

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI  
INSTITUTE OF DISTANCE LEARNING**

**TOTAL QUALITY MANAGEMENT PRACTICES, ORGANISATIONAL CULTURE  
AND FIRM PERFORMANCE; THE MEDIATING EFFECT OF SERVICE/  
PRODUCT INNOVATION**

**BY:**

**ESTHER BLUWEY**

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## DECLARATION

I hereby declare that this work is the result of my own research towards the award of the Master of Philosophy (MPhil) except for the references of other authors work, which has been duly acknowledged, and that this thesis has neither in whole nor in part been presented by anyone for the award of any degree of the University.

Esther Bluwey .....  
( PG1138817) Signature Date

**Certified By**  
Dr. John Manso Frimpong .....  
Supervisor Signature Date

**Certified By**  
Prof. David Asamoah .....  
(HOD, SCIS) Signature Date

## DEDICATION

Dedicated to my parents.

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## ABSTRACT

The tenets of TQM are continuous improvement, top management leadership commitment to the goal of customer satisfaction, employee empowerment, and customer focus. The concept of TQM has been well accepted by managers and quality practitioners as a change management quality approach. It plays a vital role in the development of management practices. Some researchers asserted it is an approach to improve the effectiveness, flexibility, and competitiveness of a business to meet customers' requirements. It is also seen as a source of attaining excellence, creating a right-first-time attitude, acquiring efficient business solutions, delighting customers and suppliers, etc. It could be deduced from the various definitions that the implementation of TQM across organizations is aimed at achieving customer satisfaction and retention and invariably enhance organizational performance levels. The main objective of the study was to determine how Total Quality Management practices and good organizational culture influence operational performance in the banking sector in Ghana. This research is explanatory in nature. Taking the time frame of the study and the need to bring out a finding reasonable for generalization, the researcher selected a sample of 153. The study examined the effect of total quality management on service product innovation and the findings of the study establish that total quality management has a positive and significant effect on service product innovation. Organizational culture has a positive and significant effect on service product innovation. Service product innovation has a positive and significant effect on firm performance. Organizational culture has a positive but insignificant effect on firm performance. Total quality management has a positive and significant effect on firm performance. The study further revealed that service product innovation positively and significantly mediates the relationship between total quality management and firm performance. The study finally assessed the mediating effect of service product innovation on the relationship between organizational culture and firm performance and the findings of the study indicate that service product innovation positively and significantly mediates the relationship between organizational culture and firm performance. The study recommends that Top management of organizations should allocate the required resources for quality management to be achieved. Organizations should listen to employees' suggestions on issues regarding quality management. There must be a clear agreement about the right way and the wrong way to do things in organizations to help the employees to know where there are rewards and punishments as well.

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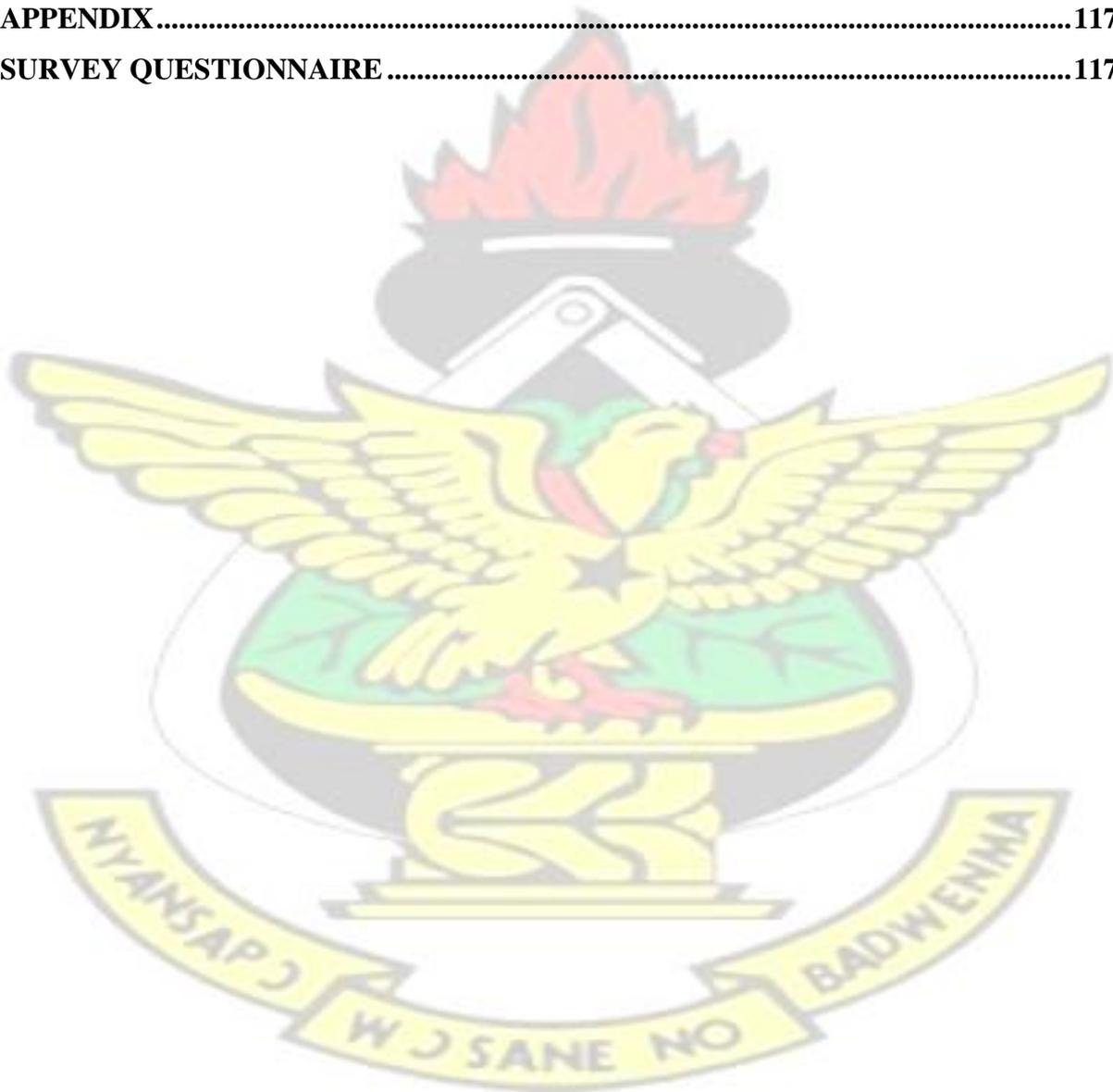
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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of The Study

Every institution wants to remain competitive and making returns for its shareholders on a going-concern basis. To achieve this, the products and services of the organization must be apt and consistently meet the satisfaction of its customers as well as achieving operational performance. Total Quality Management (TQM) concept ensures the organization constantly review its products and services to ensure they are in tune with the current demands of their Customers. The banking sector in Ghana remains one of the very competitive sectors which offer varying products and services. This research is aimed at achieving operational performance considering organizational culture and Total Quality Management and the mediating role of product service innovation in the Ghanaian financial institutions.

TQM, in the form of statistical quality control, which was invented by Walter A. Shewhart. In 1923, Walter Shewhart, then working at Bell Telephone Laboratories first devised a statistical control chart; which is still named after him. He published his method in 1931 as Economic Control of Quality of Manufactured Product. The method was first introduced at Western Electric Company's Hawthorn plant in 1926, in the form developed by Joseph Juran who had worked there with the method. TQM was demonstrated on a grand scale by Japanese industry through the intervention of W. Edwards Deming who, in consequence, and thanks to his missionary labors in the US and across the world, has come to be viewed as the "father" of quality control, quality circles, and the quality movement generally. The emergence of TQM has been one of the most significant developments in the United State (US). The focus on the development of TQM systems in the US appears to have begun around 1980 in response to Global competition and stiff rivalry in the US manufacturing subsector arising from Japan (Easton and Jarrell, 1998). In the last three (3) decades, TQM has become pervasive and widely

accepted in manufacturing, services, government, healthcare and banking subsectors of the developed economies (Fotopoulos & Psomas, 2009; Freng et al (2008), Kaplan et al (2010). Alswadi et al (2012) and Temtime (2003) assert that continuous attention has been given to TQM in the industrialized countries but researchers have started investigating quality practices in the developing countries in the last ten (10) years.

Total Quality Management (TQM) considered as a main tool extends to the strategy of structuring work and improving performance in order to achieve profitability through excellent services and quality products. It can be defined as the continuous improvement of administrative and productive processes through constant visit and analyzing the results achieved, and searching for appropriate means and methods to raise the level of performance and try to minimize the time and effort for the completion of production processes by abolishing all unnecessary functions for consumers and for the productive process to get to required level of total quality. In order to attain a competitive quality level, it is necessary to use many methods and skills of continuous quality improvement. Choosing the appropriate method or the effective and appropriate tool is related to many elements and circumstances of the organization as a whole. Continuing Quality Improvement can be considered as the only way to improve the performance of organizations and banks. Continuing Quality Improvement and its various applications assist to achieve gains for banks by ensuring differentiated and constantly evolving services using quality improvement techniques, to eliminate problems and errors through the quality control methods to detect any defect in inspection in order to prevent its development and to detect the causes and remove them as soon as possible, It even can avoid the error or problem before it happened, which helps the bank to maintain its basic customers and gain the largest possible number of new customers

TQM is a philosophy and a set of guiding principles that represent the foundation of an excellent organization and to ensure the survival of industrial organizations in the competitive

economy of today (Besterfield, 1999). TQM is a technique that underscores the continuous improvement of products and services quality to satisfy customers and enhance productivity. Now, every organization has to pay much attention on what customer demand is. Who is our customer? How do we lure our customers? What do customers wish to experience when dealing with us? What do customers frame in their mind about us? All these questions should be taken into consideration hence it is the customer who defines quality (Arora 2006:1).

Quality is fast becoming a critical aspect of banking, and in these few years has become a basic requirement for the survival of the industry. It is indeed worthy of note that quality needs to be natural through positive attitude and constitute a major component that ensures the delivery of services throughout the branches and units of the bank which will eventually give them competitive advantage.

Before the deregulation of financial services and its consequent ready access to funds resulting in a new competitive environment, both the commercial and merchant banks in the country were competing with finance and mortgage houses, insurance companies and stockbrokers. The new competition brought about successes for some and spectacular failure for others. In the new millennium, banking has gone even beyond expectation, and for the surviving banks, competition has just begun. New products developed are vigorously vetted to gain competitive advantage over the existing products, reviewed and approved by the regulator before they are launched, all in the bid to attract more customers.

In the early 1990s, there was a sea of change in the banking industry that sent many Chief Executives of the industry back to the drawing board to find new ways to compete. At this time, the top management of the industry learned the fundamental lessons that customers were willing to pay a price premium for products and services that consistently meet high standard of quality. Customers now perceive that they have the right to demand for good services, since

they pay for it. As the service industries are setting promises, all that the customer wants are for the promises to be kept and this define the reputation of the organization.

According to Arora (2006:50), Reputation is either built or lost through satisfying or dissatisfying customers. What does it take to satisfy a customer today? The customer will have a need, which the banks are trying to fulfill. This may be weakly articulated or very vague. Either way, it is responsibility of the service provider to identify the need as precisely as possible and meet it. The customer will be satisfied once this is done.

The loss of a customer can be devastating, although the banks may be blissfully unaware of it. Each customer who walks away, takes away future years of repeat revenue. We do not sell to customers today, they buy. That is, they call the tune; they have the choice of banking with any bank of their choice (with the advent of a stable capital base for the existing banks). They will only bank with a particular bank if that bank delivers excellent and quality products and services. Excellence in services can be achieved through ISO 9000, ISO 14000, 18000, TQM, teamwork, and Quality Assurance.

According to Arora 2006.9, quality of a product throughout its lifespan is total Quality. All personnel of the organization are committed to quality by doing the right thing the first time and every time by employing the organization's resources to provide value added quality to the customers. Total quality accomplishes the business goals by designing and supplying products and services to achieve customer satisfaction at an economic level. A. V. Freignbaum 1983, Japan, conceived the term TQC (total quality control) TQC later became TQM. It is a corporate business management philosophy, which recognizes that customer needs and business goals are inseparable. Arora (2008:11). Management must be able to recognize that TQM will not happen by accident. TQM is a managed process, which involves people, system and supporting tools and techniques. Quality should begin to permeate financial institutions as a way of life and it should begin with employee satisfaction. TQM, though a recent phenomenon is

important in the banking sector. It has evolved as a management concept out of the need by organizations for continuous quality improvement and critical importance of increased profitability and survival in the face of competitive challenges in the banking industry.

However organizational culture is another variable to be looked at. According to Wong (2020), Organizational culture is the collection of values, expectations, and practices that guide and inform the actions of all team members. Think of it as the collection of traits that make your company what it is. A great culture demonstrates positive traits that lead to improved performance, while a dysfunctional organizational culture brings out qualities that can restrain even the most successful organizations. The Consolidated Bank Ghana Limited as one of the banks used in the survey, was a merged institution which is made up of seven defunct banks and therefore has employees from diverse backgrounds. Their culture has to become one and it is the role of management to ensure same. Fidelity on the other side, has been the same since inception. They have strong cultural background.

### **1.2 Problem statement of the study**

Developing innovative services that offer new value propositions leads to customer satisfaction and the acquisition of new customers. Technology-oriented and co-creation-oriented innovative behavior enhances business customer performance. Business growth is directly related to the extent and diversity of a firm's service innovation, reflecting changes in marketing, strategy, and business processes. But, in the investment banking industry, service innovation demands a coordinated approach across interrelated businesses. Banks are faced with major challenges due to demand-side changes and supply-side changes induced by legislation. These challenges ranges from internal barriers, competition, strategic management, to the broader impacts of market and legislative changes. Banks are strategically putting measures in place to overcome internal barriers which major pillars are the organizational structure categorized by rigid or hierarchical processes, hindering the free flow of innovative

ideas. Again, banks, by nature, are risk-averse entities. This can sometimes stifle innovation, especially if the potential risks of a new product or service are not immediately clear. Organizational cultural of banks can sometime make employees banking methods might resist new technologies or processes. Competitions among banks are not limited to national boundaries but globally, international banks entering local markets can pose significant challenges. With so many options available, customers expect more from their banks better digital experiences, faster services, and more personalized products. These challenges hinder banks service innovation. However, studies indicate that business growth is directly related to the extent and diversity of a firm's service innovation, reflecting changes in marketing, strategy, and business processes (Woo et al., 2021; Tajeddini et al., 2020; Aspara et al., 2017; Visnjic et al., 2016). For this reason, this student will examine the influence of banks service/ product innovation on firm performance.

Total quality management practices, when implemented effectively, can significantly support the achievement of overall organizational performance objectives. This performance boost can be further amplified when coupled with service/product innovations. Total quality management practices emphasize understanding and meeting customer needs. Khan and Naeem (2018), González et al. (2018), Hassan and Jaaron (2018) found that quality practices improve service innovation and organizational performance, competitive strategy, and manager's motivation to adopt quality management, and customer orientation are key factors that explain the presence of innovation capability as a firm's strength and Innovative companies find adopting quality management routines less demanding and less expensive than non-innovative companies respectively. Total quality management practices, when implemented effectively, can significantly support the achievement of overall organizational performance objectives. This performance improves can be further amplified when coupled with service/product innovations. Again, it is evident that being productive in existing services increases a firm's

willingness to innovate new services. A strong corporate culture, fostered by robust leadership and an emphasis on innovation in hiring and promotions, is essential to support this innovation. Large financial services firms face unique internal barriers that hamper potentially disruptive and radical innovation. These barriers can stem from the organizational culture and can include resistance to change, fear of the unknown, or a preference for tried-and-tested methods. Harel et al. (2020), Forcadel et al. (2019) and Das et al. (2019) point out that banks' organizational cultures can be significantly influenced by their national cultures. This can lead to varied perceptions and approaches to innovation, potentially causing resistance if the national culture is more conservative or risk averse. A genuinely customer-oriented organizational culture is crucial for success in the marketplace. If a bank's culture is not aligned with customer needs and preferences, it can resist innovations that are customer centric. This implies that banks' organizational culture can improve firm performance through service/product innovation. This study intends to determine the level of influence service/product innovation can have in the relationship between bank's organization culture and firm performance. Therefore, this research aims to address this empirical gap by systematically investigating whether service/product innovation serves as a mediator between organizational culture and firm performance. By doing so, it seeks to provide a deeper understanding of the intricate dynamics within organizations, potentially offering insights into how organizations can harness their cultural strengths to enhance their performance outcomes in a rapidly evolving business landscape.

### **1.3 Objectives of the study**

The main objective of the study is to determine how Total Quality Management practices and good organizational culture will enhance operational performance in the banking sector in Ghana.

Specifically,

1. To ascertain the influence of organizational culture on service product innovation
2. To assess the influence of total quality management practices on service product innovation
3. To determine the extent to which organizational culture influences service product innovation
4. To determine how total quality management practices affect operational performance
5. To identify the influence of service product innovation affect operational performance.
6. To ascertain the mediating effect of service product innovation on the relationship between organizational culture and operational performance
7. To determine the mediating effect of service product innovation on the relationship between total quality management practices and operational performance

#### **1.4 Research Questions;**

1. What is the influence of organizational culture on service product innovation?
2. What is the influence of total quality management practices on service product innovation?
3. What is the extent to which organizational culture influences service product innovation?
4. How does total quality management practices affect operational performance?
5. How does service product innovation affect operational performance?
6. To what extent does service product innovation mediates the relationship between organizational culture and operational performance?
7. To what extent does service product innovation mediates the relationship between total quality management practices and operational performance?

### **1.5 Significance of the Study**

Research justification according to SAGE research methods, refers to the rationale for the research or the reason why the research is being conducted, including an explanation for the design and methods employed in the research.

The focus of this research is to determine the relationship between Organizational Culture and Total Quality Management on operational performance of banks in Ghana, a comparative study of a government bank and private bank.

Most of the researches conducted in this field try to relate the successful implementation of TQM to customer satisfaction. However, organizations are established to generate returns for their owners or shareholders. This is achieved when organizations perform financially. This study is therefore to establish the link between organizational culture and TQM and operational performance with the mediating role of product service innovation and as such recommend or otherwise product service innovation to organizations that are weak in their operational performance.

### **1.6 Overview of Methodology**

Research Design:

An explanatory research design was adopted for the study. A descriptive research design seeks to identify the relationship between variables, that is, to identify how one variable affects the other: it also seeks to provide a clarification to the cause or effects of one or more variables.

Target Population:

The target population for a survey is the entire set of units for which the survey data are to be used to make inferences. Thus, the target population defines those units for which the findings of the survey are meant to generalize. A population element is therefore the subject on which

the measurement is being taken. The study targeted 200 respondents drawn from two banks respectively.

The sampling technique used is purposive sampling. Due to the purpose, nature and time available to complete the research, 200 respondents were selected from each of the two banks namely, consolidated bank Ghana Limited and Fidelity bank Ghana. This will be detailed in chapter three of the study.

Sources of Data:

Secondary data will be collected from the Bank's web site, company records and web sites and also from journals, books and periodicals etc. and the researcher used self-administered questionnaires to collect primary data for the study.

### **1.7 Scope of the Study**

The study will assess the relationship between organizational culture and TQM in Consolidated Bank Ghana and Fidelity Bank Ghana and how product service innovation can boost operational performance. It therefore makes sense that the principles and practices this study espouses will be applicable to the banking sector only.

### **1.8 Limitations of the Study**

Due to economic and time constraints in terms of huge amounts of money involved in carrying out the study extensively to cover all the banks in Ghana, accompanied with the urgency needed in the early submission of the research result, the study has been limited to cover only the head offices of the two banks.

The project was also limited by the constraint of securing primary data from the banks coupled with the lukewarm response from respondents who had to be persuaded to complete and return questionnaires on time.

## **1.9 Organization of the Thesis**

Chapter one of this research is concerned with the background of the study, the major objective and specific objectives, the research questions, the significance and limitations of the research and the entire scope of the study.

Chapter two talks about the Literature review. This is concerned with previous studies made on the subject matter by other researchers. It involves all variables included in the research.

Chapter three (3) discusses the methodology for the study. Subtopics such as research design, study philosophy, population of study, sampling technique adopted, and instrument design for data collection as well as procedure for data analysis has been explored to achieve the research objectives as pertain to the research questions.

The chapter four (4) contains data analysis and interpretation of findings. The results were interpreted and discussion alongside. The final chapter of the study is chapter five (5) which covers the review of the research objectives, summary of findings, conclusion and recommendation and end with scope for further studies.

## **1.10 Chapter Summary**

The chapter laid a foundation for the entire study by establishing that there is a research gap when it comes to Organizational Culture, Total Quality Management practices among banks and in Ghana. The chapter further covered the background of the study, statement of the problem, purpose of the study, research objectives, and significance of the study, the scope of the study and the limitations of the study. The next chapter reviews the literature.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter covers the relevant literature related to total quality management, organizational culture, product and service innovation and operational performance. The chapter further considered the theory underpinning the study, empirical review and conceptual framework. Some relevant literature covered are Overview of Total Quality Management, Total Quality Management Practices, Service Innovation, Product innovation complementary, Service Quality, Categories of service innovation, Contextualizing product and service in the literature on innovation, Antecedents of service versus product innovation performance, Organizational Culture, Sources of an Organizational Culture, Positive Organizational Culture, Organizational culture and innovation, Total Quality Management Practices and Operational Performance.

#### **2.1 Overview of Total Quality Management**

Total quality management (TQM) is a management philosophy which focuses on the work process and people, with the major concern for satisfying customers and improving the organizational performance (Talib, Rahman and Qureshi, 2012). They added that TQM involves the proper coordination of work processes which allows for continuous improvement in all business units with the aim of meeting or exceeding customer's expectations. It emphasizes on totality of quality in all facets of an organization with the aim of reducing waste and rework to reduce cost and increase efficiency in production and service delivery. TQM is applicable to any organization irrespective of size, and or motives, even the public sector organizations have started adopting the ideology in order to make them effective in meeting public demands (Rorio, 2015; Syed & Upadhyay, 2017). The International Standard ISO 8402, Quality Management and Quality Assurance Terminology defined TQM as the management approach of an organization, centred on quality, based on the participation of all its members

and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society. Rorio (2015) also posited that TQM is continuous improvement in the quality of all processes, people, products, and services of an organization. The tenets of TQM are continuous improvement, top management leadership commitment to the goal of customer satisfaction, employee empowerment, and customer focus (Rorio, 2015; AlAreqi, Al-Hadheq&Mutahar, 2018). The concept of TQM has been well accepted by managers and quality practitioners as a change management quality approach (Talib, Rahman&Qureshi, 2013). It plays a vital role in the development of management practices (Auniel&Mokaya, 2018). Some researchers asserted, it as an approach to improve effectiveness, flexibility, and competitiveness of a business to meet customers 'requirements (Madziwa, 2016; Daniel, 2016). It is also seen as a source of attaining excellence, creating a right first-time attitude, acquiring efficient business solutions, delighting customers and suppliers etc. it could be deduced from the various definitions that the implementation of TQM across organizations is aimed at achieving customer satisfaction and retention and invariably enhance organizational performance levels.

### **2.1.1 Total Quality Management Practices**

Total Quality Management, TQM, is a method by which management and employees become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices (Hashmi, 2010). In fact, Total Quality is a description of the culture, attitude and employee involvement to provide customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operations (Peters, 1994). TQM philosophy begins at the top, from the board of directors to the line employees. TQM is an ideology which is focused on the satisfaction of customer's need. TQM

require organizations to develop a customer focused operational processes and at the same time committing the resources that position customers and meeting their expectation profitably. This implies an approach of changing the corporate culture of an organization to be customer centric. TQM requires effective change in organizational culture which is enhanced by the deep involvement/commitment of management to the organization's strategy of continuous improvement, open communication and cooperation throughout the organization; broad employee interest, participation and contribution in the process of quality management. Leaders in a TQM system view the firm as a system; support employee development; establish a multipoint communication among the employees, managers, and customers; and use information efficiently and effectively. In addition, leaders encourage employee participation in decision-making and empower the employees. TQM requires effective knowledge management so as to ensure that employees obtain timely reliable, consistent, accurate, and necessary data and information as they need to do their job effectively and efficiently in the firm. TQM is concerned with the continuous improvement in all the process of design and operation, from the levels of planning and decision making to the execution of work by the front-line staff. The focus on continuous improvement leads to the formation of formidable team whose membership is determined by their work on the detailed knowledge of the process, and their ability to take improvement action. TQM also implies reducing and streamlining the supplier base to facilitate managing supplier relationships, developing strategic alliances with suppliers, working with suppliers to ensure that customer expectations are met.

