge become more and more like a commodity without borders, its diffusion and utilization would determine whether a higher education institution would be able to compete favourably now and in the future. This status of being a commodity without boarder has greatly improved the geographical mobility of faculty members which would have impact on the achievement of stakeholder's objectives in higher education institutions.

5.3.3 Third Objective

The third objective of the study aimed at determining the moderating effect of entrepreneurial orientation on the relationship between transformational leadership and organisational excellence in higher education institutions. This objective was also achieved through hypothesis testing. The third hypothesis stated that entrepreneurial orientation moderates the impact of transformational leadership on organisational excellence. The result in table 4.21a suggested that for every unit increase in the interaction of entrepreneurial orientation with transformational leadership, there was an expected increase of .941 in organisational excellence. That showed a significant positive of the interaction term of transformational leadership and entrepreneurial orientation on organisational excellence.

Bosetti and Walker (2010) found that higher education leadership were becoming more entrepreneurially oriented in achieving excellence status. Leadership in these higher education institutions did this through the revision of the financial and administrative structure of their institutions as well as proactive regeneration of communities in which

their institutions were located. These higher education institutions also imbibed competitive aggressiveness towards increasing the visibility of their institutions in the regional, national and international communities.

Kandiko (2012) investigated the role of interdisciplinarity with respect to leadership and creativity in higher education institutions. The investigation showed that for success in the challenges brought about by needs in the higher education institutions of today, entrepreneurial orientation (depicted by fundamentally creative skills) were required for leadership and management processes. They found that entrepreneurially-oriented (creative) leaders were proactive by developing programmes that worked within the structures of the institution and exploited the opportunities based on the needs of the external community. This was in confirmation of the result of this study which showed that entrepreneurial orientation's interaction with transformational leadership led to organisational excellence in higher education institutions that were studied.

Due to the present and future challenges in higher education institutions, the era of arm-chair leadership in these institutions was gone. Leaders in these institutions could no longer sit in their offices and expect the customers (students, organisations, grant providers, et cetera) to come to the institutions without making efforts. These resources that are available are limited in supply with the ever-increasing and keen competitions for them by the higher education institutions. Leadership in the higher education institution must display high level of innovation, competitive aggressiveness and proactivenes to exploit these opportunities.

Since opportunity waits for no one except the person that is prepared, leadership that were not entrepreneurially oriented would not be able to exploit the full rage of opportunities available in the present and future forms in which higher education institutions could operate. In fact, higher education institutions in advanced economies where the changes in higher education had much impact had been more entrepreneurial than the developing countries.

5.3.4 Fourth Objective

The fourth objective of this study was to determine the moderating effect of entrepreneurial orientation on the relationship between knowledge management and organisational excellence in higher education institutions. Just as with the previous objectives, a hypothesis was tested for the purpose of achieving this objective. This was done through the fourth hypothesis. The fourth hypothesis stated that entrepreneurial orientation moderates the impact of knowledge management on organisational excellence. The result in table 4.21b suggested that for every unit increase in the interaction of entrepreneurial orientation with knowledge management, there was an expected increase of .835 in organisational excellence. That showed a significant positive of the interaction term of knowledge management and entrepreneurial orientation and; organisational excellence.

This result was confirmed by Ayub and Othman (2013) in their investigation of entrepreneurship management practices as a way of creating effective schools. In a sample of one hundred and eighty school administrators that was randomly selected, they discovered the need for special courses and training on successful entrepreneurs' best

practices. They discovered that the training will lead to entrepreneurial orientation among school administration (management team). Thus a combination of knowledge management and entrepreneurial education will lead to entrepreneurial orientation skills and culture among the school administrators for effective schools.

Investigation of barriers and fears in academic entrepreneurship versus wishes and opportunities by Binkauskas (2012) supported this result. The result of the analysis of the study revealed that academic entrepreneurs underscored the importance of proper knowledge management in the area of gaining knowledge in the areas of law and financial management. However, the academic entrepreneurs referred to acquisition of administrative knowledge and staff management knowledge as either necessary or certainly necessary as twice as those few who preferred law and financial knowledge. They all believed that proper knowledge management in their areas was necessary to bring out the best of them in their entrepreneurial activities.

With the result above, interaction of entrepreneurial orientation and knowledge management had been found to be positively related to excellence in higher education institutions. For a higher education to excel, it must combine knowledge management and entrepreneurial orientation for best results.

As observed earlier, knowledge had become a commodity of exchange operating like commodities in local and international trade. As a result of high demand for knowledge in the knowledge economies that prevailed throughout the world, any higher education institution that wants to be relevant now and in the future need to determine the types of

knowledge asset it required. It must be continuously innovative in knowledge management to have an edge over other competitors.

Higher education institutions' competitive aggressiveness in the knowledge industry that continues to expand would ensure their survival. Furthermore, the absorptive capacity of these institutions in community of practices and internalization of knowledge determine their excellence in achievement of goals. The ability of these institutions in risk-taking by venturing into new ares of knowledge and practices had impact on the achievement of excellence. Risk-taking in new areas provided institutions with prime-mover advantage to ensure patenting and world class advantage.

5.4 IMPLICATIONS OF THE STUDY

The importance of transformational leadership, knowledge management and entrepreneurial orientation in the management of higher education institutions towards achieving excellence were in many areas. This study had implications as discussed below.

This study had shown if higher education institutions were entrepreneurially-oriented with transformational leaders and knowledge management, this would enable these institutions to satisfy their customers who were primarily students. Students would get excellent and World class training as at when due and probably at reduced cost.

Apart from that, it showed that public higher education institutions could improve the amount of fund available for running their institutions without necessarily heavily depend on government subventions. This was possible through collaboration

in conduct of ground-breaking researches that usually attract funding from the private sector, funding agencies and non-governmental organisations.

Couple with the above, higher education institutions could achieve people's results by motivating their staff to show high level of initiative, identify work problems and provide solutions to them. Staff opinion could be sought in decision making while staff training and development could be used to achieve excellent performances in higher education institutions.

Furthermore, this study had shown that higher education institutions could positively contribute to the society by providing opportunities for members of the institutions' immediate environment and improving quality of life of people in the locality. These institutions could contribute to economic development and serve as source of foreign exchange earnings for Nigeria. Instead of the capital flight being experienced now due to increase in Nigerians seeking further education abroad, the trend would be reversed. This would also result into a reduction in the drain of foreign exchange direly needed for development by a developing country like Nigeria.

Other implication of this study was for the image of public higher education institutions as entities and Nigeria as a country. Excellent performances had played significant role in boosting the image of World Class institution. This had subsequently improved the image of the countries in which they were located on the World academic landscape. In fact, education could be said to contribute like, if not more than, tourism in making Malaysia a preferred destination for foreigners.

Lastly, the study showed that higher education institutions could be as, if not more, efficient as corporate private organisations. This would be possible if the necessary entrepreneurial orientation were in use in these HEIs.

5.5 THEORETICAL CONTRIBUTIONS

The results of this study had contributed to theory in the areas stated below:

The results of this study were consistent with theories and the previous, as well as, current literature that supported these theories. As the body of knowledge in the fields of higher education institutions' management continued to grow, the empirical evidence obtained from this research had contributed to better understanding of the higher education institutions, especially in Nigeria.

Two underpinning theories of this study were the resource-based view and complementary asset theories. This study had contributed to these theories by providing additional evidence from a developing African country. To the knowledge of the researcher, no study of this type had been carried out in Nigeria using the underpinning theories either in higher education institutions or in other fields. Thus, the study had contributed in extending the scope and applicability of the underpinning theories with respect to a different operating environment from where other studies had been conducted.

In studies on higher education institutions in Nigeria, this study was the first attempt, known to the researcher, to use entrepreneurial orientation as a moderator in the management of higher education institutions, especially the public ones. This could be

considered a significant contribution to the theory in its applicability to Nigeria. Thus, it was the first study on public higher education institutions in Nigeria that combined all the variables of organisational excellence, transformational leadership, knowledge management and entrepreneurial orientation together.

