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**ALLIANCE ORIENTATION, TOTAL QUALITY
MANAGEMENT AND PERFORMANCE OF NIGERIAN
PUBLIC UNIVERSITIES: THE ROLE OF CORPORATE
ENTREPRENEURSHIP**

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PERFORMANCE OF NIGERIAN PUBLIC UNIVERSITIES: THE ROLE OF
CORPORATE ENTREPRENEURSHIP**

By

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**Thesis Submitted to
School of Business Management, College of Business,
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(Management)**

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ABSTRACT

The study aims to investigate an association between alliance orientation and total quality management on the performance of Nigerian public universities, with the moderating variable of corporate entrepreneurship. Literature was reviewed in management and other related fields for better understanding of past, present and future needs in the study area. Higher education is a vital tool for the economic growth in Nigeria and it constitutes an important basis of producing high level manpower which significantly contributes towards the economic development of the country. As a result of a thorough review of literature, a model was proposed to examine these associations. A questionnaire survey design was used and the academic leaders of 13 public Northwestern Nigerian Universities were the respondents. The study employed systematic sampling technique in data collection, and 434 usable questionnaires were received from the respondents. A combination of descriptive and inferential statistics was used to analyze the data collected using SPSS statistical package version 20, and smart partial least squares (PLS) 2.0 M3. The findings of this study indicate that alliance orientation and total quality management have direct significant positive relationship with performance, whereas, corporate entrepreneurship was found to moderate on the relationship between alliance orientation, total quality management and performance among Nigerian public Universities. Finally, study implications for theory and practice, limitations, conclusions as well as direction for future research were provided and discussed.

Keywords: alliance orientation, total quality management, corporate entrepreneurship, performance

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ABSTRAK

Kajian ini bertujuan untuk meneliti hubungan di antara orientasi perikatan dan pengurusan kualiti menyeluruh dengan prestasi universiti-universiti awam di Nigeria, dengan keusahawanan korporat sebagai variabel penyederhana. Literatur telah diulas dalam bidang pengurusan dan bidang berkaitan bagi mendapatkan pemahaman lebih baik tentang keperluan lepas, semasa dan masa hadapan pengajian berkenaan. Pendidikan tinggi merupakan alat yang penting bagi pertumbuhan ekonomi di Nigeria and ia adalah asas penting bagi mengeluarkan gunatenagatahap tinggi yang akan menyumbangkan kepada pembangunan ekonomi negara. Hasil daripada ulasan terperinci literatur, satu model dicadangkan untuk meneliti hubungan-hubungan ini. Rekabentuk tinjauan soal-selidik digunakan dan pemimpin akademik di 13 universiti awam di baratdaya Nigeria dijadikan responden. Kajian ini menggunakan teknik persampelan sistematik dalam pemungutan data dan sebanyak 434 soal selidik bolehguna diterima daripada responden. Gabungan deskriptif dan statistik inferensi digunakan untuk menganalisis data melalui SPSS pakej statistik versi 20 dan smart partial least squares (PLS) 2.0 M3. Dapatan kajian menunjukkan orientasi perikatan dan pengurusan kualiti menyeluruh mempunyai hubungan signifikan positif dengan prestasi manakala keusahawanan korporat menyederhana hubungan di antara orientasi perikatan, pengurusan kualiti menyeluruh dan prestasi di kalangan universiti-universiti awam Nigeria. Akhir sekali, implikasi kajian bagi teori dan praktis, limitasi, rumusan serta arah tuju kajian masa hadapan di sedia dan dibincangkan.

Kata kunci: orientasi perikatan, pengurusan kualiti menyeluruh, keusahawanan korporat, prestasi

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LIST OF ABBREVIATIONS

AL	Academic Leaders
AO	Alliance Orientation
AVE	Average Variance Extracted
BP	Business Performance
CE	Corporate Entrepreneurship
CR	Composite Reliability
EO	Entrepreneurial Orientation
FL	Factor Loadings
FP	Firm Performance
ISO	International Standard Organization
NPE	National Policy on Education
NUC	National Universities Commission
OP	Organizational Performance
PLS	Partial Least Square
RBV	Resource Based View
SEM	Structural Equation Modelling
SME	Small And Medium Entreprises
SPSS	Statistical Package for Social Science
TQM	Total Quality Management
TQS	Total Quality Services
US	United State



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

University education serves as a means for producing individuals that possess academic and mental capability which will in turn help in the production of high level manpower to man the various sectors of the economy (Wolfensohn, 2000). Subiar (2014) asserted that the intellectual and professional life of a country depends on the sound higher education, especially university education that provides quality products of international standards. Research has shown that quality education could be determined by the following factors, among which is entrepreneurship training, academic qualification, financial, moral and many more. The problem of accessing higher education is due to the expected rise in demand for it and the subsequent need for implementing UNESCO (2000)'s goal of Education for all. Presently, Juman (2007) reported that there is a continuous fall in the enrollment rate in Sub-Saharan Africa, which is found to be less than five percent.

In particular, the National Policy on Education (NPE), (2004) highlighted the aims of university education which includes the following: contribution to national development through high-level relevant manpower training; developing and inculcate proper values for the survival of the individual and the society; developing

the intellectual capability of individuals to understand and appreciate their local and external environments; acquiring both physical and intellectual skills which will allow individuals to be self-reliant and useful members of the society; promoting and encouraging scholarship and community service; forging and strengthening national unity; promoting national and international understanding and interactions. Self reliance philosophy has not been incorporated in the Nigerian tertiary education curriculum such that can allow for the creation of a new culture toward a good and enabling productive environment that will encourage a sense of pride and self-discipline, motivation of people to take an active part and decisions affecting their general welfare, promoting new sets of behaviors and culture for the accomplishment of future challenges (Bukola, 2011).

Uche (2015) asserted that the inability of the Nigerian tertiary education to instill the above philosophy in students was the major reasons for human and natural resources wastages. The youth and graduate from Nigerian tertiary institutions are not prepared with the skills with which to exploit and judiciously utilized the endowed natural resources in the country. These and other reasons have rendered the attainment of self-reliance and entrepreneurship education among the teeming graduates difficult to maintain. In their own contributions, Ajah (2012) observe the alarming rate of repeats, carry overs and drop out among the university graduate showing their level of inpreperadness in learning and skills acquisition.

Arogundade (2015) acknowledged that a lack of adequate total quality management initiatives, poor alliance orientation and also Nigeria's economic and political

environment were unhealthy for a sound entrepreneurship development. In addition, some of the government programs are not given adequate attention toward the promotion of entrepreneurship, looking at the country – Nigeria, the level of the infrastructural development provided by the government is still very low and this has been affecting productivity among the Nigeria universities and in general the entrepreneurial activities in the country. The Nigerian environment is equally characterized with high rate of many business enterprises winding up prematurely consequent upon the employable and unemployable youths (Okpara, 2011). It is against this background that this research is set to look into the association between alliance orientation, total quality management and performance of Nigerian public Universities with the moderating variable of corporate entrepreneurship.

Despite the contribution of Nigerian public universities in ensuring employment generation as well as quality education, innovation through technological enhancement, the sector has recorded a dropped in the form of employment generation. In 1979, the quality of Nigerian university graduates in employment was 72 percent as against, 68 percent in 1999 (Uche, 2014). The statistics above clearly showed the reduction and or poor performance of the sector, hence the need to conduct empirical studies on the academic performance of Nigerian public universities.

Dabalén and Adekola (2010) reported that employers complain about graduates poor preparation to job. In their findings, there is a persistent fall in the academic standards for a number of years that a university degree is no longer a guarantee of technical competence. As a result, half baked university graduates are continuously

been produced. Similarly, graduates performance in the year 2011/2012 and 2012/2013 stood at 48 percent and 47.3 percent which clearly shows a fall in the performance of students and this constitute a problem which needs an empirical investigation (Dabalén & Adekola, 2010). It has been reported that faculty staff among Nigerian University (2010) was inadequate, which has a direct impact on student performance i.e. the number required is 50,000 while the available staff strength stood at 30,452, there is a short fall of 19,548 representing 39.1 percent (Shu'ara, 2014).

Babs – Fafunwa (1980) have criticized the severe inadequate quality management, alliance and knowledge base of Nigerian university products. This is also supported by the study of Onweueme and Nwadiani (2001) studies conducted on students' performance in general studies courses. They found that an average student performance of 55.9 percent among 6922 students was not encouraged as compared to what is obtained in the 1980's and early 1990's. Nwadiani (2012) and Moja (2013) reported a poor and low levels of students performance in the Nigerian work. Akinyimi (2013) criticized the readiness of government in funding the university education, which resulted to poor performance competency among the Nigerian graduates.

Several variables were reported in different studies to predict performance, and these include strategic human resource management, market orientation, knowledge management, innovation, corporate social responsibility, social context, dynamic competence, learning orientation, government support, technical competence, firm

characteristics, firm size, individual determinants as well as the intensity of a marketing decision. Alliance orientation, total quality management, and corporate entrepreneurship were chosen for this study because they constitute the major issues found to predict performance within the study context.

However, other studies have shown the relevance of entrepreneurial orientation on performance. Empirical findings on corporate entrepreneurship is considered to be an important issue in the study of entrepreneurial organization and corporate ventures (Covin, Green & Slevin, 2006). Miller(1983) viewed entrepreneurial firms as those that are taking risks, very innovative, and always being proactive. The following have been identified as the major problems facing Nigerias university education as: lack of adequate alliance orientation, poor quality management, poor corporate entrepreneurial orientation, poor funding, inadequate facilities, general indiscipline (Nwagu, 1997; Odi & Omofinwan, 2007).

1.2 Problem Statement

The non-performance of Nigerian graduates is a subject of worry to the education stakeholders (Shu'ara, 2014). Ekundayo and Ajayi (2014) posited that the government priority to education is low, hence the basis for low alliance and partnering exploitation, poor quality enhancement along side other managerial problems. The current executive - secretary of the National Universities Commission (NUC), Okoji (2014), admitted that Nigeria Universities are faced with a lot of shortcomings which

includes, among others inadequate allianceorientation strategies for managing the universities, low corporate entrepreneurial spirit, lack of access to funding, inefficiency in managing the universities, globalization threat, unfavourable learning environment, insecurity, and many more. Nwachuku (2015) argued on poor partnering and achievement motivation along side low productivity with little or no vocational orientation resulting to high unemployment and under employment. Other common practical issues regarding the non- performance of the Nigerian university students are issues of discussion to all.

Similarly, Aluede, Idogho and Imonikhe (2014) asserted that the expectation of university education is to serve as instrument of change, innovation and invention, with creativity, resourcefulness and imaginative abilities of learners to be sharpened by educational programs and entrepreneurial spirit, thus, the inability of Nigerian universities to achieve that, calls for empirical investigation. Nwagu (2014) was reported to itemize the above mentioned factors as major challenges confronting the university education in the country. Odia and Omofonwan (2014), highlighted the danger that the Nigerian university education is facing as a result of poor student capability.

There are a number of studies conducted in relation to alliance orientation and performance which reported inconsistent finding. Among the studies that reported a positive associations between the two constructs includes Sarkar, Echambadi and Harrison (2001); Leisen, Lilly and Winstor (2002); Teegan and Doh (2202); Kandemir, *et al.*, (2006); Ju, Chen, Li and Lee (2006); Luo, Rindfleisch and Tse

(2007); Grinstein (2008); Gravier, Randall and Strutton (2008); Vergauwen, Hanno and Vandemaelle (2009); Mishra (2011); Bican and Hunt (2012); Zeng, Shi, Li, and Zhu (2013);Weinzimmer, Michel and Franczak (2013); Pangarkar and Wu (2013); Wilson, Perepelkin, Zhang and Vachon (2014). Based on the above, Jabeen, Shehu, Mahmood and Kofar Mata (2014) recommended the inclusion of a moderating variable such as corporate entrepreneurship between alliance orientations to performance relationship. This is in line with Baron and Kenny's (1986), assumption that where there are inconsistent or completing findings, then there is the possibility of moderation between the independent variable and dependent variable

Furthermore, similar studies were conducted to look at total quality management and performance. Yusof and Aspinwal (2000); Sureshchandra, Rajendran and Anantharaman (2002); Khan (2003); Temtime (2004); Prajogo and McDermott (2005); Sharma (2006); Fryer, Antony and Douglas (2007); Yusuf, Gunasekaran and Dan (2007); Awan, Bhatti, Bukhari and Qureshi (2008); Salaheldin (2009); Kureshi, Qureshi and Sajid (2010); Khalid, Irshad and Mahmood (2011); Seedee (2012); Wang, Chen and Chen (2012); Fayzollahi, Shirmohammadi and Litifian (2013); Jaafreh and Al –abedallat (2013); Yunis, Jung and Chen (2013); Narimani, Tabaein, Khanjani and Soltani (2014); Golmohammadi, Zohoori, Hosseinipour and Mehdizadeh (2014), Al – Ettayen and Al – Zubi (2015); Topalovic (2015) reported a significant and positive association between the constructs. The study of McCabe and Wilkinson (1997) found a negative association between TQM and organizational performance. Yunis *et al.*, (2013) suggested a replication of TQM strategy and performance relationship in different countries and context, this is also in line with the

recommendation of Jaafreh and Al – Abedallat (2013) which suggest a further examination of TQM to performance relationship in other sectors. The study of Sulistyowati *et al.*, (2013) also supported a further examination of strategic orientation to performance relation using a different samples. Sadikoglu and Okay (2014) emphasized on TQM and other relevant examination to performance relationship across different sectors including education. Al – Ettayen and Al – Zubi (2015) also supported a duplication of strategic orientation to performance relationship across different sectors.

In another related research conducted by Mohammad, Ramavah, Puspowarsito, Natalesa and Saerang (2011), they concluded that entrepreneurial orientation directly affects firm performance, while Kaya (2011), also found a match between corporate entrepreneurship to performance relation in established firms in Turkey. Antoncic (2006) reported a positive association between corporate entrepreneurship performance. Jennings and Hindle (2004) established a good association relationship between corporate entrepreneurship to performance among both entrepreneurial and non –entrepreneurial organizations. Similarly, the studies of Barrett, Balloun, Weintein (2001); Kellermanns and Eddleston (2006); Hermendez – Maestro and Gonzalez – Benito (2011); Shukri Bakar and Mahmood (2014) reported a strong and positive relationship between the study constructs. Shehu and Mahmood (2014a) and Shehu and Mahmood (2014b) asserted the need for strategic orientation to performance relationship in other sectors such as education. The study of Shehu and Mahmood (2014c) recommend further research using other variables that may

predicts performance. Additionally, the study of Shehu and Mahmood (2014d) suggests a further alliance orientation and TQM studies.

Therefore, performance competency among the Nigerian public universities is an issue of staid concern with both practical and theoretical justification which requires empirical investigation considering the role played by the sector toward overall sustainable economic development. Based on the available literature consulted none of the previous studies integrate and investigate alliance orientation, total quality management and corporate entrepreneurship into one framework.

1.3 Research Questions

As a result of the above problem statement, the question which the study attempt to provide answers to is what is the relationship between alliance orientation, total quality management, and corporate entrepreneurship on performance of Nigerian public universities? Based on the major question, the following specific questions will be raised in order to guide the study:

- 1) Is there a significant relationship between alliance orientation and performance of Nigerian public universities?
- 2) Is there a significant relationship between total quality management and performance of Nigerian public universities?

- 3) Does corporate entrepreneurship moderates the relationship between alliance orientation and performance of Nigerian public universities?
- 4) Does corporate entrepreneurship moderates the relationship between total quality management and performance of Nigerian public universities?

1.4 Research Objectives

As a result of the above research questions, the goal of the present research is to investigate the relationship between alliance orientation, total quality management and corporate entrepreneurship on performance of Nigerian public universities. In order to achieve the goal of the study, the following specific research objectives will be developed to take care of the research questions. Hence, the first objective will take care of the first research question; second objective will lead to answering second research question and so on till the last objective which will handle the last question in this order. The specific research objectives of the study are:

- 1) To examine the relationship between alliance orientation and performance
- 2) To examine the relationship between total quality management and performance
- 3) To determine whether corporate entrepreneurship moderates the relationship between alliance orientation and performance
- 4) To determine whether corporate entrepreneurship moderates the relationship between total quality management performance.

1.5 Significance of the Study

First, the research would add to the existing body of knowledge by adding moderator which other researchers have failed to reflect on. Secondly, the theory will be tested in Africa, particularly Nigeria, as against to other researches that were conducted in different parts of the world. The uniqueness of Nigeria from other parts of the World is seen that it is an emerging economy, awareness and understanding level on the importance attached of research is low against the background of other developed nations. There is a poor government implementation of policies and programs towards university education. Third, the methodology adopted for the study, i.e. the measuring instrument for the variables under study is another contribution as they will further be experienced in the Nigerian university context. Most of strategic orientations of performance association literature were conducted in developed countries, conducting a similar study in Nigeria university setting will put in to the understanding as to whether the measuring instruments will still be relevant in other contexts, different from that of the other developed economies.

The study will further contribute to the industry by giving the overall result on the examination of strategic orientation to performance relationship. The study will help the government of Nigeria more especially the Nigerian federal ministry of education, National University Commission (NUC) in designing future curriculum in

entrepreneurship. The management of different universities in the country more especially the Vice Chancellors will equally benefit from the study outcome, as the result the study will assist them by giving empirically tested findings on the effects of some determinants of university performance in their various universities.

The study would provide empirical evidence on the association between alliance orientation, TQM on the performance of Nigerian universities with the moderating effects of corporate entrepreneurship. Thus, the present study is of benefit to staff and students of Nigerian Universities. The findings from the research will serve as a guide to university administrators, i.e. Vice Chancellors on what is important to their overall performance. It will also serve as a future reference guide to students and other stakeholders. Finally, it will help in making important recommendations which will help toward achieving higher productivity in the university education through improved performance.

1.6 Scope of the Study

This study will focus on examining the association between alliance orientation, total quality management on the Nigerian public university academic performance, with both moderating variable of corporate entrepreneurship. The study will cover all public universities in Nigeria, that are universities owned, managed and financed by different tiers government. Thus, the relationship between the variables under examination will be studied from the academic staff viewpoints.

1.7 Definition of Terms

The definitions of terms used in the study were based on the previous researches conducted.

- 1) Performance refers to the ability to assess the level of success or otherwise of an organization (Shehu & Mahmood, 2014).
- 2) Alliance orientation is a strategy that firm use to adapt and deploy resources of partner firms to effectively compete in the market place (Kendemir *et al.*, 2006).
- 3) Total quality management is a holistic approach involving all stakeholders of continuous improvement through involvement of top level management and employees to achieve customer satisfaction which will enhance the quality delivery (Demirbag, *et al.*, 2006).
- 4) Corporate entrepreneurship is described as an organization readiness to engage in a more innovative, and risky as well as uncertain activities in the market place, accurately discovers new opportunities before the competitor (Idar & Mahmood, 2011).

1.8 Organization of the Thesis

The present study is outlined in a sequence of five chapters. Chapter one looked at the introduction of the study, which is outlined in order of issues relating to general background and motivation, a statement of the problem, research questions, research objectives, significance of the study, and the scope which is the area to cover during the study.

Chapter two concerned with issues relating to literature review, which discussed the fundamental definitions of concepts of all the dependent, independent and moderating variables under the study. It also investigated the relationship between the variables in a broader context, hence the hypotheses developed and theoretical underpinning were explained. Chapter three offered the research methodology for the study. Here research design, population of the study, sample size and sampling design, unit of analysis, operationalization and measurement of variables, questionnaire design, data collection procedure, a technique for data analysis, reliability and validity as well the outcome of the pilot study were explained. Chapter four reported the findings of the study. Here, data collection process and survey response will discuss as well as the issue of non-response bias. Data screening is also carried mainly for the detection of missing data and outliers. Descriptive statistics is presented and interpreted. Issues relating to smartpls such as measurement and structural model is presented and discussed for hypothesis testing. Chapter five focused on the summary, discussions, conclusion and recommendations of the study.

In the chapter, implications and limitation of the study as well as direction for future research were discussed.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter will present a review of related literature on the academic performance of Nigerian public universities and also establishes the linkages among the study constructs. The constructs involved in the study are performance, alliance orientation, total quality management and corporate entrepreneurship respectively. All the concepts and definitions of the constructs will be provided and discussed. Hence, all the possible relationships between the study variables will be explained. The theoretical framework will be presented as well as the theoretical underpinning to be used shall also be explained.

2.2 Performance

A number of definitions were put forward by different scholars as to what performance is all about. Performance is considered to be the outcome of an organization's activity measured along with its input. The understanding of performance measurement will allow an organization to focus on units that need enhancement by evaluating the level of work progress in terms of cost, quality and time with other useful variables and maintenance in areas with higher productivity

(Shehu 2014;Tomlinson 2011). Assessing the performance of an organization to achieve a short and long term goals require a critical look at globalization and competition.

The determining factors in measuring organizational performance may include; productivity, liquidity, market share, innovation level, goods and service quality, human resource management (Shehu and Mahmood, 2014;Gleason, Mathur &Mathur, 2000; Jabeen *et al.*, 2014).

Kanyabi and Devi (2012) defined performance as the level of financial worthiness of the firm which may include the level of investment, profit, with both growth in sales and profit. According to Mandy (2009) performance is considered to be the effect of using effective and sound management process. He argued that organizational performance can be assessed using some criteria; which includes effectiveness, efficiency, growth and productivity. Organizational effectiveness can be used to measure operation, finance as well as behavioral levels. Olosula (2011) viewed performance to mean the ability of one organization to evaluate the level of success of a business organization be it small or big. According to Shariff, Peous and Ali (2010) sees performance from the objective perspective that is more about the financial assessment of organizational performance on issues relating to return on equity, return on assets and sales growth. In contrast, Minai and Lucky (2011) viewed that performance from two perspectives: that is the financial and the non-financial respectively. Prior researches have some preference in using financial performance measures as a measure of the overall organizational success (Murphy, Trailer & Hills 1996). However, other studies prefer the non- financial (subjective)

measures in measuring performance. Thus, this study will focus on the subjective measure of organizational performance including: information gathering in problem solving/communication, faculty intellectual pursuits, achievement and development among staff and students, achieving academic excellence through quality adherence and feedback among others.

2.3 Alliance Orientation

Alliances orientation can be seen as a strategic option that organizations can use to pool and deploy resources of partner firms more effectively compete in the marketplace (Day, 1995). According to Gravier (2008) alliances is seen as a means of achieving competitive advantage. Alliance competitive advantage roots itself in firm-level knowledge resources (Barney, 1991). Alliance orientation has been described as the exchange of resources, skills, and, most importantly, knowledge (Varadarajan & Cunningham, 1995). An alliance oriented organization is one that places a high concern on the present and future relationships and has advanced its ability to; 1) skillfully scan for and identify partnering opportunities in its immediate environment; 2) coordinate its alliance activities carefully and capably, and 3) learn from its alliance experiences more skillful than its competitors. Thus, alliance orientation is seen as a higher order ability and or competence from the firm's continuous improvement of its lower order capabilities (Lambe *et al.*, 2002).

