ENTREPRENEURIAL ORIENTATION, TOTAL QUALITY MANAGEMENT, ORGANISATIONAL LEARNING AND PERFORMANCE OF SMES IN NIGERIA: THE MODERATING ROLE OF COMPETITIVE INTENSITY

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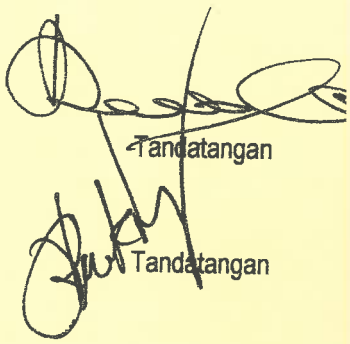

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ABSTRACT

Extant research addressing the relationships between entrepreneurial orientation, total quality management, organisational learning, and small and medium enterprises (SMEs) performance demonstrates inconsistency in results, suggesting the need to introduce a moderator variable. Drawing upon resource-based theory, as well as contingency theory, this study examined the role of competitive intensity in moderating the relationships between entrepreneurial orientation, total quality management, organisational learning, and SME performance. Using a stratified random sampling, 714 self-administered questionnaires were distributed to owner-managers of SMEs operating in Kano and Kaduna in the north-west geopolitical zone of Nigeria. Of the 714 questionnaires distributed, 440 unusable questionnaires with 62 percent responses were returned and further analysed. The hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). Results supported the hypothesised main effects of entrepreneurial orientation, total quality management, and organisational learning on SME performance. Also, the competitive intensity was found to moderate the relationships between entrepreneurial orientation and SME performance. Similar results regarding the moderating effect of competitive intensity on the relationship between organisational learning and SME performance was found. On the contrary, no significant interaction effect was found between total quality management and competitive intensity. The theoretical contribution of the present study lies in its use of competitive intensity as a moderator of the relationships between entrepreneurial orientation, total quality management, organisational learning, and SME performance. From the practical perspective, the key contribution of this study is that SMEs in Nigeria may clearly appreciate the benefits of devoting greater attention to the implementation of entrepreneurial orientation, total quality management, and organisational learning to achieve a sustainable competitive advantage. Finally, the findings of this study can also provide directions to government and policy-makers toward promoting SMEs for sustainable development.

Keywords: entrepreneurial orientation, total quality management, organisational learning, competitive intensity, performance

ABSTRAK

Penyelidikan sedia ada mengenai hubungan antara orientasi keusahawanan, pengurusan kualiti menyeluruh, pembelajaran organisasi, dan prestasi perusahaan kecil dan sederhana (PKS) menghasilkan dapatan yang tidak tekal dan ini menunjukkan perlunya pemboleh ubah penyederhana diperkenalkan. Berbekalkan teori berasaskan sumber serta teori kontingensi, kajian ini menelitI peranan intensiti persaingan dalam menyederhanakan hubungan antara orientasi keusahawanan, pengurusan kualiti menyeluruh, pembelajaran organisasi, dan prestasi PKS. Dengan menggunakan persampelan rawak berstrata, 714 soal selidik yang ditadbir sendiri telah diedarkan kepada pemilik-pengurus PKS beroperasi di Kano dan Kaduna di zon geopolitik utara-barat Nigeria. Daripada 714 soal selidik yang diedarkan, 440 soal selidik tidak dapat digunakan dan 62 peratus respons telah dikembalikan dan seterusnya dianalisis. Hipotesis telah diuji menggunakan *Partial Least Squares Structural Equation Modeling* (PLS-SEM). Keputusan menyokong kesan utama orientasi keusahawanan, pengurusan kualiti, dan pembelajaran organisasi terhadap prestasi PKS seperti yang dijangkakan. Juga, intensiti persaingan didapati menyederhanakan hubungan antara orientasi keusahawanan dan prestasi PKS. Keputusan yang sama mengenai kesan penyederhana intensiti persaingan terhadap hubungan antara pembelajaran organisasi dan prestasi PKS ditemui. Sebaliknya, tiada kesan interaksi yang signifikan antara pengurusan kualiti dan intensiti persaingan diperoleh. Sumbangan teori kajian ini terletak pada penggunaan intensiti persaingan sebagai penyederhana dalam hubungan antara orientasi keusahawanan, pengurusan kualiti menyeluruh, pembelajaran organisasi, dan prestasi PKS. Dari perspektif praktis, sumbangan utama kajian ini adalah bahawa PKS di Nigeria perlu menghargai faedah menumpukan perhatian yang lebih kepada pelaksanaan orientasi keusahawanan, pengurusan kualiti, dan pembelajaran organisasi untuk mencapai kelebihan daya saing yang mampan. Akhir sekali, hasil kajian ini juga boleh memberikan panduan kepada kerajaan dan pembuat dasar demi menggalakkan PKS untuk pembangunan lestari.

Kata kunci: orientasi keusahawanan, pengurusan kualiti menyeluruh, pembelajaran organisasi, intensiti persaingan, prestasi

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LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CMV	Common Method Variance
PhD	Doctor of Philosophy
PLS	Partial Least Squares
Q2	Construct Crossvalidated Redundancy
R2	R-squared values
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
SWT	*Subhanahu Wa Ta'ala*
USA	United States of America
ρc	Composite Reliability

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Small and medium-sized enterprises (SMEs) have been identified as major drivers of economic growth, competitiveness and jobs creation, in both developed and developing countries (Aris, 2007; European Commission, 2014; Leegwater & Shaw, 2008; Shehu & Mahmood, 2014b; Tuck, 2014). It is also generally accepted in both theory and practice that SMEs are used as engine for solving socio- economic problems such as unemployment, poverty alleviation. For example, SMEs have been regarded as critical to economic growth, employing 88.8 million people, as well as generating €3,666 trillion in valued added, representing 28 percent of Gross Domestic Product (GDP) in the 28 European Union (EU) member states (Muller, Gagliardi, Caliandro, Bohn, & Klitou, 2014). Relatedly, the contribution made by SMEs to the GDP and employment of high income countries, such as Australia, Austria, Canada, and Germany, were 55 percent and 65 percent, respectively. It is also estimated that in the United Kingdom (UK), SMEs contribute 60 percent to total employment and about47 percent of all private sector turnover (Department for Business Innovation & Skills, 2015). It has also been reported that in upper middle income countries, SMEs are important economic agents for growth (Pail, 2015).

In Southeastern Asia, SMEs are integral to ASEAN economic integration, providing approximately 80 percent of employment, and contributed as much as 50 percent to the GDP, as well as significantly constituting more than 96 percent of enterprises in the region (Aziz, 2015). Specifically, in Malaysia, the contribution made by SMEs to the GDP in 2015 was 36.3 percent (SME Corporation Malaysia, 2016), while in China, SMEs contributed 60 percent to GDP in 2015 (Muyuan, 2015).

In contrast to the aforementioned countries in developed and emerging economies, the contribution made by SMEs to the GDP of Nigeria was 48 percent in 2015 (Nnabugwu, 2015). In the same vein, compared to the countries having the same levels of development with Nigeria, such as South Africa, Ghana, and Kenya, among others; SMEs contribute a much higher proportion to GDP than currently observed in Nigeria. For example, while SMEs in Nigeria contribute 48 percent of the country's GDP in 2015, in South Africa, Ghana, and Kenya, SMEs contribute about 55 percent, 70 percent and 98 percent of the countries' GDPs, respectively (Kenya Private Sector Alliance, 2016; Laary, 2016; PricewaterhouseCoopers, 2015; Ramell, 2016). Hence, this implies that SMEs in these countries out performed those Nigeria's SMEs in terms of contribution to the GDP. A plausible reason why SMEs in Nigeria are performing below expectation, compared to the aforementioned countries in Africa could be due to the attack of oil and gas installations by Niger Delta Avengers in the south-south region of country (Idowu, 2016).

Furthermore, the following reasons justified why South Africa, Ghana, and Kenya were mainly featured in the discussion of SMEs in African countries. Firstly, in terms of economic development, these countries and Nigeria were moving at the same pace. Secondly, from historical perspective, all the aforementioned countries of Africa, including Nigeria were colonized by Britain (Hyam, 2003). Finally, in relation to cultural background, extant research has shown that Nigeria, South Africa, Ghana, and Kenya have similar cultural dimensions and orientations (Hofstede, Hofstede, & Minkov, 2010).

The definition of SMEs varies from one country to another; however, SMEs are usually defined in terms of their number of employees, annual turnover or value of sales, as well as capital investment, among other parameters. For example, an International Labour Organisation (2015) defined SME as "any enterprise with fewer than 250 employees. This includes all types of enterprises, irrespective of their legal form (such as family enterprises, sole proprietorships or cooperatives) or whether they are formal or informal enterprises" (p.2). Relatedly, European Union (2005) defined SMEs as any enterprise with under 250 employees and an annual turnover of not more than 50 million Euros or an annual balance sheet total of not more than 43 million euro. According to Central Bank of Nigeria (2010), SME is "an enterprise that has asset base (excluding land) of between N5million –N500 million and labour force of between 11 and 300" (p.2).

Although Nigeria remains Africa's biggest economy, evidence has shown that business enterprises, including SMEs have been facing challenges, such as

entrepreneurial orientation deficiencies, poor market orientation, lack of competent management, intense competition, low demand for product and service lack of financial support, lack of training and experience, unfriendly business environment, and limited capacity for innovations, among others (Aigboduwa & Oisamoje, 2013; Ekpenyong & Nyong, 1992; Okpara, 2011; Osotimehin, Jegede, Akinlabi, & Olajide, 2012; Shehu & Mahmood, 2014c).

The non-performance of SME in Nigeria remains a key concern because anecdotal evidence has shown that there is a growing decrease on the performance of the SME sector. In 2007, 2012, and 2013, the contribution of SME to the nation's gross domestic production (GDP) were 50 percent , 46.54 percent , and 10 percent respectively (Gbandi & Amissah, 2014; Oyeyinka, 2013). Therefore, given the aforementioned statistics and issues, it will be pertinent to understand the underlying factors that affect SME performance. Alarape (2013) has attributed poor entrepreneurial orientation as the major cause of decrease in growth performance of SMEs in Nigeria. Likewise, Ibeh (2003) associated poor entrepreneurial orientation as one of the factors responsible for non-encouraging performance of SME in Nigeria. Furthermore, Boso, Cadogan, and Story (2012) identified entrepreneurial orientation as one of critical as drivers of product innovation success among SME in developing economy. Similarly, Ogunsiji (2010) considered entrepreneurial orientation as a solution for the decrease in productivity of SME in Nigeria

. Therefore, based on the works of Alarape (2013), Ibeh (2003), as well as Boso *et al.* (2012), examining the effect of entrepreneurial orientation on SME performance in Nigerian context represents an important area for future research

direction, in which considerable theoretical and empirical contributions can be made. Furthermore, "it is generally agreed that firms that behave entrepreneurially perform better than more conservative firms" (Gupta & Gupta, 2015, p. 7). While researchers have generally agreed that firms that behave entrepreneurially outperform their conservative counterparts, Shehu and Mahmood (2014d) noted that research linking entrepreneurial orientation to SME performance in Nigeria is still rare, especially in manufacturing sector. Hence, in an attempt to address this gap and make theoretical and empirical contributions, entrepreneurial orientation is selected and incorporated as one of the key variables in the present study.

Kober, Subraamanniam, and Watson (2012) observed that lack of total quality management (TQM) adoption may be a fundamental factor responsible for poor financial performance of SMEs. Ou-Yang, and Tsai (2013) emphasized the need of TQM implementation for improving operations performance multinational corporations in China. A number of other empirical studies have also demonstrated the important role of TQM implementation for improving the performance of business enterprises (e.g., Claver & Tarí, 2008; Herzallah, Gutiérrez-Gutiérrez, & Munoz Rosas, 2013; Kaynak, 2003; Nair, 2006b; Vanichchinchai & Igel, 2011). Two main reasons justified why total quality management has been selected as one of the key variables in this study. First, while total quality management is widely applied in large listed manufacturing companies (Fotopoulos & Psomas, 2009; Mohrman, Tenkasi, Lawler, & Ledford, 1995), there is still a lack of TQM studies on the small and medium enterprises, especially in the manufacturing sector (Antony, Kumar, & Labib, 2008; Kumar & Antony, 2008; Parkin & Parkin, 1996; Walley, 2000).

Second, even though small and medium enterprises are still dominant in many areas of manufacturing industries in Nigeria, yet currently, there are few studies conducted regarding the relationship between total quality management implementation and SME performance.

A comprehensive review of literature also indicated that organisational learning has been an important consideration in understanding business performance (Alegre, Pla-Barber, Chiva, & Villar, 2012; Chaston, Badger, & Sadler-Smith, 1999; Li, Wang, & Liu, 2011; Zgrzywa-Ziemak, 2015). Organisational learning has been defined as the process through which the organizations learn (Lee, Lin, Yang, Tsou, & Chang, 2013). Theory and empirical studies considered organisational learning as an intangible resource for achieving sustained competitive advantage (Barney, 1991, 2000; Chen, Lin, & Chang, 2009; Pucik, 1988).

The present study incorporated organizational learning as one of the key variables in the conceptual model for several reasons. First, several scholars (e.g., Alegre *et al.*, 2012; Chaston *et al.*, 1999; Jain & Moreno, 2015; Öztürk, Arditi, Günaydın, & Yitmen, 2016) have underscored the importance of organizational learning to respond to today's highly competitive environment and to achieve sustain competitive market advantage. Hence, organizational learning has become an important key variable in this study. Second, according to Cho, Ellinger, Ellinger, and Klein (2010), despite the importance of organizational learning in achieving sustain competitive advantage, limited empirical research examining the relationship between organizational learning and firms' performance has been conducted. Thus,

the aforementioned discussions justified the need for choosing organizational learning as one of the key variable in the present study

.

Taken together, while there are many factors that affect SME performance in Nigeria, the three variables (i.e., entrepreneurial orientation, total quality management, and organizational learning) have been chosen as the key independent variables because literature indicated absence of a study examining the cumulative influence of these factors, which complement and enhance each other on the performance of small and medium enterprises. Accordingly, this study argued that combining these three variables in one model could contribute to the development of theory. Furthermore, competitive intensity has been incorporated as a moderator between the three independent variables and SME performance because contingency theory (Hofer, 1975; Luthans, 1973) suggests that characteristics of the environment might have a strong effect on the strength and direction of the relationship among these three variables and SME performance.

1.2 Statement of Problem

The non-encouraging performance of SME in Nigeria has been an issue of growing concern among researchers, policy makers, enterprises, and practitioners (Ibru, 2013). Although SMEs in Nigeria play an important role in the economy, they have been facing so many challenges that restrict their performance.

According to the Chief Executive Officer of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), Dr Dikko Umaru Radda has attributed

the non-performance of SME to so many factors, including inadequate capital base, lack of capacity, limited innovation, low entrepreneurial spirit, weak infrastructure; low capacity utilization, poor access to critical resources; poor research and development, and unfair competition (Ashiru, 2016).

Scholars have also documented entrepreneurial orientation deficiencies, poor market orientation, lack of competent management, intense competition, low demand for product and service lack of financial support, lack of training and experience, unfriendly business environment, and limited capacity for innovations, among others as major reasons for the non-performance of SME in Nigeria (Aigboduwa & Oisamoje, 2013; Ekpenyong & Nyong, 1992; Okpara, 2011; Osotimehin *et al.*, 2012; Shehu & Mahmood, 2014c). Recent estimates from the Centre for Research and Documentation (CRD; 2013) show that there were over 41 tanneries in Nigeria, and about 30 of these tanneries are located in Kano metropolis. It is also estimated that over 20 tanneries owned by Nigerians representing 49 percent in Kano State have been shut down, which resulted in unemployment, social crises, and loss of market. Hence, this has affected entrepreneurial activities in the entire Nigerian economy and Kano in particular.

Several studies have suggested several factors having a direct or indirect effect on SME performance. Entrepreneurial orientation has been regarded as one of the important variables affecting the performance of SME (Miller, 1983; Rauch, Wiklund, Lumpkin, & Frese, 2009). Despite considerable advances in examining entrepreneurial orientation as a determinant of firm performance, however, literature

shows mixed results regarding the relationship between entrepreneurial orientation and SME performance. For example, the evidences supporting the significant relationship between entrepreneurial orientation and SME performance can be found in many empirical studies, including Keh, Nguyen, and Ng (2007), Kraus et al. (2012), Brouthers, Nakos, and Dimitratos (2014), Real, Roldán, and Leal (Lechner & Gudmundsson, 2014; 2014; Tang, Chen, & Jin, 2015). Wijetunge and Pushpakumari (2014), however, studies by Slater and Narver (2000), Chadwick, Barnett, and Dwyer (2004)

Grant, Laney, Nasution, and Pickett (2006), and Walter, Auer, and Ritter (2006) showed no significant relationship between entrepreneurial orientation and SME performance.

Studies have also shown that organizational learning is one of the factors that lead to SME performance (Alegre *et al.*, 2012; Chaston, Badger, Mangles, & Sadler-Smith, 2001; Jiang & Li, 2008; Li, Wang*, et al.*, 2011; Ramayah, Sulaiman, Jantan, & Ching, 2004; Yeoh, 2014). Literature indicates that organizational learning is a multidimensional construct, consisting of a least two dimensions: exploitation learning and exploration learning (Li, Wang*, et al.*, 2011). According to Li et al. (2011), these two dimensions of organizational learning can improve organizational product quality and performance.

The relationship between organizational learning and SME performance has been well documented in the literature (e.g., Alegre *et al.*, 2012; Chaston *et al.*, 2001;

Jiang & Li, 2008; Lee & Lee, 2015; Li, Wang, *et al.*, 2011; Moustafa & Mohamed, 2013; Öztürk *et al.*, 2016; Pett & Wolff, 2016; Ramayah *et al.*, 2004; Swee, Catherine, & Tony, 2012; Tsung-Hsien, 2011; Ugurlu & Kurt, 2016; Wu & Fang, 2010; Yeoh, 2014; Zgrzywa-Ziemak, 2015; Zhou, Hu, & Shi, 2015). In particular, Öztürk *et al.* (2016) investigated the effects of organizational learning on performance of Turkish architectural design firms. With a sample of 165 architectural design firms registered with the Turkish Chamber of Architects, they found that that organizational learning positively affects the performance of Turkish architectural design firms. Relatedly, Zhou *et al.* (2015) theorized that organizational learning has a significant effect firm performance. The sample of 287 listed Chinese companies in their study was organized into financial service, computer and data processing, engineering, chemicals, electronic, machinery, instruments, and management services. The authors hypothesized and found significant positive relationship between organizational learning and firm performance.

Lee and Lee (2015) also offered empirical evidence of the relationship between organizational learning and firm's business performance. With a sample of 434 non-life insurance companies in Taiwan, Lee and Lee (2015) found that organizational learning significantly predicted firm's business performance. They further established that the relationship between organizational learning and business performance is mediated by total quality management. Other empirical evidences supporting the link between organizational learning and SME performance can be found in extant empirical studies, such as Garrido and Camarero (2010), Hung et al. (2011), and Panayides (Alegre *et al.*, 2012; Li, Wang, *et al.*, 2011; 2007).

Conversely, studies by Kaplan, Ogut, Mehmet, and Asli (2014), as well as Ramayah et al. (2004) found no evidence that organizational learning enhanced SME performance.

A comprehensive review of literature also suggest that total quality management (TQM) plays an important role in achieving sustainable business performance (e.g., Bou & Beltrán, 2005; Dubey & Gunasekaran, 2014; Hung *et al.*, 2011; Kaynak, 2003; Nair, 2006b; Ou-Yang & Tsai, 2013; Zhang & Xia, 2013). However, the findings of these studies were largely inconclusive. Specifically, extant literature found a significant positive relationship between TQM implementation and SME performance (e.g., Claver & Tarí, 2008; Herzallah *et al.*, 2013; Kaynak, 2003; Nair, 2006b; Vanichchinchai & Igel, 2011). In contrast, other studies found no evidence that TQM improved SME performance (Kober *et al.*, 2012).

Taken together, it can be argued that extant research does not provide a consistent depiction of the direct effect of entrepreneurial orientation, organizational learning and quality management on SME performance. As such the present study therefore proposed incorporating a moderating variable on these relationships. This is in concurrence with Baron and Kenny's (1986) assertion, who argued that "moderator variables are typically introduced when there is an unexpectedly weak or inconsistent relation between a predictor and a criterion variable" (p. 1178). As such, incorporating a moderator can help to explain more about the condition under which entrepreneurial orientation, total quality management and organizational learning predict SME performance. Furthermore, in a recent study, Hu (2014) has

recommended that it is important to include competitive intensity as a moderator between SME performance and its antecedents. This study answers this call by incorporating competitive intensity as a potential moderating variable between entrepreneurial orientation, total quality management, organizational learning and SME performance.

Competitive intensity refers to the level of direct competition that a firm faces within its business environment (Jaworski & Kohli, 1993). Competitive intensity has also been widely studied by researchers because of its possible linkage to firm performance (Lahiri, 2013; Li, Lundholm, & Minnis, 2011; Lusch & Laczniak, 1987; Ramaswamy, 2001; Wilden, Gudergan, Nielsen, & Lings, 2013). Despite its theoretical importance, research considering competitive intensity as a contingency factor between EO, TQM, OL and SME performance has thus far remained rare. In other words, based on the comprehensive review of available literature, the researcher had not come across any study that incorporate competitive intensity as a moderating variable on the relationship between EO, TQM, OL and SME performance. However, notable exceptions is a study conducted by Wang, Chen, and Chen (2012). The present study is significantly different from the work of Wang *et al.* (2012) in the following ways. Firstly, the study of Wang *et al.* (2012) mainly considered the relationship between total quality management, market orientation and firm performance; with competitive intensity as one of the moderating factors. Secondly, the work of Wang *et al.* (2012) was mainly conducted in China's hospitality industry (i.e., among Chinese hotels).

1.3 Research Questions

In line with the problems stated above, the present study seeks to address the following research questions:

1) Is there a significant relationship between entrepreneurial orientation and SME performance?
2) Is there a significant relationship between total quality management and SME performance?
3) Is there a significant relationship between organizational learning and SME performance?
4. Does competitive intensity moderates the relationship between entrepreneurial orientation and SME performance?
5. Does competitive intensity moderates the relationship between total quality management and SME performance?
6. Does competitive intensity moderates the relationship between organizational learning and SME performance?

1.4 Research Objectives

In line with the above research questions, the general objective of this study is to examine the moderating effects of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance. Specifically, the objectives of the study are as follows:

1. To examine the relationship between entrepreneurial orientation and SME performance.

2. To examine the relationship between total quality management and SME performance.
3. To examine the relationship between organizational learning and SME performance.
4. To determine whether competitive intensity moderates the relationship between entrepreneurial orientation and SME performance.
5. To determine whether competitive intensity moderates the relationship between total quality management and SME performance.
6. To determine whether competitive intensity moderates the relationship between organizational learning and SME performance.

1.5 Scope of Study

The main focus of this study is the performance of SME, which is proposed to be influenced by firms' entrepreneurial orientation, total quality management and organizational learning. Additionally, competitive intensity is proposed to moderate the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance. The research will be conducted amongst Nigerian manufacturing SME and the geographical area of research will be Kano and Kaduna, which are located in north-west geopolitical zone of Nigeria. To ensure the composition of seven main industries in manufacturing sector represented, proportionate samples of seven main industries in manufacturing sector were taken. These industries will include: food and beverages, packaging/containers, metal and metal products, printing and publishing, agro-allied, furniture, and building materials. The manufacturing sector is proposed to be covered in this study because

the sector is the major driver of Nigeria's economic growth and it accounted for a substantial proportion of total economic activities in Nigeria.

Furthermore, scope of this study is limited to formal SMEs in the manufacturing sector. These formal SMEs were identified through Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). Hence, informal SMEs, as well those operating in other sectors, such as telecommunications, oil-and-gas, tourism and hospitality, and banking sector, among others were not included in the present study. The scope of this study is also limited to SMEs operating in the north-west geopolitical zone of Nigeria, particularly those in Kano and Kaduna metropolis. Accordingly, other SMEs operating in other states of the north-west geopolitical zone, as well as those in the remaining five geo-political zones of Nigeria were excluded in the present study.

1.6 Significance of Study

This study has the potential to make significant contributions to the field of entrepreneurship. Firstly, most research involving relationship between entrepreneurial orientation, total quality management, organizational learning, and SME performance has typically yielded conflicting results (Garrido & Camarero, 2010; Grant *et al.*, 2006; Herzallah *et al.*, 2013; Kaplan *et al.*, 2014; Kober *et al.*, 2012; Kraus *et al.*, 2012). Theoretically, this study will improve upon the aforementioned studies by incorporating a moderating variable on these relationships. Specifically, this study will draw from resource based-view theory (Barney, 1991; Barney & Clark, 2007) and contingency theory (Hofer, 1975;

Luthans, 1973; Luthans & Stewart, 1977) to incorporate competitive intensity as a potential moderator on the relationship between entrepreneurial orientation, total quality management, organizational learning, and SME performance.

Secondly, while extant empirical studies have examined various factors that influence the performance of SME, such studies were conducted mainly in western, south-eastern Europe, and Asian contexts, including United Kingdom, United States, Spain, Germany, South Korea, India, and Norway, among others. This implies that less attention has been paid to the African continent, particularly in Nigeria. Hence, understanding the underlying factors that influence the performance of SME is necessary so that findings obtained in western, south-eastern Europe and Asian contexts could be generalized to the Nigerian context. In so doing, the present study will extend prior research by examining the relationships among five underlying constructs, namely: entrepreneurial orientation, total quality management, and organizational learning, and SME performance in the context of Nigerian manufacturing sector.

Furthermore, from practical point of view, considering the poor performance of SMEs in Nigeria, this study is expected to offer novel insights to the firm's managers in two ways. Firstly, the study will help management of firms to consider that entrepreneurial orientation, total quality management, and organizational learning are the basis for gaining a sustainable competitive advantage and key variables in enhancing the performance of SME performance (Claver & Tarí, 2008; Herzallah *et al.*, 2013; Kaynak, 2003; Nair, 2006b; Vanichchinchai & Igel, 2011).

1.7 Definition of Terms

i) **Small and medium enterprises:** In this study, small and medium enterprises refer to "entities with asset base of N5 million and not more than N500 million (excluding land and buildings) with employees of between 11 and 200" (Central Bank of Nigeria, 2014, p. 25).

ii) **Entrepreneurial orientation:** Entrepreneurial orientation is defined as "the top management's strategy in relation to innovativeness, proactiveness, and risk taking" (Cools & Van den Broeck, 2007, p. 27).

iii) **Total quality management:** Total quality management refers to " "an ongoing process whereby top management takes whatever steps necessary to enable everyone in the organization in the course of performing all duties to establish and achieve standards which meet or exceed the needs and expectations of their customers, both external and internal" (Miller, 1996, p. 157).

iv) **Organizational learning:** "Organizational learning is defined as the capability or processes within an organization that entails development of skills, sharing such skills to others, as well as application of knowledge or skills among organizational members in order to maintain and/or improve performance" (Dibella, Nevis, & Gould, 1996).

v) **Performance:** Performance is defined as "a metric that quantifies the efficiency and effectiveness of firm's past actions through the acquisition, collation, sorting, analysis, interpretation, and dissemination of appropriate data (Neely, 1998).

vi) **Competitive intensity:** Competitive intensity refers to "a situation where competition is fierce due to the number of competitors in the market and the lack of potential opportunities for further growth (Auh & Menguc, 2005b, p. 1654).

1.8 Organization of Thesis

The remainder of this thesis is structured as follows. Chapter two provides an overview of the context of the study. Next, chapter three focused on comprehensive review of the important concepts. Specifically, the concepts of organizational performance, entrepreneurial orientation, total quality management, and organizational learning are explored. This is followed by a review the previous works that relate these concepts toward the development of a model that explains the relationships. To link these relationships, resource based theory (Barney, 1991; Barney & Clark, 2007) and contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) are used as underpinning theories. Hence, an elaboration of these theories is offered. Chapter four describes the proposed methods and techniques including the research design, data collection procedures, sampling technique and techniques of data analysis, among others. Next, chapter five describes

the analyses of data and findings of the study. In chapter six, the key findings of the study are summarized based on the research objectives. Additionally, in chapter six, the theoretical, methodological and practical implications of the findings are highlighted. Also in chapter six, recommendations and suggestions for future research are offered.

CHAPTER TWO

SME DEVELOPMENT IN NIGERIA

2.1 Introduction

This chapter is aimed at providing an overview of SMEs in Nigeria, by specifically focusing on their potential role in the economic growth of the country. A better understanding of the context of the study would be valuable towards conducting empirical research. Nigerian manufacturing sector has been selected as the context of this study, due to the tremendous contribution of the sector to economic growth, in terms of employment generation, revenue to government. The chapter begins with a brief history of Nigeria, before considering an overview of Nigerian economy. Next, the background and importance of SMEs in Nigeria has been briefly discussed. Finally, a brief overview of some relevant agencies supporting SMEs in Nigeria has been made.

2.2 Brief History of Nigeria

Nigeria is located in the western coast of Africa, and is the most populous country in Africa, with an estimated population of 170 million people (World Bank Group, 2015). Nigeria, which has a total area of 923,766 square kilometers is bordered on the north by the Chad and Niger republics; on the west by the Republic of Benin, on the east by Cameroon, and shares boundary on the south by the Gulf of Guinea and Equatorial Guinea (Ubogu, 2015). The name Nigeria is derived from the word 'Niger,' the name of the major river that flows through 10 African countries,

including Niger, Benin, Guinea, Burkina Faso, Cameroon, Algeria, Chad, Ivory Coast, Mali, and Nigeria itself (Baxter, 2003; Hogan, 2013).

Before the advent of colonialism, Nigerians lived under political systems, which was based on monarchy, chieftaincy, village, clan, and lineage headship that helped them to properly manage of their own affairs (Audu, 2014; Iweriebor, 1982). However, since its political independence from Britain in 1960, Nigeria's governance systems and administrations were dominated by military regimes (Odinkalu, Amuwo, Bach, & Lebeau, 1996). After thirty-three years of military rule, on May 29, 1999, Nigeria returned to civilian democratic rule under the leadership of Olusegun Mathew Okikiola Aremu Obasanjo (Nwanze, 2015; Omotoso, 2013). Currently, Nigeria has over 250 different ethnic groups, with 36 states divided into six

geopolitical zones, including North Central, North-East, North-West, South-East, South-South, and South-West. English is the national language of Nigeria.

2.3 Overview of Nigerian Economy

Nigeria is also the second biggest economy in Africa and it is ranked among the top 30 largest oil producers in the world (United States Energy Information Administration, 2015). Agriculture, oil and gas, and trade accounted for about 54 percent of Gross Domestic Product (GDP) and distribution of growth is diverse, with higher contributions from manufacturing and various services industries (World Bank Group, 2014). Over the past 10 years, Nigerian economy has achieved sustained economic growth, with annual real GDP increasing by 6.3 percent in 2014 (Barungi, Ogunleye, & Zamba, 20015). Furthermore, oil and gas sector has been considered as the main driver of economic growth, with services contributing about 57 percent, while manufacturing and agriculture contributed about 9 percent and 21 percent, respectively in 2014 (Barungi *et al.*, 20015). Hence, Nigerian economy is diversifying and becoming more services-oriented, particularly through retail and wholesale trade, information and communication, as well as real estate, among others (Barungi *et al.*, 20015).

Recently, Nigeria, like other oil-exporting countries, has been facing "a sharp decline in oil revenues because of the fall in global oil prices that saw the price of Bonny Light drop from USD 118 per barrel (pb) in June 2014 to about USD 50 pb in January 2015 (Barungi *et al.*, 20015, p. 3). Given the recent fall in global oil prices,

the Federal Government of Nigeria (FGN) has been very quick and proactive to respond to the exogenous shock through a home-made adjustment strategies in the "2015 FGN Budget (Barungi *et al.*, 20015). Specifically, some of these strategies include removing of oil subsidy, encouraging participation in the agricultural sector to increase job creation, increase of Value Added Tax, infrastructure development and power, tightening monetary policy, and diversifying of the economy, among others.

2.4 Background of SMEs and its Importance

As noted in the preceding chapter, SMEs play a pivotal role economic growth, competitiveness and jobs creation, in both developed and developing countries (Aris, 2007; European Commission, 2014; Leegwater & Shaw, 2008; Shehu & Mahmood, 2014b; Tuck, 2014). Specifically, Muller *et al.* (2014) reported that SMEs are critical to economic growth, employing 88.8 million people, as well as generating €3,666 trillion in valued added, representing 28 percent of Gross Domestic Product (GDP) in 2013 in the 28 European Union (EU) member states Relatedly, according to Economic Research Institute for ASEAN and East Asia (2014) SMEs are integral to ASEAN economic integration, generating about 97 percent of employment, and contributed as much as 58 percent to the GDP, as well as significantly generated to 30 percent of total exports.

Anecdotal evidence suggests that about 96 percent of Nigerian businesses are SME compared to 53 percent in the US and 65 percent in Europe (International Finance Corporation, 2002). SMEs in Nigeria represent almost 90 percent of the manufacturing/ industrial sector in terms of number of enterprises (Oyeyinka, 2013). However, despite the critical role of SME to the development of Nigeria, evidence has shown that these business enterprises have been facing challenges possibly due to the nature of business environment. For example, Nigerian business environment is considered as a non-conducive and uncompetitive, burdensome customs procedures and costly, as well as time consuming business start-up processes (Adelowoon, 2015; Agabi & Ojeyemi, 2014; Nigerian States and the business environment, 2010; World Bank Group, 2014). According to World Bank Group (2014), "Nigeria lags behind in terms of firm performance. Unit labour costs (labour costs as a proportion of value-added) are higher in Nigeria, putting firms at a disadvantage (p.31).

Reviewing the background of SMEs and its importance in Nigeria is incomplete unless the history of entrepreneurship in Nigeria is reviewed. Accordingly, the history of entrepreneurship in Nigeria has also been reviewed in this paragraph. The history of entrepreneurship in Nigeria can be traced back to the early 1960s when the Federal Government set up several agencies and institutions in order to support the development of entrepreneurship and SMEs (Oghojafor, Okonji, Olayemi, & Okolie, 2011). To date, some of the agencies and institutions set up by the Federal Government to encourage the development of entrepreneurship and SMEs in Nigeria include the Nigerian Industrial Development Bank (NIDB),

Industrial Development Centres (IDCs), National Economy Reconstruction Fund (NERFUND), Peoples and Community Banks, National Poverty Eradication, Bank of Agriculture (BOA), Small and Medium Industries Equity Investment Scheme (SMIEIS), Nigerian Export-Import Bank (NEXIM), and Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), among others. In particular, some of the government agencies that facilitate and promote the activities of SMEs in Nigeria are discussed in the following sections.

2.4.1 Industrial Development Centres

The Industrial Development Centre (IDCs) are agencies under the Federal Ministry of Industry that are responsible for the provision of technical and managerial support services to micro, small and medium enterprises in their respective areas of jurisdiction. To discharge their activities, IDCs have been provided with modern training workshops on various trades including wood work, metal work, electrical and electronics, leather work, automobile, ceramics and textile. The services offered by IDCs include:

1. **Technical - Managerial Consultancy Services**: These services involve (i) Guidance and counseling on investments opportunities to prospective SME promoters; (2) Preparation of pre-investment proposals and feasibility studies; and (iii) Management consultancy services on production management Book-Keeping, accounting and cost analysis, marketing and sales promotion, personnel management, industrial relations, among others.

2. **Extension Services:** The extension services are concerned with (i) project implementation including installation and commissioning of factory plants; (ii) repair and maintenance of plants and equipment; and (iii) project monitoring and extension services involving in-plant problem diagnosis and on-the-spot techno-managerial assistance.

3. **Training Services:** These services include (i) entrepreneurship and management training workshops, and (ii) skill acquisition/upgrading and transfer of technology training on new processes, systems, industrial proto-type etc. for sustainable livelihood, export production and quality assurance.

4. **Technology Adaptation and Commercialization**: Technology adaptation and commercialization mainly include (i) adaptation of appropriate technologies and processes for extension and commercialization by SMEs, (ii) sourcing of new applications for utilization of locally available raw materials by SMEs, and (iii) innovation and proto-type development for machine, components and products.

5. **Information Services:** As the name implies, information services include data collection, documentation and dissemination on SME development, technology, raw materials, markets, investment, among others.

2.4.2 Industrial Training Fund

The Industrial Training Fund (ITF) was established under Act No 47 of 1971 (as amended up to date) to promote and encourage the "acquisition of skills in industry and commerce with a view to generating a pool of indigenous trained manpower sufficient to meet the needs of the economy" (ITF, 2007). The statutory functions of ITF include: (i) identifying the training needs of companies/employers in commerce and industry; Designing and developing appropriate training curricular to meet the identified needs; (ii) implementing training programmes, workshops and seminars; (iii) administering the Nationwide Students Industrial Work Experience Scheme (SIWES); (iv) Liaising with external bodies (NBTE, NUC, NCCE, Federal Ministry of Education etc) in developing the modalities for implementation of SIWES Scheme; (v) Establishing guidelines for calculating and operating ITF Reimbursement and Grant Scheme; (vi) liaising with International Bodies for bilateral technical cooperation agreements in human resources development and management; (vii) planning physical facilities for Vocational and Apprentice Training Schemes in Nigeria; (viii) providing assistance to enterprises in developing expertise in the development of competency-based training programmes; and (ix) establishing training standards in skills and apprentice training.

2.4.3 Nigerian Investment Promotion Commission

The Nigerian Investment Promotion Commission (NIPC) is an agency of the federal government, which was established by the NIPC Act N0. 16 of 1995 to promote, co-ordinate and monitor all investments in Nigeria. The main Functions of NIPC under

Section 4 of the Nigerian Investment Promotion Commission Act, include: (i) co-ordinating and monitoring all investment promotion activities to which this Act applies; (ii) initiating and enhancing investment climate in Nigeria for both Nigerian and non-Nigerian investors; (iii) promoting investments in and outside Nigeria through effective promotional means; collect, collate, analyse and disseminate information about investment opportunities and sources of investment capital, and advise on request, the availability, choice or suitability of partners in joint-venture projects; (iv) registering and keeping records of all enterprises to which this Act applies; (v) identify specific projects and invite interested investors for participation in those projects; (vi) initiating, organizing and participating in promotional activities, such as, exhibitions, conferences and seminars for the stimulation of investments; (vii) liaison between investors and Ministries, Government departments and agencies, institutional lenders and other authorities concerned with investments; (viii) providing and disseminating up-to-date information on incentives available to investors; (ix) assisting incoming and existing investors by providing support services; (x) evaluate the impact of the Commission in investments in Nigeria and make appropriate recommendations; (xi) advising the Federal Government on policy matters, including fiscal measures designed to promote the industrialization of Nigeria or the general development of the economy; and (xii) perform such other functions as are supplementary or incidental to the attainment of the objectives of this Act.