The original model of organisational excellence developed by European Foundation for Quality Management and the Malcolm Baldrige Education Criteria Frameworks were modified to use entrepreneurial orientation as a moderator. In the original models, innovation was used as part of the model. However, since innovation was a dimension out of the five dimensions of entrepreneurial orientation, this study used the entrepreneurial orientation in a comprehensive way to determine its moderating role in ensuring excellence in higher education institutions. Thus, this was a significant contribution to body of literature on organisational excellence. Despite the modification of the model, this study was able to validate the theories of resource based view and complementary assets.

Of the variables that contributed to explaining organisational excellence in higher education institutions, entrepreneurial orientation had been found to contribute significantly in Nigeria public higher education institutions. No study known to the researcher had applied entrepreneurial orientation to public higher education institutions in Nigeria. Thus, this research would trigger further researches in entrepreneurial orientation in public higher education institutions in Nigeria.

Furthermore, this research combined different forms of higher education institutions in Nigeria i.e. University, Polytechnic and Colleges of Education. No study known to the researcher has combined all these three institutions. A high proportion of studies had been conducted using Nigerian Universities to the neglect of the Polytechnics and Colleges of Education. Despite the fact that these other two institutions were expected to contribute to the development of the Nigeria, undue emphasis had been on the Universities, especially, public universities in Nigeria. This research was expected to draw attention to the needs for more studies on the Polytechnics and Colleges of Education in Nigeria.

Apart from contributing to theories, the findings presented in the previous sections had implications for practice in Nigerian public higher education institutions. The implications were discussed in the following section.

5.6 IMPLICATIONS TO PRACTICE

From the results of the present study, it was found that entrepreneurial orientation had a moderating impact on transformational leadership, knowledge management and organisational excellence in Nigerian higher education institutions. The following subsections explained how different stakeholders could benefit from this study.

5.6.1 Policy Makers

Policy makers in Nigeria could improve and enhance public higher education institutions in Nigeria through a policy thrust in organisational excellence. This would

ensure higher performance, reliability, improved visibility and competitiveness of these public higher education institutions in Nigeria.

The Federal and State ministries of education in Nigeria should focus more attention on the leadership in Nigerian public higher education institutions with a view to enhancing improved performance. Leadership training programmes should be initiated by the ministries so that the leaders would learn how to imbibe transformational leadership skills for improved performance. This was moreso, since bad leadership had been found to be the bane of Nigerian public higher education institutions (FME, 2014).

Furthermore, these public higher education institutions needed to be corporatised as was the practice in other highly competitive higher educational institutions. This would instill entrepreneurialism in the leadership of these institutions.

Not only that, all public higher education institutions should be directed to imbibe knowledge management culture by vigorously pursuing knowledge creation, storage, dissemination, implementation and evaluation. Patenting of innovations should be encouraged and rewarded by the regulatory authorities.

Governments should provide the necessary conducive fertile environment that would make creativity thrive in these public higher education institutions. For that purpose, the ministries should encourage exhibitions and yearly comparism of performance of these higher education institutions. This would instill healthy rivalry among these institutions and make them to be more competitively aggressive.

A broad policy on monitoring and evaluation based on World-Class focus for these institutions must be put in place. By doing so, these institutions would aspire towards provision of World-Class higher educational services. This would serve as a source of attracting more international students and improvement in foreign earnings for the country. This would also reduce the amount of foreign capital flight from Nigeria.

The university autonomy granted to public universities should be enhanced and vigorously pursued while the same level of autonomy should be extended to the public polytechnics and colleges of education. This would relieve the management of these institutions from being tied to the apron strings and the bureaucratic bottlenecks of the regulatory authorities which might inhibit their entrepreneurialism in the provision of higher education activities.

Nigerian embassies abroad could be encouraged to improve marketing of higher education institutions in Nigeria by promoting higher education opportunities in Nigeria. This could be done through education exhibitions, yearly Nigerian independence celebration in their countries of posting and active participation in highly-rated international higher education conferences.

5.6.2 Higher Education Institutions

Higher education institutions will benefit from the results of this study. They will benefit in the following ways:

The management of these public higher education institutions would benefit by changing their focus to becoming World-Class provider of higher education services. They should be more focused on excellent performance so as to improve their institutions' visibility. This woulb be a source of pride and achievement to them.

Apart from that, entrepreneurialism must be promoted at every level of their institutions. Faculties, institutes, centres et cetera needed to be treated like strategic business units (SBU) so as to improve their contributions to the general excellence of their institutions. Every group or groups of units in the institution must be given certain key performance indices (KPI) so as to serve as a guide for their evaluation and promote necessary improvements. Performances of all units combined together would improve the quality in service delivery of these institutions.

Furthermore, the management of these institutions must pursue adequate deployment and utilization of information and communications technology infrastructure in their institutions. Rich and robust institution's website with add on facilities should be provided to make information about their institutions highly easily accessible and interactive. This could serve as a source of attracting international students and scholars.

More collaboration within and outside Nigeria should be pursued also. Intra- and inter-institutional collaboration as well as collaboration with local and foreign donor agencies, non-governmental organisations et cetera should be pursued. This would improve their access to funds and improve their visibility in the World academic landscape.

To ensure excellence, public higher education institutions in Nigeria should train and develop their manpower so as to be up-to-date in their areas of specialisation. This would

have the effect of improving their performances and increasing their initiative. Employees must also be retained through motivational incentives while they should be encouraged to imbibe the spirit of psychological ownership with respect to the achievement of the institutions' aims and objectives.

The age-long town and gown relationship between the ivory towers and their environments should be vigorously pursued. By this means, higher education institutions would be relevant to the aspirations of their immediate and remote environments. There should be symbiotic relationship between the environment and the higher education institutions.

As an enclave for the intellectual minds, the higher education institutions must be made a fertile ground for breakthrough research. In this wise, the leadership must be visionary and should intellectually stimulate the staff. The staffs' intellect must be challenged towards discovering and achieving what individuals would had thought not achievable.

Higher education institutions should also exploit the opportunities available in the environment. Researches into local content of production and domestication of technology would make these institutions only excellent. They would also be relevant to their environment by improving efficient utilisation of resources and improved welfare for the stakeholders. Opportunities provided by TETFund should be optimized by accessing the fund to provide World Class higher education services.

Also, higher education institutions could be both entrepreneurial and achieve their age-long traditional function of knowledge production. Entrepreneurialism will only improve the level of achievement of those aims and objectives. Age-long traditional function of

knowledge production and entrepreneurialism are not mutually exclusive but could be complementary to each other. This must be the pursuit of higher education institutions in Nigeria.

5.7 LIMITATIONS OF THE STUDY

There were several limitations to this study and these were acknowledged as below:

The sample of this study consisted of academic staff of public higher education institutions in charge of groups in the North-Central and South-Western geo-political zones of Nigeria. On the strenght of this observation, the generalisability of the findings to a much wider population of academic staff of public higher education institutions in Nigeria may not be possible. This is due to the fact that the culture and dispositions of different geo-political zones were different and even affect their perception of issues. This might have effect on the likely outcome of this study if the study had been extended to other geo-political zones.

Also, only academic staffs of these institutions were sampled to the exclusion of the administrative and junior staff cadre. Academic staff only cannot ensure the excellent performance of an higher education institutions because senior administrative and junior staffs also provided facilitating functions. Their functions also contributed, although indirectly, to achievement of whatever goal a higher education institution sets for herself. This meant that their contributions had not been factored into the analysis. The students who were the first-line customers of these institutions were also excluded in the study.