Alliance orientation is seen in this study to consist of three capabilities: (1) alliance scanning, (2) alliance coordination, and (3) alliance learning. Alliance orientation will be stronger when a firm possesses superior degrees of each of these capabilities and is able to skillfully arrange and deploy them. There are some basic characteristics of alliance orientation. First, it is valuable; that is, its utility will not reduce with usage (Prahalad & Hamel, 1990). Second, it is very difficult to imitate as the processes for developing alliance orientation are surrounded in cognitive routines that cannot be experimented by the competitors (Kendamir *et al.*, 2006). Third, it is immobile because these processes, created within an organization, cannot be easily found in an open market and (Barney 1991). Finally, it is rare because these processes are not possessed by a large number of competitors (Kendamir *et al.*, 2006).

The alliance scanning. This is the second capability which calls for an organization to carefully scan and maintain its positional advantage if their existing resources and capabilities become outdated due to the environmental uncertainty that surrounds them in their markets (Gravier, 2008). Additionally, firms that have good scanning for partnering opportunities can reposition themselves in a better competitive market (Gulati 1999; Day 1995). Geringer (1991) suggested that the specific partner chosen can influence the overall mix of available resources and skills, the operating policies and procedures, and the short and long term practicality of an alliance (Lambe *et al.* 2002; Sarkar, Echambadi, Cavusgil & Aulakh 2001). Therefore, alliance scanning is seen as the ability of an organization to take a proactive measures in monitoring and identification for partnering opportunities.

Alliance coordination. Is seen by Grinstein (2000) as the ability of organizations to produce mutually valuable strategic results in alliance partnerships, coordination becomes a critical skill to influence the unique alliance network environment, to combine respective resources available to them, and to generate new abilities that might be required. Information sharing with the alliance partners is a critical role of coordination, which will enable organizations to utilize and attain their competitive advantages (Mishari, 2011). Organizational activities can be integrated with a careful understanding of information sharing so that effective planning and implementation become simpler. Coordination ability allows for the integration of strategies which equally enhance proper knowledge sharing across alliance partners (Dwyer *et al.*, 1987). Capability, alliance coordination, is seen as the extent to which an organization systematically integrates strategies, synchronizes activities, and regularly disseminate knowledge across its alliances for the achievement of alliance goal.

According to Zeng (2013) alliance learning involves an organization's internal ability to direct experiences, successes, and failures with alliance partner (Zeng, 2013) and the appropriation of this learning across its alliance network. For example, internalized information can lead to a further alliance learning from observation and assessment of the decisions made on the basis of prior knowledge once it is interpreted through processes of arranging, and simplification of articulated pattern (Day, 1995). Alliance learning is considered to be the extent to which an organization acquires, stores, interprets, and utilize alliance management knowledge throughout its organizational network.

2.4 Total Quality Management

In spite of the numerous work conducted in the literature regarding the total quality management practices, there has been a lack of agreement or consensus on what TQM is. The TQM definition can only be seen differently in accordance with the method taken towards quality (Reed *et al.*, 1996). However, in the prior studies conducted and the literature consulted on TQM, there are a variety of definitions offered and put forward by different scholars in different situations. According to Dale (2003), Flynn *et al.*, (1994) defines TQM as the management philosophy that ensures the cooperation and participation of all individuals in an organization toward the production of better products and services that can satisfy customers' needs and wants which exceed their expectations. Similarly, Anderson, Rungtusanatham, and Schroeder (1994) viewed the TQM strategy as a holistic method for the organization overall quality through major principles such as leadership, continuous improvement, effective process management, product and or service design, customer satisfaction and involvement, and employee involvement and training. Additionally, Yusof and Aspinwall (2000) defined TQM as the management thinking that can change the organization through successful change initiatives to meet with the world-class status. Moreover, it has been described by the same authors as the system that helps an organization to achieve excellence. Additionally, Kumar, Choisine, Grosbois, and Kumar (2009) defined TQM as the holistic management approach which integrates all the organizational activities to satisfy customer's needs and go beyond their expectations towards achieving overall organizational objectives.

In relation to that, Dean and Bowen (1994) suggested that TQM strategy can be looked at in terms of principles, practices, and techniques. Principles include customer focus, continuous improvement, and teamwork. Each principle has a set of determining practices such as customer relationships, quality and process control, and group training and skills as well. To ensure their effective implementations, these practices have to have certain techniques such as quality function deployment, control charts, and team building techniques (Al – Swidi and Mahmood, 2012). Based on their review of the literature to define TQM, Mehra, Hoffman, and Sirias (2001) identified human resources focus; management structure; quality tools; supplier support; and customer orientation as the major critical factors based on which TQM should be defined. As it has been widely reported in the literature on the quality management, TQM can be measured based on some critical factors (Arawati, 2005; Li *et al.*, 2003; Saraph, Benson & Schroeder, 1989; Al – Swidi & Mahmood, 2012). The strategy was defined by Swamidass and Newell (1987) as the series of actions practiced to achieve organizational goals. Based on that, TQM can be defined as the management system consisting of several coordinated critical factors that help the organization to develop an effective set of actions resulting in achieving targeted organizational goals. Demings (1986) viewed quality from customer – centric basis to the product performance that satisfies customer needs and meets their specifications toward quality provision.

Therefore, the product quality according to Garvin (1987), encompasses the following dimensions: Performance that refers to the operating characteristics of the product; Features that refers to the additional features that supplement the product's basic

function; reliability that refers to what extent to which a product will serve the customer effectively and efficiently; conformance that refers to the extent to which a product meets the set standards; durability refers to the rate of product use before it deteriorates. serviceability refers to the speed, courtesy, and ease of repair; aesthetics refers to the product appearance and impression. perceived quality refers to the reputation of the provider.

Service Quality on the other hand; has been mentioned earlier, although TQM strategy originated in manufacturing, it has been gaining a growing attention to be applied in service organizations as well. Service quality literature revealed that there are two schools of thought (Camison, 1998; Lakhe & Mohanty 1995). The first school focuses on the content of services by differentiating technical from the functional. This school is led by Gronroos (1988) and Gummesson (1988). The second school, on the other hand, focuses on the service delivery from the customer's perspective. This school, however, is led by Parasuraman, Zeithaml, and Berry (1985; 1988). While technical dimension refers to the effective production of the core service, the functional dimension refers to the delivery of the service produced (Gummesson, 1988). Regarding the other perspective, Parasuraman *et al.*, (1988) research identified five behavioral dimensions namely tangibility, reliability, responsiveness, assurance, and empathy. Initially, Parasuraman *et al.*, (1985) work produced a list of ten dimensions that were reduced to the current five dimensions model after several stages. However, based on continuous work, a measure of 22-item instrument called SERVQUAL was produced and it is one of the most widely known tools in measuring the service quality in various contexts (Parasuraman *et al.*, 1988).

The critical success factors can be seen as the critical areas in which organization must target to achieve its mission by examining their impacts (Oakland, 1995). However, they are considered as those things that needed to be present for a successful TQM activity implementations. Tari (2005) identified the following as critical factors for TQM which includes; customer based approach; process management; commitment and leadership; quality planning; management based on facts; continuous improvement; human resources management; work team communication; cooperation with suppliers; organizational social and environmental issues and related awareness.

One of the earlier empirical studies in the quality management field that analyzed the TQM CSFs was carried by Yusof and Aspinwall (2000). They found that the CSFs for TQM implementation in the organization includes: management leadership, continuous improvement system, measurement and feedback, improvement tools and techniques, supplier quality assurance, human resource development, systems and processes, resources, education and training, and work environment and culture.

More importantly, Hodgetts, Kuratko and Hornsby (1999) found that the CSFs of TQM implementation in organization are; top management involvement, customer focus, employees training, employee empowerment and generating new ideas. In this line with the study of Dayton (2003) which identified ten TQM critical factors as: people and customer management, supplier partnerships, communications, customer satisfaction, external interface management, strategic quality management, teamwork structures for improvement, operational quality planning, and quality improvement

systems. Rahman's (2001) come with the following critical factors of the successful implementation of TQM are leadership, strategy and planning, employee empowerment and employee involvement, employee training and development, information analysis and customer management. Demirbag *et al.*, (2006) concluded by identifying seven CSFs of TQM practices as: quality data and reporting, role of top management, employee relations, supplier quality management, training, quality policy and process management.

2.5 Corporate Entrepreneurship

According to Lumpkin and Dess (1996) corporate entrepreneurship (CE) is regarded as the decision making process that leads to new business and development. Covin, Green and Slevin (2006) defined Entrepreneurial orientation to be the construct representing organizational entrepreneurial capability. Lan and Wu (2010), looked at EO as the willingness to engage in a more innovative, risky as well as uncertain activities in the market place, accurately discover new opportunities before their competitors. Miller (1983) provided one of the earliest conceptualization of EO construct. The entrepreneurial firm are viewed as one that engaged in product innovation, risky ventures and be among the leaders proactively.

Morris and Jone (1995) defined EO as the tendency of a firm's top executive to take planned risks, be creative, and proactive. Investigators have used this operationalization and measure EO from innovativeness, risk-taking, and

proactiveness in their works (Covin & Slevin 1989). Meeting customer needs, new product exploration, idea support are the central issues in product innovation (Li, Liu & Zhao, 2006), services, or scientific processes (Lumpkin & Dess 1996), and modifying existing technologies or practices and ventures (Kimberly & Evanisko, 1981). EO is also featured by risk-taking which guarantees high returns. They grab chances in the open market and obtain first-mover benefit (Lumpkin & Dess 1996; Tan 1996).

Research on entrepreneurial behavior developed by Covin and Slevin, (1991) viewed EO from the following dimensions, i.e. innovation, risk-taking and Proactiveness. Two more dimensions were added to the Covin and Slevin (1991) EO constructs by Lumpkin and Dess (1996) which includes autonomy and competitive aggressiveness. Additionally, Wiklund (1999) asserted that most studies, come to an understanding that entrepreneurial orientation is a combination of three dimensions namely: innovativeness, risk-taking and proactiveness. However, many studies (Covin & Slevin 1989; Naman & Slevin 1993) follow this three dimensional model created by Miller (1983).

Research by Hughes and Morgan (2007) have shown that the dimensions can vary separately from each other. However, only a few studies allow the dimensions described above to differ within their model and create a truly multidimensional EO model. The discussion lies in not whether the dimensions can differ from each other, but is based on the belief that an entrepreneurial firm should score on all three dimensions (Covin *et al.*, 2006). The EO dimension of innovativeness is about

pursuing and giving support to novelty and originality, creative processes and the development of new ideas through experimentation (Lumpkin & Dess 1996).

The second dimension is proactiveness. Proactiveness refers to processes which are aimed at seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition and strategically eliminating operations which are in the mature or declining stages of the life cycle (Venkatraman, 1989). The third dimension, risk-taking, is often used to describe the uncertainty that follows from behaving entrepreneurially. The fundamental emphasis is on calculated risk-taking instead of extreme and uncontrolled risk-taking (Morris & Jones, 1995) but the value of the risk-taking dimension is that it orients the firm towards the absorption of uncertainty as opposed to a overburden fear of it.

Autonomy basically concerns customer focus in order to maximise customer satisfaction. A necessary condition for customer orientation is autonomy (Slater & Narver, 1995), which refers to the freedom of employees to be creative, to develop new ideas and open communication and to be focused upon customer interaction and orientation (Hughes & Morgan, 2007; Lumpkin & Dess, 1996). Competitive aggressiveness means to outdo and outperform competitors: it includes ambitious market share goal-setting or aggressive actions such as price-cutting, outspending competitors in marketing and building larger production capacities (Shehu & Mahmood, 2014).

2.6 Alliance Orientation and Performance

Empirical studies on the association between alliance orientation and performance appeared to be mixed. There are a number of researches carried in relation to AO and performance. Among the studies which reported a positive association includes: Sarker, Echambadi and Harrison (2001) investigated the effects of alliance proactiveness on market based performance with a contingency approach as the underpinning theory. A sample of one hundred and eighty two firms was used with a PLS method for data analysis. The findings show that alliance proactiveness leads to superior market based performance. Similarly, the study of Teegan and Doh (2002) investigated fifty five Mexican business firms. Authority balance was found to have a positive impact on alliance performance, while authority advantage has a perfect negative impact on performance.

Moreover, Leisen, Lilly and Winsor (2002) inspected the link between organizational culture, market orientation and marketing effectiveness in the context of strategic marketing alliance. A self – administered questionnaire to one hundred and twenty eight organizations is used. The overall finding shows that organizational culture affects strategic marketing alliances. The finding above only considers contingency theory, conducted in most business and other profit orientated organizations, and emphasized on marketing alliance, hence, the the present study considers resource based view as theoretical underpinning, and is conducted in non profit making venture that is Nigerian public universities where the emphasis is on provision of essential

service for the sole aim of achieving academic excellence. Similarly, the study is focused on partnering opportunities in research and development.

Kandemir, Yasrak and Cavusgil (2006) conducted an empirical study with one hundred and eighty two small firms in the U.S and a structural equation modeling. The study outcome indicated a significant association between alliance of orientation to performance. The finding of Ju, Chen, Li and Lee (2006) indicated that firms with higher absorption orientation, high risk reduction, higher research and development, scale of economies orientation, performs better in acquiring competitive advantage in alliance relationship. Also, strategic match among strategic factors, organizational capability factors and technology alliance choice could lead to a better competitive gain. Luo, Rinfleisch and Tse (2007) established that the intensity of the firms alliances with its competitors has a curvilinear (inverted U-shaped) influence on equity.

Gravier, Randall and Strutton (2008) in their meta-analysis examined how alliance performance is induced by knowledge. The findings indicated that the level of risk associated with the environment in which the alliance partners, joint force does not moderate between the various roles of knowledge and alliance performance. Additionally, Vergauwen, *et al.*, (2009) in their research indicated that behavioral value drivers directly affects alliance performance. The direct association of intangible performance is found to be positively significant to six value drivers of trust, commitment, communication, strategic interdependence, participation, and coordination of work. The only variable not significant is symmetry. The indirect relationship through intangible performance shows a positive effect on the strategic

interdependence, participation and coordination of work. The overall, symmetry does not have any impact on performance.

Mishara (2011) conducted a study which surveyed a sample drawn from banking and recruitment industry in India, using a social network theory. The finding indicated that e- business alliance network is has a significant positive impact with e – business firm performance. Zoogah and Peng (2011) in their empirical survey found a positive association between alliance competencies and performance judgement, the hierarchical linear regression suggests that structural, functional, and social competencies were considered more important in determining alliance managers performance. However, Pangarkar and Wu (2012) in a survey with seventy six responses from internet related startups in Singapore lend support to significant relationship between the constructs. In the same vein, Zeng, Shi, Li and Zhu (2013) reported that market orientation has a positive effect on the social capital, which in turn, has a positive effect on the stability of company alliance. Moreover, The study of Wilson *et al.*, (2014) which examined the market and alliance orientation and business performance of biotechnology industry in Canada. The instrument of the study is mail and Web based questionnaire survey. The outcome from the research shows a significant and positive association between alliance orientation and performance. Additionally, the study of Lee (2015) examined companies that have signed in international business business. The findings indicated that national culture is significantly and positively related to alliance performance.

However, the study of Emmanuel, Onyinye and Chimezia (2016) adopted pre-test-post-test control group students. The results showed that there was no significance difference in the treatment effects in collaborative learning technique group. Although the studies above provided a clear understanding on the relationship between alliance orientation and performance, but they used other variables such as trust, commitment, strategic independence and collaborative learning as against the background of this study using partnering/allainace orientation, total quality management, and corporate entrepreneurship. Similarly, none of the above studies is cinducted at a public organization. Based on these arguments, this study seeks to propose the following hypothesis:

H1: There is a significant and positive relationship between alliance orientation strategy and performance of Nigerian public universities.

2.7 Total Quality Management and Performance

Many studies have attempted to establish the association between total quality management and performance. The study of McCabe and Wilkinson (1997) which was conducted in the service sector, found a negative association of TQM and organizational performance. Anderson and Sohal (1998) inspected sixty two small and medium sized Australian companies, using questionnaire survey and descriptive statistics for analyzing data. The finding indicated a positive association of TQM and organizational performance. Yusof and Aspinwal (2000) finding indicated a strong

and positive association between total quality management implementation and business performance of SMEs.

Sureshchandar, Rajendran and Anantharaman (2002) found that TQS dimensions are good predictors of service quality in the Indian banking sector. Lee (2003) in a study which examined total quality management and small and medium enterprise performance in China, using a quantitative survey found that total quality management has a significant effect on organizational performance. Kaynak (2003) examined total quality management effects on organizational performance. A cross – sectional study conducted via mail questionnaire survey of US firms from contiguous states. TQM practice is found to positively associate to organizational performance of the US firms. Khan (2003) surveyed four hundred and sixty three firms over a period of ten years, and found a significant and positive relationship between TQM and performance of firms. Temtime (2004) used a questionnaire survey of fifty four small and medium enterprises in Bostwana using a descriptive statistics for the data analysis. The finding shows that environmental scanning is indirectly related to TQM practices and has a moderating role in TQM practice.

Similarly, Fuentes, Albacete – Saez and Llotens – Montes (2004) surveyed two hundred and seventy three Spanish firms, a sample of quality managers used. The causal analysis result shows that dynamism, munificence and complexity predicts the degree of total quality management principles. Sharma (2006) investigated quality management dimensions, contextual factors and performance in Australia. The interview is employed for data collection with descriptive statistics and Analysis of variance (ANOVA) for the data analysis. This empirical study indicates that the

implementation of quality management practice in Queensland firms tends to put more on measurement and training aspect, and process improvement tends to be more relevant for manufacturing firms. However, few noticeable correlations were identified with some quality management dimensions in spite of the low level implementation of quality management practices. Total quality management and performance relationship studies above were in short of employing a PLS as a methods for the data collection, ANOVA, multiple regression and correlations were used. In the same view, most of these studies were conducted in different countries i.e. Australia, China whereas, this study is carried in the African context, Nigeria in particular.

Prajogo and McDermott (2005) explores the association between total quality management practice and organizational performance with one hundred and ninety four organizations drawn from Australia. Structural equation modeling employed for the data analysis and a random survey of one thousand managers. The outcome of the survey established a strong positive relationship between TQM and OP. However, Prajogo and Brown (2006) empirically surveyed managers in Australia, using descriptive statistics, correlation and regression methods for the data analysis. The finding is in support of the positive relationship between approaches to quality and organizational performance. Additionally, Demirbag, *et al.*, (2006) analyzed the relationship between quality implementations and organizational performance of SMEs in textile industry in the city of Istanbul in Turkey. A data of five hundred were collected using self – administration of questionnaires and structural equation modeling for data analysis. A random selection from the database of Turkish small

business administration (KOSBEB) via mail survey collected. The study reported a strong positive association between total quality management practice and non – financial performance, while a weak influence is reported on TQM practice and financial performance of SMEs. Santos – Vijande, Alvarez - Gonzalez (2007) examined total quality management and firm performance of Spanish manufacturing and service sector. A confirmatory factor analysis was used to test the psychometric properties of the measurement scale. A structural equation modeling is used for the data analysis and mail survey for data collection. TQM practice and organizational performance, association is found to be positive.

Similarly, Fryer, Antony and Douglas (2007) determined the critical success factors for a continuous improvement project in public sector. The finding indicated that CSF are vital in manufacturing organizations. However, Yusuf, Gunasekaran and Dan (2007) examined the essence and process of total quality management and its effects on organizational performance. A questionnaire survey employed with descriptive statistics for the data analysis, and the findings established a significant relationship between TQM and organizational performance of Chinese firms. The study of Awan, Bhatti, Bukhari and Qureshi (2008) found from the study shows that critical success factors guide senior management in implementing TQM programs and resource allocation. Saleheldin (2009) evaluated the effect of critical success factors for total quality management implementation of SME performance in the Qatar industrial sector. A structural equation modeling employed for the data analysis. A questionnaire survey of two hundred and ninety seven SMEs is used through the mail

is employed. The study finding shows a substantial positive effect of TQM critical success factors implementation on SME performance.

However, Awan, Raof, Ahmad and Spark (2009) undertook a study which identified the critical success factors of TQM in Pharmaceutical wholesale distribution in Pakistan. A twenty nine item questionnaire is sent to ninety pharmaceutical distributors using convenience non – probability sampling with descriptive statistics for the data analysis. Top management in pharmaceutical distribution is adequately supporting TQM implementation. Jimenez and Martinez - Costa (2009) quantitatively assessed the effects of human resource management (HRM) and total quality management (TQM) of Spanish organizations. A sample of seven hundred and six companies is employed using a cross – sectional study, generated from Spanish Ministry of Science and technology. The finding established that HRM and TQM practices have a positive impact on the organizational performance. The study of Malik, Iqbal and Shaukat (2010) explores the impact of total quality management practice on non – financial performance of SMEs. A sample of sixty SMEs both ISO 9000 certified and non – certified SMEs from the three renowned cities of Punjab province. Linear multiple regression analysis was used for the data analysis. The finding indicated that TQM practice such as supplier association, benchmarking, top management commitment, and customer focus have a positive impact on the performance of SMEs.

Similarly, Kureshi, Qureshi and Sajid (2010) conducted a study using focus interview with one hundred SMEs in the Pakistan service sector using a Delphi

method. The finding of the study indicated a significant correlation between the usage of total quality management and other quality management methods. Musa and Alawad (2011) inspected the impact of TQM implementation on plant productivity. A sample of three poultry processing was chosen out of eight using purposive sampling. Total quality management found to have a positive impact on poultry processing plant productivity. This is in line with the finding of Idris (2011) which also established a positive association between TQM and company performance.

Saleem, Siidique, Akmal, Khan and Sultan (2011) measure the impact of ISO 9000 certification on organizational performance. A questionnaire survey employed with a sample of three hundred SMEs from the cities of Lahore, Sialkot and Multan in Pakistan. A convenient non – probability sampling used with a multiple regression method for the data analysis. The finding indicated a strong and positive relationship of ISO 9000 and organizational performance. Valmohammadi (2011) surveyed sixty five quality managers with 81.5 response rate, and found TQM to organizational performance to be supportive, but a weak correlation established. Saeed and Hasno (2011) in a quantitative survey conducted using a questionnaire and a sample of ninety SMEs with descriptive statistics and correlation for the data analysis. The finding Shows that SMEs are found to have a medium level of TQM implementation.