#### **2.1.1.2 Historical Development of the Total Quality Management (TQM) Philosophy**

Some scholars who are interested in the quality of products have traced the origins of TQM to thousands of years ago. Dennis (1997), for example, has explored the quality issue by going back to 1700 BC when King Hammurabi ruled the Babylonian Kingdom and made a very strong ruling on product quality and liability in the construction sector by stating; "If a builder

constructed a building, then it falls into pieces and the owner is killed then the builder shall also receive the death penalty. If the children of the owner are killed then the builders' children shall also die." Comparatively more recently, however, at the end of the 13th century, artisans started to form guilds in order to develop product quality and organise themselves formally (Juran, 1995). During this period, the products of these artisans were frequently inspected and high-quality goods were marked with special symbols (Wolek, 1999), a method that was used continually until the Industrial Revolution at the beginning of the 19th century. Other inspection techniques that originated in the medieval guilds have remained, however, and are still in use today, forming many of the current concepts of TQM. Variance minimization, for example, is one such idea that developed at around this time in order to ensure that the products created by different members of the guilds were consistent in quality and appearance. And while the fact that manufactured goods were produced by individual craftsmen on a single item basis and therefore, limited the ability of the guilds to develop a systematic QM approach, the presence of the basic principles of TQM were perceived as being present at this time (Wolek, 1999). Clearly, research on the medieval guilds indicates that TQM has a strong basis in historical business and professional practices, and that it developed out of a need to control the quality of goods at a time in history where most goods were hand-made rather than being mass produced. These concepts developed over time as manufacturing became more systematic and standardized, eventually leading to the sub-field of business known as Quality Management. Yet another perspective places the beginnings of TQM in the late 19th century with a management theorist named Frederick Taylor. At the time, Taylor argued that frequent inspections of manufacturing facilities were critical in the effective and efficient management of factory shop floors (Sliwa and Wilcox, 2008). Taylor focused on the idea that inspections helped workers and managers to concentrate upon producing high quality goods rather than on producing goods quickly. Another aspect of Taylor's focus on inspections as a means of quality

control was that the inspections would observe the manufacturing process as well as the functioning of equipment and thus, be able to identify problems that might lead to defective product quality. TQM theory further developed in the 1920s and 1930s when WA Shewhart developed a scientific process for QM that was responsible for setting industry standards well into the 1950s. Shewhart's 'Control Chart Theory' embodied several key QM processes such as control limits, and assignable and chance causes of variation. In their efforts, both Taylor and Shewhart can be considered as the Founding Fathers of TQM (Sliwa and Wilcox, 2008)

The decisive moment for TQM occurred just before World War II, when the extraordinary expansion of manufacturing productivity associated with that war inevitably led to the concept of quality focus on product and performance. It is suggested that interest in TQM increased somewhat during the Second World War as the result of the need to concentrate on improving production of goods to power the military that needed not only weapons and ammunitions for their soldiers, but also supplies such as uniforms, food, and pharmacological items (BPIR, 2011). This in turn led to the eventual emergence of TQM in its present and recognisable form after the war when the Japanese became preoccupied with quality improvement as the result of the need to rebuild their manufacturing sector (Fisher and Nair, 2009). Deming is considered to be the main agent in helping the Japanese reorganise their business and management systems during the post-war period in the effort to stabilise the Japanese economy (Saylor, 1992). His book *Out of the Crisis* demonstrates his theory of chain reaction in business management and the relationship between quality and improved productivity (Wayhan et al., 2010). It should also be said that Deming adapted Shewhart's statistical quality control ideas through a series of lectures to Japanese engineers and CEOs that he gave to the largest Japanese organisations (Deming, 1986). Deming's (1986) observations of Japanese, American, and European management styles led him to reconsider QM in respect of the Japanese business environment, since several differences emerged between this and the Western countries. One particular

instance was seen at Toyota Inc., where it was obvious that the focus was on group, rather than individual performance. In this case, the emphasis was on loyalty and dedication to the group rather than to personal promotion. And the outcome was that Japanese managers were reluctant to change, and hence there were quality issues. The Western approach, however, was more individualistic and American and European managers were seen as more inclined to promote workers according to their merit, rather than their dedication to a team, or on their seniority. The focus on the individual is seen in Western workers' preparedness to leave a company which they do not feel is rewarding them for effort, whereas Japanese workers with their preference for collectivism, are predisposed to remain loyal to their employers, even when they are dissatisfied with their rewards. Atkinson (1990) characterises the changes that occurred in terms of QM in manufacturing between 1951 and 1989 as a complete change in how the concept of quality was viewed within organisational cultures. Ishikawa (1985) argues that many of the principles on which TQM is based incorporate a particularly Asian worldview in terms of the group rather than an individual focus, and in terms of how organisations are viewed as holistic units rather than as several sections or sectors with differing goals and purposes. The TQM perspective adopted by the Japanese in the 1950s was actually used to great effect by organisations such as Toyota that adopted TQM to solidly cement its position as one of the top automotive manufacturers in the world (Kakuro, 2004). Another important contributor to the development of QM in Japan was Feigenbaum, who introduced the 'cost-of-quality' idea in his book entitled Total Quality Control. The importance of this was that TQM acquired a focus on cost reduction (Hanna, 1995). In Japan, Ishikawa presented a theory of seven basic tools of quality, which could be used to solve any quality-related problems in an organisation. Other Japanese experts have also stressed the importance of a proper design strategy with exact specifications that focused on best target value (Saylor, 1992). It is suggested that there is a significant difference between 'control of quality' as is practised by the Japanese, and TQM as

is practised by the American and European business sectors. In Japan, QM has as its main concern, the control of quality within the company in every aspect ranging from employees to the environment, to products and services, whereas in the American and European business sector, quality is often solely focused upon products and services (BPIR, 2011; Powell 1995). Others with an interest in quality in the service sector consider the history of TQM development by referring to the United States Department of Defence and its adoption of TQM principles for use in the military (Ahmad and Kimberly, 1992). In this respect, the idea of TQM was formally introduced in 1988 to improve the overall efficiency of military defence in the US within approved financial limits. Later during that same year, TQM became an issue of prime importance when the Undersecretary of Defence approved its use for government projects. Other federal agencies within the US began adopting TQM practices during the mid-1980s, leading to the formal introduction of TQM practices in 1988. This is generally recognised as an accepted way to introduce TQM principles as a part of any organisation that is considering improving its efficiency for reasons of competition from other sources, improved customer satisfaction, or just to be economically viable (Hyde, 1993). Essentially, it was different departments within the organisation testing methods to manage quality, and observing the results, and if the method proved successful, then the process could be delivered to other departments. When using this method of deployment the organisations in question quickly discovered which areas of their operation were in critical need of overhaul. And finally, when TQM was shown to be successfully applied to these areas, it then became central to the smooth running of the entire organisation (Saylor, 1992).

### **2.1.2 Innovation**

Innovation, on the other hand, is used to refer to new products, services, processes or technologies that require acceptance and eventually adoption and implementation (Damanpour, 1991; Thompson, 1965; Zaltman et al., 1973). Innovation is the factor that enables the

innovative processes to produce new products and services, new technologies and new concepts (Sutanto, 2017). According to Padilla-Melendez and Garrido-Moreno (2012), knowledge of innovation needs more communication, and interaction between not only researchers, but also stakeholders affected by this, as well as, leaders. This way new ideas, processes and interactions can have an economic and commercial benefit. Hence, leaders, managers and researchers in organizations and universities should be aware of the different ways of innovation. Innovation, in the literature, can be divided into different types. The most popular typology of innovation divides it into three types: “administrative vs technical,” “product vs process” and “radical vs incremental” (Gopalakrishnan and Damanpour, 1997). Another classification of the typologies of innovation was developed by Jensen et al. (2007). According to this classification, innovation can be classified as: “Science, Technology and Innovation” (STI) that is based on analytical knowledge and “Doing, Using, and Interaction” that is subject to knowledge retrieved from the engineering field (Coenen and Asheim, 2006; Lorenz and Lundvall, 2006). Innovation can be divided into three groups: product-related, technology-related and behavior related perspectives. The technology-related innovation is related to the readiness to adopt current technologies and processes and the tendency of the organization to adopt new technologies and processes internally (Kitchell, 1995). Behavior-related innovation relates to the speed, at which the organizational system is ready to adopt new ideas relative to competitors (Rogers, 1995). Lastly, product-related innovation is about the ability of an organization to generate new ideas, products, services and processes, or to buy them (Stalk et al., 1992). Moreover, as innovation is responsible for implementing totally new or ameliorated versions of products, services or processes within the organization, or in the external relations (OECD and EUROSTAT, 2005), innovation can be classified into four categories. First, product innovation, which refers to the radical changes or ameliorations done to products and services. Second, process innovation, which refers to the major changes done

to the production system or to the delivery mode. Third, organizational innovation, which refers to the adoption of new business processes that affect the business process within the organization and or on external relations. And fourth, marketing innovation, which refers to any change made to one of the four marketing Ps (product, price, placement and position) (OECD and EUROSTAT, 2005).

### **2.1.2.1 Service Innovation**

Innovation is defined as “the act of introducing something new” (American Heritage Dictionary of the English Language, 2017). The aim of innovation is to identify new opportunities in order to make new products, services or work practices (Axtell et al., 2016). The service innovation differs from product innovation in many ways. First, service delivery staff is part of innovation in case of labor-intensive interactive services. Second, the services that involve the physical presence of customer need “local” decentralized production capacity. Third, service innovations do not carry brand names like an iPod or Samsung (Berry et al., 2016). The interaction with customers is an essential part of their service offerings. Therefore, service suppliers must build up suitable form of service product and proper way of interaction with customers because developing a new service is far more difficult than the development of new tangible product (Johne and Storey, 2017). According to numerous researchers, service innovation enables firms achieving competitive advantage (Kaplan, 2000). The benefits that accrue from starting new services include increase in the profitability, enhancing the customer satisfaction and loyalty of existing customers and the opportunity for opening new markets (Sampson, 2012). Due to technological advancements service firms are growing very fast and the competition amongst them is getting fierce day by day. Therefore, these firms are working very hard to provide high-quality service to their customers better than their competitors. These service organizations are moving their attention towards the implementation of TQM principles

in service organization to offer better service quality to their customers (Rönnbäck and Witell, 2018).

### **2.1.2.2 Product innovation complementary**

Literature has shown over a sustained period that product innovation has been considered one of the main drivers of value creation. Underpinned by technological change, this value creation stems from ‘creative destruction’ and the willingness to embrace risk and uncertainty; in effect, it destroys existing value in order to create new, superior value (Schumpeter 2014). Since Schumpeter’s contribution, scholars have invested time and effort in coming to understand how companies acquire and develop technological capabilities as well as how they hone innovation processes to develop new products that generate the greatest value. Although our knowledge of product innovation has matured somewhat, many gaps remain. First, innovation is not limited to products and –in line with Schumpeter’s initial definition –insufficient attention has been paid thus far to how other types of innovation create value, particularly business model innovation (Amit and Zott 2001; Snihur and Zott 2014). Second, the interdependencies between different types of innovation, while noted, have not been extensively explored (Snihur and Zott 2014; Zott and Amit 2008). Indeed, authors have already noted that product innovation in itself is likely to be insufficient and should, therefore, be accompanied by the appropriate business model (Chesbrough and Rosenbloom 2002; Teece 1986, 2010). These contributions, however, perceive the business model as a somewhat static factor that accompanies product innovation rather than a force for innovation and a source of value creation in its own right. Business model innovation represents a change in the design of the activity system that spans the focal firm and its clients, partners, suppliers and other stakeholders involved in the process of creating value (Zott and Amit 2007). Drivers of value creation that underpin business model innovation have been more diverse, context-specific and less defined than those underpinning product innovations (Zott et al., 2011). Some effort has been made to define and group how

business model innovation creates value. For instance, Amit and Zott(2001) group the value drivers of business model innovations for digital start-ups. They find that business model innovation helps e-businesses create value through an increase in novelty, efficiency, complementarity and lock-in. Understanding how incumbents, particularly in ‘non-digital’ sectors, create value through business model innovation is beginning to attract research interest(Zott et al.2011). At the same time, the first contributions with respect to how manufacturing firms create value –specifically, the use value for customers –by shifting to service business models are beginning to appear (Rajset al., 2013). Furthermore, the interplay between product innovation and business model innovation deserves greater attention. Researchers began to look at the supporting role that business models play in unlocking the value creation potential of technology change in the market place (Desyllas and Sako, 2013; Gambardella and McGahan, 2010), and they have increasingly argued that firms must consider how business model innovation and product innovation relate to one another(Chesbrough2010; Desyllas and Sako, 2013; Gambardella and McGahan, 2010; Teece 2010). Some contributions investigating the impact of the business model on product innovation are already in place.

### **2.1.2.3 Categories of service innovation**

Another way to understand service innovation is through categories or classifications that distinguish by innovation type. Each category contains a number of objects that are considered equivalent; therefore, categorization becomes a system comparing how different categories relate to each other (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976). Schumpeter (1934) proposes several different innovation forms: introduction of a new good, introduction of a new production means, and the discovery of a new source of raw materials, new markets, or new organizations. Taking a Schumpeterian view of service innovation, Drejer (2004) emphasizes the dichotomy between product and process as two main service innovation categories. In addition, the radical and incremental innovation dichotomy is a common service innovation

categorization that suggests bifurcating innovations based on the degree of change. To use a dichotomy to separate mutually exclusive types of innovation is common. Several benefits exist from developing and using categorizations because they create useful heuristics and provide a systematic basis for comparison and operationalization (Smith, 2002). Lovelock (1983) emphasizes the practical relevance of categorizations in marketing and suggests that distinctions can benefit different types of marketing strategies and management tools. Different marketing and innovation strategies might be relevant for different service innovation categories (Hsieh et al., 2013). However, using different categories in research can be troublesome because operationalizing them might be difficult. Hsieh et al. (2013) argue that most studies using service innovation categorizations do not provide specific examples of the different category types despite the importance of such details. Frequently, categories are neither exhaustive nor mutually exclusive and they are typically based on arbitrary or ad hoc criteria (Smith, 2002). Arguably, discerning these alternative categorizations is essential to gaining a deeper understanding service innovation. The following sections investigate the various service innovation categorizations through a comprehensive literature review.

#### **2.1.2.4 Contextualizing product and service in the literature on innovation**

The term “innovation” refers to the development of goods or services, which includes significant changes in features that distinguish products from previously existing ones (Maier et al., 2019), with the ability to create a change in themselves and their competitors, concomitantly satisfying their consumers and promptly creating new market demands. It is a two-dimensional structure, where the market is on one side and technological innovation on the other (Orihata and Watanabe, 2000). For this investigation, the definition adopted was recently updated by the OECD, which defines innovation as being a “new or improved product or process (or a combination thereof) that differs significantly from the unit’s previous products or processes and that has been made available to potential users (product) or brought into use by the unit

(process)”(OECD/Eurostat, 2018).The innovation process is the setting of different phases with a logical sequence between knowledge, innovation and economic performance (Capello and Lenzi, 2015). Conceptuallyspeaking, a pattern of innovation is defined as a combination of context conditions and of specific modes of performing the different phases of the innovation process in a specific region defined according to the presence/absence of some context conditions that allow for the creation and/or the adoption of knowledge and innovation (Capello and Lenzi, 2016; Capello and Lenzi,2019). As such, knowledge, financial resources, R&D, public politics, company size, the dynamic of the market, features of the economic activity sector, and other factors can influence the innovative capacity of a company or place. In Portugal, a specific standard was created to help companies leveraging their internal capabilities to create innovation (Santoset al., 2019). These researchers quote there are Portuguese companies that believe in innovation, the development of new concepts and in their human resources, creating opportunities for the growth of all, but this number is still very small as compared to what is required by Portugal. At the innovation of the product, there is the need to combine several inventions to create products that meet customer needs. Factors such as distribution courses, collaboration (with other companies, universities, customers), the right partnerships and shared technology directly affect product innovation. Thus, the higher the knowledge, experience and technology, the greater and more efficient the degree of novelty in the innovation processes (Calantoneet al., 2006; Nieto and Santamaría, 2007; Unet al., 2010, Capello and Lenzi, 2016; Capello and Lenzi,2019). The current focus at several companies when treating innovation in services is on the creation of value through customer’s experience, which suggests the need for methods, techniques and innovative practices of research and development (Bitneret al., 2008).As for the introduction of new or significantly improved goods and services, Tomizawa et al.(2020)quote that innovation in new (and improved) goods and services, especially those that enhance productivity and standards of living, are proving to

be the fount of growth in economies. Besides, productivity-enhancing innovation, new venture and new market creation enabling consumption by a wider range of consumers yield firm and economic growth, as well as improved standards of living. Fernandes et al. (2017), assert that the improved product does not need to be new to the market, but must be new to the firm regardless of whether the firm or external partners developed it. Besides, Hwang and Hsu, (2019) state product innovation can be a precondition for service innovation, as the first can reinforce service delivery and thus complement the innovation strategies adopted by companies. The size of the firms is an important feature that needs to be considered when trying to understand the innovative capacity of corporations (Seclen-Luna et al., 2020). Firm size is related to the capabilities and resources available for innovation, including technical, human and financial resources, and the size can affect performance benefits in innovative firms (Seclen-Luna, 2020). Small and medium enterprises' performance is enhanced by different types of innovation capabilities (Aliet et al., 2020), and firm size moderates the positive relationship between management innovation and product/process innovation such that the relationship is greater for small firms than for large firms (Ozturk and Ozen, 2020). Several coefficients interact in the innovation process, such as customer interaction, collaborative skills and knowledge interfaces (Vargo and Lusch, 2008), inside R&D investments (Sofka and Grimpe, 2010; Capello and Lenzi, 2016; Capello and Lenzi, 2019), and technology that has created great consequences to several sectors of products and services. By Sofka and Grimpe (2010), a technologically high-level environment requires companies to seek sources of scientific knowledge to access top-notch knowledge and improve the performance of innovation. Capacity for innovation is linked to the performance of medium and large companies, but not of small ones (Jeng and Pak, 2016). Also, the competitiveness of the industry increases the performance of large companies because of the strong dynamic capacity it has, thus serving as a stimulator of innovation. The large firms that remain competitive in the

market are more likely to bring new products to the market (Fanget al.,2019). Other factors are related to company innovation capacity, such as the availability of technological, financial and human resources (Aliet al.,2020). Also, the factors that stimulate innovation differ according to the type of industry and economy (Crowley and McCann, 2018).In Portuguese companies, in addition to the subsidy policies, the relevant factors regarding the type of innovation are the origin of the company, its geographical location and involvement in R&D activities (Braga and Braga, 2013;Cravo and Marques, 2019). The successful implementation of innovation policies appropriate to the development of R&D in Portugal implies an adequate contextualization, either of the factors that have been limiting the success of these policies or the new opportunities resulting from the transformation of the technological matrix of the current economy (Neveset al.,2007). For Portuguese high-tech companies, the acquisition of external sources of R&D has a positive and significant influence on the generation of product innovation (Pereira and Leitão, 2016).

#### **2.1.2.5 Tacit versus explicit services**

Although the heterogeneity of service sectors has been acknowledged for years, research on service innovation mainly focuses on specific service environments (Kuester et al., 2013). Single industry studies are dominated by the financial services sector (Avlonitis et al., 2001; Lievens and Moenaert, 2000a; Storey and Easingwood, 1998). However, there are also specific service industry sector studies ranging from medical (Zippel-Schultz and Schultz, 2011), hospitality (Nasution et al., 2011), software (Gobeli, Koenig and Bechinger, 1998), IT/Telecom (van Riel, Lemmink and Ouwersloot, 2004) to professional services (Castro-Lucas et al., 2012; 2013). This stream of research has shown that the antecedents of service innovation performance vary across different service industries, making it clear that a one size fits all approach to service innovation is no longer appropriate (Storey and Hull, 2010). However, whilst there are studies on service innovation performance that are cross-sectional (Froehle et

al., 2000; Hull, 2003), there is a lack of research that comprehensively examines the relevance of the antecedents of service innovation performance between different types of services. Services are either experiential in nature and delivered by interpersonal interactions, or process-based and delivered with the aid of technology (Dotzel et al., 2013; Hipp and Grupp, 2005). Storey and Kahn (2010) refer to these services as tacit or explicit services. Tacit knowledge services are characterized by simultaneous production and consumption (Hipp and Grupp, 2005). Such experiential services suffer from heterogeneity due to inconsistency in human performance (Dotzel et al., 2013) and are reliant on the tacit knowledge held by the people as they are delivered by interpersonal interactions. Explicit knowledge services are characterized by either their service offerings being substantially based on information and communication networks, or alternatively, they have to process large amounts of coded information data (Hipp and Grupp, 2005). Technological systems help to remove the synchronization of time and location between service provider and customer. Explicit services are often centrally produced, separable, homogeneous or consistent due to standardized processes and functionally associated with service technologies (Dotzel et al., 2013). Whilst the distinction between tacit and explicit service industries is not a straight dichotomy, emerging research has shown considerable differences in the antecedents of service innovation performance between both groups of services (Storey and Hull, 2010; Storey and Kahn, 2010). For example, MacCurtain et al. (2010) documented a direct positive link between knowledge sharing among project team members and market performance in the (tacit) software industry. By contrast, Lievens and Moenaert (2000a) concluded that in the development of (explicit) financial services, this relationship is mediated by uncertainty reduction as perceived by team members

### **2.1.3 Organizational Culture**

Organizational culture is an important tool for organizations to reside in the ideas, values, norms, rituals and beliefs in order to secure organization sustainability (Sackmann, 1991). It is

also an important mechanism to channel messages and information that will differentiate between permissible and non-permissible patterns of behaviour through the company's policies, decisions and activities. A strong organizational culture plays a role as a reliable compass and as a powerful lever to guide and balance member's behaviour (Wilson and Bates, 2003). According to Sackmann (1991), organizational culture will act as a control mechanism to create organizational commitment, achieve integration within organizations and help the organization adapt to the external changes. However, the effectiveness of organizational culture depends on its strength (Deals & Kennedy, 1982). By default, SMEs are claimed to have stronger organizational culture by virtue of their size and visibility of the owner-managers (Wilson and Bates, 2003). There are many models and theories of organizational culture. However, many of these theories and models are using etic approaches that assume that organizational culture cannot be measured (Alvesson, 2002; Schein, 2004). However, there are others who argued that despite complexity and multilevel nature of the organizational culture, the levels of organizational culture are unified and thus assessing the overt layers would mean tapping the deeper levels of the organizational culture (Cooke & Lafferty, 1986; Denison, 1990; O'Reilly & Chatman, 1991). This study would adopt the latter view of organizational culture and used Denison's model of organizational culture which is not only an observable behavioural-based model but has been validated within in business environment (Denison, et al., 2005). The Denison's model of Organizational Culture is a performance-based organizational culture framework which is developed based on a series of studies conducted over a 15-year period on over 1,000 organizations and 40,000 respondents (Denison, 2000; Denison & Mishra, 1995). Denison (1990) developed the model based on the Quinn's Competing Values Framework and uses 'values' level of analysis, the middle layer of Schein's model of organizational culture, as a basis for comparison. The use of values is consistent with theories set forth by Abdullah (1996), Hofstede (1980) and Trompenaars (1994). Based on his

extensive studies across industries, he identified four major traits of competitive organizational culture which are Involvement, Consistency, Adaptability and Mission. Involvement refers to strong sense of psychological ownership and commitment to the organizations and its goals while Consistency refers to the degree of normative integration where leaders and followers have common mindset and high degree of conformity. It is an indicator of stability and internal integration. Adaptability refers to the capacity for internal changes in response to external conditions and Mission refers to long-term vision including components such as strategic direction and intent, goals and objectives and vision. (Denison et al., 2005).