Apart from that, other stakeholders in higher education institutions in Nigeria were not included in the study. Their views and perceptions were taken for granted. For example, the immediate local environment, the parents of the students and the industry that would patronise the outputs of the institutions were taken as given. Other factors like inadequate infrastructure (i.e. light, water, road networks etc which were a common issue in Nigeria), the country's international image, governmental policy and private sector characteristics were all held constant (taken as given) in the study. These could inhibit or enhance the excellent performance of these institutions.

In spite of these limitations, the findings of this study were still valid in understanding the moderating role of entrepreneurial orientation with relation to transformational leadership and knowledge management towards organisational excellence in higher education institutions in Nigeria. The findings would also trigger further investigations towards making higher education institutions in Nigeria World Class institutions.

5.8 SUGGESTIONS FOR FUTURE RESEARCH

As a result of the discussion in the limitations of this study, additional investigations could be conducted in some areas as follows:

To be able to get generalisable results on this model, higher education institutions in other geo-political zones of Nigeria needed to be investigated. The other four geo-political zones in Nigeria that were not covered were North-East, North-West, South-East and South-South. Investigation of higher education institutions in these

remaining geo-political zones would be complementary to this study. This would provide a comparable result with the results of this study and provide a high degree of confidence in generalising the result outcomes.

The administrative staff of the higher education institutions in Nigeria might be studied to determine the moderating role of entrepreneurial orientation on transformational leadership, knowledge management in relations to organisational excellence. This was because they also performed some roles in ensuring excellent performances in Nigerian HEIs.

Students who were the first prime stakeholders in higher education institutions should be studied so as to factor in their views on expectations from and implications of organisational excellence of Nigeria higher education institutions. This was necessitated because as primary stakeholders, they had as important role as the academic staff of these higher education institutions and therefore needed to be studied.

Other external stakeholders in higher education institutions in Nigeria also had what to contribute to organisational excellence in these institutions. The immediate localities of these institutions, the impact of the infrastructural facilities and the role of the regulatory authorities must be studied. Also, governmental policy and the country's image et cetera needed further studies to determine their impact on organisational excellence of higher education institutions in Nigeria.

The conceptual model in this study might be empirically tested in other contexts to further validate its acceptability. The model could be empirically tested in other

African countries or in different sectors from the education sector either in Nigeria or other parts of the World.

This study utilised the quantitative methodology. Another study might investigate this conceptual model using qualitative methodology. This would provide alternative ontological and epistemological validation of the conceptual model.

5.9 CONCLUSION

This study had investigated the moderating role of entrepreneurial orientation on transformational leadership and knowledge management as they affected organisational excellence in higher education institutions in Nigeria.

Certain results had been obtained and limitations stated. Areas of improvements had been suggested to all stakeholders. Further areas of research had also been identified. The recommendations made in the course of the study would help in improving public higher education institutions in Nigeria and other countries.

It was believed that, this was an effort to better the lot of public higher education institutions in Nigeria. This study would assist Nigeria towards being one of the twenty leading economies in the World by the year 2020 as envisioned in the Vision 2020:20.

REFERENCES

Abdul Rahaman, Abdullah, Agus & Rahmat (2007). Universities- Workplace competency Gaps: A feedback from Malaysian practising Accountants. *Journal of Financial Reporting, 5(1),* 119 -137.

Abdulkareem, A.Y. & Oyeniran, S. (2011). Managing the Performance of Nigerian Universities for Sustainable Development Using Data Envelopment Analysis. *International Journal of Academic Research in Business and Social Sciences, 1, Special Issue*

Abel, M. (2008). Competencies management and learning organizational memory. *Journal of Knowledge Management, 12(6),* 15-30.

Adams, G. L., & Lamont, B. T. (2003). Knowledge management systems and developing sustainable competitive advantage. *Journal of Knowledge Management, 7(2),* 142-154.

Affendy A. H., Nizam, A., Talib, A. & Abdul Rahim, A. (2011). The Effects of Entrepreneurial Orientation on Firm Organisational Innovation and Market Orientation towards Firm Business Performance. *International Proceedings of Economics Development & Research,10,* 280-284.

Alannah E. R., & Griffin, M. A. (2004). Dimensions of Transformational Leadership: Conceptual and empirical extensions. *The Leadership Quarterly, 15,* 329-354.

Alexandrova, M. (2004). Entrepreneurship in a transition economy: The impact of environment on entrepreneurial orientation. *Problems & Perspectives in Management, 2,* 140-148.

Alice L., & Lambermont-Ford, J. (2010). Knowledge Sharing in Organisational Contexts: a motivation-based perspective. *Journal of Knowledge Management, 14(1),* 51-66.

Amar, A. D. (2004). Motivating knowledge workers to innovate: a model integrating motivation dynamics and antecedents. *European Journal of Innovation Management, 7(2),* 89-101.

Anderson, L. (2012). Fertiie Ground: The Future of Higher Education in the Arab World. *Social Research, 79 (2),* 771 – 785.

Andreeva T. & Kianto A. (2011). Knowledge Processes, knowledge-intensity and motivation: a moderated mediation analysis. *Journal of Knowledge Management 15(6),* 1016-1034.

Ardi, R., Hidayatno, A. & Zagloel, T. Y. M. (2012) Investigating relationships among quality dimensions in higher education. *Quality Assurance in Education, 20 (4),* 408-428.

Arling, P. A. & Chun, M. W. S. (2010). Facilitating new knowledge creation and obtaining knowledge management maturity. *Journal of Knowledge Management, 15(2),* 231-250.

Armstrong, M. (2005). *A Handbook of Human Resource Management Practice.* New Delhi: Kogan-Page Publishers.

Ashly W. W. & Barlau N. Addressing Survey Nonresponse Issues: Implications for ATE Principal Investigators, Evaluators, and Researchers http://evalu-

ate.org/downloads/resources/Survey_nonresponse_issues,_Implications_for_ATE_PIs,_researchers,_evaluators.pdf Accessed on 05/01/2014

Aslam, H. S. S., Shahzad, K., Syed, A. R., & Ramish, A. (2013). Social Capital and Knowledge Sharing as Determinants of Academic Performance. *Journal of Behavioral & Applied Management*, 25-41.

ASUU (Academic Staff Union of Universities) www.asuu-ng.org/test/exesumcnanu.pdf accessed 12th February, 2014.

Atuahene-Gima, K., & Ko, A. (2001). An Empirical Investigation of the Effect Market Orientation and Entrepreneurship Orientation Alignment on Product Innovation. *Organization Science, 12(1),* 54-74.

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations.* Thousands Oaks, California: Sage Publications.

Avolio, B. J., Bass, M. B., & Jung, D. I. (1999). Reexamining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72,* 441-462.

Ayub, D. & Othman, N. (2013). Entrepreneurship Management Practices in Creating Effective Schools. *Asian Social Science; 9(12),* 69-79.

Babalola, J. B. (2001): University Funding, Responses and Performance under a Declining Economy in Nigeria. *Staff Research and Seminar Series No.1* http://www.aau.org/studyprogram/notpub/babalol2.pdf.

Babalola, J B. (2007). Reinventing Nigerian higher education for youth employment in a

competitive global economy. *Distinguished Personality Lecture.* Calabar: Department of Educational Administration and Planning, University of Calabar.

Babbie, E. and Mouton, J. (2001). *The Practice of Social Research.* Cape Town; Oxford University.

Badri, M. A., Selim, H., Alshare, K., Grandon, E. E., Younis, H., & Abdulla, M. (2006). The Baldrige Education Criteria for Performance Excellence Framework: Empirical test and validation. *International Journal of Quality & Reliability Management, 23(9),* 1118-1157.

Bakar, L. J. A., & Ahmad, H. (2010). Assessing the relationship between firm resources and product innovation performance: A resource-based view. *Business Process Management Journal, 16(3),* 420-435.

Barnett, R. (1992), *Improving Higher Education: Total quality Care.* Buckingham: SHRE/Open University Press.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management, 17(1),* 99-120.

Baron, R. M. & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51(6),* 1173-1182.

