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Influence of Organizational Culture and Structure on Implementation of Total
Quality Management

By

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CERTIFICATION

I hereby declare that this submission is my own work towards MPhil in Procurement Management and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the text.

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ABSTRACT

Failure to pay sufficient attention to Organizational culture and structural variables that influence total Quality Management (TQM) Implementation renders the usefulness and benefits of the Total Quality Management (TQM) unachievable. In the light of this recognition, emerging literature still continues to bemoan lack of successful implementation of total quality management. Against this background, there is a common belief that, the knowledge and the clear understanding of how the organizational culture and structure influence the total quality management implementation will be a vital resource, which can stimulate effective planning of implementing total quality management (TQM). Additionally, this understanding will thus be useful in the reduction of cost, improvement of quality of services and product. Decisive decision making will be adopted as a result of effective teamwork. With careful study of the earlier studies and knowledge gap identified, this study has been undertaken to empirically determine the influence of organizational culture and structure influence on total quality management implementation. Adopting the Hofstede theory on the six cultural dimensions; Power distances, Individualism vs. collectivism, Masculinity and femininity, Long term vs. short term, Indulgence vs. restraints and Uncertainty avoidance served as the rudiment or the fundamentals of this study. Addition to the Hofstede theory, the researcher, also based his studies on the competing values framework of Cameron and Quinn (1999). This framework made it possible to develop appropriate theoretical concepts and subsequently aided in establishing conceptual evaluative model for the study. Quantitative research methodology was adopted in investigating the influence of the organizational culture and structure variables on total quality management implementation. Through the use of Structural Equation Modeling (SEM) as the analytical approach in determining the influence revealed that organizational culture influence total quality management by 69.7 % whereas organizational structure influence the total quality management implementation by 53.6 % , which is very significant to be watched in any management decision making. Therefore, it is prudent for management to understand the driving vision of the organization and integrate total quality management concept into their operations. Flexibility oriented culture and organic structure must be consolidated within the organization. Dormant cultures must be changed to encourage adaptation to change without fear.

TABLE OF CONTENTS

CERTIFICATION	i
ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
ACKNOWLEDGEMENTS	viii
LIST OF ABBREVIATIONS	ix

CHAPTER ONE	1
INTRODUCTION	1
1.1 Background.....	1
1.2 Statement of Problem	3
1.3 Aim	4
1.4 Objectives	4
1.5 Relevance of Study	4
1.6 Limitation of the Study	5
1.7 Scope of the Research	5
1.8 Organization of the Study	5
CHAPTER TWO	7
LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Organizational Culture	8
2.2.1 Types of Organizational Culture	13
2.2.2 Functions of the Organizational Culture	18
2.2.3 Characteristics of Organizational Culture	19
2.2.4 Organizational culture change	21
2.2.5 Cultural Variables Influencing Behavior.....	23
2.2.5.1 Manners	25
2.2.5.2 Dress which is acceptable:	25
2.2.5.3 Time:.....	25
2.3 Total Quality Management	27
2.3.1 Barriers to TQM Implementation	27
2.4 Organizational Structure	31
2.4.1 Evolution of Organizational Structure:	31
2.4.2 Definition of Organizational Structure	31
2.4.3 Types of Organizational Structure.....	32
2.4.4 Importance of Organizational Structure	40
2.4.5 The Six Elements of Organizational Structure	42
2.6 Theoretical Framework	43
2.7 Conceptual framework for evaluating the influence of organizational culture and structure on (TQM) implementation	50
Structural Components of the conceptual model.....	51
CHAPTER THREE	53