### **2.1.3.1 Sources of an Organizational Culture**

Organizational culture may spring from different sources, mainly from the beliefs of the founders (Martínez-Cañas& Ruiz-Palomino, 2014; Schein, 2010). Uddin, Luva, and Hossian (2013) noted that the source of organizational culture also includes the learning experience of group members, as well as the new beliefs and assumptions of new members and managers. Founders have an opportunity to introduce a strategy and direction of the organization at an early stage of the organization. Founders have a significant impact on how the organization operates (Andish et al., 2013). Founders of the organization are the primary source in establishing a new culture for the new organization (Flamholtz& Randle, 2012). The impact of culture occurs when the founders implement their business strategy and operational assumptions. Toma and Marinescu (2013) indicated that the founders' assumptions might develop because of their personal experience and cultural history. Founders may impose their personal experience and culture on their employees and partners within the organization(O'Reilly, Caldwell, Chatman, &Doerr, 2014). For example, the founder of Apple, Steve Jobs imposed his personal experiences and assumptions on employees. Steve Jobs' experiences and assumptions contributed to creating an effective and productive culture at the Apple Corporation (Kaliannan&Ponnusamy, 2014). Toma and Marinescu (2013) confirmed

that Steve Jobs successfully imposed assumptions and personal cultures on the Apple company culture. As a result, Jobs built a strong and successful organizational culture. Apple's corporate culture contributed to turning the founder's dreams into realities. Schein (2010) considered Apple as a good example to show how the founder's personal culture and assumptions profoundly influence the organizational culture. The other source of organizational culture is the learning experience. The learning experience derives from the social trends of the business environment (Nguyen & Aoyama, 2014). Uddin et al. (2013) noted that managers in the organization adapt some attributes from the community and the business climate. Employees of the organization live in the community, and they can impose their culture on the organization culture. Society may impose its culture on the organization through members of the organization because the members of the organization are part of the community (Gibbs, 2012).

#### **2.1.3.2 Positive Organizational Culture**

Business managers may develop and maintain a positive organizational culture to improve organizational performance and productivity in the organization (Flamholtz & Randle, 2011). Study findings in the area of organizational culture showed that a positive organizational culture as a functional culture in improving performance and productivity in the organization (Childress, 2013). Inabinett and Ballaro (2014) found the existence of a positive relationship between positive organizational culture and performance. Many business managers confirmed that a positive organizational culture as a primary factor in the success of their businesses (Childress, 2013; Melo, 2012). For example, the founders from Walmart and Southwest Airlines confirmed that their organizational culture is a primary factor in their business success (Flamholtz & Randle, 2011). The founders of Google and Apple also identified their positive organizational culture as the ultimate source of sustainable competitive advantage (Simoneaux & Stroud, 2014). Business managers with a positive organizational culture may develop a high level of trust in the leadership (Andish et al., 2013). In a positive

organizational culture, business managers use a transparent leadership style to develop and maintain trust in the organization (Simoneaux & Stroud, 2014). Transparent leadership includes a consistent decision-making process and transparent communication throughout the organization. When business managers show consistent decision-making processes and transparent communication in the organization, employees may develop trust on leadership (Miguel, 2015). Business managers with a positive organizational culture are responsible for clarifying and communicating organizational goals and objectives to employees and other stakeholders in the organization (Simoneaux & Stroud, 2014). In a positive organizational culture, employees may clearly understand their organization goal and values (Flamholtz & Randle, 2012). Childress (2013) noted that when employees share and understand the organization's values, they might engage on value added activities.

### **2.1.3.3 Organizational Culture Effectiveness**

The organizational culture literature contains information on how business managers use effective organizational culture to improve performance and productivity (Flamholtz & Randle, 2012; O'Reilly et al., 2014). Business managers believe that effective organizational culture is an asset, and ineffective culture is a liability for organizational success (Flamholtz & Randle, 2011). Eaton and Kilby (2015) indicated that business managers use organizational culture to control and moderate the working environment throughout the organization. Hartnell et al. (2011) noted that business managers use an effective organizational culture (a) to shape employee attitudes, (b) to improve operational effectiveness, and (c) to increase financial performance in the organization. Operational effectiveness contains information on how management uses an effective organizational culture to introduce and innovate new products and to improve process and service. Financial performance includes information regarding the achievement of profitability, productivity, and growth in the organization. Effective organizational culture is a combination of strong and positive culture. In a strong culture, the

organization members behave in a way consistent with organizational values (Flamholtz & Randle, 2011). In a positive organizational culture, employees share the goals and values of the organization (Flamholtz & Randle, 2012). Business managers may establish an effective organizational culture to improve performance and productivity in the organization (Inabinnett & Ballaro, 2014). Givens (2012) noted that managers with effective organizational culture promote excellent customer service and an innovative business environment. In an effective organizational culture, business managers show employee-focused leadership, sound interpersonal relationship, and ethical decision-making processes (Engelen et al., 2014). Business managers use an effective organizational culture to maintain a positive work environment (Pinho et al., 2014). Effective organization culture is a collection of sub-organizational cultures. Such culture includes (a) healthy customer service, (b) employee-oriented management, (c) strong interpersonal relationship, (d) exemplary leadership, and (e) ethical decision-making process (Childress, 2013). Maintaining an effective organizational culture in the organization is essential to motivate employees (Berg & Wilderom, 2012). Managers with an effective organizational culture may improve performance in the organization (Shahzad et al., 2012). In an effective organizational culture, employees share the organization's values and beliefs (Schein, 2010). When employees share the organization's value, they can perform better to achieve the organization's objectives (Denison, 1990). Study findings in the area of organizational culture showed that effective organizational culture includes shared values and common purpose to create a sense of teamwork in the organization (Flamholtz & Randle, 2011). Members of the organization use an effective organizational culture to develop teamwork and knowledge sharing culture (Wiewiora, Murphy, Trigunaryah, & Brown, 2014). Schein (2010) indicated that managers with an effective organizational culture encourage teamwork to improve performance in the organization. Teamwork is an essential factor to achieve common organizational objectives. In an effective

organizational culture, business managers and employees work together to improve performance and productivity in the organization (Childress, 2013). Eaton and Kilby (2015) noted that effective organizational culture is important to motivate and retain competent employees in the organization. Business managers with effective organizational culture give priority to excellent customer services (Berg & Wilderom, 2012). In most cases, organizational leadership contains outstanding customer service as part of a mission statement (Denison, 1990). Miguel (2015) indicated that leadership must value good customer service as a source of sustainable competitive advantage. Denison (1990) also noted that in an effective organizational culture, employees share the organization's values and beliefs. When employees share the organizational values and beliefs, they motivate themselves to achieve organizational goals by providing caring and comfortable service for customers (Childress, 2013). In an effective organization culture, customer service is an essential responsibility for business managers (Berg & Wilderom, 2012). In an effective organizational culture, business managers use employee-focused and transformational leadership to improve performance and productivity in the organization. Veiseh et al. (2014) found that the existence of a positive relationship between transformational leadership and organizational culture. Wiewiora et al. (2014) indicated that transformational business managers encourage collaboration and teamwork. When business managers encourage collaboration and teamwork in the organization, employees may benefit from shared experience and supportive alliance culture (Man & Luvison, 2014). In a supportive and collaborative culture, employees may develop a friendly environment in the organization (Veiseh et al., 2014). Wiewiora et al. (2014) noted that a friendly working environment is important to motivate employees for better performance. Quantitative research evidence in the field of organizational culture showed the existence of a positive relationship between high interpersonal relationship and organizational culture

(Veisoh et al., 2014). In an effective organizational culture, business managers encourage employee-centered interpersonal relationship in the organization (Engelen et al., 2014).

#### **2.1.4 Operational Performance**

Operational Performance can be defined as the process of quantifying the efficiency and effectiveness of action. Effectiveness refers to the extent to which customer requirements are met, while efficiency is a measure to how economically to firms' resources are utilized when providing customer satisfaction. Effective implementation of TQM will increase customer satisfaction with the service offerings, ensures that organisations change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Ozaki, 2003). According to Sila, (2007) TQM helps in improving the quality of products and also reduces the scrap, rework and the need for buffer stock by establishing a stable production process. He argued that TQM will reduce the cost of production and time of production. TQM enhance employees' training, information system management, relationship with suppliers (Khanna, Laroia, & Sharma, 2010). The performance criteria include: quality leadership, human resource development, quality strategy, information resources, quality assurance in process and product, people satisfaction, customer satisfaction, social and environmental impact and, the results. Most of the previous studies report that overall TQM practices have positively been related to operation performance, quality performance, employee satisfaction/ performance, innovation performance, customer satisfaction/results, competitive advantage, market share, financial performance, and aggregate firm performance. The success of TQM will result in improved employee involvement, improved communication, increased productivity, improved quality, improved customer satisfaction, reduced costs of poor quality and improved competitive advantage (Arumugam&Mojtahedzadeh, 2011). Kaynak (2003) suggested that the effectiveness of TQM in an organisation should be measured by the degree of integration with their supplier bases because supplier quality management is

a critical component of TQM. Operational effectiveness is then a function of how well the various units of an organization carry out their functions with quality.

### **2.1.5 Organizational culture and service product innovation**

As innovation plays a significant role in determining an organization's success, several studies attempted to examine its antecedences (Crossan and Apaydin, 2010). Different studies found that organizational culture and organizational design are the most influential determinants (Mumford, 2000). Organizational culture can affect the innovative attitude in two ways. The socialization process teaches individuals how to behave and act toward one another. Moreover, the organization's structure, policy system, procedure and management orientation can be affected by the basic "values, beliefs and assumptions" (Martins and Terblanche, 2003). Hence, culture can encourage innovation among employees, because it drives them toward accepting innovation as a philosophy of the organization (Hartmann, 2006). Different values of culture were regarded as means to foster innovation. Examples of these cultural values were creativity and initiative (Jamrog et al., 2006), entrepreneurial mindset (McLean, 2005), freedom and autonomy (Ahmed, 1998), risk taking (Wallach, 1983), teamwork (Arad et al., 1997), marketing orientation and flexibility (Martins and Terblanche, 2003). Research has given enough evidence for an existing relationship between organizational culture and innovation (Buschgens et al., 2013; Chang and Lee, 2007; Lau and Ngo, 2004; Lin et al., 2013; Miron et al., 2004; Naranjo-Valencia et al., 2016; Rezaei et al., 2018; Tseng et al., 2008; Uzkurt et al., 2013). Organizational culture includes the norms that the members of an organization experience and describe as their work settings (Schneider et al., 2013). Such norms shape how members behave and adapt to get results in the organization. Organizational culture shows the members of an organization interact with each other and other stakeholders (Simoneaux & Stroud, 2014). Organizational culture is a set of values, beliefs, and behavior patterns that differentiate one organization from other organizations (Ortega-Parra & Sastre-Castillo, 2013).

King (2012) defined organizational cultures as a system of values that subconsciously and silently drives people to make each choice and decision in the organization. Business managers use organizational culture and corporate culture interchangeably because both terms refer to the same underlying phenomenon (Childress, 2013). Business managers use an organizational culture to differentiate their company from other companies (Weber & Tarba, 2012). Apple Inc, the International Business Machines Corporation (IBM), and Hewlett-Packard Corporation (HP) exist on similar technology and same operating environment, but these companies have different organizational cultures (Schein, 2010). The Apple culture includes producing simple, elegant, and innovative products (Toma & Marinescu, 2013). Priorities in HP culture are employees' autonomy and creativity (Childress, 2013). The IBM's cultural focal point is long-term thinking with loyal and highly motivated employees (Flamholtz & Randle, 2011; Kotter & Heskett, 1992). The difficulty about leadership is the handling of human resources in the organizational culture (Peters & Waterman, 1982). Yirdaw (2014) noted that organizational culture is the glue that combines the hardware (nonhuman resources) to the software (human resources) in the organization to establish teamwork and excellent performance. Organizational culture positively relates to corporate leadership and governance (O'Connor & Byrne, 2015). Many business managers understand the impact of culture on corporate performance (Unger, Rank, & Gemunden, 2014). Warren Buffet, one of the top three richest businesspersons in the world, confirmed how organizational culture is necessary to organizational success (Childress, 2013). Similarly, the founder of Starbucks Coffee Company, Howard Schultz, explained that organizational culture is a critical factor in the success of Starbucks (Flamholtz & Randle, 2012). Given this discussion, it is then positing the hypothesis that:

***H1: Organizational culture has a positive relationship with service product innovation***

### **2.1.5.1 Relationships between TQM Practices and Service Product Innovation**

The key objective of product innovation is to accomplish the demands of the customers or capture external markets. Service product innovation is further classified into two sub-categories-radical product innovation and incremental product innovation. Service product innovations are the introduction of new offerings in the core of current services is the most common kind of innovation that may lead to new business benefits. The purpose of service innovation is to make the services more attractive to consumers by adding new flavors in the core of existing services (Khazanchi et al., 2007) Firms get momentum for market leadership and growth by making product improvements and adding new products to their product line (Iansiti, 1995). Product innovation opens new markets to the firm by attracting new customers. Product innovation also open firms in market share growth by adding new customers in the existing markets (Zahra & Nielsen, 2002). The management of successful organizations show more commitment to the development of new product especially in terms of delivering sufficient funding and resources than less successful organizations ( Kuczarski& Associates ,1994). A study from Mercer Management Consulting (1994) reveals that management of high-performance companies is highly committed in the implementation of new product development strategy. The service products are easier to copy and hard to safeguard under commercial patents. Even so, in order to remain competitive, service firms should keep working on innovating service products (Chen & Tsou, 2007). The TQM dimension of customer focus persuade organizations to look for new customer needs and expectations and therefore direct organizations to be innovative in terms of exploring new products on continual basis in order to fulfill market's changing demands (Juran, 1988). To do so organizations need to be creative to exceed the needs and expectations of their customers. Similarly, customer focuses emphasis organizations to constantly seek for new customer's demands and expectations. This strategy is closely related with innovation. Similarly, continuous

improvement motivates change and creative thinking in their business work. Finally, TQM dimensions like employee empowerment, teamwork play important part in determining the success of organizational innovation (Prajogo&Sohal, 2001). Organizations who adopt TQM as management strategy are more innovative organizations (Baldwin and Johnson, 1996). The service firms that implement TQM practices will perform better in distinguishing their products and offering better services. The TQM dimension leadership motivates employees to present new ideas for solving problems for developing new products or services. Prajogo et al. (2008) found positive and significant relationship between TQM practices and product innovation. Therefore, it posits that:

H2: Total Quality Management implementation has positive influence on service product innovation.

#### **2.1.5.2 Relationship between operational performance and Service Product Innovation**

Service quality play vital role in achieving sustainable competitive advantage. Satisfied customers increase organization's profitability by repeat purchase, brand loyalty and positive word of mouth. Service quality is the comparison of customer expectations with performance. Delivering service quality means fulfilling customer expectations on regular basis. During evaluating service quality customers compare the expected services with the services they receive. It is perceived judgment that is measured by comparing the customer expectations from the service and the level of service perceived by the customer (Parasuraman et al., 1998). Parasuraman et al. (1988) developed a scale to measure the service quality of different services provided by the service providers. It is one of the fundamental instruments used to measure perceived service quality and has been verified by numerous past studies. The widely used SERVQUAL model is consist of five dimensions which suggest that customers focus on five dimensions in their assessment of services that are: Tangibles, reliability, responsiveness, assurance, and empathy. Service quality is the customer's overall judgment of excellence of

service offering (Santos, 2003). Service quality is also influenced by capability of an organization in satisfying customer needs in accordance with their expectation level (Yoo& Park, 2007). Gronoos (1984) has presented his own two-dimensional model of service quality. He argued that service quality is a function of two variables: technical quality and functional quality. The technical quality deals with what is delivered whereas functional quality entails how it is provided. Customer loyalty is of great importance in the current literature because it's the primary force to boost firm's financial performance in the current business environment. Superior service quality is of fundamental importance in enhancing customer loyalty. It has been proved from previous research that there is positive correlation between service quality and customer satisfaction (Cronin et al., 2000). Service quality is also closely linked with customer's intention to stay close to their service provider (Anton et al., 2007). Research has found that innovation plays a significant role in organization performance (Higgins, 1995; Hult et al., 2004). Organizations able to innovate are more capable to deliver new products and services, improve processes in a faster way to fit the market's needs and capitalize on opportunities better than non-innovative organizations (Jimenez-Jimenez et al., 2008). Moreover, innovation has been associated with higher levels of growth and profitability (Li and Atuahene-Gima, 2001). In the literature, several studies have been conducted to confirm the positive relationship between innovation and performance (Afcha, 2011; Artz et al., 2010; Baker and Sinkula, 2002; Chen et al., 2009; Damanpour, 1991; Damanpour and Gopalakrishnan, 2001; De Clercq et al., According to different studies being innovative can lead to growth in business performance in service firms. Cainelli et al. (2004) in their study investigated the effect of innovation on financial performance in service firms. Based on the discussion, it is hypothesis that:

**H3: operational performance has a positive influence on Service Product Innovation**

### **2.1.5.3 Mediating effect of Service Product Innovation on TQM Practices and operational performance**

Service process innovation is the introduction of new or significantly improved production or delivery method for producing products or services for business purposes and can be implemented on whole value chain (Chen & Tsou, 2007; Sadikoglu & Zehir, 2010). The aim of Process innovation is to improving the productivity of the firm by creating or improving production methods or services as well as the enhancements in the development of processes, systems and reengineering activities in order to make new products or services (Garcia and Calantone, 2002; Khazanchi et al., 2007). Process innovation facilitates firms in creating large number of products and services on the expense of limited number of available resources. The incremental process innovation and radical process innovation are two categories of service process innovation (Reichstein and Salter, 2006). A research conducted on British companies found that processes improvements are critical for the success of product/service innovations (Oke, 2007). Deming (1986) recommended that firms should continuously improve their products and services to satisfy their customer because it is major indicator of firm's market share and profitability. The satisfied customers increase firm's profitability by repeating their purchase of products or services. The TQM efforts resulted in increased customer satisfaction in big firms like IBM, Xerox and 3M (Ross, 1995). A study conducted by Prajogo & Sohal (2004) on manufacturing and non-manufacturing firms found TQM practices have positive and significant impact on product and process innovation. Martínez-Costa and Martínez-Lorente (2008) suggest that continuous improvement bring change in organizations and this change leads to innovations in the organization. Service innovation is an important feature of firm's capability to differentiate itself from its competitors and add more to firm's revenue. Innovations can enhance service differentiation; therefore, it is essential for managers to implement those innovations that are desired by the customers to generate revenues for the firm

(Dev et al., 2005). The recent literature found direct and positive relationship between innovation and performance in different service sectors (Lin, 2011). Firms which clearly define their innovation process for services are swifter and more successful in developing new services. The development of new services leads to higher revenue growth as well as increase in the share of their total revenue. Today's business environment is very competitive and therefore just providing quality services is not enough, companies should seek for new innovative service offerings that are valuable for customers (Bettencourt et al., 2013). Therefore, companies should pay more attention to their innovation strategy, processes and especially their services to make innovation process more systematic (Schulteß et al., 2010). Successful innovation strategies are more useful during the recession times when there is decrease in economic activity due to decrease spending. Service innovation is a big source of competitive advantage for those companies which capitalize on knowledge gained from customers, competitors and have the potential to develop more meaningful and unique services. The effective implementation of TQM practices will increase customer satisfaction with the service offerings (Omachonu & Ross, 1994). Quality enhances customer loyalty through satisfaction; this in turn can generate repeat business and lead to the attraction of new customers through positive word of mouth. The word-of-mouth communication will help in cost reduction. The improvement in quality will result in increased market share and profitability. Total quality management is a management philosophy which emphasizes the devolution of authority to the front-line staff. It ensures the participation of everyone in the decision-making process through activities such as quality cycles and team work. The implementation of TQM ensures that every worker in the organisation does his work with quality the first time, thus improving the efficiency of operation and avoiding some cost associated with waste. This in turn will offer more value to customers in terms of price and service quality, thus making them satisfied. Implementation of TQM further ensures that organisations change how they perform

activities so as to eliminate in efficiency, improve customer satisfaction and achieve the best practice (Porter, 1996). According to Sila (2007), TQM helps in improving the quality of products and also reduces and establishes a stable production process. Continuous improvement which is a feature of TQM is said to reduce the product cycle time thus improving performance (Huang & Lin, 2002). Many other TQM practices such as training, information system management, relationship with suppliers etc have a positive impact on operational performance. The efficient management handling of these practices will improve efficiency and no doubt affect the profitability of the firm According to Sila (2007), TQM can minimize the total cost of production through sole sourcing. The cost in this case is reduced by limiting the number of suppliers used by the firm and providing them with necessary training and technology. The efficient functioning of an operation will then depend on how well the suppliers meet up with the expectations of the organisation. This is why the TQM principle emphasizes the totality of quality in all facets which includes the suppliers. The total quality approach creates an integrated method of analyzing operation by focusing the processes of production on customer satisfaction. Thus, it requires that quality be built into all the processes so as to be efficient in the overall operation (Andrle, 1994). Based on the argument, it is proposed that:

H4: Service Product Innovation Positively Mediates Total Quality Management Practices and operational performance

#### **2.1.5.4 Mediating effect of Service Product Innovation on organizational culture and operational performance**

It is argued that it is important to study the antecedents of success innovation performance because of the differences between services and products (Song, Song and Di Benedetto, 2009). Relative to products, services are widely recognized as being intangible, inconsistent, and inseparable. As a result, innovation practices developed for products may be inappropriate for

services. Intangibility means that services require intensive information exchanges between service employees and customers (Lievens and Moenaert, 2000b). Inseparability refers to the simultaneity of service production and use requiring the interaction between customers and service employees during service delivery (e.g., de Brentani, 1989). As a result, services exhibit greater variance in their delivery performance (i.e., inconsistent or heterogeneous performance) making new services more difficult for consumers to assess, especially before purchase, making consumption inherently less likely (Dotzel et al., 2013). Risks are associated with service innovation because it is difficult for companies to fully gauge customer reactions prior to the introduction of a new service (Kuester et al., 2013). These service characteristics suggest that the antecedents of service innovation performance may be different from those for products. The conceptual framework presented in this article builds on previous product innovation meta-analyses, and identifies six broad categories of service innovation performance antecedents. Henard and Szymanski (2001) identify four categories of antecedents of innovation performance: (1) product (service offering) characteristics that capture elements pertaining to the offering, such as value, innovativeness, and how well the offering meets customer needs; (2) strategy characteristics that refer to a firm's planned actions that can help it achieve competitive advantage in the marketplace; (3) process characteristics that refer specifically to elements associated with the development process and its execution; and (4) marketplace characteristics that capture elements that describe the target market. Additional meta-analyses identify organizational characteristics, which include the structure, climate and design of the firm (Evanschitzky et al., 2012; Montoya-Weiss and Calantone, 1994), and team characteristics, which concern how development teams are organized and managed (Cankurtaran, Langerak and Griffin, 2013; Chen, Damanpour and Reilly, 2010) as separate categories of antecedents. The conceptual framework of the present study used these six categories of antecedents as its starting point for three reasons. First, whilst this classification

schema is not definitive, it has pedagogical value and intuitive appeal (Henard and Syzmanski, 2001). Second, using this classification schema enables comparisons with meta-analytic findings on the antecedents of service and product innovation performance. Third, it further reflects frameworks proposed in the service innovation literature (de Brentani 2001; John and Storey, 1998; Kuester et al., 2013). However, the present study incorporated in its conceptual framework a number of antecedents that are specific to service innovation (e.g., service quality, front-line staff), within these six categories. Organizational culture includes the norms that the members of an organization experience and describe as their work settings (Schneider et al., 2013). Such norms shape how members behave and adapt to get results in the organization. Organizational culture shows the members of an organization interact with each other and other stakeholders (Simoneaux & Stroud, 2014). Organizational culture is a set of values, beliefs, and behavior patterns that differentiate one organization from other organizations (Ortega-Parra & Sastre-Castillo, 2013). King (2012) defined organizational cultures as a system of values that subconsciously and silently drives people to make each choice and decision in the organization. Business managers use organizational culture and corporate culture interchangeably because both terms refer to the same underlying phenomenon (Childress, 2013). Business managers use an organizational culture to differentiate their company from other companies (Weber & Tarba, 2012). Apple Inc, the International Business Machines Corporation (IBM), and Hewlett-Packard Corporation (HP) exist on similar technology and same operating environment, but these companies have different organizational cultures (Schein, 2010). The Apple culture includes producing simple, elegant, and innovative products (Toma & Marinescu, 2013). Priorities in HP culture are employees' autonomy and creativity (Childress, 2013). The IBM's cultural focal point is long-term thinking with loyal and highly motivated employees (Flamholtz & Randle, 2011; Kotter & Heskett, 1992). The difficulty about leadership is the handling of human resources in the organizational culture (Peters & Waterman, 1982). Yirdaw