Bass, M. B. (1985). *Leadership and performance beyond expectations.* New York: Free Press.

Bass, B. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52,* 130-139.

Bass, M. B. (1998). *Transformational leadership: Industry, military, and educational im pact.* New Jersey: Mahwah Erlbaum.

Bass, M. B., & Avolio, B. J. (1990). Developing transformational leadership: 1992 and b eyond. *Journal of European Industrial Training, 14,* 21-27.

Bass, M. B., & Avolio, B. J. (1994). Shatter the glass ceiling: Women may make better managers. *Human Resources Management Journal, 33,* 549-560.

Bass, M. B., Avolio, B. J., Jung, D.I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88(2),* 207-21.

Bass, M. B. & Bass R. (2008). *The Bass Handbook of Leadership* (4th ed.). New York: Free Press.

Baumol, W. J. (1990). Entrepreneurship: Productive, Unproductive, and Destructive. *Journal of Business Venturing, 11,* 3-22.

Behling, O. & McFillen, J. M. (1996). A Syncretical model of charismatic/transformational leadership. *Groups & Organization Management,31,* 237 – 263.

Benneworth, P. & Jongbloed, B. W. (2010). Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorization. *High Education, 59,* 567–588.

Berson & Linton (2005). An examination of the relationships between leadership style, quality, and employee satisfaction in R&D versus administrative environments. *R&D Management, 35(1),* 51–60.

Bhuian, S. N., Mengue, B., & Bell, S. J. (2005). Just entrepreneurial enough: the moderating effect of entrepreneurship on the relationship between market orientation and performance. *Journal of Business Research, 58*, 9-17.

Binkauskas, G. (2012). Academic entrepreneurship: Barriers and fears versus wishes and opportunities. *International Journal of Technology Management & Sustainable Development, 11(3),* 231–244.

Bjorkman, H. & Sundgren, M. (2005). Political Entrepreneurship in action research: learning from two cases. *Journal of Organizational Change Management, 18(5),* 399-415.

Blackmore, J., & Douglas, A. (2003). Towards a "better" University: the Use of the EFQM Model in a UK Higher Education Institution. *Asian Journal on Quality, 4(2),* 1-15.

Bosetti, L. & Walker, K. (2010). Perspectives of UK Vice-Chancellors on Leading Universities in a Knowledge-Based Economy, *Higher Education Quarterly, 64 (1),* 4 –21.

Bou-Llusar, J. C., Escrig-Tena, A. B., Roca-Puig, V., & Beltrán-Martín, I. (2005). To what extent do enablers explain results in the EFQM excellence model?: An empirical study. *International Journal of Quality & Reliability Management, 22(4),* 337-353.

Bou-Llusar, J. C., Escrig-Tena, A. B., Roca-Puig, V., & Beltrán-Martín, I. (2009). An empirical assessment of the EFQM Excellence Model: Evaluation as a TQM framework relative to the MBNQA Model. *Journal of Operations Management, 27(1),* 1-22.

Bratianu, C., & Orzea, I. (2010). Organizational Knowledge Creation. *Management. Marketing Challenges for Knowledge Society, 5 (3),* 41-62.

Brown, A. (2013). Quality: where have we come from and what can we expect? *The TQM Journal, 25(6),* 585-596.

Brown, M. G. (2014). *Baldrige Award Winning Quality*. New York: Taylor & Francis.

Burns J. M. (1978) *Leadership.* New York: Harper & Row.

Burrows, J. (1999). Going beyond labels: A framework for profiling institutional stakeholders. *Contemporary Education, 70(4),* 5–10.

Butera F. (2000) Adapting the Pattern of University Organisation to the Needs of the Knowledge Economy. *European Journal of Education, 35(4),* 403-419.

Byrne B. M. (2010). *Structural Equation Modeling with AMOS - Basic Concepts, Applications, and Programming.* New York: Taylor & Francis Group.

Campbell, I. & Dealtry, R. (2003). The new generation of corporate universities – co-creating sustainable enterprise and business development solutions. *Journal of Workplace Learning, 15(7),* 368 – 381.

Carrier, C., Raymond, L., & Eltaief, A. (2004). Cyberentrepreneurship: A multiple case study. *International Journal of Entrepreneurial Behaviour & Research, 10(5),* 349-

363.

Cassell C, Symon G, Buehring A. & Johnson, P. (2006). The role and status of qualitative methods in management research: an empirical account. *Management Decision, 44(2),* 290 – 303.

Chi, M. (2010). Government aims to attract 200,000 international students by 2020. *The Malaysia Insider* http://www.themalaysianinsider.com/malaysia/article/government-aims-to-attract-200000-international-students-by-2020/

Christensen, K. S. & Bang, H. K. (2003). Knowledge Management in a process-oriented organization: three perspectives. *Journal of Knowledge Management, 7(3),* 116-128.

Clulow, V., Gerstman, J., & Barry, C. (2003). The resource-based view and sustainable competitive advantage: the case of a financial services firm. *Journal of European Industrial Training, 27(5),* 220-232.

Conti, T. A. (2007). A history and review of the European Quality Award Model. *The TQM Magazine, 19(2),* 112-128.

Corallo, A., Lazoi, M., Margherita, A. & Scalvenzi, M. (2010). Optimizing competence management processes: A case study in the Aerospace Industry. *Business process Management Journal, 16(2),* 297-314.

Cordeiro, C., Machas, A. & Neves, M. M. (2010). A case study of a Customer Satisfaction Problem: Bootstrap and Imputation Techniques *in* Vinzi, V. E., Chin W. W., Henseler, J. & Wang, H. (2010) *Handbook of Partial Least Squares: Concepts, Methods and Application*. Germany: Springer

Covin, J. G. & Slevin, D. P. (1991). A Conceptual Model of Entrepreneurship as Firm Behaviour. *Entrepreneurship: Theory & Practice, Fall,* 7-25.

Covin, J. G., & Covin, T. J. (1990). Competitive aggressiveness, environmental context, and small firm performance. *Entrepreneurship: Theory and Practice, Summer,* 35-50.

Crossman, J. E & Clarke, E. M. (2010). International experience and graduate employability: stakeholder perceptions on the connection. *High Education, 59,* 599–613.

Crowther, D. & Lancaster, G. (2009). *Research Methods: A concise introduction to research in management and business consultancy.* Boston: Elsevier Butterworth-Heinemann.

Cunha, A. B. (2009). Convergence and Innovation in Telecommunications Services: An Assessment from the Perspective of the Complementary Assets and Dynamic Capabilities Theories. *International Journal of Innovation and Technology Management, 6(1),* 41-58.

Daily Trust, Oct. 10, 2013. N100b Funds For Varsities Idle As Strike Lingers. Accessed at http://dailytrust.info/index.php/education/7280-n100b-funds-for-varsities-idle-as-strike-lingers on 29th January, 2014

Dallas, H., & Grimmer, M. (2007). The mix of qualitative and quantitative research in major marketing journals, 1993-2002. *European Journal of Marketing, 41(1/2),* 58 – 70.

Darroch, J. & McNaughton, R. (2002). Examining the link between knowledge

management practices and types of innovation. *Journal of Intellectual Capital, 3(3),* 210-222.

Davenport, T. H. (1993). *Process Innovation: Reengineering Work through Information Technology.* USA: Ernst & Young.

Davenport, T. H. (2005). *Thinking for a Living: How to Get Better Performance and Results from Knowledge Workers.* Boston: Harvard Business School Press.

Davenport, T. H. & Prusak, L. (1998). *Working Knowledge: How Organisations Manage What They Know.* Boston: Harvard Business School Press.

Davis D., (2005). *Business Research for Decision Making.* USA: Thomson Brooks/Cole.

Dawei, L., Alan, B., & Simon, C. (2011). Re-investigating business excellence: Values, measures and a framework. *Total Quality Management & Business Excellence, 22(12),* 1263-1276.