However, the study of Raja, Bodla and Malik (2011) evaluated the effects of total quality management practices on business performance of manufacturing firms in Pakistan. A sample of sixty five managers working in the quality assurance department was employed with a descriptive statistics for the data analysis. The

finding shows that TQM is implemented only in quality control, quality assurance and continuous improvement and that top management commitment is the most variable affecting TQM implementation which then directly affects business performance. In the same vein, Khan (2011) empirically investigated the impact of TQM on organizational performance with the moderating role of managerial competence. A sample of two hundred and fifty managers working in service organization was used with correlation, factor analysis and hierarchical regression for data analysis. Total quality management is found to predict organizational performance, managerial competence is found not to moderate TQM practice and organizational performance. Talib, Rahman and Quresh (2012) analyzed and ranked the key TQM practices in the Indian hospitality industry based on an email survey of thirty four hospital companies. The finding established an association between the study constructs.

Wang, Chen and Chen (2012) inspected five hundred and eighty eight hotels using structural equation modeling (SEM) and discriminant analysis for data analysis. The finding indicated that market orientation has a mediating effect between total quality management and hotel performance. External environment moderates the relationship between total quality management, market orientation and hotel performance. Sajjad and Amjad (2012) argued on benchmarking in total quality management of the telecom service sector in Pakistan. A questionnaire survey employed, and the finding indicated that TQM practice implementation has a positive effect on quality outcomes (productivity, profitability, competitive position, cost reduction, reduces rework level,

reduce scrap level, stay in business). Benchmarking also plays a significant role in the development of organizations.

Similarly, Seedee (2012) examined business strategies as moderating role affecting the relationship between best practices and firm performance. A data collected from one hundred and sixty nine Thai manufacturing firms using parametric statistics of descriptive statistics and hierarchical regression. Best practices are found to have a strong relationship with firm performance. Sulistowati, Salim and Surachman (2013) surveyed one hundred and fifty four units of ISO 9000 as population of certified manufacturers companies in East Java. The data were analyzed by generalized structural components (GSCA). Their report found that ability to adapt to the business external environment indirectly affects performance, adaptability to the external business environment affects company performance improvement through competitive strategy, mediation, implementation of TQM affects company performance through company strategy mediation, and implementation of TQM found to have indirect effects toward company performance improvement. Fayzollahi, Shirmohammadi and Litifian (2013) surveyed one hundred and thirty five industrial enterprises in western Iran using a random sampling and questionnaire survey. A correlation analysis employed for data analysis for testing the study hypothesis. The findings of the study indicated a significant positive association between TQM and performance, whereas environmental factors were found to moderate between TQM and performance.

However, Yunis, Jung and Chen (2013) did a similar study on the TQM to performance relationship. Data from six hundred and fifty questionnaires obtained from USA, Mexico, Korea and China using middle level managers as respondents with convenient sampling. The results show that TQM influence strategy on both soft and hard TQM hence predict performance. In another related study conducted by Jaafreh and Al – Abedallat (2013) on the impact of TQM practice on organizational performance conducted on banking sector business in Jordan. A survey questionnaire as instrument and multiple regressions for the data analysis. The findings indicate that TQM practice affects organizational performance. In a similar way, Narimani, Taaeian, Khanjani and Soltani (2014) established a significant mediating role of TQM between OCB and ERP. Additionally, Haque, Sarwar, Azam and Yasmin (2014) provides a deeper understanding of TQM application in the Islamic bank sector by identifying matching as well as the peculiar factors that affects TQM application in Bangladesh and Malaysian banks. A convenient sampling approach adopted, using self – administered questionnaire survey. The result shows that knowledge is the basic TQM principle among employee in Malaysian banks, whereas, ignorance is found in Bangladeshi Islamic banks.

The study of Benavides – Velasco, Quintana – Garcia and Marchante – Lara (2014) surveyed one hundred and forty one Spanish hotel from an Andalusian region. They reported a positive association between TQM and performance. However, Sadikoglu and Okay (2014) argued on TQM practice and performance. A cross – sectional survey method and organizational unit of analysis adopted. The study sample was selected from the Turkish quality association of the firms located in the Kocaeli –

Gebze industrial zone, two hundred and forty two usable questionnaires obtained representing forty eight percent. The finding shows that employee involvement, awareness and commitment, inappropriate firm structure, and lack of resources were the major obstacle of the firms in Turkey. Moreover, Waweru and Orodho (2014) investigated the extent to which management practice used by school principals. A descriptive correlational research design employed with both stratified and simple probability sampling techniques. capabilities and SMEs organizational performance. The result of the study indicated that planning of human and physical resources, organizational strategies, curriculum, leadership, control measures and students academic performance are strongly correlated.

Jabeen, Shehu, Mahmood, and Kofar Mata (2014) examined the impact of total quality management and business performance of Nigerian SMEs. A cross – sectional research design employed with partial least square method for the data analysis employed. The finding indicated a significant and positive relationship between the study constructs. Therefore, the review of literature in most of the studies above only used descriptive and perametric statistics, none of the prior studies employed a none peremetric statistics using PLS 2.0 which has capability of using both larger and samples. Al – Ettayen and Al – Zubi (2015) examined the effects of TQM on organizational performance of the Jordanian banking sector. A questionnaire was distributed to eleven commercial banks using statistical package of social science (SPSS). The TQM to performance relationship was found to be supported. Similarly, Topalovic (2015) investigated the attitude of corporate clients on a variety of elements implemented TQM process provided by banks. The result shows that top management

commitment, courtesy and responsibility towards customers are significant for satisfaction. Based on these arguments, this study seeks to propose the following hypothesis:

H2: There is a significant and positive relationship between total quality management and performance of Nigerian public universities.

2.8 Corporate Entrepreneurship As a Moderator

Prior researches conducted have used corporate entrepreneurship in its association with organizational performance and the possible findings are: Morris and Jones (1995) surveyed environmental turbulence relationship, human resource management practice and corporate entrepreneurship. The finding indicates that HRM practice is the basic means for achieving corporate entrepreneurship for most organizations operating in the turbulent environment. Barrett, Balloun and Weintin (2001) investigated marketing mix factors as moderators of the CE to BP relationship. The outcome of the study established a strong link between firm's CE behavior and BP. Marketing mix factors of promotion, product quality, and pricing were found to moderate between CE to BP relationship. The finding of Antoncic and Hisrich (2003) supported the previous entrepreneurial orientation literature that established positive association between privatization and corporate entrepreneurship and also serve as a mediator between CE activities.

Additionally, the study of Jennings and Hindles (2004) which examined the linkage of equifinality to CE by analyzing strategy, structure and performance. A sample of one hundred and forty eight U.S electrical distribution firms was used between 1998-2002. The finding indicated that both entrepreneurial and non-entrepreneurial organizations with an optimum structural match tend to have a higher performance. Similarly, Antoncic and Zorn (2004) conducted a cross – sectional survey using mail questionnaire. The finding indicated that corporate entrepreneurship mediates the organizational performance relationship.

However, Kaya (2006) finding from indicated that human resource management practice, partially mediated the relationship between the CE and FP, whereas, a direct relationship between CE to FP was found to be positive. Antoncic (2006) finding shows that single business and vertical diversifications make some difference in organizational growth and profitability in terms of direct effects; but not indirectly with the mediation of corporate entrepreneurship strategy making. Additionally, Kellermanns and Eddleston (2006) found that willingness to change and technology opportunity recognition are positively correlated to CE; strategic planning was found to significantly moderates the relationship between generational involvement and technology opportunity recognition and CE. In (2007), Yang, Li – Hua, Zang and Wang argued on the corporate entrepreneurship and market performance relationship in China uses questionnaire survey. The finding indicated that the key dimensions of corporate entrepreneurship exert differentiated impacts on market performance in China.

Hernonen (2007) explored the entrepreneurial-directed approach to teaching within one university-level course in corporate entrepreneurship (CE) for Master's-level students. A combination of qualitative research methods and observation methods were used during and after the course, the finding shows a relationship between the study constructs. Thorgren, Wincent and Ortquist (2009) finding found support for the reciprocal causation model. Similarly, Toledano, Urbano and Bernadich (2010) They found a significant association between networks and corporate entrepreneurship. Zampatakis and Moustakis (2010) did a study on the factors stimulating corporate entrepreneurship in the Greek public sector. The sample was drawn from fifteen Greek using Bayesian factor analysis. The findings of their study indicated a significant association between entrepreneurial civil servant preference CE. Prior studies on the effects of corporate entrepreneurship and performance were conducted in Asia, Europe and America, as only little evidence of such studies can be found in Africa, specifically, Nigeria. Therefore, the present study in an effort to bridge the gap that exist between different countries.

Arising from this, Hernandez-Maestro and Gonzalez- Benito (2011) employed a sample of one hundred and three rural tourism entrepreneurs in Spain. The outcome from this study shows a positive influence of an establishment equity on performance, but involvement influences performance to a greater extend and even reaches profit. A positive moderating effects of experience and exclusiveness also emerge, and also a negative moderating effect of education found. The study of Mohammad, Ramayah, Pustowarsito, Netalisa and Saerang (2011) on Indonesian medium sized firms

reported a positive relationship between CE to Performance; and moderately high level of CE among the firms.

Cavus and Demir (2011) investigates the relationship between institutionalization factors and corporate entrepreneurship in Turkish family firms. The data were obtained from the responses of two hundred and forty four managers in family firms. The results show that there were significant relationships between the dimension of institutionalization and the dimension of corporate entrepreneurship. While automation affects all dimensions (risk taking, proactiveness and innovativeness) of corporate entrepreneurship, autonomy, professionalization, transparency positively, formalization affects the dimensions of corporate entrepreneurship negatively. Adonisi (2012) investigated the relationship of CE with the organizational variable of marketing flexibility and job satisfaction. A sample of three hundred and thirty three managers in three different industries in South African employed. Spearman and Pearson correlation is used for the data analysis. A significant association is found of different marketing flexibility and job satisfaction factors.

However, Haar and White (2013) reported a direct and substantial relationship between CE and employee retention among one hundred and fifty eight firms in New Zealand. The study of Karacaoglu, Bayrakdaroglu and San (2013) findings shows that the dimensions of corporate entrepreneurship such as innovativeness, risk taking and proactiveness were found to have positive associations and interaction with financial performance, autonomy and competitive aggressiveness variables did not show any relationship with the financial performance of firms. Shukri Bakar and Mahmood

(2014) investigated transformational leadership and corporate entrepreneurship to performance association of higher education institutions in Malaysia, using a questionnaire survey with two hundred and forty six valid responses. The finding indicated a significant and positive association between CE and performance; corporate entrepreneurship partially mediated transformational leadership and performance.

Yaldiz (2014) conducted studies on which examined the relationship between organizational culture and corporate entrepreneurship among leading multinational companies in Turkey. The results show that power distance is found to have a positive relationship on corporate entrepreneurship. Masculinity has a negative effect on new business venturing. The study Behram and Ozdemirci (2014) argued on environmental conditions, organizational culture, corporate entrepreneurship and performance. The result of regression test showed that market and adhocracy culture have positive and strong effects on all corporate entrepreneurship dimensions, clan culture positively affects innovations, but has no effects on corporate entrepreneurship. Innovations and proactiveness negatively are affected by munificence. Proactiveness is found to mediate between munificence and financial performance. This result produced a mixed findings.

According Ozdemirci and Behram (2014) in their study, which surveyed two hundred and fifty eight medium and large firms operating in different industries in Turkey. The findings indicated a strong impact of human resource management practice on corporate entrepreneurship, and mediated by perceived organizational support of

employees. Al-Swidi and Mahmood (2012) findings reported a positive association between TQM, EO and organizational performance. In the same vein, Wang and Yen (2012) argued on the corporate entrepreneurial orientation and performance of Taiwanese SMEs, using multiple regression method for data analysis. A sample of two hundred and sixty seven Taiwanese SMEs in China was used. The finding from their study indicated a significant association between innovativeness, proactiveness, risktaking in a Taiwanese SME performance, hence entrepreneurial orientation to performance relationship was positive. Arbaugh, Cox and Camp (2009) in their study a multi-country study across seventeen countries and in four continents with one thousand and forty five firms. The results show a mixed findings as entrepreneurial orientation was positively to net worth (financial performance), while entrepreneurial orientation was negatively related to return on sales. The reviewed literature above mostly investigated firm performance, there by criticized by neglecting other non profit making organizations such university performance, which the present study attempt to examined.

Similarly, the study of Frank, Kessler and Fink (2010) on entrepreneurial orientation and business performance with a sample of eighty five SMEs from electric and electronic industry was chosen using survey questionnaire. The finding shows a low correlation between business performance and EO. In the same vein, Anderson (2010) in his seminal work employed a sample of one hundred and seventy two SMEs from the manufacturing sector in Sweden. He asserted that previous studies were short of considering other factors of entrepreneurial orientation to performance relationship. The result from this study indicated a negative relationship between entrepreneurial

orientation to performance in terms of growth and profitability. Tang, Tang, Marino Zhang and Li (2008) reported an inverted U-shaped relationship between entrepreneurial orientation and performance relationship among Chinese ventures. Additionally, Su, Xie and Li (2011) study established a mixed curvilinear EO to performance findings. The relationship between entrepreneurial orientations to performance is found to be an inverse U-shape in new ventures, whereas, such relationship was found to be positive in established firms.

Lechner and Gudmundson (2014) examined a sample of three hundred and thirty five firms randomly selected from Icelandic firms. They also reported a mixed finding on entrepreneurial orientation dimensions, firm strategy and performance relationship. Innovativeness was positively related to differentiation; risk taking and aggressiveness was negatively associated with both differentiation and cost leadership. Hence, differentiation and cost leadership strategies were positively related to performance. The study of Filser and Eggers (2014) which examined entrepreneurial orientation and firm performance using multiple regression method for data analysis. The outcome from this study reported a mixed finding, the relationship between innovativeness and risktaking to firm performance was found to be positive, while proactiveness relationship to firm performance was negatively associated. Based on the above arguments, this study seeks to propose the following hypothesis:

H3: Does corporate entrepreneurship moderates the relationship between alliance orientation strategy and performance of Nigerian public universities.

H4: Does corporate entrepreneurship moderates the relationship between total quality management and performance of Nigerian public universities.



Table 2.1: Summary of Some Past Studies Reviewed

S/N	Variables	Author	Country	Industry	Method/ Theory	Major Findings	Future research
1	Total quality management practice and performance	Sadikoglu and Okay 2014	Turkey	Manufacturing	Regression	Negative	Need for continuous implementation of TQM to enhance performance improvement
2	TQM practice and OP	Malik, Iqbal and Shaukat 2010	Pakistan	N/A	Regression	positive	N/A
3	TQM and Organizational performance	Saleem, Siddique, Akmal, Khan. Khan and Sultan 2011	Pakistan	Service	Regression/cor relation	Positive	Need for further research to assess the impact of ISO 9000 series on financial and market performance
4	Quality management dimensions, contextual factors and performance	Sharma 2006	Australia	N/A	Descriptive statistics and Anova	positive	Need for a larger sample
5	Entrepreneurial value, firm financing, management, market practice and performance	Shariff, Peous, and Ali 2010	Cambodia	Public	Hierarchical multiple regression	positive	Future studies could examined whether variables such as organizational structure and organizational culture could influence the performance of SME
6	Alliance orientation, market performance	Kandemir, Yasrak and Cavusgil 2006	US	N/A	Structural equation modelling	positive	N/A
7	Market orientation, Alliance orientation and Business performance	Wilson, Perepeikin, Zhang and Vachon 2014	Canada	Biotechnology industry	Descriptive statistics	Positive	Need for longitudinal survey

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
8	Alliance entrepreneurship and firm market performance	Sarkar, Echambadi and Harrison 2001		Service and Manufacturing	Partial least square	Positive	N/A
9	Business alliance and partnership performance	Vergauwen, Hanno, and Vandemaele 2009	UK	Manufacturing and service	Regression	Mixed	N/A
10	Alliance negotiation, culture, trust, authority and performance	Teegan and Doh 2002	US/Mexico			Mixed	N/A
11	Alliance formation, partnerdiversity and performance	Pangarkar and Wu 2013	Singapore	N/A		Positive	N/A
12	Technology alliance and performance	Ju, Chen, Li and Lee 2006	Taiwan	Manufacturing	Regression	Positive	To develop strategic contingency model
13	Alliance competence and performance	Zoogah and Peng 2011				Positive	N/A

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
14	Organizational culture and performance	Shehu and Mahmood 2014	Nigeria	SME sector	Regression	Negative	Future study be conducted on strategic orientation to performance relationship in other sector such as education
15	TQM, knowledge management and Business performance	Jabeen, Shehu, Mahmood and Kofar mata 2001	Nigeria	SME sector	Regression	Positive	Introduction of moderating variables between TQM and BP
16	TQM and organizational performance	Yusuf, Gunasekaran and Dan 2007	China	Variety	Descriptive statistics	Positive	Need for in depth investigation
17	Critical success factor for TQM and OP	Yusof and Aspinwal 1999	Different nations	Across different sectors	N/A	Positive	Need for further research in manufacturing sector
18	TQM and BP	Yunis, Jung and Chen 2013	USA	N/A	Regression/SEM	Positive	To use mixed method/Replication
19	Business strategies, Business practice and firm performance	Seedee 2012	Thailand	Manufacturing	Regression/Descriptive statistics	positive	N/A
20	Quality management practice and organizational performance	Jaafreh and Al-abadallat 2013	N/A	Banking sector	Correlation and regression	Mixed	further research may consider other sectors
21	Environmental factors, TQM and firm performance	Fayzollahi and Shirmohammadi 2013	Iran	N/A	Correlation	Positive	Need to give more attention on organizational issues

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
22	Critical success factors and OP	Fryer, Anthony and Douglas 2007 2011	N/A	Manufacturing	N/A	Positive	Need for future research in other sectors
23	TQM, BP and Managerial competence	Khan 2011 2013	Pakistan	Service	N/A	Negative	Replication
24	TQM, contextual factors and performance	Sharma 2006	Australia	N/A	Anova/correlation	Mixed	Need for a larger sample
25	Critical success factors of TQM and performance	Salaheldin 2009	Pakistan	SME	SEM	contextual factors are relevant	N/A
26	TQM and BP	Saeed and Hasnu 2011	N/A	N/A	Decriptive/correlation	Positive	Need for comparism
27	Quality management practice and OP	Kureshi, Qureshi and Sajid 2010	Pakistan	N/A	Interview	Positive	Need for considering other sectors
28	TQM and OP	Awan, Raouf, Ahmad, and Spark	Pakistan	Pharmaceutical wholesale	Descriptive statistics	Negative	Need for top management support

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
29	TQM and BP	Raja, Bodla and Malik 2011	Pakistan	Manufacturing	Descriptive	Positive	N/A
30	Corporate entrepreneurship and Bank performan	Mahmood and Abdul wahid 2012	Malaysia	Banking	Regression	Positive	Future research should refine the methodology used in the study to provide further Insights
31	Entrepreneurial orientation, marketing orientation and performance	Idar and Mahmood 2011	Malaysia	N/A	Regression	EO, MO to performance positive, MO as a partially mediator	Future studies should investigate the implementation of the constructs
32	HRM, TQM and OP	Jimenez and Martinez 2009	Spain	N/A	SEM	Positive	Need for introducing other variables
33	Entrepreneurial orientation, debt finance and SBU	Fatoki 2012	South Africa	N/A	Regression	Positive	To uses Hughes and Morgan EO scales
34	Critical success factors of TQM and BP	Awan, Bhatti, Bukhari and Qureshi 2008	Pakistan	Manufacturing	Regression	N/A	N/A
35	Corporate entrepreneurship, business environment and firm performance	Mohammad, Ramayah, Puspowarsito, Natali saand David 2011	Indonesia	Manufacturing	Hierarchical regression	Business environment with partially moderation	Need for a longitudinal study

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
36	HRM practice, corporate entrepreneurship FP	Kaya 2006	Turkey	Different industry	Regression	Partial mediation	N/A
37	Corporate entrepreneurship and Business performance	Zampatakis and Moutakis 2010	Greek	N/A	Bayesian factor analysis	Positive	Use multidimensional and longitudinal study
38	HRM practice and entrepreneurship	Naor, Goldstein, Kevin and Schroeder 2008	N/A	Different industries	Regression/Correlations/SEM	Positive	N/A
39	Privatization, entrepreneurship and performance	Antoncic and Hisrich 2003	Slovenia	N/A	N/A	Positive	N/A
40	Environmental conditions, organizational culture, corporate entrepreneurship and performance	Behram and Ozdemirci 2014	N/A	N/A	Hierarchical Regression	Mixed	Future research should assess the influence of gender roles on academic outcomes
41	Corporate entrepreneurship and firm financial performance	Karacaoglu, Bayraktaroglu and San 2013	Turkey	Service	SEM	Mixed	Employing larger samples
42	Market orientation, flexibility, Job satisfaction and corporate entrepreneurship	Adonisi 2012	South Africa	Different industries	Spearman correlation/person correlation	Positive	To replicate in other sectors and countries
43	Objective quality, performance, entrepreneurship, and involvement	Hernandez – Maestro and Gonzalez – Benito 2011	Spain	Tourism	N/A	Mixed	N/A

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
44	Organizational culture and corporate entrepreneurship	Yildiz 2014	Turkey	N/A	Mixed	Mixed	Future research could expand the sample size
45	Corporate entrepreneurship and market performance	Yang, Li, Zang and Wang 2007	China	N/A	SEM	Key dimensions of corporate entrepreneurship exerts differential influence on market performance of firms	To investigate the cause and effects relationship
46	Transformational leadership and corporate entrepreneurship	Shukri Bakar and mahmood 2014 2011	Malaysia	Academics	Regression	Positive and partial mediation	N/A
47	Marketing mix factors, corporate entrepreneurship and Business performance	Barrett, Balloun and Weinstein 2001	N/A	N/A	N/A	Mixed	N/A
48	TQM practice and organizational culture	Prajogo and McDermott 2005	Australia	N/A	SEM	Positive	Need for further study of TQM effects on organizational performance

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
49	TQM practice and BP	Talib, Rahman, and Qureshi	India	Hospitality	Descriptive/ Pearson correlation	Mixed	Respondents other than managers be used and also to increase the sample size
50	Management perception, TQM service and customer perceptions	Sureshchandra, Rajendran and Anantharaman 2002	N/A	N/A	Regression	Positive	To duplicate the study in other emerging economy
51	Competitive strategy, external business environment, TQM and Performance	Sulistyowati, Salim, Surachman and Solimun 2013	N/A	Manufacturing	Generalized structural components	Positive	Future research conducted on a larger sample
52	Organizational citizenship behavior enterprise resource planning and TQM	Narimani, Tabaeian, Khanjani and Soltani 2014	Iran	Construction	SEM	Full mediation	To test the effects of other variables on ERP success implementations
53	MO, TQM and Hotel performance	Wang, Cheng and Chen 2012	N/A	Hotel	SEM	Positive	Need for a longitudinal study and interview
54	TQM and firm performance	Santos – Vijande and Alvarez – Gonzalez 2007	Spain	Manufacturing and Service	SEM	Positive	To consider the interaction between TQM specific practice
55	Environmental characteristics, TQM principles and OP	Fuentes – Fuentes, Albacete – Saez and Liotens – Montes 2004	N/A	N/A	SEM	Positive	N/A
56	Bench – Marking, TQM	ajjad and Amja 2012	Pakistan	Service	Regression	Positive	To conduct similar study in academic setting

Table 2.1 (Continued)

<i>S/N</i>	<i>Variables</i>	<i>Author</i>	<i>Country</i>	<i>Industry</i>	<i>Method/ Theory</i>	<i>Major Findings</i>	<i>Future research</i>
57	Total quality management implementation and organization performance	Volmohammadi 2011	Iran	Manufacturing	Regression/correlation	Positive/weak correlation	N/A
58	TQM and OP	Al – Eltayen and Al – Zubi 2015	Jordan	Service	Regression	Positive	The study be duplicated in other sectors
59	TQM, Production and Customer satisfaction	Tapalovic 2015	N/A	Banking sector	Regression	Positive	N/A
60	Entrepreneurial orientation, Business environment and Performance	Shehu and Mahmood 2014	Nigeria	SME	Partial least square	Mixed	Other variables be use to predict performance

2.9 Theoretical Underpinning

This study will be underpinned by the Resource Based – view theory (RBV). The resource-based view has a fundamental concern about the unique development of resources for an organization to have a competitive advantage (Barney, 1991). There seems to be no consensus definition about what resource-based view is, thus, resources and capabilities are used interchangeably (Christensen & Overdorf, 2000; Gold, Malhotra & Segars, 2001; Shehu & Mahmood, 2014). RBV described resources as either assets, processes and/or capability. Barney (1991) lamented that an organization can achieve increased performance by getting rare resources of economic value and the ones that competitors and other corporate rivals cannot easily copy, imitate or alternate. Therefore, organizations should focus on the development and utilization of peculiar resources for their own benefit. Amit and Schoemaker (1993) viewed resources to be the organizational assets that are processed through ownership and control, while capabilities are referring to an organization's ability to combine resources and adequately use them.