2.4.4 Nigerian Export-Import Bank

The Nigerian Export-Import Bank (NEXIM) was established by Act 38 of 1991 as an Export Credit Agency (ECA) with a share capital of N500, 000,000 (Five Hundred Million Naira) held equally by the Federal Government of Nigeria and the Central Bank of Nigeria. The Bank which replaced the Nigerian Export Credit Guarantee & Insurance Corporation earlier set up under Act 15 of 1988. The statutory functions of NEXIM include: (i) provision of export credit guarantee facility to its clients (ECGF). NEXIM's export credit guarantee facility is designed to protect Nigerian Banks against the risks of non-payment for loans or advances granted to exporters to meet short-term export contracts; (ii) provision of export credit insurance facility (ECIF). One of the major problems facing exporters is the non-payment for goods exported. Non-payment may result from the buyer's insolvency or other events outside the control of the exporters and the buyers. NEXIM's export credit insurance facility is designed to protect Nigerian exporters against the risks of non-payment for goods and services exported on credit terms as a result of commercial/political events; (iii) provision of credit in local currency to its clients in support of exports. NEXIM lends money directly to Nigerian exporters to fund their purchase of capital goods, raw materials, packaging materials and spare parts. The facility also covers the provision of infrastructure as well as revitalization and modernization of plants/machinery; (iv) establishment and management of funds connected with exports. (v) maintenance of a foreign exchange revolving fund for lending to exporters who need to import foreign inputs to facilitate export production; (vi) Maintenance of a trade information system in support of export business; and (vii)

provision of domestic credit insurance where such a facility is likely to assist exports, among others.

2.4.5 Nigeria Export Processing Zones Authority

The Nigeria Export Processing Zones Authority (NEPZA) is a Federal Government Agency established by Act No. 63 of 1992 to provide appropriate enabling environment necessary for export manufacturing and other commercial activities. The Nigeria Export Processing Zones Authority (NEPZA) is being located in any Free Zone in Nigeria, including Kano, Calabar, among others. NEPZA provides investor(s) with certain advantages, benefits and incentives, including (i) complete tax holiday for all Federal, State and Local Government taxes, rates, customs duties and levies; (ii) one-stop approvals for all permits, operating licenses and incorporation papers.; (iii) duty-free, tax-free import of raw materials and components for goods destined for re-export; (iv) duty-free introduction of capital goods, consumer goods, machinery, equipment, and furniture; and (v) permission to sell 100% of manufactured, assembled or imported goods into the domestic Nigerian market.

2.4.6 Small and Medium Enterprises Development Agency of Nigeria

The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established by the SMEDAN Act of 2003 to promote the development of the MSME sector of the Nigerian economy. The functions of SMEDAN as contained in enabling Act include: (i) stimulating, Monitoring and Coordinating the development

of the MSMEs sector, (ii) initiating and articulating policy ideas for micro, small and medium enterprises growth and development, (iii) promoting and facilitating development programmes, instruments and support services to accelerate the development and modernization of MSME operations; (iv) serving as vanguard for rural industrialization, poverty reduction, job creation and enhanced sustainable livelihoods; (v) linking SMEs to internal and external sources of finance, appropriate technology, technical skills as well as to large enterprises; (vi) promoting information and providing access to industrial infrastructure such as layouts, incubators, industrial parks; (vii) intermediating between MSMEs and the Government. SMEDAN is the voice of the MSMEs; and (viii) working in concert with other institutions in both public and private sectors to create a good enabling environment of businesses in general, and MSME activities in particular.

2.5 Chapter Summary

Small and medium enterprises exists in every sector of the economy, including agriculture, solid mineral, oil and natural gas, manufacturing, informational and communication, wholesale and retail trade, building and construction, hotel and restaurants, among others. Nigeria supposed to be a potential market for small and medium enterprises, but unfortunately, the performance of SMEs has not been encouraging due to so many problems, such as inadequate capital base, lack of capacity, limited innovation, low entrepreneurial spirit, weak infrastructure; low capacity utilization, poor access to critical resources; poor research and development, and uncompetitive nature of business environment, among others.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The main purpose of this chapter is to critically review relevant literatures and theories related to the study's constructs. Specifically, this chapter reviews the important concepts of SME performance, entrepreneurial orientation, total quality management, organizational learning and competitive intensity respectively. Additionally, drawing from the resource based view and contingency perspectives, these concepts (entrepreneurial orientation, total quality management, organizational learning, competitive intensity, and organizational performance) were linked together toward development of research hypotheses.

3.2 Organizational Performance

Organizational performance is a relevant construct in the field of entrepreneurship and frequently used as a dependent variable (e.g., Alarape, 2013; Calantone, Cavusgil, & Zhao, 2002; Herzallah *et al.*, 2013; Kraus *et al.*, 2012; Lechner & Gudmundsson, 2014; Long, 2013; Lumpkin & Dess, 2001; Ramayah *et al.*, 2004; Real *et al.*, 2014; Shehu & Mahmood, 2014a). Despite its relevance in the field of entrepreneurship, Santos and Brito (2012) argued that "there is hardly a consensus about its definition, dimensionality and measurement, what limits advances in research and understanding of the concept" (p.96). Organizational performance has been defined as a metric that quantifies the efficiency and effectiveness of firm's

past actions through the acquisition, collation, sorting, analysis, interpretation, and dissemination of appropriate data (Neely, 1998).

Organizational performance has also been defined "as the achievement of organizational goals related to profitability and growth in sales and markets share, as well as the accomplishment of general firm strategic objectives" (Hult, Hurley, & Knight, 2004, p. 430). Organizational performance also is considered as the long-term well-being and strength of the business enterprise in relation to its competitors (Bergeron, Raymond, & Rivard, 2004). Consistent with the aforementioned definitions, organizational performance in this study refers to the extent to which a firm has actually achieved its organizational goals in terms of sales growth, increase in market share, and profitability relative to its competitors. Literature indicates that several studies have used various types of measures to assess organizational performance in different organizational settings (Covin & Slevin, 1989; Dawes, 1999; Zulkiffli & Perera, 2011). These measures can be categorized under subjective measures and objective measures of organizational performance.

3.2.1 Subjective Measures of Organizational Performance

Subjective measures of organizational performance reflect measures that are directed at firm's key informants (e.g., Managers, Chief Executive Officers, Directors or equivalent level), who are asked to rate the overall performance of their firms relative to its competitors (Dawes, 1999; Kim, 2006; Wall *et al.*, 2004; Zulkiffli &

Perera, 2011). As mentioned earlier, prior studies have successfully used subjective measure of organizational performance in different contexts (Alarape, 2013; Covin & Slevin, 1989; Deligianni, Dimitratos, Petrou, & Aharoni, 2015; Khandekar & Sharma, 2006; Schepers, Voordeckers, Steijvers, & Laveren, 2014).

Specifically, Khandekar and Sharma (2006) in a study among 100 senior managers in three global firms operating in India used subjective measure of firm performance to investigate the relationship between organizational learning and firm performance. The study established a significant positive relationship between organizational learning and firm performance (as reflected by organizational efficiencies and inefficiencies in terms of corporate image, competences and overall financial performance). In the same vein, Schepers *et al.* (2014) examined the moderating role of socio-emotional wealth on the relationship between entrepreneurial orientation and performance of 232 family based manufacturing firms in Belgium. Using subjective measures of firm performance, the findings showed a significant and positive relationship between entrepreneurial orientation and business performance. In addition, socio-emotional wealth was found to be a moderator on the relationship between entrepreneurial orientation and firm performance.

In a more recent study, Deligianni *et al.* (2015) also applied subjective measures of performance, as reflected by sales level, market share, return on investment, and profitability to investigate the moderating role of decision-making rationality on the relationship between entrepreneurial orientation and international performance. Two hundred and sixteen CEO/Managers of the firms in United States and United Kingdom participated in the survey. The findings of the study revealed: (1) a significant positive relationship between decision-making rationality and international performance, and (2) decision-making rationality was found to moderate the relationship between entrepreneurial orientation and international performance.

3.2.2 Objective Measures of Organizational Performance

Objective measures of organizational performance focus on actual performance indicators, in which firm's key informants may provide absolute quantitative data on how well an organization is doing (Dawes, 1999; Kim, 2006; Zulkiffli & Perera, 2011). Examples of such quantitative performance data include, but not limited to return on assets (ROA), Return on Equity (ROE), overall profit margin, profit per employee, growth in assets, number of customers, number of employees trained, number of innovations, ratio of good output to total output, number of new product launches, time to market new products, number of customer complaint, customer response time, and percent shipments returned due to poor quality (Alarape, 2013;

Bharadwaj, 2000; Lau & Sholihin, 2005; Mayer-Haug, Read, Brinckmann, Dew, & Grichnik, 2013; McCracken, McIlwain, & Fottler, 2001; Yıldız & Karakaş, 2012)

.

Extant empirical studies have utilized objective measure of organizational performance in different contexts (Aragón-Sánchez & Sánchez-Marín, 2005; Bharadwaj, Bharadwaj, & Konsynski, 1999; Casillas & Moreno, 2010; Hult & Ketchen, 2001; Lee, Lee, & Pennings, 2001; McCracken *et al.*, 2001). Specifically, Bharadwaj *et al.* (1999) utilized objective data to investigate the relationship between information technology investments and firm performance as measured by Tobin's q (i.e., ratio of the market value of a firm's assets to the replacement cost of assets). Based on the financial and accounting-based data obtained from the Compustat database (1988–1993), the findings of the study revealed that information technology expenditure in the model increased the amount of variance explained in Tobin's q. The study further revealed that information technology investments was a significantly positively related to firm performance.

In the same vein, Hult and Ketchen (2001) used objective performance indicators to examine the relationships among market orientation, entrepreneurship, innovativeness, organizational learning and the performance of 181 large multinational corporations (MNC). The authors measured MNC's performance by using three objective indicators, namely: average change in return-on investment, percentage change in income, and percentage change in stock price for five-year average each. Consistent with resource-based theory, the findings showed that market orientation, entrepreneurship, innovativeness, as well as organizational

learning were significantly and positively related to MNC performance. Relatedly, Lee *et al.* (2001) investigated the relationships between internal capabilities, external networks and firm performance by using both subjective and objective data from 137 Korean technological start-up companies. Both internal capabilities and external networks were measured using subjective data (i.e., self-administered questionnaires), while firm performance was assessed using profit based performance indicators (i.e., ration of sales growth to the sales volume). The results of the regression analysis indicated that both internal capabilities and external networks play a significant role in predicting firm performance.

Furthermore, using resource-based theory, Aragón-Sánchez and Sánchez-Marín (2005) examined the influence of strategic orientation and management characteristics on performance of 1,351 Spanish small and medium enterprises. Both subjective performance indicator (self-administered questionnaires) and objective data, as reflected by return on investment were utilized to empirically test the hypotheses. As expected, the results confirmed that strategic orientation and Management characteristics were significantly and positively related to firm performance. In another study, Gutierrez, Martinez-Ros, and De Castro (2009) examined the moderating effects of strategy, structure, human resource policies and information systems on the relationship between entrepreneurial orientation and firm performance among a sample of SME in the Spanish chemical industry. The performance of SME was proxied by the growth in return on assets, while measures for entrepreneurial orientation, strategy, structure, human resource policies and information systems were adapted from established scale from the literature (e.g.,

Lumpkin & Dess, 1996). The findings showed a significant and positive relationship between entrepreneurial orientation and firm performance. Furthermore, the results also suggested that the positive relationship between entrepreneurial orientation and firm performance were moderated by strategy, structure, human resource policies and information systems.

Using two objective measures of performance, Ferreira and Azevedo (2008) examined the effect of the entrepreneurial orientation on small firm's growth (measured using two objective indicators: the sales growth and employment growth). The results supported the hypothesized relationship between entrepreneurial orientation and small firm's growth. In the same vein, Awang *et al.* (2009b) utilized objective performance indicators to examine the mediating role of distinctive capabilities in the relationship between entrepreneurial orientation and firm performance, as measured by return on sales among small and medium Agro-Based Enterprises (SMAEs) in Malaysia. The findings demonstrated that entrepreneurial orientation was positively related to return on sales, and this positive relationship was further mediated by distinctive capabilities among Malaysian agro-based SME.

From the findings reported, it can be concluded that objective measures of organizational performance are mostly based upon accounting rates of returns, which emphasize historic events over future performance. As such, reliance on accounting measures can only reflect what has happened and it is difficult to reveal future performance, which might be either negative or a positive outcomes (Richard, Devinney, Yip, & Johnson, 2009). Furthermore, while objective measures of

organizational performance are less affected by social desirability bias; subjective measures of organizational performance would be utilized in the present study for the following reasons. Firstly, "subjective measures have tended to focus on overall performance, whereas objective measurement has typically used more specific financial indicators (Wall *et al.*, 2004, p. 97). Secondly, many researchers have argued that SME are often very reluctant to disclose details of their operation and actual financial performance, possibly due to fear of tax and competition reasons (e.g., Balcı, 2011; Brouthers & Nakos, 2004; Hope, 1997; Promwichit, Mohamad, & Hassan, 2014; Zulkiffli & Perera, 2011). Hence, this justified the need for utilizing subjective measures of organizational performance. Finally, in Nigeria, SME are not mandated to make their financial performance publicly, as such it would be very difficult to have access to firms' financial data (Companies and Allied Matters Act 1990). Hence, this makes it impossible to obtain objective data of SME performance.

3.3 Entrepreneurial Orientation

Entrepreneurial orientation has certainly become a central in the realm of entrepreneurship and over the past three decades, research on EO has flourished for continuous improvement of theory development and measurement technique (Lumpkin & Dess, 1996; Lumpkin & Dess, 2001; Lyon, Lumpkin, & Dess, 2000; Miller, 1983; Rauch *et al.*, 2009; Wiklund & Shepherd, 2005). The historical foundations of entrepreneurial orientation research can be traced to the seminal works of strategic management theorists, such as Mintzberg (1973), Khandwalla (1977), Miller (1983), Covin and Slevin (1986), Zahra (1993), and Voss, Voss, and Moorman (2005), among others.

Specifically, Miller (1983), viewed an entrepreneurial firm as the one "that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch" (p.771). Relatedly, Covin and Slevin (1986) and Zahra (1993) considered entrepreneurial firms as those characterized by innovativeness, proactiveness, risk-taking, bold and aggressiveness strategic orientations when pursuing opportunities. In a similar pioneering work, Voss *et al.* (2005) defined entrepreneurial orientation as a firm-level predisposition and commitment to engage in behaviors that lead to change in the organization or marketplace, such as initiating and sustaining new ideas that lead to new product offerings, implementing new business processes in order to expand new markets, trying out new product offerings in the face of uncertainty, encouraging employees to be independent in initiating and implementation of innovative ideas, and monitoring industry trends and competitors' best practices.

Entrepreneurial orientation has also been viewed by Pearce, John, Fritz, and Davis (2010) "as a set of distinct but related behaviors that have the qualities of innovativeness, proactiveness, competitive aggressiveness, risk taking, and autonomy" (p.219). Meanwhile, Cools and Van den Broeck (2007) conceptualized EO as "the top management's strategy in relation to innovativeness, proactiveness, and risk taking" (p. 27).

In general, the above conceptualization of entrepreneurial orientation suggests that EO is multidimensional construct consisting of at least three components or dimensions. For instance, Cools and Van den Broeck (2007) definition suggests three dimensions of EO, namely: innovativeness, proactiveness, and risk taking. While other definitions of EO are equally important, yet the present study adopts Millers' (1983) conceptualization of the EO because majority of entrepreneurship researchers have also adopted this earliest definition (e.g., Hughes & Morgan, 2007; Morris & Paul, 1987; Naman & Slevin, 1993; Rauch *et al.*, 2009).

Furthermore, regardless of the conceptualization used to describe entrepreneurial orientation construct, many researchers have argued that EO could lead to superior business performance and sustained competitive advantage (Boso, Story, Cadogan, & Ashie, 2015; Deligianni *et al.*, 2015; Ferreira & Azevedo, 2007b; Hasan, Syyedhamzeh, & Ali, 2013; Keh *et al.*, 2007; Kraus *et al.*, 2012; Lechner & Gudmundsson, 2014; Lee & Chu, 2011; Rosenbusch, Rauch, & Bausch, 2011).

3.3.1 Dimensions of Entrepreneurial Orientation

As noted earlier, EO is a multidimensional construct consisting of several components or dimensions. For example, in a study conducted among 103 large Canadian firms on the relationship between top management style, environmental context, and firm performance, Khandwalla (1977) described three dimensions of entrepreneurial styles, namely: risk-taking, innovativeness, and proactiveness. Risk-taking refers to the tendency of an entrepreneur to engage in ventures that have the

potential risks, yet at the same time yield positive returns on investment. Innovativeness refers to the tendency of an entrepreneur or firms to create value through exploration, innovation, thinking creatively and by finding new products, services, sources, technologies and markets (Geri, 2013). On the other hand, proactiveness is essentially the tendency of a firm to anticipate and acts on customers' future needs (Lumpkin & Dess, 1996)

Following the Seminal work Khandwalla (1977), several other early studies (e.g., Covin & Slevin, 1989, 1991; Davis, Morris, & Allen, 1991; Miller, 1983; Miller & Friesen, 1982; Morris & Paul, 1987; Naman & Slevin, 1993) have also adopted risk-taking, innovativeness, and proactiveness as underlying dimensions to an entrepreneurial orientation. Although other early studies have characterized EO based on the work of Khandwalla (1977), other scholars (e.g., Lumpkin & Dess, 1996) have suggested five dimensions of EO by incorporating two additional dimensions, namely: autonomy and competitive aggressiveness. Autonomy refers to the degree to which an individual, teams, as well as entrepreneurial leaders are independent and self-directed in bringing forth a new idea or a vision and carrying it through to completion stage (Lumpkin & Dess, 1996; Rauch *et al.*, 2009). On the other hand, competitive aggressiveness is defined as "the intensity of a firm's effort to outperform rivals and is characterized by a strong offensive posture or aggressive responses to competitive threats" (Rauch *et al.*, 2009, p. 763).

Although entrepreneurial orientation is a multifaceted construct, having three or five dimensions, the present study focused mainly on three dimensions for the following reasons. Firstly, despite the clear tradeoffs among generality, accuracy, and simplicity, this study has chosen mainly the three dimensions in order to achieve parsimony in concept development and measurement. Secondly, because in scientific inquiry, one cannot achieve generality, accuracy, and simplicity simultaneously (Blalock, 1979), the present study unavoidably opted for simplicity at the expense of generality and accuracy. Hence, focusing on the three dimensions to develop EO construct would provide opportunities to researchers who might want to dwell on the five dimensions of EO.

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3.3.2 Measurement of Entrepreneurial Orientation

Previous research has measured entrepreneurial orientation through the use of self-report measures at both the organizational-level and individual level of analysis (Bissing-Olson, Iyer, Fielding, & Zacher, 2013; Bolton & Lane, 2012; Covin & Slevin, 1989; Covin & Wales, 2012; Felgueira & Rodrigues, 2012; Hughes & Morgan, 2007; Miller, 1983). Additionally, many other studies have measured entrepreneurial orientation as a unidimensional and/or multidimensional constructs by adopting or modifying the aforementioned self-report measures of entrepreneurial orientation (Chadwick *et al.*, 2004; Dong, Ge, Runyan, & Swinney, 2012; Ju, Chen, Yu, & Wei, 2013). Specifically, Miller (1983) conducted a cross-sectional study among 52 business firms from a varied industries, including retailing, electronics, broadcasting, furniture manufacturing, paper mills, publishing, construction and transportation, among others. They empirically developed and validated a 9-item

self-report measure entrepreneurial orientation. The results showed that overall Cronbach Alpha coefficient for the measure of entrepreneurial orientation was 0.88. Results also showed that the correlations coefficients between entrepreneurial orientation and its dimensions were 0.82, 0.76, and 0.80 for innovation, proactiveness, and risk-taking, respectively. Furthermore, although entrepreneurial orientation is suggested to be a multidimensional construct, Miller clearly argued that there is an absence of covariation or correlation among innovativeness, risk taking, and proactiveness, due to the intersection of these three dimensions of entrepreneurial orientation. Hence, Miller's conceptualization of entrepreneurial orientation as three dimensions should not hold.

Consistent with Miller's conceptualization of entrepreneurial orientation, Covin and Slevin (1989) developed and validated a 9-item measure of entrepreneurial orientation (i.e., strategic posture), and these nine items also focus on innovation, proactiveness, as well as risk-taking. As an organizational phenomenon, research questionnaires were completed by 344 senior- managers of small firms that are primarily involved in manufacturing activities in Western Pennsylvania. Because the items of this scale focus on different aspects of entrepreneurial orientation (i.e. innovation, proactiveness, and risk-taking), factor analyses were conducted in order to assess the dimensionality of this measure of entrepreneurial orientation. Factor analyses demonstrated that the items for entrepreneurial orientation are highly loaded on a single factor, which suggest that the nine items for entrepreneurial orientation can be combined together to form a unidimensional construct.

Lumpkin and Dess (1996) Suggested that “the dimensions of entrepreneurial orientation may vary independently of each other in a given context” (p. 137). Based on this argument, Hughes and Morgan (2007) employed a “disaggregated” approach in the assessment of entrepreneurial orientation by developing and validating the measures for individual sub-dimensions of EO, namely: risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy. Hence, Hughes and Morgan (2007) extended the work of Miller (1983), as well as Covin and Slevin (1989) by conceptualizing entrepreneurial orientation as having five components, but measured separately using a "disaggregated” approach. As an organizational phenomenon, the unit of analysis was organizational in which 211 Managing Directors of young high-technology firms in the U.K completed the research questionnaires on behalf of their organizations. As expected, the results supported the view that the five dimensions of entrepreneurial orientation vary independently of each other; as such they should be measured independently. Table 3.1 summarizes empirical studies on the relationship between entrepreneurial orientation and business performance.

Table 3.1

Summary of Empirical Studies on the relationship between entrepreneurial orientation and Business performance

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Li, Y.-H., Huang, J.-W., & Tsai, M.-T. (2009).	To examine the mediating role of knowledge creation process on the relationship between Entrepreneurial orientation and firm performance.	Entrepreneurial orientation (EO)	knowledge creation process (KC) as mediator	Firm performance (FP)	A sample of 165 manufacturing, high-tech, and service firms in Taiwan	EO-->FP (Yes) EO-->KC (Yes) KC-->FP (Yes) EO-->KCP-->FP (Yes)
Jalali, A., Jaafar, M., & Ramayah, T. (2014).	To examine the interaction effect of customer capital on the relationship between entrepreneurial orientation and performance	Proactiveness (PRO) Innovativeness (INV) Risk-taking (RSK)	Customer capitals (CC) as moderator	Growth-profitability (GP)	A sample of 16 SMEs in the manufacturing industry in Iran	PRO-->GP (Yes) INV-->GP (Yes) RSK-->GP (Yes) PRO X CC--> GP (Yes) INV X CC--> GP (Yes) RSK X CC--> GP (Yes)
Cabillas, C. J., Moreno, A. M.(2010)	To examine the moderating role family involvement on the relationship between entrepreneurial orientation and Growth.	Proactiveness (PRO) Innovativeness (INV) Risk-taking (RSK) Aggressiveness (AGR) Autonomy (AUT)	Family involvement (FI) as moderator	Growth (GRW)	A sample of 449 SMEs in Spain	PRO-->GRW (Yes) INV-->GRW (Yes) RSK-->GRW (No) AGR-->GRW (No) AUT-->>GRW (No) PRO X FI--> GP (No) INV X FI--> GP (Yes) RSK X FI--> GP (Yes) AGR X FI--> GP (No) AUT X FI--> GP (No)

Table 3.1 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Wang, C. L. (2008).	To examine the relationship between Entrepreneurial orientation, learning orientation, and firm performance.	Entrepreneurial orientation (EO)	Learning orientation (LO) as mediator ; Firm strategy (FS) as moderator.	Firm Performance (FP)	A sample of 213 medium-to-large UK firms	EO-->FP (Yes) EO --> LO--> FP (Yes) EO X FS--> FP (Yes) LO X FS--> FP (Yes)
Jantunen, A., Puumalainen, K., Saarenketo, S., & Kyläheiko, K. (2005)	To examine the relationship between Entrepreneurial orientation, dynamic capabilities and international performance.	Entrepreneurial orientation (EO)	Dynamic capabilities(DC) as second IV	International Performance (IP)	A sample of 217 manufacturing and service organizations.	EO-->IP (Yes) DC --> IP (Yes)
Kraus, S., Rigtering, J. C., Hughes, M., & Hosman, V. (2012).	To examine the moderating effect of market turbulence on the relationship between entrepreneurial orientation and SMEs performance.	Proactiveness (PRO) Innovativeness (INV) Risk-taking (RSK)	Market turbulence (MT) as moderator	SME business performance (SBP)	A sample of 164 service and manufacturing SMEs in Netherlands	PRO-->SBP (Yes) INV-->SBP (No) RSK-->SBP (No) PRO X MT--> SBP (No) INV X MT--> SBP (Yes) RSK X MT--> SBP (Yes)

Table 3.1 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Zhang, Y., & Zhang, X. e. (2012)..	To examine the moderating effect on the role of network capabilities on the relationship between entrepreneurial orientation and business performance	Entrepreneurial orientation (EO)	Network Capabilities.(NC) as moderator	Business performance (BP)	A sample of 130 SMEs in the north-eastern China	EO-->BP (Yes) EO X NC-->BP (Yes)
Schepers, J., Voordeckers, W., Steijvers, T., & Laveren, E. (2014)	To examine the moderating role of socioemotional wealth on the relationship between entrepreneurial orientation and performance relationship in private family firms business performance	Entrepreneurial orientation (EO)	socioemotional wealth (SEW) as a moderator	Firms business performance(FBF)	A sample of 232 manufacturing from Belgian private family firms	EO --> FBP (Yes) EO X SEW --> FBP (Yes)
Long, Hoang C. (2013).	To examine the relationship between learning orientation, market orientation, entrepreneurial orientation, and firm performance of Vietnam marketing communications firms	Entrepreneurial orientation (EO)	learning orientation, market orientation,	Firms performance(FF)	A sample of 642 owners, senior managers and CEOs in Vietnam marketing communications firms	EO --> FF (Yes) LO --> FF (No) MO --> FF(Yes)

Table 3.1 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Leste, I. T. (2014)	To examine the moderating role of government policy on the relationship between entrepreneurial orientation and business performance.	Entrepreneurial orientation (EO)	government policy (GP) as a moderator	Business performance(BF)	A sample of 157 SMEs in Indonesia	EO --> BP (Yes) EO X GP --> BP (No)
Hasan, K., Syyedhamzeh, N., & Ali, F. (2013).	To investigate the relationship between entrepreneurial orientation and innovative performance	Proactiveness (PRO) Innovativeness (INV) Risk-taking (RSK) Aggressiveness (AGR) Autonomy (AUT)		Innovative Performance (IP)	Using cluster and Morgan table to determine the sample size, a sample of 180 worker(manager/employer) from different section of the department in the company was choose,eg marketing, R&D, training, commercial, IT, and plan and project.	INV--->IP (Yes) Risk--->IP (YES) PRO-->IP (No) CA ---> IP (No) AU---> IP (Yes)

3.4 Organizational Learning

The historical foundations of organization learning can be traced to the pioneering works of industrial and organizational psychologists. Specifically, researchers, such as Argyris and Schön (1978), Cyert and James (1992), as well as Dutton and Thomas (1984) studied the concept of organization learning from a psychological viewpoint. For example, Argyris and Schön (1978) conceptualized organizational learning in terms of single-loop and double-loop learning. Single-loop learning refers to learning by improving (Argyris & Schön, 1978; Shrivastava, 1983). In other words, single-loop learning is a process through which mistakes committed are corrected by using a different strategy and/or technique that are expected to realize different, successful outcomes. On the other hand, double-loop learning refers to learning by transformation or modification of goals (Argyris & Schön, 1978). Accordingly, in double-loop learning process, mistakes are corrected by modification or transformation of goals in the light of experience. Double-loop learning occurs when an organization realizes a mistake and modifies its objectives and policies before taking corrective actions (Argyris, 1991; Shrivastava, 1983).

From strategic management perspectives, organizational learning refers to how organizational environments are perceived and interpreted by their employees (James & James, 1989; James, James, & Ashe, 1990). James and James (1989) proposed that individuals cognitively appraise their work environment with respect to work-related values. The appraisal is a reflection of the extent the organizational

characteristics are important to the individual and his or her personal and organizational well-being (James, et al., 1990). Thus, psychological climate reflects a judgment by the individual about the degree to which the work environment is beneficial to their sense of well-being.

Organizational learning can be distinguished from learning organization (Anders, 2001; Mark, John, & Luis, 2000) in the sense that the latter refers "to an organization that is designed to enable learning and has an organizational structure with the capability to facilitate learning" (p.47). Learning organization can also be defined as a specific type of organization, which is conducive or ideal for learning to take place, so that behaviour can be improved and adapted, with the aid of learning facilities (Anders, 2001). The focus of this study will be on organizational learning. Organizational learning is important because it enables firms to increase their competitive advantage, innovativeness, as well as enhancing their effectiveness (Wu & Fang, 2010).

3.4.1 Dimensions of Organizational Learning

Organizational learning is often conceptualized as either unidimensional or multidimensional construct (Chakrabarty & Rogé, 2002; Therin, 2003; Wang & Ellinger, 2011). Specifically, an earlier study by Chakrabarty and Rogé (2002) has attempted to examine dimensionality of the organizational learning construct. Following a confirmatory factor analysis using LISREL 8.30, the study has established a unidimensionality of organizational learning construct. Relatedly,

drawing from a sample of 546 private and public sector organizations in Canada, Goh, Quon, and Cousins (2007) have re-examined the unidimensionality of organizational learning construct. Using both exploratory and confirmatory factor analysis, results suggest a unidimensionality for organizational learning construct.

On the other hand, extant researches (e.g.,Chaston *et al.*, 2001; Dale, 1994; Huber, 1991; Li, Wang*, et al.*, 2011; Lopez, Peón, & Ordás, 2005; Nevis, DiBella, & Gould, 1997; Wang & Ellinger, 2011) have conceptualized organizational learning as a multidimensional construct consisting of several dimensions. In particular, a study by Wang and Ellinger (2011) has come up with four dimensions of organizational learning, including information acquisition, information distribution, information interpretation, and organizational memory.

Similarly, in a survey of 168 small UK manufacturing firms, Chaston *et al.* (2001) concluded that organizational learning is conceptualized into six orientations, namely: knowledge source, strong commitment, documentation focus, skills development focus, dissemination focus, Value-chain focus, and skills development focus.

(1) Knowledge source orientation refers to “acquiring new knowledge from external sources and exploiting knowledge already contained within the organization”.

(2) Strong commitment relates to “accumulating and exploiting knowledge concerned with, first, processes associated with the production of products or

services and, second, making available to markets, new improved products and services".

(3) Documentation focus refers to a situation where by "knowledge being carefully collected and documented in company policy manuals and/or held in a central documentation center".

(4) Dissemination focus is concerned with ensuring that "key information can be accessed by referring to company manuals and new knowledge is formally documented for wide distribution to staff within the organization".

(5) Value-chain focus is defined as commitment "to using knowledge to add value across both internal processes and making new products or services available to the market".

(6) Skills development focus relates to "improving the knowledge of individual employees and improving the capabilities of group learning by emphasizing a collaborative approach to knowledge acquisition".

In spite of this converging evidence for the multidimensionality of the organizational learning, the present study focused on unidimensionality approach for the following reasons. Firstly, unidimensional approach is opted for in this study because multidimensional constructs are associated with item redundancy, i.e., where the items within a scale are simply repeated versions of one another (Barrett & Paltiel, 1996). Secondly, from a questionnaire administration point-of-view,

organizational learning is modelled as a unidimensional construct because it would reduce the fatigue, frustration, and boredom associated with answering lengthy survey (Robins, Hendin, & Trzesniewski, 2001). Finally, organizational learning has been widely used and successfully validated as a unidimensional construct across a number of empirical studies in the field of entrepreneurship (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012; Levitt & March, 1988).

As noted earlier, researchers have examined a number of organizational learning dimensions. For example, Huber (1991), Dale (1994), as well as Nevis *et al.* (1997) were one of the earliest attempts to hypothesize and identified four dimensions of organizational learning: (1) knowledge acquisition, (2) information distribution, (3) information interpretation, and (4) organizational memory. The definition of each of these dimensions as provided by Huber (1991) is as follows:

> *Knowledge acquisition* is the process by which knowledge is obtained. *Information distribution* is the process by which information from different sources is shared and thereby leads to new information or understanding. *Information interpretation* is the process by which distributed information is given one or more commonly understood interpretations. *Organizational memory* is the means by which knowledge is stored for future use

Following Huber (1991), Dale (1994), as well as Nevis *et al.* (1997), several attempts have been made by researchers to develop and validate measures of organizational learning. For example, Pace, Regan, Miller, and Dunn (1998)

developed a seventeen items instrument called the Organizational Learning Survey (OLS) to measure perceptions of the respondents towards the organizational learning. The OLS was tested, along with other measurement (i.e., goal achievement inventory), on a sample of 168 students who enrolled in educational courses at a large university in Australia between July and November, 1995. The factor analysis using varimax rotation suggests three underlying dimensions of perceived organizational learning: (1) learning outcomes, (2) individual support, and (3) group support.

In the same vein, Templeton, Lewis, and Snyder (2002) after conducting a comprehensive review of literature developed and validated a measure of organizational learning. Templeton *et al.* (2002) performed exploratory principal components factor analysis in order to extract underlying factors of organizational learning. The exploratory factor analysis yielded eight dimensions of organizational learning, namely: (1) awareness, which reflects the degree to which members of an organization are aware of the sources of key organizational information and its application in solving problems (2) communication, which is defined as the degree to which communication flows among members of a particular organization (3) performance assessment, which reflects "the comparison of process and outcome related performance to organizational goals" (4) intellectual cultivation, defined as the degree to which development of experience, expertise, and skill exist among organizational members (5) environmental adaptability, defined as the extent to which members of the organization utilize technology-related devises for communication in responses to environmental change (6) social learning, defined as

the extent to which members of an organization learn through social media about what concerns their organizations (7) intellectual capital management, defined as the degree to which an organization manages knowledge, skill, as well as other intellectual capital for sustained competitive advantage, and (8) organizational grafting, which refers to the degree to which "organization emphasis on the knowledge, practices, and internal capabilities of other organizations" (Templeton *et al.*, 2002, p. 198).

Tippins and Sohi (2003b) in their study involving 271 manufacturing firms developed and validated organizational learning, called ORGLEARN. In order to confirm the dimensionality of the organizational learning scale, a confirmatory factor analysis (CFA) was performed. This analysis suggested that the organizational learning can be represented by five dimensions: information acquisition, information dissemination, shared interpretation, declarative memory, and procedural memory, which are somehow similar to Huber's (1991) conceptualization of organizational learning.

Besides the aforementioned studies, several other researchers have conducted the studies to develop and validate measures of organizational learning. Some of these include López, Peón, and Ordás (2004) who developed and validated a 25-item organizational learning scale with five dimensions, namely: external acquisition of knowledge, internal acquisition of knowledge, knowledge distribution, knowledge interpretation, and organizational memory. A similar scale with same dimensions

was also developed by Lopez *et al.* (2005). Table 3.2 summarizes empirical studies on the relationship between organizational learning and firm performance.