Donate, M. J. & Canales, J. I. (2011). A new approach to the concept of knowledge strategy. *Journal of Knowledge Management, 16(1),* 22-44.

Donate, M. J. & Guadamillas, F. (2011). Organizational factors to support knowledge management and innovation. *Journal of Knowledge Management, 15(6),* 890-914.

Dora, M. T. & Hussin, H. (2012). Impacts of Training on Knowledge Dissemination and Application among Academics in Malaysian Institutions of Higher Education. *Asian Social Science, 8(1),* 146-156.

Easterby-Smith, M., Thorpe R. & Jackson, P. R. (2008). *Management Research.* London: Sage Publications Ltd.

EFQM - European Foundation for Quality Management- (2014): Business Excellence Model. Available at www.efqm.org Accessed 06/08/2014)

Ellis, R. (1993). The Management of Quality in the University of Ulster. *Higher Education, 25(3),* 239-257.

Emerald: Malaysia prime minister award result (49) http://www.emeraldinsight.com.eserv.uum.edu.my/search.htm?PHPSESSID=da0d7o5pggg3r2n9grgr9jddf7&st1=malaysia+prime+minister+quality+award&ct=all&ec=1&bf=1&go=Go none discuss

Emery & Barker (2007). The Effect of Transactional and Transformational Leadership Styles on the Organizational Commitment and Job Satisfaction of Customer Contact Personnel. *Journal of Organizational Culture, Communications and Conflict, 11(1),* 77-90.

Epps, E. G. (1973). Education for Black Americans: Outlook for the Future. *The School Review, 81 (3),* 315 – 330.

Esson, J. & Ertl, H. (2013). Securing the Future of Higher Education in England. *The Political Quarterly, 84.(3),* 404 – 410.

Eskildsen, J. K., Kristensen, K., & Juhl, H. J. (2001). The criterion weights of the EFQM excellence model. *International Journal of Quality & Reliability Management, 18(8),* 783-795.

Federal Ministry of Education (2014). Federal Universities Must Sit or Perish. http://www.fme.gov.ng/index.php/2012-03-16-05-02-06/press-releases/item/52-federal-universities-must-sit-up-or-perish. Accessed on 03/01/2014.

Fischer, G. (2014). Beyond hype and underestimation: identifying research challenges for the future of MOOCs. *Distance Education, 35 (2),* 149–158.

Fisher, D. C. (1994). *Measuring Up to the Baldrige: A Quick & Easy Self-Assessment Guide For Organizations Of All Sizes.* USA: Amacom

Foster, D. & Jonker, J. (2003) Third Generation quality management: The role of stakeholders in integrating business into society. *Managerial Auditing Journal, 18(4),* 323-328.

Frank, H., Korunka, C., Lueger, M., & Mugler, J. (2005). Entrepreneurial Orientation and education in Austrian secondary schools: Status quo and recommendations. *Journal of Small Business and Enterprise Development, 12(2),* 259-273.

Fuller, J. B., Hester, K., & Cox, S. S. (2010). Proactive Personality and Job Performance: Exploring Job Autonomy as a Moderator. *Journal of Management Issues, XXVI(1),* 35-51.

Gabriel, A. (2011). Nigerians' penchant for foreign schools and implications for the economy. *National Accord* http://nationalaccordnewspaper.com/index.php?option=com_content&view=article&id=3070:nigerians-penchant-for-foreign-schools-and-implications-for-the-economy&catid=59:education&Itemid=57

George S. (1992). *The Baldrige Quality System: The Do-It-Yourself Way to Transform Your Business.* New York: John Wiley & Sons, Inc.

George S. (1997). *Uncommon Sense: Creating Business Excellence in Your Organization.* USA: John Wiley & Sons, Inc.

George, B. A. & Marino L. (2011). The Epistemology of Entrepreneurial Orientation: Conceptual Formation, Modeling, and Operationalization. *Entrepreneurship: Theory and Practice, Sept,* 989-1024.

Goi, C. L., & Goi, M. T. (2009). Rebranding of Higher Educational Institutions in Malaysia. *International Journal of Business and Management*, 170-177.

Golden-Biddle, K., & Locke, K. (1993). Appealing work: an investigation of how ethnographic texts convince. *Organisation Science, 4(2),* 595-616.

Gómez, J. G., Costa, M. M., & Lorente, Á. R. M. (2011). A critical evaluation of the EFQM model. International *Journal of Quality & Reliability Management, 28(5),* 484-502.

Gottschalk, P., & Smith, R. (2011). Criminal Entrepreneurship, white-collar criminality, and neutralization theory. *Journal of Enterprising Communities: People and Places in the Global Economy, 5(4),* 300-308.

Grifoll, J., Hopbach, A., Kekäläinen, H., Lugano, N., Rozsnyai, C. & Shopov, T. (2012). Quality Procedures in the European Higher Education Area and Beyond – Visions for the Future. Available at www.enqa.eu/pubs.lasso accessed on 06/08/2014.

Grigg, N., & Mann, R. (2008). Promoting excellence: an international study into creating awareness of Business Excellence models. *The TQM Journal, 20(3),* 233-248.

Groves, R. M. and Peytcheya, E. (2008). The Impact of Nonresponse Rates on Nonresponse Bias: A Meta-Analysis. *Public Opinion Quarterly, 72 (2),* 167-189.

Haarmann, J., Kahlert, T., Langenberg, L., & Muller-Prothmann, T. (2009). K.exchange: A Systematic Approach to Knowledge Transfer of the Aging Workforce. The India: Icfai university Press

Hair, J. F., Babin, R., Money A. H., & Samouel, P. (2003) *Essentials of Business Research Methods.* USA: John Wiley & Sons, Inc.

Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). 7th Ed. *Multivariate Data Analysis- A Global Perspective.* New Jersey: Pearson Education, Inc

Hair, J. F., Money A. H., Samouel P., and Page M. (2007). *Research Methods for Business.* England: John Wiley & Sons Ltd.

Hardy, C. (1990). "Hard" Decisions and "Though" Choices: The Business Approach to University Decline. *Higher Education, 20(3),* 301-321.

Hayes, F. A. (2014). *Introduction to Mediation, Moderation, and Conditional Process Analysis- A Regression-Based Approach*. New York: Guilford Press

Heaphy, M. S. & Gruska, G. F. (1995). *The Malcolm Baldrige National Quality Award: A Yardstick for Quality Growth.* USA: Addison-Wesley Publishing Company.

Hebscohost 1: MALAYSIA EXCELLENCE 111 results none discuss PMQA but TQM only http://ehis.ebscohost.com.eserv.uum.edu.my/ehost/results?sid=a8f1eb0c-d8bd-46f4-82d5-

394b07f6a035%40sessionmgr11&vid=9&hid=6&bquery=malaysia+and+excellence&bdata=JmRiPWJ0aCZ0eXBlPTAmc2l0ZT1laG9zdC1saXZlJnNjb3BlPXNpdGU%3d 30/12/12

Hebscohost 3: Malaysia Prime Minister Quality Award http://ehis.ebscohost.com.eserv.uum.edu.my/ehost/results?sid=a8f1eb0c-d8bd-46f4-82d5-394b07f6a035%40sessionmgr11&vid=11&hid=6&bquery=malaysia+and+excellence&bdata=JmRiPWJ0aCZ0eXBlPTAmc2l0ZT1laG9zdC1saXZlJnNjb3BlPXNpdGU%3d

Hebscohost 2: MALAYSIA QUALITY AWARD 20 results http://ehis.ebscohost.com.eserv.uum.edu.my/ehost/results?sid=a8f1eb0c-d8bd-46f4-82d5-394b07f6a035%40sessionmgr11&vid=10&hid=6&bquery=malaysia+and+excellence&bdata=JmRiPWJ0aCZ0eXBlPTAmc2l0ZT1laG9zdC1saXZlJnNjb3BlPXNpdGU%3d 30/12/12

Henk ter Bogt & Helden Jan van, (2012). The practical relevance of management accounting research and the role of qualitative methods therein: The debate continues. *Qualitative Research in Accounting & Management, 9(3),* 265 – 273.