The RBV identifies that some possessions may lead to realization of organizational goals, while others do not. Therefore, the hurdle lies in the organization's ability to identify those resources that will lead to goal achievement of the overall corporate performance (Wade & Hulland, 2004).

The RBV is the underpinning theory for this study, which explains the association between the firm resources and sustenance of modest advantage for superior firm

performance (Barney, 1991; Fahy, 2000; Shehu & Mahmood, 2014). Mills, Platts and Bourne (2003) provides the following classification of resources: tangible resources, knowledge resource, cultural values and resources; network resources and potential dynamic capabilities; and Intangible resources. Additionally, Fahy and Smithee (1999) and Fahy (2000) viewed resources as: tangible, intangible and capabilities. The RBV has a focus on the ability of an organization to develop and deploy its core resources for an effective and efficient result achievement (Hitt, Ireland & Hoskisson, 2001). Therefore, resources are organizational input injected into a firm's production process to improve competitiveness and performance.

This study considered the RBV from the perspective of intangibility, the fundamental focus of intangibility is toward resources such as innovation, reputations and other relevant strategies employed in order to have a competitive advantage in the environment (Mills *et al.*, 2003; Shehu, 2014). Universities using such resources will gain internal competence with a view of acquiring the necessary strength and capability in implementing the formulated strategy for them to achieve their fundamental objectives which are always tailored towards academic excellence. The impacts of such strategies are seen through organizational ability in acquiring competitive advantage and at the same time remaining relevant in the environment they operate.

2.10 Theoretical Framework

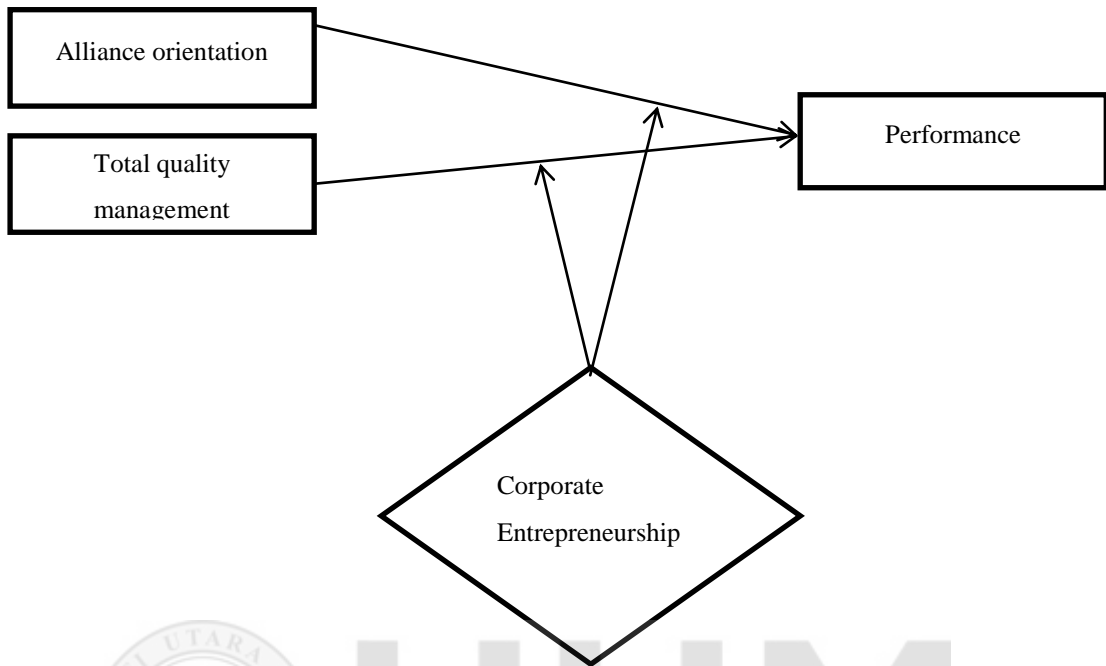


Figure 2.1
Theoretical Framework

Deductions can be made from the above, that resource based view (RBV) focus on the internal competence of organizational resources for such an organization to achieve competitive advantage and remain relevant in its immediate environment. The underlying features of RBV by Barney (1991) are: 1) resources that are valuable; 2) resources that are rare; 3) resource that are imitable; and 4) resources that are non-substitutable. Based on the above, the entire construct under investigation possess the above named characteristics. Alliance orientation is a strategy that firm use to adapt and deploy resources of partner firms to effectively compete in the market place (Kendemir *et al.*, 2006). The concern here is trying to identify partners and their

alliances for a better realization of alliance objectives. Therefore, a sound alliance oriented strategy can be rare, valuable, imitable and non-substitutable, hence the need for RBV.

Total quality management represents a holistic approach involving all stakeholders of continuous improvement through the involvement of top level management and employees to achieve customer satisfaction which will enhance the quality delivery (Demirbag, *et al.*, 2006). Resource based - view will help in developing internal competence of all the stakeholders toward quality achievement. Corporate entrepreneurship concerns the plan of top management in relation to innovation, proactiveness as well as risk taking. It is being considered as an essential attribute of high performing firms. CE is to do with the internal ability of universities to achieve goal and to remain relevant, hence, RVB can be used as the underpinning theory due to the fact that CE is something that is rare, of value to the firm, imitable and non-substitutable.

2.11 Summary

The chapter provided and discussed general issues concerning literature review. It equally provided related definitions of concepts for the entire study variables, performance, alliance orientation, total quality management and corporate entrepreneurship respectively. Empirical studies relating to each of the predicting variables to the criterion variable were fully discussed, hence, the study hypotheses developed. However, the relationship between the independent variable with the

moderating to dependent variables provided. Theoretical underpinning which is the RBV explained with its possible relationship to the whole constructs established.



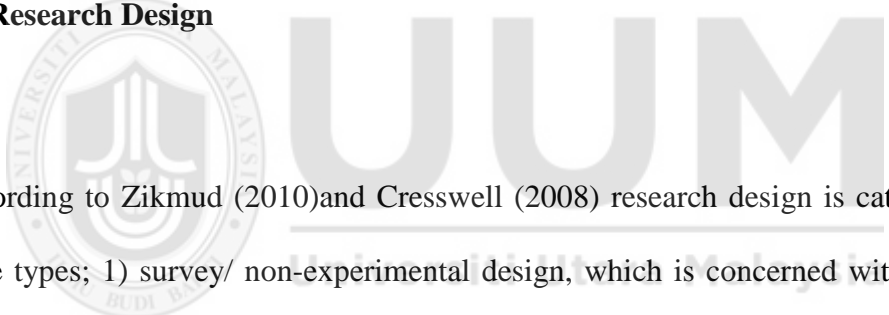
CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter discussed issues relating to research designs, population and sampling size, sampling technique, operational definitions and measurement of variables, data collection procedure, technique of data analysis and the result of the pilot study conducted.

3.2 Research Design



According to Zikmund (2010) and Cresswell (2008) research design is categorized into three types; 1) survey/ non-experimental design, which is concerned with the use of questionnaires and interviews 2) experimental design, which is usually carried in research laboratories and, 3) historical design, which is about the use of secondary data and observation as well. A non – experimental research design is adapted, as the researcher has no control on the independent variables which determines the effects on the dependent variable. Here, a researcher can only influence the measurement (Sekaran & Bougie, 2001; Cresswell, 2012).

The study focused on explaining the features of the population that is the performance of Nigerian Universities. Descriptive survey design is conducted in order to be able to

describe the features of the concern variable in a given circumstance (Sekaran & Bougie, 2010; Davis, 2007; Davis & Cosenza, 1998). Given that this research has focused on performance of Nigerian public Universities, the survey method is more suitable to achieve the set goal. A cross-sectional study has equally been employed. It is a process of collecting data only once and at a point in time (Leedy & Ormrod; 2005; Cavana, Dalahaye & Sekaran, 2001; Bichi 2004; Kumar *et al.*, 2014). The advantage associated with this type of study is that, it is cost effective and saves a lot of time (Wilson, 2010).

3.3 Population and Sample Size

3.3.1 Population

According to Cavana, Delahaye and Sekaran (2001) population is seen as the collection of subject of interest to be studied. Similarly, Sekaran and Bougie (2010) defined population as a gathering of data whose properties are to be assessed in a given research situation. Additionally, Creswell (2012) defined a population as the group of individuals who have identical features that the researcher can identify and study.

The population of this study is made up of all academic staff who hold the administrative position of Vice – Chancellors, Deputy vice Chancellors, Deans, Head of academic departments, Programme Chairpersons or Programme Directors/Coordinators, University's excellence centres/Institute Directors and all their deputies in the entire 13 North – western part of Nigeria. The above mentioned

positions are regarded as academic leaders in the present study. They were selected due to the simple fact that they are heads of their respective units, hence have the relevant information on the overall and daily activities on their units and can better assess the performance of their various Universities (Shukri Bakr, 2014). Therefore, a total population of this study is based on the five hundred and eleven (511) academic leaders from the 13 public owned Universities in North – western part of Nigeria.

Table 3.1
Total Target Population of Academic Leaders in the 13 Public Owned Universities in North – western part of Nigeria

	University	Total Academic Leaders
1	Bayero University, Kano	157
2	Kano University of Science and Technology, Wudil	42
3	NorthWest Univeristy, Kano	21
4	Nigeria Police Academy, Wudil	12
6	Federal University, Dutse	20
7	Jigawa State University, Kafin Hausa	10
8	Usmanu Danfodio University, Sokoto	165
9	Sokoto State University	22
10	Federal University, Dutsinma	12
11	Umar Musa Yar' adua University, Katsina	18
12	Federal University, Birnin Kebbi	11
13	Kebbi State University	11
14	Federal University, Gusau	10
	Total	511

Source: Directories of the selected Universities

3.3.2 Sample Size

According to Crewell (2012) and Ross (2005) a sample is a sub-group of the required population that the researcher intends to study for the purpose of generalization. A sample is part of the population that is available for selection in some stage of the sampling process. It is part of the population of interest to be studied. It can further be referred to as a sub-collection that is picked from the population of interest. Some of the reasons for the use of sample include; studies using a sample rather than the entire population are likely to produce enhanced reliable results; there is a reduction in fatigue and the possibility of recording fewer errors in the data collection process; the impossibility of collecting data and information from the entire population (Bartlett, Kotrlik & Higgins, 2001; Sekaran & Bougie 2010).

The sample size for this study is drawn from the academic leaders of the 13 public North – western Nigerian universities academic leaders. Krijcie and Morgan (1970), table for determining sample size is used to select the respondents. Based on this, 217 academic leaders were selected. However, to reduce mistakes in sampling and to take care of the non-response rate issue, the sample size is multiplied by two (Hair, *et al.*, 2008). Therefore, 434 is the total number of questionnaires administered. Additionally, Alrech and Settle (1995) were of the view that, when there is lower sample this will increase chances of committing mistake, and with adequate sample size the chances of mistake will be reduced.

3.4 Sampling Technique

This study employed a systematic sampling method, the technique, involves randomly selecting of an initial starting point on a list, and subsequently every n th element in the sampling frame is selected (Greer & Lothia, 1994; Cocran, 1997, Hair, Money, Samouel & Page, 2007). Zikmund *et al.*, (2010) described the technique as a procedure in which a starting point is carefully chosen by a random process and then every n th number on the list is selected. The sampling interval is regarded as the number of population elements between each unit chosen from a given sample. The sampling interval for this study is considered to be (population/sample) $511/217 = 2$. At a starting point the researcher selected a number between 1 and 2, and then the sample would be the sampling elements numbered 2, 4, 6, 8, 10, 12 and so on up to the last sample to be selected.

Some of the merit associated with this type of sampling procedure are simple to use, the systematic sampling technique allows a researcher to add a systematic element in to a random selection of subjects; the researcher is guaranteed that the population will be evenly sampled; it reduces the possibility of human bias in the selection of cases to be included in the sample; and it allow the researcher to make statistical inference within the sample Sekaran (2003); Hair *et al.*, (2007); Sekaran and Bougie (2010); Zikmund *et al.*, (2010); Daniel (2012).

This study used systematic sampling technique which is considered suitable due to the fact that it has been used in similar prior studies (Weiss, 1984; Awairitefe, 2005; Zabidi, Ibrahim & Ismail, 2007; Harriette, Spall & Toren, 2007; Vafee, Narimani & Tahamasepour, 2011; Mbath, 2013; Albueku & Ogbouma, 2013; Ghambarali, Alibaygi, Rasekchi, Pezeshki, Ghasemi & Akbari, 2013; Sour, Arzan, Feizizadeh, Tavili & Alizadeh, 2013; Zakeri, Jafari, Tavili, Songooni & Soltan, 2013; Kheng & Mahmood, 2013; Shehu, 2014; June & Kheng, 2014; Kheng, June & Mahmood, 2014).

3. 5 Unit of Analysis

Creswell (2012), Kumar, Abdul Talib and Ramayah(2013)described a unit of analysis as what is to be studied in a given research. Social science research has the following kinds of unit of analysis as individual, organization and group. The unit of analysis for this study is the organization, and the academic leaders from the Nigerian public universities are the respondents. There are evidences that previous studies used organizational unit of analysis, these include Idar and Mahmood (2011); Junaidu (2012); Suliyanto and Rahab (2012); Fatoki (2012); Mahmood and Abdul Wahid (2012); Al-Swidi and Mahmood (2012).

3.6 Operationalization and Measurement of Variables

Operational definition is an arrangement on how the researcher intends to define and measure the study variables which are only peculiar to that study (Priest, McColl, Thomas & Bond, 1995; Nunally & Bernstein, 1994; Creswell, 2012). Variables measurement as adapted or adopted from the previous studies are explained.

3.6.1 Performance

Performance is operationalized as the ability to access the level of success or otherwise of a given firm. The performance scale which uses subjective (non-financial) measures is adapted from the work of ShukriBakr (2014) and has twenty three items. The items are as follows:

- i- I seek out relevant information when problem solving.
- ii- I identify needs and set priorities.
- iii- I facilitate departmental goal setting.
- iv- I motivate faculties to achieve departmental goals and objectives.
- v- I make an effort to get appropriate others involved in problem solving.
- vi- I recognized when group requires future direction.
- vii- I effectively interact with a group to guide them to accomplish a task.
- viii- I perceive needs, concern, and personal problem of others.
- ix- I am skillful in resolving conflict.
- x- I exhibit tact in dealing with persons from different background.

- xi- I recognize what information needs needs to be communicated to others.
- xii- I perform effectively under pressure.
- xiii- I perform effectively during oppositions.
- xiv- I handle positive and negative feedback appropriately.
- xv- I make clear oral presentation of facts or ideas.
- xvi- I expresss ideas clearly in writing.
- xvii- I interact well with students.
- xviii- I communicate effectively with other academic units within the university.
- xix- I communicate effectively with alumni.
- xx- I facilitate faculty intellectual persuits.
- xxi- I facilitate faculty excellence in teaching.
- xxii- I foster achievement and development among students.
- xxiii- I have an effective working relationship with other university administrators.

Shukri Bakr (2014) in an empirical study found the construct reliability to be 0.917

3.6.2 Alliance Orientation

Alliance orientation is a strategy that the firm is to adapt and deploy resources of partner firms to effectively compete in the market place (Kendemir *et al.*, 2006). The

measurements were sourced from the previous work of Kandemir, Yaprak, Cavusgil (2006). The items include:

- i- In our university, there is an active monitoring of environment to identify partnering opportunities.
- ii- Our university, routinely gather information about prospective partners from various forums (e.g. Industry conventions, databases, publications, internet, etc.).
- iii- Our university is always at alert to market development that creates potential alliance opportunities.
- iv- There is coordination in our university across different departments.
- v- Our university, systematically coordinate its strategies across the different alliance.
- vi- Our university have possessed to systematically transfer knowledge across alliance partners.
- vii- There is periodic review of our university alliance to understand what we are doing right and what we are doing wrong.
- viii- Our university periodically collects and analyzes field experiences from our alliances.
- ix- Our university modifies its alliance related procedures based from the experience learned.

Kandemir *et al.*, (2006) Conducted a study on Alliance orientation: conceptualization, measurement, they found the value of a composite reliability to be 0.85.

3.6.3 Total Quality Management

Total quality management is a holistic approach involving all stakeholders of continuous improvement through the involvement of top level management and employees to achieve customer satisfaction which will enhance the quality delivery (Demirbag, *et al.*, 2006). The measurement is sourced from Al – Swidi and Mahmood (2012). This item includes:

- i- In our university, long-term plans focused on quality are developed.
- ii- In our university, there are clear quality goals identified by top- level policy makers.
- iii- In our university regular meetings, we always emphasize on the importance of quality delivered to our students.
- iv- In our university, we depend heavily on quality performance to evaluate students.
- v- In our university, we view service quality as being more important than cost.
- vi- In our university, we view service quality as being more important than cost.
- vii- In our university, students requirement and expectation are used as a basis for measuring quality.
- viii- In our university, floor and heads of departments are aware of the level of students satisfaction.
- ix- It is the policy of our university to keep in close contact with our students.
- x- In our university, we have a mission statement which has been effectively communicated to all staff and students and gain their support.
- xi- In our university, we have a comprehensive planning process which sets and reviews focus on the achievement of the best practice.

- xii- When we develop our plans, policies, and objectives, we always incorporate students requirements and the needs of all stakeholders, including the community.
- xiii- In our university, we have a written statement of strategy covering all the operations which is clearly articulated and approved by our senates.
- xiv- Our departmental operations are effectively aligned with the entire university mission.
- xv- In our university, there is always an emphasis on the continuous improvement in all the activities of our various levels.
- xvi- In our university, there is always an emphasis on the quality awareness programs for students.
- xvii- In our university, continuous improvement is emphasized in the training programs provided to students.
- xviii- In our university, policies in providing the quality are more than quality provided to students
- xix- In our university, all departments believe that by implementing continuous improvement strategies, they can survive and serve better in the highly competitive environment
- xx- In our university, it is always emphasized that benchmarking is our strategy to achieve better competitive position.
- xxi- We visit our faculties and department to investigate their practice.
- xxii- In our university, we conduct research to find out the best practices of other local and international universities.

Al – Swidi and Mahmood (2012) conducted an empirical study using structural equation modeling; they found the composite reliability to be 0.856

3.6.4 Corporate Entrepreneurship

Corporate entrepreneurship is described as a readiness to engage in a more risky, and innovative as well as uncertain activities in the market place, accurately discovers new opportunities before the competitor (Idar & Mahmood, 2011). The measurement is sourced from Shukr Bakr and Mahmood (2014). The items are:

- i- Our university, find new ways of doing things.
- ii- Our university, develop new processes and services.
- iii- Our university, tend to implement changes before they are needed.
- iv- Our university, often do things in unique ways.
- v- Our university, approach tasks in a more innovative ways.
- vi- Our university, improve things when the need arises.
- vii- Our university keeps ahead changing instead of responding to them.
- viii- Our university has the initiative to start projects or assignments.
- ix- We often take calculated risk despite the possibility of failure.
- x- We engage in activities that have chances of working out.
- xi- We approach new assignment/activities in a cautious manner.

Shukri Bakr and Mahmood (2014) conducted an empirical study using regression analysis, they found Cronbach's alpha to be 0.814.

Table 3.2
Summary of Measures and Their Sources

Variables	Dimensions	Items	Sources	Reliability Alpha value
Performance	Unidimension	23	Shukri Bakr (2014)	0.917
Alliance orientation	Unidimension	9	Kandemir, Yaprak	0.780
Total quality management	Unidimension	22	Al-Swidi and Mahmood (2012).	0.856
Corporate Entrepreneurship	Unidimension	11	Shukr Bakr and Mahmood (2014).	0.814

3.7 Data Collection Procedure

Hand delivery method for data collection is used, which is intended to facilitate quick response to the completed questionnaires and to be returned within the shortest possible time. There are evidences showing the rate of return of mail questionnaires in Nigeria is inadequate as the response rate is between 3 to 4 percent respectively (Asika, 1991; Roy & Berger, 2005; Shehu & Mahmood, 2014).

The survey is carried through self-administration of questionnaires. The chosen survey method is very expensive compared to a postal survey; despite, some researcher prefers to use this method because of its numerous benefits. One of such benefits is that the researcher can administer and collect a quick response. Another benefit is that, the researcher can give additional explanation on items that need clarification by the respondents. More so, the researcher can induce the respondents in

taking part in the survey (Khandwalla, 1997; Bichi, 2004; Roy & Berger, 2005; MCGivern, 2006; Malhotra & Birks, 2006; Sekaran & Bougie, 2010).

3.8 Technique of Data Analysis

The present study used a combination of descriptive and inferential statistics. The essence of descriptive statistics is to provide an explanation of the features of data quantitatively. It intends to summarize a sample rather than taking the whole population (Bichi, 2004). Both SPSS software version 20 and SmartPLS 2.0 M3 (Ringle, Wendo & Will., 2005) were employed as a tools of analysis. Fox (2005) viewed SmartPLS 2.0 M3 (Ringle *et al.*, 2005) as a tool that reflects an informal thinking about causal relationships that is common in social-science theories, and helps in translating such theories into data analysis though in courses such as economics, structural-equation models may stem from formal theory.