Table 3.2

Summary of Empirical Studies on the relationship between Organizational Learning and Firm performance

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Ramayah, T., Sulaiman, M., Jantan, M., & Ching, N. G. (2004)	To examine the mediating role of Proprietary Technology, on the relationship between organizational learning and Manufacturing Performance.	Internal learning (IL) External Learning (EL)	Proprietary Technology, (PT) as a mediators	Manufacturing performance(MP)	A sample of 68 manager in manufacturing firms in Northern peninsular Malaysia	IL-->PT (Yes) EL-->PT (No) PT-->MP (Yes) OL --> PT--> MP (Yes)
Lee, H. H., and Lee, C. H. (2014)	To examine the mediating role of organizational learning on the relationship between total quality management and business Performance.	Proactiveness (PRO) Innovativeness (INV) Risk-taking (RSK)	Proprietary Technology, (PT) as a mediators	Manufacturing performance(MF)	A sample of 68 manager in manufacturing firms in Northern peninsular Malaysia	IL-->PT (Yes) EL-->PT (No) PT-->MP (Yes) L X MP--> PT (Yes)
Jiang, X., & Li, Y. (2008)	To examine the mediating role of organizational learning on the relationship between total quality management and business Performance.	Organizational Learning (OL)	Contractual Alliance, (CA) Alliance scope (AS) as a moderator	Firms financial performance(FFP)	A sample of 127 German partnering firms.	OL-->FFP (Yes) CA X OL--.>FFP (Yes) AS X OL-->FFP (Yes)
Wu, C.-H., & Fang, K. (2010)	To examine the mediating role of organisation process focus on the relationship between organizational learning and project Performance.	Organisation process focus (OPF)	Organizational Learning (OL) as a mediators	Project performance(PP)	A sample of 196 Taiwanese companies, both manufacturing and service firms .	OPF-->OL (Yes) OL-->PP (Yes) OPF-->PP (Yes)

Table 3.2 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Alegre, J., Pla-Barber, J., Chiva, R., & Villar, C. (2012)	To examine the mediating role of Product innovation performance on the relationship between Organisational learning capability and Export intensity	Organisational learning capability, (OLC)	Product innovation performance (PIP) as a mediators	Export intensity(EI)	A sample of182 from Italian and Spanish ceramic tile producer .	OLC->EI (Yes) OLC--> PIP--> EI (Yes)
Li, Y., Wang, L., & Liu, Y. (2011)	To examine the moderating effect of social ties on the relationship between Organisational learning, product quality and performance	Exploitation learning (EL) Exploration learning (EXP)	Product quality(PQ) Financial ties (FT) and Government ties (GT) as a moderators	Financial performance(FFF)	A sample of 143 manager in manufacturing firms in Northern peninsular Malaysia	EL-->FFF (Yes) EXP-->FFF (Yes) EL-->PQ (Yes) EXP --> PQ (Yes) PQ-->FFF(Yes) EL X GT--> FFF(Yes) EXP X GT-->FFF(Yes) EL X FT-->FFF(Yes) EXP X FT-->FFF (Yes)
Chaston, I., Badger, B., Mangles, T., & Sadler-Smith, E. (2001).	To examine the moderating effect of social ties on the relationship between Organisational learning, product quality and performance	Exploitation learning (EL) Exploration learning (EXP)	Product quality(PQ) Financial ties (FT) and Government ties (GT) as a moderators	Financial performance(FFF)	A sample of 143 manager in manufacturing firms in Northern peninsular malaysia	EL-->FFF (Yes) EXP-->FFF (Yes) EL-->PQ (Yes) EXP --> PQ (Yes) PQ-->FFF(Yes) EL X GT--> FFF(Yes) EXP X GT-->FFF(Yes) EL X FT-->FFF(Yes) EXP X FT-->FFF (Yes)

Table 3.2 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Michna, A. (2009)	To examine the relationship between organizational learning and SME performance .	Organizational learning (OL)		SMEs business performance SBM)	A sample of 121entreprises in Poland	OL --> SBP (Yes)
Battor, M.and Battour, M.(2013)	To examine the mediating role of organizational learning on the relationship between customer relationships management and Performance.	learning orientation (LO)	Customer relationships management (CRM) as a mediators	Performance(P)	A sample of 180 manager directors in FAME database from UK companies	CRM--> P (Yes) LO-->P (NO) LO-->CRM (Yes)
Kuo, T., H.( )	To examine the relationship between human resource management, organizational learning organizational innovation, knowledge management capability and organizational performance.	human resource management (HRM) organizational learning (OL) organizational innovation, (OI) knowledge management capability (KMC)		Organizational performance(OP)	A sample of 208 electronic manufacturing companies in Taiwan.	HRM-->OL (Yes) HRM-->OL (Yes) HRM-->OP (Yes) HRM --> OP (NO) OL-->OI( ) OL--> KMC( ) OL -->OP(Yes) OI-->KMC(Yes) OI -->OP (Yes) KMC -->CFOP (Yes)
Wang, Y.-L., & Ellinger, A. D. (2011).	To examine the relationship between Organizational learning Perception of external environment and innovation performance	Perception of research and development (PRD)	Organizational learning (OL)	Individual-level innovation performances(ILIP) organizational-level innovation performance(OLIP)	A sample of 268 senior R&D companies in USA	PRD-->OL (Yes) OL-->ILIP (Yes) OL-->OLIP (Yes) ILOP --> OLIP (Yes) OLIP-->ILOP(Yes)

Table 3.2 (Cont'd)

Author (s)	Objectives	Predictors (IV)	Other variables	Performance indicator	Sample	Findings
Lopez, S. P., Peón, J. M. M., & Ordás, C. J. V. (2005)	To examine the relationship between organizational learning and business performance.	Organizational learning(OL)		Innovation competitiveness (IC) Economic financial result (EFR)	A sample of 195 industry and service sector in Spain.	OL-->IC (Yes) OL-->EFR (Yes) IC-->EFR (Yes)
Ho, L.-A. (2008).	To examine the relationships among self-directed learning, organizational learning knowledge management capability and organizational performance	Self-directed learning (SDL) Organizational learning(OL) knowledge management capability (KMC		Organizational performance (OP)	A sample of 236 technological companies in Taiwan.	SDL-->OL (Yes) SDL--> KMC (Yes) SDL--> OP (Yes) OL--> KM(Yes) OL-->OP (Yes) KM--> OP(Yes)
Lin, C.-Y., & Kuo, T.-H. (2007)..	To examine mediate effect of learning and knowledge on organizational performance	human resource management (HRM), organizational learning (OL), knowledge management capability (KMC)		Organizational performance (OP)	Anonymous	HRM-->OL (Yes) HRM--> KMC (Yes) HRM--> OP (NO) OL--> KMC(Yes) OL-->OP (Yes) KM--> OP(Yes)
Khandekar, A., & Sharma, A. (2006	To examine the relationship between organizational learning and performance	organizational learning (OL).		Organizational performance (OP)	A sample of 100 senior manager base on 3 global firm operating in national capital region India	OL-->OP (Yes)

3.5 Total Quality Management

Total Quality Management (TQM) traces its origins when the Union of Japanese Scientists and Engineers formed a committee of scholars, engineers, and government officials in 1949, aimed at improving Japanese productivity, and enhancing their quality of life following the end of World War II (Powell, 1995). Philip B. Crosby, W. Edwards Deming and Joseph M. Juran are often credited with providing insights toward understanding the underlying philosophy, principles, and practices of TQM (Anderson, Rungtusanatham, & Schroeder, 1994; Bryan, 1996; Mitra, 2008).

In today's globalized and competitive environment, adoption of the total quality management practices is widely recognized as an indispensable strategy for the survival and success of organizations (Abdi, Awan, & Bhatti, 2008; Manal, Joo, & Shouming, 2013; Santos-Vijande & Alvarez-Gonzalez, 2007). Total Quality Management (TQM) is defined by Dahlgaard, Kristensen, and Kanji (2008) as "a corporate culture characterized by increased customer satisfaction through continuous improvements, in which all employees in the firm actively participate" (p.16). This conceptualization is of consistent with Miller's (1996) definition who also viewed total quality management as:

> "an ongoing process whereby top management takes whatever steps necessary to enable everyone in the organization in the course of performing all duties to establish and achieve standards which meet or exceed the needs and expectations of their customers, both external and internal" (p. 157).

Joseph, Rajendran, and Kamalanabhan (1999) also defined TQM as "an integrative management philosophy aimed at continuously improving the quality of products and processes to achieve customer satisfaction" (p. 2201). While there has been many conceptualization of TQM, the present study mainly adopts the definition provided by Dahlgaard *et al.* (2008) as because a number of authors (Alemu Moges, Fentahun Moges, Petri, Josu, & Daryl, 2014; Azizan, 2010; Louise, Tony, & Jens, 2013) have endorsed this conceptual definition as it adequately represents the core of what total quality management practices mean (Hackman & Wageman, 1995).

Furthermore, from methodological perspective, a comprehensive review of literature suggests several factors as critical for measuring and successful implementation of TQM (Porter & Parker, 1993). For example, Saraph, Benson, and Schroeder (1989) developed and validated an empirically based measures for critical factors of quality management. Specifically, they developed eight critical factors as the underlying measure of TQM implementation: (1) management leadership; (2) role of quality department; (3) training; (4) product/service design; (5) supplier quality management; (6) process management; (7) quality data and reporting; and (8) employee relations (Saraph *et al.*, 1989).

The explanations of these eight critical factors are further provided by Saraph *et al.* (1989) as follows. First, management leadership reflects that top management must be responsible for quality assurance and also be involved in quality improvement process. Second, role of quality department reflects that quality

department should have access to top management, involve quality staff for consultation, and liaise with other departments in order to perform effectively. Third, training reflects that all employees must be provided with statistical control training, and other quality-related training for successful implementation of TQM. Fourth, product/service design entails that all affected departments should be involved in the design and review of product and/service, and emphasis should also be productivity and clarity of specifications. Fifth, supplier quality management reflects collaboration with fewer dependable suppliers, reliance on supplier process control, and organizational purchasing policy should emphasize on quality, instead of price. Sixth, process management involves application of statistical process control, preventative maintenance, employee self-inspection, as well as automated testing. Seventh, quality data and reporting entails using of quality cost data, quality performance appraisal of managers and employees, timely quality measurement, and providing feedback of quality data to both employees and managers for problem solving. Finally, employee relation reflects practical involvement of employees in quality decisions, recognizing employees for superior quality performance, handling quality issues effectively, and providing an on-going quality awareness to all employees.

In another study, Rao, Solis, and Raghunathan (1999) extended the work of Saraph *et al.* (1989) by developing and validating an internationally based measurements for key dimensions of quality management. Based on a study of manufacturing companies from five countries (i.e., the US, India, China, Mexico and

Taiwan), Rao *et al.* (1999) developed an empirical measures of quality management, consisting of thirteen dimensions in terms of managerial perceptions. The thirteen key dimensions identified were: top management support, strategic quality planning, quality information availability, quality information usage, employee training, employee involvement, product/process design, supplier quality, customer orientation, quality citizenship, benchmarking, internal quality, and external quality results (for review, see Rao *et al.*, 1999). However, of these thirteen key dimensions, four dimensions, namely: top management support, employee training, product/process design, and supplier quality were similar to those identified in the work of Saraph *et al.* (1989). In the same vein, Zhihai, Ab, and Jacob (2000) identified eleven critical factors of quality management in their study, which was based on a sample of 212 Chinese manufacturing companies. These eleven critical factors of quality management identified in the work of Zhihai *et al.* (2000) include: leadership; supplier quality management; vision and plant statement; evaluation; process control and improvement; product design; quality system improvement; employee participation; recognition and reward; education and training; and customer focus. A comparison between this measure of quality management and that of the work of Saraph *et al.* (1989) indicated that role of quality department in the Saraph et al. measure was excluded since every department in any organization are required to partake in quality management implementation.

In another study, Vanichchinchai and Igel's (2011) developed and validated Total Quality Management Practice (TQMP) measure in Thailand's automotive

industry. This measure is a multidimensional in nature, which comprised of four dimensions, namely: customer focus, commitment and strategy, human resource management, and information analysis. This dimension highlights improving customer satisfaction as an important element in implementing TQM. Customer focus refers to the extent to which an organization continuously satisfies the needs and expectations of their customers (Zhang, 1999). One necessary condition for building a strong competitive position is creating a customer relationship, which help firms to understand whether the needs and expectations of their customers are met, as well as to receive feedback on how well those needs are being met (Zhihai *et al.*, 2000).

Commitment and strategy relates to the need for top level managers to strongly encourage employee involvement in quality management, as well as to have a clear vision, mission, policies, long term objectives and plan for improving quality (Vanichchinchai & Igel, 2011). Human resource management has to do with providing training and training resources to employees, as well as evaluating and implementing employees' suggestions related to quality and supply chain management by firm (Vanichchinchai & Igel, 2011). Information analysis is concerned with making sure that information is shared among functional business departments, such as production department, marketing department and finance department in order to improve quality and process management (Vanichchinchai & Igel, 2011).

While other measures of total quality management practices are equally important, yet the TQMP framework developed by Vanichchinchai and Igel (2011) will be adopted as a basis for measuring total quality management practices in the current study because it has been successfully used in several empirical studies (e.g., Assadej, 2014; Vanichchinchai, 2012). In addition, Vanichchinchai and Igel's (2011) measure of TQMP is consistent with most prestigious criteria for organizational quality assessment that has been widely accepted by TQM experts, including Malcolm Baldrige National Quality Award (MBNQA), European Foundation for Quality Management (EFQM), and Malaysian Quality Management Excellence Award (QMEA).

3.6 Competitive Intensity

Within the context of entrepreneurship literature, increasing research attention has been paid to competitive intensity (Jermias, 2008; Lahiri, 2013; Mahapatra, Das, & Narasimhan, 2012). Auh and Menguc (2005b) viewed competitive intensity as "as a situation where competition is fierce due to the number of competitors in the market and the lack of potential opportunities for further growth" (p.1654). Competitive intensity has been found to be associated with some organizational outcomes. However, there are two streams of research regarding the effect of competitive intensity on a firm's performance. The first stream of research suggests that competitive intensity can work to the advantage of a firm. The second stream of research is that, competitive intensity can impose loose bounds on a firm's performance (Montez, Ruiz-Aliseda, & Ryall, 2013).

Specifically, in a cross-sectional study of 247 firms drawn from Australian database of firms, O'Cass and Weerawardena (2010) showed that perceived industry competitive intensity has a positive and significant effect on firm brand performance. Relatedly, Sengül, Alpkan, and Eren (2015) found that perceived intensity of competition increases the quality performance in the context of Turkish electric industry. In a recent study, Fuchs and Köstner (2016) argued that competitive intensity is expected to be positively related to export venture performance, because in more competitive environments, firms would be making effort to adapt, leading them to better performance.

Besides the works of O'Cass and Weerawardena (2010), Sengül *et al.* (2015), and Fuchs and Köstner (2016), there are also other empirical studies (e.g., Giroud & Mueller, 2010; Wang, Jou, Chang, & Wu, 2014) that have suggested a positive impact of competitive intensity on firm performance. Particularly, these other empirical studies showed that competition could lead to better monitoring quality and managerial incentives; therefore, it can alleviate management inefficiency and improve organizational performance.

In contrast, a study by Eibe Sørensen (2009) suggested that higher levels of competitive intensity within an industry would continually works to lower firm-level performance. Beiner, Schmid, and Wanzenried (2011) also found evidence suggesting that firm values are negatively influenced by higher levels of competitive within an industry. Furthermore, researchers (e.g., Ghosal, 2002; Peress, 2010; Slade,

2004) have documented that competitive intensity and firm performance are negatively related.

It has been noted earlier that research examining relationships among EO, OL, TQM, and SME performance has shown mixed results. One explanation for the mixed results that has not been fully explored is the potential moderating role of competitive intensity. Hence, it is argued in this study that competitive intensity can also be an important factor in moderating the effects of entrepreneurial orientation, organizational learning, and total quality management on SME performance. The postulation that competitive intensity will moderate the relationships among EO, OL, TQM, and SME performance is based on extant empirical research, and logical reasoning as follows.

Firstly, research suggests that external environment can affect the level of success achieved by firms that implement and/or practice EO, TQM, and OL (Liu, Luo, & Huang, 2011; Pratono & Mahmood, 2015; Wang *et al.*, 2012); and competitive intensity is a widely recognized dimension of the external environment (Jaworski & Kohli, 1993). Accordingly, competitive intensity require firms to be up and doing in implementing and/or practicing EO, TQM, and OL in order to achieve better performance. Secondly, it is logical to argue that EO, TQM, and OL may be a particularly effective organizational practice among firms operating in highly competitive environments.

Researchers have developed and validated the measures of external business environment in a bewildering variety of ways and with respect to its underlying dimensions (Dess & Beard, 1984; Khandwalla, 1977; Lin & Germain, 2003; Meznar & Nigh, 1995; Miller, 1987; Miller & Friesen, 1982; Sharfman & Dean, 1991; Westhead, Wright, & Ucbasaran, 2004). In particular, Miller and Friesen (1982) developed and validated a measure of external business environment with respect to three key dimensions: environmental dynamism, environmental heterogeneity, and environmental hostility. In developing this measure of external business environment, a total number of 52 business firms from varied industries (e.g., retailing, furniture manufacturing, broadcasting, chemicals, and publishing) were included in the study. Additionally, the divisional vice president or higher were the key informants in these firms. Self-administered questionnaires were used to obtained responses from the participants, in which they were asked to indicate how rapid or intense environmental dynamism, environmental heterogeneity, and environmental hostility are in their main industry.

In another study, Dess and Beard (1984) assessed organizational environment by both objective. A sample of 52 manufacturing industries from U.S. was randomly selected for this study. The objective measures of the environment was typically based archival data and schema, which were meant to record information regarding organizational environment, as reflected by its three underlying dimensions, namely: munificence, complexity, and dynamism. Although Dess and Beard (1984) have substantially advanced the study of the organizational environment in the field of strategic management by operationalizing and measuring organizational environment

using a variety of archival data. However, a number of theoretical issues raised were raised by researchers.

For example, the study by Dess and Beard (1984) failed to suggest how each dimensions of organizational environment might actually be measured. In an attempt to address the limitation of Dess and Beard (1984) measure of organizational environment, Sharfman and Dean (1991) developed a revised measure of external business environment in a study conducted among 104 senior managers from 25 firms representing 16 different Standard Industrial Classification (SIC) codes. In developing this revised measure of external business environment, data were collected using a structured interview protocol where the participants were asked to assess their perceptions of competitive threat, market turbulence, and technological turbulence, among others.

Meanwhile Westhead *et al.* (2004) conducted a study involving 377 independent limited liability unquoted companies in the UK to develop a measure of environmental turbulence. The authors utilized a summated technique to measure environmental turbulence construct with eight items. Specifically, for each of the 377 valid respondents, Westhead et al. (2004) calculated environmental turbulence scores by adding the raw scores with regard to the eight items. The raw scores were then standardized by dividing the summated environmental turbulence value by eight items. For example, if the raw scores for the first observation were 2, 3, 4, 4, 2, 5, 5, 3 on a five point scale. The environmental turbulence scores can be obtained as

follows: 2 + 3 + 4 + 4 + 2 + 5 + 5 + 3/8 (i.e., the number of items). This will give us the environmental turbulence score of 3.5 for the first observation.

In sum, given that varieties of measures have been developed by researchers to assess external business environments; there is virtually lack of clarity and disagreement as to the specific measure of external business environment. As noted by Volberda and Van Bruggen (1997), this lack of clarity and disagreement reflects both the diversity of orientations in the study of external business environments and the different approaches that have been employed to measure it.

3.7 Underpinning Theories

The moderating role of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance can be explained from various perspectives. Hence, main underpinning theories that will be used to explain the conceptual framework in the present study are: resource based theory, and contingency theory.

3.7.1 Resource Based Theory

The resource-based theory is perhaps the most influential theoretical perspective for understanding strategic management, particularly the field of entrepreneurship (Barney, Wright, & Ketchen, 2001; Barney, Ketchen, & Wright, 2011). This theory was initially introduced by Wernerfelt (1984), who argued that the success of every firm or organization is largely determined by its internal resources. The internal resources are defined here as “stocks of available factors that are owned or controlled

by the firm" (Amit & Schoemaker, 1993, p. 35). Additionally, these internal resources may include firm's physical and intangible assets, of which the intangible assets, reflected by organizational capabilities can be further classified into three categories: (1) ability to perform the basic functional activities, (2) dynamic improvements, and (3) metaphysical strategic insights (Collis, 1994, 1996).

Ability to perform the basic functional activities refers to the organizational capabilities that "are often developed in functional areas (e.g., brand management in marketing) or by combining physical, human, and technological resources at the corporate level (Amit & Schoemaker, 1993, p. 35). Dynamic improvement capabilities relates to "highly reliable service, repeated process or product innovations, manufacturing flexibility, responsiveness to market trends, and short product development cycles (Amit & Schoemaker, 1993, p. 35). On the other hand, metaphysical strategic insights refer to capabilities that 'enable an organization to conceive, choose and implement strategies (Barney, 1992, p. 44).

Resource-based theory postulated that a firm can achieve sustained competitive advantage and superior performance by formulating and implementing strategy that generates increased value for the firm relative to its competitors; and sustainability is said to be achieved if the increased value remains when competitors stop trying to copy or imitate the competitive advantage (Barney, 1991, 2000; Barney & Clark, 2007; Wernerfelt, 1984).

A comprehensive review of literature indicates that several scholars have employed the resource-based perspective as their theoretical underpinning for explaining firm performance and competitive advantage (Armstrong & Shimizu, 2007; Ketchen, Boyd, & Bergh, 2008; Newbert, 2007). For example, drawing on Barney's (1991) resource-based theory, Lisboa, Skarmeas, and Lages (2011) examined the mechanisms through which entrepreneurial orientation influences export markets performance based on the final sample of 254 small and medium-sized manufacturing firms in Portugal. Lisboa *et al.* (2011) argued that "in order to innovate, adapt to its changing market environment, and achieve competitive advantage, a firm needs to continuously develop, integrate, and reconfigure its skills and abilities through organizational learning capabilities, which represent one of the internal resources of an organization (p. 1275).

Similarly, Ferreira and Azevedo (2007a) employed Barney's (1991) resource-based theory to investigate the relationship between entrepreneurial orientation and growth among 168 small manufacturing firm in Portugal. They argued that entrepreneurial orientation is one of the key strategic resources or intangible resources that seem to be pertinent for firm's sustained competitive advantage and growth. Along these same lines, Smith, Vasudevan, and Tanniru (1996) in their model that is designed to integrate organizational learning into the resource-based theory, argued that organizational learning is a strategic resource and capability, which developed over time, and directed towards the achievement of sustained competitive advantage

Furthermore, besides the aforementioned empirical studies, resource-based theory has also demonstrated sound predictive capacity across a variety of life situations, including the relationships between: market orientation and firm performance (Hult & Ketchen, 2001; Menguc & Auh, 2006), technological competence and firm performance (De Carolis, 2003; Tippins & Sohi, 2003b), board structure and firm performance (Arosa, Iturralde, & Maseda, 2013), dynamic capabilities and firm performance (Li & Liu, 2014; Lin & Wu, 2014; Wilden *et al.*, 2013), as well as social capital and firm performance, among others (Roxas & Chadee, 2011).

Given the empirical support for the resource-based theory across various organizational settings, the present study employs this perspective in explaining the links between the key independent variables (entrepreneurial orientation, organizational learning and total quality management) and the criterion variable (i.e, SME performance).

3.7.2 Contingency Theory

Contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) is a universal theoretical underpinning that can be applied across a variety of life situations, including performance management (Wadongo & Abdel-Kader, 2014), conflict management (Pang, Jin, & Cameron, 2010), project management (Sauser, Reilly, & Shenhar, 2009; Zmud, 2002), and risk management, among others (Gordon, Loeb, & Tseng, 2009; Hossein Nezhad Nedaei, Abdul Rasid, Sofian, Basiruddin, & Amanollah Nejad Kalkhouran, 2015; Woods, 2009). The contingency

theory postulates that for every organization, there exists multiple strategic choices that can be implemented in order to achieve sustained competitive advantage. Therefore, an organization could choose the best out of many available choices that are dependent on situation or environment in which the organization operates (Schuler, 2000).

A closer look at contingency theory can help in understanding the moderating role of competitive intensity on the relationships between entrepreneurial orientation, organizational learning and total quality management and SME performance. To explain the relationships among competitive intensity, entrepreneurial orientation, organizational learning, total quality management and SME performance, the present study follows Donaldson's, (2001) explanation of contingency theory. According to Donaldson (2001), the relationship between an organizational factors and organizational performance largely depends upon one or more situational variables, which are also known as contingencies (Donaldson, 2001). A contingency here refers to "any variable that moderates the effect of an organizational characteristic on organizational performance" (Donaldson, 2001, p. 7). Hence, in the present study, it can be argued that the relationships between entrepreneurial orientation, organizational learning and total quality management and SME performance depend upon the intensity of competition in the environment in which the organization operates. Given that contingency perspective is a universal theoretical underpinning that can be applied across a variety of life situations, the present study will employ this perspective in explaining the moderating effect of competitive intensity (i.e, a

contingent variable) on the relationship between entrepreneurial orientation, organizational learning total quality management and SME performance.

3.8 Hypotheses Development

3.8.1 Entrepreneurial orientation and SME performance

Entrepreneurial orientation has been defined as strategies, processes, and behaviours of firms that are reflected by proactiveness, innovativeness, risk-taking, aggressiveness, and autonomy (Casillas & Moreno, 2010; Miller, 1983). As noted earlier several dimensions of entrepreneurial orientation are described in the literature. Extant researches have shown that firms that are seeking for sustainable competitive advantage need to have strong entrepreneurial orientation that creates value added services to customers (Lee & Chu, 2011; Pett & Wolff, 2016). Entrepreneurial orientation is the most consistent predictor of firm performance. Firms that have a strong entrepreneurial orientation are more likely to out-perform other firms that have weak entrepreneurial orientation. More so, firms that are proactive, innovative, aggressive, as well as those that have autonomy and willing to take risk generate higher market share, profitability and sales growth relative to their competitors (Barney, 1991, 2000; Lumpkin & Dess, 2001).

The literature supports a positive entrepreneurial orientation–business performance relationship. For example, Li, Huang, and Tsai (2009) found a statistically significant positive relationship between entrepreneurial orientation and firm performance in a research of a sample of 165 manufacturing, high-tech, and service firms in Taiwan. Jalali, Jaafar, and Ramayah (2014) also found a positive

association between entrepreneurial orientation and performance in a research sample of 16 SMEs in the manufacturing industry in Iran. Zhang and Zhang (2012) have established a significant positive relationship between entrepreneurial orientation and business performance in their study of SMEs in the northeastern China. Rauch *et al.* (2009) reported a moderately large correlation of 0.242 between entrepreneurial orientation and business performance in their meta-analysis of 51 studies.

Recently, several empirical studies have confirmed the positive relationship between entrepreneurial orientation and business performance, across a variety of research contexts (e.g.,Deligianni, Dimitratos, Petrou, & Aharoni, 2016; Ibrahim & Shariff, 2016; Linton & Kask, 2017; Maroofi, 2017; Pett & Wolff, 2016). Consistent with the aforementioned empirical studies, a positive relationship between entrepreneurial orientation and SME performance is also expected in the present study. Hence, the following hypothesis is postulated:

H1: There will be a positive relationship between entrepreneurial orientation and SME performance.

3.8.2 TQM implementation and SME performance

A number of authors have examined the relationships between total quality management practices and organizational performance (Akgün, Ince, Imamoglu, Keskin, & Kocoglu, 2013; Christos & Evangelos, 2010; Demirbag, Koh, Tatoglu, & Zaim, 2006; Hackman & Wageman, 1995; Powell, 1995; Shaukat, Jen Li, & Rao,

2000; Valmohammadi, 2011; Vinod, Franck, Danuta de, & Uma, 2009). Specifically, Powell (1995) in a three phases empirical research concluded that firms adopting total quality management has a potential to achieve sustainable competitive advantage. In a study involving 141 SME operating in the Turkey textile industry, Demirbag *et al.* (2006) demonstrated that TQM implementation has a significant and positive relationship with SME' performance.

In the same vein, Vinod *et al.* (2009) examined the relationships between TQM implementation and different indicators of firm performance, including employee relations, operating procedures, customer satisfaction, and increased profitability. As expected, the results confirmed the hypothesized positive relationships between TQM implementation and all investigated dimensions of firm performance. Christos and Evangelos (2010) also examined the relationships between TQM and organizational performance, by utilizing a sample of 370 ISO 9001:2000 certified Greek companies. They showed that a number of TQM factors, including quality practices of top management, employee involvement, customer focus, process and data quality management, and quality tools and techniques improved organizational performance. Akgün et al's (2013) study among 193 firms in Turkey demonstrated that TQM had significant and positive effects on firm's financial performance. Recently, besides the aforementioned empirical studies, there are also several studies that established significant and positive relationships between total quality management practices and firm's performance (e.g., Al-Dhaafri, Al-Swidi, & Yusoff, 2016; Sweis, Ahmad, Al-Dweik, Alawneh, & Hammad, 2016; Yusr, 2016). Consistent with above discussion, a positive relationship between TQM

and SME performance is also expected in the present study. Accordingly, the following hypothesis is advanced:

H2: There will be a positive relationship between TQM implementation and SME performance.

3.8.3 Organizational learning and SME performance

Prior studies across different research context have examined the relationship between organizational learning and a wide range of performance indicators (e.g., Lee & Lee, 2015; Li, Wang*, et al.*, 2011; Moustafa & Mohamed, 2013; Öztürk *et al.*, 2016; Pett & Wolff, 2016; Ramayah *et al.*, 2004; Swee *et al.*, 2012; Tsung-Hsien, 2011; Ugurlu & Kurt, 2016; Wu & Fang, 2010; Zgrzywa-Ziemak, 2015; Zhou *et al.*, 2015). In particular, Ramayah *et al.* (2004) examined the mediating role of proprietary technology on the relationship between organizational learning and manufacturing performance. Sixty eight managers in manufacturing firms in Northern peninsular Malaysia participated in their study. Ramayah *et al.* (2004) found that organizational learning dimensions (i.e., internal learning and external learning) were significantly and positively related with manufacturing performance. In addition, the study showed that proprietary technology mediated the relationship between organizational learning and manufacturing performance. Wu and Fang (2010) examined the mediating role of organization process focus on the relationship between organizational learning and project performance among 196 Taiwanese manufacturing and service firms. Similar to Ramayah *et al.* (2004), they found a

significant and positive relationship between organizational learning and project performance. Furthermore, organization process focus was found to mediate the relationship between organizational learning and project performance.

Li, Wang*, et al.* (2011) examined whether social ties moderates the relationships among organizational learning, product quality and performance. A cross-sectional research design was employed among 143 managers in manufacturing firms in Northern peninsular Malaysia. The study established significant and positive relationships among organizational learning, product quality and performance. Furthermore, the study showed that these relationships were moderated by social ties

.

Along similar lines, Öztürk *et al.* (2016) sought to better understand the effects of organizational learning on performance of Turkish architectural design firms. With a sample of 165 architectural design firms registered with the Turkish Chamber of Architects, they found that that organizational learning positively affects the performance of Turkish architectural design firms. Relatedly, Zhou *et al.* (2015) theorized that organizational learning has a significant effect firm performance. The sample of 287 listed Chinese companies in their study was organized into financial service, computer and data processing, engineering, chemicals, electronic, machinery, instruments, and management services. The authors hypothesized and found significant positive relationship between organizational learning and firm performance.

Lee and Lee (2015) also offered empirical evidence of the relationship between organizational learning and firm's business performance. With a sample of 434 non-life insurance companies in Taiwan, Lee and Lee (2015) found that organizational learning significantly predicted firm's business performance. They further established that the relationship between organizational learning and business performance is mediated by total quality management.

Additionally, theory and empirical evidence also suggest that firms create competitive advantage by assembling and integrating valued resources, such as assets, knowledge, capabilities, as well as organizational processes in order to create organizational capabilities (Barney, 1991, 2000; Bharadwaj, 2000). In other words, evidence suggests that organizational learning serves as a source of increased business performance and sustained competitive advantage (Khandekar & Sharma, 2006; Lei, Slocum, & Pitts, 2000). In Malaysian context, Lai Wan and Kwang Sing (2014) suggested that organizational performance of SME could be enhanced through organizational learning capability. They further argued that knowledge (e.g., organizational learning) is one of the important resources which derive sustained competitive advantage of organizations.

In a meta-analysis of 33 published work on the link between learning capability and organizational performance, Swee *et al.* (2012) argued that investing in building a learning capability was positively related to organizational performance. Specifically, their results suggest organizational learning capability has a stronger positive relationship with non-financial than that of financial performance

of business. Likewise, in a sample of 208 employees from electronic and technological companies in Taiwan, Tsung-Hsien (2011) investigate how organizational performance could be improved through organizational learning. It was found that organizational learning significantly and positively contributes to achieving organizational performance.

Moustafa and Mohamed (2013) also conducted a study to examine the links among customer relationships management, organizational learning, and performance in a sample of 180 managers in FAME database from UK companies . The findings showed that customer relationships management was significant predictors of business performance. Similarly, organizational learning was found to be significantly related with customer relationships management. On the contrary, no significant relationship was established between organizational learning, and performance. Therefore, the following hypothesis is advanced:

H3: There will be a positive relationship between organizational learning and SME performance.

3.8.4 Competitive Intensity as a Moderator

Given that competitive intensity is one of the underlying dimensions of external business environment, evidence supporting the role of competitive intensity as a moderator would be largely drawn from business environment literature. Past research suggests that competitive intensity plays a crucial role in determining organizational performance (Lahiri, 2013; Li, Lundholm*, et al.*, 2011; Lusch &

Laczniak, 1987; Ramaswamy, 2001; Wilden *et al.*, 2013). Specifically, Ramaswamy (2001) has contributed to the literature by investigating the moderating effect of competitive intensity on the relationship between ownership and performance of large manufacturing firms across both public and private sector in India. Results of their empirical analyses revealed that the relationship between ownership and performance is contingent upon the intensity of competition.

Additionally, Li, Lundholm*, et al.* (2011) showed that firm's future profitability and stock returns are negatively influenced by the increase in the level of competitive intensity. In a more recent study, Lahiri (2013) examined how the level of competitive intensity influences the relationship between firm resources and firm performance India. They established that the relationship between firm resources and firm performance is moderated by competitive intensity, such that the relationship is stronger when there is increase in the level of competitive intensity than when it decreases.

As noted earlier, results regarding the link between entrepreneurial orientation and firm performance were inconsistent (Covin & Slevin, 1989; Li, Huang*, et al.*, 2009; Wiklund & Shepherd, 2005). These contradictory findings reported in the literature have led many researchers (e.g, Jabeen & Mahmood, 2014; Kraus *et al.*, 2012; Li, Huang*, et al.*, 2009; Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005) to suggest incorporating some other organizational variables as moderator(s) on these relationship in order to shed light on these contradictory findings. In particular, Lumpkin and Dess (1996) in their in their contingency model,

proposed that environmental factors might explain how and when entrepreneurial orientation contributes to organizational performance.

Additionally, Wiklund and Shepherd (2005) in a study among 413 small firms in Sweden, suggested that incorporating a moderating variable of environmental characteristics (operationalized as environmental dynamism) might provide ample opportunities to gain a better understanding of the relationship between entrepreneurial orientation and small business performance. In line with contingency theory, Kraus *et al.* (2012) confirmed that the relationship between entrepreneurial orientation and SME business performance is moderated external environment, which was measured in terms of firms Chief Executive Officers' perception of market turbulence.

Previous studies have demonstrated the theoretical and methodological importance of including a moderating role of external business environment on the relationship between entrepreneurial orientation and business performance. However, most of these studies mainly focused on the other characteristics of external business environment, i.e., market turbulence, environmental dynamism, and technological turbulence (e.g., Kraus *et al.*, 2012; Wiklund & Shepherd, 2005), thereby paying less attention on other characteristics of firm's competitive intensity. Therefore, the following hypothesis is proposed.

H4: Competitive intensity moderates the positive relationship between entrepreneurial orientation and SME performance.

Theory and extant empirical studies also suggest that competitive intensity can moderate the relationship between total quality management implementation and SME performance (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977). Specifically, Contingency theory suggests that a firm's competitive intensity could be a potential moderator of the relationship between total quality management and SME performance. Such that when competitive intensity is high, the relationship between total quality management and SME performance would become stronger (more positive), whereas, when the competitive intensity is low, the relationship between total quality management and SME performance is weaken (Wang *et al.*, 2012). Furthermore, in today's highly uncertain business environment, quality improvement programmes and competitiveness are critical to organizational effectiveness. Consequently, when an organization's quality improvement programmes like TQM generates value for customers that is rare and difficult to imitate (Barney, 1991, 2000; Powell, 1995), it can be a source of sustainable competitive advantage which will allow firms to out-perform their competitors who pay lip service to the implementation of total quality management (Liao, Chang, Wu, & Katrichis, 2011). Therefore, the following hypothesis is advanced.

H5: Competitive intensity moderates the positive relationship between total quality management implementation and SME performance.

Past research suggests that external business environment moderates the link between organizational learning and organizational performance. For example, Hanvanich, Sivakumar, and Hult (2006) found that environmental condition (i.e., technological turbulence and market turbulence) moderated the relationships between learning, memory and organizational performance. Specifically, they showed that relationship between learning and organizational performance "is stronger in highly turbulent environments than in environments with low turbulence; in contrast, the strength of the relationship between organizational memory and organizational outcomes is usually weaker in highly turbulent environments than in environments with low turbulence" (p. 609). Similarly, Moorman and Miner (1997) confirmed that organizational memory enhanced organizational performance when there is low market turbulence, but had no effect firm's performance when there is high market turbulence. While some attempts have been made to in integrate past findings of the moderating effect of external business environment on the relationship between organizational learning and organizational performance. However, researchers have ignored the moderating effect of competitive intensity on the organizational learning and organizational performance. Therefore, based on the aforementioned empirical studies, the following hypothesis is formulated.

H6: Competitive intensity moderates the positive relationship between organizational learning and SME performance.

3.9 Research Model (Framework)

The research model represents the framework for the research. It should indicate the relationships between or among the variables. This model must be supported by the resource based theory and contingency theory as well.

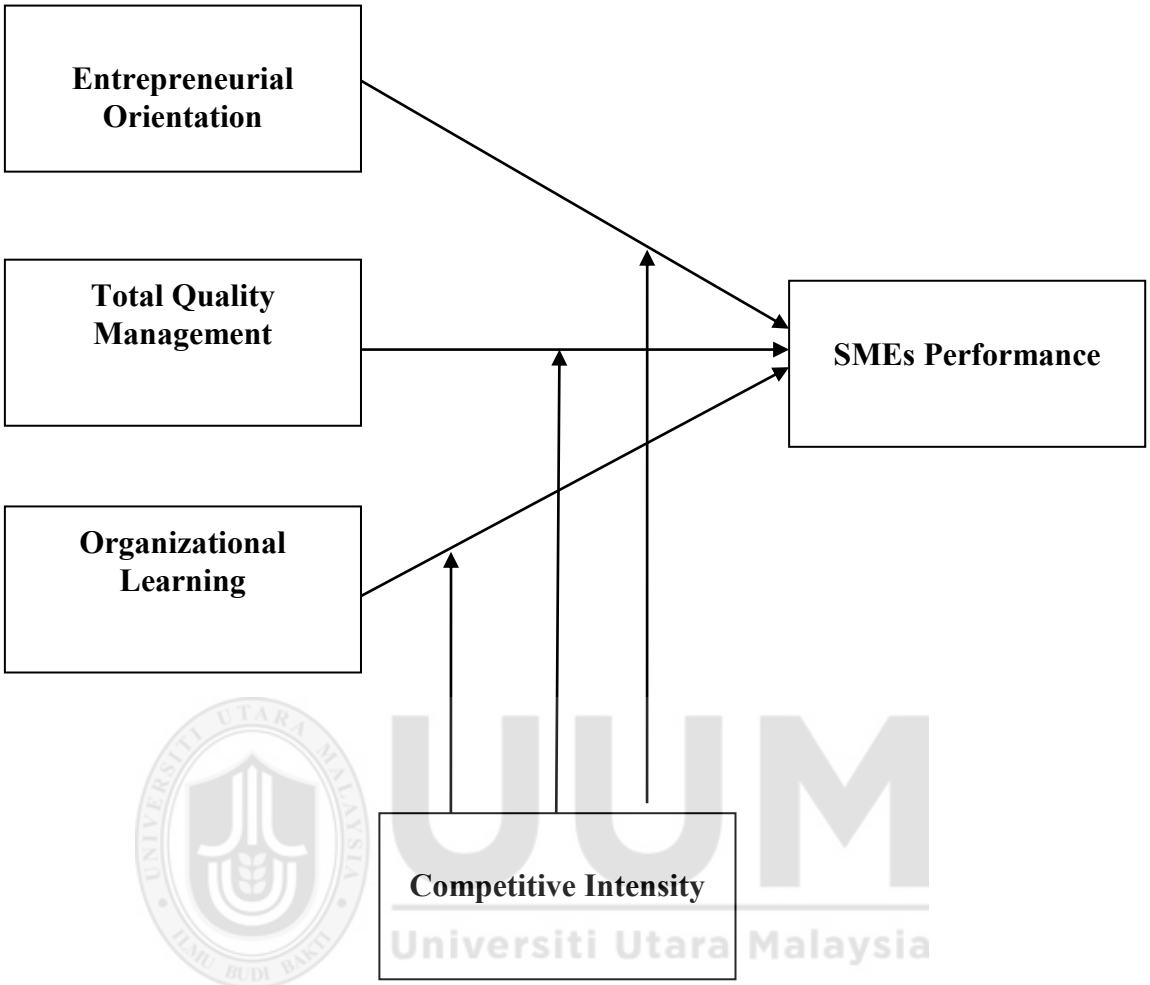

Figure 3.1
Conceptual Framework

Based on the prior empirical evidences and theoretical perspectives (i.e., resource based theory & contingency perspectives), a conceptual framework for this study was developed illustrating the moderating role of competitive intensity on the relationships between entrepreneurial orientation, organizational learning total quality management and SME performance as depicted in Figure 3.1. The entrepreneurial orientation, organizational learning, and total quality management are

the independent variables in this study, while the dependent variable is SME performance. In addition, the conceptual framework suggests competitive intensity as a potential moderator variable on the relationships between entrepreneurial orientation, organizational learning, total quality management and SME performance.