Hidding, G. J., Wilson, T., Williams J. R., & Kuncheria, T. (2008). Complementary Resources' Role in First Movers and Followers in I.T. Industries. *Journal of Information Science and Technology, 5(3),*3-23.

Hodgkinson, M. & Brown, G. (2003). Enhancing the Quality of Education: A Case Study and Some Emerging Principles. *Higher Education, 45(3),* 337-352.

Hoffman, J. J., Hoelscher, M. L., & Sherif, K. (2005). Social Capital, Knowledge Management, and sustained superior performance. *Journal of Knowledge Management*, *9(3)*, 93-100.

House, R. J. (1996). Path-goal theory of leadership: Lessons, legacy, and a reformulated theory. *Leadership Quarterly*, *7*, 323-352.

Houston, D. (2008). Rethinking quality and improvement in higher education. *Quality Assurance in Education*, 16 (1), 61-79

IBM Corporation, (1989, 2011). User Manual for SPSS 20

Israel, G. D. (2013) Combining Mail and E-Mail Contacts to Facilitate Participation in Mixed-Mode Surveys. *Social Science Computer Review*, *31(3)*, 346-358.

Jayamaha, N. P., Grigg, N. P., & Mann, R. S. (2011). Empirical analysis of the Baldrige Criteria as both an organisational performance measure and a theoretical model. *Measuring Business Excellence*, *15(1)*, 20-33.

Jeewon, C., Park, I., & Michel, J. W. (2011). How does leadership affect information system success? The role of transformational leadership. *Information & Management*, *48*, 270-277.

Jose, P. E. (2014). *Doing Statistical Mediation and Moderation*. New York: The Guilford Press

Jstor: Malaysia prime minister award result (179) none found http://www.jstor.org.eserv.uum.edu.my/action/doBasicResults?la=&wc=on&fc=off&vf=all&bk=off&pm=off&jo=off&ar=off&re=off&ms=off&Query=malaysia+prim

e+minister+quality+award&sbq=malaysia+prime+minister+quality+award&prq=malaysia+prime+minister+award&si=1&aori=a&so=rel&hp=50&Go=Go

Judd, C. H. (1942). The Future of American Education. I. *The School Review, 50 (8),* 559-567.

Judd, C. H. (1942). The Future of American Education. II. *The School Review, 50 (9),* 621-628.

Kandiko, C. B. (2012) Leadership and creativity in higher education: the role of Interdisciplinarity. *London Review of Education, 10(2),* 191–200.

Kanji, G. K. (2002). *Measuring Business Excellence.* London: Routledge.

Kanji, G. K. (2006). *Measuring Business Excellence,* New York: Routlege.

Kanji, G. K., & Wong, A. (1999). Business excellence model for supply chain management. *Total Quality Management, 10(8),* 1147-1168.

Kim, D. Y., Kumar, V., & Murphy, S. A. (2010). European foundation for quality management business excellence model: An integrative review and research agenda. *International Journal of Quality & Reliability Management, 27(6),* 684-701.

Kim, S. & Lee, H. (2006). The Impact of Organizational Context and Information Technology on Employee Knowledge-Sharing Capabilities. *Public Administration Review, 66(3),* 370-385.

Klefsjö, B., Bergquist, B., & Garvare, R. (2008). Quality management and business excellence, customers and stakeholders: Do we agree on what we are talking about, and does it matter? *The TQM Journal, 20(2),* 120-129.

Kotabe, M., Dunlap-Hinkler D., Parente, R., & Mishra, H. A. (2007). Determinants of

Cross-National Knowledge Transfer and Its Effect on Firm Innovation. *Journal of International Business Studies, 38(2),* 259-282.

Krishnaveni, R. & Sujatha, R. (2012). Communities of Practice: An Influencing Factor for Effective Knowledge Transfer in Organizations. *Journal of Knowledge Management, IUP, 10(1),* 26-40.

Kwiatkowski, S. (1990). Survival through Excellence: Prospects for the Polish University. *European Journal of Education, 25(4),* 391-398.

Kumar, M. R. (2007). Comparison between DP and MBNQA: convergence and divergence over time. *The TQM Magazine, 19(3),* 245-258.

Lai, H., Chiu, Y., & Liaw, Y. (2010). Can external corporate venturing broaden firm's technological scope? The role of complementary assets. *Journal of Engineering and Technology Management, 27,* 183-196.

Lam, A. & Lambermont-Ford, J. (2010). Knowledge sharing in organisational context: a motivation-based approach. *Journal of Knowledge Management, 14(1),* 51-66.

Laurie, E. P. & Lavigna, B. (2010). Transformational Leadership and Public service Motivation: Driving individual and Organisational Performance. *Public Administration Review, Sept/Oct,*

Lee S., Kim, B. G. & Kim, H. (undated). An Integrated View of knowledge Management for Performance. *Journal of Knowledge Management, 16(2),* 183-203.

Lee, C., Tsai, D. S., & Amjadi, M. (2011). The Adaptive Approach: Reflections on Knowledge Management Models. *Journal of Management Inquiry*

Lee, L. T., & Sukoco, B. M. (2011). Risk-Taking as a Moderator of the Effect of Team

Reflexivity on Product Innovation: An Empirical Study. *International Journal of Management, 28(4),* 263- 274.

Li, Y., Liu, X., Wang, L., Li, M., & Guo, H. (2009). How Entrepreneurial Orientation Moderates the Effect of Knowledge Management on Innovation. *Systems Research and Behavioural Science, 26,* 645-660.

Little R. J. A. & Rubin D. B. (2002). *Statistical Analysis with Missing Data*. New Jersey: Wiley.

Lomas, L. (2004). Embedding quality: the challenges for higher education. *Quality Assurance in Education, 12(4),* 157-165.

Long, C. (2013). The Changing Face of Higher Education: The Future of the Traditional University Experience. Xiii, 58 – 63. Available at www.harvardkennedyschoolreview.com Accessed on 07/08/2014.

Lumpkin, G. T., & Dess, G. G. (1996) Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *The Academy of Management Review, 21(1),* 135-172.

Lumpkin, G. T. & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing, 16 (5),* 429-451.

Lustri D., Miura, I., & Takahashi, S. (2007). Knowledge Management Model: practical application for competency development. *The Learning Organisation, 14(2),* 186-202.

Malcolm Baldrige National Quality Improvement Act of 1987

Mars, M. M. & Rios-Aguilar, C. (2010). Academic entrepreneurship (re)defined: significance and implications for the scholarship of higher education. *High Education, 59,* 441–460.

Mårtensson, M. (2000). A critical review of knowledge management as a management tool. *Journal of knowledge management, 4(3),* 204-216.

McFadzean, E., O'Loughlin, A., & Shaw E. (2005). Corporate entrepreneurship and innovation part 1: the missing link. *European Journal of Innovation Management, 8(3),* 350-372.

McNeish, J. & Mann, I. J. S. (2010). Knowledge Sharing and Trust in Organizations. *Journal of Knowledge Management, 18(1/2),* 18-38.

Metric Consultancy Limited (2007). Business Excellence Movement: Historical Perspective. In Patwardhan S. G. (ed), *Business Excellence: Concepts and Cases.* India: The Icfai University Press.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, application.* Thousand Oaks: Sage Publications

Middlehurst, R.(2001). Quality Assurance Implications of New Forms of Higher Education; European Network for Quality Assurance in Higher Education,

Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal, 3,* 1-25.

Miller, D. and Friesen, P. H. (1983). Strategy-making and environment: The third link. *Strategic Management Journal. 4 (3),* 221-235.