SmartPLS 2.0 M3 (Ringle *et al.*, 2005) is a encouraging method that provides researchers with vast opportunities. SmartPLS 2.0 M3 (Ringle *et al.*, 2005) is regression like approach that is capable of reducing the residual variances and has the unique ability to work well with both larger and fewer samples. Contrary to AMOS SEM, that requires larger samples of data set (Cavana, Delahaye & Sekaran, 2001; Hair *et al.*, 2011). There is two different processes of data assessment in SmartPLS 2.0 M3 (Ringle *et al.*, 2005) which includes the assessment of the measurement model as well as that of the structural model.

The assessment of the measurement model allows for the confirmation of reliability using a cronbach's alpha and validity of were both discriminnat, convergent are treated.The structured model step would evaluates the structural model estimates. SmartPLS 2.0 M3 (Ringle *et al.*, 2005) has a peculiar capability of providing a parameter for estimate that exploits on the R^2 values of the dependent variables. As such, it has the ability to predict outcome (Höck & Ringle 2010; Sarstedt & Schloderer, 2010; Sattler, Franziska, Claudia & Christian, 2010). SmartPLS 2.0 M3 (Ringle *et al.*, 2005) also has the capability for hypothesis testin, their assumptions about parameters and the variances and co - variances of all the observed variables can be factored ones. This study intends to investigate the association between alliance orientation, total quality management on performance of Nigerian public universities with the moderation of corporate entrepreneurship.

3.9 Questionnaire Design

A structured questionnaire consisting of close - ended multiple choice questions is used in the survey. Despite some studies in the literature that used different Likert scales, the researcher prefers to use a five point Likert scale. Studies in the past argued that using a scale with midpoint provides better and good result (Robinson, Shave & Wrightman, 1991; Krosnic & Fabrigar, 1997; Brah, Wong & Roa, 2000; Zikmund, 2003; Cooper & Schindler; 2006; Rattray & Jones, 2007), and it enables respondents to comfortably show their stand.

Schuman and Presser (1981) also stressed the need of having scales with midpoints as they give a wider chance for respondents to better express their stand. According to Elmore and Beggs (1975) five point scale is preferable, and increase in the number from five to what ever as the case may be would not assures improvement in the reliability of rating. This is also in line with the argument of Neuman and Robson (2008) who viewed that five point scale is the most appropriate and provide better results. Hence, five point Likert scale was adopted for this study. Additionally, there is evidence that previous studies used a five point Likert scale, few among includes Boumarafi and Jabnoun (2008); Ghorbani, Branch and Dimneh (2012), Noor and Muhammad (2005); Noor (2012); Wahab, Noor and Ali (2009); Haq (2012), Awang *et al.*, (2014), Shehu and Mahmood (2014).

The questionnaire used in this study has five sections. Section A consists of demographic information of respondents. It covers seven items in nominal scale. Section B has twenty three questions regarding the dependent variable which is the performance. In section C there are nine questions in respect of alliance orientation, which is an independent variable. There are twenty two questions in section D representing total quality management construct also an independent variable. Section E is made up oftweleve questions in respect of the moderatingvariable, which is the corporate entrepreneurship.

3.10 Reliability and Validity

3.10.1 Reliability

The reliability of a measure is defined as the extent to which a measuring instrument is error free and thus, consistent and stable across time and also across various items in the scale (Sekaran & Bougie, 2010). The most common test of inter-item consistency reliability is the Cronbach's alpha coefficient. Hence, the Cronbach's alpha coefficient was employed in this study to measure the internal consistency of the instrument. Thus, the result of the reliability conducted ranges from 0.780 to 0.939 showing the attainment of adequate values.

3.10.2 Validity

According to Huck(2004) the validity of the measuring instrument is seen as the extent to which the instrument is measuring what it is supposed to measure. A face validity based on expert assessment was used to assess the validity of the instruments (Green, Tull & Albaum, 1988). Based on this, a draft of this instrument was given to the expert at the college of business, University Utara Malaysia, for observation, and correction. A sample of the instrument was equally given to industry experts, that is the academic leaders of the Nigerian public universities which they made valuable suggestions on how to make some improvement on the instrument.

3.11 Pilot Study

According to Gay, *et al.*, (2006) a pilot test is regarded as a trial in which a small scale of the study is carried out before the actual full scale study. A sample size for a pilot test is usually small, ranging from fifteen to thirty respondents, though it could be more than that if the study involves several stages (Malhotra, 2008). A total of 30 copies of the questionnaire was given out to a sample of head of departments from selected public universities, and the entire 30 copies were duly completed and returned representing 100 percent response rate. The researcher personally distributed the questionnaires, and made explanation to the respondents on items that needed further explanations. The process took about one complete month, which was conducted between March to April 2015.

The most common test of inter-item consistency reliability is the Cronbach's alpha coefficient. Hence, the Cronbach's alpha coefficient was used in this study to measure the internal consistency of the instrument. After running the data using SPSS version 20 windows, it was found that all the measures possess a high reliability standard ranging from 0.780 to 0.939. This is in accordance with the standard that an instrument with a coefficient of 0.60 is regarded to have an average reliability; whereas a coefficient of 0.70 and above shows that the instrument has a high level of reliability (Hair *et al.*, 2006; Nunally, 1967; Nunally, 1978; Sekaran & Bougie, 2010).

Table 3.3
Summary of Total Number of Items for Each Instrument and Their Reliability Coefficient

Constructs	Number of items	Cronbach's Alpha
Performance	23	0.939
Alliance orientation	9	0.780
Total quality management	22	0.856
Corporate Entrepreneurship	11	0.814

3.13 Summary

The chapter discusses the methodology, where issues relating to research design, population of 511 North – Western Nigerian public Universities academic leaders is considered. A sample size of 217 using Kriecie and Morgan (1970), table for sample determination is employed; a systematic probability sampling method adopted. However, organization's unit of analysis is used, with all the operationalization and measurement of all the variables in the study explained. Issues concerning data collection procedure and technique for data analysis with the reliability and validity were stated in the chapter and result for pilot study explained.

CHAPTER FOUR

RESEARCH FINDINGS

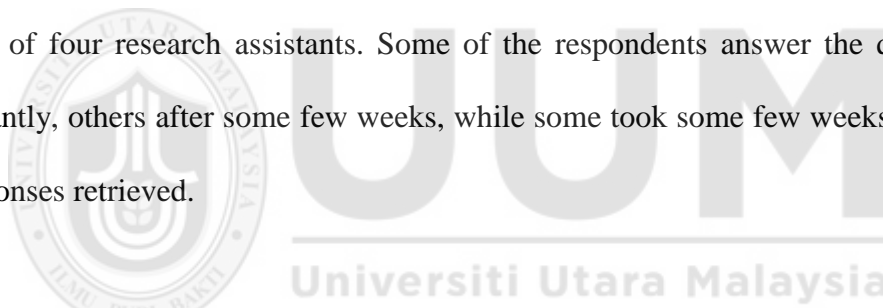
4.1 Introduction

This chapter is about the research findings, therefore, issues of data collection process and survey responses, issues of non-response bias, data cleaning which essentially concerns missing values and outliers were provided and discussed. The chapter also concerns analysis of the goodness of measures, i.e the measurement model, in which issues concerning validation of measurement such as construct including convergent, discriminant were provided and discussed, reliability test; and the descriptive statistics i.e., mean and standard deviation, profile of respondents. Additionally, it presents the correlation test, structured model for hypothesis testing for both direct and indirect relationship.

4.2 Data Collection Process and Survey Responses

According to National Universities Commission (2014), and the various Universities academic planning departments (2015), there were 13 public Universities owned by the Federal and States government in North – Western part of Nigeria, with a total of 511 academic leaders. The sample size was drawn from Krijcie and Morgan (1970) table for sample size determination, based on this 217 academic leaders were selected. In order to take care of none response rate and minimize error in sampling as

suggested by Hair, Wolfinbarger and Ortinal (2008), the sample size was double, hence, a total of 434 questionnaires was distributed to the academic leaders of the selected Universities. The respondents were selected on the basis of systematic probability random sampling technique. A total of 511 constituted the population, 217 represent the sample. Hence, based on systematic procedure the sample interval is picked by dividing the population with the sample size as (population/sample). Based on this, an interval of n^{th} which represents 2 was picked. Therefore, the selection process was that at starting point a value between 1 and 2 is chosen, then subsequently, 4, 6, 8, 10, 12 until the last sample is selected. After respondent's identification through their lists, a total of 434 questionnaires was personally administered with the help of four research assistants. Some of the respondents answer the questionnaire instantly, others after some few weeks, while some took some few weeks before their responses retrieved.



The researcher made follow up mainly through personal visitation of respondents and to some extent phone calls during the data collection periods, whereas, other research assistants were equally used to collect back the questionnaire distributed from some category of respondents. The data collection period took about two months, which was between July to September, 2015. A total of 212 questionnaires was duly completed and returned representing 49 percent response rate. However, a total of 203 questionnaires was finally retained for analysis, as depicted in table 4.1. A total of 9 responses were excluded from the analysis due to issues of both univariate and multivariate outliers. Removing such number of questionnaires is essential due to the fact that they do not represent the sample (Hair *et al.*, 1998).

Table 4.1
Questionnaire Distribution and Retention

Item	Frequency	Percentage %
Distributed Questionnaires	434	100
Returned Questionnaires	212	49
Rejected Questionnaires	19	4
Retained Questionnaires	203	47

A total of 203 respondents constituted the sample for this research showing a response rate of 47 percent. The response rate is regarded adequate based on Sekaran's (2003) argument that a 30 percent response rate is suitable for the survey research. Therefore, 203 usable responses of 47 percent satisfied the required sample size requirement for non – parametric statistics (Tabachnic & Fidell, 2014) . The data was keyed into SPSS (version 20) for further analysis.

4.3 Non- Response Bias

Non-response bias is described as the most common mistake a researcher anticipates to make in estimating the characteristics of sample because some category of respondents are underrepresented due to non-response (Berg, 2002). Singer (2006) asserted that there is no minimum response rate below which a survey estimate is necessarily biased and, on the other hand, no response rate above which it is never biased. However, no matter how small a non-response is, there is the possibility of bias which needs to be investigated (Pearl & Fairly, 1985; Sheikh, 1981). In order to test non – response bias, extrapolation procedure was conducted as suggested by

Armstrong and Overton (1977). Respondents were divided into two independent samples based on their response to survey questionnaire with regards to four major study variables (alliance orientation, total quality management, corporate entrepreneurship and performance).

One of the ways used to test for non-response bias is to compare the responses of respondents to the instrument (questionnaire) distributed early July, 2015 and others, who responded to the questionnaire in September, 2015 (Armstrong & Overton, 1977; Lin & Schaeffer, 1995). However, the responses of those respondents late in September, 2015 were, in essence, a sample of non-respondents to the first questionnaire administered, and that is presumed to be the representative of the non-respondents group (Miller & Smith, 1983; Oppenheim, 1966).

Table 4.2
T- test Comparison Between Early Respondents (1) and Late Respondents (2)

Measure	Timeline	N	Mean	SD	t-value	Sign
Performance	Early	104	3.49	3.20	4.20	.42
	Late	99	3.20	4.08		
Alliance orientation	Early	104	3.45	4.76	3.20	.32
	Late	99	3.33	5.40		
Total quality management	Early	104	2.85	4.98	-1.31	.61
	Late	99	2.86	5.22		
Corporate entrepreneurship	Early	104	2.43	3.91	-.22	.80
	Late	99	2.47	4.11		

From the independent samples t-test, the results above indicated that the group mean and standard deviation for early respondents and late respondents were not different. As shown in table 4.2 above, the t-test result indicated that there is no significant difference between early responses and late responses based on the items in performance ($t= 4.2, p< 0.42$); alliance orientation ($t= 3.2, p< 0.32$); total quality management ($t= -1.31, p< 0.61$); and corporate entrepreneurship ($t= -.22, p< 0.80$) respectively. Hence, as the result indicates, though the items have statistical difference, but the differences are relatively small and not significant to have an effect on the entire results.

4.4 Data Cleaning

Pallant(2011) asserted the relevance of data cleaning in the conduct of any multivariate analysis. The quality and importance of the outcome realize heavily on the data screening and editing (Pallant, 2011, Shehu, 2014). Tabachnick and Fidell (2007) contended that data value could be safeguarded by ordinary proof reading, this method may be very tasking when dealing with large set of data. Hence, missing data and outliers were thoroughly checked and treated.

4.4.1 Detection of Missing Data

Missing data refer to the unobtainability of suitable value on one or more variables for data analysis (Hair, Black, Babin & Anderson, 2010). Due to the harmful effects of

missing data in the analysis, the researcher took care right from the field in an attempt at reducing or ensuring that the data is free from any missing value. On receipt of any duly completed questionnaire, the researcher and his assistants quickly checked through to ensure that each and every question is appropriately answered. In case of respondent's inability to answer a given question, respondents' attention is immediately drawn to kindly and appropriately complete the question. Additionally, the researcher follows the data entry step by step, with caution and curiosity. As soon as a missing value is noted, the researcher refers back to the questionnaire and traces it. Therefore, this goes a long way in significantly ensuring that no missing value is detected. A preliminary descriptive statistics were conducted to find out whether there is the presence of missing data or not. The descriptive statistics result shows that no missing value is recorded. Hair *et al.*, (2010) asserted that any case with more than 50 percent missing value should be deleted as long as there is adequate sample. Similarly, Tabachnick and Fidell (2007) and Babbie (2005) observed the method of treating missing data is to merely drop the case. Hence, in this study no missing value was recorded.

4.4.2 Outliers

According to Byrne (2010) outliers are those cases whose scores are significantly different from all the others in a given set of data. Tabachnick and Fidell (2007) recommended the identification of univariate outlier through observation of z score. The z score for each and every item must be within the range of ± 3 . 29 (0.05 sig.

level). According to this investigation any value exceeding ± 3.29 were due to some mistake of data entry. A total of only 6 cases of univariate outliers was recorded. In addition, Mahalanobis distance was examined to identify multivariate outliers. All cases with Mahalanobis distance exceeding 65 at a degree of freedom of 0.05 are removed. Therefore, cases 49, 71 and 89 were deleted because they were above the critical value of 84.82. Mahalanobis distance was further conducted and found that no more outlier in the data set. The remaining 203 cases were considered for further analysis.

4.5 Descriptive Statistics – Profile of Respondents

Table 4.3 below indicates the demographic profile of respondents. The respondents were asked to explain some of their demographic information, which includes gender, age, education, years in service, current administrative position as well as the years in the present administrative post. In this study it is found that males academic leaders are the dominant gender in the public Universities of North – Western Nigeria. Male were 184 representing (90.6) percent response rate, while female had a response of only 19 (9.4) percent response rate. This signifies that male consisted the dominant academic leaders in these Universities. With regards to the age of the respondents, it is found that those between 50-60 years amounted to 127 and representing (62.5) percent are found to dominate the academic leadership positions. This is followed by those between 60 years and above were the next dominating the academic leadership with a total number of 20 and carrying (9.8 percent). Those between 30 – 40 years and

20 – 30 years were the less dominant in academic leadership with only 1 and none representing (0.5 & 0) percentages respectively.

Regarding the educational attainment, those with PhD qualification constituted 170 responses, representing (83.7 percent) of the total responses, followed by Master Degree holders with 23 responses (11.3 percent), next are others with only 10 responses, representing (5.0 percent) of the total response. None is found with HND/Bachelor Degree. This indicated that the academic leadership is mainly occupied by PhD Degree holders and above, meaning that the University academic leadership is becoming more challenging as only those with higher qualification stand a chance in becoming leaders. Similarly, Other qualification is serving as an additional advantage as it was next in value importance after the PhD degrees. Master degree and HND/Bachelor degree were less important as far as the academic positioning is concern.

As for the years in service, 117 respondents had between 16-20 years which is equivalent to 57.6 percent whereas 70 respondents (34.4 percent) had between 11-15 years, followed by those between 21-30 years constituted a response rate of 12 corresponding to 5.9 percent respectively. However, those having 30 years and above were only 2 representing (0.9) percent, while, none is found for less than 5 years. Meanwhile, with regard to the current administrative position 90 respondents are Heads of academic departments (44.3 percent), 23 respondents were deputy deans, representing (11.3 percent), 21 respondents were deans of different faculties with (10.3 percent) response rate. Additionally, 18 respondents were the programme

coordinators/Chairperson with (8.8 percent) response rate. However, 15 respondents were the deputy directors of University excellence centres carrying (7.3 percent) response rate. Director of University centres/institute carries 13 respondents with (6.4 percent) response rate, whereas, the deputy directors of University centre/institutes had 10 respondents with (5.0 percent). The deputy Vice – Chancellors had only 6 response equivalent to (2.9 percent). Similarly, the deputy University excellence centres, deputy programme coordinators, Vice – Chancellors and others had 4, 2, 1 and 0 responses representing (2.0, 0.9, 0.5 and 0 percent) response rate.

However, as regard to years in service in the present administrative post, 1-2 years, carrying 118 respondents with (58 percent) dominate the academic leadership positions. Those with 3-4 were 85 in number representing (42 percent) were next, while no evidence is established for both 5-6 years and 7 years and above. This indicated that most academic leadership were between 1-4 years respectively.

Table 4.3
Demographic Profile of Respondents

Demographic variables	Categories	Frequencies	Percentages
Gender	Male	184	90.6
	Female	19	9.4
Age	20 -30 Years	----	----
	30 – 40 Years	1	0.5
	40 – 50 Years	55	27.2
	50 – 60 Years	127	62.5
	60 Years and above	20	9.8
Education	HND/Bachelor	----	---
	Master Degree	23	11.3
	PhD	170	83.7
	Others	10	5.0

Years in service	Between 6 – 10 Years	---	---
	Between 11 – 15 Years	2	0.9
	Between 16 – 20 Years	70	34.4
	Between 21– 30 Years	117	57.6
	30 Years and above	12	5.9
		2	0.9
Current Administrative Position	Vice – Chancellor	1	0.5
	Deuty Vice - Chancellor	6	2.9
	Dean	21	10.3
	Deputy Dean	23	11.3
	Head of Department	90	44.3
	Director of Centre/institute	13	6.4
	Deputy Director of Centre/institute	10	5.0
	Programme Coordinator/Chairperson	18	8.8
	Deputy Programme Coordinator/Chairperson	2	0.9
	Director University Excellence Centre	4	2.0
	Deputy Director University Excellence centre	15	7.3
		---	---
	Others		
Years in current administrative position	1 – 2 Years	118	58
	3 – 4 Years	85	42
	5 - 6 Years	---	---
	7 Years and above	---	---

4.5.1 Mean and Standard Deviation

Mean is the common measure of central tendency, which is considered to be the average value of the data set (Sekaran & Bougie, 2010). Standard deviation is a measure of variability, or spread, which provides an index of dispersion in the data set and it is the square root of variance. Mean and standard deviation are considered to be the important descriptive statistics for interval and ratio scale. The present study used five point Likert scale, and an interpretation based on Nik, Jantan and Taib (2010) is adapted. They recommended that scores of less than 2.33 are low level, 2.33 to 3.67 are moderate level, whereas 3.67 and above are considered as high level. Table 5.4 below presents the mean and standard deviation of the entire variables used in this

study. Corporate entrepreneurship recorded the highest mean ($M = 3.97$, $SD = 3.82$) while performance has the lowest mean ($M = 2.98$, $SD = 1.68$). Therefore, the entire variables means were in the range of high level.

Table 4.4
Mean and Standard Deviation of the Study Variables

Items	Description	Mean	SD
1	Performance	2.98	1.68
2	Alliance orientation	3.20	2.44
3	Total quality management	3.21	2.44
4	Corporate entrepreneurship	3.97	3.82

The mean and standard deviation shown in table 4.5 below there are twenty three items representing performance. Thirteen items out of twenty three recorded high level of mean score, while, seven items indicated moderate mean score, whereas, only three items are with low mean scores. Effective performance recorded the highest mean score ($M = 4.17$, $SD = 0.988$), whereas, facilitation of faculty excellence in teaching recorded a low mean score of ($M = 2.12$, $SD = 1.20$) respectively. This result shows that effective performance is the most vital item representing the performance of Nigerian public Universities

Table 4.5
Mean and Standard Deviation of Performance Items

Items	Description	Mean	SD
1	Seek out relevant information	3.89	1.269
2	Need identification and priority setting	2.44	1.09
3	Facilitation of departmental goals and objectives	3.43	1.01
4	Faculty motivation in achieving departmental goals	2.99	1.10
5	Effort to get appropriate others involved in problem solving	2.94	1.20
6	Future direction requirement	3.99	1.24
7	Group interaction for task accomplishment	4.00	1.57
8	Others perception of needs, concern, and personal problems	2.70	1.57
9	Skillful in resolving conflict	2.53	1.55
10	Tact exhibition in dealing with persons	4.06	1.17
11	Recognition of what information needs to be communicated	3.81	1.05
12	Effective performance under pressure	3.70	.974
13	Effective performance during opposition	4.17	.988
14	Handling of positive and negative feedback	3.19	.975
15	Making clear oral presentations of facts	4.01	1.06
16	Clearly expression of ideas	4.07	1.04
17	Good interaction with students	4.00	1.15
18	Effective communication with other academic units within the university	3.95	1.13
19	Effectively communication with alumni	3.79	1.12
20	Facilitation of faculty intellectual pursuits	2.99	1.17
21	Facilitation of faculty excellence in teaching.	2.12	1.20
22	Achievement fostering and development among students	3.11	1.30
23	Effective working relationship with other university administrators	2.13	1.21

The mean and standard deviation of alliance orientation is indicated in table 4.6. The highest mean score of items for alliance orientation is routinely gathering of information about prospective partners (M = 4.12, SD = 1.01), whereas systematic transfer of knowledge across alliance partners recorded the moderate mean in the range (M = 3.12, SD = 1.18). Hence, routinely gathering of information about prospective partners is the item that best represents alliance orientation construct.

Table 4.6
Mean and Standard Deviation of Alliance Orientation Items

Items	Description	Mean	SD
1	Active monitoring of environment	3.78	.978
2	Routinely gather information about prospective partners	4.12	1.01
3	Always at alert to market development	3.66	1.05
4	Coordination across different departments	3.22	.971
5	Systematic coordination of strategies across different alliance	4.01	1.12
6	Systematically transfer of knowledge across alliance partners	3.12	1.18
7	Periodic review of our university alliance	3.80	1.25
8	Periodically collection and analysis of field experiences from our alliances.	3.94	1.16
9	Modification of alliance related procedures	3.89	1.27

The mean and standard deviation shown in table 4.7 there are twenty two items representing total quality management. All the items recorded high levels of mean score. Two items that are; policy in providing the quality of students and benchmarking

is our strategy to achieve better competitive positioning recorded highest mean score (M = 4.07, SD = 1.03), whereas students feedback in determining their needs and requirement recorded a moderate mean score of (M = 3.23, SD = 0.912) respectively. This result shows that policy in providing the quality of students and bechmarking is our strategy to achieve better competitive positioningare the main characteristic representing the total quality management of Nigerian public universities.