3.10 Chapter Summary

In summary, this chapter has critically reviewed the literature on organizational performance, entrepreneurial orientation, organizational learning, total quality management, and external business environment. Additionally, a review of the literature on measurement of each theoretical variable has been successfully carried out. As noted in this chapter, literature indicates that prior studies that investigated the relationships between entrepreneurial orientation, organizational learning, total quality management, and organizational performance have reported mixed findings (e.g., Covin & Slevin, 1989; Kober *et al.*, 2012; Li, Huang*, et al.*, 2009; Wiklund & Shepherd, 2005). Hence, this suggests the need for incorporating a moderator variable on the relationships. Accordingly, competitive intensity is proposed as a potential moderator to empirically ascertain whether strengthen the relationships between entrepreneurial orientation, organizational learning, total quality management, and SME performance.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

The purpose of the chapter is to describe the research methodology in the present study. Specifically, the chapter will cover the research design to be employed, description of population and sample, instruments and measurements to be adapted, how validity and reliability will be established, pre and pilot tests of the instruments, data collection procedures, assessment of non-response bias, and method of data analysis.

4.2 Research Design

There are various definitions of research design provided by different authors. For example, Burns and Grove (2003) viewed research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings" (p.195). Relatedly, research design has been defined by Parahoo (1997) as "a plan that describes how, when and where data are to be collected and analysed" (p.142). In the words of Polit, Beck, and Hungler (2001), research design refers to "the researcher's overall for answering the research question or testing the research hypothesis" (p.167). Research design can be classified in terms of whether it is quantitative or qualitative, cross-sectional or longitudinal, explanatory, descriptive, experimental or historical. Each type of these research designs can produce valuable scientific evidence if the study is designed and implemented systematically and carefully (Davis, 2003). Furthermore, it is important

to state that the appropriateness and type of research design to be employed depends largely on the specific research questions to be answered (Davis, 2003).

The purpose of the research is to investigate the relationships among entrepreneurial orientation, total quality management, organizational learning, and competitive intensity on the performance of SME. Towards this end, the present study employed a quantitative technique. The study also adopted survey research design in which data will be collected once during the whole study by means of questionnaire. The choice of quantitative and survey approach as the most appropriate type of research design is guided by several considerations.

Firstly, quantitative technique allows researchers to collect numerical data rather than data in words and concepts; analyze such data using statistically based method in order to draw valid conclusions (Aliaga & Gunderson, 2003). Secondly, quantitative technique enables researchers to understand the views of respondents concerning an organization and/or the behaviours of people within a social setting by mean of questionnaire administration (Punch, 2005; Sekaran & Bougie, 2010). Thirdly, survey research design was employed in the present study due to resource constraints of the researchers in terms of time and money (Burns & Burns, 2008; Hair, Money, Samouel, & Page, 2007; Sekaran & Bougie, 2010). Finally, survey research design is also considered the most appropriate in this study because it is a widely used by entrepreneurship researchers (e.g., Arend, 2014; Mehmet, Koh, Ekrem, & Selim, 2006; Šarūnas, Asta, Solveiga, & Margarita, 2013; Wang, 2008),

who are interested in collecting information about a large population that cannot be observed directly (Keeter, 2005; Tanur, 1982).

4.3 Population of Study

The population of the study can be defined as the entire elements under study (e.g., people, places, objects and cases) from which a researcher wishes to determine the required sample size and make some inferences (Burns & Burns, 2008; Cooper & Schindler, 2009; Sekaran & Bougie, 2010). In the present study, the population of interest will be the SMEs in the manufacturing sector of Nigeria. According to the National Bureau of Statistics and Small and Medium Enterprises Development Agency of Nigeria (2013), there are currently 6,652 SMEs in the manufacturing sector of Nigeria. Out of the 6,652, a total number of 3,090 are based in Kano and the Kaduna states. For the purpose of this study, the target population will be 3,090 SME in Kano and Kaduna, the northwest geo-political zone of Nigeria. Kano and Kaduna states are selected for this study because they have high concentration of business enterprises in the northwest geo-political zone of Nigeria. The distribution of SME across Kano and Kaduna states is presented in Table 4.1.

Table 4.1

Number of Small and Medium Enterprises in Kano and Kaduna States

State	Number	Percentage
Kano	1,808	58.51
Kaduna	1,282	41.49
Total	**3,090**	**100.00**

Source: Adapted from NBS and SMEDAN, 2013

The main reasons for choosing SMEs in Kano and Kaduna states are as follows. Firstly, Kano and Kaduna states are commercial centres of the countries with high concentration of businesses, ranging from large corporations to small firms; compared to other area or states in Nigeria. Secondly, Kano and Kaduna states are considered as modern industrial hubs in the country and therefore, many businesses, including SMEs established their business presence in these states to exploit greater economies of scale and infrastructural development. Thirdly, SMEs operating in Kano and Kaduna states have similar characteristics with other small firms in other states in terms of ownership structure, asset base, number of employees, and mode of operation, which makes it possible to be generalized. Finally, there are also some previous studies that have chosen to focus on SMEs in Kano and Kaduna (e.g.,Ibrahim & Shariff, 2016; Shehu & Mahmood, 2015).

4.4 Sample Size

As noted earlier, there are currently 6,652 SMEs in the manufacturing sector of Nigeria, out of which 3,090 are based in Kano and Kaduna states. Therefore, following Saunders, Lewis, and Thornhill's Saunders, Lewis, and Thornhill (2009)

sample size determination table, given population of 3,090 SMEs in Kano and Kaduna states, a sample size of 357 is required. Hence, 357 owners and managers are expected to respond to the research questionnaires. The unit of analysis was organizational, in which owners and managers were invited to participate in the study. Owners and managers were specifically involved as key informants because they are the most informed about firms' strategies and capabilities (Sciascia, D'Oria, Bruni, & Larrañeta, 2014), and could therefore respond to the research issues and the information sought accurately (Zahra & Covin, 1995). Additionally, owners and managers were chosen as the key informants in the present study because decisions regarding the strategic decision making activities of smaller firms rest very much in the hands of these individuals, and could therefore stand in a better position to respond to the survey correctly (Naldi & Davidsson, 2014). Extant empirical research also establishes the reliability of self-reported, single-respondent surveys of owners or managers, which confirm that their knowledge of the business is highly correlated with archival data of firm-level performance (e.g., Dai, Maksimov, Gilbert, & Fernhaber, 2014; Herzallah *et al.*, 2013; Keh *et al.*, 2007; Kraus *et al.*, 2012).

Additionally, in order to minimize the low response rate from uncooperative respondents, the present study follows Hair, Bush, and Ortinau's (2008) recommendation by increasing the determined sample size to 100%. Therefore, increasing the determined sample to 100% yielded 714.

4.5 Sampling Procedures

In order to achieve equal distribution of SMEs located in Kano and Kaduna states, a stratified sampling technique was used to select 714 determined sample size. According to Saunders *et al.* (2009), stratified sampling technique is "a modification of random sampling in which you divide the population into two or more relevant and significant strata based on one or a number of attributes" (p.221). The first step is in conducting a stratified random sampling to define the population. As mentioned earlier, the population in the present study is 3,090 (see Table 4.1).

The second step is to define the stratum. The stratum in the present study is two states (i.e., Kano and Kaduna that are located in the north-west geopolitical zone of Nigeria. Next is to determine an average number of population elements per strata by dividing the population size (i.e., 3,090) by number of strata (2 states). This yielded 1545 elements per strata. Next is to determine the percentage of participants to be drawn from each stratum by dividing the determined sample size by the population of the study (i.e. 714 divided by 3,090, and then multiply by 100 = 23.11%). Finally is to determine the number of subjects in a sample by multiplying the total number of each element in the population by determined percentage (i.e. 23.11 %.) For example, the total number of SMEs in Kano state is 1,808 and this number is multiplied by 23.11% to arrive at the number of subjects in sample (i.e. 1,808 x 23.11% = 418) …and so on as shown in Table 4.2. Additionally, a disproportionate stratified random sampling was adopted in order to ensure an equal distribution of the participants.

Table 4.2
Disproportionate Stratified Random Sampling of Respondents

State	Number of Elements in Stratum	Number of Subjects in Sample
Kano	1,808	418
Kaduna	1,282	296
Total	**3,090**	**714**

Importantly, one basic question that needs to be answered is how to select the respondents after dividing the sample size into strata. Following Saunders *et al.* (2009), this can be achieved by using a computer program and Microsoft Excel in particular to generate random numbers. This will enable researchers to select their sample without any bias.

4.6 Instruments and Measurements

4.6.1Operationalization of variable

Entrepreneurial orientation: Entrepreneurial orientation is operationalized as "the top management's strategy in relation to innovativeness, proactiveness, and risk taking" (Cools & Van den Broeck, 2007, p. 27).

Total quality management: Total quality management is operationalized as " "an ongoing process whereby top management takes whatever steps necessary to enable everyone in the organization in the course of performing all duties to establish and

achieve standards which meet or exceed the needs and expectations of their customers, both external and internal" (Miller, 1996, p. 157).

Organizational learning: "Organizational learning is defined as the capability or processes within an organization that entails development of skills, sharing such skills to others, as well as application of knowledge or skills among organizational members in order to maintain and/or improve performance" (Dibella *et al.*, 1996).

Performance: Performance as a subjective measure is operationalized as "a metric that quantifies the efficiency and effectiveness of firm's past actions through the acquisition, collation, sorting, analysis, interpretation, and dissemination of appropriate data (Neely, 1998).

Competitive intensity: Competitive intensity is operationalized as" a situation where competition is fierce due to the number of competitors in the market and the lack of potential opportunities for further growth (Auh & Menguc, 2005b, p. 1654).

4.6.2 Measurements

4.6.2.1 Entrepreneurial Orientation

Entrepreneurial orientation was assessed using Covin and Slevin's (1989) entrepreneurial orientation scale. Specifically, this scale contains nine items, of which three items were designed to measure the innovativeness dimension of entrepreneurial orientation, three items to assess risk taking, and the remaining three

to measure proactiveness. Entrepreneurial orientation was rated using seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Thus, a low score indicates a more conservative entrepreneurial orientation, while high score suggests a more entrepreneurial orientation.

Sample items include: "Our firm favours a strong emphasis on R&D, technological leadership, and innovations". "Our firm has marketed many new lines of products or services in the past 3 years". "In our firm, changes in product or service lines have usually been quite dramatic. The justification for using this scale is that it has been successfully used in several empirical studies (e.g., Alegre *et al.*, 2012; Fernet, Torrès, Austin, & St-Pierre, 2016; Li, Tse, & Zhao, 2009; Lumpkin, Cogliser, & Schneider, 2009; Rauch *et al.*, 2009; Roxas & Chadee, 2011). The internal consistency coefficient (i.e., Cronbach Alpha) for entrepreneurial orientation was 0.87. The detailed of the items and their source are presented in Table 4.3.

Table 4.3
Entrepreneurial Orientation Scale, Its Items and Source

Code	Item	Source
EO01	Our firm favours a strong emphasis on R&D, technological leadership, and innovations.	Covin and Slevin (1989)
EO02	Our firm has marketed many new lines of products or services in the past 3 years.	
EO03	In our firm, changes in product or service lines have usually been quite dramatic.	
EO04	In dealing with competitors, our firm typically responds to actions which competitors initiate.	
EO05	Our firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc in dealing with competitors.	
EO06	Our firm typically adopts a very competitive, 'undo-the-competitors' posture.	
EO07	Our firm has a strong proclivity for high-risk projects (with chances of very high returns).	
EO08	Our firm believes that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.	
EO09	When confronted with decision-making situations involving uncertainty, our firm typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	

4.6.2.2 Total Quality Management

A 7-item scale developed by Chenhall (1997) was used to measure total quality management in this study. Specifically, the items in this scale asked the participants to indicate the extent to which their firms have implemented programmes over the past three years to improve the quality of products and processes, efficiency, minimizing waste, as well as involving employees in the continuous improvement. Additionally, total quality management was rated by the participants using seven-

point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items include: "Our firm implements programs to improve the quality and reliable delivery of materials and components provided by suppliers". "Our firm implements programs to reduce waste or non-value added activities throughout the production process". "Our firm strongly encourages involvement of employees in quality improvement programs (e.g. training, involvement in improvement teams)". This scale was adapted in the current study because it has been successfully used in several empirical studies (e.g., Joiner, 2007; Sholihin & Laksmi, 2009; Sim & Killough, 1998). The Cronbach's Alpha for total quality management was 0.88. The detailed of the items and their source are presented in Table 4.4.

Table 4.4
Total Quality Management Scale, Its Items and Source

Code	Item	Source
TQ01	Our firm implements programs to improve the quality and reliable delivery of materials and components provided by suppliers.	Chenhall (1997)
TQ02	Our firm implements programs to reduce waste or non-value added activities throughout the production process.	
TQ03	Our firm implements programs to reduce time delays in manufacturing and designing products (i . e . improve cycle time).	
TQ04	Our firm strongly encourages involvement of employees in quality improvement programs (e . g . training , involvement in improvement teams).	
TQ05	Our firm encourages involvement of functional personnel (manufacturing, marketing, R & D) in strategy formulation.	
TQ06	Our firm develops close contact between manufacturing and customers	
TQ07	Our firm implements programs to co-ordinate quality improvements between parts of the organisation.	

4.6.2.3 Organizational Learning

Organizational learning was assessed using 4-item measure of organizational learning developed by García-Morales, Llorens-Montes, and Verdú-Jover (2006). A seven-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* was used by the participants to rate extent of their agreement with statements describing organizational learning practices in their organizations. Sample items include: "Our firm has learned or acquired much new and relevant knowledge over the last three years". "Members of our firm have acquired some critical capacities and skills over the last three years". "Our firm's performance has been influenced by new learning it has acquired." This scale was also adapted in the current study because it has been successfully used in several empirical studies (e.g., Wang & Ellinger, 2011). The internal consistency coefficient (i.e., Cronbach's Alpha) for organisational learning scale was 0.92. The detailed of the items and their source are presented in Table 4.5

Table 4.5
Organisational Learning Scale, Its Items and Source

Code	Item	Source
OL01	Our firm has learned or acquired much new and relevant knowledge over the last three years.	García-Morales, Llorens-Montes, and Verdú-Jover (2006).
OL02	Members of our firm have acquired some critical capacities and skills over the last three years.	
OL03	Our firm's performance has been influenced by new learning it has acquired." over the last three years.	
OL04	Our firm is a learning organization.	

4.6.2.4 Competitive Intensity

To assess competitive intensity, Jaworski and Kohli's (1993) Competitive Intensity Scale was administered. Competitive intensity was assessed with six items, such as "There are many "promotion wars" in our industry", and "our competitors are relatively weak". Participants were asked to use a seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree* to rate extent of their agreement with statements describing the intensity of competition in their industry.

High reliability of the competitive intensity scale has also been demonstrated in several empirical studies (e.g., Leonidou, Katsikeas, Fotiadis, & Christodoulides, 2013; McManus, 2013; Wieseke, Kraus, Ahearne, & Mikolon, 2012), which justifies its use in the present study. The internal consistency coefficients (i.e., Cronbach's Alpha) for competitive intensity scale were 0.93. The detailed of the items and their source are presented in Table 4.6

Table 4.6
Competitive Intensity Scale, Its Items and Source

Code	Item	Source
CI01	Competition in our industry is cutthroat.	Jaworski and Kohli (1993)
CI02	There are many "promotion wars" in our industry.	
CI03	Anything that one competitor can offer, others can match readily.	
CI04	Price competition is a hallmark of our industry.	
CI05	One hears of a new competitive move almost every day.	
CI06	Our competitors are relatively weak.	

4.6.2.5 Organizational Performance

Six-items were used to assess a broad range of SME' performance indicators. Five items were adapted from the work of Powell (1995), and the remaining item were drawn from the work of Baker and Sinkula (1999). Examples of these items are: "Over the past 3 years, financial performance of our firm has exceeded our competitors'", and "Over the past 3 years, there has been change in market share relative to our competitors". Responses were on a seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Cronbach's Alpha was 0.88 for Organizational Performance Scales, suggesting good reliability. The justification for using this scale is that it has been successfully used in several empirical studies (e.g., Rodrigues & Raposo, 2011).

Finally, it is important to note that subjective (i.e., perceptual measurement was used in the present study for the following reasons. Firstly, managers and Chief Executive Officers of small firms are naturally reluctant and may not be willing to disclose the actual performance of their business (Abor, Agbloyor, & Kuipo, 2014; Dawes, 1999; Storto, 2013). Secondly, in the context of this study (Nigeria), it is not possible to get the objective data through Annual Reports, as the law in Nigeria does not compel SME to make their financial statements available to the public. The detailed of the items and their source are presented in Table 4.7.

Table 4.7
Organizational Performance Scale, Its Items and Sources

Code	Item	Source
FP01	Over the past 3 years, our financial performance has been outstanding	Powell (1995)
FP02	Over the past 3 years, our financial performance has exceeded our competitors'.	
FP03	Over the past 3 years, our revenue (sales) growth has been outstanding.	
FP04	Over the past 3 years, we have been more profitable than our competitors.	
FP05	Over the past 3 years, our revenue growth rate has exceeded our competitors'.	
FP06	Over the past 3 years, there has been an increase in market share relative to our competitors.	Baker and Sinkula (1999)

4.6.2.6 Demographic Variables

Demographic variables such as gender of respondents, age of respondents, education level of respondents, nature of business, years in business (Firm age), respondent's positions, firm ownership type, and employment size was included in the questionnaire. Gender of the respondents will be coded using dummy variables with value "1" for male and "2" for female. Age was coded as "1" = 20-30 years, "2" = 31-40 years, "3" = 41-50 years, "4" =50 years and above. The respondents were asked to indicate their educational qualification. As such, education level of respondents was coded using dummy variables with "1" = Primary School Certificate, "2" = Secondary School Certificate, "3" = Diploma/National Certificate in Education, "4" = Bachelor Degree/Higher National Diploma, and "5" = Master's Degree and above, "6" = others.

Respondents' marital status was coded using dummy variables with "1" = single, "2" = married. Ethnicity was coded as "1" = Hausa/Fulani, "2" = Igbo, "3" = Yoruba, "4" = others. Respondents position, dummy coding was also used with "1" = owner, "2" = manager. Regarding demographic profile of firms surveyed, ownership was also coded using dummy variables with "1" = Sole proprietorship, "2" = "2" = I Partnership, "3" = Limited Liability Company. The respondents were asked to indicate the size of their firm. As such, firm size was coded using dummy variables with "1" = Less than 50 employees, "2" = 50-99 employees, "3" = 100-249 employees, "4" = 250-499 employees, and "5" = 500 or more employees.

Industry was denoted using dummy variables with "1" = food and beverages, "2" = packaging/containers, "3" = metal and metal products, "4" = printing and publishing, "5" = agro-allied, "6" = building materials, "7" others. Finally, a similar coding system was applied to firm age with "1" = 3 – 6 years, "2" = 7 – 9 years, "3" = 10 – 12 years, "4" = 13 years or more.

4.7 Validity and Reliability

In social science researchers, the quality of a research instrument is established through validity and reliability analysis. According to Van-Lill and Visser (1998), "validity is the extent to which an instrument measures what it is supposed to measure" (p.14). Given that all instruments used in the present study were developed from existing ones in the literature, convergent and discriminant validity test was performed using PLS path modeling in order to avoid bias and to ensure that the instrument measures the contents desired. Specifically, the convergent validity is

ascertained using the average variance extracted (AVE; Chin, 1998; Fornell & Larcker, 1981; Henseler, Hubona, & Ray, 2016; Sánchez-Franco & Roldán, 2015). On the other discriminant validity was established by comparing the square root of AVEs (the diagonal entries) with the correlations between constructs (the off-diagonal entries) (Fornell & Larcker, 1981; Hair, Hult, Ringle, & Sarstedt, 2014; Roldán & Sánchez-Franco, 2012).

Reliability has been defined as "the extent to which independent administration of the same instrument will consistently yield the same results under comparable conditions" (De Vos, 1998, p. 168). In the present study, reliability was established based on composite reliability index (Hair, Hult*, et al.*, 2014; Hair, Ringle, & Sarstedt, 2011b; Hair, Sarstedt, Ringle, & Mena, 2012; Nunnally & Bernstein, 1994)..

4.8 Pilot Test

Before embarking on the actual survey, an initial draft of the self-administered survey was given to experts from both academia and industry to read go through survey and give their valuable inputs to avoid any ambiguities which could not be detected by the researcher. Firstly, three experts (two from academia) and one from industry examined the quality of the survey instrument in terms of wording, structure, clarity, simplicity and ambiguity of the questionnaire items (Kumar, Talib, & Ramayah, 2013; Punch, 2005; Sekaran & Bougie, 2010). Based on the outcomes of their evaluation, corrections that might have been suggested will be reflected in the final survey before it is administered to the respondents.

To receive further feedbacks and comments from the respondents about the length, wording, structure, clarity, simplicity and ambiguity of the questionnaire items; a pilot study was conducted before the main study. A pilot study has been defined by Wiersma (1991) as:

> "a study conducted prior to the major research study that in some way is a small-scale model of the major study: conducted for the purpose of gaining additional information by which the major study can be improved -for example, an exploratory use of the measurement instrument with a small group for the purpose of refining the instrument" (p. 427).

A separate page was provided in the questionnaire for pilot survey for participants to give their feedbacks and comments, which was recorded in a diary. Based on their feedbacks and comments during the pilot test, further changes were made in the questionnaire before embarking on the main the survey.

A total number of 40 self-administered questionnaires were sent out for the pilot survey. Of the 40 questionnaires distributed, thirty one (31) were completed by Nigerians who are postgraduate students at the Universiti Utara Malaysia. This represents a response rate of 77.5 per cent for the pilot study. For a student to be included in the pilot study, he or she must have been working in private sector of Nigeria as a full time employee. Hence, all participants in the pilot survey have fulfilled this requirement because following a preliminary interview with them, it was noted they have been working in the Nigerian private sector as full time employees

before getting formal approval to start the postgraduate programme at the Universiti Utara Malaysia. Table 4.8 presents the results of the pilot study conducted in the month of April, 2015.

Table 4.8
Results of the Pilot Survey (N = 31)

Variable	Number of Items	Number of Items Deleted	Cronbach's Alpha
1 Entrepreneurial Orientation	9	0	0.91
2 Total quality Management	7	0	0.81
3 Organizational Learning	4	0	0.79
4 Competitive Intensity	6	0	0.85
5 SME Performance	6	0	0.86

As indicated in Table 4.8, Cronbach's Alpha coefficients were used to determine the reliability of the scales adapted in the present study. Researchers have suggested that reliability is achieved when the Cronbach's Alpha co-efficient of each variable should be at least .70 or more (e.g., DeVellis, 2003; Nunnally, 1978; Robinson, Shaver, & Wrightsman, 1991; Sekaran & Bougie, 2010). Therefore, as shown in Table 4.8, the Cronbach's Alpha co-efficient of each variable ranged from 0.79 to 0.91, hence, exceeding the minimum acceptable level of .70, this also suggests adequate reliability of the measures used in the pilot study.

4.9 Data Collection Procedures

The data for this research was obtained through a self-administered survey, which were distributed managers and owners of SMEs in Kano and Kaduna metropolis a month after the proposal defense. As noted earlier, managers or owners of SME were selected for this study because they stand a better position to respond on behalf of

their firm. The questionnaire was divided into two sections. The first section of the questionnaire is designed to reflect the demographic profiles of the participating firms the respondents. The second section of the questionnaire contained questions which reflect the five key variables of the study (entrepreneurial orientation, total quality management, organizational learning, competitive intensity, performance). Overall, the survey will consist of thirty two questions from the five key variables of the study and ten from the demographic profiles shown in Appendix A.

Respondents were asked to rate their level of agreement with each question of the key on a seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. The use of a seven-point scale format is considered the most appropriate in this study because it was used in many of the previous studies and found it to be successful (e.g., Kraus *et al.*, 2012; Long, 2013; Merlo & Auh, 2009; Panayides, 2007; Real *et al.*, 2014).

It is also imperative to note that the questionnaire administered to the respondents was written in English, because almost all the respondents speak English, which is the official language in Nigeria. Furthermore, given that Nigeria was a British colony, respondents' language skills did not require the translation of questionnaires.

4.10 Data Analysis

The research framework depicted in Figure 2.1 will be tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is typically a multivariate statistical analysis for testing theoretical models (Wold, 1974, 1985). However, before providing the justifications for using PLS-SEM, several statistical assumptions need to be taken into consideration, including normality of data, linearity, multicollinearity, and homoscedasticity.

4.11 Justification for using PLS-SEM Modeling

As mentioned earlier, the present study assessed the theoretical model using PLS path modeling in conjunction with Smart PLS 3.0 software (Ringle, Wende, & Becker, 2015). In the present study, the PLS path modeling is considered appropriate technique of data analysis for several reasons. Firstly, the PLS path modeling is considered to be suitable data analysis technique in this study because it can simultaneously assess the measurement model, which describes the link between theory (latent constructs) and data (corresponding indicators) as well as relationships among constructs, also called the structural model (Chin, 1998; Hair, Hult*, et al.*, 2014; Hair *et al.*, 2012; Tenenhaus, Vinzi, Chatelin, & Lauro, 2005).

Secondly, the goal of the present study is to predict the effect of entrepreneurial orientation, total quality management, organizational learning, and competitive intensity on the performance of SME. Hence, the present study is causal-predictive in nature where a complex model with many variables, indicators and relations will be tested. This kind of complex model requires a path modeling

approach to be employed because several researchers (e.g., Hair, Hult*, et al.*, 2014; Hair *et al.*, 2012; Henseler *et al.*, 2016) have recommended the use of PLS path modeling when the goal of research is to predict the dependent variable.

Thirdly, PLS path modeling has been successfully used in the past empirical studies related to SME performance (e.g., Carraresi, Mamaqi, Albisu, & Banterle, 2016; Lechner & Gudmundsson, 2014; Pratono & Mahmood; Vlasov, Bahlmann, & Knoben, 2016).

Finally, since this study incorporates entrepreneurial orientation, total quality management, organizational learning, and SME performance in the research model, the use of PLS-SEM is considered preferable to the more popular multiple regression analysis using SPSS statistics or covariance-based techniques using AMOS because latent variables scores from the measurement model results can be used to build a subsequent PLS-SEM model with higher order constructs. Roldán and Sánchez-Franco (2012), noted that PLS-SEM would be the best option if the researcher needs to use latent variables scores in subsequent analysis, such as building higher order constructs from the scores.

4.12 Chapter Summary

This chapter has described the methodology comprising the research design to be employed, description of population and sample, instruments and measurements adapted, validity and reliability, pre and pilot tests of the instruments, data collection procedures, assessment of non-response bias, and justification for data analysis. A disproportionate stratified random sampling technique was used in this study.

Measurement scales from the previous studies were adapted to measure five constructs: entrepreneurial orientation, total quality management, organizational learning, competitive intensity, and performance. Next, after successful data collection exercise, chapter five will present the results of the analyses.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 Introduction

The purpose of this study was to examine the moderating role of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance. This chapter presents the results of the statistical analysis of the key variables incorporated in a conceptual model as depicted in the preceding chapter. The rest of this chapter is organized as follows. In section two, the results of initial data screening and preliminary analyses are provided and explained. Specifically, the results of initial data screening and preliminary analyses was organized in terms of the assessment of missing values, outliers detection and handling, normality test, linearity test, homoscedasticity, and multicollinearity test. In section three of this chapter, descriptive statistics of the key and demographic variables have been presented and explained. In section four, results of the PLS path analysis of the theoretical model have been presented. In particular, results of the PLS path analysis was presented according to measurement model evaluation, assessment of structural model, as well as testing the role of moderator variable in the theoretical model.

5.2 Response Rate

Overall, 714 survey packages were sent to the owner/managers of SMEs operating in Kano and Kaduna in the north-west geopolitical zone of Nigeria. After several follow-up phone calls, 482 questionnaires were received between September 2015 and December 2015. Hence, this yielded an aggregate response rate of 68%, based on Jobber's (1989) definition of response rate. Of the 482 questionnaires that have been collected, 42 were unusable because a substantial part of these questionnaires were incomplete. Accordingly, this yielded 420 useable questionnaires with an adjusted response rate of 62%. The response rate of 62% in this study is deemed acceptable because Sekaran (2003) suggested that a response rate of 30% should be considered adequate in survey research. The detailed responses and response rate are reported in Table 5.1.

Table 5.1
Responses and Overall Response Rate

Details	**Responses/Rate**
Number of distributed questionnaires	714
Number of questionnaires returned	482
Number of returned and usable questionnaires.	440
Number of returned and excluded questionnaires.	42
Number of questionnaires not returned	232
Response rate	68%
Adjusted response rate	62%

5.3 Assessment of Non Response Bias

Non-response bias is a major concern in survey research because it could result in misleading or inaccurate findings (Lewis, Hardy, & Snaith, 2013). Non-response bias has been defined by Lambert and Harrington (1990) as the differences in answers to the questionnaire between early responders (those who respond quickly) and late responders (those who respond after a specified response period). According to Armstrong and Overton (1977), late responders are almost similar to non-responders and therefore can be regarded as a proxy for the non-responders. In order to evaluate non-response bias in the present study, demographic or the main study variables were used to identify differences between early responders and late responders (Lewis *et al.*, 2013).

Specifically, a time-trend extrapolation approach were used dividing the respondents into two main groups, namely; those who responded within 30 days (in September, 2015; early responders) and those who responded after 30 days (After September, 2015; late responders) as recommended by Armstrong and Overton (1977). Statistically, this approach entails conducting an independent samples t-test to detect any possible non-response bias on the main study variables. When the results of the t-test are found to be significance at 0.05 significance level, it can be concluded that non- response bias exists in the study; otherwise when t-test is not significance, it means there are no differences in answers to the questionnaire between early responders and non-responders (Field, 2009; Pallant, 2010).

Table 5.2
Results of Non Response Bias Test

Variable	Group	N	Mean	Std. Deviation	t-value	Sig.
EO	Early Response	342	5.078	1.487	-.198	.844
	Late Response	66	5.117	1.433	-.203	.840
TQM	Early Response	342	2.274	1.070	-1.414	.158
	Late Response	66	2.479	1.128	-1.365	.176
OL	Early Response	342	2.775	1.017	.855	.393
	Late Response	66	2.661	0.851	.964	.337
CI	Early Response	342	2.686	1.153	-.844	.399
	Late Response	66	2.816	1.099	-.872	.385
SMEP	Early Response	342	5.167	1.204	.834	.405
	Late Response	66	5.033	1.145	.863	.390

Note: EO = Entrepreneurial orientation; TQM = Total Quality Management; OL = Organizational learning; CI = Competitive intensity; SMEP = SME performance.

5.4 Assessment of Common Method Variance

Given that self-reported surveys were used to collect data at the same time from the same participants, it is possible that common method variance (CMV) may be a major issue in the present study (Chang, van Witteloostuijn, & Eden, 2010; MacKenzie & Podsakoff, 2012; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012; Podsakoff & Organ, 1986; Spector & Brannick, 2009). CMV, also called monomethod bias refers to the "variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff *et al.*, 2003, p. 879). Accordingly, CMV "can cause systematic measurement errors that either inflate or deflate the observed relationships between constructs, generating both Type I and Type II errors (Chang, Witteloostuijn, & Eden, 2010, p. 178).

In order to address the issue of CMV, Harman's one-factor test was used in the present study (Lindell & Whitney, 2001; Podsakoff & Organ, 1986). This test involves performing a principal components factor analysis on all items in the theoretical constructs (i.e., entrepreneurial orientation, total quality management, organizational learning, competitive intensity, and SME performance). If the results of the principal components factor analysis indicated that the first factor explains less than 50% of the total variance, it means that CMV is not a major concern (Podsakoff & Organ, 1986). The summary results of CMV test are reported in Table 5.3. As shown in Table 5.3, the principal components factor analysis yielded 32 factors, with first factor accounting for only 37% of the variance. Furthermore, it was found that no general factor was evident in the unrotated factor structure. As such, the results suggest that CMV was not a major concern in this study.

Table 5.3
Results of Common Method Variance Test

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	11.900	37.187	37.187	11.900	37.187	37.187
2	4.900	15.314	52.501			
3	2.751	8.597	61.098			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
…	…	…	…			
30	.126	.395	99.345			
31	.107	.333	99.679			
32	.103	.321	100.000			

5.5 Initial Data Screening and Preliminary Analyses

Before conducting the main analyses of interest, it was necessary to screen the raw data for missing values, multivariate outliers, normality, linearity, homoscedasticity, and multicollinearity. This was done to confirm that the key multivariate assumptions are not violated before conducting the main analyses. Therefore, in the following section the key assumptions, including missing values, multivariate outliers, normality, linearity, homoscedasticity, and multicollinearity are explored.

5.5.1 Assessment of Missing value

According to Tabachnick and Fidell (2007), missing value is one of the most pervasive problems in data analysis. Thus, overlooking cases with missing values could have serious impact on quantitative research, leading to biased estimates of parameters, loss of information, decreased statistical power, increased standard errors, as well as weakened generalizability of findings. (Dong & Peng, 2013; Graham, 2009; Peng, Harwell, Liou, & Ehman, 2006; Roth, 1994; Schlomer, Bauman, & Card, 2010).

Although there is no universally threshold on how much missing data can be tolerated for a given sample size and a valid statistical analysis (Tabachnick & Fidell, 2007), researchers, particularly Schafer (1999) has asserted that a missing rate of 5% or less is of no importance in multivariate analysis. While Schafer (1999) is somehow more conservative regarding the rate of missing value in a dataset, Bennett (2001) contended that when the rate of missing value is more than 10% , results of subsequent statistical analyses may be invalid and biased. One of the popular statistical methods for replacing missing values is "the mean scores of all other subjects for that variable" (George & Mallery, 2001, p. 46). In the present study, this statistical method was performed using the Statistical Package for the Social Sciences (SPSS). The results for missing values analysis are presented in Table 5.4.

Table 5.4
Number of Detected and Replaced Missing Values

Latent Variable and Items	Number of Replaced Missing Values
Entrepreneurial orientation	
EO04	1
EO06	1
EO07	1
Sub-total	**3**
Organizational learning	
OL01	2
OL02	2
OL03	2
OL04	1
Sub-total	**7**
Total Quality Management	
TQ01	4
TQ04	1
TQ05	2
TQ06	1
TQ07	1
Sub-total	**9**
Competitive intensity	
CI03	2
CI05	1
CI06	1
Sub-total	**4**
SME performance	
FP03	1
FP04	1
Sub-total	**2**
Grand total	25 out of 15,162 data points
Percentage of missing values	.16%

Note: Percentage of missing values is obtained by dividing the total number of randomly missing values for the entire data set by total number of data points multiplied by 100.

As can be seen in Table 5.4, of the 15,162 data points, 25 were randomly missed, which represented .16%. Specifically, entrepreneurial orientation had 3 randomly missing values. Organizational learning had 7 randomly missing values. Total quality management was found to have 9 randomly missing values. Competitive intensity had 4 randomly missing values, and finally, SME performance had only 2 randomly missing values.

5.5.2 Outliers Detection and Handling

Outliers refer to the "observations or subsets of observations which appear to be inconsistent with the remainder of the data" (Barnett & Lewis, 1994, p. 7). In a multivariate analysis, the presence of outliers in the dataset could seriously decrease the statistical power of nonparametric tests, leading to spurious results (Verardi & Croux, 2008). Hence, exclusion of such outliers from the dataset has been a common practice ever since. Because PLS path modeling is a multivariate technique, in the present study multivariate outliers were detected and subsequently deleted from the dataset. Specifically, the assessment of multivariate outliers in this study was based on Mahalanobis distance (D^2) measure. Mahalanobis distance has been defined as "the distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables" (Tabachnick & Fidell, 2007, p. 74). Results for the assessment of multivariate outliers are presented in Table 5.5.

Table 5.5
Multivariate Outliers Detected and Deleted

Respondents number	Mahalanobis distance (D2)
203	136.29996
384	127.13704
322	122.32623
364	121.57106
141	103.50169
312	101.37634
371	100.43497
380	93.37826
368	92.42105
402	89.85961
426	87.06736
427	84.08732
396	82.51058
424	79.0336
173	78.72677
341	77.70529
379	75.17313
358	73.63764
412	71.41336
430	68.67049
347	68.09765
363	66.25247
429	65.4707
351	64.67204
345	64.18898
55	64.17428
381	64.13221
406	63.66323
18	61.92913
434	61.55469
404	61.15138
439	61.14238

Note. N = 32; df = 31; $X^2 = 61.10$; p = .001; $D^2 = \geq X^2$

As can be seen in Table 5.5, based on degree of freedom (df) of 31 observed variables in this study, the recommended threshold of chi-square is 61.10 (p = 0.001). Hence, Mahalanobis distance values that exceeded the threshold of 61.10 were deleted from the dataset. In line with this criterion, only thirty two (32) multivariate outliers were identified and subsequently deleted from the dataset. Hence, the remaining 408 valid datasets were finally used for the main the PLS-SEM analyses.

5.5.3 Normality Test

Empirical research published prior to 2000 (e.g., Cassel, Hackl, & Westlund, 1999) has traditionally assumed that PLS-SEM results are robust even in situation with an extremely non-normal data. In other words, although PLS path modeling relaxes the key assumption of multivariate normal distribution (Hair, Ringle, & Sarstedt, 2011c; Hair *et al.*, 2012), it is important to note that in social sciences, data collected from the field usually fails to follow a multivariate normal distribution (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014a). Hence, overlooking the key assumption of multivariate normal distribution could reduce the statistical power of the analysis (Hair, Hult*, et al.*, 2014). In order to ensure that key normality assumption has not been violated in the present study, skewnes and kurtosis statistics were used. Kline (2011) suggested that the key the normality assumption is considered violated when the skewness exceeds ±3 and kurtosis is above ±10. Results for the normality test, based on skewness and kurtosis are presented in Table 5.6.