Morris, J. H., & Snyder, R. A. (1979). A Second Look at Need for Achievement and Need for Autonomy as Moderators of Role Perception-Outcome Relationships. *Journal of Applied Psychology, 64(2),* 173-178.

Morris, M. H. and Paul, G. W. (1987). The relationship between entrepreneurship and marketing in established firms. *Journal of Business Venturing, 2,* 247-259.

Moustaghfir, K. (2008). The dynamics of knowledge asset and their link with firm performance. *Measuring Business Excellence, 12(2),* 10-24.

MPC - Malaysia Productivity Corporation (2011). The Business Excellence Journey. August

National Board for Technical Education http://nbte.gov.ng/institutions.html

National Bureau of Statistics, (2010). Annual abstract of statistics. Nigeria: Federal Government of Nigeria

National Commission for Colleges of Education www.ncceonline.gov.ng/institutions.html

National Productivity Centre (Incorporation) (Amendment) Act, A801 1991.

National Productivity Corporation Act (Incorporated) (Amended) 2008.

National Salaries, Income and Wages Commission. (2013). Revised Consolidated National Universities Academic Salary Structure (CONUASS)

National Salaries, Income and Wages Commission. (2013). Revised Consolidated Polytechnic and Colleges of Education Academic Salary Structure (CONPCASS)

National Universities Commission http://www.nuc.edu.ng/pages/universities.asp

Ngulube, P. (2009).Utilisation of Communities of Practice in the Humanities at the Universities of KwaZulu-Natal Zululand, South Africa. *African Journal of Library Archives & Information Science, 19(1),* 1 – 12.

Nguni, Sleegers and Denessen (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice, 17(2),* 145-177.

Nobre, F. S. & Walker, D. S. (2011). An ability-based view of the organisation: Strategic-resource and contingency domains. *The Learning Organization, 18(4),* 334-345.

Nonaka, I. (1991). The Knowledge-Creating Company. *Harvard Business Review, Nov-Dec,* 96-104.

Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company- How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.

Nonaka, I., Toyama, R., Konno, N. (2000). SECI, Ba and leadership: a unified model of dynamic knowledge creation. *Long Range Planning, 33(1),* 5-34.

Nonaka, I. & von Krogh, G. (2009). Tacit Knowledge and Knowledge Conversion:

Controversy and Advancement in Organizational Knowledge Creation Theory. *Organization Science, 20(3),* 635-652.

Ogbogu, C. O. (2013). Policy Issues in the Administration of Higher Education in Nigeria. *World Journal of Education,* 3(1), 32-38.

Okojie, J. A. (2011). University Autonomy: Repositioning the Nigerian Education System in the 21st Century. Nigeria: National University Commission;

Okuwa, O.B and Campbell, O.A (2011). The Influence of Strike on the Choice of Higher Education Demand in Oyo State, Nigeria. *Journal of Emerging Trends in Economics and Management Sciences* (JETEMS), *2 (4),* 275-280.

Olabisi, D. (2012). More students seek higher education abroad –Report. *The Punch* http://www.punchng.com/education/more-students-seek-higher-education-abroad-report/ 04/06/2012

Olson, K. (2006). Survey Participation, Nonresponse Bias, Measurement Error Bias, and Total Bias. *Public Opinion Quarterly, 70(5):* 737-758.

Omerzel, D. G., Antoncic B., & Ruzzier, M. (2011) Developing and Testing a multi-dimensional knowledge management model on Slovenian SMEs. *Baltic Journal of Management, 6(2),* 179-204.

Osman, Z., Goon, C. A., & Aris, W. H. W. (1998). Quality services: policies and practices in Malaysia. *Library Management, 19(7),* 426 – 433.

Osseo-Asare, A. E., Longbottom, D., & Murphy, W. D. (2005). Leadership best practices for sustaining quality in UK higher education from the perspective of the EFQM

Excellence Model. *Quality Assurance in Education, 13(2),* 148-170.

Pallant J. (2013). *SPSS Survival Manual*. Australia: Allen & Unwin

Patwardhan S. G. (2007). Excellence in Business. In Patwardhan S. G. (ed.). *Business Excellence: Concepts and Cases.* India: The Icfai University Press.

Pearce II, J. A., Kramer, T. R., & Robbins, D. K. (1997). Effects of Managers' Entrepreneurial Behavior on Subordinates. *Journal of Business Venturing, 12,* 147-160.

Peet, M. (2011). Leadership transitions, tacit knowledge sharing and organizational generativity. *Journal of Knowledge Management, 16(1),* 45-60.

Perrin, A. (2012). The practices of knowledge managers in Lafarge. *Journal of Knowledge Management, 16(2),* 204-214.

Pertusa-Ortega, E. M., Molina-Azorin, J. F., & Claver-Cortes, E. (2010). Competitive strategy, structure and performance: A comparison of the resource-based view and the contingency approach. *Management Decision, 48(8),* 1282-1303.

Peteraf, M. A. (1993). The Cornerstone of Competitive Advantage: A Resource-Based View. *Strategic Management Journal, 14,* 179-191.

Peters, T. J. & Waterman, R. H. (1982). *In Search of Excellence: Lessons from America's Best-Run Companies.* New York: Harper & Row.

Peters, T. J. & Waterman, R. H. (2004). *In Search of Excellence: Lessons from America's Best-Run Companies.* New York: Harper & Row

Politis, Y, Litos C, and Grigoroudis, E. (2009). A business excellence model for the hotel sector: implementation to high-class Greek hotels. *Benchmarking: An International Journal, 16(4),* 462-483.

Prabhu, V. B., & Robson, A. (2000). Impact of leadership and senior management commitment on business excellence: an empirical study in the North East of England. *Total Quality Management, 11(4-6),* 399-409.

Prabhu, V. P., McGuire S. J., Drost, E. A., & Kwong, K. K. (2012). Proactive personality and entrepreneurial intent: Is entrepreneurial self-efficacy a mediator or moderator? *International Journal of Entrepreneurial Behaviour & Research, 18(5),* 559-586.

Prybutok, V., & Cutshall, R. (2004). Malcolm Baldrige National Quality Award leadership model. *Industrial management & Data systems, 104(7),* 558-566.

Quintas, P. (2002). Managing Knowledge in a New Century. In Little, S., Quintas P., & Ray, T. (eds), *Managing Knowledge: An Essential Reader*. London: The Open University

Rafferty A. E. and Griffin M. A. (2004) Dimensions of transformational leadership: Conceptual and empirical extensions. *The Leadership Quarterly 15,* 329-354.

Ramayah, T. (Undated). Developing and Testing Moderators and Mediators in Management Research. School of Management, Universiti Sains Malaysia, Minden, 11800 Penang. URL: http://www.ramayah.com

Ranking Web of Universities http://www.webometrics.info/en/Africa/Nigeria accessed on 26th January, 2014.

Ranking Web of Universities http://www.webometrics.info/en/Africa accessed on 26th

January, 2014.

Richard, O. C., Barnett, T., Dwyer S., & Chadwick, K. (2004). Cultural Diversity in Management, Firms Performance, and the Moderating Role of Entrepreneurial Orientation Dimensions. *The Academy of Management Journal, 47(2),* 255-266.

Robbins, J. (2008). Toward a Theory of the University: Mapping the American Research University in Space and Time. *American Journal of Education, 114 (2),* 243-272.

Rothaermel, F. (2001). Incumbent's Advantage through Exploiting Complementary Assets via Interfirm Cooperation. *Strategic Management Journal 22,* 687-699.

Santosh, B. R. & Muthiah, K. (2012). Knowledge Transfer from Repatriated Employees: The Indian Experience. *Journal of Knowledge Management IUP, 10(1),* 7-25.