Table 4.7
Mean and Standard Deviation of Total Quality Management Items

Itms	Description	Mean	SD
1	plans focused on quality	3.98	1.12
2	clear quality goals identification by top- level policy makers	3.96	1.10
3	Our university regular meetings emphasized on the importance of quality delivered to our students	4.04	1.10
4	We depend heavily on quality performance to evaluate students	4.04	1.10
5	We view service quality as being important than cost	3.99	.986
6	Students' feedback in determining their needs an requirement.	3.23	.912
7	Students' requirement and expectation are used as a basis for measuring quality.	3.37	.896
8	Heads of departments are aware of the level of students' satisfaction.	3.42	.964
9	Our university policy is to keep in close contact with our students we have a mission statement which is effectively communicated	3.45	.888
10	Planning process which sets and reviews focus	3.48	.947

11	We always incorporate students' requirements and that of all stakeholders, including the community	3.48	.947
12	We have a written statement of strategy	3.50	.985
13	Operations are effectively aligned with the entire university mission	3.45	.910
14	There is always an emphasis on the continuous improvement	3.45	.875
15	There is an emphasis on the quality awareness programs for students.	3.95	1.15
17	Continuous improvement is emphasized	4.05	1.06
18	There is policy in providing the quality of students	4.07	1.03
19	All departments believe that by implementing continuous improvement strategies	3.97	1.15
20	Benchmarking is our strategy to achieve better competitive position	4.07	1.03
21	Visit our faculties and department to investigate their practice	3.95	1.17
22	We conduct research to find out the best practices	3.95	1.17

The mean and standard deviation indicated in table 4.8 there are eleven items representing corporate entrepreneurship. All the items recorded high levels of mean score. Keeps ahead changes instead of responding to them recorded highest mean score ($M = 4.04$, $SD = 1.14$), while engagement in activities that have chances of working out recorded a moderate mean score of ($M = 3.45$, $SD = 0.888$) respectively. This result shows that keeps ahead changes instead of responding to them is the main characteristic representing the corporate entrepreneurship of Nigerian public Universities

Table 4.8
Mean and Standard Deviation of Corporate Entrepreneurship Items

Items	Description	Mean	SD
1	New ways of doing things.	3.99	1.15
2	Development of new processes and services.	4.02	1.12
3	Change implementation	3.99	1.15
4	Unique ways of doing things	3.99	1.15
5	Approach tasks in a more innovative ways.	3.91	1.18
6	Things improvement	3.86	1.23
7	Keeps ahead changes instead of responding to them	4.04	1.14
8	Initiative to start projects	4.13	1.03
9	Take calculated risk	4.02	1.09
10	Engage in activities that have chances of working out.	3.45	.888
11	Approach new assignment/activities in a cautious manner	3.48	.947

4.6 Fundermental Statistical Assumptions

The present study use statistical analyses as supported by Hair *et al.*, (2010; 2006) and Lee (2010) affirmed that it is relevant to use important assumptions such as linearity, normality and Homoscedasticity regarding the study variables to be able to confirm the results and in order to efficiently deal with the prevalence of errors such as Type I or Type II. Hence, this study will consider the issues relating to normality, linearity, multicollinearity and homoscedasticity.

4.6.1 Test of Normality

Tabachnick and Fidell, (2007) asserted that one of the fundamental assumption of multivariate analysis is that each variable and all linear groupings of the variable should be normally distributed. The common method used in assessing normality is either by statistical or graphical methods. The basic mechanisms of statistically normality are skewness and kurtosis. When a distribution is normal, the value of both skewness and kurtosis should be close to zero. In graphical method, normality is usually determined through histogram residual plots. This refers to a shape of data distribution to an individual continuous variable and its correspondence to normal distribution. If the assumption is met, the residuals should be normally and independently distributed (Tabachnick & Fidell, 2007).

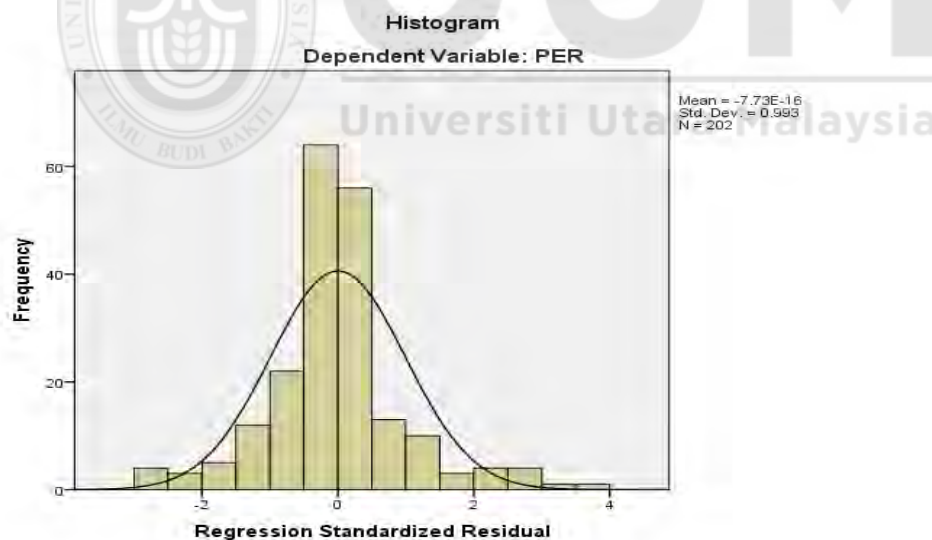


Figure 4.1:
Normality

The normality assumption in this study is diagnosed by checking at both skewness and kurtosis at the same time looking at histogram residual plots. Based on the

analysis, the residual appears to be normal and the values of skewness and kurtosis were close to zero. Therefore, the normality assumption is achieved (Afifi & Clark, 1998).

4.6.2 Linearity

Linearity is an important statistical assumption in multivariate analysis because one of the underlying expectations of the technique is that the association between predicting and criterion variables should be linear. However, correlation can only capture the linear association between variables. Therefore, if substantial non-linear relationships exist, they will be ignored in the analysis, which will in turn underestimate the actual strength of the relationship (Tabachnick & Fidell, 2007).

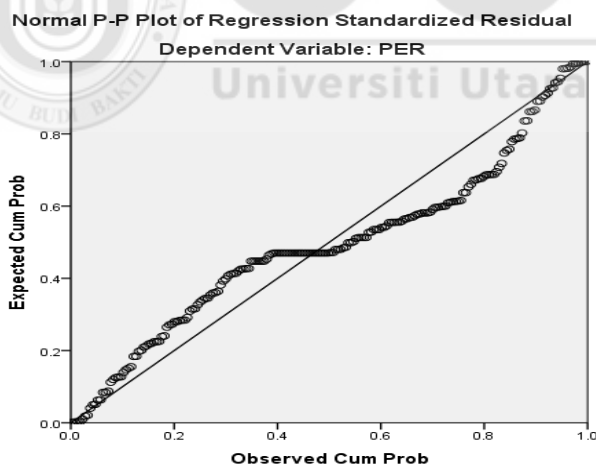


Figure 4.2:
Linearity

The study used residual scatter plot, the residual ought to scatter around 0 and most of the scores should concentrate at 0 points (Shehu, 2014). The assumption is achieved as

the plot shows that residual scores converged at the center along the zero point, hence evidencing that the linearity assumption is fulfilled.

4.6.3 Multicollinearity

Zikmund *et al* (2003), Sekaran and Bougie (2010) labelled multicollinearity as a occurrence in which two or more independent variables in a multivariate are extremely related. The easiest way of finding multicollinearity is through the checking of the correlation matrix of the predicting variables (Tabachnich & Fidell, 2007). Most people consider correlation of 0.7 and above as high (Sekaran and Bougie, 2010), while to the others intercorrelation of greater than 0.8 is considered to be evidence of high multicollinearity (Berry & Feldman, 1985). According to Hair *et al.*, (2010) the value of predicting variables is highly correlated among themselves at 0.9. In an effort at find the multicollinearity problem, a bivariate correlation of the entire predicting variables has been conducted, using Pearson's correlation. The Pearson's correlation indicated that there is no multicollinearity issue as all values were in range of 0.554 to 0.439.

Additionally, one other method used for detecting multicollinearity is to look at the variance inflated factor (VIF) and tolerance value. Hair *et al.*, (2010) asserted that any VIF exceeding 10 and tolerance value lower than .10 indicates a problem of multicollinearity. Table 5.11 below shows the VIF and the Tolerance value of independent variables.

Table 4.9
Tolerance and VIF Values

Independent variables	Collinearity Statistics	
	Tolerance	VIF
Alliance orientation	.247	4.042
Total quality management	.297	3.368
Corporate entrepreneurship	.354	2.823

The result in the table 4.9 above clearly shows the absence of multicollinearity among the predicting variables due to the fact that the VIF values are less than 10 whereas the tolerance values are more than .10.

4.6.4 Homoscedasticity

Homoscedasticity as one of the statistical assumption is considered to be a situation where the variance of the criterion variable is approximately the same at different level of the predicting variables (Hair, *et al.*, 2010). Homoscedasticity is normally measured by visual inspection of the scatter plot of the regression residuals. Homoscedasticity appear to be indicated when the width of the band of the residuals is approximately the same at dissimilar levels of the dependent variable and scatter plots shows a pattern of residuals normally disseminated around the mean (Berry & Feildman, 1985). The assumption of homoscedasticity was assessed using regression

in SPSS method. An examination of residual plots for all the independent variables shows that the assumption of homoscedasticity was not violated.

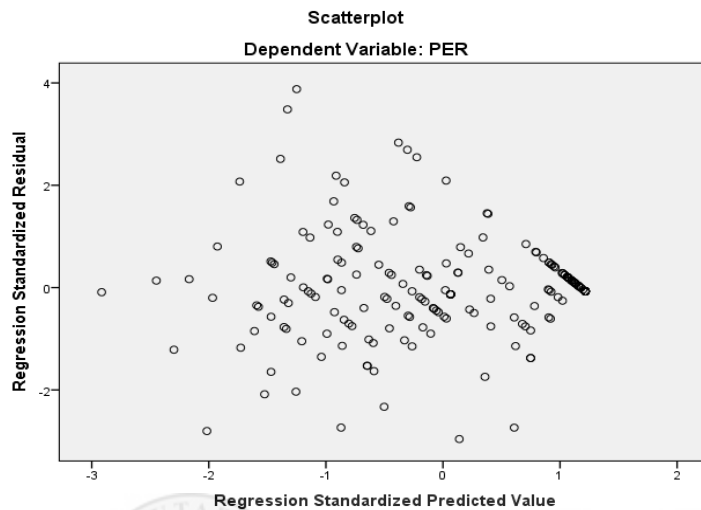


Figure 4.3
Residual Plots- AO, TQM, CE and Performance

4.7 Correlation Between The Exogenous Variables

Correlation analysis is employed in order to provide and explain the strength and direction of a linear association between two variables (Pallant, 2011). Pearson correlation was used to assess the interrelationship between the study variables. The table below indicated the interrelations among performance, alliance orientations, total quality management, and corporate entrepreneurship of Nigerian public Universities. Pallant (2011) argued that a correlation of 0 is showing no relationship at all, a correlation of 1.0 is an indication of positive correlation, and a value of -1 is a

pointer of a perfect negative correlation. Cohen (1988) suggested the following criteria as: $r = 0.10$ to 0.29 small; $r = 0.30$ to 0.49 medium; and $r = 0.5$ to 1.0 large.

Table 4.10
Pearson's Correlation Between the Constructs

		1	2	3	4
1	Performance	1			
2	Alliance orientation	.493	1		
3	Total quality management	.440	.526	1	
4	Corporate entrepreneurship	.554	.488	.439	1

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

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

The table above indicated that the variables are significantly correlated to the fact that there is no variable with a value of 0.9 which clearly pointed out that there is no problem of multicollinearity (Hair *et al.*, 2010).

4.8 Confirmatory Factor Analysis (CFA)

This is where the results of confirmatory factor analysis is presented in this study by employing principal component analysis method. It is pertinent to note that items in this study were adapted from previous studies, hence this study only undertook the CFA. SmartPLS 2.0 M3 (Ringle *et al.*, 2005) has an inbuilt features that takes care of the confirmatory factor analysis.

4.9 Model Evaluation

Under model evaluation issues concerning measurement and the structural /hypothesized models are treated. However, an assessment of the measurement model is provided in detail.

4.9.1 Measurement Model

Measurement model is intended at ensuring that the model specification is valid and reliable. Base on Esposito vinzi *et al.* (2010) argument clearly pointed out the rules of thumb as, for an outer loading to be considered such a model should be 0.5 and above and for the average variance extracted (AVE), it should be greater than 0.5 also. Based on this argument, all the items with outer loading below 0.5 were deleted beginning with the one with the lowest value, a technique which according to Hair *et al* (2012) is very appropriate because it improves data quality.

Additionally, a detailed description of the modeling procedures as pointed out by Anderson and Gerbing (1998) is also considered. They provided a two-step modeling approach to determine the quality of items used for measurement and secondly to be able to estimate the relationship between models. This two approaches are also discussed as measurement model and structural model (Hair *et al.*, 2012). Several relationship effects involved in the present study, hence, the use partial least squares is employed as suggested by Chin *et al.* (2003) and SmartPLS 2.0 M3 (Ringle *et al.*, 2005) was used in this study to be able to assess the reliability and validity as well as

testing the structural /hypothesized model. An examination of the loadings and cross loadings serve as a pre requisite for ascertaining the convergent validity is shown in table Table 4.11

Table 4.11
Factor Loading and Cross Loading

	PER	AO	TQM	CE
PER19	0.753	0.505	0.455	0.432
PER20	0.829	0.610	0.529	0.454
PER21	0.861	0.610	0.536	0.538
PER22	0.744	0.589	0.434	0.499
AO01	0.597	0.790	0.553	0.375
AO02	0.529	0.719	0.519	0.348
AO03	0.601	0.815	0.537	0.463
AO04	0.526	0.761	0.463	0.345
AO08	0.573	0.767	0.560	0.443
TQM16	0.552	0.564	0.767	0.389
TQM17	0.524	0.580	0.837	0.303
TQM18	0.524	0.607	0.858	0.290
TQM20	0.466	0.533	0.814	0.340
TQM22	0.471	0.547	0.776	0.374
CE07	0.388	0.287	0.241	0.790
CE08	0.453	0.320	0.289	0.778
CE09	0.525	0.473	0.391	0.851
CE10	0.523	0.508	0.348	0.750

4.9.2 Convergent Validity

Convergent validity is used with a view of ascertaining the construct validity for this research. Bagozzi, Yi and Philips (1991) and Hair *et al.*, (2010), viewed convergent validity as the extent to which a set of construct meets in measuring the concept on the construct. The convergent validity can be established, based on SEM literature, by using items reliability, composite reliability and the average variance extracted. That is, the item of each construct are highly loaded and statistically significant in measuring their respective constructs with at least 0.7 factor loadings, composite reliability is at least 0.7 and the average variance extracted (AVE) is at least 0.5 (Bagozzi, *et al.*, 1991; Hair, *et al.*, 2010).

Table 4.12. shows that the average variance extracted values between 0.596 to 0.659 and the composite reliability values of the constructs exceeded the recommended value of 0.7, which ranges between 0.880 to 0.906, it can be established that the measurement model has an adequate level of convergent validity.

Table 4.12
Construct Validity and Reliability

Variable	Items	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
Performance	PER19	0.753601	0.809	0.880	0.747
	PER20	0.829723			
	PER21	0.861088			
	PER22	0.744863			
Alliance orientation	AO01	0.790710	0.829	0.880	0.596
	AO02	0.719553			
	AO03	0.815818			
	AO04	0.761559			
	AO08	0.767493			
Total quality management	TQM16	0.767493	0.886	0.906	0.659
	TQM17	0.837244			
	TQM18	0.858817			
	TQM20	0.814487			
	TQM22	0.776897			
Corporate entrepreneurship	CE07	0.790277	0.804	0.878	0.738
	CE08	0.778599			
	CE09	0.851668			
	CE10	0.750082			

4.9.3 Discriminant Validity

Discriminant validity refers to the degree to which a set of construct can truly be different from other construct. In examining discriminant validity of the measurement model, the Fornell and Lacker (1981) criteria is employed. Table 4.13 Indicate the correlation matrix in which the diagonal element represent the square root of the average variance extracted of the latent constructs. The result of the correlation matrix indicated in the table below ensures that the discriminant validity is confirmed.

Table 4.13
Discriminant Validity

		1	2	3	4
1	Performance	.864			
2	Alliance orientation	.493	.772		
3	Total quality management	.440	.526	.811	
4	Corporate entrepreneurship	.554	.488	.439	.859

Note: The bolded values in diagonals represent the square root of the AVE while those off the diagonals represent latent variable correlations

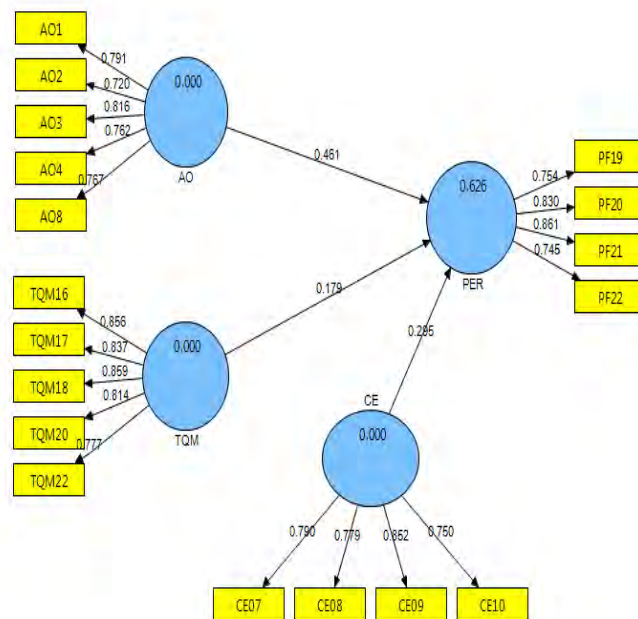


Figure 4.4
Revised Study Model

4.10 Structural/Hypothesized Model

After a careful assessment of the measurement model in 4.2, the section examined the structural Model for this study. Hair *et al.*, (2006) viewed Structural model as a model that expresses about the reliance of association in the hypothesized model. In partial least squares, structural model brings to forefront the directional association between the constructs and their t-values as well as the path coefficient. In terms path coefficient, partial least squares as argued by Argawal and Karahanna (2000), is just like the standardized beta coefficient in regression analysis. The fundamental objective of structural model is to test the hypothesized relationships among

constructs. Initially, the study focused on model evaluation and secondly, assessed the assumption of regression and correlation of variables. The structural model evaluation continues with an examination of the direct relationships. Two hypotheses that posed a direct relationship in this study were tested out of which the entire hypothesis were supported. The direct path relationship is shown in figure 4.3 which described the direct effect of every latent variable on the dependent variable.

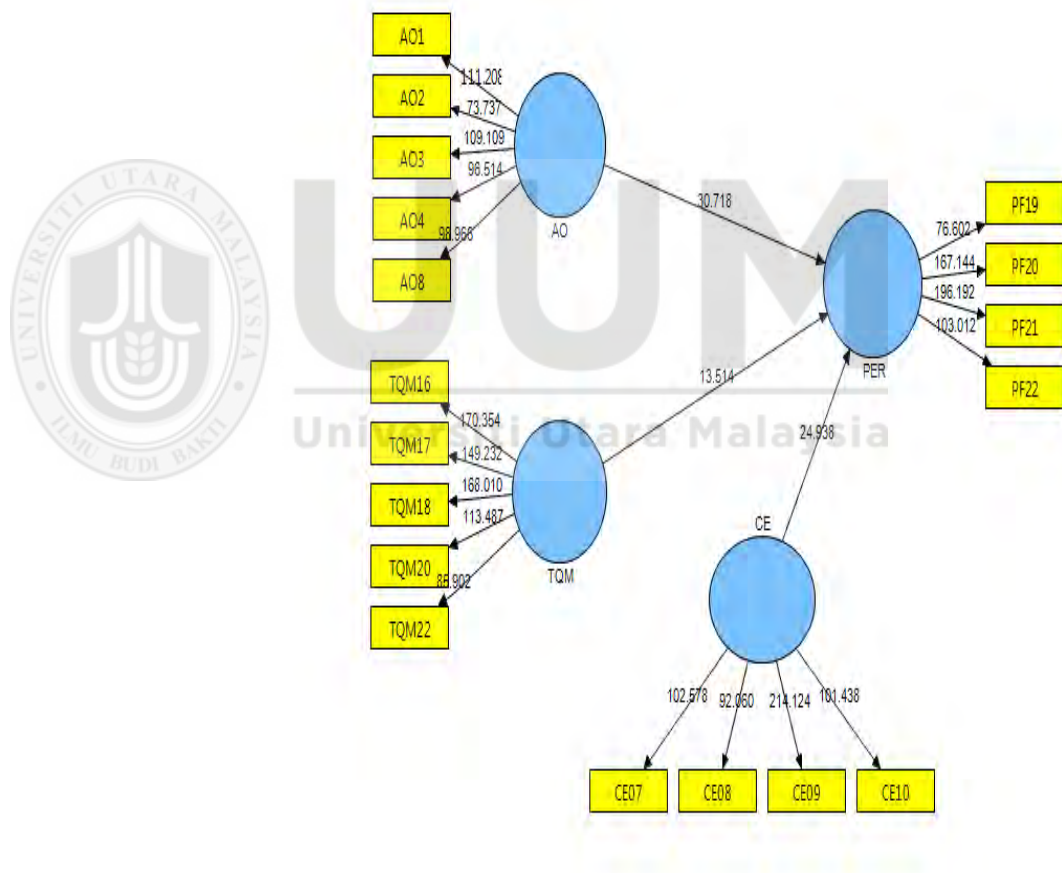


Figure 4.5
The Direct Effect

Figure 4.3 above was fully explained in Table 4.11 indicated the path coefficients, t-values, and standard error at which they are used as a basis for testing hypotheses. The t- values for this research were calculated using a 5000 re sampling iterations in repetitive Bootstrapping as recommended by Hair *et al.*, (2014). It can equally be justified that chosen a 5000 sample is for ensuring that every model parameter has empirical sampling distribution and the standard deviation of the distribution will serve as proxy of the parameter for empirical standard error (Hair *et al.*, 2012).

Table 4.14
Result of Hypothesis Testing

	Beta	Standard Error	t-value	P-Value	Decision
AO -> PER	0.460559	0.014993	30.717743	0.000	Supported
TQM -> PER	0.178810	0.013231	13.514385	0.000	Supported

The above table 4.14 indicated that all the study hypotheses were accepted and possess a t-value which is greater than 1.96 shown an adequate support for the two direct hypotheses. The R² value indicated that, all the study variables of alliance orientation, total quality management, corporate entrepreneurship are capable of influencing 62.6% of the changes in the dependent variable which is the organizational performance.