Table 5.6
Descriptive Statistics of Normality Test (n= 408)

	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
EO01	1	7	5.35	1.822	-1.020	.121	.059	.241
EO02	1	7	5.23	1.767	-.935	.121	-.034	.241
EO03	1	7	5.15	1.784	-.881	.121	-.105	.241
EO04	1	7	5.15	1.780	-.828	.121	-.303	.241
EO05	1	7	5.37	1.267	-.599	.121	.098	.241
EO06	1	7	4.76	1.742	-.754	.121	-.200	.241
EO07	1	7	4.91	1.757	-.761	.121	-.330	.241
EO08	1	7	4.88	1.763	-.809	.121	-.165	.241
EO09	1	7	4.97	1.722	-.768	.121	-.223	.241
OL01	1	7	2.70	1.231	.601	.121	.642	.241
OL02	1	7	2.65	1.235	.552	.121	.272	.241
OL03	1	7	2.72	1.351	.742	.121	.484	.241
OL04	1	7	2.96	1.519	.713	.121	.301	.241
TQ01	1	7	2.22	1.330	.801	.121	-.198	.241
TQ02	1	6	2.08	1.199	.851	.121	-.109	.241
TQ03	1	7	2.44	1.506	.741	.121	-.337	.241
TQ04	1	6	2.40	1.314	.585	.121	-.609	.241
TQ05	1	6	2.13	1.276	.933	.121	.073	.241
TQ06	1	6	2.39	1.254	.523	.121	-.622	.241
TQ07	1	7	2.48	1.239	.754	.121	.578	.241
CI01	1	7	2.50	1.436	.709	.121	-.287	.241
CI02	1	7	2.54	1.410	.603	.121	-.546	.241
CI03	1	7	2.52	1.477	.724	.121	-.183	.241
CI04	1	7	2.79	1.492	.594	.121	-.315	.241
CI05	1	7	3.03	1.486	.259	.121	-.774	.241
CI06	1	7	2.85	1.505	.417	.121	-.697	.241
FP01	1	7	5.22	1.275	-.401	.121	-.316	.241
FP02	1	7	5.13	1.520	-.621	.121	-.230	.241
FP03	1	7	5.34	1.372	-.599	.121	-.030	.241
FP04	1	7	4.94	1.464	-.505	.121	-.234	.241
FP05	1	7	5.13	1.437	-.487	.121	-.320	.241
FP06	1	7	5.11	1.584	-.635	.121	-.384	.241

As is shown in Table 5.6, this condition was met. Specifically, the normality test conducted revealed that none of the items in the dataset has a skewness and kurtosis statistics above ±3 and ±10 respectively. To further confirm the results of

the normality test, a graphical approach was also used to determine whether the data collected is normally distributed. In particular, the graphical approach of the normality test was implemented using normal probability plots of the residuals. Furthermore, histogram and the normal probability plot (P-P Plots) of the regression standardized residual were used to confirm that the key assumption of multivariate normal distribution was met in this study. Figure 5.1 and Figure 5.2 shows the histogram and the normal probability plot (P-P Plots) of the regression standardized residual, respectively.

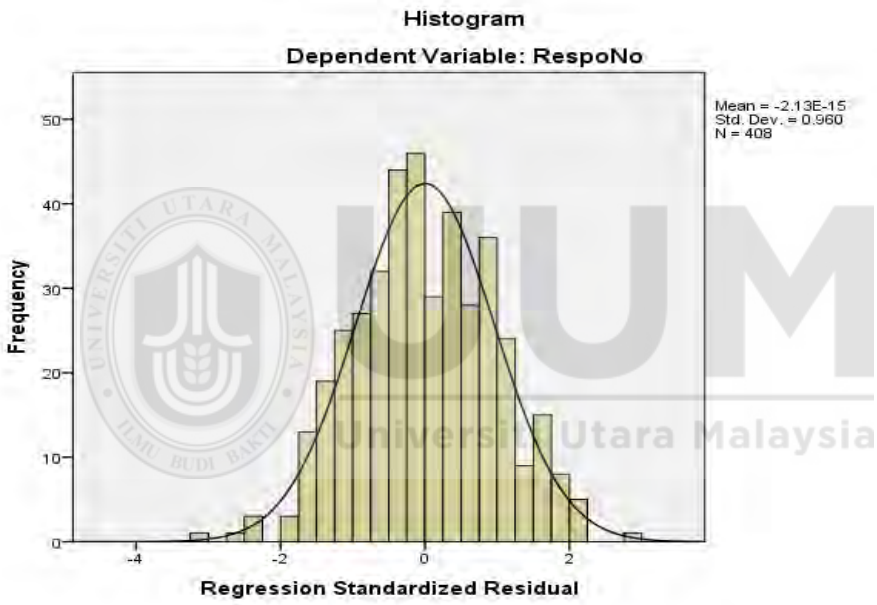

Figure 5.1
Histogram of the Regression Residuals

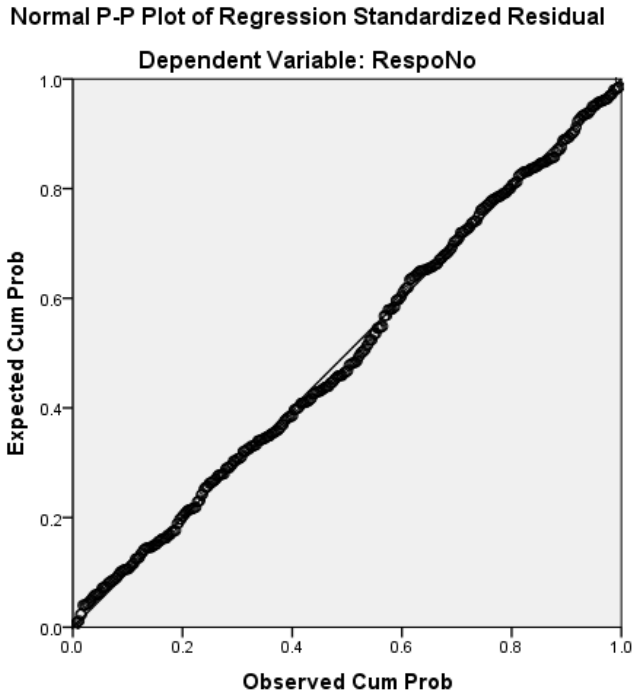

Figure 5.2
Normal Probability Plot (P-P Plots) of the Regression Standardised Residual

As depicted in Figures 5.1 and 5.2, the data collected for this study is consistent with normal distribution curve. Hence, it can be concluded that the key assumption of multivariate normal distribution has been satisfied in this study.

5.5.4 Linearity Test

Linearity assumption suggests that the relationship between continuous independent and dependent variables should be straight-line (Osborne & Waters, 2002; Rovai, Baker, & Ponton, 2013). Testing for linearity in PLS-SEM analysis is very important because overlooking it increases chance of Type I errors (overestimation) and Type

II error (underestimation) of the relationship between predictors and the outcome variables (Mertler & Vannatta, 2005; Osborne & Waters, 2002).

Theory and past empirical studies (e.g., Barney, 1991; Demirbag *et al.*, 2006; Li, Wang*, et al.*, 2011; Mehmet *et al.*, 2006) have suggested the linear relationships among entrepreneurial orientation, total quality management, organizational learning, competitive intensity and the performance of SME. Therefore, it is essential to ascertain if the relationship between independent variables and the dependent variable is linear or not in order to avoid under-estimating the true relationships among the variable in the present study (Osborne & Waters, 2002). To test for linearity among independent variables and the dependent variable, a graphical method was employed in this study.

Specifically, linearity assumption was examined through scatter plot. According to Pallant (2010), the linearity assumption is confirmed when the residuals have a straight-line relationship with predicted dependent variable scores. The results of the linearity test are depicted in Figure 5.3, where the residuals have a straight-line relationship with predicted dependent variable scores, and thus, there was no visual evidence of linearity assumption being violated in this study.

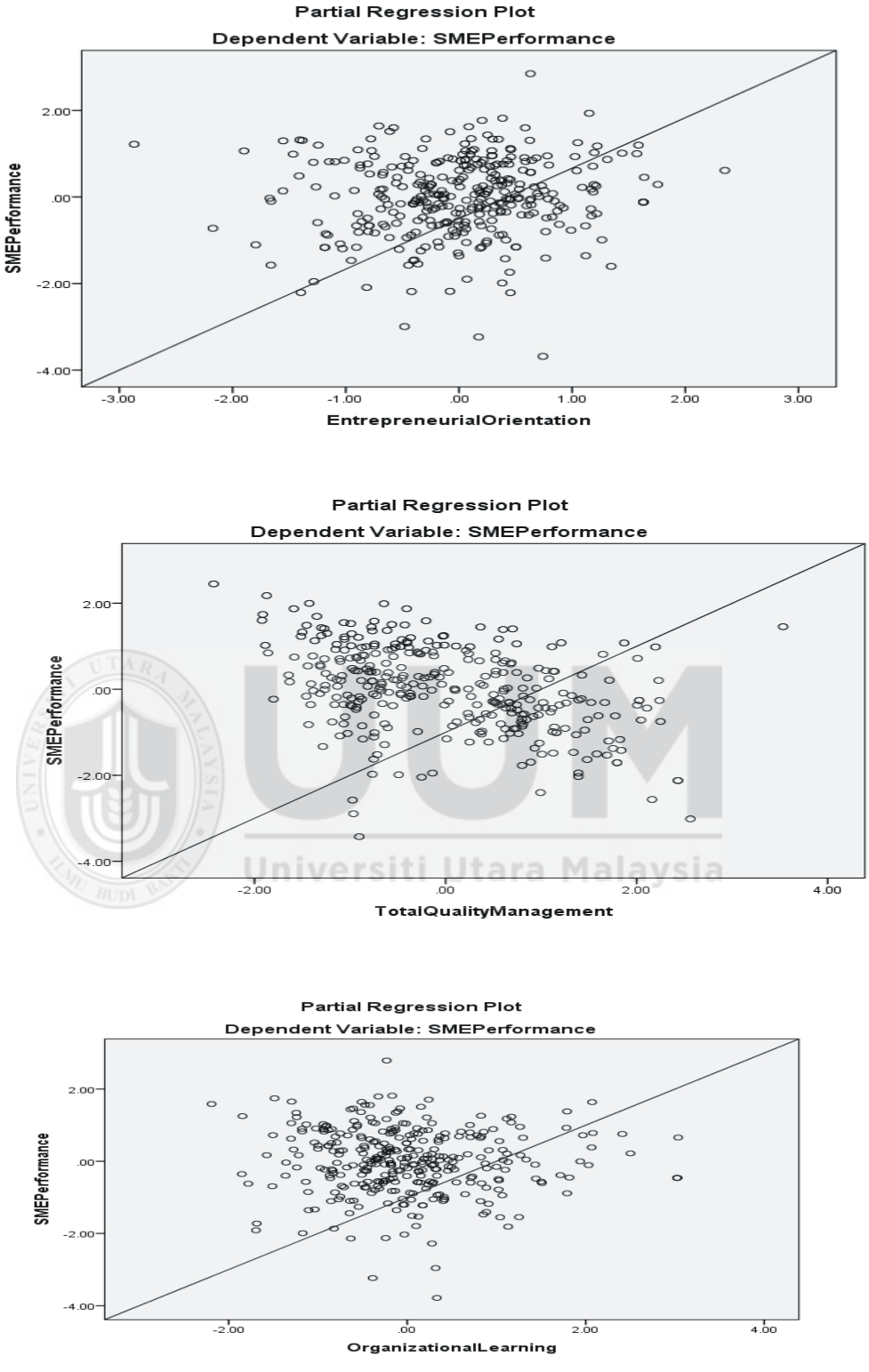

Figure 5.3
Scatter Plot

5.5.5 Homoscedasticity

Homoscedasticity assumption suggests that there should be similar amounts of variance between dependent variable across a range of independent variables that can either be continuous or categorical (Rovai *et al.*, 2013). Violation of homoscedasticity assumption in a multivariate analysis is known as heteroscedasticity, and it can lead to overestimation of the relationship between predictors and the outcome variables, thereby seriously affecting substantive conclusions (Rosopa, Schaffer, & Schroeder, 2013).

The assumption of homoscedasticity is typically confirmed through a residuals scatterplot or the standardized residuals against the standardized predicted values, and homoscedasticity is satisfied, when residuals vary randomly around zero and the spread of these residuals are almost the same throughout the plot (Rovai *et al.*, 2013). As depicted in Figure 5.4, heteroscedasticity was not a major concern in the present study because the residuals varied randomly around zero and scattered almost the same throughout the plot. In other words, there was no visual evidence of homoscedasticity assumption being violated in this study.

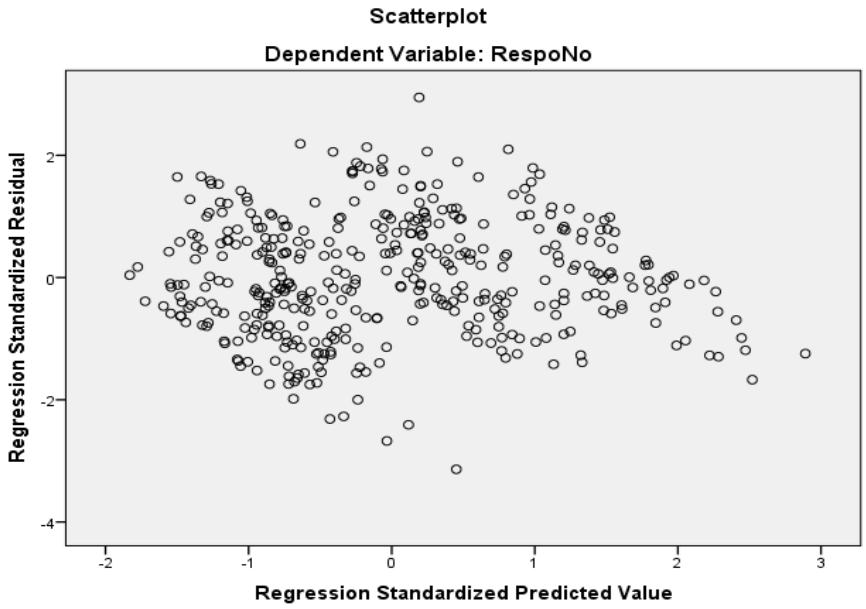

Figure 5.4
Standardized Residuals against the Standardized Predicted Value

5.5.6 Multicollinearity Test

Multicollinearity may be present when there is unacceptably high correlation among the independent variables (Hair, Black, Babin, & Anderson, 2010). Multicollinearity has become the major methodological issue because it can seriously falsify the estimates of regression coefficients, as well as their statistical significance (Hair, Anderson, Tatham, & Black, 1998; Keith, 2006; Tabachnick & Fidell, 2007). Hence, the presence of multicollinearity makes it very difficult to determine the individual contribution of independent variable on the dependent variable because the effects of the independent variables are conflicting. Thus, it has become imperative to ascertain whether there is high intercorrelation among the independent variables (Hair *et al.*, 2010).

Tolerance value, VIF, and condition index are among the methods used to confirm whether multicollinearity assumption is violated or not (Pallant, 2010). Hair, Ringle, and Sarstedt (2011a) suggested that multicollinearity is present when VIF value is greater than 5, tolerance value is less than .20, and condition index exceeded 30. Results of multicollinearity assessment are presented in Table 5.7. The results suggested that multicollinearity was not an issue in the present study because for each independent variable, the tolerance value was more than 0.2, VIFs were below 5, and none of the condition index has exceeded 30.

Table 5.7
Results of Multicollinearity Test

	Collinearity Statistics		**Condition Index**
	Tolerance	**VIF**	
Entrepreneurial orientation	0.725	1.379	4.821
Total quality management	0.732	1.367	6.633
Organizational learning	0.832	1.202	7.540
Competitive intensity	0.605	1.652	17.240

Furthermore, in order to have credible and accurate results, correlation matrix was examined to re-confirm that the key assumption of multicollinearity has not been violated in the present study. According to Hair *et al.* (2010), key assumption of multicollinearity has not been violated in the present study if a correlation coefficient among study variables are less than 0.90. As indicated in Table 5.8, the key assumption of multicollinearity was met because the highest intercorrelation among study variables was .602.

Table 5.8
Correlations Matrix for the Study Variables

	Variables	1	2	3	4	5
1	Entrepreneurial orientation	1				
2	Total quality management	-.151**	1			
3	Organizational learning	-.328**	.286**	1		
4	Competitive intensity	-.470**	.481**	.296**	1	
5	SME performance	.602**	-.259**	-.145**	-.739**	1

Note: **. n = 408; Correlation is significant at the 0.01 level (2-tailed).

5.6 Descriptive Statistics

The purpose of descriptive statistics is to summarize and present the raw data collected from the field in a clear and understandable way (Hanneman, Kposowa, & Riddle, 2013; Stevens, 2012). The descriptive statistics are organized in two sections: (1) descriptive statistics for the continuous variables, and (2) descriptive statistics for the categorical variables. Specifically, the descriptive statistics for the continuous variables, which were based on seven-point Likert scales, include mainly the means and standard deviations. On the other hand, descriptive statistics for the categorical variables include frequencies and percentages.

5.6.1 Descriptive Statistics of Study Variables

It could be recalled that each item in the questionnaire administered was rated on a seven-point Likert scale ranging from 1 = "*Strongly disagree*" to 7 = "*Strongly agree*". On the basis of seven-point Likert scales, a descriptive analysis was

performed to determine the means, standard deviations, as well as the minimum and maximum values of the independent variables, dependent variable, and moderator variable. A detailed descriptive statistics of the study variables are provided in in Table 5.9. For entrepreneurial orientation, the minimum and maximum values were 1.33 and 7.00, respectively. Additionally, Table 5.9 indicated that means and standard deviations for entrepreneurial orientation were 5.08 and 1.48, respectively.

For total quality management, the mean value was 2.31; standard deviation is 1.08 with minimum score of 1.00 and maximum value of 5.71. On the other hand, the mean and standard deviation for organizational learning were 2.76 and 0.99, respectively. Furthermore, organizational learning has minimum and maximum values of 1.00 and 6.50, respectively. Regarding competitive intensity, Table 5.9 showed a mean and standard deviation of 2.71 and 1.14, respectively. Furthermore, the minimum and maximum values for competitive intensity were 1.00 and 5.50, respectively (Table 5.9). Finally, it can be seen in Table 5.9 that the minimum and maximum values for SME Performance were 1.75 and 7.00, respectively. In the same vein, SME Performance was found to have mean and standard deviation of 5.15 and 1.19, respectively.

Table 5.9
Descriptive Statistics of Study Variables (n=408)

Variables	Min.	Max.	Mean	Std. Deviation
Entrepreneurial orientation	1.33	7.00	5.08	1.48
Total quality management	1.00	5.71	2.31	1.08
Organizational learning	1.00	6.50	2.76	0.99
Competitive intensity	1.00	5.50	2.71	1.14
SME performance	1.75	7.00	5.15	1.19

5.6.2 Demographic Profile of Respondents Surveyed

The demographic profiles of the respondents surveyed are based on gender, age, educational qualification, marital status, ethnicity, and current position. Specifically, the demographic profile of the respondents is presented in Table 5.10. As shown in Table 5.10, a distribution of the gender of participants indicated that 226, representing 64 percent were male and the remaining 261, which made up of 36 percent were their female counterparts. This is similar to the gender distribution within the general population of Nigeria where male slightly out-numbered female. Regarding the age distribution of the participants, about 28 of the sample, representing 6.9 percent were aged between 20 and 30 years, with a further 116 (28.4 percent) were within the age bracket of 31-40 years. Furthermore, 180 (44.1 percent) of the participants indicated that they were between 41 and 50 years old, and another 84 (20.6 percent) who were aged around 50 years and above.

Table 5.10
Demographic Profile of the Respondents Surveyed

	Frequency	Percentage
Gender		
Male	261	64.0
Female	147	36.0
Age		
20-30 years	28	6.9
31-40 years	116	28.4
41-50 years	180	44.1
50 years and above	84	20.6
Educational qualification		
Primary School	2	.5
Secondary School	49	12.0
Diploma/NCE	78	19.1
Bachelor Degree	113	27.7
Masters	116	28.4
Others	50	12.3
Marital status		
Single	172	42.2
Married	236	57.8
Ethnicity		
Hausa/Fulani	64	15.7
Igbo	265	65.0
Yoruba	51	12.5
Others	28	6.9
Position		
Owner	79	19.4
Manager	329	80.6

Regarding the participants educational qualification, only 2 of the respondents, representing 0.5 percent attended primary school, 49 (12 percent) of them had Secondary School Certificate. About 78 of the participants, representing

19.1 percent were Diploma/NCE holders and 113 (27.7 percent) indicated that they possessed Bachelor Degree. Table 5.10 also indicated that about 116 of the participants, representing 28.4 percent hold Master's Degree, while only 50 of the respondents, representing 12.3 percent indicated that the hold certificates other than the ones discussed above.

One hundred and seventy two of the participants, representing 42.2 percent were single and majority, which is 236 or 57.8 percent were married. Furthermore, Table 5.10 showed that of the 408 participants, 64 or 15.7 percent belong to Hausa/Fulani ethnic group. More so, of the sampled participants, 265, representing 64 percent were Igbos. In the same vein, 51 or 12.5 percent of the participants belong to Yoruba ethnic group, while 28 other participants (6.9 percent) belong to other ethnic groups, such as Egbura, Edos, and Igalas, among others. Finally, seventy nine of the participants, representing 19.4 percent were managers and majority of them (329 or 80.6 percent) were owners of them small and medium enterprises. Hence, the high number of owners in the sampled supports accuracy of data that has been provided in the completed and returned questionnaires, because owners/managers stand in better position to give vital information related to their firms.

Table 5.11
Demographic Profile of Firms Surveyed

	Frequency	Percentage
Ownership		
Sole proprietorship	45	11.0
Partnership	141	34.6
Limited Liability Company	222	54.4
Firm size		
Less than 50 employees	17	4.2
50-99 employees	215	52.7
100-249 employees	87	21.3
250-499 employees	48	11.8
500 or more employees	41	10.0
Industry		
Food and beverages	104	25.5
Packaging/containers	32	7.8
Metal and metal products	35	8.6
Printing and publishing	176	43.1
Agro-allied, furniture	29	7.1
Building materials	9	2.2
Others	23	5.6
Firm age		
3 – 6 years	36	8.8
7 – 9 years	79	19.4
10 – 12 years	73	17.9
13 years or more	220	53.9

5.6.3 Demographic Profile of Firms Surveyed

Related to demographic profile of the respondents, the profile of firms surveyed is based on forms of business ownership, firm size, industry, as well as firm age. In particular, the demographic profile of participating firm is presented in Table 5.11.

Table 5.11 indicated the ownership type of the participating firms, which were specifically categorized into three groups: 45 (11 percent of the participating firms were sole proprietorship, 141 (34.6 percent were partnership form of business organization and 222 (54.4 percent) were incorporated as limited liability companies. The table further revealed that 17 (4.2 percent) of the participating firms employ less than 50 employees. About 215 (52.7 percent) reported that they employ between 50 and 99 employees and only 87 of the participating firms, representing 21.3 percent employ between 100 and249 employees. Forty eight of the participating firms employ, representing 11.1 percent employ between 250 and 499 employees, and another 41 of the participating firms, representing 10 percent employ 500 or more employees.

In terms of industry, Table 5.11 further indicated that 104 or 25.5 percent of the participating firms were operating in Food and beverages industry. Relatedly, 32 (7.8 percent) of the participating firm operate in packaging/containers industry, 35 (8.6 percent of the participating firms operate in metal and metal products industry. Additionally, of the 176 of the participating firms or 43.1 percent operate in printing and publishing industry. Furthermore, 29 of firms surveyed, representing 7.1 percent were into agro-allied business, 9 or 2.2 percent operate in building

materials. Finally, 23 or 5.6 percent of the participating firms were regarded as those that operate in other industries not indicated above.

5.7 Assessment of PLS Path Modeling Results

According to Jöreskog and Sörbom (1993), testing of the structural model may be meaningless unless the measurement model has been evaluated to determine whether the data fits the model Given that PLS path modeling belongs to a family of structural equation modeling, in this study, before testing the structural model, measurement model was evaluated to determine the extent to which data collected fits the model. This two-step approach in the assessment of PLS-SEM results has also been recommended by Henseler, Ringle, and Sinkovics (2009) as depicted in Figure 5.5

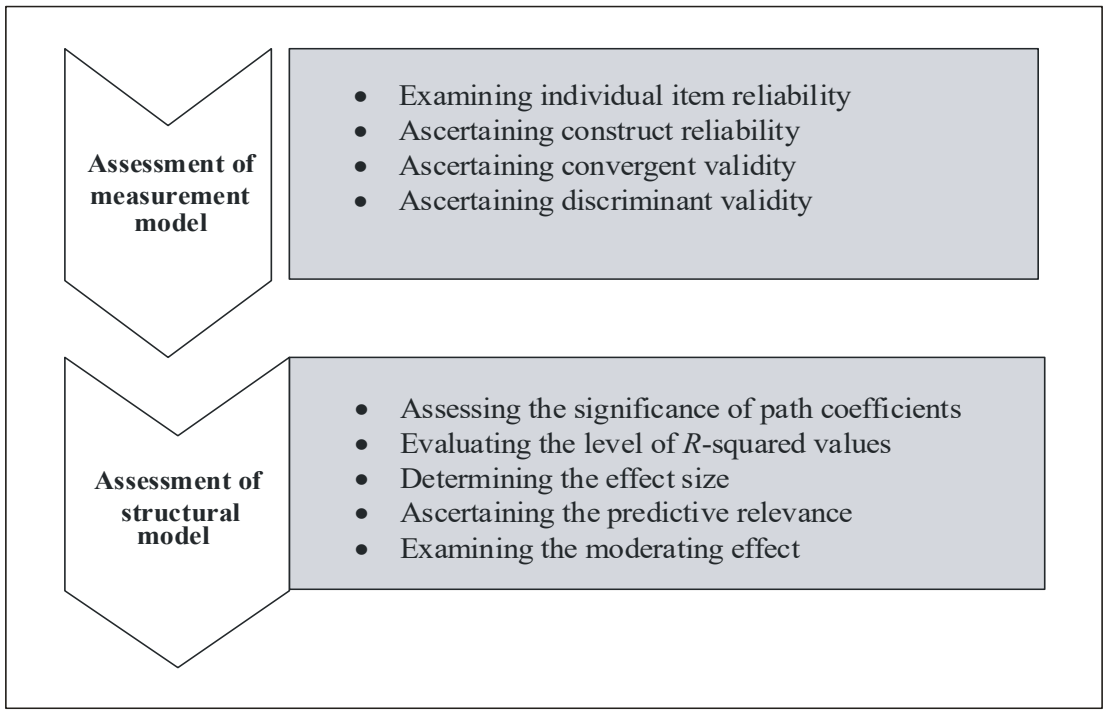

Figure 5.5
A Two-Step Process for the Assessment PLS-SEM Results
Source: Henseler *et al.* (2009).

5.7.1 Assessment of Measurement Model

Measurement model, also known as the outer model demonstrates the relationships between indicators and the latent constructs (Chin, 1998; Hair, Hult*, et al.*, 2014; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014b; Roldán & Sánchez-Franco, 2012). In the present study, measurement model was evaluated for reliability and validity. Reliability and validity are two important criteria for evaluating the quality of measures (Andrew, Pedersen, & McEvoy, 2011; Kimberlin & Winterstein, 2008). Reliability has been defined as the consistency or stability of measure each time it is

administered (Hays & Revicki, 2005). Reliability is usually ascertained at the individual indicator level or at a given construct level (Chin, 2010b; Götz, Liehr-Gobbers, & Krafft, 2010; Im & Grover, 2004).

Because the present study employed partial least squares structural equation modeling (PLS-SEM), the measurement scales was evaluated on the basis of individual indicator reliability, internal consistency reliability, convergent validity, as well as discriminant validity (Hair, Hult*, et al.*, 2014; Hair, Sarstedt*, et al.*, 2014b; Henseler *et al.*, 2009). The full Measurement model was presented in Table 5.11 and Figure 5.6.

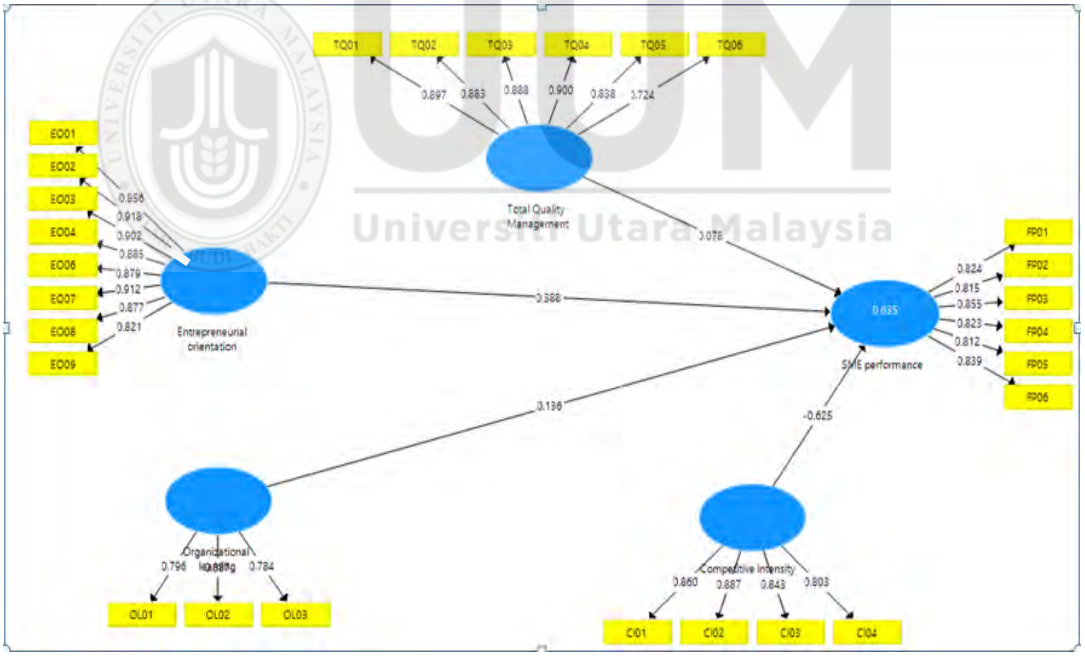

Figure 5.6
Full Measurement Model

5.7.1.1 Individual Indicator Reliability

In this study, individual indicator reliability was evaluated based on standardized loadings for all latent constructs (Chin, 1998; Chin, 2010b; Hair, Hult*, et al.*, 2014; Hair *et al.*, 2011b; Hair, Sarstedt*, et al.*, 2014b). According to Carmines and Zeller (1979), the reliability of an individual item is confirmed when its standardized loading is 0.707 or higher. As shown in Table 5.11, for each latent construct, all standardized loadings have exceeded the Carmines and Zeller's (1979) accepted cut-off point of 0.707, except five items (i.e., EO05, TQ07, OL04, CI05, and CI06), which were deleted from the Measurement model. Thus, individual indicator reliability has been found to be acceptable based on the measurement model results.

5.7.1.2 Construct Reliability

It has been noted earlier that reliability can be ascertained at either the individual indicator level or at a given construct level (Chin, 2010b; Im & Grover, 2004). In this study, construct reliability was determined based on composite reliability index (Hair, Hult*, et al.*, 2014; Hair *et al.*, 2011b; Hair *et al.*, 2012; Nunnally & Bernstein, 1994). According Hair *et al.* (2011b), a satisfactory construct reliability is established when the composite reliability index 0.70 or higher. Therefore, it can be seen in Table 5.11 that the composite reliability indices of all latent constructs were between 0.863 and .0.943. This suggests that satisfactory construct reliability is

achieved because the composite reliability indices reported in this present study were above the acceptable cut-off point of 0.70 (see also Figure 5.6).

5.7.1.3 Convergent Validity

Convergent validity refers to the degree to which two or more measures of the same theoretical construct assessed by different methods are in agreement (Guo, Aveyard, Fielding, & Sutton, 2008; Papoutsakis, 2008). The existing literature on PLS path modeling indicates that convergent validity is ascertained using the average variance extracted (AVE; Chin, 1998; Fornell & Larcker, 1981; Henseler *et al.*, 2016; Sánchez-Franco & Roldán, 2015). In particular, to achieve adequate convergent validity, Fornell and Larcker (1981) recommended that AVE values should be 0.50 or higher. As indicated in Table 5.11, AVE values ranged between 0.679 and 0.777, and all latent constructs demonstrate AVE values higher than the recommended threshold of 0.50. Hence, it can be concluded that adequate convergent validity has been established in the present study.

Table 5.11
Measurement Model Results

Latent constructs and indicators	**Standardized Loadings**	**Composite Reliability**	**Average Variance Extracted**
Entrepreneurial orientation		0.941	0.777
EO01	0.856		
EO02	0.918		
EO03	0.902		
EO04	0.885		
EO06	0.879		
EO07	0.912		
EO08	0.877		
EO09	0.821		
Total Quality Management		0.943	0.735
TQ01	0.897		
TQ02	0.883		
TQ03	0.888		
TQ04	0.900		
TQ05	0.838		
TQ06	0.724		
Organizational learning		0.863	0.679
OL01	0.796		
OL02	0.887		
OL03	0.784		
Competitive intensity		0.912	0.721
CI01	0.860		
CI02	0.887		
CI03	0.843		
CI04	0.803		
SME performance		0.929	0.686
FP01	0.824		
FP02	0.815		
FP03	0.855		
FP04	0.823		
FP05	0.812		
FP06	0.839		

5.7.1.4 Discriminant Validity

Discriminant validity refers to the degree to which one theoretical construct differs from another (Papoutsakis, 2008, p. 149). Extant literature on PLS path modeling suggests several approach to ascertain adequate discriminant validity, including Fornell-Larcker criterion, heterotrait-monotrait ratio of correlations (HTMT) criterion, and by examination of cross-loadings (cf., Chin, 1998; Fornell & Larcker, 1981; Hair, Hult*, et al.*, 2014; Henseler, Ringle, & Sarstedt, 2015). However, the present study focuses mainly Fornell-Larcker criterion, as well as cross-loadings approach because they are the most widely used methods of establishing discriminant validity in entrepreneurship research (e.g., Al-Dhaafri *et al.*, 2016; Ho, Ahmad, & Ramayah, 2016; Lechner & Gudmundsson, 2014).

Regarding the Fornell-Larcker criterion, discriminant validity was confirmed by comparing the square root of AVEs (the diagonal entries) with the correlations between constructs (the off-diagonal entries) (Fornell & Larcker, 1981; Hair, Hult*, et al.*, 2014; Roldán & Sánchez-Franco, 2012). According to Roldán and Sánchez-Franco (2012), adequate discriminant validity is achieved if, the diagonal elements are significantly greater than the off-diagonal elements in the corresponding rows and columns. The results of the discriminant validity analysis using Fornell-Larcker criterion are reported in Table 5.12. Following Roldán and Sánchez-Franco (2012),

adequate discriminant validity has been established in the present study because the square root of AVEs were greater than the correlations between constructs .

Table 5.12
Results of Discriminant Validity Based on Fornell-Larcker Criterion

	Latent Construct	1	2	3	4	5
1	Entrepreneurial orientation	**0.882**				
2	Total quality management	-0.244	**0.857**			
3	Organizational learning	-0.374	0.351	**0.824**		
4	Competitive intensity	-0.474	0.557	0.353	**0.849**	
5	SME performance	0.615	-0.317	-0.202	-0.718	**0.828**

Note: "Diagonal elements are the square root of the variance shared between the constructs and their measures (AVE). Off-diagonal elements are the correlations among constructs".

As mentioned earlier, the present study also ascertained discriminant validity using as cross-loadings approach. As the name implies, this approach involves examination of cross-loadings Table. Specifically, discriminant validity is ascertained "when an indicator's loading on a construct is higher than all of its cross loadings with other constructs" (Hair, Hult*, et al.*, 2014, p. 111). The loadings and cross loadings of each indicator are reported in Table 5.13. Following Hair, Hult*, et al.* (2014), adequate discriminant validity has been established in the present study because the indicator's loading on each construct is higher than all of its cross loadings with other constructs.

5.7.2 Structural Model/Hypotheses Testing

Structural model, also known as the inner model shows the relationships among the latent constructs (Chin, 1998; Hair, Hult*, et al.*, 2014; Hair, Sarstedt*, et al.*, 2014b). This section presents the results of the hypotheses tests relating to the conceptual model that has been depicted in Figure 3.1. It could be recalled that the conceptual model proposes that competitive intensity moderates the relationships between entrepreneurial orientation, total quality management, organizational learning and SME performance in Nigeria. In line with empirical evidence, resource based theory, as well as contingency theory, six research hypotheses were formulated and tested based on the results of structural model.

Table 5.13
Cross Loadings

	Entrepreneurial orientation	Total Quality Management	Organizational learning	Competitive intensity	SME performance
EO01	**0.856**	0.389	0.370	0.519	-0.571
EO02	**0.918**	-0.241	-0.308	-0.455	0.572
EO03	**0.902**	-0.271	-0.292	-0.437	0.544
EO04	**0.885**	-0.229	-0.315	-0.410	0.532
EO06	**0.879**	-0.102	-0.311	-0.328	0.483
EO07	**0.912**	-0.207	-0.347	-0.443	0.556
EO08	**0.877**	-0.151	-0.277	-0.420	0.574
EO09	**0.821**	-0.101	-0.425	-0.300	0.487
TQ01	-0.359	**0.897**	0.309	0.574	-0.372
TQ02	-0.071	**0.883**	0.301	0.416	-0.180
TQ03	-0.146	**0.888**	0.288	0.470	-0.230
TQ04	-0.320	**0.900**	0.342	0.521	-0.339
TQ05	-0.013	**0.838**	0.253	0.372	-0.183
TQ06	-0.133	**0.724**	0.292	0.413	-0.201
OL01	-0.169	0.249	**0.796**	0.232	-0.074
OL02	-0.353	0.360	**0.887**	0.320	-0.198
OL03	-0.323	0.233	**0.784**	0.290	-0.174
CI01	-0.393	0.499	0.302	**0.860**	-0.595
CI02	-0.390	0.458	0.298	**0.887**	-0.644
CI03	-0.441	0.508	0.304	**0.843**	-0.603
CI04	-0.385	0.426	0.296	**0.803**	-0.593
FP01	0.553	-0.243	-0.252	-0.590	**0.824**
FP02	0.577	-0.234	-0.154	-0.560	**0.815**
FP03	0.443	-0.276	-0.114	-0.614	**0.855**
FP04	0.431	-0.176	-0.140	-0.514	**0.823**
FP05	0.406	-0.261	-0.159	-0.597	**0.812**
FP06	0.610	-0.360	-0.179	-0.670	**0.839**

Drawing on PLS path modeling literature, the structural model was evaluated based on five main criteria, namely: algebraic sign, significance of the structural path coefficients, f^2 values, R^2 values, and assessment of PLS estimates at the construct

level (Q^2 values) (Chin, 1998; Chin, 2010a; Roldán & Sánchez-Franco, 2012; Suarez, Calvo-Mora, & Roldán, 2016). Furthermore, following Hair, Hult, *et al.* (2014), as well as Henseler *et al.* (2009), bootstrapping with 5000 resamples was used to generate beta values, standard errors, *t*-values, and *p*-values. The full results of structural model that included both the direct effect model, (baseline model), and moderating effect model are presented in Figure 5.7 and Table 5.14.