(2014) noted that organizational culture is the glue that combines the hardware (nonhuman resources) to the software (human resources) in the organization to establish teamwork and excellent performance. Organizational culture positively relates to corporate leadership and governance (O'Connor & Byrne, 2015). Many business managers understand the impact of culture on corporate performance (Unger, Rank, & Gemunden, 2014). Warren Buffet, one of the top three richest businesspersons in the world, confirmed how organizational culture is necessary to organizational success (Childress, 2013). Similarly, the founder of Starbucks Coffee Company, Howard Schultz, explained that organizational culture is a critical factor in the success of Starbucks (Flamholtz & Randle, 2012). Given this discussion, it is then posing the hypothesis that:

***H5: Service Product Innovation positively Mediates organizational culture and operational performance***

## **2.2 Empirical Review**

Customer focus enables organisations to give priorities to customers thus involving them in every aspect of product and or service design and development in a bid to reduce quality defects. A quantitative study by Herzallah, Gutiérrez-Gutiérrez and Munoz Rosas (2014) found TQM practices adopted at SMEs in Palestine to include process management, customer focus, top management leadership and strategic planning. Shun-Hsing, Fei-Yun and I-Ping (2014) did a study to identify TQM practices and how they affect customer satisfaction and loyalty. The study focused on 402 customers in the securities industry located at cities of Hsin-Chu and Miao-Li of Taiwan. The study found TQM practices to include top management commitment, empowerment, product design, employee training, continuous improvement, process management and customer relationship management. Mwaniki, & Bichanga (2014) focused on determining the Effects of total quality management on financial performance in the banking sector: a case study of national bank of Kenya . This study was limited to establishing how the pillars of TQM, namely supplier relationship, customer relationship, processes and top

management involvement relate to financial performance. The four pillars of TQM formed the independent variables of the study while financial performance was the dependent variable. The findings of the study indicated a positive relationship between top management involvement, process and supplier relationship and financial performance. In their study Hassan, Mukhtar, Qureshi and Sharif (2012) examined the association between quality management practices and performance, i.e. quality, business, and organizational performance. The quantitative data were obtained through a survey from 171 quality managers of Pakistan's manufacturing industry. This study supports the hypothesis that quality management systems practices positively impact the performance. Quality management systems tools and techniques (Incentive and Recognition System, Process, Monitoring and Control and Continuous Improvement) and Behavioral factors (Fact based-management, top management's commitment to quality, employee involvement and customer focus) contribute to the successful implementation of quality management systems. The study reports that successful adoption and implementation of quality management systems practices results in improving the performance of organization. The main implication of the findings for managers is that with quality management systems practices, manufacturing organizations are more likely to achieve better performance in customer satisfaction, employee relations, quality and business performance than without quality management systems practices. According to Irfan, Ijaz, Kee and Awan (2012) in the study on Improving Operational Performance of Public Hospital in Pakistan used a questionnaire with fourteen Quality management systems practices to measure the impact of Quality management systems practices on operational performance of public hospital in Pakistan. Structural Equation Modeling (SEM) approach with AMOS 16.0 was employed to develop a Quality management systems and performance model. A total of 239 questionnaires was included in the study and the results show that selected Quality management systems practices has a significant positive impact on quality management systems implementation and

also on operational performance in terms of increased flexibility, improved quality of services, reduction in service time and effective diagnostics. In examining whether quality management work in the public sector Stringham (2004) focused on the quality movement in the United States during the past two decades in the context of public management. The paper reviewed the impact of the Pennsylvania Department of Transportation's twenty-year experience with its quality improvement program on overall organizational performance and productivity. The study concluded with a discussion of the challenges of sustaining a quality program through the frequent changeover of senior political appointee leadership and the inherent tension between process improvement quality approaches and cost savings/cost avoidance approaches that surface during times of government fiscal crises. Adeoti (2003) examined the gains of application of total quality management in the service industry with particular reference to the commercial banks in Nigeria and also to see how the application of TQM can prevent future threats of distress in commercial banks. Three banks were selected randomly, one to represent each of the three generation banks. The results of the study showed that the quality and quantity of employees employed determine to a very large extent the survival of any bank, also that the application of TQM is not immunity against distress but a preventive mechanism for distress.

### **2.3 Diffusion of Innovation Theory**

The roots of the discussion about innovation seem to be found in the early 20th century, with the fundamental contribution of Joseph Schumpeter. Schumpeter discusses that large companies operating in concentrated industries are the main source of innovative activity (Schumpeter, 1934) and characterizes innovation as the engine of economic development that can replace the old with the new, causing significant changes in economic systems (Schumpeter, 1942). Later, Rogers (1962) elaborates the Diffusion of Innovation Theory, which examines the processes by which innovation is communicated and adopted over time among the participants of a given social system. Rogers identified four main elements that

influence and disseminate a new idea: the innovation itself, the communication channels, time and a social system. Another set of explanations for innovation is offered by the Economic Evolutionary Theory, proposed by Nelson and Winter (1982). Their model supports that the behavior of any company is based on a set of learned principles or routines. Evolutionary theories understand innovation as a process dependent on its development through interactions between their various actors and subsequently tested in the market. These theories and market tests largely determine which products are developed and which are successful, thereby influencing the future path of economic development. Drucker (1985) characterizes innovation as the tool of entrepreneurs, being how they explore change as an opportunity for a different business or service. For Cooper (1994), innovation and development of new products are the processes themselves and for Kuhlmann (2001), the essential element for innovation are the institutions involved in scientific research, responsible for the accumulation and dissemination of knowledge, the ability to educate and train the working population, develop technology, produce products, develop innovative processes and distribute them. In the Open Innovation Model proposed by Chesbrough (2003), companies commercialize internal ideas through external channels to generate value for the organization. In other words, it is a set of external knowledge and ideas together with internal research and development, which offers new ways to create value. For the author, the boundary between a company and its environment is flexible, which enables internal and external ideas for the organization to generate innovation for the market. The dynamic of competition in the market and financial resources are two factors that influence innovation processes. The contributions of other people with whom the company maintains contact, such as customers, suppliers and distributors, are crucial in the innovative process (Urban et al., 1997; Lusch and Nambisan, 2015; Arthur, 2009; Sofka and Grimpe, 2010), whereas the partnership between employees and managers is quoted by Ordanini and Parasuraman (2011) as a robust booster of innovation in services that can

contribute with volume and radicality. Vincent et al. (2004) consider fundamental to understand innovation, as it is the main source of sustained economic growth (Rodríguez-Pose and Crescenzi, 2008). As a financial incentive, Moura et al. (2019) and Gibson and Naquin (2011) refer those effects of those for companies through public financing, are essential to stimulate innovation in the European Union, and at a policy level, many factors can affect the development innovation investment. Continued investment in innovation, especially in the development of knowledge and skillsets within the country, is critical to the development of tacit knowledge for Portugal (Gibson and Naquin, 2011).

#### **2.4 Empirical studies on Total Quality Management**

The concept behind the identification of TQM practices is to successfully implement TQM approach in the organisation so as to achieve productive results with high level of customer satisfaction by delivering enhanced quality products and services (Hoang, Igel & Laosirihongthong, 2010; Talib et al., 2011). Alternatively, it can be said that the TQM practices are the building blocks of organization's performance and must be addressed critically so as to implement TQM effectively. The section presented extensive reviews of related literature on total quality management practices adopted in various sectors notably the banking sector across the globe. For instance, Saravanan and Rao (2007) identified top management commitment and leadership, benchmarking, customer focus and satisfaction, service marketing, social responsibility, human resource management, employee satisfaction, service culture and continuous improvement as major TQM dimensions. Sadikoglu and Zehir (2010) similarly revealed customer focus and continuous improvement as TQM practices. He explained that customer focus, for instance, reveals what customers want in order to design products and services to exceed such wants. An empirical review by Lenka and Suar (2008) found six TQM practices to include customer orientation, continuous improvement, quality measurement, organisational culture, human resource management and leadership. Duggirala,

Rajendran and Anantharaman (2008) concluded that process management as a TQM practice is critical as it ensures error-free services in the most unique, innovative and efficient manner. Similarly, Selvaraj (2009) studied about TQM practices in the Indian banking industry and found such practices to include customer focus, social responsibility, human resource management, employee satisfaction and top management commitment. Fotopoulos and Psomas' (2009) study found TQM practices to include employee management and involvement, customer focus, leadership and continuous improvement, among other factors. Other studies by Talib and Rahman (2010) and Jha and Kumar (2010) found TQM practices to comprise continuous improvement, meeting customers' requirements, reducing rework, long-work thinking, increased employee involvement and teamwork, process redesign, competitive benchmarking and team-based problem solving.

**Table 1: Summary of previous empirical studies on Total Quality Management**

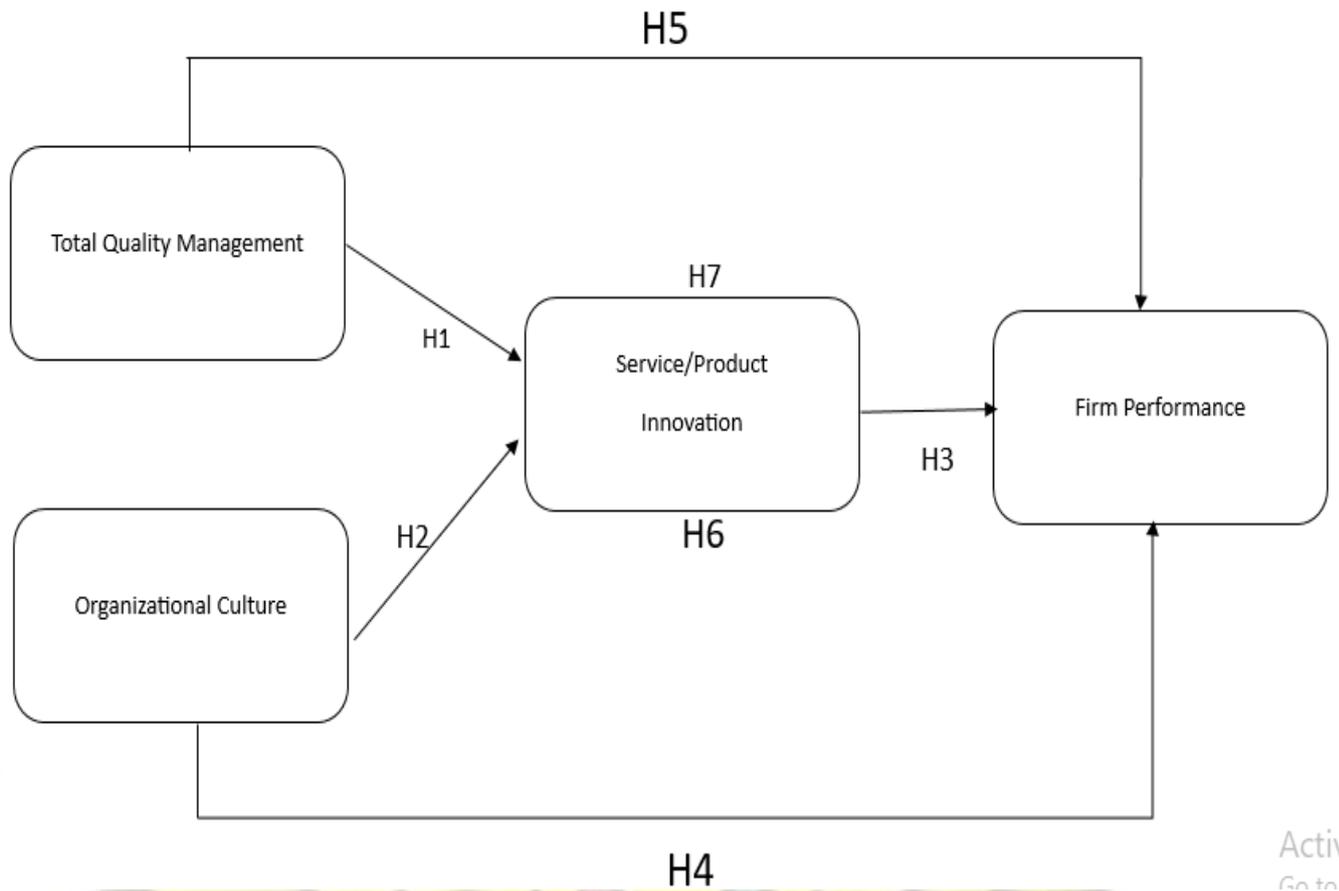
Author(5)	Title	Main Purpose	Methodology	Findings
Setyawan et al.(2020)	Conceptual Framework on Quality Management Practices and Operational Performance for ISO 9001 Certified Construction Industries	Effect of Quality Management (QM) practices on Operational Performance (OP)	Quantitative	Quality Management (QM) practices has a positive influence on Operational Performance (OP)
Jancikova and Brychta (2009)	TQM And Organizational Culture as Significant Factors in Ensuring Competitive Advantage: A Theoretical Perspective	The aim of the paper is to analyse TQM and organizational culture as factors influencing business performance.	Quantitative	Positive relationship exists on TQM and organizational culture as factors influencing business performance on the present demanding markets.
Bagga and Haque (2020)	Total Quality Management As A Change Driver For Influencing Affective Commitment To Change: An Empirical Study In It Organizations Of Delhincr Region.	This paper aims to recommend a conceptual model of how TQM practices affect affective commitment to	a qualitative survey distributed to 160.	The findings revealed thatTQM practices have a positive and significant direct relationship with employee's

		change through their impact on employee readiness to change.		readiness for change in the IT organization.
Mose, and Kibera (2015)	The Influence Of Service Quality Management Practices On The Performance Of Hotel Firms In Kenya	The influence of service quality management practices (top management support, employee management, customer orientation, quality information, reward and recognition and product/service) on the performance of hotel firms in Kenya	The study adopted a descriptive cross-sectional survey design.	The results of the study revealed that service quality management practices significantly influences performance.
Arshad and Su (2015)	Role Of Total Quality Management In Service Innovations: An Empirical Study Of Pakistan's Financial Services Firms	This empirical study examines the relationship between total quality management (TQM) and service innovation as well as the relationship between service innovation and service quality. .	Quantitative	Data analysis shows that TQM implementation has a positive and significant impact on service innovation as well service quality.
Munizu(2013)	Total Quality Management (TQM) Practices toward Product Quality Performance: Case at Food and Beverage Industry in Makassar, Indonesia	The purpose of this research was to test and analyze the effect of TQM practices impelementation which consists of leadership, strategic planning, customer focus, information and analysis, people management, and process management to	Method of analysis which use both descriptive statistic and Structural Equation Modelling (SEM). Data processing uses two statistic tools i.e: IBM SPSS and AMOS 19.00	The findings of research indicate that leadership has significant effect on product quality performance, strategic planning has significant effect on product quality performance, customer focus has significant effect on product quality performance, information and

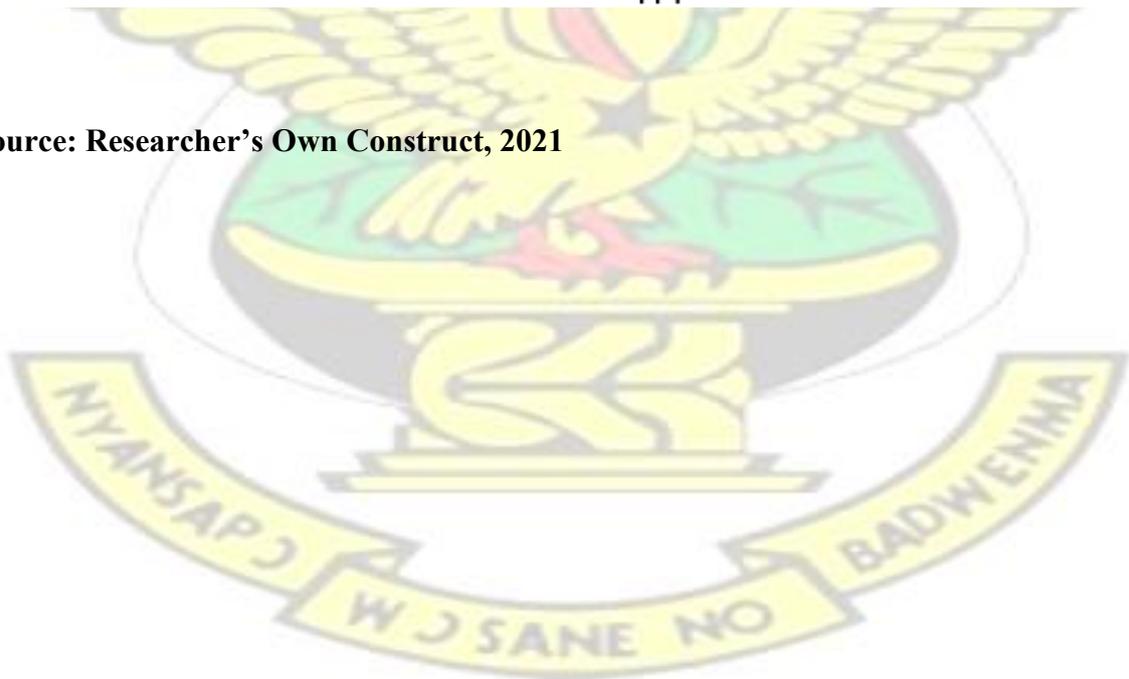
		product quality performance.		analysis has significant effect on product quality performance, people management has significant effect on product quality performance, and process management has significant effect on product quality performance. Leadership factor has dominant effect on product quality performance
Saraiva et al. (2014)	Quality Management Principles and Practices Impact On The Companies' Quality Performance	The aim of this paper is to expose the conceptual model which pretends to reflect the relationship between the use and implementation of quality management principles and practices and their impact on the companies' quality performance.	contributions structural equation modeling technique (SEM).	the results show a significant and positive relationship between the implementation of quality management principles and practices and their impact on the companies' quality performance.
Keng-Boon (2009)	TQM and knowledge management: Literature review and proposed framework	This research study seeks to come up with a conceptual framework that investigates the different dimensions of total quality management (TQM) and its effects on knowledge management (KM).	Qualitative	There are different dimensions of total quality management (TQM) and its effects on knowledge management (KM).

Addae-Korankye (2013)	Total Quality Management (Tqm): A Source Of Competitive Advantage. A Comparative Study Of Manufacturing And Service Firms In Ghana	Among the objectives were; to find out the impact of TQM on , challenges in the implementation of TQM policies and practices, and to ascertain whether TQM is a source of competitive advantage in both service and manufacturing firms in Ghana.	Mixed method approach	It was found out that when properly implemented, TQM will be a source of sustained competitive advantage. The study also revealed that while the quality of manufacturing products can be tested and controlled, it is difficult to control the quality of services before delivery because of their intangibility nature
Owusu and Duah (2018)	EVALUATING TOTAL QUALITY MANAGEMENT AS A COMPETITIVE ADVANTAGE TOOL IN MOBILE TELECOMMUNICATION SERVICES IN GHANA	The purpose of the study was to find out TQM as a competitive advantage tool in mobile telecommunication services in Ghana	Qualitative	TQM is a competitive advantage tool in mobile telecommunication

## 2.5 Conceptual Framework for the study



Source: Researcher's Own Construct, 2021



## **SCHAPTER THREE**

### **APPROACH AND METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the detailed methodology of the study. It covers such areas as research philosophy, research approach/strategy, research design, population of the study, sampling technique and sample size, research instruments employed, data collection procedures, data analysis techniques and organizational profiles.

#### **3.2 Research Philosophy**

According to Myers and Avison (2002), research philosophy is defined as “a set of beliefs, values and techniques from the fundamental philosophical assumptions which define what valid research is and the appropriate methods that can be applied in that research.

Research philosophy is classified as ontology, epistemology and axiology. These philosophical approaches assist to decide which one approach should be adopted by the researcher and the reasons, which is derived from research questions (Saunders, Lewis, & Thornhill, 2009). These important assumptions are present in research philosophy which explains about the researcher's view regarding the world. These assumptions will determine the research strategy and the methods of that strategy.

Susweta and Priya 2015, explained different types of research philosophy, which are below:

##### **Ontology**

Ontology is based on the nature of reality. It is classified on the basis of objectivism and subjectivism. The first aspect of ontology, objectivism portrays the position that social objects persist in reality external to social actors. Secondly, subjectivism is concerned on the social phenomena which are emerged from the perceptions and consequences of those social actors concerned with their existence. For example, the Filmfare Award ceremony is the high cultural experience which is organized by the Government of India. The government officials,

ministers, celebrity of national as well as international level are invited in this programme. The researcher wants to map the attitudes and temperament of this crowd which is spread over three days' festival. The researcher adopts subjectivism philosophy to determine their temperament and attitude.

### **Epistemology**

Epistemology is understood about the **acceptable knowledge of a particular area of study**. It can be divided into two aspects; resources researcher and feeling researcher. The 'resource researcher' deals with the data from the perspective of natural scientist. On the other hand, the 'feeling researcher' is concerned about the feelings and attitudes of the workers towards their managers. So, the 'resource researcher' is involves developing positivist philosophy whereas the 'feeling researcher' is focus on interpretivist philosophy. Epistemology is therefore classified as Positivism, Realism and Interpretivism in the domain of research philosophy.

### **Positivism**

The philosophical approach of natural scientist is observed in positivism as the work of natural scientist is based on observable social entity. Research strategy is approached on the basis of data collection and hypothesis development. These hypotheses will be tested and confirmed which can be used for further research. Another feature of this philosophy is that the positivist researcher follows highly structured methodology in order to facilitate the hypothesis. Furthermore, positivism works on quantifiable observations and accordingly statistical analysis is obtained.

For example, the resources researcher cannot manipulate during data collection procedure as they are independent to the subject of the research. For example, a research was conducted on the basis of flexi working on the female workforce throughout India. The researcher would study the literature which is based on previous studies based on which identify factors; like the importance of flexi working, types of flexi-working, increased rate of flexi-working and future

of flexi-working and develop hypotheses have been developed like the influence of flexi-working to our socio-economic life; influence of regular work life to the women's family life; influence of flexi-working to the economic life of the flexi-worker. In positivism, these hypotheses are tested and result is confirmed by the researcher to develop a theory.

### **Realism**

Realism is another philosophical branch of epistemology which relates to scientific enquiry. The core feature of realism is pertained to disclose the truth of reality and the existence of the objects are prevalent independently in the human mind. Realism is classified as direct realism and critical realism. Direct realism explains what is experienced by our senses and that are attained by the researcher. On the other hand, the critical realism expresses that what is experienced by our sensations those are images of the real world, not the reality. The difference between the two is that the first is related to the capacity of research what is studied and the critical realist recognizes the importance of multi-level study in the context of the individual, the group and the organization.

There is a difference between direct realism and critical realism. Critical realism claims that there are two stages to experience this world. Firstly, sensation is conveyed to experience the object or people or event and the next stage is our mental process starts working after the sensations. For example, in a cricket match, as a critical realist, while providing the umpiring decisions, the umpire says, 'I give them as I see them!' whereas the umpire who is a direct realist would say 'I give them as they are!' So according to direct realism the first stage of critical realism is enough to understand the experience level of us.

### **Interpretivism**

Interpretivism is a branch epistemology which is focused to the assessment the differences between humans as social actors. The issue of difference is emphasized on the difference between conducting research among people rather than objects such as medicines and

computer. In this philosophy, interpretation of social roles has been presented with respect of own set of meaning. In addition, we interpret the social roles of others in accordance with our own set of meanings.

This approach is based on social life world and the difference between the earlier approach and interpretivist approach is that the natural scientists are intended for reliabilities of the data in order to infer 'laws' whereas the social science deals with the individual's actions. For example, in the organization, all the stakeholders' approach is different and they act according to their interpretation. The interpretation regarding employee turnover of HR manager and trade union leader are completely different as they both belong to different social roles.

### **Axiology**

Axiology is a branch of philosophy which is concerned about judgments, aesthetics, and ethics. The process of social enquiry is involved in this approach. Researchers' axiological skill is executed in order to make judgments about the research content and its conduct. For example, Researchers' philosophical approach is reflected on his or her values as well as in their research work, especially in the area of data collection or data analysis procedures. However, this method creates impact in social sciences research.

Interpretivism is the philosophy adopted for this research. According to John Dudouskiy (2011), Interpretivism, qualitative research areas such as cross-cultural differences in organizations, issues of ethics, leadership and analysis of factors impacting leadership etc. can be studied in a great level of depth. Primary data generated via Interpretivism studies might be associated with a high level of validity because data in such studies tends to be trustworthy and honest.