Table 4.15

Holistic Effects of Alliance orientation, Total quality management, corporate entrepreneurship on Performance

Constructs	R Square
Alliance orientation	
Total quality management	
Corporate entrepreneurship	0.626204

Note: The study variables explain 62.6% variation in Performance

4.11 Relationship Effect Size and Rating

Table 4.14 above indicated the result of holistic effect of alliance orientation, total quality management, corporate entrepreneurship and performance, hence, the need for ascertaining individual contribution of all the predicting variable to criterion through the calculation of the effect sizes of the predicting variables. Therefore, only the results of the effect size F_2 of the two (2) hypotheses that were statistically supported are reported. The effect size F_2 is calculated using the formula advanced by Cohen (1988) is employed:

Thus: $F_2 = \frac{\mathbf{R^2\ included - R^2\ excluded}}{\mathbf{1 - R^2\ included}}$

$$\mathbf{1 - R^2\ included}$$

Thus: Where R^2 included and R^2 excluded represent the R squares on the predicting variable, when the independent variable is present (R^2 included) or when it is withheld (R^2 excluded). This perhaps translates the effect of the variance of every variable.

Table 4.16
Relationship Effects Size and Rating

Relationship	t-value	F²	Rating
AO -> PER	30.717743	0.02	Small
TQM -> PER	13.514385	0.19	Medium

The Table 4.16 presents the effect sizes of the supported relationships with their respective t-values, effect size and their rating based on Cohen (1988) criterion, where a value of 0.02 is considered small; 0.15 medium; and 0.35 as large. It is important to note that out of two direct hypotheses one of the hypotheses possess a small rating whereas the other hypothesis has a medium strength of F² in terms of the rating. Chin *et al.*, (2003) argued that even the smallest F² strength is considered important due the fact the they can have impact on the criterion variable.

4.12 Determining the Predictive Relevance of the Model

Predictive relevance of the model is meant to assess the predictive capability of a particular model. Hair *et al.*, (2012) asserted that predictive relevance is represented by Q², Q² does not only evaluated how values are built around the model but also assesses the parameter estimates. The Q² is calculated through blindfolding, and then the results were obtained through the variable score out of which cross validated redundancy is extracted. The cross validated redundancy assesses the capability of the model to predict the endogenous variables and hence demonstrates the quality of the model. The Table 4.17 shows the construct cross validated redundancy

Table 4.17
Construct Cross Validated Redundancy

Total	SSO	SSE	1-SSE/SSO (Q²)
AO	1972	2170	0.09
TQM	1573	1836	0.15
CE	1972	2170	0.09

Table 4.17 above shows that the predictive relevance of the model remains outstanding, which is inline with the Hair et al., (2013) argued that if $Q^2 > 0$, the model has predictive relevance whilst if $Q^2 < 0$, the model do not poses any predictive ability. Hence, all the predictors possess values that are greater than Zero indicating sound predictive model relevance. Alliance orientation (0.09), Total quality management (0.15), Corporate entrepreneurship (0.09) respectively..

4.13 GoF and Geometric Means

After achieving the predictive relevance of the model, next is to test the goodness of fit. Different from CB - SEM, SmartPLS 2.0 M3 (Ringle *et al.*, 2005) do not have emphasize on goodness of fit information. SmartPLS 2.0 M3 (Ringle *et al.*, 2005) focuses substantially on nonparametric measures that is why in many studies, the fitness were based on the power of R square (R^2) and the predictive relevance (Q^2) average variance extracted (AVE) as well as bootstrapping (Alumni, 2014;Gorondutse; 2014, Chin, 1998; Fornell & Larcker, 1981). However, this study

followed the assertions of Tenenhaus *et al.* (2005) and Hair *et al.* (2012) who pointed out certifying goodness of fit in SmartPLS 2.0 M3 (Ringle *et al.*, 2005) is recommended. Goodness of fit (GoF) in SMARTPLS 2.0 M3 (Ringle *et al.*, 2005) is conceived to mean the product of the geometric mean of two different sets of values of R^2 i.e. geometric mean of the average communality and the geometric mean of endogenous latent variables. It is employed in this study to further certify and validate the overall fitness of the model. The aim of GoF is bring cooperation between the performances of measurement model and that of structural or hypothesized model.

Table 4.18
GoF and Geometric Means

	Cummunality	Composite Reliability	R²
PER	0.809	0.880	0.626
AO	0.595	0.880	
TQM	0.886	0.906	
CE	0.804	0.878	
GEOMEANS	0.773		
		GoF	0.484

Note: GoF values 0.1 and above = small; 0.25 and above = medium, 0.36 and above = large

$$\text{Gof: } \sqrt{(R^2 \times \text{Average of Communality AVE})}$$

$$0.626 \times 0.773$$

$$\text{Gof} = 0.484.$$

The above table 4.18 indicated the geometric mean values for average communality and endogenous latent variables i.e. 0.626 and 0.773 and the overall GoF value as shown in the Table indicates 0.484. According to Tenenhaus *et al.* (2005) and Hair *et al.* (2012) arguments the GoF value is considered to be accepted. Similarly, Wetzels

et al. (2009) a Gof value of 0.484 is considered to be large. Therefore, the result showed that the model GoF measure is substantial based on the average variance which refer as an adequate level of PLS model validity.

4.14 Test of Moderation

A moderator is a variable that affects the relationship between two variables, so that the nature of the influence of independent variable on the criterion will differ in accordance to the level or value of the moderator (Rumayah, 2014). In this study, a moderating variable of corporate entrepreneurship is introduced on the relationship between alliance orientation, total quality management and performance. First, the study considers corporate entrepreneurship as a moderator on the relationship between alliance orientation and performance. After the insertion of the interaction term the result of the of the path coefficient established that corporate entrepreneurship is found to moderate on the relationship between alliance orientation and performance.

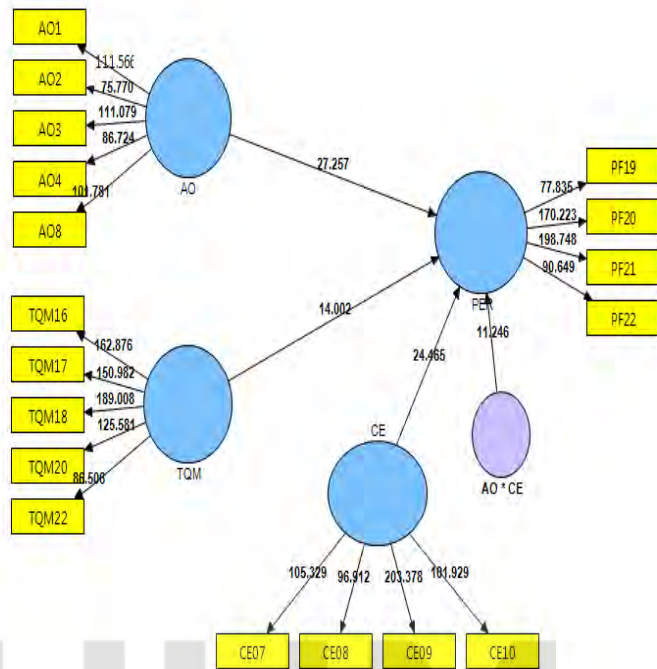


Figure 4.6
The moderating effect of CE on the relationship between AO and Performance.

Table 4.19
Result of moderation Test of CE on the relationship between AO and performance.

	Beta	Standard Error	t-value	P-Value	Decision
AO -> PER	0.4289	0.0157	27.256	0.000	Supported
AO * CE -> PER	0.099	0.008	11.245	0.000	Supported
TQM -> PER	0.1707	0.0121	14.002	0.000	Supported

Secondly, the study considers corporate entrepreneurship as a moderator on the relationship between total quality management and performance. After the insertion of the interaction term the result of the of the path coefficient established that

corporate entrepreneurship is found to moderate on the relationship between total quality and performance.

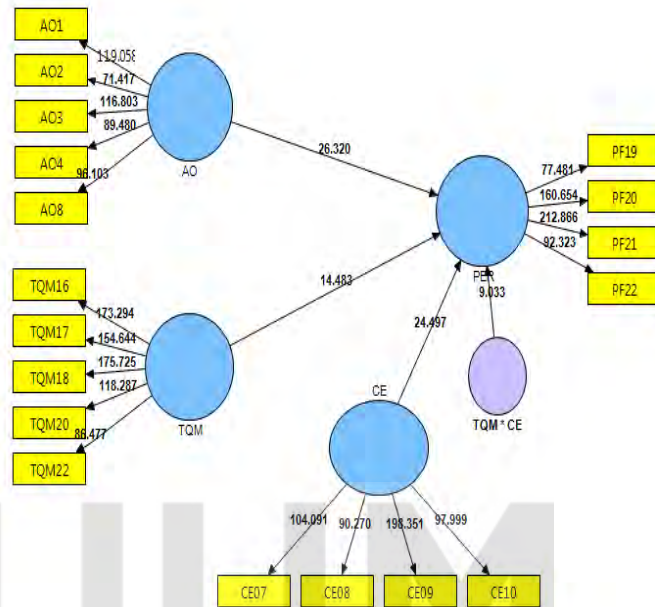


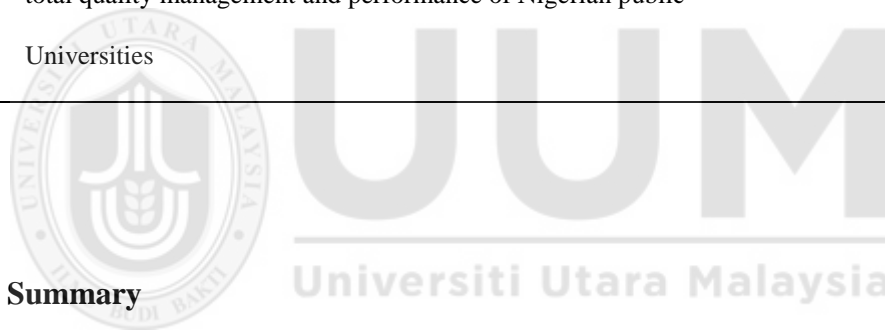
Figure 4.7
The moderating effect of CE on the relationship between TQM and Performance.

Table 4.20
Result of moderation Test of CE on the relationship between TQM and performance.

	Beta	Standard Error	t-value	P-Value	Decision
AO -> PER	0.432	0.016	26.320	0.000	Supported
TQM -> PER	0.178	0.012	14.482	0.000	Supported
TQM * CE -> PER	0.088	0.009	9.032	0.000	Supported

Table 4.21
Summary of Hypotheses Test

	Hypotheses	Results
H1	There is a significant and positive relationship between alliance orientation and performance of Nigerian public Universities	Supported
H2	There is a significant and positive relationship between total quality management and performance of Nigerian public Universities	Supported
H3	Corporate entrepreneurship moderates the relationship between alliance orientation and performance of Nigerian public Universities	Supported
H4	Corporate entrepreneurship moderates the relationship between total quality management and performance of Nigerian public Universities	Supported



4.15 Summary

The chapter discusses issues relating to findings and the interpretation of the empirical results from the study. The chapter began with data collection process and responses, followed by non-response bias issue, where it was found that there were no evidences of significant difference between early and late respondents using independent t-test analysis. Data cleaning is carried out where issues regarding missing data and outliers were considered. Both univariate (z-score) and multivariate (Mahalanobis) outlier treatment were carried in order to ensure good data. Descriptive statistics were followed mainly to provide the profile of respondents that twestern

through out the thirteen public universities in Northwestern Nigeria. Basic information such as gender, education level, age, years in service, current administrative position as well as years in current position were discussed which gave insight on the respondent fundamental information's. Statistical assumptions for multivariate analysis was seen and found that none of the normality, linearity, multicollinearity and homosdasticity assumptions was violated, which give a go ahead in conducting the analysis.

Goodness of measures on the entire constructs, as well as issues relating to construct reliability and validity were seen and all factors have a good Cronbach's alpha for internal consistency of 0.7 and above and average variance extracted of above 0.5. Pearson (r) bivariate correlation was performed and found that all the variables are significantly correlated. Both measurement and structural models were found to fit and the result of hypotheses testing indicated a support to all the direct and indirect hypotheses and finally the chapter is provided and discussed.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

5.1 Introduction

This chapter is about a discussion of the research findings and recommendations. Additionally, it describes the theoretical and practical implications of the study; limitations and recommendations for future research are also explained.

5.2 Recapitalization of the Study

The present study was conducted to investigate the relationship between alliance orientation, total quality management, and performance among Nigerian public Universities. The moderating effect of corporate entrepreneurship on the relationship between alliance orientation, total quality management, and performance was equally investigated.

A quantitative method of data collection is used, which involved the use of a structured questionnaire adapted from previous studies. A self-administration of questionnaire is used which allows the researcher to have a face to face contact with the respondents. A total of 434 sets of questionnaire was distributed to the academic leaders of Nigerian public Universities with a population of 511. Having distributed

434 questionnaires, 212 questionnaires were completed and returned, out of which 203 questionnaires were retained for further analysis. A total of 9 questionnaires were considered not suitable as a result of both univariate and multivariate outlier cases. The data were keyed into SPSS version 20, and the analysis started by checking for missing values and outliers. No missing value was found in the data set, as this is connected with the researcher's conciosness right from the field in ensuring that all items are duly responded by respondents, and at the same time the researcher's ability to key in any questionnaire collected within the shortest possible time.

Similarly, reliability test was conducted for the purpose of assessing the internal consistency of the measures through Cronbach's alpha. The hypotheses of direct relationship were tested using smart PIs 2.0, whereas, the hypotheses about the indirect relationship (moderation) were tested using the same software. Alliance orientation, total quality management, corporate entrepreneurship and performance were all measured as one-dimensional, and their respective reliability coefficient, composite reliability stood above 0.7 which is the minimum benchmark. As regards to hypothesis testing for direct relationship, the result indicated that all hypotheses were accepted.

The result of moderation test also indicated that the CE is a good moderator to alliance orientation, total quality management, and performance. As all the hypotheses were supported.

5.3 Discussions

The discussion of the study basically focused on the research questions stated in chapter one of this study. Research questions were answered by research objectives. The research questions were as follows: 1) Is there a significant relationship between alliance orientation and performance? 2) Is there a significant relationship between total quality management and performance? 3) Does corporate entrepreneurship moderates the relationship between alliance orientation, total quality management, performance?

5.3.1 Alliance Orientation and Performance

The first research question of the study is whether there is a significant relationship between alliance orientation and performance. The aim of the question is to assess whether alliance orientation can be a good predictor toward performance of the Nigerian public Universities. This represents the first research hypothesis that, *there is a significant relationship between alliance orientation and performance*. SmartPLS 2.0 is used to test this hypothesis. The result indicated that the two predicting variables were able to explain 62.6% of the model (R^2). The SmartPLS 2.0 results indicated that among the two predicting variables, alliance orientation, was found to predicts the performance of Nigerian public Universities with the following values ($\beta = 0.460$, $t =$

30.717, $P < 0.000$). This result shows that alliance orientation is a good predictor of University performance in Nigeria. This result of H_1 is support.

The findings of this study on the relationship between alliance orientation and performance of Nigerian public Universities was in line with previous studies. Sarker, Echambadi and Harrison (2001) investigated the effects of alliance proactiveness on market based performance with a contingency approach as the underpinning theory. A sample of one hundred and eighty two firms was used with a PLS method for data analysis. The findings show that alliance proactiveness leads to superior market based performance. Similarly, the study of Teegan and Doh (2002) investigated fifty five Mexican business firms. Authority balance was found to have a positive impact on alliance performance. Moreover, Leisen, Lilly and Winsor (2002) inspected the link between organizational culture, market orientation and marketing effectiveness in the context of strategic marketing alliance. A self – administered questionnaire to one hundred and twenty eight organizations is used. The overall finding shows that organizational culture affects strategic marketing alliances.

Kandemir, Yasrak and Cavusgil (2006) conducted an empirical study with one hundred and eighty two small firms in the U.S and a structural equation modeling. The study outcome indicated a significant association between alliance of orientation to performance. The finding of Ju, Chen, Li and Lee (2006) indicated that firms with higher absorption orientation, high risk reduction, higher research and development, scale of economies orientation, performs better in acquiring competitive advantage in alliance relationship. Also, strategic match among strategic factors, organizational

capability factors and technology alliance choice could lead to a better competitive gain.

Additionally, Vergauwen, *et al.*, (2009) in their research indicated that behavioral value drivers directly affects alliance performance. The direct association of intangible performance is found to be positively significant to six value drivers of trust, commitment, communication, strategic interdependence, participation, and coordination of work. Mishara (2011) conducted a study which surveyed a sample drawn from banking and recruitment industry in India, using a social network theory. The finding indicated that e- business alliance network is has a significant positive impact with e – business firm performance. Zoogah and Peng (2011) in their empirical survey found a positive association between alliance competencies and performance judgement, the hierarchical linear regression suggests that structural, functional, and social competencies were considered more important in determining alliance managers performance.

However, Pangarkar and Wu (2012) in a survey with seventy six responses from internet related startups in Singapore lend support to significant relationship between the constructs. In the same vein, Zeng, Shi, Li and Zhu (2013) reported that market orientation has a positive effect on the social capital, which in turn, has a positive effect on the stability of company alliance. Moreover, The study of Wilson *et al.*, (2014) which examined the market and alliance orientation on business performance of biotechnology industry in Canada. The instrument of the study is mail and Web

based questionnaire survey. The outcome from the research shows a significant and positive association between alliance orientation and performance.

5.3.2 Total Quality Management and Performance

The second research question of the study is whether there is a significant relationship between total quality management and performance. The aim of the question is to find out whether total quality management can be a good predictor toward organizational performance of Nigerian public universities. This represents the second research hypothesis that, *there is a significant relationship between total quality management and performance*. SmartPLS 2.0 were conducted using calculate estimate to test this hypothesis. The result indicated that the two predicting variables were able to explain 62.6% of the model (R^2). The results indicated that among the three predicting variables, total quality management is found to have a least prediction towards performance with the following values ($\beta = 0.178$, $t = 13.514$, $P < .000$). The finding lend supports to H_2 .

This result shows that total quality management was a good predictor of public University performance in Nigeria. This finding indicated that the regulators and administrators of University education in Nigeria should pay more attention to the issue and concept of total quality management been among the predicting variables that predicts their performance. Non- challant attitude and little or no concern to the

total quality management philosophy will automatically affect the University education performance and will escalate the deteriorating conditions of the entire sector.

The finding of this study on the relationship between total quality management and performance was in line with the findings of previous studies. Sureshchandar, Rajendran and Anantharaman (2002) found that TQS dimensions are good predictors of service quality in the Indian banking sector. Lee (2003) in a study which examined total quality management and small and medium enterprise performance in China, using a quantitative survey found that total quality management has a significant effect on organizational performance. Kaynak (2003) examined total quality management effects on organizational performance. A cross – sectional study conducted via mail questionnaire survey of US firms from contiguous states. TQM practice is found to positively associate to organizational performance of the US firms. Khan (2003) surveyed four hundred and sixty three firms over a period of ten years, and found a significant and positive relationship between TQM and performance of firms. Temtime (2004) used a questionnaire survey of fifty four small and medium enterprises in Bostwana using a descriptive statistics for the data analysis. The finding shows that environmental scanning is indirectly related to TQM practices and has a moderating role in TQM practice.

Similarly, Fuentes, Albacete – Saez and Llotens – Montes (2004) surveyed two hundred and seventy three Spanish firms, a sample of quality managers used. The causal analysis result shows that dynamism, munificence and complexity predicts the

degree of total quality management principles. Sharma (2006) investigated quality management dimensions, contextual factors and performance in Australia. The interview is employed for data collection with descriptive statistics and Analysis of variance (ANOVA) for the data analysis. This empirical study indicates that the implementation of quality management practice in Queensland firms tends to put more on measurement and training aspect, and process improvement tends to be more relevant for manufacturing firms. However, few noticeable correlations were identified with some quality management dimensions in spite of the low level implementation of quality management practices.

Prajogo and MCDermott (2005) explores the association between total quality management practice and organizational performance with one hundred and ninety four organizations drawn from Australia. Structural equation modeling employed for the data analysis and a random survey of one thousand managers. The outcome of the survey established a strong positive relationship between TQM and OP. However, Prajogo and Brown (2006) empirically surveyed managers in Australia, using descriptive statistics, correlation and regression methods for the data analysis. The finding is in support of the positive relationship between approaches to quality and organizational performance.

5.3.3 The Moderating Effect of Corporate Entrepreneurship

The third and fourth research questions of the study is about whether corporate entrepreneurship moderates the relationship between alliance orientation, total quality management, and performance of Nigerian public Universities. The aim of these question is to find out whether corporate entrepreneurship can strengthen the relationship between alliance orientations, total quality management, and performance of Nigerian of Nigerian public Universities. This represents the third and the fourth research hypothesis that, corporate entrepreneurship moderates the relationship between alliance orientation, total quality management, and performance of Nigerian public Universities. Product indicator approach (Chin, *et al.*, 2003) were conducted to test this hypothesis. The result of the moderation test for the corporate entrepreneurship on the relationship between alliance orientation and firm performance indicated that the variable were able to explain 63.3% of the model. The product indicator approach results indicated that AO has the following values ($\beta = 0.099$, $t = 11.245$, $P = 0.000$). Therefore H_3 is supported. The result of a moderation test of the corporate entrepreneurship on the relationship between total quality management and performance indicated that the variable is able to explain 63.0% of the model. The product indicator approach results indicated that TQM has the following values ($\beta = -0.088$, $t = 9.032$, $P = 0.000$). Therefore H_4 is supported.

The finding of this study on the moderating effect of corporate entrepreneurship on the relationship between alliance orientation, total quality management, and

performance is in line with the previous study of Antoncic and Zorn (2004) conducted a cross – sectional survey using mail questionnaire. The finding indicated that corporate entrepreneurship mediates the organizational performance relationship. However, Kaya (2006) finding indicated that human resource management practice, partially mediated the relationship between the CE and FP, whereas, a direct relationship between CE to FP was found to be positive. Additionally, Kellermanns and Eddleston (2006) found that willingness to change and technology opportunity recognition are positively correlated to CE; strategic planning was found to significantly moderates the relationship between generational involvement and technology opportunity recognition and CE. In (2007), Yang, Li – Hua, Zang and Wang argued on the corporate entrepreneurship and market performance relationship in China uses questionnaire survey. The finding indicated that the key dimensions of corporate entrepreneurship exert differentiated impacts on market performance in China.