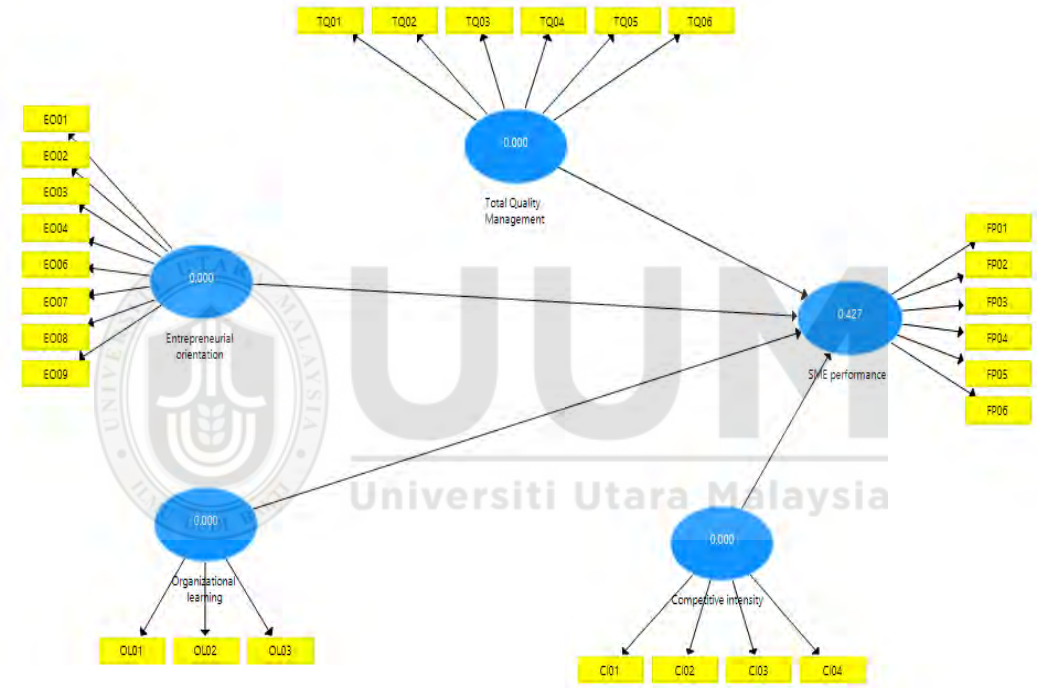

Figure 5.7
Structural Model

5.7.2.1 Algebraic Signs

As indicated in Table 5.14, the algebraic signs (beta values) in the direct effect model were all positive, which is consistent with the first three research hypotheses were formulated. Specifically, the positive beta values direct effect model suggests that Hypotheses 1-3, the relationships between exogenous latent variables and endogenous latent variables are positive. For example, there is a positive relationship between entrepreneurial orientation and SME performance.

Table 5.14
Structural Model Results

Hypotheses	Relations	Beta	SE	t-value	p-value	Findings
	Main Effect:					
H1	EO	0.44	0.06	7.64***	0.00	Supported
H2	TQM	0.11	0.04	2.63***	0.00	Supported
H3	OL	0.16	0.04	4.09***	0.00	Supported
	Moderating Effect:					
H4	EO x CI	-0.12	0.04	2.84***	0.00	Supported
H5	TQM x CI	-0.01	0.05	0.18	0.43	Not supported
H6	OL x CI	-0.08	0.06	1.51*	0.07	Supported

Note: EO = Entrepreneurial orientation; TQM = Total Quality Management; OL = Organizational learning; CI = Competitive intensity; SMEP = SME performance; Note: ***Significant at 0.01 (1-tailed), **significant at 0.05 (1-tailed), *significant at 0.1 (1-tailed).

5.7.2.2 Significance of the Structural Path Coefficients

Regarding the significance of the structural path coefficients, of the six hypotheses postulated and tested, H1, H2, H3, H4, and H6 were statistically significant, while H5 was not found to be statistically significant. It could be recalled that Hypothesis 1 predicted that there will be a positive relationship between entrepreneurial

orientation and SME performance. As indicated in Figure 5.8 and Table 5.14, a significant positive relationship between entrepreneurial orientation and SME performance was found ($\beta = 0.44$, $t = 7.64$, $p < 0.01$). Accordingly, Hypotheses 1 was supported.

Hypothesis 2 predicted that there will be a positive relationship between total quality management and SME performance. Results (Figure 5.8 and Table 5.14) indicated that total quality management had a significant positive relationship with SME performance ($\beta = 0.11$, $t = 2.63$, $p < 0.01$), supporting Hypothesis 2. Similarly, Hypothesis 3 predicted that there will be a positive relationship between organizational learning and SME performance. As shown in Figure 5.8 and Table 5.14, organizational learning had a significant positive relationship with SME performance ($\beta = 0.16$, $t = 4.09$, $p < 0.01$). Hence, Hypotheses 3 was supported.

The remaining three moderation hypotheses postulated were tested using Henseler and Chin's (2010) product indicator approach. Specifically, product indicator approach entails "calculating products using the indicators of the two latent variables for which the moderation effect occurs, and in turn using these to establish a latent interaction term that is included in the structural equation modeling" (Finch & French, 2015, p. 118). A simple example of product indicator approach is depicted in Figure 5.8.

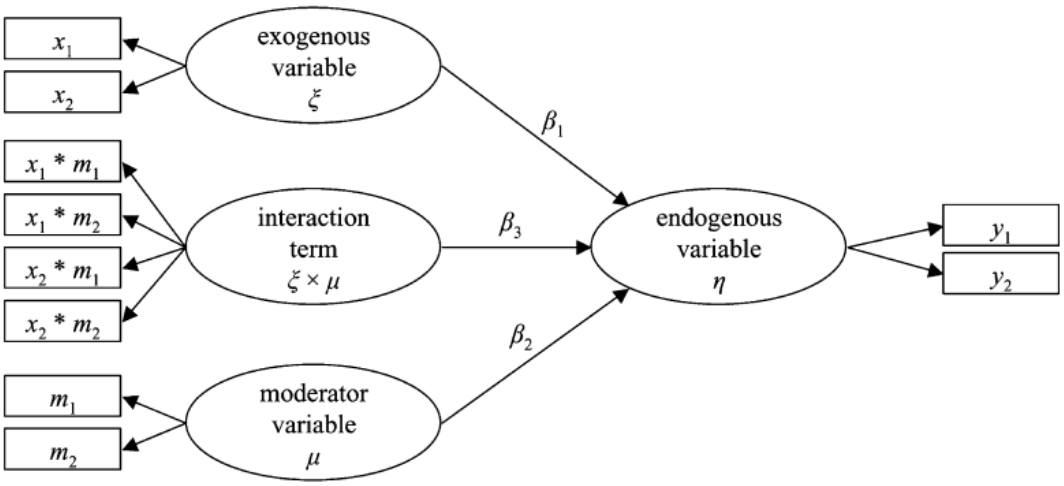

Figure 5.8
Product Indicator Approach
Source: Henseler and Chin (2010).

It could be recalled that Hypothesis 4 postulated that competitive intensity moderates the positive relationship between entrepreneurial orientation and SME performance. Specifically, this relationship is stronger (i.e. more positive) when business environment is highly competitive than when it is not competitive. The results shown in Figure 5.9 and Table 5.14 indicated that the interaction terms representing entrepreneurial orientation and competitive intensity, towards predicting SME performance ($\beta = -0.12$, $t = 2.84$, $p < 0.01$) was statistically significant. Hence, Hypothesis 4 was fully supported. Following procedures recommended by Dawson and Richter (2006), as well as Dawson (2014), information from the structural model

results was used to plot a graph depicting the moderating effect of competitive intensity on the relationship between entrepreneurial orientation and SME performance. Figure 5.10 demonstrates that the relationship between entrepreneurial orientation and SME performance is stronger (i.e. more positive) when business environment highly is competitive than when it is not competitive.

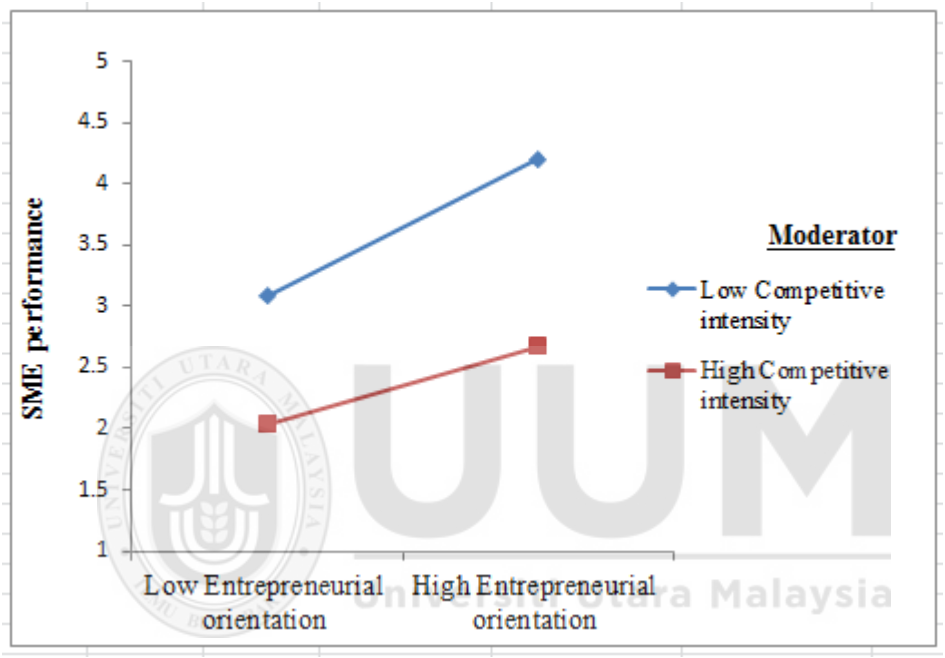

Figure 5.9
Interaction Effect of Entrepreneurial Orientation and Competitive Intensity on SME performance

Regarding Hypothesis 5, which posited that competitive intensity moderates the positive relationship between total quality management and SME performance. Specifically, this relationship is stronger (i.e. more positive) when business environment highly is competitive than when it is not competitive. As indicated in

Figure 5.10 and Table 5.14 , this hypothesis was not because the interaction terms representing total quality management and competitive intensity, towards predicting SME performance was not statistically significant ($\beta = -0.01$, $t = 0.18$, $p > 0.10$).

Finally, Hypothesis 6 predicted that competitive intensity moderates the positive relationship between organizational learning and SME performance. Specifically, this relationship is stronger (i.e. more positive) when business environment highly competitive than when it is not competitive. The results shown in Figure 5.10 and Table 5.14 support Hypothesis 6, since the interaction terms representing organizational learning and competitive intensity towards predicting SME performance was found to be statistically significant ($\beta = -0.08$, $t = 1.51$, $p < 0.10$). Accordingly, the moderating effect of competitive intensity on the relationship between organizational learning and SME performance is depicted in Figure 5.10, which shows a stronger positive relationship between organizational learning and SME performance when business environment highly competitive than when it is not competitive.

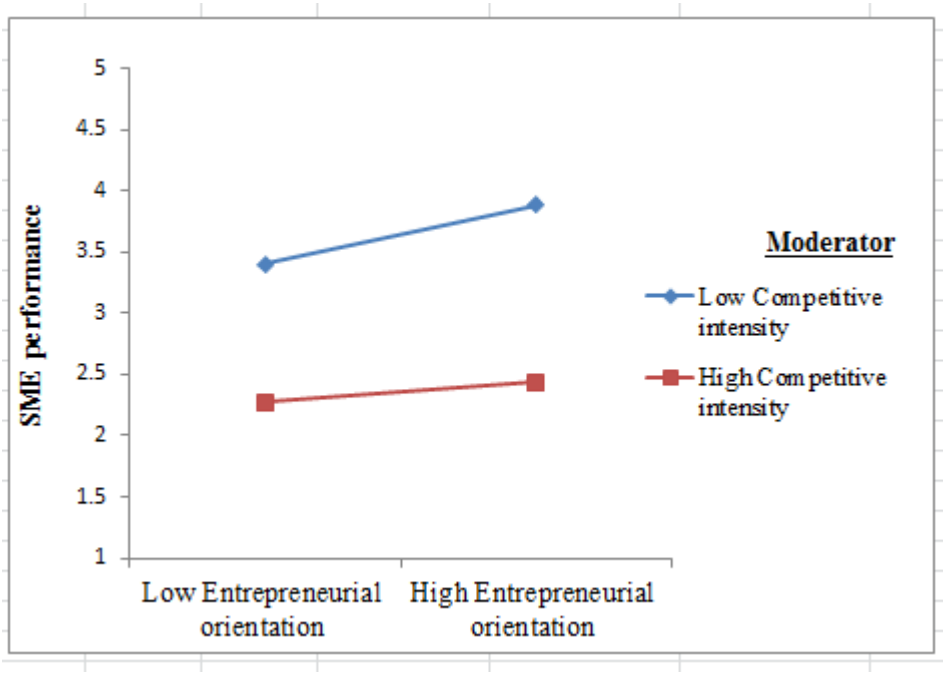

Figure 5.10
Interaction Effect of Organisational Learning and Competitive Intensity on SME performance

5.7.2.3 Assessment of Effect Size (f^2)

Effect size can be defined as a measure of the strength of the relationship between two variables (Kotrlik, Atherton, Williams, & Jabor, 2011; Sullivan & Feinn, 2012). For example, effect size describes indices that measure the magnitude or extent of the effect of an exogenous latent variable on endogenous latent variable in the PLS path modeling. Two main reasons justify the need for reporting effect size in this study. Firstly, measure of effect size would enable researchers to better judge the practical significance of this study's key findings (Fritz, Morris, & Richler, 2012; Kotrlik *et al.*, 2011; Wilkinson & APA Task Force on Statistical Inference, 1999).

Secondly, reporting of effect size in the present study increases the accuracy of path coefficient estimates, thereby reducing the probability of committing a Type II error (Schwab, 2015).

Although effect size is automatically calculated by the SmartPLS version 3, it is imperative to note that it can also be computed manually using the following formula (see, for example, Chin, 1998; Cohen, 1988; Hair, Hult, *et al.*, 2014; Henseler *et al.*, 2009; Peng & Lai, 2012):

$$\text{Effect size } (f^2) = \frac{R^2_{Included} - R^2_{Excluded}}{1 - R^2_{Included}} \quad (5.1)$$

According to Cohen (1988), f^2 values of 0.02, 0.15 and 0.35 should be operationalized and interpreted as small, medium, and large effect sizes, respectively. The strength of the effect of exogenous latent variables on endogenous latent variable in the main effect PLS path model is reported in Table 5.15.

Table 5.15
Effect Sizes in the Main Effect PLS Path Model

Endogenous Latent Variables	**Effect size (f^2)**
Entrepreneurial orientation	0.298m
Total quality management	0.011n
Organizational learning	0.040s
Competitive intensity	0.605l

Note: Endogenous Latent Variable = SME Performance

As shown in Table 5.15, the strength of the effect of the four exogenous latent variables, namely: entrepreneurial orientation, total quality management, organizational learning, and competitive intensity on endogenous latent variable were 0.298, 0.011, 0.040, and 0.605, respectively. Accordingly, based on Cohen's (1988) guidelines, the effects sizes of these four exogenous latent variables on SME performance can be described and interpreted as medium, none, small, and large, respectively.

Besides reporting the measure of effect size the main effect PLS path model, the present study also determined the strength of the moderating effects manually using the following formula (Chin, 1998; Cohen, 1988; Hair, Hult, *et al.*, 2014; Henseler *et al.*, 2009; Peng & Lai, 2012):

$$\text{Effect size } (f^2) = \frac{R^2_{\text{model with moderator}} - R^2_{\text{model without moderetor}}}{1 - R^2_{\text{model with moderator}}} \quad (5.2)$$

The interpretation of the strength of moderating effect was also based on Cohen's (1988) small, medium, and large effect sizes for 0.02, 0.15 and 0.35, respectively. While in some cases small effect size is obtained using the above formulae, it is important to note that small effect size does not necessarily mean that the moderating effect is negligible. According to Chin, Marcolin, and Newsted (2003), "even a small interaction effect can be meaningful under extreme moderating conditions, if the resulting beta changes are meaningful, then it is important to take

these conditions into account" (p. 211). Results of moderating effects size are reported in Table 5.16.

Following Cohen's (1988) threshold, Table 5.16 indicated that the strength of the moderating effect of competitive intensity on the relationships between entrepreneurial orientation, total quality management, organizational learning, and SME performance was 0.123, suggesting small effect size.

Table 5.16
Moderating Effect Size

	Included	**Excluded**	**f-squared**	**Effect size**
R-squared	0.675	0.635	0.123	Small

5.7.2.4 Coefficient of Determination

Coefficient of determination, also called the R-squared indicates the percentage of variance in the endogenous variable that can be explained by the exogenous variables. In other words, R-squared value indicates how well the independent variables predict the dependent. R-square value, which ranges from 0 to 1, also indicates how well a regression model fits the data. Thus, R-square value closer to 1 indicates a better model fit. While an acceptable R-squared value depends on the research context, (Hair et al., 2010), Falk and Miller (1992) suggests 0.10 or 10% as a minimum acceptable R-squared value. Table 5.16 presents the R-squared values of

the main effect structural model, as well as the moderating effect structural model. As shown inTable 5.16, the coefficient of determination for the main effect PLS model was 0.635. This suggests that the four sets of exogenous latent variables (i.e., entrepreneurial orientation, total quality management, organizational learning, and competitive intensity) collectively explain 64% of the variance in SME performance.

In the same vein, Table 5.16 showed that the coefficient of determination for the moderating effect PLS model was 0.675. This suggests that after computing the interaction terms, the four sets of exogenous latent variables (i.e., entrepreneurial orientation, total quality management, organizational learning, and competitive intensity) collectively explain 68% of the variance in SME performance. Taken together, the coefficients of determination for both the main effect PLS models, as well as the moderating effect PLS model were above Hence, Falk and Miller's (1992) acceptable levels of R-squared values. Hence, it can be concluded that the R-square values reported in both the main effect and moderating effect PLS models were satisfactory and acceptable.

5.7.2.5 Assessment of PLS Estimates at the Construct Level

As noted earlier, an assessment of PLS estimates at the construct level (Q^2) represents one of the five criteria through which theoretical/structural model is evaluated. Following these criteria, this study applied Stone-Geisser test of

predictive relevance to assess model fit (Geisser, 1974; Stone, 1974). In other words, Stone-Geisser test of predictive relevance is an indicator of how well a model fits the data collected like hand in glove (Ruiz, Gremler, Washburn, & Carrión, 2010; Wold, 1982). In PLS path modeling, two types of Q^2 values can be generated after applying blindfolding procedure , namely: cross-validated communality, as well as Crossvalidated redundancy (Fornell & Cha, 1994). However, Chin (1998) strongly recommended using Crossvalidated redundancy to examine the predictive relevance of the structural model. A Crossvalidated redundancy (Q^2 value) greater than zero suggests that a theoretical/structural model has predictive relevance, conversely, a structural model with Q^2 value less zero implies that the model has no predictive relevance (Chin, 1998; Henseler *et al.*, 2009).

Accordingly, in line with Chin's (1998) recommendation, Results of Stone-Geisser test of predictive relevance (Q^2) are presented in Table 5.17. As shown in Table 5.17, the Crossvalidated redundancy (Q^2 value) for endogenous latent variable (SME performance) was 0.427, suggesting that the structural model in this study has predictive relevance (Chin, 1998; Henseler *et al.*, 2009).

Table 5.17
Construct Cross-Validated Redundancy

	SSO	SSE	Q¬≤ (=1-SSE/SSO)
Entrepreneurial orientation	3,264.000	3,264.000	
Total quality management	2,448.000	2,448.000	
Organizational learning	1,224.000	1,224.000	
Competitive intensity	1,632.000	1,632.000	
SME performance	2,448.000	1,401.617	0.427

5.8 Summary of Results

After presenting the results of structural model for both the main effect PLS models, as well as the moderating effect PLS model in preceding sections, Table 5.18 provides summary of results of all hypotheses tested.

Table 5.18
Summary of Hypotheses Testing

Hypotheses	Statement	Findings
H1	There will be a positive relationship between entrepreneurial orientation and SME performance.	Supported
H2	There will be a positive relationship between TQM implementation and SME performance.	Supported
H3	There will be a positive relationship between organizational learning and SME performance.	Supported
H4	Competitive intensity moderates the positive relationship between entrepreneurial orientation and SME performance.	Supported
H5	Competitive intensity moderates the positive relationship between total quality management implementation and SME performance.	Not supported
H6	Competitive intensity moderates the positive relationship between organizational learning and SME performance.	Supported

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5.9 Chapter Summary

This chapter presented the rationale for using PLS path modeling to test the theoretical model in the present study. For the sake of simplicity, empirical results are presented using tables and graphs. The chapter began by presenting the results of initial data screening and preliminary analyses before presenting the results of the PLS path analysis. Specifically, the results of the PLS path analysis was presented according to measurement model evaluation, assessment of structural model. It could be recalled that the purpose of this study was to examine the moderating role of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance. Following assessment of structural model, the results have provided considerable support for the moderating effects of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance.

In particular, the path coefficients demonstrated a significant positive relationship between: (1) entrepreneurial orientation and SME performance; (2) total quality management and SME performance; (3) and organizational learning and SME performance. Regarding moderating effect, results indicated that competitive intensity moderated the positive relationship between: (4) entrepreneurial orientation and SME performance; and (5) organizational learning and SME performance. The

next chapter (Chapter 6) will discuss the findings of the study in terms of its implications, limitations, and then make suggestions for future research directions before making concluding remarks.

CHAPTER SIX

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

This chapter provides detailed discussion of the findings and then relates these findings to prior theories and extant research. The chapter begins with recapitulation of the research findings. The recapitulation of the research findings is then followed by discussion of the research results, which has been organized according to the research objectives. Next, the chapter delves into the theoretical, practical, and methodological contributions of the study. The chapter also addresses the limitations of this study and suggests possible directions for future studies. Finally, the chapter presents the conclusions of this study.

6.2 Recapitulation of the Research Findings

This study provides insight into the boundary condition for the effects of entrepreneurial orientation, total quality management practices, and organizational learning on SME performance. Specifically, the main objective of the present study was to examine the moderating role of competitive intensity on the relationships between entrepreneurial orientation, total quality management practices, organizational learning and SME performance. Based on the main objective of this study, a total of six specific objectives were put forward and six hypotheses formulated were also tested. The first specific objective of this study was to examine

the relationship between entrepreneurial orientation and SME performance. The results of the PLS path modeling support the hypothesized relationship between entrepreneurial orientation and SME performance.

In the interest of achieving the second research objective, this study tested a hypothesized structural model to determine the relationship between total quality management and SME performance. Based on the results of PLS path modeling, this study reported that total quality management had a significant positive relationship with SME performance. Likewise, the third objective of this study was to examine the relationship between organizational learning and SME performance. As expected, the results of the PLs path modeling yielded that organizational learning positively influenced overall SME performance in Nigerian manufacturing sector.

In addition to the main effect of entrepreneurial orientation, total quality management practices and organizational learning on SME performance, the fourth specific objective of this study was to determine whether competitive intensity moderates the relationship between entrepreneurial orientation and SME performance. As predicted, the results of PLS path modeling showed that competitive intensity strengthened the relationship between entrepreneurial orientation and SME performance. Small and Medium Enterprises that operate in a

highly competitive business environment achieve better performance than those which operate in a business environment that is not competitive in nature.

The fifth specific objective of this study was to examine whether competitive intensity moderates the relationship between total quality management and SME performance. Contrary to this prediction, competitive intensity did not moderate the relationship between total quality management and SME performance. It was hypothesized that the moderating effect would be that as competitive business environment increase SME performance as implementation of total quality management increased. Instead, this study reported that competitive intensity did not increase the level of SME performance when implementation of total quality management increased.

Finally, to achieve the sixth research objective, this study tested a hypothesized structural model to ascertain determine whether competitive intensity moderates the relationship between organizational learning and SME performance. Based on the results of PLS path modeling, this study established that competitive intensity plays a significant moderating role between organizational learning and SME performance.

6.3 Discussion of the Research Results

Overall, the present study provided supportive evidence regarding the role of competitive intensity as a moderator on the relationships between entrepreneurial orientation, total quality management practices, organizational learning and SME performance. This responds to calls for more research on the role of business environment factors in predicting organizational performance. The subheadings of the discussions of research results section are organized according to the objectives of the study.

6.3.1 Entrepreneurial orientation and SME performance

As noted earlier, the first objective of the present study was to assess the influence of entrepreneurial orientation on SME performance. Based on the results of Partial Least Squares path modeling, the present study reported that entrepreneurial orientation positively influenced SME performance. It is imperative to remember that entrepreneurial orientation was defined as a firm-level predisposition and commitment to engage in behaviors that lead to change in the organization or marketplace, such as initiating and sustaining new ideas that lead to new product offerings, implementing new business processes in order to expand new markets, trying out new product offerings in the face of uncertainty, encouraging employees to be independent in initiating and implementation of innovative ideas, and

monitoring industry trends and competitors' best practices Voss *et al.* (2005). A plausible explanation for this is that a firm that engages in entrepreneurial orientation is likely to achieve superior business performance and sustained competitive advantage (Hasan *et al.*, 2013; Kraus *et al.*, 2012; Lee & Chu, 2011). Thus, entrepreneurial orientation requires a firm to engage in product-market innovation, undertake somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch" Miller (1983, p. 771).

The significant positive influence of entrepreneurial orientation on SME performance in this study was consistent with many of the past empirical studies, such as Li, Huang, and Tsai (2009), Jalali, Jaafar, and Ramayah (2014), Keh, Nguyen, and Ng (2007), Kraus et al. (2012), Real, Roldán, and Leal (2014), Tang *et al.* (2015), Lechner and Gudmundsson (2014), Wijetunge and Pushpakumari (2014), Rodrigues and Raposo (2011), Schepers, Voordeckers, Steijvers, and Laveren (2013), and Brouthers, Nakos, and Dimitratos (2015). Collectively, these studies found a significant positive impact of entrepreneurial orientation on various similar organizational performances. The result was also in accordance to the proposition by resource-based theory that a firm can achieve sustained competitive advantage and superior performance by formulating and implementing strategy that generates increased value for the firm relative to its competitors; and sustainability is said to be achieved if the increased value remains when competitors stop trying to copy or

imitate the competitive advantage (Barney, 1991, 2000; Barney & Clark, 2007; Wernerfelt, 1984).

Based on theory and empirical evidence, it could be summed up that entrepreneurial orientation could bring forth positive SME performance, which include better return on assets, financial profitability or return on equity, return on sales, higher level of return on investments than that of competitors, increase in market share relative to competitors, as well as increase in sale volume relative to competitors, among others.

6.3.2 Total Quality Management and SME performance

Total quality management was also reported to have a significant positive influence on SME performance in this study (refer to Table 5.14 on page 112). This denotes that firm that implements total quality management is able to achieve sustainable business performance. The results also provided empirical support to the resource-based theory that articulated total quality management practices as a crucial element in achieving sustained competitive advantage and superior performance of firm, relative to its competitors (Barney, 1991, 2000; Barney & Clark, 2007; Wernerfelt, 1984). Furthermore, this finding was very much similar to the previous studies in the literature of total quality management, including Akgün *et al.* (2013), Christos and Evangelos (2010), Hackman and Wageman (1995), Powell (1995), Shaukat *et*

al. (2000), Vinod *et al.* (2009), Dubey and Gunasekaran (2014), Herzallah *et al.* (2013), Lee and Lee (2013), Yunis, Jung, and Chen (2013), and Zhang and Xia (2013), Jaca and Psomas (2015), Fields and Roman (2010), Prajogo and Sohal (2006).

Despite different context in terms of cultural backgrounds, organizational settings, as well as demographic factors, the aforementioned empirical studies reported similar findings to the present study in which total quality management practices had impacted various organizational performance. If firms implement total quality management practices by adopting a series of strategies, such as quality practices of top management, employee involvement, customer focus, process and data quality management, they are more likely to achieve sustainable competitive advantage by being able to achieve superior business performance.

Based on theory and empirical evidence the present study has succeeded in substantiating the empirical link between total quality management and SME performance in Nigerian context. To sum it up, this study has succeeded in achieving the second research objective.

6.3.3 Organizational Learning and SME performance

This study found a significant and positive influence of organizational learning on SME performance. This suggests that firms that were involved in this study would perform better relative to its competitors. One plausible explanation for this is that firms that are able to learn stand a better chance of recognizing events and market trends (Day, 1994; Jiménez-Jiménez & Sanz-Valle, 2011; Tippins & Sohi, 2003a). Consequently, an organizations that are able to learn in most cases are more flexible and faster in responding to new challenges competition in the marketplace (Day, 1994; Slater & Narver, 1993), hence, this will afford them with opportunities to maintain sustained competitive advantages (Dickson, 1996).

Another possible explanation why the present study found a significant and positive influence of organizational learning on overall performance is that SMEs in Nigerian manufacturing industry are typically able to learn from their failures by digging deeply enough to understand and appreciate the potential learning from failures (Cannon & Edmondson, 2005; Tucker & Edmondson). This in particular helped them to carefully analyse their failure towards understanding what went wrong and how to prevent the occurrence of similar failures in the future (Cannon & Edmondson, 2005).

The result is consistent to empirical findings by Alegre *et al.* (2012), Ramayah *et al.* (2004), Wu and Fang (2010), Li, Wang, *et al.* (2011), Lei *et al.*

(2000), Khandekar and Sharma (2006), Lai Wan and Kwang Sing (2014), Swee *et al.* (2012), Tsung-Hsien (2011), Moustafa and Mohamed (2013), Chaston *et al.* (2001), Barba Aragón, Jiménez Jiménez, and Sanz Valle (2014), Hu (2014), Jiménez-Jiménez and Sanz-Valle (2011), Öztürk *et al.* (2016), Zhou *et al.* (2015), Lee and Lee (2015)

Furthermore, the result is consistent to empirical findings by resource based theory, which postulates that firms usually achieve sustained competitive advantage from the resources at their disposal (e.g., new knowledge and capabilities), which have been acquired based on lessons from past experiences and over time (Barney, 1991, 2000; Smith *et al.*, 1996).

Overall, this study has succeeded in answering the third research objective. It is evident that organizational learning has a significant influence on the performance of SMEs in Nigerian manufacturing industry, particularly those operating in Kano and Kaduna, located in north-west geopolitical zone of Nigeria.

6.3.4 Competitive Intensity as a Moderator between Entrepreneurial Orientation and SME Performance

Extant research suggests that competitive intensity plays a crucial role in determining organizational performance (see for example Awang *et al.*, 2009a; Dimitratos, Lioukas, & Carter, 2004; Donaldson, 2001; García-Zamora, González-

Benito, & Muñoz-Gallego, 2013; Gupta & Batra, 2015; Gupta & Gupta, 2014; Lahiri, 2013; Li, Lundholm*, et al.*, 2011; Li, Zhang, & Chan, 2005; Lumpkin & Dess, 2001; Lusch & Laczniak, 1987; Morić Milovanović, 2012; Parnell, Lester, Long, & Köseoglu, 2012; Ramaswamy, 2001; Su, Xie, Wang, & Li, 2009; Wilden *et al.*, 2013). In addition, research suggests that the intensity of competition has an important role in the effectiveness of entrepreneurial orientation.

The findings of the present study provide substantial support for the moderating role of competitive intensity. They provide practical implications regarding how small and medium enterprises successfully cope with various pressures from competitors (Jansen, Bosch, & Volberda, 2006). In particular, results suggest that small and medium enterprises operating in highly competitive environment increase their performance by practicing entrepreneurial orientation. They response to the threat of their competitors by being proactive, innovative and risk takers (Zahra, 2008). Accordingly, the empirical findings of the present study contribute to previous literatures by demonstrating that competitive intensity differentially moderates the relationship between entrepreneurial orientation and SME performance. In other words, competitive intensity serves as a variable that strengthen the relationship between entrepreneurial orientation and SME performance.

6.3.5 Competitive Intensity as a Moderator between Total Quality Management and SME Performance

As noted earlier, extant research has demonstrated that competitive intensity is related to firm performance (e.g., Gupta & Gupta, 2014; Lahiri, 2013; Lumpkin & Dess, 2001; Parnell *et al.*, 2012; Ramaswamy, 2001; Wilden *et al.*, 2013). However, there is relatively limited number of research examining the moderating role of competitive intensity on total quality management practices - firm performance relationship. Given the scarcity of empirical research in this regard, many scholars (e.g., Nair, 2006a; Sila, 2007; Sousa & Voss, 2002) suggest the need for more research on the plausible moderating role of contextual factors on the effectiveness of total quality management practices.

To answer calls for further research, the present study incorporated competitive intensity as plausible moderating variable between total quality management practices and SME performance. Unexpectedly, the results of the present study do not support the initial postulation of the moderating role of competitive intensity on the relationship between total quality management practices and SME performance. In other words, competitive intensity was not found to be a significant moderator between total quality management and SME performance.

Perhaps the inconsistent result could be attributed to the study context. Specifically, one of the plausible reasons for the unexpected findings could be that, in Nigeria, due to financial constraints as results of current economic recession, SMEs do not properly implement total quality management strategy toward sustained organizational performance. This plausible explanation for the unexpected non-significant results is consistent with Abubakar and Mahmood's (2016) argument that total quality management strategy is resource consuming and the implementation of such strategy dependent largely on firm's resource capacity. The higher the firm's resource capacity, the more likely it would properly implement TQM; and vice versa

6.3.6 Competitive Intensity as a Moderator between Organizational Learning and SME Performance

A substantial amount of research has documented that organizational learning are related to firm performance (Moustafa & Mohamed, 2013; Öztürk *et al.*, 2016; Pett & Wolff, 2016; Ramayah *et al.*, 2004; Swee *et al.*, 2012; Tsung-Hsien, 2011; Ugurlu & Kurt, 2016; Wu & Fang, 2010; Zgrzywa-Ziemak, 2015; Zhou *et al.*, 2015). The present study has examined the moderating role of competitive intensity on the relationship between organizational learning and SME performance. This study provides insight into the differential relationship of organizational learning to SME performance.

Specifically, the results of the present study demonstrated that competitive intensity significantly moderated the relationship between organizational learning and SME performance. Furthermore, the results suggest that the extent to which organizational learning is related to SME performance is contingent on the level of competitive intensity. Specifically, the positive relationship between organizational learning and SME performance is stronger when the firm's operating environment is highly competitive. Thus, a substantially learning-oriented organization should find more opportunities in any business environment than its less learning-oriented competitors. This is why organizational learning is as important, if not more important, in a business environment characterized by low competition.

The results are in line with contingency theory, which postulates that the effectiveness of the effect of organizational learning on SME performance depends largely on competitive intensity. Accordingly, the present study adds to the domain of contingency theory by providing an insight into the effect of organizational learning on SME performance under different levels of competition (i.e., high and low level competitive intensity).

Having discussed the results in the light of theory and extant empirical studies, it is imperative to also relate the findings of this study with four types of moderation that have been proposed by Sharma, Durand, and Gur-Arie (1981).

According to Sharma *et al.* (1981), a typology of moderator variables can be developed by using two underlying dimensions: (1) Based on the relationship with the dependent variable, that is, whether the moderator variables are or are not related to the dependent variable, and (2) based on whether the moderator variable interacts with the predictor variable.

Furthermore, based on the aforementioned dimensions, Sharma *et al.* (1981) proposed four types of moderations, namely: (1) intervening, exogenous, antecedent, suppressor, (2) homologizer, (3) quasi moderation, and (4) pure moderation. Specifically, an intervening, exogenous, antecedent, suppressor refers to the type of moderation in which the specification variable is related to the dependent and/or predictor variable but does not interact with the predictor. Homologizer is defined as a moderation in which the specification variable is neither related to the dependent/predictor variable nor interacts with the predictor. In quasi moderation, the specification variable is related to the dependent and/or predictor variable, as well as interact with the predictor. On the other hand, in pure moderation, the specification variable is related to the dependent and/or predictor variable and it also interact with the predictor.

The results regarding the moderating role of competitive intensity on the relationship between entrepreneurial orientation and SME performance, as well as

the relationship between organizational learning and SME performance is a reflection of quasi-moderation. Indeed, it is quasi-moderation, because prior empirical studies have shown that competitive intensity is to firm performance (Lahiri, 2013; Li, Lundholm*, et al.*, 2011; Lusch & Laczniak, 1987; Ramaswamy, 2001; Wilden *et al.*, 2013), as well as interacted with either EO, TQM, or OL (Auh & Menguc, 2005a; Martin & Javalgi, 2016; Wang *et al.*, 2012).

6.4 Contributions of the Study

Prior research has demonstrated that entrepreneurial orientation, total quality management practices and organizational learning significantly play an important role in predicting SME performance (e.g., Covin & Slevin, 1989; Kober *et al.*, 2012; Li, Huang*, et al.*, 2009; Wiklund & Shepherd, 2005). The present study extends previous findings by demonstrating how competitive intensity can strengthen the effect of entrepreneurial orientation, total quality management, and organizational learning on SME performance. The results of this study have several contributions to the existing body of knowledge theoretically, practically, and methodologically. The following sub-sections elaborate on some of the theoretical, practical, and methodological contributions of the present study.