RESEARCH DESIGN AND METHODOLOGY	53
3.1 Introduction	53
3.2 Research Process	53
3.3 Research Approach	54
3.3.1 Deductive Approach	54
3.3.2 Inductive Approach	55
3.3.3 The Right Approach to this Study	55
3.4 Research Design	55
3.5 Philosophical Stance	57
3.5.1 Epistemological Stance	57
3.5.2 Axiological stance	58
3.5.3 Ontological stance	59
3.6 Research Strategy	59
3.7 Sources of Data.....	62
3.8 Population and Sample	62
3.9 Methods of Data Collection.....	64
3.10 Design of the Questionnaires	67
3.10.1 Pre testing Questionnaire Instrument	68
3.10.2 The Main Questionnaire Survey Instrument	69
3.11 Methods of Data Analysis and development of the model	70
3.11.1 Choosing Statistical Analysis Appropriate for the Evaluative Model.....	70
3.11.2 Model Analysis, Fitness, Validity and reliability.	72
3.12 Test of Model and Validation	75
CHAPTER FOUR	77
PRELIMINARY DATA ANALYSIS, FINDINGS AND DISCUSSION	77
4.1 Introduction	77
4.2 Background Information on Respondents”	78
4.3 Inferential statistical analysis of the data collected	81
4.4 Challenges of TQM implementation	87
4.4.1 Structural Challenges.....	88
4.4.2 Procedural Challenges	89
4.4.3 Strategic Challenges	89
4.4.4 Human Resource Challenges	90
4.4.5 Contextual Challenges	91
4.5 TQM Implementation	93
4.6 The influence of organizational culture and Structure Variables on (TQM) implementation	94
4.6.1 Outline of section	94
4.6.2 Structural Equation Modeling (SEM)	94
4.6.3 Structural Equation modeling analytic strategy	95
4.6.4 Hypothesized Evaluative model on the influence of organizational culture and structural variables on TQM implementation (exogenous and endogenous variables).	97
4.6.5 Factor loadings, variance accounted for and construct validity of the model testing (OCV and TQM)	100

4.6.7	Kaiser Meyer Olkin and Bartlett's Test for the OCV1A- to- OCV28A	105
4.6.8	Communalities for OVCA- to- OCV28	106
4.6.9	Kaiser Meyer Olkin and Bartlett's Test for the OSV1A- to- OSV14A	107
4.6.10	Communalities	108
4.6.11	Kaiser Meyer Olkin and Bartlett's Test	109
4.6.12	Communalities.	110
4.6.13	Analysis of Covariance Estimates	113
4.6.14	Significance of the findings towards successful implementation of total quality management.....	113
4.6.15	Results of the Evaluative Structural Model Hypothesis Testing	114
4.6.16	Summary of the Structural Equation Model	116
4.7	Discussion of Results	116
4.7.1	Influence of the organizational culture and structure on TQM implementation.	117
4.7.3	Focus on Customer	118
4.7.4	Benchmarking.....	118
4.7.5	Management Leadership	118
4.7.6	Effective Teamwork and Coordination	119
4.7.7	Responsibility of Quality at Source	119
4.7.8	Employee Involvement	119
4.8	Summary on chapter	120
CHAPTER FIVE		121
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS		121
5.1	Introduction	121
5.2	Summary of the findings	123
5.2.1	Objective one: Determination of the barriers affecting total quality management (TQM) implementation.	123
5.2.2	Objective two: Identification of the cultural and structural variables that influence total quality management (TQM) implementation.	123
5.2.3	Objective three: Determining the influence of the organizational culture and structural variables on total quality management (TQM) implementation.	124
5.2.4	Objective four: Development of an evaluative model for evaluating the influence of the organizational culture and structural variables on TQM implementation.	125
5.3	Conclusion	126
5.4	Significance and Contribution of the Research	127
5.5	Limitations of the Findings	128
5.6	Recommendations for Management	128
5.7	Recommendation for Future Research	129
5.8	Summary.....	129
REFERENCES		130