This approach considers data collection tools such as interviews and observations. Secondary data research is also popular with interpretivism philosophy

### **3.3 Research Approach/Strategy**

However, three Research strategies have been identified viz. mixed method, qualitative and quantitative approaches (Bosomtwe, 2015; Creswell, 2009). Based on the selected philosophy for this study (that is interpretivism), qualitative method was employed. According to John Dudouskiy (2011), Interpretivism, qualitative research areas such as cross-cultural differences in organizations, issues of ethics, leadership and analysis of factors impacting leadership, etc. can be studied in a great level of depth. He emphasized that Primary data generated via Interpretivism studies might be associated with a high level of validity because data in such studies tends to be trustworthy and honest.

### **3.4 Research Design**

Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The design allows researchers to sharpen the research methods suitable for the subject matter and set up their studies for success. Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The design allows researchers to sharpen the research methods suitable for the subject matter and set up their studies for success.

You can further break down the types of research design into five categories:

#### Qualitative research

It determines relationships between collected data and observations based on mathematical calculations. Statistical methods can prove or disprove theories related to a naturally existing phenomenon. Researchers rely on qualitative research methods that conclude “why” a particular theory exists and “what” respondents have to say about it.

## Quantitative research

It is for cases where statistical conclusions to collect actionable insights are essential. Numbers provide a better perspective for making critical business decisions. Quantitative research methods are necessary for the growth of any organization. Insights drawn from complex numerical data and analysis prove to be highly effective when making decisions about the business's future

**.Descriptive:** In a descriptive composition, a researcher is solely interested in describing the situation or case under their research study. It is a theory-based design method created by gathering, analyzing, and presenting collected data. This allows a researcher to provide insights into the why and how of research. Descriptive design helps others better understand the need for the research. If the problem statement is not clear, you can conduct exploratory research.

**Experimental:** Experimental research establishes a relationship between the cause and effect of a situation. It is a causal design where one observes the impact caused by the independent variable on the dependent variable. For example, one monitors the influence of an independent variable such as a price on a dependent variable such as customer satisfaction or brand loyalty. It is an efficient research method as it contributes to solving a problem.

The independent variables are manipulated to monitor the change it has on the dependent variable. Social sciences often use it to observe human behavior by analyzing two groups. Researchers can have participants change their actions and study how the people around them react to understand social psychology better.

**Correlational research:** Correlational research is a non-experimental research technique. It helps researchers establish a relationship between two closely connected variables. There is no assumption while evaluating a relationship between two other variables, and statistical analysis

techniques calculate the relationship between them. This type of research requires two different groups.

**Diagnostic research:** In diagnostic design, the researcher is looking to evaluate the underlying cause of a specific topic or phenomenon.

Explanatory research: Explanatory design uses a researcher's ideas and thoughts on a subject to further explore their theories. The study explains unexplored aspects of a subject and details the research questions' what, how, and why.

However, based on the purpose of the study and the philosophy backing the research, Quantitative approach was adopted.

The survey design was adopted for this study. Shona (2019), survey research allows you to gather large volumes of data that can be analyzed for frequencies, averages and patterns. She also emphasized that survey can be used to describe the demographics of a country or region and to also evaluate satisfaction with a company's products or organization's services.

This study is explanatory in nature in that, it aims to systematically explain how innovative organizational culture and Total Quality Management within an organization will lead to firm performance within the banking industry in Ghana.

### **3.5 Population of the Study**

Shukla (2020), Population refers to the set or group of all the units on which the findings of the research are to be applied. Referring to the definition of population, we can say that it consists of all the units on which the findings of research can be applied. In other words, population is a set of all the units which possess variable characteristic under study and for which findings of research can be generalized.

The target population here refers to the group of firms from the general population which the researcher drew conclusions on. In this survey, the total population is the twenty-seven (27)

banks in Ghana. According to Barbie (2004), the population should gain from the study for they are the reason for which the study is being conducted. Therefore, this study is strategized to promote product and service innovation in the banking sector.

The study is looking at the influence of organizational culture and total quality management practices on firm's performance in the banking sector of Ghana in one selected public bank and one privately owned bank in the Greater Accra metropolis.

The researcher arrived on these two banks within the Greater Accra Metropolis because, the consent letters were approved by them. During the investigation with some staff of Consolidated bank Ghana Limited, the researcher discovered that bank engages in service product innovation activities.

The second organization (Fidelity Bank Ghana Limited) upon instigation also revealed that, they engage in service product innovation.

### **3.6 Sampling Technique and Sample size**

Sample refers to the representative of the population that have the same feature of the population. Sample is selected as the subject of a research because of large size of the population. According to Lund (2012), sample is the miniature of a population. Therefore, the end result of the study on a sample should be conformable to the population. The author further explained that the sample should come from the population and the population should possess similar characteristics and function so that it becomes reasonable to apply the same findings on the population. The sampling was considered on these informed reasons; Sarandakos (2005) outlines some reasons for sampling. Since full coverage of a population is not possible when conducting research; sampling produces similar and equally suitable results. Studies based on sampling requires less time and produce quick results, it requires a small proportion of the target population; sampling is more economical and it provides high degree of accuracy as well

as detailed information needed for the study. Due to nature of the study and the need to bring out a finding reasonable for generalization, the researcher selected a sample of 200.

The twenty-seven (27) banks in Ghana were divided into two strata's; thus local and foreign.

There were sixteen (16) foreign banks and eleven (11) local.

The researcher however used stratified random sampling to randomly pick five (5) local banks.

Concern letters were distributed to these five locals but only two banks gave their concern, namely Fidelity bank Ghana and Consolidated bank Ghana.

Because of the nature of the study, the sample was chosen purposively and conveniently. The survey institutions were purposely selected. In addition, the convenience sampling technique opted permitted for the selection and inclusion of available and willing research participants at the top and middle level staff of the bank. Thus, the respondents were selected depending on their willingness to participate in the research and also for the fact that they are part of middle and top level staff.

### **3.7 Data Collection Methods**

Questionnaires were the research instruments used in sourcing information from the respondents for data for the study. Cohen, Manion & Morrison (2000) referred to questionnaires as a widely and useful instrument for collecting information, providing structured and often non numeric data, being able to be administered without the presence of the researcher and often Straight forward to analyze. The questionnaire used open-ended and closed-ended questions. The open-ended questions sought to get the subject views of the respondents. According to Pritha (2021) Questionnaires are commonly used in market research as well as in the social and health sciences. For example, a company may ask for feedback about a recent customer service experience, or psychology researchers may investigate health risk perceptions using questionnaires.

The respondents who were busy were given the questionnaires and picked up at a later time.

The researcher left his contact behind for the respondents to call for clarification should they encounter difficulties in filling out the questionnaires. The primary data was collected using

self-administered questionnaires while secondary data was taken from records in journals, newspapers, internet, articles and written books

### 3.7.1 Measures

Prasanth (2020), defined measurement as the process of describing some property of a phenomenon under study and assigning a numerical value to it. Measurement is considered as the foundation of scientific inquiry. We can measure quantitatively and qualitatively. We can measure height, weight, length, width, income, etc. (Quantitative measurement) and at the same time we can measure attitude, personality, perception, intelligence, preference (Qualitative measurement). There are four hierarchical levels of measurement identified by Stevens (1946): they are nominal, ordinal, interval and ratio. Likert scale is a tool used to collect interval data which is developed by Rensis Likert. Likert scale is typically used in questionnaires which are designed to measure people’s attitude, opinions or perceptions. In surveys, Likert scale is considered as a vital tool and is widely used in questionnaire.

### 3.7.2 Data Collection Instruments

Constructs	Indicators	Number of items	Source
Organizational culture	Involvement	5	(Slaughter, 2015)
	Consistency	6	(Slaughter, 2015)
	Adaptability	6	(Slaughter, 2015)
	Mission	6	(Slaughter, 2015)
Total Quality Management	Top Management Commitment	4	(Aloun, 2018)
	Employee Training	3	(Aloun, 2018)

	Employee Involvement	4	(Aloun, 2018)
	Continuous Improvement	4	(Aloun, 2018)
<b>Firm Performance</b>	Operational Performance	4	(Merrilees, 2011)
	Financial Performance	5	(Merrilees, 2011)
	Market Performance	2	(Merrilees, 2011)
<b>Service/Product Innovation</b>	-	6	(Slaughter, 2015)

### 3.7.2 Validity and Reliability

Validity and reliability are fundamental concepts in research methodology that ensure the rigor and credibility of research findings. Below, I'll provide justifications for the importance of validity and reliability, along with citations to support these points:

**External Validity (Generalizability):** External validity refers to the extent to which research findings can be generalized beyond the specific study sample or context. Ensuring external validity is crucial because it allows researchers to draw meaningful conclusions about the broader population. For example, if a clinical trial demonstrates the effectiveness of a new drug, the findings need to be valid for a wider range of patients and healthcare settings to have practical significance (Cook & Campbell, 1979).

**Internal Validity (Causality):** Internal validity concerns the degree to which research findings accurately reflect cause-and-effect relationships. Researchers must establish a strong internal validity to draw meaningful conclusions about the impact of independent variables on dependent variables. For instance, in an experiment examining the effect of a teaching method on student learning outcomes, internal validity ensures that any observed differences can be

attributed to the teaching method itself, rather than confounding variables (Shadish, Cook, & Campbell, 2002).

**Consistency and Replicability:** Reliability refers to the consistency and stability of research measurements over time and across different situations. Reliable measurements enable other researchers to replicate the study and verify its findings. Replicability is a cornerstone of scientific progress, as it allows for the validation of results and the development of robust theories (Bryman & Bell, 2015).

**Reduction of Measurement Error:** Measurement error can introduce noise into research data, obscuring the true relationships between variables. Reliable measurements help reduce this error, increasing the likelihood of detecting meaningful patterns and relationships. For example, in psychological research, reliable psychological tests are essential to accurately measure constructs like personality traits or cognitive abilities (Nunnally & Bernstein, 1994).

**Enhanced Comparability:** Reliable data facilitate meaningful comparisons between different groups, time points, or contexts. Researchers can confidently assess changes or differences and make informed decisions based on the data. For instance, in business research, reliable financial indicators allow analysts to compare the performance of different companies or track changes in performance over time (Hair, Black, Babin, & Anderson, 2019).

Validity and reliability are essential for ensuring the trustworthiness and robustness of research findings. Validity ensures that the study measures what it intends to measure and allows for meaningful generalizations and causal inferences. Reliability ensures that research measurements are consistent, replicable, and free from excessive error, enhancing the credibility and utility of research results

### 3.8 Data Analysis

Using SPSS (Statistical Package for the Social Sciences) and AMOS (Analysis of Moment Structures) in data analysis is a powerful combination for conducting both descriptive and advanced statistical analyses, as well as structural equation modeling (SEM).

**Descriptive Statistics and Data Cleaning:** SPSS is a user-friendly software that is widely used for basic data manipulation, cleaning, and initial exploratory data analysis. It allows researchers to generate descriptive statistics, frequency distributions, and summary tables to gain a preliminary understanding of the data (Pallant, 2021).

**Hypothesis Testing:** SPSS provides a broad range of statistical tests for hypothesis testing, including t-tests, ANOVA, regression analysis, chi-square tests, and non-parametric tests. Researchers can use these tests to investigate relationships between variables, compare groups, and test research hypotheses (Field, 2013).

**Data Visualization:** SPSS offers data visualization tools, including charts and graphs, which help researchers present their findings effectively. Visualizations are essential for conveying complex data patterns to a wider audience (Andy & Field, 2016).

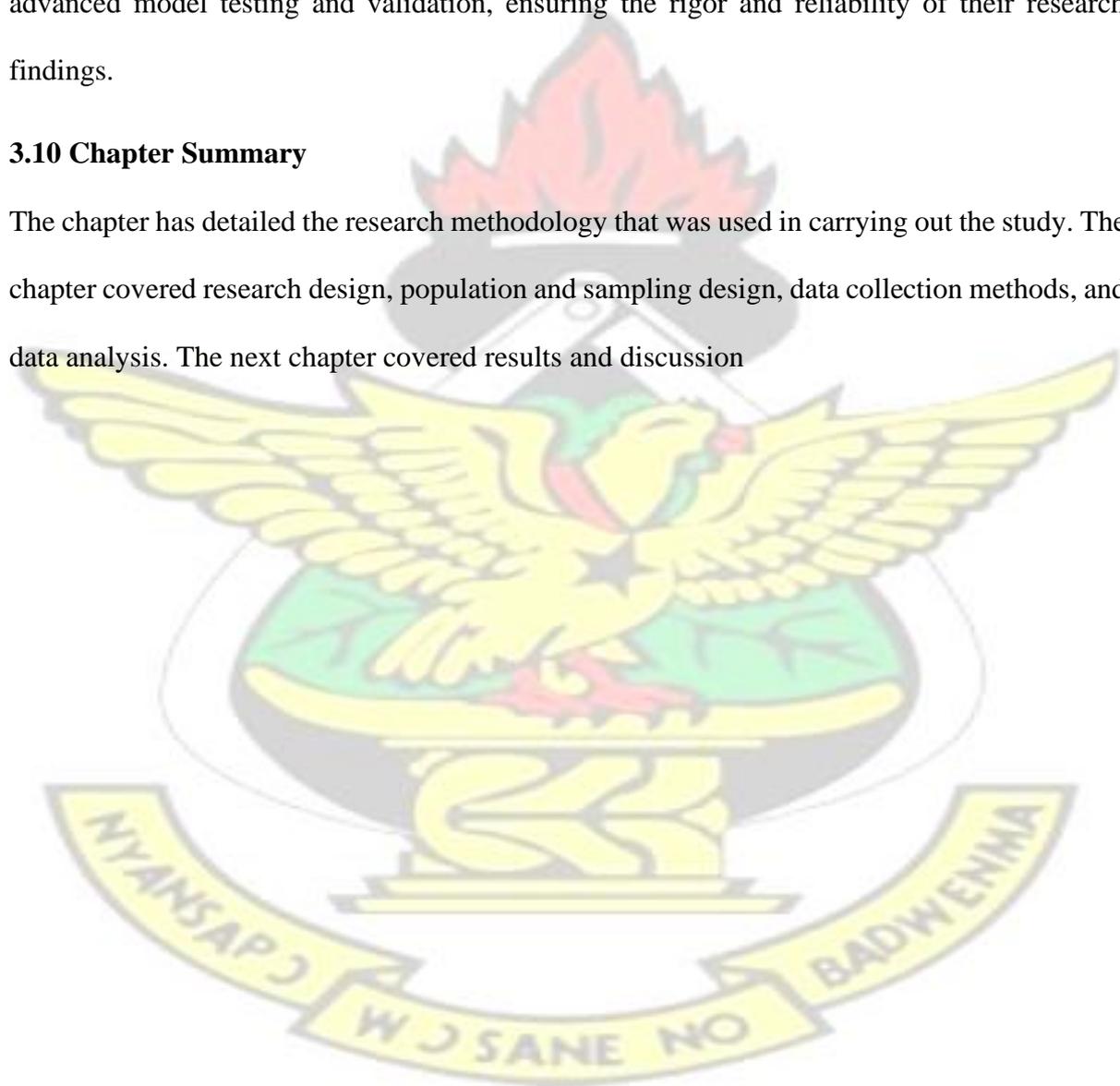
**Structural Equation Modeling (SEM):** AMOS is a specialized software for SEM, a powerful statistical technique used to test complex models that involve latent variables, multiple observed variables, and directional relationships. SEM allows researchers to assess and validate theoretical models, making it especially valuable for hypothesis-driven research (Kline, 2015).

**Path Analysis and Mediation Models:** AMOS enables the analysis of path models and mediation models, which are commonly used in social sciences and other fields to assess the direct and indirect effects of variables on outcomes. This is crucial for understanding the underlying mechanisms driving relationships between variables (Hayes, 2018).

Using SPSS and AMOS in data analysis provides a comprehensive approach to handling and analyzing data. SPSS is valuable for initial data exploration, hypothesis testing, and basic statistical analyses, while AMOS is specifically designed for advanced structural equation modeling, which is essential for testing complex theoretical models and understanding intricate relationships between variables in research studies. This study combine these tools to cover a wide spectrum of data analysis needs, from data cleaning and basic statistical testing to advanced model testing and validation, ensuring the rigor and reliability of their research findings.

### **3.10 Chapter Summary**

The chapter has detailed the research methodology that was used in carrying out the study. The chapter covered research design, population and sampling design, data collection methods, and data analysis. The next chapter covered results and discussion



## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

#### 4.1 Introduction

This chapter presents the data analysis and the discussion of the results. The chapter begins with the background of the respondents, validity and reliability test, descriptive statistics, inferential statistics, hypothesis testing and findings and discussion of the results. In all, 220 questionnaires were administered to the respondents and 153 representing 76.5% was retrieved within the stipulated time.

**Table 4.1 Respondents Background**

Profile	Characteristics	Frequency	Percentage
<b>Age</b>	20-29	34	22.2
	30-39	55	35.9
	40-49	56	36.6
	50 or more	8	5.2
	Total	153	100
<b>Gender</b>	Male	81	52.9
	Female	72	47.1
	Total	153	100
<b>Working experience</b>	0-5	31	20.3
	6-10	57	37.3
	11-15	46	30.1
	16-20	15	9.8
	20+	4	2.6
	Total	153	100
<b>Position</b>	First degree	9	5.9
	Second degree	68	44.4
	Doctor of Philosophy	76	49.7
	Total	153	100

**Source: Field Data, 2022**

Concerning the age interval of the respondents, 34 of the respondents were between the ages of 20-29 years representing 22.2%, 55 of the respondents were between the ages of 30-39 representing 35.9%, 56 of the respondents were between the ages of 40- 49 representing 36.6% and 8 of the respondents were 50 years or more representing 5.2%.

The gender fairness consideration of the respondents, 81 of the respondents was male representing 52.9% whereas 72 of the respondents were female representing 47.1%. This strongly indicates that gender balanced was highly taken into consideration where male and female views were solicited to arrival at sound conclusions.

The working experiences, 31 of the respondents have about 3-5 years working experience constituting 20.3%, 57 of the respondents have about 6-10years working experience constituting 37.3%, 46 of the respondents have about 11-15years working experience constituting 30.1%, 15 of the respondents have about 16-20 years working experience constituting 9.8 and 4 of the respondents have about 20 years working experience constituting 2.6%.

The educational backgrounds, 9 of the respondents were first degree graduate representing 5.9%, 68 of the respondents were second degree graduate representing 44.4% whereas 76 of the respondents were Doctor of philosophy graduate representing 49.7%.

**4.2 Validity and reliability**

Validity refers to the extent to which a measure or set of measures correctly represent the constructs of the study (Bhattacharjee, 2012). Reliability is an assessment of degree of consistency between multiple measurements of the same variable. It is therefore concerned with whether alternative measurements at different times would reveal similar information. Variables differ in how well they could be measured-i.e. how much measurable information

their measurement scale is able to provide. There is some measurement error involved in every measurement, which determines the amount of information that can be obtained (Bhattacharjee, 2012). Reliability refers to the consistency and stability of a score from measurement scale as to whether the results in the survey could be duplicated in similar surveys (Bhattacharjee, 2012). Reliability is said to be particularly important when latent variables are calculated from underlying item scales. Since these scales consist of a group of interrelated items designed to measure underlying constructs, it is important to establish whether the same set of items would extract the same responses if they were re-administered to the same sample group on more than one occasion. Variables derived from test instruments are only said to be reliable when it is clear that they elicit stable responses over multiple measurements of the instruments surveys (Bhattacharjee, 2012).

Cronbach's Alpha coefficient was used as a measure of internal consistency-reliability of the scale used in this study. Cronbach's Alpha is a measure of internal reliability for multi-item summated rating scales. Its values range 0 and 1, where the higher the score, the more reliable the scale. A coefficient reliability of 0.70 or higher indicated that the instrument used is reliable (Cronbach, 2004).

Also, in order to analyze the data in relation to ascertain the validity threshold, the measurement of the response using Kaiser Mayer Olkin test to be certain that the data is acceptable to proceed to the inferential statistics to make fair and valid conclusions. Kaiser (1974) proposes that values above 0.5 are acceptable and appropriate. In a situation that the value is less than 0.5, then there is a need to collect additional data or reconsider which variable is to take into consideration. The table 4.2 presents the results on the reliability and the validity of the constructs.

**Table 4.2 Validity and reliability**

Variable	Items	Loadings	KMO (Approx. Chi Square)	Variance (%)	Cronbach's Alpha
Total Quality Management	CI5	.854	.946 (3066.528)	61.386	.968
	CI4	.826			
	CI3	.854			
	CI2	.843			
	CI1	.820			
	EI4	.776			
	EI3	.784			
	EI2	.731			
	EI1	.779			
	ET3	.812			
	ET2	.708			
	ET1	.756			
	TMC4	.723			
	TMC3	.727			
	TMC2	.641			
TMC1	.598				
Organizational culture	OCM6	.841	.937 (2424.222)	60.155	.960
	OCM5	.833			
	OCM4	.793			
	OCM3	.831			
	OCM2	.798			
	OCM1	.784			
	OCA6	.752			
	OCA5	.792			
	OCA4	.760			
	OCA3	.818			
	OCA2	.798			

	OCA1	.713			
	OCC6	.774			
	OCC5	.702			
	OCC4	.602			
	OCC3	.638			
	OCC2	.629			
	OCC1	.675			
	OCI5	.764			
	OCI4	.837			
	OCI3	.827			
	OCI2	.806			
	OCI1	.812			
Firm performance	OP1	.696	.898 (1936.402)	69.203	.955
	OP2	.698			
	OP3	.661			
	OP4	.725			
	OMP1	.835			
	OMP2	.848			
	FP1	.876			
	FP2	.872			
	FP3	.894			
	FP4	.895			
	FP5	.895			
Service innovation	SI1	.776	.872 (854.674)	75.812	.936
	SI2	.819			
	SI3	.852			
	SI4	.870			
	SI5	.862			
	SI6	.876			

Source: Field Data, 2022

Reliability Statistics Cronbach's Alpha Based on Standardized Items of total quality management of .968, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .946, Approx. Chi Square of 3066.528 and Variance (%) of 61.386 were all within the acceptable threshold.

Cronbach's Alpha Based on Standardized Items of Organizational culture of .960, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .937, Approx. Chi Square of 2424.222 and Variance (%) of 60.155 were all within the acceptable threshold and therefore the items for the variable are deemed reliable.

Cronbach's Alpha Based on Standardized Items of firm performance of .955, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .898, Approx. Chi Square of 1936.402 and Variance (%) of 69.203 were all within the acceptable threshold acceptable threshold and therefore the items for the variable are deemed reliable.

Cronbach's Alpha Based on Standardized Items of Service innovation of .936, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .872, Approx. Chi Square of 854.674 and Variance (%) of 75.812 were all within the acceptable threshold and therefore the items for the variable are deemed reliable.

The factor loading of items below 0.7 is considered to be low and therefore not considered for the Discriminant validity, Convergent validity and composite reliability. The table 4.3 below presents the results of the validity tests.

Validity test

**Table 4.3 Validity test**

<b>Variable</b>	<b>AVE</b>	<b>Discriminant Validity</b>	<b>Composite Reliability</b>
Total Quality Management	0.619	0.787	0.958
Organizational Culture	0.628	0.792	0.969
Firm Performance	0.734	0.857	0.956
Service Innovation	0.711	0.843	0.936

**Source: Field Data, 2022**

Igbaria et al. (1997) demonstrated that a variable is of good fit if the latent variable shows the factor loading of  $> 0.50$ . Haire et al. (2019) recommended that an Average Variance Extracted (AVE) as convergent validity measure since AVE could explain the degree to which items are shared between the construct in Structural Equation Modeling (SEM) where AVE 0.5 or more are acceptable as convergent validity. The scale development in this study involved four constructs namely Total Quality Management, Organizational Culture, Firm Performance and Service Innovation. The results indicated that the AVE values for the four constructs respectively were 0.619; 0.628; 0.734 and 0.711. As all the constructs were within and above the threshold of  $> 0.50$ , it is concluded that they could measure the latent variables. Hence, they fulfilled the Convergent Validity Criteria. Haire et al. (2019) stated that discriminate validity could be established by correlating one construct to another. If the correlation value of both constructs is lower than 0.85, it means that the discriminate validity exists. Besides, Furnell and Larker (1981) argue that discriminate validity exists if latent variable shows more variance on related indicator variable rather than share with other construct in the same model. The table 4.4 presents the covariance of the variables. Also, a composite reliability is fit if the variable measurement is .70 and above. The table 4.3 shows Total Quality Management composite

reliability of = 0.958; Organizational Culture composite reliability of =0.969; Firm Performance composite reliability of 0.956 and Service Innovation composite reliability of 0.936. All the three constructs composite reliability values were above the threshold of 0.07 therefore the variables items are highly reliable.