6.4.1 Theoretical Contributions

The present study drew upon three theoretical perspectives to test the hypothesized structural model, including the resource-based view theory (Barney, 1991, 2000) and Contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977). It could be recalled that resource-based view theory (Barney, 1991, 2000) posits that a firm can achieve sustained competitive advantage and superior performance by formulating and implementing strategy that generates increased value for the firm relative to its competitors; and sustainability is said to be achieved if the increased value remains when competitors stop trying to copy or imitate the competitive advantage (Barney & Clark, 2007; Wernerfelt, 1984). Whereas contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) postulates that the relationship between an organizational factors and organizational performance largely depends upon one or more situational variables, which are also known as contingencies (Donaldson, 2001).

The present study has provided additional empirical evidence in the domain of resource-based theory (Barney, 1991, 2000), as well as contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) by moving beyond the direct effect of entrepreneurial orientation, total quality management, and organizational learning on SME performance. In particular, this study has examined the moderating role of competitive intensity on the relationship between entrepreneurial orientation, total

quality management, organizational learning and SME performance. Extant empirical studies regarding the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance have reported mixed findings (e.g., Covin & Slevin, 1989; Kober *et al.*, 2012; Li, Huang*, et al.*, 2009; Wiklund & Shepherd, 2005). Hence, this strongly suggested the need for incorporating a moderating variable on these relationships. Accordingly, this study has extended contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) by incorporating competitive intensity as a moderator to empirically ascertain whether it would strengthen the relationships between entrepreneurial orientation, total quality management, organizational learning, and SME performance.

6.4.2 Practical Contributions

From a practical point of view, the results of this research provided important insights on how entrepreneurial orientation, total quality management, organizational learning, and competitive intensity could enhance the overall performance of SMEs in Nigerian manufacturing sector. Subsequently, the results of this study would serve as a blueprint for the policy-makers and practitioners in formulating vital policies that could assist and help in improving the overall performance of SMEs. The findings suggested that managers of SMEs require working alongside strategic business units, including marketing and quality assurance departments to design relevant policies

that help in promoting customer satisfaction and firm performance (Lai, 2003; Lai & Cheng, 2005).

Furthermore, the findings of this study indicated that entrepreneurial orientation was a significant predictor of SME performance. The findings have practical implications for SMEs in Nigeria. In particular, findings indicate that proactiveness, aggressiveness and innovativeness have emerged as important strategies that grants SMEs better capability to exploit the new opportunities in the Nigerian business environment, thereby achieving sustained competitive advantage (Tang & Tang, 2010). Managers of SMEs ought to realize that research and development capabilities, and new product lines will play an important role in the survival and prosperity of their firms than ever before (Tang & Tang, 2010).

On the one hand, consistent with prior research, the present study reported that organizational learning had a significant and positive relationship with SME performance. This finding has practical implications for SMEs in Nigeria because it suggests that in order to achieve superior performance; SMEs need to foster their organizational learning capability to enable them better anticipate and understand the customer needs and the competitive situation (Barba Aragón *et al.*, 2014). One best way of fostering organizational learning capability is by investing in employee training to enhance their learning competencies.

Additionally, the findings confirm the significant positive relationship between total quality management practices and performance of SMEs in Nigerian manufacturing sector. This finding implies the need to encourage employees' involvement and participation in the implementation of total quality management. Specifically, SMEs ought to develop formal reward and recognition systems in order to encourage employee involvement and participation, provide feedback to the employees, as well as support teamwork (Demirbag *et al.*, 2006). This finding also suggests the need for commitment of top management in the implementation of total quality management. The top management of SMEs should develop an appropriate organization culture, vision, and quality policy in order to satisfy customer expectations and improve their organizations' performance (Demirbag *et al.*, 2006).

Finally, the findings also indicate that competitive intensity moderated the relationships between entrepreneurial orientation, organizational learning and SME performance. Thus, given that the external environment in which organizations compete is dynamic and rapidly changing, it is imperative for managers of SMEs to also constantly change their strategies and operations to reflect these increasing changes in business environment (Kennerley, Neely, & Adams, 2003). Thus, managers should focus on the strategy variables, particularly entrepreneurial orientation, and organizational learning since these variables significantly related to

performance in their environments and adjust their strategies accordingly (Prescott, 1986).

6.4.3 Methodological Contributions

From methodological perspective, this study evaluated construct validity of five measures (i.e., entrepreneurial orientation, total quality management, organizational learning, competitive intensity and SME performance). These instruments were adapted from well-established studies and have been considered as widely-used instruments of the entrepreneurial orientation, total quality management, organizational learning, competitive intensity and SME performance. However, limited empirical evidence on psychometric properties of these measures has been reported because most studies (e.g., Alegre & Chiva, 2013; Kreiser, Marino, & Weaver, 2002; Saraph *et al.*, 1989) are more interested in evaluating the internal consistency reliabilities using Cronbach's alpha (e.g., Auh & Menguc, 2005b; Feng, Prajogo, Tan, & Sohal, 2006; Spicer & Sadler-Smith, 2006). This study moved one step ahead in evaluating the robustness of the Nigerian version of entrepreneurial orientation, total quality management, organizational learning, competitive intensity and SME performance in terms of construct validity to establish usability of the instrument in the Nigerian manufacturing sector.

Specifically, the present study has succeeded in assessing psychometric properties of entrepreneurial orientation, total quality management, organizational learning, competitive intensity and SME performance in terms of convergent and discriminant validity. Psychometric property was also evaluated in terms of individual item reliability; average variance explained (AVE) and composite reliability of each construct measure. Taken together, the present study has succeeded in using one of the more robust approaches (PLS path modeling) to assess the psychometric properties of each theoretical construct incorporated in the conceptual model.

6.5 Limitations and Future Research Directions

Despite its contributions, the present study has a number of limitations that merit discussion. The following section discusses the limitations of the study. First, SME performance data used in the present study was only perceptual or subjective. Although researchers (e.g., Jones & Linderman, 2014; Ketokivi & Schroeder, 2004) showed that subjective measure of firm performance is valid and reliable proxies for objective measures, however, objective measures of firm performance has been found to be relatively free from measurement error (Devaraj, Hollingworth, & Schroeder, 2001; Meier & O'Toole, 2012). Therefore, future research could incorporate objective measures of SME performance in order to replicate the findings of the current study.

Second, the present study offers quite limited generalizability because it focused mainly on SMEs in Nigerian Manufacturing sector, particularly those located in Kano and Kaduna in Northwest geo-political zone. Thus, subsequent similar works are needed to include SMEs in other sector of the economy or geo-political zones in order to generalize the findings. Furthermore, future research could study and compared Manufacturing sector with other sector including banking sector, and real estate industry.

Third, the present study employed a cross-sectional design. One major weakness of cross-sectional design is that it does not allow causal inferences to be made from the population. Hence, given the shot coming of cross-sectional design, future research is strongly needed using longitudinal research design in order to measure and re-examine the relationship between entrepreneurial orientation, total quality management, organizational learning, competitive intensity and SME performance by collecting data at different points in time to confirm the findings of the present study.

Fourth, it could be remembered that all items for each construct in this study were rated by single key informants (owner/manager). Research demonstrates that the use of single key informants can produce valid and reliable results when the key

informants are highly knowledgeable about the affairs of their firm. Nevertheless, use of single key informants is susceptible to judgmental biases when the key informants are not highly knowledgeable in the affairs of their firms (Rindfleisch, Malter, Ganesan, & Moorman, 2008). Although it is not always be feasible, using multiple informants would have clearly strengthened the results. Hence, future research is needed to replicate the findings of the current study using multiple informants.

Fifth, the present study reported that the structural model explained 64 percent of the total variance in in SME performance. This implies that there remain some variables that could significantly explain the variance in SME performance, but not included in the research model. In other words, the remaining 36 percent of the variance in SME performance might be explained by other factors. Hence, this represents a methodological limitation of the present study. Future research is therefore needed to include more variables that might yield additional variance in SME performance. For example, given the fact that the context of this (Nigeria) is prominently a collectivist culture (Fiske, 2002), it is likely that cultural orientation might moderate the relationships between entrepreneurial orientation, total quality management, organizational learning, and SME performance. Thus more research is needed to confirm whether collectivist culture maters in the relationships between

entrepreneurial orientation, total quality management, organizational learning, and SME performance.

6.6 Conclusions

The primary goal of the present study was to examine the underlying factors influencing the performance of small and medium enterprises in Nigerian context. Investigating the factors that influence SME performance was particularly important owing to the contributions of small and medium enterprises to the economic growth of Nigeria. Specifically, this study tested the direct effects of entrepreneurial orientation, total quality management, and organizational learning, on SME performance. The study also tested the moderating role of competitive intensity on the relationships between entrepreneurial orientation, total quality management, organizational learning, and SME performance.

Generally, the cross-sectional analyses provide empirical support for the hypothesized relationships. This study showed that competitive intensity is an important boundary condition of the relationships between entrepreneurial orientation, total quality management, organizational learning, and SME performance. The results also supported theory and research in demonstrating the main effects of entrepreneurial orientation, total quality management, and

organizational learning, on SME performance on SME performance. Furthermore, the present study has provided some empirical support for the moderating effect of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organizational learning and SME performance.

To conclude, the present study adds new knowledge in relation to the impact of entrepreneurial orientation, total quality management, and organizational learning on SME performance in the Nigerian setting. A point of particular importance is that the present study has provided additional empirical evidence in the domain of resource-based theory (Barney, 1991, 2000), as well as contingency theory (Hofer, 1975; Luthans, 1973; Luthans & Stewart, 1977) by moving beyond the direct effect of entrepreneurial orientation, total quality management, and organizational learning on SME performance by incorporating competitive intensity as a moderator on these relationships.

The findings will aid both practitioners and managers to take action towards enhancing firms' sustainable competitive advantage by implementing value-creating strategies, including focusing on customer satisfaction, employees' quality of worklife, developing and implementation of new innovative ideas, as well as creating a supportive learning environment. It is also important to take risk taking strategies into consideration when devising interventions towards enhancing their

firms' sustainable competitive advantage because higher risk has long been associated with greater probability of higher return on investment. Responding to a highly competitive market in which competitors adopts an aggressive program to keep the costs of theirs product very low is also an important strategic option to achieve and/or maintain a sustainable competitive advantage.

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Appendix A

Research Questionnaire

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Dear Prof / Reader / Dr / Mr / Mrs / Ms,

ACADEMIC RESEARCH QUESTIONNAIRE

I am a doctoral candidate at the above-named university, currently working on my PhD thesis title "moderating effect of competitive intensity on the relationship between entrepreneurial orientation, total quality management, organisational learning and SME performance.

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

Thank you very much in anticipation of your responses.

Yours sincerely,

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Section One

Instruction: The following statements assess whether your firm engages in product-market innovation, undertake somewhat risky ventures, and come up with "proactive" innovations in order to survive competition in the market place. Please indicate the extent to which you agree or disagree with the statements based on the scale provided.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

No.	Statement	Level of Agreement with statement						
EO01	Our firm favours a strong emphasis on R&D, technological leadership, and innovations.	1	2	3	4	5	6	7
EO02	Our firm has marketed many new lines of products or services in the past 3 years.	1	2	3	4	5	6	7
EO03	In our firm, changes in product or service lines have usually been quite dramatic.	1	2	3	4	5	6	7
EO04	In dealing with competitors, our firm typically responds to actions which competitors initiate.	1	2	3	4	5	6	7
EO05	Our firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc in dealing with competitors.	1	2	3	4	5	6	7
EO06	Our firm typically adopts a very competitive, 'undo-the-competitors' posture.	1	2	3	4	5	6	7
EO07	Our firm has a strong proclivity for high-risk projects (with chances of very high returns).	1	2	3	4	5	6	7

EO08	Our firm believes that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.	1	2	3	4	5	6	7
EO09	When confronted with decision-making situations involving uncertainty, our firm typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	1	2	3	4	5	6	7

Section Two

Instruction: In this section, we are interested in understanding the extent to which your firm has implemented programs over the past three years to improve the quality of products and processes, improve efficiency, decrease waste, involve employees in the philosophy of continuous improvement. These programs are generally referred to as total quality management (TQM). Please indicate the extent to which you agree or disagree with the statements based on the scale provided.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

No.	Statement	Level of Agreement with statement						
TQ01	Our firm implements programs to improve the quality and reliable delivery of materials and components provided by suppliers.	1	2	3	4	5	6	7
TQ02	Our firm implements programs to reduce waste or non-value added activities throughout the production process.	1	2	3	4	5	6	7

TQ03	Our firm implements programs to reduce time delays in manufacturing and designing products (i . e . improve cycle time).	1	2	3	4	5	6	7
TQ04	Our firm strongly encourages involvement of employees in quality improvement programs (e . g . training , involvement in improvement teams).	1	2	3	4	5	6	7
TQ05	Our firm encourages involvement of functional personnel (manufacturing, marketing, R & D) in strategy formulation.	1	2	3	4	5	6	7
TQ06	Our firm develops close contact between manufacturing and customers	1	2	3	4	5	6	7
TQ07	Our firm implements programs to co-ordinate quality improvements between parts of the organisation.	1	2	3	4	5	6	7

Section Three

Instruction: The following describe statements about some aspects of learning practices in your firm. For example a system that allows us to learn successful practices from other organizations. Please indicate the extent to which you agree or disagree with the statements based on the scale provided.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

No.	Statement	Level of Agreement with statement						
OL01	Our firm has learned or acquired much new and relevant knowledge over the last three years.	1	2	3	4	5	6	7
OL02	Members of our firm have acquired some critical capacities and skills over the last three years.	1	2	3	4	5	6	7
OL03	Our firm's performance has been influenced by new learning it has acquired." over the last three years.	1	2	3	4	5	6	7
OL04	Our firm is a learning organization.	1	2	3	4	5	6	7

Section Four:

Instruction: The following describe statements assess the intensity of competition in the environment in which your firm operates. Please indicate the extent to which you agree or disagree with the statements based on the scale provided below.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

No.	Statement	Level of Agreement with statement						
CI01	Competition in our industry is cutthroat.	1	2	3	4	5	6	7
CI02	There are many "promotion wars" in our industry.	1	2	3	4	5	6	7
CI03	Anything that one competitor can offer, others can match readily.	1	2	3	4	5	6	7
CI04	Price competition is a hallmark of our industry.	1	2	3	4	5	6	7
CI05	One hears of a new competitive move almost every day.	1	2	3	4	5	6	7
CI06	Our competitors are relatively weak.	1	2	3	4	5	6	7

Section Five:

Instruction: The following describe statements assess the overall performance of organisation compared to your competitors. Using the scale provided below to rate your firms' overall performance over the past 3 years.

Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

No.	Statement	Level of Agreement with statement						
FP01	Over the past 3 years, our financial performance has been outstanding	1	2	3	4	5	6	7
FP02	Over the past 3 years, our financial performance has exceeded our competitors'.	1	2	3	4	5	6	7
FP03	Over the past 3 years, our revenue (sales) growth has been outstanding.	1	2	3	4	5	6	7
FP04	Over the past 3 years, we have been more profitable than our competitors.	1	2	3	4	5	6	7
FP05	Over the past 3 years, our revenue growth rate has exceeded our competitors'.	1	2	3	4	5	6	7
FP06	Over the past 3 years, there has been an increase in market share relative to our competitors.	1	2	3	4	5	6	7

Section Six:

Individual and Organizational Profile Information

Please Kindly, tick [✓] in the appropriates answer.

1. Gender

Male [ ]

Female [ ]

2. Age

1. 20-30 years **[ ]**

2. 31-40 years **[ ]**

3. 41-50 years **[ ]**

4. 50 years and above **[ ]**

3. Highest Educational Qualification

1. Primary School [ ]
2. Secondary School [ ]
3. Diploma/NCE [ ]
4. Bachelor Degree [ ]
5. Masters [ ]
6. Others [ ]

4. Marital Status

1. Single [ ]
2. Married [ ]

5. Ethnicity

1. Hausa/Fulani [ ]
2. Igbo [ ]
3. Yoruba [ ]
4. Others (please specify)_____

6. Position

Owner [ ]
Manager [ ]

7. Ownership of company

Sole proprietorship [ ]
Partnership [ ]
Limited Liability Company [ ]

8. Number of employees

Less than 50	[ ]
50-99	[ ]
100-249	[ ]
250-499	[ ]
500 or more	[ ]

9. Industry

Food and beverages	[ ]
Packaging/containers	[ ]
Metal and metal products	[ ]
Printing and publishing	[ ]
Agro-allied	[ ]
Building materials	[ ]
Others	[ ]

10. Number of years in business

Less than 3 years	[ ]
3 – 6 years	[ ]
7 – 9 years	[ ]
10 – 12 years	[ ]
13 years or more	[ ]

Thank you for your participation and your time in answering the survey. All response will be treated with the utmost confidence and no single set of responses will be readily identifiable.

Comments (optional):

_____

_____

_____

Appendix B

SPSS Output

Frequencies

Statistics

		EO01	EO02	EO03	EO04	EO05	EO06	EO07
N	Valid	439	439	439	439	439	439	439
	Missing	1	1	1	1	1	1	1

Statistics

		EO08	EO09	OL01	OL02	OL03	OL04	TQ01
N	Valid	439	439	438	438	438	438	439
	Missing	1	1	2	2	2	2	1

Statistics

		TQ02	TQ03	TQ04	TQ05	TQ06	TQ07	CI01
N	Valid	439	439	439	439	439	439	438
	Missing	1	1	1	1	1	1	2

Statistics

		CI02	CI03	CI04	CI05	CI06	FP01	FP02
N	Valid	438	438	438	438	438	438	438
	Missing	2	2	2	2	2	2	2

Statistics

		FP03	FP04	FP05	FP06
N	Valid	438	438	438	438
	Missing	2	2	2	2

Frequency Table

EO01

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	39	8.9	8.9	8.9
	2	2	.5	.5	9.3
	3	29	6.6	6.6	15.9
	3	6	1.4	1.4	17.3
	4	59	13.4	13.4	30.8
	5	61	13.9	13.9	44.6
	6	6	1.4	1.4	46.0
	6	79	18.0	18.0	64.0
	7	158	35.9	36.0	100.0
	Total	439	99.8	100.0	

Missing	System	1	.2		
Total		440	100.0		

EO02

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	7.7	7.7	7.7
	2	4	.9	.9	8.7
	3	40	9.1	9.1	17.8
	3	7	1.6	1.6	19.4
	4	49	11.1	11.2	30.5
	5	80	18.2	18.2	48.7
	6	7	1.6	1.6	50.3
	6	92	20.9	21.0	71.3
	7	126	28.6	28.7	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

EO03

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	8.4	8.4	8.4
	2	2	.5	.5	8.9
	3	32	7.3	7.3	16.2
	3	14	3.2	3.2	19.4
	4	63	14.3	14.4	33.7
	5	71	16.1	16.2	49.9
	6	8	1.8	1.8	51.7
	6	92	20.9	21.0	72.7
	7	120	27.3	27.3	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

EO04

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	7.5	7.5	7.5
	2	3	.7	.7	8.2
	3	44	10.0	10.0	18.2
	3	10	2.3	2.3	20.5
	4	63	14.3	14.4	34.9
	5	62	14.1	14.1	49.0
	6	3	.7	.7	49.7
	6	104	23.6	23.7	73.3
	7	117	26.6	26.7	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		

Total		440	100.0		

EO05

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	.9	.9	.9
	2	7	1.6	1.6	2.5
	3	10	2.3	2.3	4.8
	3	11	2.5	2.5	7.3
	4	85	19.3	19.4	26.7
	5	93	21.1	21.2	47.8
	6	38	8.6	8.7	56.5
	6	102	23.2	23.2	79.7
	7	89	20.2	20.3	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

EO06

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	48	10.9	10.9	10.9
	2	8	1.8	1.8	12.8
	3	24	5.5	5.5	18.2
	3	14	3.2	3.2	21.4
	4	76	17.3	17.3	38.7
	5	102	23.2	23.2	62.0
	6	5	1.1	1.1	63.1
	6	98	22.3	22.3	85.4
	7	1	.2	.2	85.6
	7	63	14.3	14.4	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

EO07

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	40	9.1	9.1	9.1
	2	5	1.1	1.1	10.3
	3	41	9.3	9.3	19.6
	3	13	3.0	3.0	22.6
	4	65	14.8	14.8	37.4
	5	81	18.4	18.5	55.8
	6	3	.7	.7	56.5
	6	113	25.7	25.7	82.2
	7	78	17.7	17.8	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		

Total		440	100.0		

EO08

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	50	11.4	11.4	11.4
	2	3	.7	.7	12.1
	3	25	5.7	5.7	17.8
	3	19	4.3	4.3	22.1
	4	64	14.5	14.6	36.7
	5	91	20.7	20.7	57.4
	6	6	1.4	1.4	58.8
	6	107	24.3	24.4	83.1
	7	74	16.8	16.9	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

EO09

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	36	8.2	8.2	8.2
	2	7	1.6	1.6	9.8
	3	37	8.4	8.4	18.2
	3	13	3.0	3.0	21.2
	4	60	13.6	13.7	34.9
	5	94	21.4	21.4	56.3
	6	7	1.6	1.6	57.9
	6	100	22.7	22.8	80.6
	7	85	19.3	19.4	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

OL01

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	88	20.0	20.1	20.1
	2	80	18.2	18.3	38.4
	3	48	10.9	11.0	49.3
	3	113	25.7	25.8	75.1
	4	80	18.2	18.3	93.4
	5	13	3.0	3.0	96.3
	6	3	.7	.7	97.0
	6	7	1.6	1.6	98.6
	7	6	1.4	1.4	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

OL02

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	90	20.5	20.5	20.5
	2	86	19.5	19.6	40.2
	3	45	10.2	10.3	50.5
	3	98	22.3	22.4	72.8
	4	90	20.5	20.5	93.4
	5	15	3.4	3.4	96.8
	6	4	.9	.9	97.7
	6	4	.9	.9	98.6
	7	6	1.4	1.4	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

OL03

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	89	20.2	20.3	20.3
	2	90	20.5	20.5	40.9
	3	46	10.5	10.5	51.4
	3	93	21.1	21.2	72.6
	4	81	18.4	18.5	91.1
	5	16	3.6	3.7	94.7
	6	4	.9	.9	95.7
	6	11	2.5	2.5	98.2
	7	8	1.8	1.8	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

OL04

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	85	19.3	19.4	19.4
	2	70	15.9	16.0	35.4
	3	41	9.3	9.4	44.7
	3	85	19.3	19.4	64.2
	4	103	23.4	23.5	87.7
	5	22	5.0	5.0	92.7
	6	2	.5	.5	93.2
	6	10	2.3	2.3	95.4
	7	20	4.5	4.6	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

TQ01

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	188	42.7	42.8	42.8
	2	54	12.3	12.3	55.1
	3	31	7.0	7.1	62.2
	3	76	17.3	17.3	79.5
	4	56	12.7	12.8	92.3
	5	8	1.8	1.8	94.1
	6	18	4.1	4.1	98.2
	6	1	.2	.2	98.4
	7	7	1.6	1.6	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ02

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	202	45.9	46.0	46.0
	2	64	14.5	14.6	60.6
	3	32	7.3	7.3	67.9
	3	79	18.0	18.0	85.9
	4	38	8.6	8.7	94.5
	5	12	2.7	2.7	97.3
	6	9	2.0	2.1	99.3
	7	3	.7	.7	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ03

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	177	40.2	40.3	40.3
	2	50	11.4	11.4	51.7
	3	35	8.0	8.0	59.7
	3	50	11.4	11.4	71.1
	4	80	18.2	18.2	89.3
	5	17	3.9	3.9	93.2
	6	13	3.0	3.0	96.1
	6	8	1.8	1.8	97.9
	7	9	2.0	2.1	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ04

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	154	35.0	35.1	35.1

	2	73	16.6	16.6	51.7
	3	42	9.5	9.6	61.3
	3	64	14.5	14.6	75.9
	4	76	17.3	17.3	93.2
	5	11	2.5	2.5	95.7
	6	15	3.4	3.4	99.1
	6	1	.2	.2	99.3
	7	3	.7	.7	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ05

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	205	46.6	46.7	46.7
	2	63	14.3	14.4	61.0
	3	33	7.5	7.5	68.6
	3	73	16.6	16.6	85.2
	4	37	8.4	8.4	93.6
	5	16	3.6	3.6	97.3
	6	6	1.4	1.4	98.6
	6	4	.9	.9	99.5
	7	2	.5	.5	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ06

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	143	32.5	32.6	32.6
	2	83	18.9	18.9	51.5
	3	33	7.5	7.5	59.0
	3	80	18.2	18.2	77.2
	4	70	15.9	15.9	93.2
	5	13	3.0	3.0	96.1
	6	10	2.3	2.3	98.4
	6	2	.5	.5	98.9
	7	5	1.1	1.1	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

TQ07

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	120	27.3	27.3	27.3
	2	98	22.3	22.3	49.7
	3	28	6.4	6.4	56.0

	3	107	24.3	24.4	80.4
	4	55	12.5	12.5	92.9
	5	16	3.6	3.6	96.6
	6	8	1.8	1.8	98.4
	6	3	.7	.7	99.1
	7	4	.9	.9	100.0
	Total	439	99.8	100.0	
Missing	System	1	.2		
Total		440	100.0		

CI01

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	151	34.3	34.5	34.5
	2	75	17.0	17.1	51.6
	3	19	4.3	4.3	55.9
	3	84	19.1	19.2	75.1
	4	53	12.0	12.1	87.2
	5	17	3.9	3.9	91.1
	6	32	7.3	7.3	98.4
	7	7	1.6	1.6	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

CI02

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	139	31.6	31.7	31.7
	2	81	18.4	18.5	50.2
	3	25	5.7	5.7	55.9
	3	71	16.1	16.2	72.1
	4	73	16.6	16.7	88.8
	5	16	3.6	3.7	92.5
	6	25	5.7	5.7	98.2
	6	3	.7	.7	98.9
	7	5	1.1	1.1	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

CI03

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	153	34.8	34.9	34.9
	2	69	15.7	15.8	50.7
	3	18	4.1	4.1	54.8
	3	74	16.8	16.9	71.7
	4	72	16.4	16.4	88.1
	5	12	2.7	2.7	90.9

	6	24	5.5	5.5	96.3
	6	4	.9	.9	97.3
	7	12	2.7	2.7	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

CI04

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	106	24.1	24.2	24.2
	2	85	19.3	19.4	43.6
	3	15	3.4	3.4	47.0
	3	92	20.9	21.0	68.0
	4	73	16.6	16.7	84.7
	5	15	3.4	3.4	88.1
	6	35	8.0	8.0	96.1
	6	4	.9	.9	97.0
	7	13	3.0	3.0	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

CI05

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	91	20.7	20.8	20.8
	2	66	15.0	15.1	35.8
	3	16	3.6	3.7	39.5
	3	94	21.4	21.5	61.0
	4	89	20.2	20.3	81.3
	5	28	6.4	6.4	87.7
	6	41	9.3	9.4	97.0
	6	5	1.1	1.1	98.2
	7	8	1.8	1.8	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

CI06

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	117	26.6	26.7	26.7
	2	65	14.8	14.8	41.6
	3	11	2.5	2.5	44.1
	3	99	22.5	22.6	66.7
	4	79	18.0	18.0	84.7
	5	16	3.6	3.7	88.4

	6	35	8.0	8.0	96.3
	6	9	2.0	2.1	98.4
	7	7	1.6	1.6	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP01

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.1	1.1	1.1
	2	2	.5	.5	1.6
	3	21	4.8	4.8	6.4
	3	18	4.1	4.1	10.5
	4	91	20.7	20.8	31.3
	5	106	24.1	24.2	55.5
	6	8	1.8	1.8	57.3
	6	105	23.9	24.0	81.3
	7	82	18.6	18.7	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP02

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	3.0	3.0	3.0
	2	6	1.4	1.4	4.3
	3	35	8.0	8.0	12.3
	3	15	3.4	3.4	15.8
	4	71	16.1	16.2	32.0
	5	97	22.0	22.1	54.1
	6	14	3.2	3.2	57.3
	6	90	20.5	20.5	77.9
	7	97	22.0	22.1	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP03

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	1.6	1.6	1.6
	2	2	.5	.5	2.1
	3	15	3.4	3.4	5.5
	3	13	3.0	3.0	8.4
	4	89	20.2	20.3	28.8
	5	83	18.9	18.9	47.7
	6	29	6.6	6.6	54.3
	6	87	19.8	19.9	74.2

	7	113	25.7	25.8	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP04

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	2.5	2.5	2.5
	2	6	1.4	1.4	3.9
	3	39	8.9	8.9	12.8
	3	15	3.4	3.4	16.2
	4	98	22.3	22.4	38.6
	5	91	20.7	20.8	59.4
	6	19	4.3	4.3	63.7
	6	89	20.2	20.3	84.0
	7	70	15.9	16.0	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP05

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	1.8	1.8	1.8
	2	10	2.3	2.3	4.1
	3	23	5.2	5.3	9.4
	3	17	3.9	3.9	13.2
	4	97	22.0	22.1	35.4
	5	81	18.4	18.5	53.9
	6	23	5.2	5.3	59.1
	6	86	19.5	19.6	78.8
	7	93	21.1	21.2	100.0
	Total	438	99.5	100.0	
Missing	System	2	.5		
Total		440	100.0		

FP06

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	3.2	3.2	3.2
	2	2	.5	.5	3.7
	3	43	9.8	9.8	13.5
	3	18	4.1	4.1	17.6
	4	71	16.1	16.2	33.8
	5	81	18.4	18.5	52.3
	6	12	2.7	2.7	55.0
	6	99	22.5	22.6	77.6
	7	98	22.3	22.4	100.0
	Total	438	99.5	100.0	

Missing System	2	.5		
Total	440	100.0		

Replace Missing Values

Result Variables

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
			First	Last		
1	EO01_1	1	1	440	440	MEDIAN(EO01,2)
2	EO02_1	1	1	440	440	MEDIAN(EO02,2)
3	EO03_1	1	1	440	440	MEDIAN(EO03,2)
4	EO04_1	1	1	440	440	MEDIAN(EO04,2)
5	EO05_1	1	1	440	440	MEDIAN(EO05,2)
6	EO06_1	1	1	440	440	MEDIAN(EO06,2)
7	EO07_1	1	1	440	440	MEDIAN(EO07,2)
8	EO08_1	1	1	440	440	MEDIAN(EO08,2)
9	EO09_1	1	1	440	440	MEDIAN(EO09,2)
10	OL01_1	1	1	440	439	MEDIAN(OL01,2)
11	OL02_1	1	1	440	439	MEDIAN(OL02,2)
12	OL03_1	1	1	440	439	MEDIAN(OL03,2)
13	OL04_1	1	1	440	439	MEDIAN(OL04,2)
14	TQ01_1	1	1	440	440	MEDIAN(TQ01,2)
15	TQ02_1	1	1	440	440	MEDIAN(TQ02,2)
16	TQ03_1	1	1	440	440	MEDIAN(TQ03,2)
17	TQ04_1	1	1	440	440	MEDIAN(TQ04,2)
18	TQ05_1	1	1	440	440	MEDIAN(TQ05,2)
19	TQ06_1	1	1	440	440	MEDIAN(TQ06,2)
20	TQ07_1	1	1	440	440	MEDIAN(TQ07,2)
21	CI01_1	2	1	440	440	MEDIAN(CI01,2)
22	CI02_1	2	1	440	440	MEDIAN(CI02,2)
23	CI03_1	2	1	440	440	MEDIAN(CI03,2)

24	CI04_1	2	1	440	440	MEDIAN(CI04,2)
25	CI05_1	2	1	440	440	MEDIAN(CI05,2)
26	CI06_1	2	1	440	440	MEDIAN(CI06,2)
27	FP01_1	1	1	440	439	MEDIAN(FP01,2)
28	FP02_1	1	1	440	439	MEDIAN(FP02,2)
29	FP03_1	1	1	440	439	MEDIAN(FP03,2)
30	FP04_1	1	1	440	439	MEDIAN(FP04,2)
31	FP05_1	1	1	440	439	MEDIAN(FP05,2)
32	FP06_1	1	1	440	439	MEDIAN(FP06,2)

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	FP06, OL01, TQ07, OL04, CI06, EO05, TQ03, FP05, OL03, EO03, CI04, CI01, TQ05, FP02, CI03, FP04, OL02, CI02, CI05, FP03, TQ04, EO09, FP01, TQ06, EO06, EO04, TQ01, TQ02, EO01, EO08, EO07, EO02[b]	.	Enter

a. Dependent Variable: RespoNo
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851[a]	.724	.702	69.266

a. Predictors: (Constant), FP06, OL01, TQ07, OL04, CI06, EO05, TQ03, FP05, OL03, EO03, CI04, CI01, TQ05, FP02, CI03, FP04, OL02, CI02, CI05, FP03, TQ04, EO09, FP01, TQ06, EO06, EO04, TQ01, TQ02, EO01, EO08, EO07, EO02
b. Dependent Variable: RespoNo

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5102881.282	32	159465.040	33.237	.000[b]
	Residual	1947897.716	406	4797.778		
	Total	7050778.998	438			

a. Dependent Variable: RespoNo
b. Predictors: (Constant), FP06, OL01, TQ07, OL04, CI06, EO05, TQ03, FP05, OL03, EO03, CI04, CI01, TQ05, FP02, CI03, FP04, OL02, CI02, CI05, FP03, TQ04, EO09, FP01, TQ06, EO06, EO04, TQ01, TQ02, EO01, EO08, EO07, EO02

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	320.762	35.202		9.112	.000
	EO01	-12.893	4.045	-.194	-3.188	.002
	EO02	.636	4.459	.009	.143	.887
	EO03	-2.046	4.131	-.030	-.495	.621
	EO04	-3.444	3.538	-.050	-.973	.331
	EO05	5.676	3.455	.059	1.643	.101
	EO06	-.233	3.961	-.003	-.059	.953
	EO07	-2.034	4.310	-.029	-.472	.637
	EO08	-4.965	4.088	-.072	-1.214	.225
	EO09	-6.176	3.527	-.087	-1.751	.081
	OL01	-9.314	4.325	-.094	-2.154	.032
	OL02	-2.758	4.176	-.028	-.660	.509
	OL03	-3.018	3.180	-.033	-.949	.343
	OL04	1.120	2.496	.014	.449	.654
	TQ01	6.980	4.412	.081	1.582	.114
	TQ02	-6.117	5.107	-.062	-1.198	.232
	TQ03	17.585	3.867	.220	4.547	.000
	TQ04	1.504	4.191	.016	.359	.720
	TQ05	12.968	4.547	.134	2.852	.005
	TQ06	10.649	4.242	.114	2.511	.012
	TQ07	-22.432	4.018	-.229	-5.583	.000
	CI01	5.015	3.249	.061	1.544	.123
	CI02	1.645	3.587	.019	.458	.647
	CI03	9.489	3.242	.120	2.927	.004
	CI04	.851	2.972	.011	.286	.775

CI05	5.547	3.483	.068	1.592	.112
CI06	1.979	3.383	.025	.585	.559
FP01	2.185	4.073	.024	.536	.592
FP02	4.321	3.313	.054	1.304	.193
FP03	3.011	3.968	.033	.759	.448
FP04	-1.704	3.575	-.020	-.477	.634
FP05	1.845	3.563	.022	.518	.605
FP06	-20.509	3.678	-.262	-5.576	.000

a. Dependent Variable: RespoNo

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	25.04	521.22	220.00	107.937	439
Std. Predicted Value	-1.806	2.791	.000	1.000	439
Standard Error of Predicted Value	4.812	38.781	18.106	5.737	439
Adjusted Predicted Value	25.37	533.42	220.16	108.057	439
Residual	-209.261	218.531	.000	66.688	439
Std. Residual	-3.021	3.155	.000	.963	439
Stud. Residual	-3.220	3.381	-.001	1.005	439
Deleted Residual	-237.728	250.977	-.159	72.718	439
Stud. Deleted Residual	-3.258	3.425	-.001	1.007	439
Mahal. Distance	1.116	136.300	31.927	20.559	439
Cook's Distance	.000	.051	.003	.006	439
Centered Leverage Value	.003	.311	.073	.047	439

a. Dependent Variable: RespoNo

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
EO01	408	1	7	5.35	1.822	-1.020
EO02	408	1	7	5.23	1.767	-.935
EO03	408	1	7	5.15	1.784	-.881
EO04	408	1	7	5.15	1.780	-.828
EO05	408	1	7	5.37	1.267	-.599
EO06	408	1	7	4.76	1.742	-.754
EO07	408	1	7	4.91	1.757	-.761
EO08	408	1	7	4.88	1.763	-.809
EO09	408	1	7	4.97	1.722	-.768
OL01	408	1	7	2.70	1.231	.601
OL02	408	1	7	2.65	1.235	.552
OL03	408	1	7	2.72	1.351	.742
OL04	408	1	7	2.96	1.519	.713

TQ01	408	1	7	2.22	1.330	.801
TQ02	408	1	6	2.08	1.199	.851
TQ03	408	1	7	2.44	1.506	.741
TQ04	408	1	6	2.40	1.314	.585
TQ05	408	1	6	2.13	1.276	.933
TQ06	408	1	6	2.39	1.254	.523
TQ07	408	1	7	2.48	1.239	.754
CI01	408	1	7	2.50	1.436	.709
CI02	408	1	7	2.54	1.410	.603
CI03	408	1	7	2.52	1.477	.724
CI04	408	1	7	2.79	1.492	.594
CI05	408	1	7	3.03	1.486	.259
CI06	408	1	7	2.85	1.505	.417
FP01	408	1	7	5.22	1.275	-.401
FP02	408	1	7	5.13	1.520	-.621
FP03	408	1	7	5.34	1.372	-.599
FP04	408	1	7	4.94	1.464	-.505
FP05	408	1	7	5.13	1.437	-.487
FP06	408	1	7	5.11	1.584	-.635
Valid N (listwise)	408					

Descriptive Statistics

	Skewness	Kurtosis	
	Std. Error	Statistic	Std. Error
EO01	.121	.059	.241
EO02	.121	-.034	.241
EO03	.121	-.105	.241
EO04	.121	-.303	.241
EO05	.121	.098	.241
EO06	.121	-.200	.241
EO07	.121	-.330	.241
EO08	.121	-.165	.241
EO09	.121	-.223	.241
OL01	.121	.642	.241
OL02	.121	.272	.241
OL03	.121	.484	.241
OL04	.121	.301	.241
TQ01	.121	-.198	.241
TQ02	.121	-.109	.241
TQ03	.121	-.337	.241
TQ04	.121	-.609	.241
TQ05	.121	.073	.241
TQ06	.121	-.622	.241
TQ07	.121	.578	.241
CI01	.121	-.287	.241
CI02	.121	-.546	.241
CI03	.121	-.183	.241
CI04	.121	-.315	.241
CI05	.121	-.774	.241
CI06	.121	-.697	.241
FP01	.121	-.316	.241
FP02	.121	-.230	.241
FP03	.121	-.030	.241
FP04	.121	-.234	.241
FP05	.121	-.320	.241