LIST OF TABLES

Table 2.1	Organizational cultural variables	26
Table 2.2	The five (5) main challenges of implementing TQM	30
Table 3.1.	Relevant Situations	60
Table 3.2	Indicators for TQM Surveys	65
Table 4.1	Gender of Respondents	78
Table 4.2	Age Group of the Respondents	79
Table 4.3	Respondent Educational Level	80
Table 4.4	Experience of the Respondents	81
Table 4.5	Cronbach Alpha test	82
Table 4.6	KMO and Bartlett's test.	83
Table 4.7	Definition of Organizational Culture	84
Table 4.8	Definition of Organizational Structure	86
Table 4.9	Barriers to TQM implementation	87
Table 4.10	Structural Challenges	88
Table 4.11	Procedural Challenges-Descriptive Statistics	89
Table 4.12	Strategic Challenges-Descriptive Statistics	90
Table 4.13	Human Resource Challenges-Descriptive Statistics	91
Table 4.14	Contextual Challenges-Descriptive Statistics	92
Tables 4.15	Indication of the extent to which the seven (7) building blocks of TQM contribute to successes of an organization.	92
Table 4.17	Comparison of Goodness of-fit measures of proposed model on influence of organizational culture and structure on TQM	99
Table 4.18	Factor loadings, variance accounted for and construct validity of model testing (OCV)	102
Table 4.19	Factor loadings, variance accounted for and construct validity of model testing (TQM)	102
Table 4.20:	Factor loadings, variance accounted for and construct validity of model testing (OSV)	105
Table 4.21	KMO and Bartlett's Test	106
Table 4.22	Communalities	107
Table 4.23	KMO and Bartlett's Test	108
Table 4.24	Communalities	109
Table 4.25	KMO and Bartlett's Test of Sphericity	109
Table 4.26	Communalities	111

LIST OF FIGURES

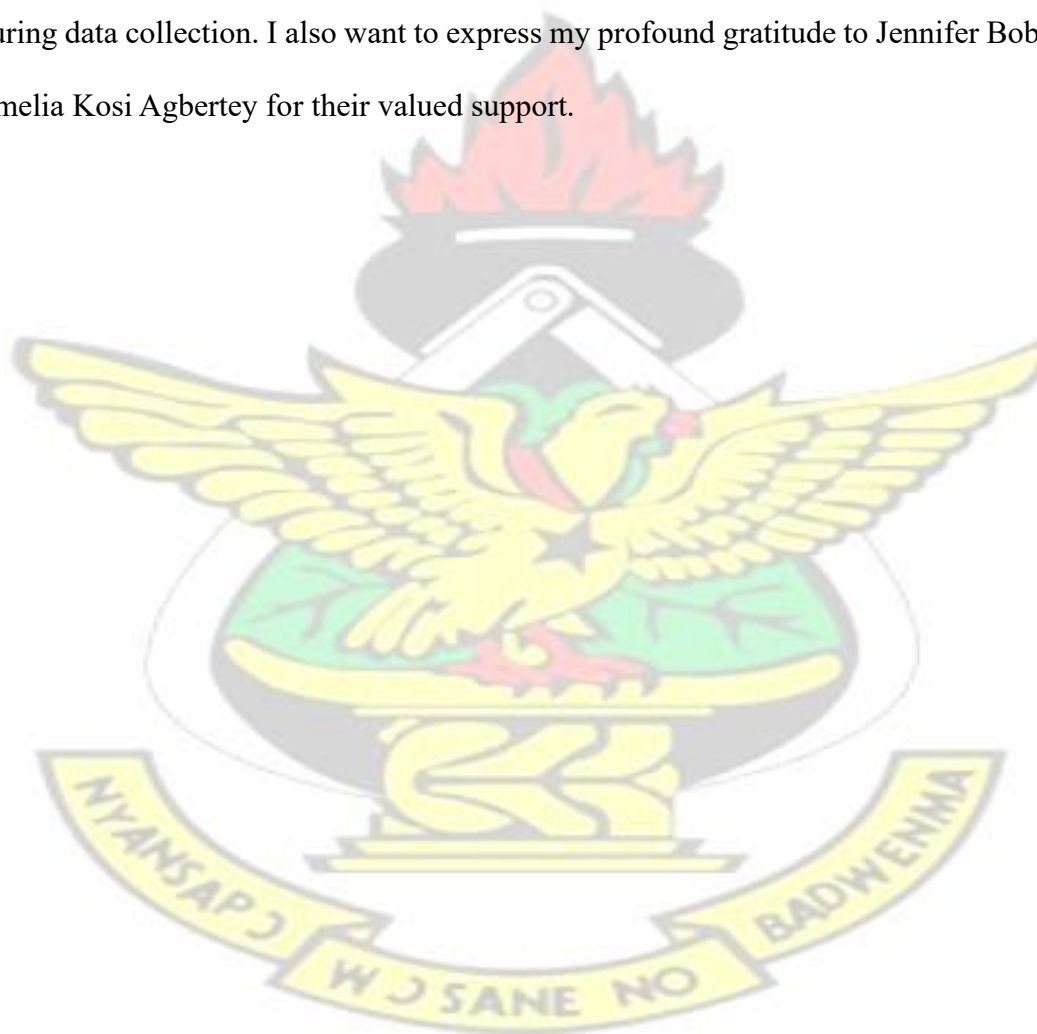
Figure 2.1	Conceptual framework for evaluating the influence of the organizational culture and structure on TQM implementation.	51
Figure 3.1	Research process	53
Figure 3.2	Research “onion model” sources: Saunder et al., (2009)	56
Figure 3.3	Analytical tools used for analyzing data from the survey	76
Figure 4.1	Evaluative Hypothesized Model	98
Figure 4.2	Evaluative Model	112