**Table 4.4 Correlations among the constructs**

CONSTRUCTS	CORRELATIONS
TQM<-->OC	.805
SI<-->OC	.832
TQM<-->SI	.721
FP<-->SI	.705
TQM<-->FP	.801
FP<-->OC	.777

**Source: Field Data, 2022**

TQM =Total Quality Management, OC=Organizational Culture, FP= Firm Performance and SI= Service Innovation.

Haire et al. (2019).Haire et al. (2019) stated that discriminate validity could be established by correlating one construct to another. If the correlation value of both constructs is lower than 0.85, it means that the discriminate validity exists. The results presented in the table 4.4 indicate that the correlation value of both constructs is lower than 0.85, confirming that discriminate validity exists since all the correlation values are within the acceptable threshold of 0.85 Haire et al. (2019). The correlation value of Total Quality Management and Organizational Culture Characteristics Discriminate Validity (DV) of: 0.805, Service Innovation and Organizational Culture Characteristics Discriminate Validity (DV) of: 832, Total Quality Management and

Service Innovation Characteristics Discriminate Validity (DV) of: .721, Firm Performance and Service Innovation Characteristics Discriminate Validity (DV) of: .705, Total Quality Management and Firm Performance Characteristics Discriminate Validity (DV) of: .801 and Firm Performance and Organizational Culture Characteristics Discriminate Validity (DV) of: .777 were all below the threshold of 0.85 had fulfilled the criteria of discriminate validity.

### 4.3 Covariance's among the constructs

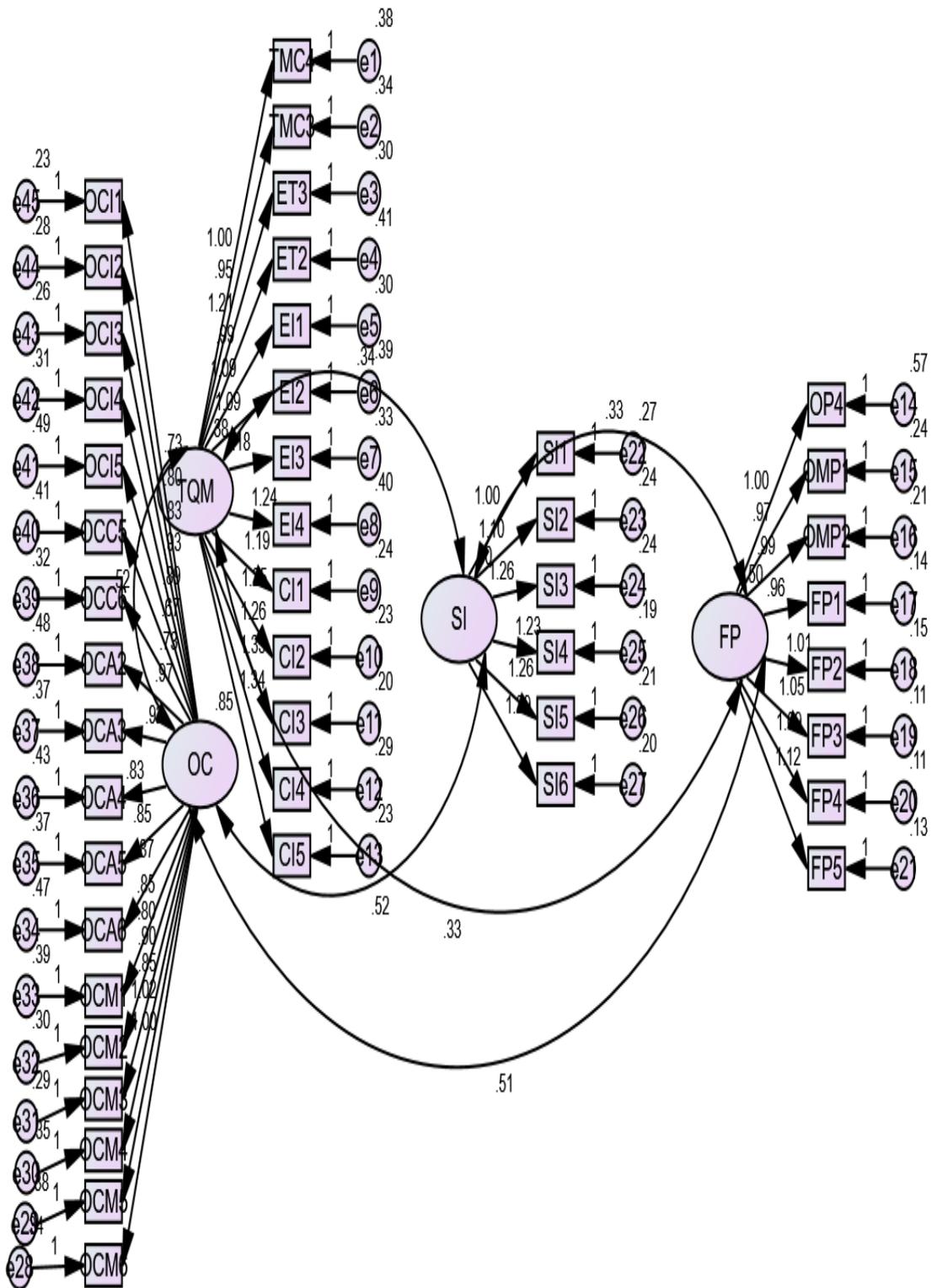
Covariance measures the directional relationship between two random variables. This helps to establish as to whether the two variables vary in the same direction thus positive covariance or negative covariance. The table 4.5 presents the results.

**Table 4.5 Covariance's among the constructs**

Variables			Estimate	S.E.	C.R.	P	Label
FP	<-->	TQM	.362	.059	6.111	***	par_53
FP	<-->	OC	.422	.068	6.167	***	par_54
TQM	<-->	OC	.684	.096	7.120	***	par_55
SI	<-->	OC	.523	.078	6.723	***	par_56
TQM	<-->	SI	.456	.068	6.713	***	par_57
FP	<-->	SI	.272	.047	5.799	***	par_58

Source: Field Data, 2022





**Figure 1**

TQM =Total Quality Management, OC=Organizational Culture, FP= Firm Performance and SI= Service Innovation.

The relationship between Total Quality Management and Firm Performance (Estimate of  $=.362$ , S.E.  $=.059$ , C.R.6.111,  $P < 0.000$ ) indicate a positive significant relationship between Total Quality Management and Firm Performance.

The relationship between Firm Performance and Organizational Culture (Estimate of  $=.422$ , S.E.  $=.068$ , C.R.6.167,  $P < 0.000$ ) indicate a positive significant relationship between Firm Performance and Organizational Culture.

The relationship between Total Quality Management and Organizational Culture (Estimate of  $=.684$ , S.E.  $=.096$ , C.R.7.120,  $P < 0.000$ ) indicate a positive significant relationship between Total Quality Management and Organizational Culture.

The relationship between Service Innovation and Organizational Culture (Estimate of  $=.523$ , S.E.  $=.078$ , C.R.6.723,  $P < 0.000$ ) indicate a positive significant relationship between Service Innovation and Organizational Culture.

The relationship between Total Quality Management and Service Innovation (Estimate of  $=.456$ , S.E.  $=.068$ , C.R.6.713,  $P < 0.000$ ) indicate a positive significant relationship between Total Quality Management and Service Innovation.

The relationship between Service Innovation and Firm Performance (Estimate of  $=.272$ , S.E.  $=.047$ , C.R.5.799,  $P < 0.000$ ) indicate a positive significant relationship between Service Innovation and Firm Performance.

#### **4.4 Variances among the constructs**

As covariance only tells about the direction which is not enough to understand the relationship completely, there was the need to also consider the variances and the table 4.6 presents the results.

**Table 4.6 Variances among the constructs**

	Estimate	S.E.	C.R.	P	Label
TQM	.378	.076	4.955	***	par_48
FP	.501	.105	4.750	***	par_49
SI	.397	.071	5.609	***	par_50
OC	.846	.131	6.463	***	par_51
e1	.382	.045	8.425	***	par_52
e2	.343	.041	8.424	***	par_53
e3	.304	.037	8.173	***	par_54
e4	.409	.048	8.452	***	par_55
e5	.304	.037	8.281	***	par_56
e6	.386	.046	8.373	***	par_57
e7	.332	.040	8.247	***	par_58
e8	.400	.048	8.283	***	par_59
e9	.243	.030	8.066	***	par_60
e10	.229	.029	7.957	***	par_61
e11	.199	.025	7.821	***	par_62
e12	.292	.036	8.014	***	par_63
e13	.228	.029	7.837	***	par_64
e14	.572	.068	8.457	***	par_65
e15	.237	.029	8.125	***	par_66
e16	.212	.026	8.021	***	par_67
e17	.138	.018	7.702	***	par_68
e18	.148	.019	7.671	***	par_69
e19	.107	.015	7.146	***	par_70
e20	.110	.016	7.076	***	par_71
e21	.126	.017	7.206	***	par_72
e22	.266	.033	8.072	***	par_73
e23	.242	.031	7.851	***	par_74
e24	.243	.032	7.584	***	par_75
e25	.192	.026	7.338	***	par_76
e26	.215	.029	7.430	***	par_77
e27	.196	.027	7.239	***	par_78
e28	.337	.041	8.163	***	par_79
e29	.382	.047	8.204	***	par_80
e30	.352	.042	8.334	***	par_81
e31	.292	.036	8.204	***	par_82

	Estimate	S.E.	C.R.	P	Label
e32	.298	.036	8.321	***	par_83
e33	.386	.046	8.371	***	par_84
e34	.473	.056	8.416	***	par_85
e35	.366	.044	8.348	***	par_86
e36	.427	.051	8.417	***	par_87
e37	.368	.044	8.284	***	par_88
e38	.482	.058	8.354	***	par_89
e39	.323	.038	8.413	***	par_90
e40	.409	.048	8.511	***	par_91
e41	.490	.058	8.415	***	par_92
e42	.314	.038	8.202	***	par_93
e43	.260	.032	8.226	***	par_94
e44	.281	.034	8.294	***	par_95
e45	.228	.028	8.284	***	par_96

**Source: Field Data, 2022**

The variance was performed to confirm the results of the covariance. The total quality management (Estimate of =.378; Standard Error of = .076; Critical Ratio of = 4.955 and  $P < 0.000$ ) establish a very strong positive complete relationship.

Organizational performance (Estimate of = .501; Standard Error of = .105; Critical Ratio of = 4.750 and  $P < 0.000$ ) affirm a positive complete relationship.

Organizational Culture (Estimate of = .846; Standard Error of = .131; Critical Ratio of 6.463= and  $P < 0.000$ ) assert a good positive complete relationship.

Service Innovation (Estimate of =.397 ; Standard Error of =.071 ; Critical Ratio of = 5.609and  $P < 0.000$ ) establish a very strong positive complete relationship. All the items for the four variables indicate a very strong and positive complete relationship hence the items are deemed for Structural Equation Modeling.

### 4.3 Top Management Commitment

The Total Quality Management for the study was assessed and in doing that 4 items were selected under the indicator of Top Management Commitment, and the table 4.6 presents the results.

**Table 4.6 Descriptive Statistics for Top Management Commitment**

<b>Top Management Commitment</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>S.D</b>
TMC1.Top management develops clear total quality goals	2.0	5.0	3.876	.6817
TMC2.Top management rewards the quality achievement action	2.0	5.0	3.752	.8294
TMC3.Top management acts as guiding example for quality	2.0	5.0	3.745	.7654
TMC4.Top management allocates the required resources for quality	2.0	5.0	3.510	.8745

**Source: Field Data, 2022**

The item top management develops clear total quality goals mean of (3.876) and Standard deviation of (.6817) indicate that the respondents are not certain as to whether their top management develops clear total quality goals or not.

The item top management rewards the quality achievement action mean of (3.752) and Standard deviation of (.8294) indicate that the respondents are not certain as to whether their top management rewards the quality achievement action or not.

The item top management acts as guiding example for quality mean of (3.745) and Standard deviation of (.7654) indicate that the respondents are not certain as to whether their top management acts as guiding example for quality or not.

The item top management allocates the required resources for quality mean of (3.510) and Standard deviation of (.8745) indicate that the respondents are not certain as to their top management develops clear total quality goals or not.

#### 4.4 Employee Training and Involvement

The Total Quality Management for the study was assessed and in doing that 7 items were selected under the indicator of Employee Training and Involvement, and the table 4.7 presents the results.

**Table 4.7 Descriptive Statistics for Employee Training and Involvement**

<b>Employee Training and Involvement</b>	Min	Max	Mean	S.D
ET1. The organization sets clear objectives for training	2.0	5.0	3.745	.8470
ET2. The organization chooses the suitable training methods	1.0	5.0	3.601	.8836
ET3. The organization gives the quality training to all employees at all levels	1.0	5.0	3.562	.9307
EI1. The organization correlates constantly with employees	1.0	5.0	3.412	.8700
EI2. The organization provides open discussions based on objective criteria.	1.0	5.0	3.294	.9168
EI3. The organization listens to employees' suggestions	1.0	5.0	3.203	.9958
EI4. The organization values employee's inputs.	1.0	5.0	3.190	.9301

**Source: Field Data, 2022**

The item organization sets clear objectives for training mean value of (3.745) and standard deviation of (.8470) indicate that the respondents are not certain as to whether their top management sets clear objectives for training or not. The organization chooses the suitable training methods 3.601 .8836 mean value of (3.601) and standard deviation of (.8836) indicate that the respondents are not certain as to whether their top management sets clear objectives for training or not. The organization gives the quality training to all employees at all levels with mean value of (3.562) and standard deviation of (.9307) indicate that the respondents are not certain as to whether their top management gives the quality training to all employees at all levels or not. The organization provides open discussions based on objective criteria mean value of (3.294) and standard deviation of (.9168) indicate that the respondents are not certain as to whether their top management provides open discussions based on

objective criteria or not. The organization listens to employees' suggestions mean value of (3.203) and standard deviation of (.9958) indicate that the respondents are not certain as to whether their top management sets clear objectives for training or not. The organization values employee's inputs mean value of (3.190) and standard deviation of (.9301) indicate that the respondents are not certain as to whether their top management values employee's inputs or not.

#### 4.5 Continuous Improvement

The Total Quality Management for the study was assessed and in doing that 5 items were selected under the indicator of Continuous Improvement, and the table 4.8 presents the results.

**Table 4.8 Descriptive Statistics for Continuous Improvement**

<b>Continuous Improvement</b>	N	Min	Max	Mean	S.D
CI1. The organization defines improvement goals	153	1.0	5.0	4.654	.8835
CI2. The organization establishes processes necessary to improvement	153	2.0	5.0	4.601	.9057
CI3. The organization relies on quality tools to improve performance	153	2.0	5.0	3.529	.8963
CI4. The organization compares improvement process outcomes with goals	153	2.0	5.0	4.510	.9942
CI5. The organization adjusts improvement plans according to feedbacks	153	2.0	5.0	4.458	.9527

**Source: Field Data, 2022**

The organization defines improvement goals with mean value of (4.654) and standard deviation of (.8835) indicates that the organization for the study defines improvement goals.

The organization establishes processes necessary to improvement with mean value of (4.601) and standard deviation of (.9057) indicates that the organization for the study have established processes necessary for improvement. The organization relies on quality tools to improve performance with mean value of (3.529) and standard deviation of (.8963) indicates that the

organization for the study have relied on quality tools to improve performance. The organization compares improvement process outcomes with goals with mean value of (4.510) and standard deviation of (.9942) indicate that the organization for the study do compare improvement process outcomes. The organization adjusts improvement plans according to feedbacks with mean value of (4.458) and standard deviation of (.9527) indicate that the organization for the study do adjust improvement plans according to feedbacks.

#### 4.6 Organizational Culture Involvement

The **Organizational Culture** for the study was assessed and in doing that 5 items were selected under the indicator Culture Involvement, and the table 4.9 presents the results.

**Table 4.9 Descriptive Statistics for organizational culture Involvement**

Involvement	N	Min	Max	Mean	S.D
OCI1. Everyone believes that he or she can have a positive impact	153	2.0	5.0	3.810	.8252
OCI2. Decisions are usually made at the level where the best information is available	153	1.0	5.0	4.680	.9080
OCI3. Cooperation across different parts of the organization is actively encouraged.	153	2.0	5.0	4.614	.9186
OCI4. Teamwork is used to get work done, rather than hierarchy	153	1.0	5.0	4.477	1.0265
OCI5. Authority is delegated so that people can act on their own	153	1.0	5.0	4.118	1.0818

The item “everyone believes that he or she can have a positive impact” with mean value of (3.810) and standard deviation of (.8252) indicate respondents uncertainty as to whether in their organizations everyone believes that he or she can have a positive impact or not. The item “decisions are usually made at the level where the best information is available” with mean value of (4.680) and standard deviation of (.9080) indicate respondents affirmation that in their organizations decisions are usually made at the level where the best information is available. The item “cooperation across different parts of the organization is actively encouraged” with

mean value of (4.614) and standard deviation of (.9186) indicate respondents' affirmation that in their organizations ensure cooperation across different parts of the organization is actively encouraged. Teamwork is used to get work done, rather than hierarchy with mean value of (4.477) and standard deviation of (1.0265) indicate respondents affirmation that in their organizations teamwork is used to get work done, rather than hierarchy. Authority is delegated so that people can act on their own with mean value of (4.118) and standard deviation of (1.0818) indicate respondents affirmation that in their organizations authority is delegated so that people can act on their own.

#### 4.7 Organizational Culture Consistency

The Organizational Culture for the study was assessed and in doing that 6 items were selected under the indicator Consistency and the table 4.10 presents the results.

**Table 4.10 Descriptive Statistics for organizational culture Consistency**

<b>Consistency</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>S.D</b>
OCC1. The leaders and managers “practice what they preach”	153	1.0	5.0	3.732	1.0260
OCC2. There is a clear and consistent set of values that governs the way we do business.	153	1.0	5.0	3.444	.8803
OCC3. When disagreements occur, we work hard to achieve “win-win “solutions.	153	2.0	5.0	3.359	.8931
OCC4. There is a clear agreement about the right way and the wrong way to do things	153	1.0	5.0	3.307	1.2475
OCC5. It is easy to coordinate projects across different parts of the organization.	153	1.0	5.0	2.987	.9388
OCCI6. There is good alignment of goals across levels	153	1.0	5.0	2.758	1.1299

The mean value of (3.732) and standard deviation of (1.0260) is affirming respondents uncertainty as to whether in their organizations the leaders and managers “practice what they

preach” or not. The mean of (3.444) and standard deviation of (.8803) is affirming respondents’ uncertainty as to whether in their organizations there is a clear and consistent set of values that governs the way we do business or not. The mean value of (3.359) and standard deviation of (.8931) is affirming respondents’ uncertainty as to whether in their organizations when disagreements occur, they work hard to achieve “win-win” solutions or not. The mean value of (3.307) and standard deviation of (1.2475) is affirming respondents’ uncertainty as to whether in their organizations there is a clear agreement about the right way and the wrong way to do things. The mean value of (2.987) and standard deviation of (.9388) is affirming respondents disagree that in their organizations it is easy to coordinate projects across different parts of the organization. The mean value of (2.758) and standard deviation of (1.1299) is affirming respondents disagree that in their organizations there is good alignment of goals across levels.

#### 4.6 Organizational Culture Adaptability

The **Organizational Culture** for the study was assessed and in doing that 6 items were selected under the indicator Culture Adaptability t, and the table 4.10 presents the results.

##### Descriptive Statistics for Adaptability

<b>Adaptability</b>	N	Min	Ma x	Mean	S.D
OCA1.The way things are done is very flexible and easy to change	153	1.0	5.0	3.386	1.0074
OCA2.We respond well to competitors and other changes in the business environment.	153	1.0	5.0	3.373	.9926
OCA3.Customer comments and recommendations often lead to changes	153	1.0	5.0	3.353	1.0480
OCA4.Customer input directly influences our decisions	153	1.0	5.0	3.229	1.1326
OCA5.We view failure as an opportunity for learning and improvement	153	1.0	5.0	3.209	1.0616

OCA6. Innovation and risk taking are encouraged and rewarded	153	1.0	5.0	2.993	1.0482
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The mean value of (3.386) and standard deviation of (1.0074) is affirming respondents' uncertainty as to whether in their organizations the way things are done is very flexible and easy to change. The mean value of (3.373) and standard deviation of (.9926) is affirming respondents' uncertainty as to whether their organizations respond well to competitors and other changes in the business. The mean value of (3.353) and standard deviation of (1.0480) is affirming respondents uncertainty as to whether in their organizations the customer comments and recommendations often lead to changes. The mean value of (3.229) and standard deviation of (1.1326) is affirming respondents' uncertainty as to whether in their organizations Customer input directly influences our decisions. The mean value of (3.732) and standard deviation of (1.0260) is affirming respondents' uncertainty as to whether in their organizations the view failure as an opportunity for learning and improvement. The mean value of (2.993) and standard deviation of (1.0482) is affirming respondents disagree that their organization's innovation and risk taking are encouraged and rewarded.

#### 4.6 Organizational Culture Involvement

The **Organizational Culture** for the study was assessed and in doing that 6 items were selected under the indicator Mission and the table 4.11 presents the results.

**Table 4.11 Descriptive Statistics for Mission**

<b>Mission</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>S.D</b>
OCM1. There is a long-term purpose and direction	153	1.0	5.0	3.562	.9989
OCM2. Our strategy leads other organizations to change the way they compete in the industry	153	1.0	5.0	3.425	.9155
OCM3. There is widespread agreement about goals	153	1.0	5.0	3.412	1.0914
OCM4. Leaders set goals that are ambitious, but realistic	153	1.0	5.0	3.386	1.1305
OCM5. We have a shared vision of what the organization will be like in the future.	153	1.0	5.0	3.340	.9878
OCM6. Leaders have a long-term viewpoint	153	1.0	5.0	3.209	.9844

The mean value of (3.562) and standard deviation of (.9989) is affirming respondents' uncertainty as to whether in their organizations there is a long-term purpose and direction. The mean value of (3.425) and standard deviation of (.9155) is affirming respondents' uncertainty as to whether in their organizations' strategy leads other organizations to change the way they compete in the industry. The mean value of (3.412) and standard deviation of (1.0914) is affirming respondents' uncertainty as to whether in their organizations there is widespread agreement about goals. The mean value of (3.386) and standard deviation of (1.1305) is affirming respondents' uncertainty as to whether in their organizations the Leaders set goals that are ambitious, but realistic. The mean value of (3.340) and standard deviation of (.9878) is affirming respondents uncertainty as to whether in their organizations have a shared vision of what the organization will be like in the future. The mean value of (3.209) and standard deviation of (.9844) is affirming respondents uncertainty as to whether in their organizations the Leaders have a long-term viewpoint.

#### 4.6 Organizational financial, market and operational performance

The **Organizational Culture** for the study was assessed and in doing those 5 items were selected under the indicator financial performance, 2 items were selected under the indicator market performance and three items were selected under the indicator operational performance and the table 4.12 presents the results.