FP06		.121	-.384	.241
Valid N (listwise)				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
EO02	408	1	7	5.23	1.767	-.935
EO03	408	1	7	5.15	1.784	-.881
EO04	408	1	7	5.15	1.780	-.828
EO05	408	1	7	5.37	1.267	-.599
EO06	408	1	7	4.76	1.742	-.754
EO07	408	1	7	4.91	1.757	-.761
EO08	408	1	7	4.88	1.763	-.809
EO09	408	1	7	4.97	1.722	-.768
OL01	408	1	7	2.70	1.231	.601
OL02	408	1	7	2.65	1.235	.552
OL03	408	1	7	2.72	1.351	.742
OL04	408	1	7	2.96	1.519	.713
TQ01	408	1	7	2.22	1.330	.801
TQ02	408	1	6	2.08	1.199	.851
TQ03	408	1	7	2.44	1.506	.741
TQ04	408	1	6	2.40	1.314	.585
TQ05	408	1	6	2.13	1.276	.933
TQ06	408	1	6	2.39	1.254	.523
TQ07	408	1	7	2.48	1.239	.754
CI01	408	1	7	2.50	1.436	.709
CI02	408	1	7	2.54	1.410	.603
CI03	408	1	7	2.52	1.477	.724
CI04	408	1	7	2.79	1.492	.594
CI05	408	1	7	3.03	1.486	.259
CI06	408	1	7	2.85	1.505	.417
FP01	408	1	7	5.22	1.275	-.401
FP02	408	1	7	5.13	1.520	-.621
FP03	408	1	7	5.34	1.372	-.599
FP04	408	1	7	4.94	1.464	-.505
FP05	408	1	7	5.13	1.437	-.487
FP06	408	1	7	5.11	1.584	-.635
tEO01	408	.00	.85	.3245	.29268	.232
Valid N (listwise)	408					

Descriptive Statistics

	Skewness	Kurtosis	
	Std. Error	Statistic	Std. Error
EO02	.121	-.034	.241
EO03	.121	-.105	.241
EO04	.121	-.303	.241
EO05	.121	.098	.241
EO06	.121	-.200	.241
EO07	.121	-.330	.241
EO08	.121	-.165	.241

EO09	.121	-.223	.241
OL01	.121	.642	.241
OL02	.121	.272	.241
OL03	.121	.484	.241
OL04	.121	.301	.241
TQ01	.121	-.198	.241
TQ02	.121	-.109	.241
TQ03	.121	-.337	.241
TQ04	.121	-.609	.241
TQ05	.121	.073	.241
TQ06	.121	-.622	.241
TQ07	.121	.578	.241
CI01	.121	-.287	.241
CI02	.121	-.546	.241
CI03	.121	-.183	.241
CI04	.121	-.315	.241
CI05	.121	-.774	.241
CI06	.121	-.697	.241
FP01	.121	-.316	.241
FP02	.121	-.230	.241
FP03	.121	-.030	.241
FP04	.121	-.234	.241
FP05	.121	-.320	.241
FP06	.121	-.384	.241
tEO01	.121	-1.293	.241
Valid N (listwise)			

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	FP06, TQ07, OL04, OL01, EO05, CI05, TQ03, CI04, OL03, EO03, FP05, CI03, FP02, CI01, CI06, TQ05, TQ06, FP01, FP04, OL02, CI02, FP03, EO09, TQ04, EO04, EO06, TQ01, TQ02, EO08, EO01, EO07, EO02[b]	.	Enter

a. Dependent Variable: RespoNo
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.847[a]	.717	.692	68.560

a. Predictors: (Constant), FP06, TQ07, OL04, OL01, EO05, CI05, TQ03, CI04, OL03, EO03, FP05, CI03, FP02, CI01, CI06, TQ05, TQ06, FP01, FP04, OL02, CI02, FP03, EO09, TQ04, EO04, EO06, TQ01, TQ02, EO08, EO01, EO07, EO02
b. Dependent Variable: RespoNo

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4456377.671	32	139261.802	29.627	.000[b]
	Residual	1762674.444	375	4700.465		
	Total	6219052.115	407			

a. Dependent Variable: RespoNo
b. Predictors: (Constant), FP06, TQ07, OL04, OL01, EO05, CI05, TQ03, CI04, OL03, EO03, FP05, CI03, FP02, CI01, CI06, TQ05, TQ06, FP01, FP04, OL02, CI02, FP03, EO09, TQ04, EO04, EO06, TQ01, TQ02, EO08, EO01, EO07, EO02

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	335.674	40.303		8.329	.000
	EO01	-11.822	4.525	-.174	-2.613	.009
	EO02	-3.936	4.916	-.056	-.801	.424
	EO03	-2.426	4.571	-.035	-.531	.596
	EO04	-2.448	3.826	-.035	-.640	.523
	EO05	6.142	3.720	.063	1.651	.100
	EO06	-.714	4.519	-.010	-.158	.874
	EO07	-1.849	4.775	-.026	-.387	.699
	EO08	-3.212	4.421	-.046	-.727	.468
	EO09	-3.575	3.955	-.050	-.904	.367
	OL01	-5.353	4.979	-.053	-1.075	.283
	OL02	-5.149	4.802	-.051	-1.072	.284
	OL03	-1.598	3.373	-.017	-.474	.636
	OL04	.341	2.574	.004	.132	.895
	TQ01	3.624	5.224	.039	.694	.488
	TQ02	-4.500	6.016	-.044	-.748	.455
	TQ03	20.064	4.519	.244	4.440	.000
	TQ04	3.455	5.123	.037	.674	.501
	TQ05	10.909	5.126	.113	2.128	.034
	TQ06	10.159	4.500	.103	2.258	.025
	TQ07	-23.307	4.230	-.234	-5.510	.000
	CI01	7.692	3.832	.089	2.007	.045
	CI02	-.070	4.263	-.001	-.016	.987

	CI03	6.634	3.724	.079	1.782	.076
	CI04	-1.630	3.463	-.020	-.471	.638
	CI05	6.127	3.736	.074	1.640	.102
	CI06	1.489	3.743	.018	.398	.691
	FP01	3.360	4.549	.035	.739	.461
	FP02	2.981	3.780	.037	.789	.431
	FP03	2.377	4.333	.026	.548	.584
	FP04	-1.741	4.005	-.021	-.435	.664
	FP05	1.668	4.192	.019	.398	.691
	FP06	-22.867	3.974	-.293	-5.755	.000

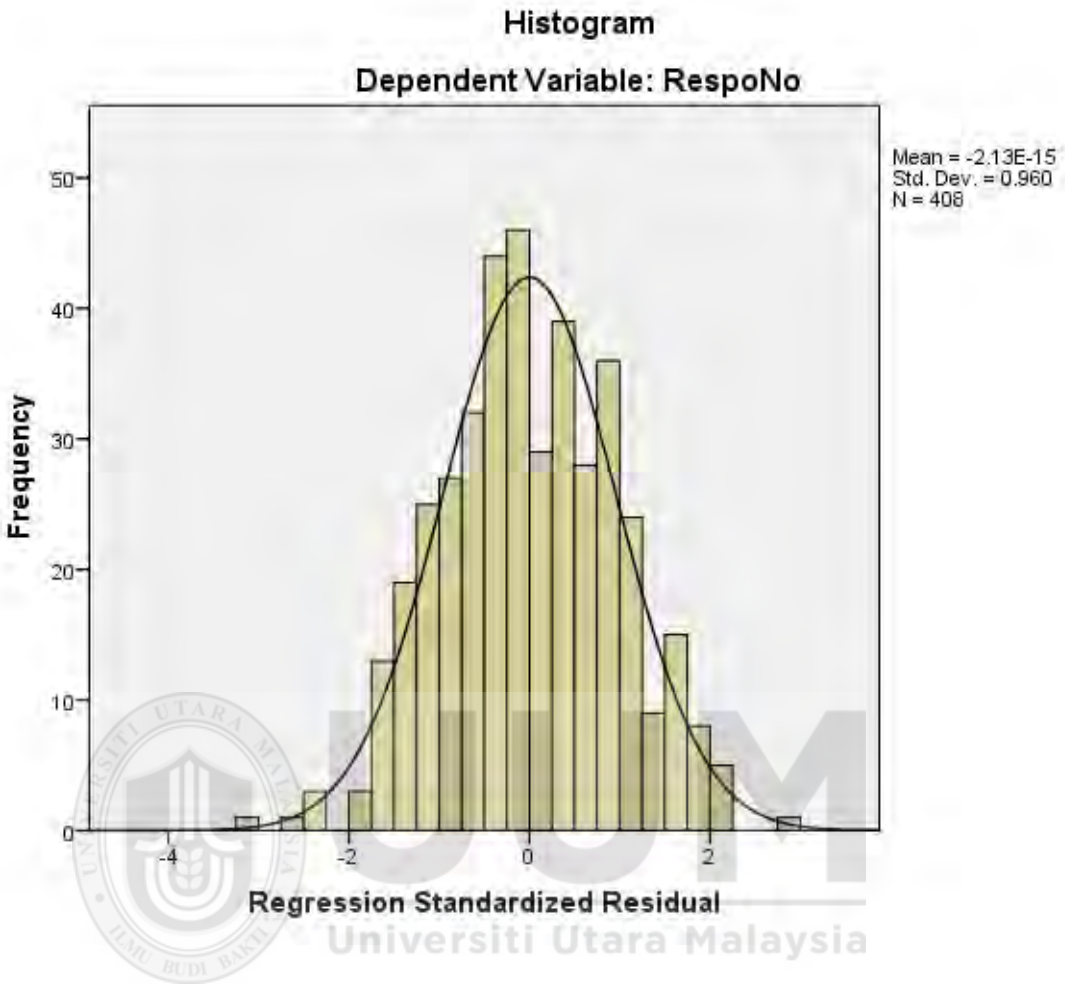
a. Dependent Variable: RespoNo

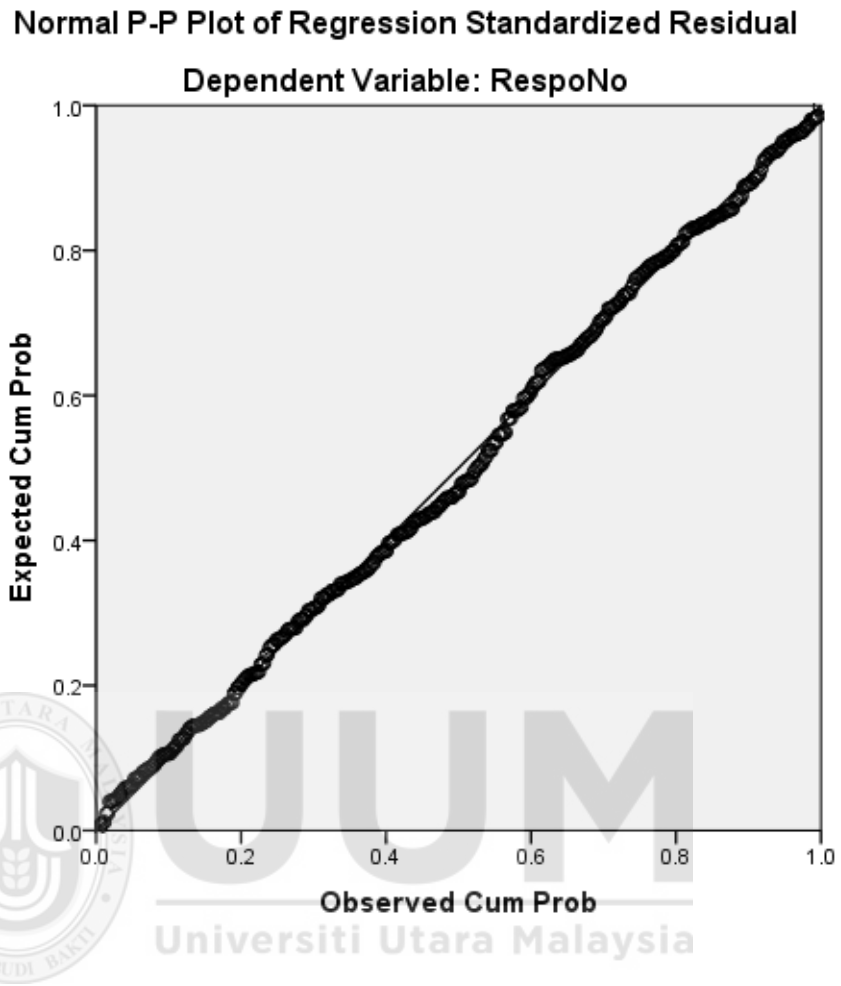
Residuals Statistics[a]

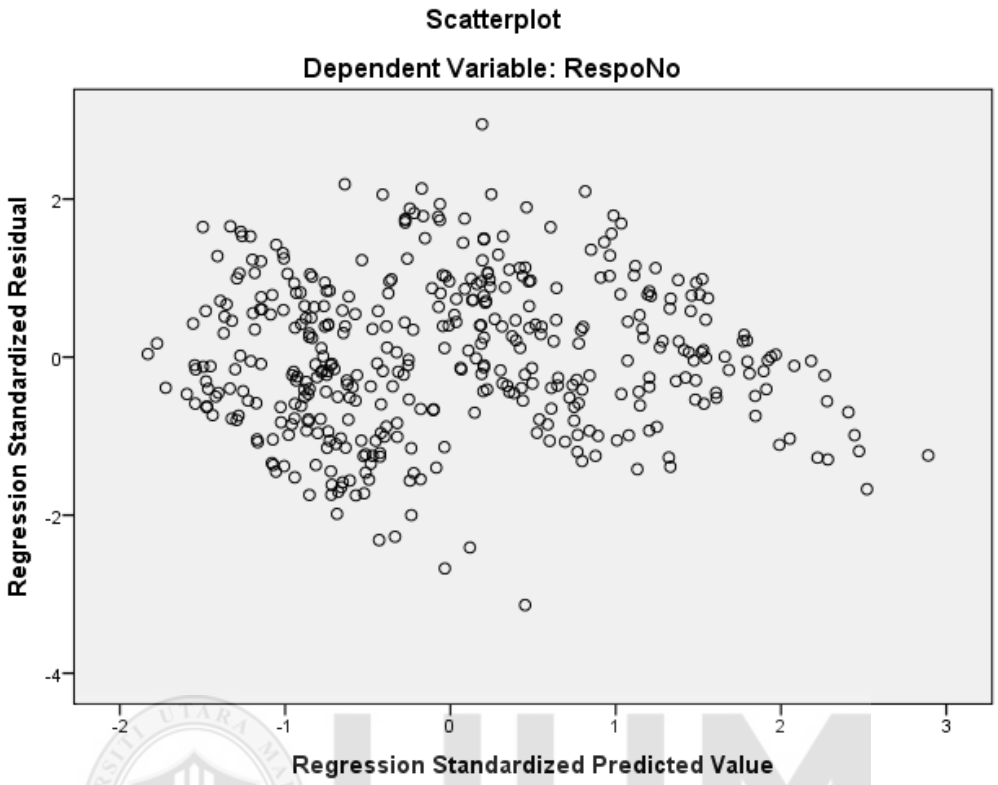
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	19.30	513.36	210.87	104.639	408
Residual	-215.105	202.069	.000	65.810	408
Std. Predicted Value	-1.831	2.891	.000	1.000	408
Std. Residual	-3.137	2.947	.000	.960	408

a. Dependent Variable: RespoNo

Charts







Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	CompetitiveIntensity, OrganizationalLearning, TotalQualityManagement, EntrepreneurialOrientation[b]	.	Enter

a. Dependent Variable: SMEPerformance
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.808[a]	.653	.650	.70660

a. Predictors: (Constant), CompetitiveIntensity, OrganizationalLearning, TotalQualityManagement, EntrepreneurialOrientation
b. Dependent Variable: SMEPerformance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	379.127	4	94.782	189.833	.000[b]
	Residual	201.214	403	.499		
	Total	580.340	407			

a. Dependent Variable: SMEPerformance
b. Predictors: (Constant), CompetitiveIntensity, OrganizationalLearning, TotalQualityManagement, EntrepreneurialOrientation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	4.858	.235		20.702
	EntrepreneurialOrientation	.288	.028	.356	10.350
	TotalQualityManagement	.070	.038	.063	1.838
	OrganizationalLearning	.175	.039	.145	4.509
	CompetitiveIntensity	-.672	.039	-.644	-17.089

Coefficients[a]

Model		Sig.	Collinearity Statistics	
			Tolerance	VIF
1	(Constant)	.000		
	EntrepreneurialOrientation	.000	.725	1.379
	TotalQualityManagement	.067	.732	1.367
	OrganizationalLearning	.000	.832	1.202
	CompetitiveIntensity	.000	.605	1.652

a. Dependent Variable: SMEPerformance

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	EntrepreneurialOrientation	TotalQualityManagement
1	1	4.601	1.000	.00	.00	.01
	2	.198	4.821	.01	.15	.11
	3	.105	6.633	.00	.03	.56
	4	.081	7.540	.01	.01	.31

5	.015	17.240	.98	.81	.01

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions	
		OrganizationalLearning	CompetitiveIntensity
1	1	.00	.00
	2	.00	.11
	3	.43	.01
	4	.33	.56
	5	.23	.31

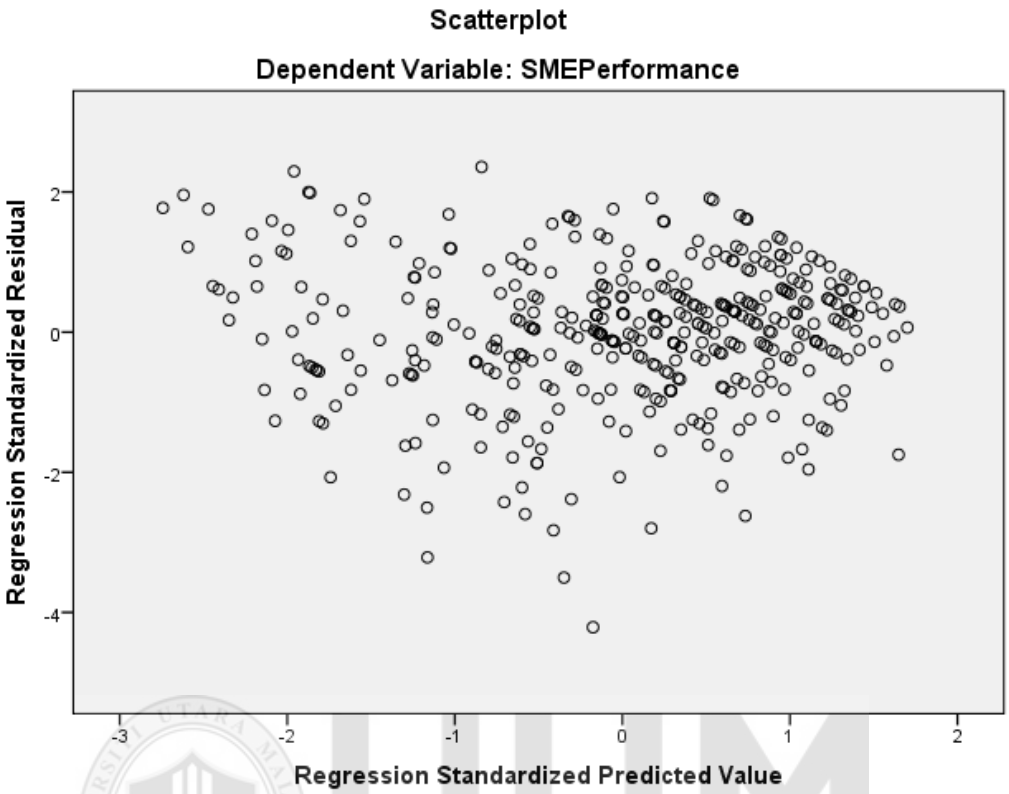
a. Dependent Variable: SMEPerformance

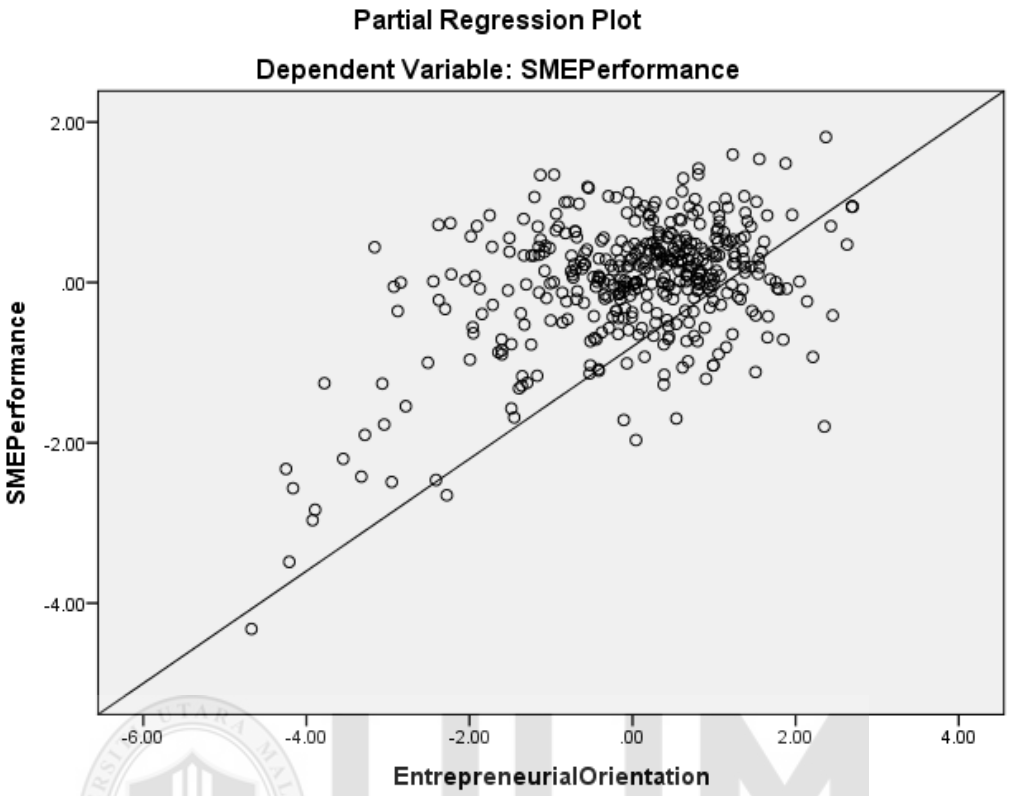
Residuals Statistics[a]

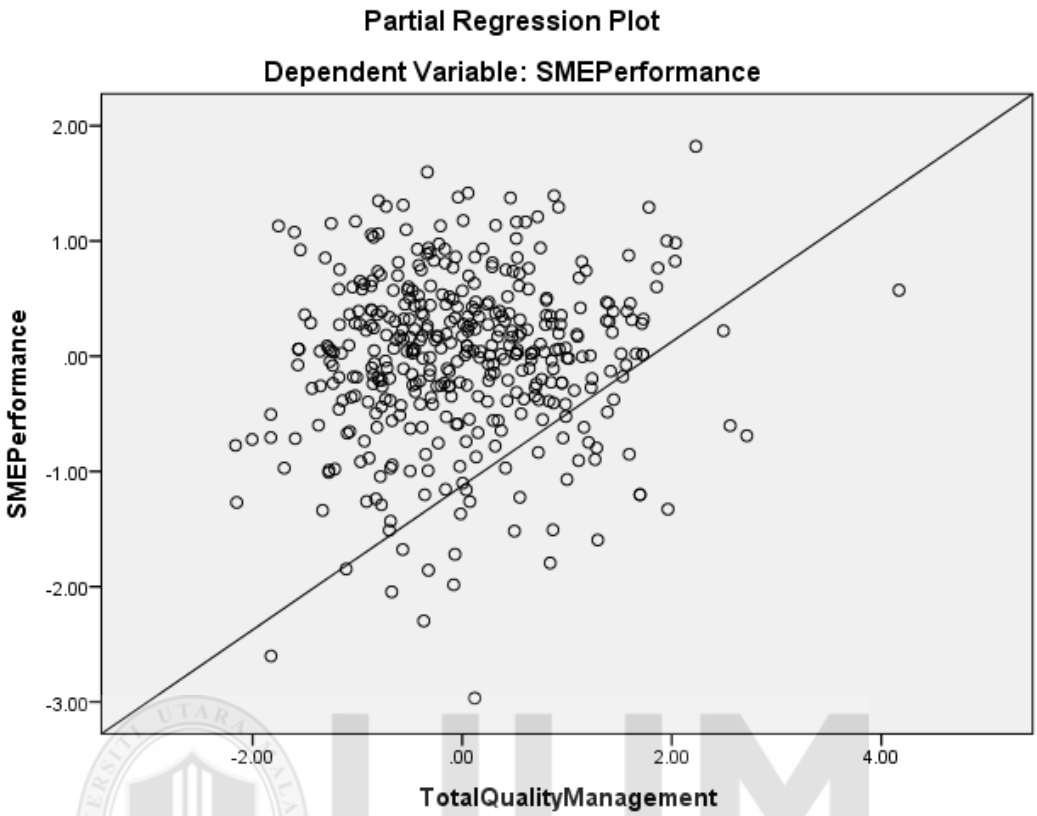
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.4977	6.7869	5.1451	.96515	408
Residual	-2.97583	1.66618	.00000	.70312	408
Std. Predicted Value	-2.743	1.701	.000	1.000	408
Std. Residual	-4.211	2.358	.000	.995	408

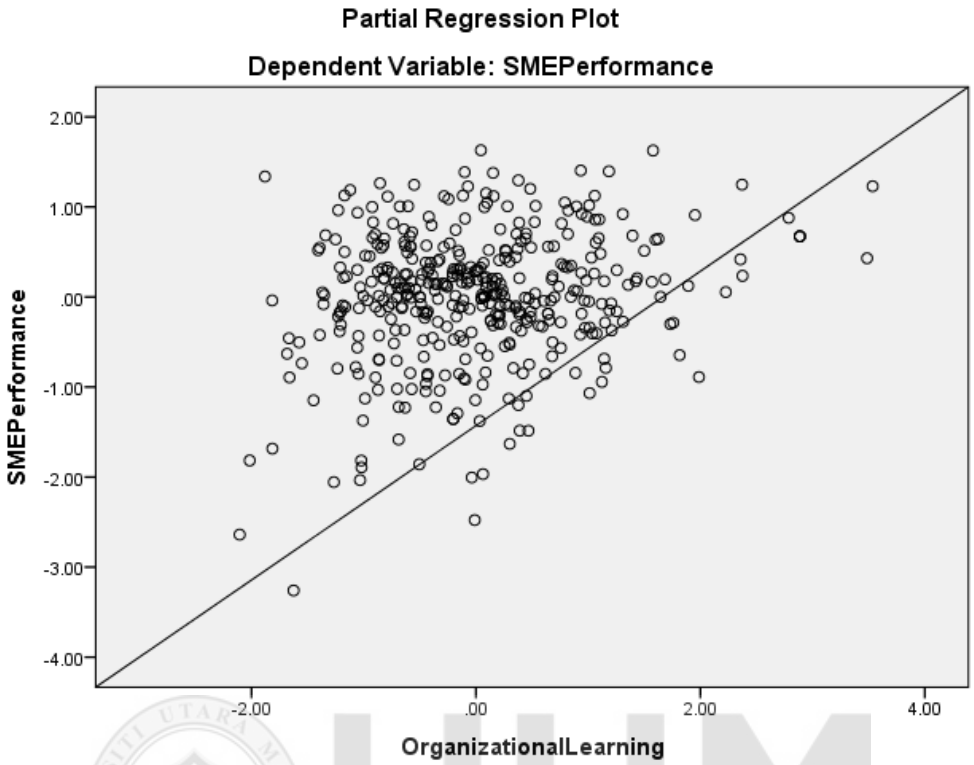
a. Dependent Variable: SMEPerformance

Charts









Factor Analysis

Communalities

	Initial	Extraction
EO01	1.000	.632
EO02	1.000	.606
EO03	1.000	.583
EO04	1.000	.550
EO05	1.000	.277
EO06	1.000	.461
EO07	1.000	.590
EO08	1.000	.542
EO09	1.000	.430
OL01	1.000	.077
OL02	1.000	.202
OL03	1.000	.154
OL04	1.000	.021
TQ01	1.000	.388
TQ02	1.000	.153
TQ03	1.000	.203
TQ04	1.000	.342
TQ05	1.000	.116
TQ06	1.000	.156
TQ07	1.000	.015
CI01	1.000	.478
CI02	1.000	.493
CI03	1.000	.503

CI04	1.000	.430
CI05	1.000	.307
CI06	1.000	.303
FP01	1.000	.531
FP02	1.000	.511
FP03	1.000	.449
FP04	1.000	.384
FP05	1.000	.412
FP06	1.000	.603

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	11.900	37.187	37.187	11.900	37.187
2	4.900	15.314	52.501		
3	2.751	8.597	61.098		
4	1.785	5.577	66.675		
5	1.111	3.471	70.145		
6	1.072	3.349	73.494		
7	.873	2.730	76.223		
8	.751	2.346	78.570		
9	.701	2.190	80.760		
10	.605	1.890	82.649		
11	.496	1.549	84.199		
12	.465	1.453	85.651		
13	.385	1.202	86.853		
14	.369	1.153	88.006		
15	.343	1.073	89.079		
16	.324	1.014	90.093		
17	.298	.933	91.026		
18	.276	.864	91.890		
19	.268	.838	92.728		
20	.260	.811	93.539		
21	.247	.770	94.309		
22	.242	.758	95.067		
23	.224	.700	95.767		
24	.203	.635	96.402		
25	.187	.586	96.987		
26	.175	.548	97.536		
27	.161	.502	98.038		
28	.152	.475	98.513		
29	.140	.437	98.950		
30	.126	.395	99.345		
31	.107	.333	99.679		
32	.103	.321	100.000		

Total Variance Explained

Component	Extraction Sums of Squared Loadings
	Cumulative %

1 2	37.187
3 4 5	
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
EO01	.795
EO02	.778
EO03	.763
EO04	.742
EO05	.527
EO06	.679
EO07	.768
EO08	.736
EO09	.656
OL01	-.277
OL02	-.449
OL03	-.393
OL04	-.144
TQ01	-.623
TQ02	-.392
TQ03	-.451
TQ04	-.585
TQ05	-.341

TQ06	-.395
TQ07	-.123
CI01	-.691
CI02	-.702
CI03	-.709
CI04	-.656
CI05	-.554
CI06	-.551
FP01	.729
FP02	.715
FP03	.670
FP04	.619
FP05	.642
FP06	.776

Extraction Method: Principal Component Analysis.[a]
a. 1 components extracted.

T-Test

Group Statistics

	Grouping	N	Mean	Std. Deviation	Std. Error Mean
EntrepreneurialOrientation	1	342	5.0777	1.48745	.08043
	2	66	5.1170	1.43336	.17643
TotalQualityManagement	1	342	2.2741	1.07028	.05787
	2	66	2.4794	1.12805	.13885
OrganizationalLearning	1	342	2.7750	1.01743	.05502
	2	66	2.6610	.85084	.10473
CompetitiveIntensity	1	342	2.6858	1.15335	.06237
	2	66	2.8157	1.09851	.13522
SMEPerformance	1	342	5.1668	1.20375	.06509
	2	66	5.0328	1.14512	.14095

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means
		F	Sig.	t
EntrepreneurialOrientation	Equal variances assumed	.140	.709	-.198
	Equal variances not assumed			-.203
TotalQualityManagement	Equal variances assumed	.710	.400	-1.414

	Equal variances not assumed			-1.365
OrganizationalLearning	Equal variances assumed	3.101	.079	.855
	Equal variances not assumed			.964
CompetitiveIntensity	Equal variances assumed	.622	.431	-.844
	Equal variances not assumed			-.872
SMEPerformance	Equal variances assumed	1.095	.296	.834
	Equal variances not assumed			.863

Independent Samples Test

		t-test for Equality of Means		
		df	Sig. (2-tailed)	Mean Difference
EntrepreneurialOrientation	Equal variances assumed	406	.844	-.03927
	Equal variances not assumed	94.050	.840	-.03927
TotalQualityManagement	Equal variances assumed	406	.158	-.20531
	Equal variances not assumed	89.033	.176	-.20531
OrganizationalLearning	Equal variances assumed	406	.393	.11405
	Equal variances not assumed	104.310	.337	.11405
CompetitiveIntensity	Equal variances assumed	406	.399	-.12986
	Equal variances not assumed	94.779	.385	-.12986
SMEPerformance	Equal variances assumed	406	.405	.13396
	Equal variances not assumed	94.856	.390	.13396

Independent Samples Test

		t-test for Equality of Means	
		Std. Error Difference	95% Confidence Interval of the Difference
			Lower
EntrepreneurialOrientation	Equal variances assumed	.19883	-.43015
	Equal variances not assumed	.19390	-.42427

TotalQualityManagement	Equal variances assumed	.14517	-.49068
	Equal variances not assumed	.15043	-.50422
OrganizationalLearning	Equal variances assumed	.13346	-.14830
	Equal variances not assumed	.11830	-.12054
CompetitiveIntensity	Equal variances assumed	.15391	-.43241
	Equal variances not assumed	.14891	-.42549
SMEPerformance	Equal variances assumed	.16060	-.18176
	Equal variances not assumed	.15526	-.17427

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
EntrepreneurialOrientation	Equal variances assumed	.35160
	Equal variances not assumed	.34572
TotalQualityManagement	Equal variances assumed	.08005
	Equal variances not assumed	.09359
OrganizationalLearning	Equal variances assumed	.37640
	Equal variances not assumed	.34864
CompetitiveIntensity	Equal variances assumed	.17269
	Equal variances not assumed	.16577
SMEPerformance	Equal variances assumed	.44968
	Equal variances not assumed	.44219

Correlations

Correlations

		EntrepreneurialOrientation	TotalQualityManagement	OrganizationalLearning
EntrepreneurialOrientation	Pearson Correlation	1	-.151**	-.328**
	Sig. (2-tailed)		.002	.000
	N	408	408	408
TotalQualityManagement	Pearson Correlation	-.151**	1	.286**

	Sig. (2-tailed)	.002		.000
	N	408	408	408
OrganizationalLearning	Pearson Correlation	-.328**	.286**	1
	Sig. (2-tailed)	.000	.000	
	N	408	408	408
CompetitiveIntensity	Pearson Correlation	-.470**	.481**	.296**
	Sig. (2-tailed)	.000	.000	.000
	N	408	408	408
SMEPerformance	Pearson Correlation	.602**	-.259**	-.145**
	Sig. (2-tailed)	.000	.000	.003
	N	408	408	408

Correlations

		CompetitiveIntensity	SMEPerformance
EntrepreneurialOrientation	Pearson Correlation	-.470**	.602**
	Sig. (2-tailed)	.000	.000
	N	408	408
TotalQualityManagement	Pearson Correlation	.481**	-.259**
	Sig. (2-tailed)	.000	.000
	N	408	408
OrganizationalLearning	Pearson Correlation	.296**	-.145**
	Sig. (2-tailed)	.000	.003
	N	408	408
CompetitiveIntensity	Pearson Correlation	1	-.739**
	Sig. (2-tailed)		.000
	N	408	408
SMEPerformance	Pearson Correlation	-.739**	1
	Sig. (2-tailed)	.000	
	N	408	408

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

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EntrepreneurialOrientation	408	1.33	7.00	5.0841	1.47718
TotalQualityManagement	408	1.00	5.71	2.3073	1.08106
OrganizationalLearning	408	1.00	6.50	2.7566	.99231
CompetitiveIntensity	408	1.00	5.50	2.7068	1.14434
SMEPerformance	408	1.75	7.00	5.1451	1.19411
Valid N (listwise)	408				

Frequencies

Statistics

		Gender	Age	Education	Marital	Ethincity	Position
N	Valid	408	408	408	408	408	408
	Missing	0	0	0	0	0	0

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	261	64.0	64.0	64.0
	Female	147	36.0	36.0	100.0
	Total	408	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30 years	28	6.9	6.9	6.9
	31-40 years	116	28.4	28.4	35.3
	41-50 years	180	44.1	44.1	79.4
	50 years and above	84	20.6	20.6	100.0
	Total	408	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary School	2	.5	.5	.5
	Secondary School	49	12.0	12.0	12.5
	Diploma/NCE	78	19.1	19.1	31.6
	Bachelor Degree	113	27.7	27.7	59.3
	Masters	116	28.4	28.4	87.7
	Others	50	12.3	12.3	100.0
	Total	408	100.0	100.0	

Marital

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	172	42.2	42.2	42.2
	Married	236	57.8	57.8	100.0
	Total	408	100.0	100.0	

Ethincity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hausa/Fulani	64	15.7	15.7	15.7
	Igbo	265	65.0	65.0	80.6
	Yoruba	51	12.5	12.5	93.1
	Others	28	6.9	6.9	100.0
	Total	408	100.0	100.0	

Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Owner	79	19.4	19.4	19.4
	Manager	329	80.6	80.6	100.0
	Total	408	100.0	100.0	

Frequencies

Statistics

		Ownership	FirmSize	Industry	FirmAge
N	Valid	408	408	408	408
	Missing	0	0	0	0

Frequency Table

Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sole proprietorship	45	11.0	11.0	11.0
	Partnership	141	34.6	34.6	45.6
	Limited Liability Company	222	54.4	54.4	100.0
	Total	408	100.0	100.0	

FirmSize

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 50 employees	17	4.2	4.2	4.2
	50-99 employees	215	52.7	52.7	56.9
	100-249 employees	87	21.3	21.3	78.2
	250-499 employees	48	11.8	11.8	90.0
	500 or more employees	41	10.0	10.0	100.0

	Total	408	100.0	100.0	

Industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Food and beverages	104	25.5	25.5	25.5
	Packaging/containers	32	7.8	7.8	33.3
	Metal and metal products	35	8.6	8.6	41.9
	Printing and publishing	176	43.1	43.1	85.0
	Agro-allied, furniture	29	7.1	7.1	92.2
	Building materials	9	2.2	2.2	94.4
	Others	23	5.6	5.6	100.0
	Total	408	100.0	100.0	

FirmAge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 - 6 years	36	8.8	8.8	8.8
	7 - 9 years	79	19.4	19.4	28.2
	10 - 12 years	73	17.9	17.9	46.1
	13 years or more	220	53.9	53.9	100.0
	Total	408	100.0	100.0	