Hernonen (2007) explored the entrepreneurial-directed approach to teaching within one university-level course in corporate entrepreneurship (CE) for Master’s-level students. A combination of qualitative research methods and observation methods were used during and after the course, the finding shows a relationship between the study constructs. Thorgren, Wincent and Ortquist (2009) finding found support for the reciprocal causation model. Similarly, Toledano, Urbano and Bernadich (2010) They found a significant association between networks and corporate entrepreneurship. Zampatakis and Moustakis (2010) did a study on the factors stimulating corporate entrepreneurship in the Greek public sector. The sample was drawn from fifteen

Greek using Bayesian factor analysis. The findings of their study indicated a significant association between entrepreneurial civil servant preference CE.

Arising from this, Hernandez-Maestro and Gonzalez- Benito (2011) employed a sample of one hundred and three rural tourism entrepreneurs in Spain. The outcome from this study shows a positive influence of an establishment equity on performance, but involvement influences performance to a greater extent and even reaches profit. A positive moderating effects of experience and exclusiveness also emerge. The study of Mohammad, Ramayah, Pustowarsito, Netalisa and Saerang (2011) on Indonesian medium sized firms reported a positive relationship between CE to Performance; and moderately high level of CE among the firms. Cavus and Demir (2011) investigates the relationship between institutionalization factors and corporate entrepreneurship in Turkish family firms. The data were obtained from the responses of two hundred and forty four managers in family firms. The results show that there were significant relationships between the dimension of institutionalization and the dimension of corporate entrepreneurship. While automation affects all dimensions (risk taking, proactivitveness and innovativeness) of corporate entrepreneurship. Adonisi (2012) investigated the relationship of CE with the organizational variable of marketing flexibility and job satisfaction. A sample of three hundred and thirty three managers in three different industries in South African employed. Spearman and Pearson correlation is used for the data analysis. A significant association is found of different marketing flexibility and job satisfaction factors.

However, Haar and White (2013) reported a direct and substantial relationship between CE and employee retention among one hundred and fifty eight firms in New Zealand. The study of Karacaoglu, Bayrakdaroglu and San (2013) findings shows that the dimensions of corporate entrepreneurship such as innovativeness, risk taking and proactiveness were found to have positive associations and interaction with financial performance. Shukri Bakar and Mahmood (2014) investigated transformational leadership and corporate entrepreneurship to performance association of higher education institutions in Malaysia, using a questionnaire survey with two hundred and forty six valid responses. The finding indicated a significant and positive association between CE and performance; corporate entrepreneurship partially mediated transformational leadership and performance.

Yaldiz (2014) conducted studies on which examined the relationship between organizational culture and corporate entrepreneurship among leading multinational companies in Turkey. The results show that power distance is found to have a positive relationship on corporate entrepreneurship. The study Behram and Ozdemirci (2014) argued on environmental conditions, organizational culture, corporate entrepreneurship and performance. The result of regression test showed that market and adhocracy culture have positive and strong effects on all corporate entrepreneurship dimensions, clan culture positively affects innovations on corporate entrepreneurship.

According Ozdemirci and Behram (2014) in their study, which surveyed two hundred and fifty eight medium and large firms operating in different industries in Turkey. The

findings indicated a strong impact of human resource management practice on corporate entrepreneurship, and mediated by perceived organizational support of employees. Al-Swidi and Mahmood (2012) findings reported a positive association between TQM, EO and organizational performance. In the same vein, Wang and Yen (2012) argued on the corporate entrepreneurial orientation and performance of Taiwanese SMEs, using multiple regression method for data analysis. A sample of two hundred and sixty seven Taiwanese SMEs in China was used. The finding from their study indicated a significant association between innovativeness, proactiveness, risk taking in a Taiwanese SME performance, hence entrepreneurial orientation to performance relationship was positive. Arbaugh, Cox and Camp (2009) in their study a multi - country study across seventeen countries and in four continents with one thousand and forty five firms. The results shows that entrepreneurial orientation was positively to net worth (financial performance).

Similarly, the study of Frank, Kessler and Fink (2010) on entrepreneurial orientation and business performance with a sample of eighty five SMEs from electric and electronic industry was chosen using survey questionnaire. The finding shows a low correlation between business performance and EO. Lechner and Gudmundson (2014) examined a sample of three hundred and thirty five firms randomly selected from Icelandic firms. They also reported a mixed finding on entrepreneurial orientation dimensions, firm strategy and performance relationship. Innovativeness was positively related to differentiation; risk taking and aggressiveness was negatively associated with both differentiation and cost leadership. Hence, differentiation and cost leadership strategies were positively related to performance.

5.4 Implications of the Study

5.4.1 Theoretical Implication

Previous studies have shown how strategic orientation of alliance orientation, total quality management, associated to performance (Sarker *et al.*, 2001; Teegan & Doh, 2002; Leisen *et al.*, 2002; Fuentes *et al.*, 2004; Prajogo & MCDoermtt, 2005; Kendemir *et al.*, 2006; Sharma 2006; Kaya 2006; Kellermanns & Eddleston , 2006; Yan *et al.*, 2007; Al-swidi & Mahmood, 2012; Mahmood & Hanafi, 2013; Haar & White, 2013; Shukri Bakar & Mahmood, 2014). Shehu and Mahmood (2014a; 2014b) suggests a study on strategic orientation to performance in education sector. This is supported by Jabeen *et al.*, (2014) which recommended the inclusion of corporate entrepreneurship as moderator between alliance orientation to performance in future studies. Consequently, Yunis *et al* (2013) suggest a replication of TQM to performance studies across different countries and context. Sadikoglu and Okay (2014) suggests TQM to performance examination in education sector.

Similarly, Jaafreh and Al – Abedallat (2013) recommend further TQM to performance studies across different sectors. Based on the suggestions and inconclusive findings, this study contributed by extending the body of knowledge by adding moderator which other studies failed to consider (Al – Ettayen and Al –Zubi, 2015; Mahmood, 2011; Ogbonna & Ogwo, 2013; Daud *et al.*, 2013; Shehu & Mahmood, 2014d).

Another important contribution of this study is the context. It is debated by Wales *et al.*, (2011) that most strategic orientation literatures were conducted in the US. Hence, suggested the need for studies in different part of the world including Africa.

Furthermore, several studies were conducted in specific sectors including manufacturing, agriculture, construction and many more, but the present study is conducted in education. The study of McCabe and Wilkinson., (2012) service; Mishara(2011) was conducted in banking and recruitment; Pangarkar and Wu., (2012) information technology; Wilson., (2014) biotechnology;; Demirbaget *al.*, (2006) textile industry; Santos – Vijande and Alvarez – Gonzalez (2007) spanish manufacturing; Sajjad and Amjad (2012) service sector.

Part of the present study contribution is the methodology adopted, the questionnaire as an instrument and the specific items were adapted from previous studies conducted in other part of the world, ie alliance orientation measures was from Kendemir *et al.*, (2006) in a study conducted in U.S; total quality management measures is from Al – Swidi and Mahmood (2012) in a study conducted in Yeman, corporate entrepreneurship measures were adapted from Shukr Bakar and Mahmood (2014) in a study conducted in Malaysia. Therefore, the current study has contributed in testing these instrument in an African context. Similarly, the present study has contributed in developing and testing research hypotheses.

5.4.2 Managerial and Policy Implication

The findings of this study support a significant and positive relationship between some predictors of public University performance in Nigeria. These findings indicated that all the predictors of alliance orientation, total quality management lend support to performance, whereas, corporate entrepreneurship is found to moderate on the relationship between alliance orientation, total quality management and performance among Nigerian public Universities.

The finding of this study would be of relevance to policy makers such as the National Universities Commission (NUC) in designing the future programs for entrepreneurship in the University curriculum. As this will help in energizing and promoting entrepreneurship spirit among the timing Nigerian students. However, this finding has provided an empirically tested study that is of relevance to the entrepreneurship education and the way forward. The administrators of the public Universities will equally benefit from the study outcome, as it will guide them in training the required students in entrepreneurship for them to be self-reliant. The various University Vice Chancellors stand a chance in identifying entrepreneurship interest of their respective students for them to find possible avenues for training and can make recommendation to government for possible financial assistance. The finding is equally relevant to various students, as they will acquire entrepreneurship skills, which will help and guide them, and in the long run help toward increase in job creation which stands to be at 70 percent in 2010 and drop to about 25 percent in 2012

(Shehu & Mahmood, 2014). Thus, the increase in job opportunities will help toward increase in gross domestic production (GDP) and sustainable economic development.

The findings would help the federal ministry of education, by giving them an empirically tested findings on some determinants of University performance for them to better understand the effects of variables under study for improve performance and also for sectoral allocation. The findings are also expected to help Nigerians in having a first hand information on the effects of some variable on university performance for them to help and support government policies and programs towards partnering opportunities, quality enhancement, and entrepreneurship spirit creation in running and managing the public universities in the country. The study outcome would also serve as a frame of future reference to academia, students and other stakeholders; it would equally help in making relevant recommendations.

5.5 Limitations of the Study

The present study has some limitations. The first limitation is that, even though there are so many variables that can measure organizational performance, this study is limited to only alliance orientation, total quality management, and corporate entrepreneurship. One other limitation of this study is that, data were collected only from the thirteen (13) public Universities in north western Nigeria, which might not be a basis for generalization.

Additionally, this study was a cross sectional in nature. It involves data collection within two months, which can be considered as short period due to limited resources and time. Sekaran (2003) asserted that one the short coming of cross – sectional study is the inability to prove cause and effect association among variables. The framework of this study only provides a relationship between the variables, but did not provide a deep understanding of the cause and effect of such a relationship.

The present study relies on the perception of academic leaders of public Universities regarding their performance, this is quite common with social science research, but the response of academic leaders may not provide a precise replication of reality. There is the likely tendency that the data collected may not reflect some degree of confidence of the respondents who might have their own perceptual biases and cognitive shortcomings in assessing their own universities.

In spite of these shortcomings, the present study provides a basis for examining the association between alliance orientation, total quality management and performance of Nigerian public Universities, with the moderating effects of corporate entrepreneurship. The present study is the first of its kind, and its findings shows that all the variables have a significant positive relationship for both the direct and indirect relationships.

5.6 Suggestions for Future Research

To overcome the limitations above, this study recommends that future studies be conducted on other variables such as knowledge management, learning orientation, corporate social responsibility, innovation, technical competence and many more performance relationship in Nigerian public Universities. Additionally, there is the need for future empirical studies on strategic orientation to performance relationship, that will cover the entire six geopolitical zones to allow for generalization. Specifically, TQM and performance relationship across different context and sectors is suggested, with a mediating or moderating variable of access to finance.

This study is cross-sectional in nature, therefore, future research may be conducted by collecting data over a long period of time, longitudinal in nature in order to have enough time for the data collection. Future studies should investigate in more detail the nature of the relationship, considering the cause and effect relationship of public University performance in Nigeria. The present study uses academic leaders perception, future studies may use other academic staff and students perception in performance rating.

This study employs quantitative research design; future research may use mixed methods/triangulation, using both quantitative and qualitative questionnaire and interview. Similarly, the present study suggests a comparative study between

Nigeria public Universities and private Universities performance. Finally, this study recommends the use of the structural equation modeling (SEM) for data analysis in the future studies.

5.7 Conclusions

The findings of this study established that, the first research objective is to examine the relationship between alliance orientation and performance. The result of Smart PLS 2.0 indicated that the relationship between alliance orientation to performance is supported. Hence, the need for University education regulators put more effort in marketing strategies and also emphasize on partnering opportunities with a view of getting competitive advantage. The second research objective is to examine the relationship between total quality management and performance. The finding of this study is supported. This shows that total quality management is a good predictor of university performance in Nigeria. Therefore, all issues regarding TQM and its critical success factors should be given emphasis by University regulators and academic leaders.

The third and fourth research objective aim at examining whether corporate entrepreneurship can moderate alliance orientation and total quality management. Based on the study findings, it was reported that CE was a moderator to alliance orientation and total quality management. Therefore, the ability of academic leaders

to be innovative, take calculated risk and proactively react to University activities is a good pointer of success, and can give them an edge over and above rivals, hence, the tendency of remaining relevant in its immediate environment.

The theoretical framework of this study was designed based on the literature reviewed. The variables cover in the study includes: allaince orientation, total quality management, corporate entrepreneurship and performance. Based on the findings of this study, a conclusion can be made that all the research questions and research objectives were answered. However, the theoretical framework is in line with the underpinning theory (resource based view) which is used to describe the framework of this study.



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APPENDIXES
APPENDIX 1: QUESTIONNAIRE

ACADEMIC RESEARCH QUESTIONNAIRE



Dear Respondents

I am an M.Sc (Management) research student in the above university, currently conducting a survey titled: Alliance orientation, Total quality management and performance of Nigerian public universities: The role of Corporate entrepreneurship. I would appreciate it, if you will assist me by providing objective and sincere answers to all the questions, as there is no right or wrong answer. The researcher assures you that; your identity and the information given will be confidentially handled and use for research purpose. Please contact the researcher for any enquiry about this research.

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SECTION A

Background information, kindly tick as (✓) appropriate

DM01	Gender		
	1. Male	[]	[]
	2. Female	[]	[]
DM02	Age		
	1. 20 -30 Years	[]	[]
	2. 30 – 40 Years	[]	[]
	3. 40 – 50 Years	[]	[]
	4. 50 – 60 Years	[]	[]
	5. 60 Years and above	[]	[]
DM0	Education		
	1. HND/Bachelor	[]	[]
	2. Master Degree	[]	[]
	3. PhD	[]	[]
	4. Others	[]	[]
DM04	Years in service		
	1. Below 5 Years	[]	[]
	2. Between 5-10 Years	[]	[]
	3. Between 11-15 Years	[]	[]
	4. Between 16-20 Years	[]	[]
	5. Between 21-30Years	[]	[]
	6. 30 Years and above	[]	[]
DM05	Current administrative position		
	1. Vice – Chancellor	[]	[]
	2. Deputy Vice - Chancellor	[]	[]
	3. Dean	[]	[]
	4. Deputy Dean	[]	[]
	5. Head of Department	[]	[]
	6. Director of Centre/institute	[]	[]
	7. Deputy Director of Centre/institute	[]	[]
	8. Programme Coordinator/Chairperson	[]	[]
	9. Deputy Programme Coordinator/Chairperson	[]	[]
	10. Director University Excellence Centre	[]	[]
	11. Deputy Director University Excellence centre	[]	[]
	12. Others	[]	[]
DM06	Years in current administrative position		
	1. 1 – 2 Years	[]	[]
	2. 3 – 4 Years	[]	[]
	3. 5 - 6 Years	[]	[]
	4. 7 Years and above	[]	[]

SECTION B

In this section, we are interested in your assessment about the actual performance of your university. Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

PER01	I seek out relevant information when problem solving.	1	2	3	4	5
PER02	I identify needs and set priorities.	1	2	3	4	5
PER03	I facilitate departmental goal setting.	1	2	3	4	5
PER04	I motivate faculties to achieve departmental goals and objectives.	1	2	3	4	5
PER05	I make an effort to get appropriate others involved in problem solving.	1	2	3	4	5
PER06	I recognized when a group requires future direction.	1	2	3	4	5
PER07	I effectively interact with a group to guide them to accomplish a task.	1	2	3	4	5
PER08	I perceive needs, concern, and personal problems of others.	1	2	3	4	5
PER09	I am skillful in resolving conflict.	1	2	3	4	5
PER10	I exhibit tact in dealing with persons from different background.	1	2	3	4	5
PER11	I recognize what information needs to be communicated to others.	1	2	3	4	5
PER12	I perform effectively under pressure	1	2	3	4	5

PER13	I perform effectively during opposition	1	2	3	4	5
PER14	I handle positive and negative feedback appropriately	1	2	3	4	5
PER15	I make clear oral presentations of facts or ideas	1	2	3	4	5
PER16	I express ideas clearly in writing	1	2	3	4	5
PER17	I interact well with students.	1	2	3	4	5
PER18	I communicate effectively with other academic units within the university.	1	2	3	4	5
PER19	I communicate effectively with alumni.	1	2	3	4	5
PER20	I facilitate faculty intellectual pursuits.	1	2	3	4	5
PER21	I facilitate faculty excellence in teaching.	1	2	3	4	5
PER22	I foster achievement and development among students.	1	2	3	4	5
PER23	I have an effective working relationship with other university administrators.	1	2	3	4	5

SECTION C

In this section, we are interested in your opinion about the alliance orientation strategy of your university. Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

AO1	In our university, there is an active monitoring of environment to identify partnering opportunities.	1	2	3	4	5
AO2	Our university, routinely gather information					

	about prospective partners from various forums (e.g. industry conventions, databases, publications, internet etc.).	1	2	3	4	5
AO3	Our university is always at alert to market development that creates potential alliance opportunities.	1	2	3	4	5
AO4	There is coordination in our university across different departments.	1	2	3	4	5
AO5	Our university, systematically coordinate its strategies across different alliance.	1	2	3	4	5
AO6	Our university have possesses to systematically transfer knowledge across alliance partners.	1	2	3	4	5
AO7	There is periodic review of our university alliance to understand what we are doing right and what we are doing wrong.	1	2	3	4	5
AO8	Our university periodically collects and analyzes field experiences from our alliances.	1	2	3	4	5
AO9	Our university modify its alliance related procedures based from the experience learned	1	2	3	4	5

SECTION D

The following describe statement on total quality management. Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

TQM 01	In our university, long-term plans focused on quality are developed.	1	2	3	4	5
TQM 02	In our university, there are clear quality goals identified by top- level policy makers.	1	2	3	4	5

TQM 03	In our university regular meetings, we always emphasize on the importance of quality delivered to our students.	1	2	3	4	5
TQM 04	In our university, we depend heavily on quality performance to evaluate students.	1	2	3	4	5
TQM 05	In our university, we view service quality as being more important than cost.	1	2	3	4	5
TQM06	It is the policy of our university to use the students' feedback in determining their needs and requirement.	1	2	3	4	5
TQM07	In our university, students' requirement and expectation are used as a basis for measuring quality.	1	2	3	4	5
TQM08	In our university, floor and heads of departments are aware of the level of students' satisfaction.	1	2	3	4	5
TQM 09	It is the policy of our university to keep in close contact with our students.	1	2	3	4	5
TQM 10	In our university, we have a mission statement which has been effectively communicated to all staff and students and gain their support.	1	2	3	4	5
TQM 11	In our university, we have a comprehensive planning process which sets and reviews focus on the achievement of the best practice.	1	2	3	4	5
TQM 12	When we develop our plans, policies, and objectives, we always incorporate students' requirements and the needs of all stakeholders, including the community.	1	2	3	4	5
TQM 13	In our university, we have a written statement of strategy covering all the operations which is clearly articulated and approved by our senates.	1	2	3	4	5
TQM 14	Our departmental operations are effectively aligned with the entire university mission.	1	2	3	4	5

TQM 15	In our university, there is always an emphasis on the continuous improvement in all the activities of our various levels.	1	2	3	4	5
TQM 16	In our university, there is always an emphasis on the quality awareness programs for students.	1	2	3	4	5
TQM 17	In our university, continuous improvement is emphasized in the training programs provided to students.	1	2	3	4	5
TQM 18	In our university, policies in providing the quality is more than quality provided to students	1	2	3	4	5
TQM 19	In our university, all departments believe that by implementing continuous improvement strategies, they can survive and serve better in the highly competitive environment.	1	2	3	4	5
TQM 20	In our university, it is always emphasized that benchmarking is our strategy to achieve better competitive position.	1	2	3	4	5
TQM 21	We visit our faculties and department to investigate their practice.	1	2	3	4	5
TQM 22	In our university, we conduct research to find out the best practices of other local and international universities.	1	2	3	4	5

SECTION E

The following describe statement on corporate entrepreneurship. Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

CE1	Our university, find new ways of doing things.	1	2	3	4	5
CE2	Our university, develop new processes and services.	1	2	3	4	5

CE3	Our university, tend to implement changes before they are needed.	1	2	3	4	5
CE4	Our university, often do things in unique ways.	1	2	3	4	5
CE5	Our university, approach tasks in a more innovative ways.	1	2	3	4	5
CE6	Our university, improve things when the need arise.	1	2	3	4	5
CE7	Our university keeps ahead changes instead of responding to them.	1	2	3	4	5
CE8	We took initiative to start projects or assignments.	1	2	3	4	5
CE9	We often take calculated risk despite the possibility of failure.	1	2	3	4	5
CE10	We engage in activities that have chances of working out.	1	2	3	4	5
CE11	We approach new assignment/activities in a cautious manner.	1	2	3	4	5

Thank you



APPENDIX 2: QUESTIONNAIRE

UUM
Universiti Utara Malaysia

OVERVIEW QUALITY CRITERIA

	AVE	Composite Reliability	R Square	Cronbachs Alpha	Communality	Redundancy
AO	0.596511	0.880219		0.829705	0.595511	
CE	0.738679	0.878574		0.804406	0.629679	
PER	0.747162	0.880431	0.626204	0.809547	0.638162	0.295329
TQM	0.659804	0.906672		0.886228	0.687804	

APPENDIX 3: LATENT VARIABLE CORRELATION

Latent Variable Correlations

	AO	CE	PER	TQM
AO	1.000000			
CE	0.493193	1.000000		
PER	0.440371	0.526569	1.000000	
TQM	0.554919	0.488676	0.43923	1.000000

APPENDIX 4: PATH COEFFICIENT

Path Coefficients (Mean, STDEV, T-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
AO -> PER	0.460559	0.459706	0.014993	0.014993	30.717743
CE -> PER	0.294678	0.294631	0.011817	0.011817	24.937531

TQM -> PER	0.178810	0.179899	0.013231	0.013231	13.514385
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UUM

APPENDIX 5: LOADING Malaysia

Factor Loadings

	AO	CE	PER	TQM
AO1	0.790710			
AO2	0.719553			
AO3	0.815818			
AO4	0.761559			
AO8	0.767493			
CE07		0.790277		
CE08		0.778599		
CE09		0.851668		
CE10		0.750082		
PF19			0.753601	

PF20			0.829723	
PF21			0.861088	
PF22			0.744863	
TQM16				0.767493
TQM17				0.837244
TQM18				0.858817
TQM20				0.814487
TQM22				0.776897

APPENDIX 6: PATH COEFFICIENT MODERATION TEST

Path Coefficients (Mean, STDEV, T-Values) Moderation Testt - AO-CE

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
AO -> PER	0.428990	0.429094	0.015739	0.015739	27.256743
AO * CE -> PER	0.099806	0.100060	0.008875	0.008875	11.245793
CE -> PER	0.316460	0.314962	0.012935	0.012935	24.464869
TQM -> PER	0.170774	0.171773	0.012196	0.012196	14.002485

Path Coefficients (Mean, STDEV, T-Values) Moderating Test TQM-CE

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
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AO -> PER	0.432638	0.431467	0.016437	0.016437	26.320223
CE -> PER	0.307273	0.306825	0.012543	0.012543	24.497196
TQM -> PER	0.178960	0.180446	0.012357	0.012357	14.482800
TQM * CE -> PER	0.088215	0.089346	0.009766	0.009766	9.032575



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