**Table 4.12 Descriptive Statistics Organizational performance**

<b>Financial Performance</b>	N	Min	Max	Mean	S.D
OP1. Developing new ideas to help customers	153	2.0	5.0	3.778	.7799
OP2. Able to fast track new offerings to customers	153	1.0	5.0	3.765	.8718
OP3. Able to manage processes to keep costs down	153	2.0	5.0	3.752	.9197
OP4. More able to package a total solution to solve a customer problem	153	1.0	5.0	3.752	.8451
<b>Market Performance</b>					
OMP1. Increase in market share over the past 3 years	153	2.0	5.0	3.667	.8429
OMP2. Increase market growth over the past 3 years	153	2.0	5.0	3.667	.8429
<b>Operational performance</b>					
FP1. Achieving firm profit goals over the past 3 years	153	2.0	5.0	3.654	.8909
FP2. Increase in annual turnover over the past 3 years	153	1.0	5.0	3.647	.7986
FP3. Having a better return on investment over the past 3 years	153	1.0	5.0	3.523	1.0393
FP4. Achieving return on investment over the past 3 years	153	2.0	5.0	3.745	.8154
FP5. Increase in total income over the past 3 years	153	1.0	5.0	3.739	.8173

The mean value of (3.778) and standard deviation of (.7799) is affirming respondent's uncertainty as to whether in their organizations developing new ideas to help customers. The mean value of (3.765) and standard deviation of (.8718) is affirming respondent's uncertainty as to whether in their organizations Is able to fast track new offerings to customers. The mean value of (3.752) and standard deviation of (.9197) is affirming respondent's uncertainty as to

whether in their organizations Is able to manage processes to keep costs down. The mean value of (3.752) and standard deviation of (.8451) is affirming respondent's uncertainty as to whether in their organizations Is more able to package a total solution to solve a customer problem. The mean value of (3.667) and standard deviation of (.8429) is affirming respondents uncertainty as to whether in their organizations has increased in market share over the past 3 years. The mean value of (3.667) and standard deviation of (.8429) is affirming respondents uncertainty as to whether in their organizations has increase market growth over the past 3 years. The mean value of (3.654) and standard deviation of (.8909) is affirming respondent's uncertainty as to whether in their organizations Is achieving firm profit goals over the past 3 years. The mean value of (3.647) and standard deviation of (.7986) is affirming respondents uncertainty as to whether in their organizations has increased in annual turnover over the past 3 years. The mean value of (3.523) and standard deviation of (1.0393) is affirming respondents uncertainty as to whether in their organizations Is having a better return on investment over the past 3 years. The mean value of (3.745) and standard deviation of (.8154) is affirming respondents uncertainty as to whether in their organizations Is achieving return on investment over the past 3 years. The mean value of (3.739) and standard deviation of (.8173) is affirming respondents uncertainty as to whether in their organizations has increased in total income over the past 3 years.

#### **4.6 Organizational Service Innovation**

The Service Innovation for the study was assessed and in doing that 6 items were selected under the indicator Service Innovation, and the table 4.13 presents the results.

**Table 4.13 Descriptive Statistics for Service Innovation**

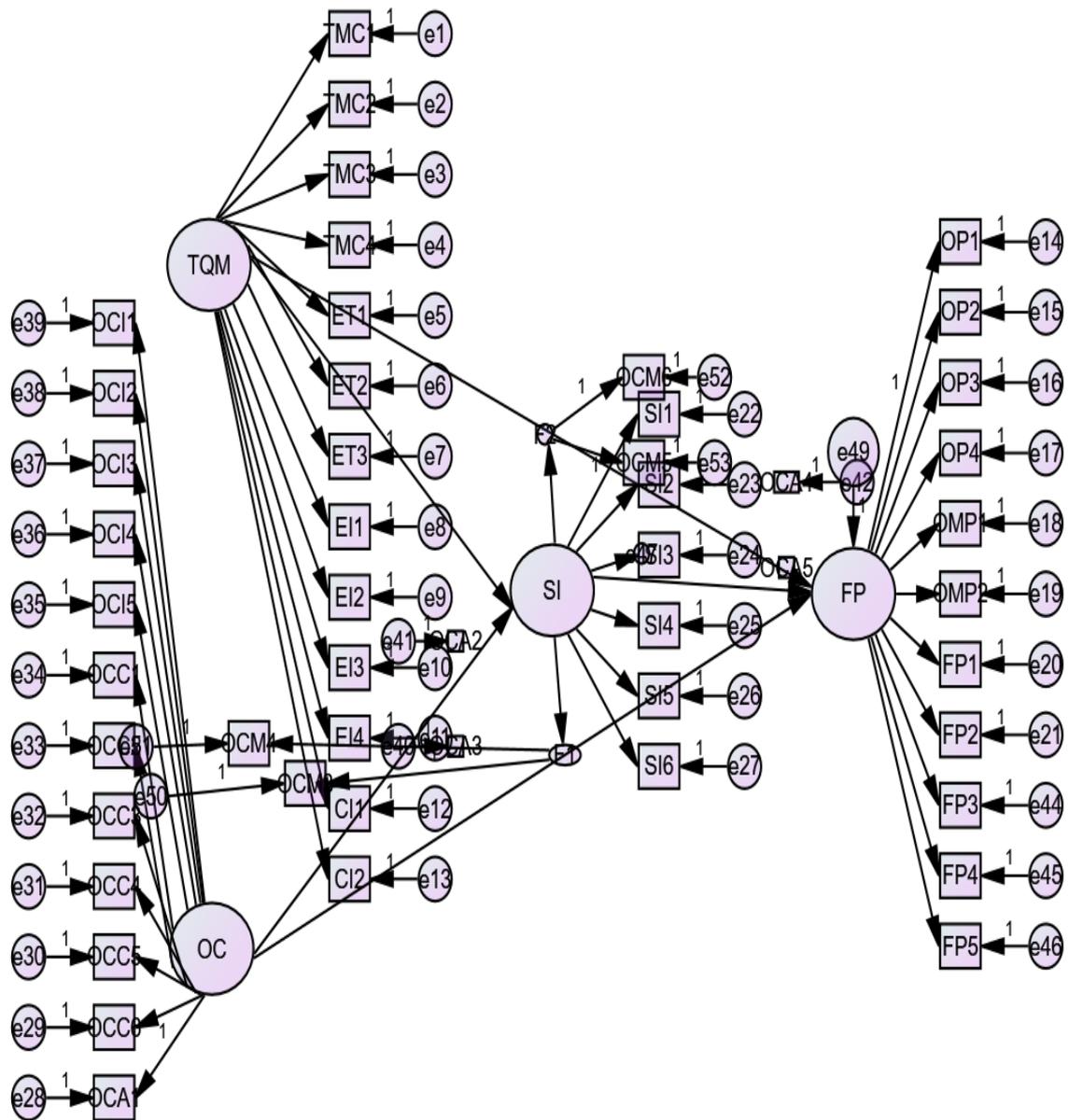
<b>Service Innovation</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>S.D</b>
SI1. The organization makes rapid service design changes	153	1.0	5.0	3.634	.8172
SI2. The organization customizes services according to customer's needs	153	2.0	5.0	3.614	.9398
SI3. The organization offers a large number of service features and variety	153	2.0	5.0	3.595	.8541
SI4. New product development goals are clearly aligned with organization's mission and strategic plan.	153	1.0	5.0	3.458	.8958
SI5. Our mission and strategic plan help to define strategic arenas for new opportunities.	153	1.0	5.0	3.373	.9240

The mean value of (3.634) and standard deviation of (.8172) is affirming respondents' uncertainty as to whether in their organizations makes rapid service design changes. The mean value of (3.614) and standard deviation of (.9398) is affirming respondents' uncertainty as to whether in their organizations customizes services according to customer's needs. The mean value of (3.595) and standard deviation of (.8541) is affirming respondents' uncertainty as to whether in their organizations offers a large number of service features and variety. The mean value of (3.458) and standard deviation of (.9240) is affirming respondents' uncertainty as to whether in their organizations new product development goals are clearly aligned with organization's mission and strategic plan. The mean value of (3.373) and standard deviation of (.7799) is affirming respondents' uncertainty as to whether in their organizations mission and strategic plan help to define strategic arenas for new opportunities.

#### **4.7 Hypothetical model for the study**

The hypothetical model of the study was tested by using AMOS, version 26. The Structural Equation Model (SEM) was used to test the direct influence of the independent variables on the dependent variables as well as the moderating and mediating effect. This was carried to ascertain the extent in which the independent variables can overall affect the dependent variables to help arrive at logical conclusions. The figure 4.2 presents the results.

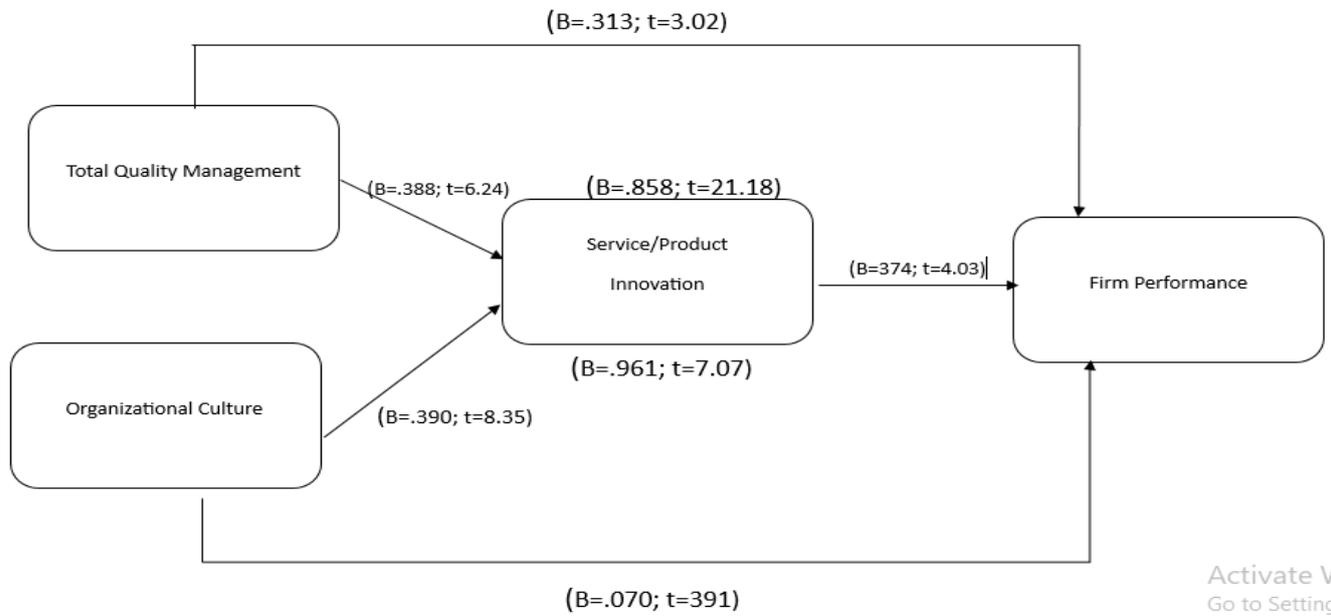
Figure 4.2 Hypothetical Model for the Study



Source: Field data, 2022



#### 4.8 Hypothetical Model Results



**Table 4.14 Hypothetical Regression Results**

Regression variables	Estimate	S.E.	C.R.	P
Total Quality Management - -> Service Product Innovation	.388	.062	6.241	.000
Organizational culture - - > Service Product Innovation	.390	.047	8.353	.000
Service Product Innovation - - > Firm Performance	.374	.093	4.036	.000
Organizational culture - - > Firm Performance	.070	.180	.391	.696
Total Quality Management - -> Firm Performance	.313	.104	3.025	.002
Service Product Innovation- - > Total Quality Management - - > Firm Performance	.858	.0405	21.189	.0000
Service Product Innovation- - > Organizational culture - - > Firm Performance	.961	.1358	7.078	.0000

Source: Field Data, 2022

The study examined the effect of total quality management on service product innovation and the (Estimate value of = .388; Standard Error value of =.062; Critical Ratio value of = 6.241 and Probability value of <0.000) statically indicate that total quality management can overall affect service innovation of about 39%. This postulates that total quality management has strong influence on service innovation. The statistical values indicate that total quality management has a positive and significant effect on service innovation.

The study examined the effect of organizational culture on service product innovation and the (Estimate value of = .390; Standard Error value of =.047; Critical Ratio value of = 8.353 and Probability value of <0.000) statically indicate that organizational culture can overall affect service innovation of about 39%. This postulates that total organizational culture has strong influence on service innovation. The statistical values indicate that total organizational culture has a positive and significant effect on service innovation.

The study examined the effect of service product innovation on firm performance and the (Estimate value of = .374; Standard Error value of =.093; Critical Ratio value of = 4.036 and Probability value of <0.000) statically indicate that organizational culture can overall affect service innovation of about 37%. This postulates that total service product innovation has strong influence on firm performance. The statistical values indicate that service product innovation has a positive and significant effect on firm performance.

The study examined the effect of organizational culture on firm performance and the (Estimate value of = .070; Standard Error value of =.180; Critical Ratio value of = .391 and Probability value of <0.696) statically indicate that organizational culture can overall affect service innovation of about 7%. This postulates that total organizational culture has weak influence on

firm performance. The statistical values indicate that total organizational culture has a positive and but insignificant effect on firm performance.

The study examined the effect of total quality management on firm performance and the (Estimate value of = .313; Standard Error value of =.104; Critical Ratio value of = 3.025 and Probability value of <0.002) statically indicate that organizational culture can overall affect service innovation of about 10%. This postulates that total quality management has strong influence on firm performance. The statistical values indicate that total organizational culture has a positive and but significant effect on firm performance.

The study considered the mediating effect of service innovation on the relationship between total quality management and firm performance and the (Estimate value of = .858; Standard Error value of =.0405; Critical Ratio value of = 21.189 and Probability value of <0.0000) statically indicate that service innovation can overall affect the relationship between total quality management and firm performance of about 86%. The statistical values indicate that service innovation positively and significantly mediates the relationship between total quality management and firm performance.

The study finally assessed the mediating effect of service product innovation on the relationship organizational culture and firm performance and the (Estimate value of = .961; Standard Error value of =.1358; Critical Ratio value of = 7.078 and Probability value of <0.0000) statically indicate that service innovation can overall affect the relationship between total quality management and firm performance of about 96%. The statistical values indicate that service product innovation positively and significantly mediates the relationship between organizational culture and firm performance.

**Table 4.15 Hypothesis testing and findings**

HYPOTHESIS	RELATIONSHIP	BETA VALUE	T VALUE	P<	REMARKS
H1	TQM --> SPI	.388	6.241	.000	Supported
H2	OC --> SPI	.390	8.353	.000	Supported
H3	SPI --> FP	.374	4.036	.000	Supported
H4	OC -->FP	.070	.391	.696	Not supported
H5	TQM -->FP	.313	3.025	.002	Supported
H6	SPI- --> TQM-->F P	.858	21.189	.0000	Supported
H7	SPI- -->OC-->FP	.961	7.078	.0000	Supported

Source: Field Data, 2022

#### 4.9 Discussion of Results

The study examined the effect of total quality management on service product innovation and the findings of the study indicate that total quality management has a positive and significant effect on service innovation. Literature posits that many business managers confirmed that a positive organizational culture as a primary factor in the success of their businesses (Childress, 2013; Melo, 2012). For example, the founders from Walmart and Southwest Airlines confirmed that their organizational culture is a primary factor in their business success (Flamholtz& Randle, 2011). The founders of Google and Apple also identified their positive organizational culture as the ultimate source of sustainable competitive advantage (Simoneaux& Stroud, 2014).

The study examined the effect of organizational culture on service product innovation and the findings of the study indicate that total organizational culture has a positive and significant effect on service product innovation. Different studies found that organizational culture and organizational design are the most influential determinants (Mumford, 2000). Organizational culture can affect the innovative attitude in two ways. The socialization process teaches individuals how to behave and act toward one another. Moreover, the organization's structure,

policy system, procedure and management orientation can be affected by the basic “values, beliefs and assumptions” (Martins and Terblanche, 2003). Hence, culture can encourage innovation among employees, because it drives them toward accepting innovation as a philosophy of the organization (Hartmann, 2006). Different values of culture were regarded as means to foster innovation. Examples of these cultural values were creativity and initiative (Jamrog et al., 2006), entrepreneurial mindset (McLean, 2005), freedom and autonomy (Ahmed, 1998), risk taking (Wallach, 1983), teamwork (Arad et al., 1997), marketing orientation and flexibility (Martins and Terblanche, 2003). Research has given enough evidence for an existing relationship between organizational culture and innovation (Buschgens et al., 2013; Uz Kurt et al., 2013).

The study examined the effect of service product innovation on firm performance and the findings of the study indicate that service product innovation has a positive and significant effect on firm performance. In an effective organizational culture, business managers how employee-focused leadership, sound interpersonal relationship, and ethical decision-making processes (Engelen et al., 2014). Business managers use an effective organizational culture to maintain a positive work environment (Pinho et al., 2014). Effective organization culture is a collection of sub-organizational cultures. Such culture includes healthy customer service, employee-oriented management, strong interpersonal relationship, exemplary leadership, and ethical decision-making process (Childress, 2013). Maintaining an effective organizational culture in the organization is essential to motivate employees (Berg & Wilderom, 2012). Managers with an effective organizational culture may improve performance in the organization (Shahzad et al., 2012). In an effective organizational culture, employees share the organization’s values and beliefs (Schein, 2010). When employees share the organization’s value, they can perform better to achieve the organization’s objectives (Denison, 1990). Study findings in the area of organizational culture showed that effective organizational culture

includes shared values and common purpose to create a sense of teamwork in the organization (Flamholtz & Randle, 2011).

The study examined the effect of organizational culture on service product innovation and the findings of the study indicate that total organizational culture has a positive and significant effect on service innovation. Members of the organization use an effective organizational culture to develop teamwork and knowledge sharing culture (Wiewiora, Murphy, Trigunarsyah, & Brown, 2014). Schein (2010) indicated that managers with an effective organizational culture encourage teamwork to improve performance in the organization. Teamwork is an essential factor to achieve common organizational objectives. In an effective organizational culture, business managers and employees work together to improve performance and productivity in the organization (Childress, 2013). Eaton and Kilby (2015) noted that effective organizational culture is important to motivate and retain competent employees in the organization. Business managers with effective organizational culture give priority to excellent customer services (Berg & Wilderom, 2012). In most cases, organizational leadership contains outstanding customer service as part of a mission statement (Denison, 1990). Miguel (2015) indicated that leadership must value good customer service as a source of sustainable competitive advantage.

The study examined the effect of organizational culture on firm performance and the findings of the study indicate that total organizational culture has a positive and significant effect on firm performance. Business managers may develop and maintain a positive organizational culture to improve organizational performance and productivity in the organization (Flamholtz & Randle, 2011). Study findings in the area of organizational culture showed that a positive organizational culture as a functional culture in improving performance and productivity in the organization (Childress, 2013). Inabinett and Ballaro (2014) found the

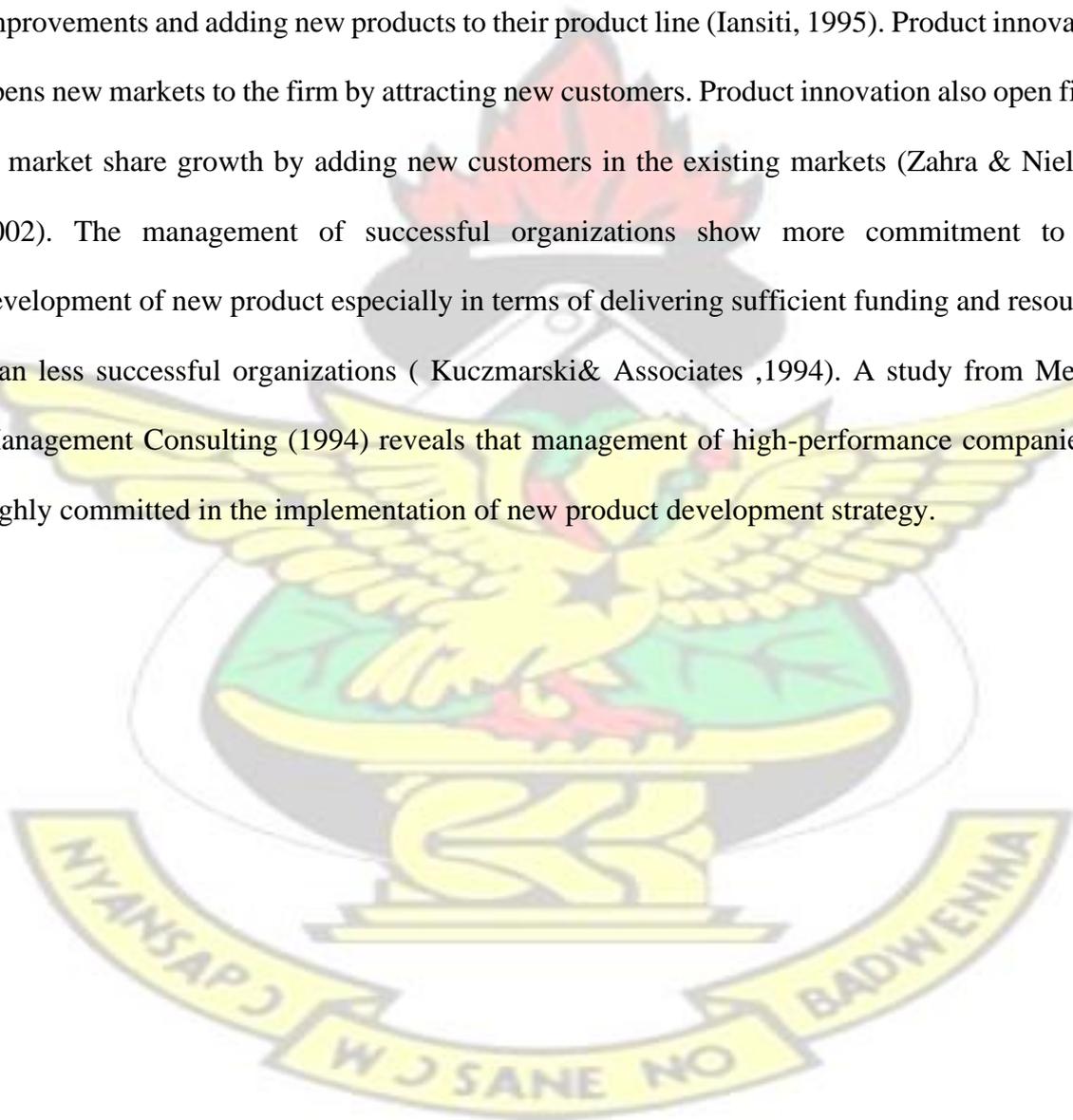
existence of a positive relationship between positive organizational culture and firm performance.

The study examined the effect of total quality management on firm performance and the findings of study indicate that total organizational culture has a positive and but significant effect on firm performance. Eaton and Kilby (2015) indicated that business managers use organizational culture to control and moderate the working environment throughout the organization. Hartnell et al. (2011) noted that business managers use an effective organizational culture (a) to shape employee attitudes, (b) to improve operational effectiveness, and (c) to increase financial performance in the organization. Operational effectiveness contains information on how management uses an effective organizational culture to introduce and innovate new products and to improve process and service. Financial performance includes information regarding the achievement of profitability, productivity, and growth in the organization. Effective organizational culture is a combination of strong and positive culture. In a strong culture, the organization members behave in a way consistent with organizational values (Flamholtz& Randle, 2011). In a positive organizational culture, employees share the goals and values of the organization (Flamholtz& Randle, 2012). Business managers may establish an effective organizational culture to improve performance and productivity in the organization (Inabinett&Ballaro, 2014).

The study considered the mediating effect of service product innovation on the relationship between total quality management and firm performance and the findings of the study indicate that service innovation positively and significantly mediates the relationship between total quality management and firm performance. Moderating effect service product innovation on the relationship between total quality management and firm performance Literature has shown over a sustained period that product innovation has been considered one of the main drivers of value creation. Underpinned by technological change, this value creation stems from ‘creative

destruction' and the willingness to embrace risk and uncertainty; in effect, it destroys existing value in order to create new, superior value (Schumpeter 2014).

The study finally assessed the mediating effect of service product innovation on the relationship organizational culture and firm performance and the findings indicate that service innovation positively and significantly moderates the relationship between organizational culture and firm performance. Firms get momentum for market leadership and growth by making product improvements and adding new products to their product line (Iansiti, 1995). Product innovation opens new markets to the firm by attracting new customers. Product innovation also open firms in market share growth by adding new customers in the existing markets (Zahra & Nielsen, 2002). The management of successful organizations show more commitment to the development of new product especially in terms of delivering sufficient funding and resources than less successful organizations ( Kuczarski& Associates ,1994). A study from Mercer Management Consulting (1994) reveals that management of high-performance companies is highly committed in the implementation of new product development strategy.



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter of the study presents the summary of the findings, conclusion, managerial implications, theoretical implications recommendations and areas for future studies.

#### 5.1 Summary of Findings

##### 5.1.1 The effect of total quality management on service product innovation

The study examined the effect of total quality management on service product innovation and the findings of the study statically indicate that total quality management can overall affect service innovation of about 39%. This postulates that total quality management has strong influence on service innovation. The statistical values further indicate that total quality management has a positive and significant effect on service innovation.

##### 5.1.2 The effect of organizational culture on service product innovation

The study examined the effect of organizational culture on service innovation and the findings of the study statically indicate that organizational culture can overall affect service innovation of about 39%. This postulates that total organizational culture has strong influence on service innovation. The statistical values further indicate that total organizational culture has a positive and significant effect on service innovation.