Sciverse: http://www-scopus-com.eserv.uum.edu.my/results/results.url?sort=plf-f&src=s&st1=malaysia+prime+minister+quality+award&sid=7B90CA58C5E0342F6DFCC1D9BB73145B.kqQeWtawXauCyC8ghhRGJg%3a20&sot=b&sdt=b&sl=52&s=TITLE-ABS-KEY%28malaysia+prime+minister+quality+award%29&origin=searchbasic&txGid=7B90CA58C5E0342F6DFCC1D9BB73145B.kqQeWtawXauCyC8ghhRGJg%3a2

Sekaran, U. and Bougie, R. (2013). *Research Methods for Business: A Skill Building Approach*. New York: John Wiley & Sons, Inc.

Selvarajah, C. & Masli, E. K. (2011). Ethnic entrepreneurial business cluster development: Chinatowns in Melbourne. *Journal of Asia Business Studies, 5(1),* 42-60.

Serrano-Velarde, K. & Krücken, G. (2012). Private Sector Consultants and Public

Universities: the challenges of Cross-Sectoral Knowledge Transfers. *European Journal of Education, 47(2),*277-289.

Shafia, M. A., Vanani, I. R., & Mirzaei, S. F. (2011). A Model to Capture the Embedded Knowledge of Implemented Projects in Iranian Motor-Vehicle Industry. *The IUP Journal of Knowledge Management, 9(2),* 44-55.

Shoham, S. & Perry, M. (2009). Knowledge management as a mechanism for technological and organizational change management in Israeli universities. *High Education, 57,* 227–246.

Shu'ara J. (2010). Higher Education Statistics - Nigerian Experience in Data Collection. UNESCO Institute of Statistics Workshop on Education Statistics in Anglophone Countries, Windohek

Silverman, D. (2000). *Doing Qualitative Research: A Practical Handbook.* London: Sage Publications.

Smith, R. (2009). Understanding entrepreneurial behaviour in organized criminals. *Journal of Enterprising Communities: People and Places in the Global Economy, 3(3),* 256-268.

Solomom M. R., Englis, B. G., Englis, P. D., Goldsmith, M. Valentine, L. & Bieak, N. (2005). Knowledge Management as Competitive advantage in the Textile and Apparel Value Chain. *National Textile Centre Annual Report* Sept

Soone K. & Lee, H. (2006). The Impact of Organizational Context and information Technology on Employee Knowledge-Sharing Capabilities. *Public Administration Review, 66(3),* 370-385.

Spreitzer, G., Perttula, K. H., & Xin, K. (2005). Traditionality Matters: An Examination of the Effectiveness of Transformational Leadership in the U.S. and Taiwan. *Journal of Organizational Behavior, 26(3),* 205-227.

Stadler, R., Reid, S., & Fullagar, S. (2013). An ethnographic exploration of knowledge practices within the Queensland Music Festival. *International Journal of Event and Festival Management, 4(2),* 90-106.

Symon, G., Cassell, CM (1999) (Eds), *Qualitative Methods and Analysis in Organizational Research: A Practical Guide.* London: Sage Publications.

Tabachnick, B. G. & Fidell, L. S. (2014). *Using Multivariate Statistics.* England: Pearson Education Limited.

Talwar, B. (2009). Comparative study of core values of excellence models vis-à-vis human values. *Measuring Business Excellence, 13(4),* 34-46.

Talwar, B. (2011). Comparative study of framework, criteria and criterion weighting of excellence models. *Measuring Business Excellence, 15(1),* 49-65.

Tan, K. C. (2002). A comparative study of 16 national quality awards. *The TQM Magazine, 14(3),* 165-171.

Tan, K. C., & Khoo, H. H. (2002). The Relevance of Confucianism in Southeast Asian National Quality Awards. *International Journal of Cross Cultural Management,*

2(1), 65-82.

Tan, K. C., Wong, M. F., Mehta, T., & Khoo, H. H. (2003). Factors affecting the development of national quality awards. *Measuring Business Excellence, 7(3),* 37-45.

Tang, B., Kreiser, P. M., Marino, L., & Weaver, K. M. (2010). Exploring Proactiveness as a Moderator in the Process of Perceiving Industrial Munificence: A Field Study of SMEs in Four Countries. *Journal of Small Business Management, 48(2),* 97-115.

Tata R. (2007) in Patwardhan S. G. (ed). B*usiness Excellence: Concepts and Cases.* India: The Icfai University Press.

Teare, R., & Rayner, C. (2002). Capturing organizational learning. International *Journal of Contemporary Hospitality Management, 14(7),* 354-360.

Teece, D. J. (1986). Profiting from technological innovation: implications for integration, collaboration, licensing and public policy. *Research Policy, 15,* 285-305.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal, 18(7),* 509-533.

Teske, P. & Schneider, M. (1994). The Bureaucratic Entrepreneur: The Case of City Managers. *Public Administration Review, 54(4),* 331-340.

The Nigerian Tribune (2010) University Ranking Editorial (March) http://www.tribune.com.ng/index.php/editorial/2628-university-ranking.html 11/05/12

Thompson, J. L. (2002). The world of the social entrepreneur. *International Journal of Public Sector Management, 15(5),* 412-431.

Tripsas, M. (1997). Unraveling the Process of Creative Destruction: Complementary Assets and Incumbent Survival in the Typesetter Industry. *Strategic Management Journal, 18,* 119-142.

Tseng, C., Pai, D. C., & Hung, C. (2011). Knowledge absorptive capacity and innovation performance in KIBS. *Journal of Knowledge Management, 15(6),* 971-983.

Tsinidou, M. Gerogiannis, V., & Fitsilis, P. (2010). Evaluation of the factors that determine quality in higher education: an empirical study, *Quality Assurance in Education, 18(3),* 227-244.

Tuck, C. E. (2005). A Quality Award and Stock Market Reaction: Evidence from Malaysia. *Total Quality Management, 16(6),* 681–691.

Udida, L. A., Bassey, U. U., Udofia I. U., & Egbona, E. A. (2009). System Performance and Sustainability of Higher Education in Nigeria. 11th International Conference of Educational Management Association of South Africa

Vanguard Editorial http://www.vanguardngr.com/2012/01/jonathan-decries-poor-ratings-of-nigerian-varsities/ 11/05/12

Vaivio, J. (2008). Qualitative management accounting research: rationale, pitfalls and potential. *Qualitative Research in Accounting & Management,* 5(1), 54-86.

Walumba, F. O., Wang, P., Lawler, J. J., and Shi, K. (2004). The role of collective efficacy in the relations between transformational leadership and work outcomes. *Journal of Occupational and Organisational Psychology, 77,* 513-530.

Walumba, F. O., Orwa, B., Wang, P., Lawler, J. J., and Shi, K. (2005). Transformational Leadership, Organisational Commitment, Job Satisfaction: A comparative study of Kenya and U.S. Financial Firms. *Human Resource Development Quarterly*, *16*, 235-256.

Web of Knowledge Result one http://apps.webofknowledge.com.eserv.uum.edu.my/summary.do?SID=P1niki4mk42l3ni61oH&product=WOS&qid=1&search_mode=GeneralSearch 30/12/12 same result

Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, *5*, 171-180.

Wiley online: http://onlinelibrary.wiley.com.eserv.uum.edu.my/advanced/search/results 705 results

Wold, Eriksson & Kettaneh, (2010). PLS in Data Mining and Data Integration *in* Vinzi, V. E., Chin W. W., Henseler, J. & Wang, H. (2010) *Handbook of Partial Least Squares: Concepts, Methods and Application.* Germany: Springer

Xu J. & Quaddus, M. (2012) Examining a Model of Knowledge Management Systems Adoption and Diffusion: A Partial Least Square approach. *Knowledge-Based System 27*, 18-28.

Yokoyama, K. (2006). Entrepreneurialism in Japanese and UK Universities: Governance, Management, Leadership, and Funding. Higher *Education, 52(3),* 523-555.

Zubac, A., Hubbard, G., & Johnson, L. W. (2010). The RBV and value creation: a

managerial perspective. *European Business Review*, *22(5)*, 515-538.