##### 5.1.3 The effect of service product innovation on firm performance

The study examined the effect of service product innovation on firm performance and the findings of the study statically indicate that organizational culture can overall affect service innovation of about 37%. This postulates that service product innovation has strong influence on firm performance. The statistical values further indicate that service product innovation has a positive and significant effect on firm performance.

#### **5.1.4 The effect of organizational culture on firm performance**

The study examined the effect of organizational culture on firm performance and the findings of the study statically indicate that organizational culture can overall affect firm performance of about 7%. This postulates that total organizational culture has frail influence on firm performance. The statistical values further indicate that organizational culture has a positive and but insignificant effect on firm performance.

#### **5.1.5 The effect of total quality management on firm performance**

The study examined the effect of total quality management on firm performance and the findings of the study statically indicate that total quality management can overall affect firm performance of about 10%. This postulates that total quality management has strong influence on firm performance. The statistical values further indicate that total quality management has a positive and significant effect on firm performance.

#### **5.1.6 The study considered the mediating effect of service product innovation on the relationship between total quality management and firm performance**

The study examined the moderating effect of service product innovation on the relationship between total quality management and firm performance and the findings of the study statically indicate that service product innovation can overall affect the relationship between total quality management and firm performance of about 86%. The statistical values further indicate that service product innovation positively and significantly mediates the relationship between total quality management and firm performance.

#### **5.1.7 The mediating effect of service product innovation on the relationship organizational culture and firm performance**

The study finally assessed the mediating effect of service product innovation on the relationship organizational culture and firm performance and the findings study statically indicate that service innovation can overall affect the relationship between total quality management and

firm performance of about 96%. The statistical values reliably indicate that service product innovation positively and significantly mediates the relationship between organizational culture and firm performance.

## **5.2 Conclusions**

The study examined the effect of total quality management on service product innovation and the findings of the study establish that total quality management has a positive and significant effect on service product innovation. The findings of this study therefore concluded that total quality management has a positive and significant effect on service product innovation.

The study examined the effect of organizational culture on service innovation and the findings of the study statically indicate that total organizational culture has a positive and significant effect on service product innovation. The findings of this study therefore concluded that total organizational culture has a positive and significant effect on service product innovation.

The study ascertained the effect of service product innovation on firm performance and the findings of the study statically indicate that service product innovation has a positive and significant effect on firm performance. The findings of this study therefore concluded that service product innovation has a positive and significant effect on firm performance.

The study examined the effect of organizational culture on firm performance and the findings of the study statically indicate that organizational culture has a positive and but insignificant effect on firm performance. The findings of this study therefore concluded that organizational culture has a positive and but insignificant effect on firm performance.

The study assessed the effect of total quality management on firm performance and the findings of the study indicate that total quality management has a positive and significant effect on firm performance. The findings of this study therefore concluded that total quality management has a positive and significant effect on firm performance.

The study examined the mediating effect of service product innovation on the relationship between total quality management and firm performance and the findings of the study indicate that service product innovation positively and significantly mediates the relationship between total quality management and firm performance. The findings of this study therefore concluded that service product innovation positively and significantly moderates the relationship between total quality management and firm performance.

The study finally assessed the mediating effect of service product innovation on the relationship organizational culture and firm performance and the findings study indicate that service product innovation positively and significantly moderates the relationship between organizational culture and firm performance. The findings of this study therefore concluded that service product innovation positively and significantly mediates the relationship between organizational culture and firm performance.

### **5.3 Theoretical Implication**

The study examined the effect of total quality management and organizational culture on firm performance the moderating effect of service product innovation. The Diffusion of Innovation Theory was found to be the best theory of underpinning this study. because Schumpeter discusses that large companies operating in concentrated industries are the main source of innovative activity (Schumpeter, 1934) and characterizes innovation as the engine of economic development that can replace the old with the new, causing significant changes in economic systems (Schumpeter, 1942).

Later, Rogers (1962) elaborates the Diffusion of Innovation Theory, which examines the processes by which innovation is communicated and adopted over time among the participants of a given social system. Rogers identified four main elements that influence and disseminate a new idea: the innovation itself, the communication channels, time and a social system. Another set of explanations for innovation is offered by the Economic Evolutionary Theory,

proposed by Nelson and Winter (1982). Their model supports that the behavior of any company is based on a set of learned principles or routines. Evolutionary theories understand innovation as a process dependent on its development through interactions between their various actors and subsequently tested in the market. These theories and market tests largely determine which products are developed and which are successful, there by influencing the future path of economic development. Drucker (1985) characterizes innovation as the tool of entrepreneurs, being how they explore change as an opportunity for a different business or service. For Cooper (1994), innovation and development of new products are the processes themselves and for Kuhlmann (2001), the essential element for innovation are the institutions involved in scientific research, responsible for the accumulation and dissemination of knowledge, the ability to educate and train the working population, develop technology, produce products, develop innovative processes and distribute them.

In the Open Innovation Model proposed by Chesbrough (2003), companies commercialize internal ideas through external channels to generate value for the organization. In other words, it is a set of external knowledge and ideas together with internal research and development, which offers new ways to create value. For the author, the boundary between a company and its environment is flexible, which enables internal and external ideas for the organization to generate innovation for the market. The dynamic of competition in the market and financial resources are two factors that influence innovation processes. The contributions of other people with whom the company maintains contact, such as customers, suppliers and distributors, are crucial in the innovative process (Urban et al., 1997; Lusch and Nambisan, 2015; Arthur, 2009; Sofka and Grimpe, 2010), whereas the partnership between employees and managers is quoted by Ordanini and Parasuraman (2011) as a robust booster of innovation in services that can contribute with volume and radically.

#### **5.4 Managerial Implications**

Management in various organizations should note that the appropriate organizational culture alone cannot help them to achieve better organizational performance. There is the need to consider product innovation because with time competition will set in and customers will expect product innovate. Organizations should not rely on their good organizational culture and fail to innovate in their product services. The failure to innovate will cause the declination of the business instead of stabilization. This is therefore calling management of organizations to prioritize innovation in their product service to help them compete well and avert declination.

Management of organizations should also note that total quality management is a strong concept of achieving better organizational performance but there is a strong need to incorporate product innovation service. The ability of an organization to innovate by thinking of reengineering of reducing cost of production and improving on quality and durability is extremely important for organizations to strive and achieve great height among their competitors. Management of organizations should not fail to encourage and welcome innovative ideas that will help them to stand tall among their competitors.

Management of organizations should note that Top management commitment is highly important for them to be able to achieve and maintain total quality management. Management of organizations should be willing to support the dream or the vision of creating and maintain of quality product and services else the organization will struggle to pursue total quality management. Management of organizations are to encourage and commit themselves to help their organizations to achieve and maintain total quality management.

#### **5.5 Recommendations**

Top management of organizations should allocate the required resources for quality management to be achieved. Where management will fail to allocate the right required resources needed by the organization, it will be extremely difficult for production and service

team to achieve the best quality that they are expecting. Top management ability to release the required resources need for quality will go long way to help the organization achieve the set target with respect to quality and deliver the best product and service to their customers.

The organizations should listen to employees' suggestions on issues regarding quality management. Employees will be comfortable to share and bring new ideas on board if the management of the organization has good listening culture. In a situation that the organization does not welcome and listen to suggestions coming from employees, new ideas will not be shared by employees to help the organization to even recognize where they are falling short and needs urgent amendment or modification to help them to always deliver the best and produce the best as well. It is therefore very important for organizations to create a conducive environment that will encourage employees to freely share and bring new ideas and suggestions on board to help them achieve total quality management.

There must be a clear agreement about the right way and the wrong way to do things in organizations to help the employees to know where there are rewards and punishments as well. Where policies regarding the code of conducts are clearly spelled out, employees will be guided to do the right thing and minimize errors that may have a negative influence on the image of the organization achieving best results. This will help firms to reduce cost and improve on good performance to help them achieve best results and deliver no defective product to their customers. Customers enjoying better service and product will then market the organization to their close relatives and friends which will help the firm to achieve good market growth and market share and withstand global competitions.

### **5.6 Areas for Future Studies**

This current considered the moderating effect of service product innovation on the relationship between total quality management and firm performance it is highly recommended that future

study can consider the moderating effect of research and development on the relationship between total quality management and firm performance.

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## REFERENCES

- Ahmed, P. K. (1998). Culture and climate for innovation. *European Journal of Innovation Management*, 1(1), 30-43.
- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, 22(6-7), 493-520.
- Andish, M., Rezvani, A., & Karami, A. (2013). The effect of organizational culture on organizational performance. *Interdisciplinary Journal of Contemporary Research in Business*, 5(2), 34-47.
- Anton, J. L., Dhaenens, F., Billaut, J. C., & Semal, P. (2007). Service quality and customer loyalty in a context of service failure. *Managing Service Quality*, 17(4), 372-393.
- Artz, K. W., Norman, P. M., Hatfield, D. E., & Cardinal, L. B. (2010). A longitudinal study of the impact of R&D, patents, and product innovation on firm performance. *Journal of Product Innovation Management*, 27(5), 725-740.
- Arumugam, V., & Mojtahedzadeh, R. (2011). The effects of total quality management on organizational innovation: The role of absorptive capacity. *International Journal of Quality & Reliability Management*, 28(4), 377-392.
- Baker, W. E., & Sinkula, J. M. (2002). Market orientation, learning orientation, and product innovation: Delving into the organization's black box. *Journal of Market-Focused Management*, 5(1), 5-23.
- Berg, P., & Wilderom, C. (2012). Why do they keep missing the target? A closer look at cultural pitfalls of performance management. *International Journal of Cross Cultural Management*, 12(2), 167-183.
- Berry, L. L., Shankar, V., Parish, J. T., Cadwallader, S., & Dotzel, T. (2006). Creating new markets through service innovation. *MIT Sloan Management Review*, 47(2), 56-63.
- Bitner, M. J., Ostrom, A. L., & Morgan, F. N. (2008). Service blueprinting: A practical technique for service innovation. *California Management Review*, 50(3), 66-94.
- Cainelli, G., Evangelista, R., & Savona, M. (2004). The impact of innovation on economic performance in services. *The Service Industries Journal*, 24(1), 116-130.

- Chang, J. F., & Lee, M. S. (2007). A study on the relationship between organizational culture and product innovation in the Korean IT industry. *International Journal of Information Management*, 27(2), 87-96.
- Chen, C. J., & Tsou, H. T. (2007). The relationship between quality management practices and innovation. *Journal of High Technology Management Research*, 18(1), 1-18.
- Chen, Y. S., Lin, M. J. J., & Chang, C. H. (2009). The positive effects of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets. *Industrial Marketing Management*, 38(2), 152-158.
- Chesbrough, H. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.
- Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, 43(2-3), 354-363.
- Childress, A. (2013). The importance of organizational culture on firm performance. Honors Theses, 30.
- Coenen, L., & Asheim, B. T. (2006). Geographical clustering and innovation policy. In *Innovation policy in a knowledge-based economy* (pp. 346-365). Springer.
- Cooper, R. G. (1994). The new product process: A decision guide for management. *Journal of Marketing Management*, 10(1-3), 101-120.
- Cronin, J. J., Brady, M. K., & Hult, G. T. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1), 45-65.
- Deming, W. E. (1986). *Out of the crisis*. MIT Press.
- Deming, W. E. (1986). *Out of the crisis: Quality, productivity and competitive position*. Cambridge University Press.

- Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. Wiley.
- Desyllas, P., & Sako, M. (2013). Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *California Management Review*, 55(1), 39-63.
- Drejer, I. (2004). Identifying innovation in surveys of services: A Schumpeterian perspective. *Research Policy*, 33(3), 551-562.
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Harper & Row.
- Eaton, R. J., & Kilby, J. (2015). Organizational culture and internal control over financial reporting. *Accounting Horizons*, 29(2), 365-388.
- Engelen, A., Neumann, C. B., Schmidt, R., & Jansen, J. J. (2014). Beyond the black box of demography: A contingency approach to demographic faultlines. *Academy of Management Journal*, 57(6), 1652-1675.
- Fernandes, A. C., Ferreira, J. J., & Raposo, M. (2017). The impact of different innovation levels of innovative products on their performance. *Journal of Business Research*, 70, 1-8.
- Flamholtz, E. G., & Randle, Y. (2011). Corporate culture, business models, competitive advantage, and performance. *Management Accounting Quarterly*, 13(1), 1-9.
- Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: A literature review. *The Journal of Product Innovation Management*, 19(2), 110-132.
- Givens, R. J. (2012). The impact of culture on business processes. *Journal of Business & Economics Research*, 10(6), 325-336.
- Gronoos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Hartmann, P. (2006). The role of organizational culture in motivating innovative behavior in construction firms. *Journal of Construction Engineering and Management*, 132(7), 751-758.
- Hashmi, K. (2010). Total quality management and performance in the healthcare sector: A literature review. *International Journal of Health Care Quality Assurance*, 23(2), 169-183.

- Herzallah, A. M., Gutiérrez-Gutiérrez, L. J., & Muñoz Rosas, J. F. (2014). The impact of TQM practices on operational performance and customer satisfaction. *Total Quality Management & Business Excellence*, 25(7-8), 778-793.
- Hsieh, Y. C., Wu, W. W., & Chen, S. H. (2013). Developing innovative behavior in hospital employees: The roles of work engagement, organizational commitment and HRM organizational practices. *Asia Pacific Management Review*, 18(1), 5-20.
- Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429-438.
- Inabinett, A. R., & Ballaro, N. L. (2014). The relationship between organizational culture and performance in acute care hospitals. *Health Care Manager*, 33(1), 32-39.
- Irfan, S. M., Ijaz, A., Kee, D. M. H., & Awan, A. G. (2012). Quality management system and organizational performance: Empirical study of Pakistani public sector hospitals. *The TQM Journal*, 24(5), 416-428.
- Jamrog, J. J., Overholt, M. H., & Gentry, W. A. (2006). From values to action: The four principles of values-based leadership. *Leadership Excellence*, 23(5), 10-15.
- Jimenez-Jimenez, D., Valle, R. S., & Hernandez-Espallardo, M. (2008). Innovation, organizational learning, and performance. *Journal of Business Research*, 61(7), 566-575.
- Kaliannan, M., & Ponnusamy, P. (2014). Analysis of the relationship between corporate culture and performance. *Journal of Economics and Behavioral Studies*, 6(8), 633-640.
- Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of Operations Management*, 21(4), 405-435.
- Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25(4), 871-884.
- Khazanchi, S., Lewis, M. W., & Boyer, K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25(4), 871-884.
- Kuhlmann, S. (2001). Future governance of innovation policy in Europe—Three scenarios. *Science and Public Policy*, 28(5), 359-370.

- Lovelock, C. H. (1983). Classifying services to gain strategic marketing insights. *Journal of Marketing*, 47(3), 9-20.
- MacCurtain, S., Karim, S., & Keating, M. (2010). Knowledge sharing and firm growth in the software industry: A study of Irish SMEs. *Journal of Small Business and Enterprise Development*, 17(4), 565-580.
- Melo, T. (2012). The impact of organizational culture on organizational performance: A case study of a private firm. Master's Thesis, University of Lisbon.
- Miguel, C. (2015). Organizational culture: The driver for positive customer experiences. *Journal of Business Strategy*, 36(5), 38-44.
- Moura, F., Viveiros, P., & Pimenta, A. P. (2019). Measuring and fostering firm-level innovation capability. *European Journal of Innovation Management*, 22(5), 740-761.
- Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review*, 10(3), 313-351.
- Nelson, R. R., & Winter, S. G. (1982). An evolutionary theory of economic change. Harvard University Press.
- Nguyen, N., & Aoyama, Y. (2014). Cultural clustering and alignment: An analysis of the cultural configuration of US cities. *Regional Studies*, 48(1), 133-149.
- O'Reilly, C. A., Caldwell, D. F., Chatman, J. A., & Doerr, B. (2014). The promise and problems of organizational culture: CEO personality, culture, and firm performance. *Group & Organization Management*, 39(6), 595-625.
- OECD & EUROSTAT. (2005). Oslo manual: Guidelines for collecting and interpreting innovation data (3rd ed.). OECD Publishing.
- Oke, A. (2007). Innovation types and innovation management practices in service companies. *International Journal of Operations & Production Management*, 27(6), 564-587.
- Omachonu, V. K., & Ross, J. E. (1994). Principles of total quality. CRC Press.
- Ordanini, A., & Parasuraman, A. (2011). Service innovation viewed through a service-dominant logic lens: A conceptual framework and empirical analysis. *Journal of Service Research*, 14(1), 3-23.

- Ozaki, T. (2003). Total quality management and just-in-time management systems in Japan: An institutional model. *Total Quality Management & Business Excellence*, 14(1), 17-29.
- Ozturk, T. H., & Ozen, S. (2020). How does the relationship between product innovation and marketing innovation differ across small and large firms? Evidence from Turkey. *International Journal of Innovation Management*, 24(07), 2050067.
- Padilla-Melendez, A., & Garrido-Moreno, A. (2012). Role of innovation in creating knowledge. *Journal of Knowledge Management*, 16(5), 682-701.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Peters, T. J. (1994). *In search of excellence: Lessons from America's best-run companies*. HarperCollins.
- Porter, M. E. (1996). What is strategy? *Harvard Business Review*, 74(6), 61-78.
- Prajogo, D. I., & Sohal, A. S. (2001). TQM and innovation: A literature review and research framework. *Technovation*, 21(9), 539-558.
- Reichstein, T., & Salter, A. J. (2006). Investigating the sources of process innovation among UK manufacturing firms. *Industrial and Corporate Change*, 15(5), 653-682.
- Rodriguez-Pose, A., & Crescenzi, R. (2008). Research and development, spillovers, innovation systems, and the genesis of regional growth in Europe. *Regional Studies*, 42(1), 51-67.
- Rogers, E. M. (1962). *Diffusion of innovations*. Free Press.
- Rönnbäck, Å., & Witell, L. (2018). Transformation towards a TQM philosophy in service organizations: Three empirical cases. *International Journal of Quality & Reliability Management*, 35(5), 1112-1132.
- Rorio, J. K. (2015). Total quality management and organizational performance in selected financial institutions in Kenya. *International Journal of Economics, Commerce, and Management*, 3(1), 1-24.
- Rosch, E., Mervis, C. B., Gray, W. D., Johnson, D. M., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive Psychology*, 8(3), 382-439.
- Sadikoglu, E., & Zehir, C. (2010). Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm

performance: An empirical study of Turkish firms. *International Journal of Production Economics*, 127(1), 13-26.

Santos, J. (2003). E-service quality: A model of virtual service quality dimensions. *Managing Service Quality*, 13(3), 233-246.

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## APPENDIX

### SURVEY QUESTIONNAIRE

Dear Sir / Madam I am a Master of Science candidate at Kwame Nkrumah University of Science and Technology. As part of my academic programme. You have been identified as a potential respondent in this research. Please respond to all questions, using your best estimates. Your participation in answering these questions is very much appreciated. Your responses will be **COMPLETELY CONFIDENTIAL**.

<b>Section 1: Demographic information</b>
1. Please indicate your age band (in years): 19 and less ( ) 20-29 ( ) 30-39 ( ) 40-49 ( ) 50 or more ( )
2. Please indicate your Gender: Male ( ) Female ( )
3. What is your working experience? (in Years) 0-5 ( ) 6-10 ( ) 11-15 ( ) 16-20 ( ) 20+ ( )
4. What is your position in your company? CEO ( ) Middle manager ( ) Supervisor ( ) Senior Staff ( ) junior Staff ( )
5. Please indicate your level of education? A level or less ( ) Bachelor ( ) Master ( ) PhD ( )
6. Type of your company: Private ( ) Public ( )
7. Type of your production: Manufacturer ( ) Service provider ( ) R&D ( ) Product designer ( )
8. Age of your firm: 1 to 5 years ( ) 6 to 10 years ( ) 11 to 15 years ( ) 16 to 20 years ( ) 21 or more ( )
10. How many employees do you have? 1 to 9 ( ) 10 to 49 ( ) 50 to 249 ( )

**Section 2 to what extent do you agree or disagree to the statement regarding Total quality management in your organization.**

1=strongly disagree, 2= disagree, 3= neutral, 4=agree and 5=strongly agree

<b>Top Management Commitment</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
TMC1.Top management develops clear total quality goals					
TMC2.Top management rewards the quality achievement action					
TMC3.Top management acts as guiding example for quality					
TMC4.Top management allocates the required resources for quality					
<b>Employee Training:</b>					
ET1. The organization sets clear objectives for training					
ET2. The organization chooses the suitable training methods					
ET3. The organization gives the quality training to all employees at all levels					
<b>Employee Involvement</b>					
EI1. The organization correlates constantly with employees					
EI2. The organization provides open discussions based on objective criteria.					
EI3. The organization listens to employees' suggestions					
EI4. The organization values employee's inputs.					
<b>Continuous Improvement:</b>					
CI1. The organization defines improvement goals					
CI2. The organization establishes processes necessary to improvement					
CI3. The organization relies on quality tools to improve performance					
CI4. The organization compares improvement process outcomes with goals					
The organization adjusts improvement plans according to feedbacks					

Source: (Alaoun 2018)



**Section 3 To what extent do you agree or disagree to the statement regarding Organizational Culture.**

1=strongly disagree, 2= disagree, 3= neutral, 4=agree and 5=strongly agree

<b>Involvement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
OCI1. Everyone believes that he or she can have a positive impact					
OCI2. Decisions are usually made at the level where the best information is available					
OCI3. Cooperation across different parts of the organization is actively encouraged.					
OCI4. Teamwork is used to get work done, rather than hierarchy					
OCI5. Authority is delegated so that people can act on their own					
<b>Consistency</b>					
OCC1. The leaders and managers “practice what they preach”					
OCC2. There is a clear and consistent set of values that governs the way we do business.					
OCC3. When disagreements occur, we work hard to achieve “win-win” solutions.					
OCC4. There is a clear agreement about the right way and the wrong way to do things					
OCC5. It is easy to coordinate projects across different parts of the organization.					
OCCI6. There is good alignment of goals across levels					
<b>Adaptability</b>					
OCA1.The way things are done is very flexible and easy to change					
OCA2.We respond well to competitors and other changes in the business environment.					
OCA3.Customer comments and recommendations often lead to changes					
OCA4.Customer input directly influences our decisions					
OCA5.We view failure as an opportunity for learning and improvement					
OCA6.Innovation and risk taking are encouraged and rewarded					
<b>Mission</b>					
OCM1. There is a long-term purpose and direction					
OCM2. Our strategy leads other organizations to change the way they compete in the industry					
OCM3. There is widespread agreement about goals					
OCM4. Leaders set goals that are ambitious, but realistic					
OCM5. We have a shared vision of what the organization will be like in the future.					
OCM6. Leaders have a long-term viewpoint					

Source: (Slaughter, 2015)

**Section 4.** Please indicate your opinion for each of the following statements regarding **firm performance** by placing a checkmark ( ) in the right column under the 5-point Likert Scale where: 1= Strongly Disagree 2= Disagree 3= Neither Disagree Nor Agree 4= Agree 5= Strongly Agree

<b>Operational performance</b>	1	2	3	4	5
OP1. Developing new ideas to help customers					
OP2. Able to fast track new offerings to customers					
OP3. Able to manage processes to keep costs down					
OP4. More able to package a total solution to solve a customer problem					
<b>Market Performance</b>					
OMP1. Increase in market share over the past 3 years					
OMP2. Increase market growth over the past 3 years					
<b>Financial Performance</b>					
FP1. Achieving firm profit goals over the past 3 years					
FP2. Increase in annual turnover over the past 3 years					
FP3. Having a better return on investment over the past 3 years					
FP4. Achieving return on investment over the past 3 years					
FP5. Increase in total income over the past 3 years					

**Source: (Merrilees et al., 2011)**

**Section 5.** Please indicate your opinion for each of the following statements regarding **Service Innovation** by placing a checkmark ( ) in the right column under the 5-point Likert Scale where: 1= Strongly Disagree 2= Disagree 3= Neither Disagree Nor Agree 4= Agree 5= Strongly Agree

<b>Service Innovation</b>	1	2	3	4	5
SI1. The organization makes rapid service design changes					
SI2. The organization customizes services according to customer's needs					
SI3. The organization offers a large number of service features and variety					
SI4. New product development goals are clearly aligned with organization's mission and strategic plan.					
SI5. Our mission and strategic plan help to define strategic arenas for new opportunities.					
SI6. New product development goals are clearly aligned with organization's mission and strategic plan					

**Source: (Slaughter, 2015)**