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LIST OF ABBREVIATIONS

ANOVA	-	Analysis of Variance
BM	-	Benchmarking
CC	-	Contextual Challenges
CFA	-	Confirmatory Factor Analysis
CFI	-	Comparative FIT Index
CI	-	Continuous Improvement
DOC	-	Definition of Organizational Culture
DOS	-	Definition of Organizational Structure
EI	-	Employee Involvement
EQS	-	Equation Software
ET	-	Effective Teamwork
FC	-	Focus on Customer
GES	-	Ghana Education Service
GFI	-	Goodness of Fit Index
HRC	-	Structural Challenges
IDV	-	Individualism vs. Collectivism
IM	-	Importance Index
KMO	-	Kaizer- Meyer- Olkin
LTO	-	Long term vs. Short term
MAF	-	Masculinity vs. Femininity
MANOVA	-	Multivariate Analysis of Variance
ML	-	Management Leadership
MOE	-	Ministry of Education
OCAI	-	Organizational Culture Assessment Instrument
OCV	-	Organizational Culture Variables

OSV	- Organizational Structure Variables
PC	- Procedural Challenges
PCA	- Principal Component Analysis
PDI	- Power Distance Index
RMSEA	- Root Mean Square Appropriation
RQ	- Responsibility of Quality at source
SC	- Strategic Challenges
SEM	- Structural Equation Modeling
SPSS	- Statistical Package for Social Sciences
SRMR	- Standard Root Mean Square Residual
STC	- Structural Challenges
TQM	- Total Quality Management
UAI	- Uncertainty Avoidance Index



CHAPTER ONE

INTRODUCTION

1.1 Background

In today's worldwide opposition and liberalization, quality has become one of the significant factors for achieving viable advantage. A good manufactured good and service enables an organization to add and maintain customers. Customers become discontent when they are offered poor quality products or services from an organization. Organizations trying to gain viable advantage over their rivals realized the need to perk up excellence goods and services.

Although many organizations desire to use TQM to get better produce and services, some organizations find it difficult implementing this programme successfully. This failure cannot be attributed to the total quality management idea but lack of success to compensate fitting concern to the cultural and structural factors that control total quality management implementation. According to Talib et al. (2011) Total Quality management require attracting position constantly and becoming a way of existence in various firms, therefore, total quality management cannot turn out to be a way of living by night or instantly. Time is the most significant feature in order to bring into line the appropriate total quality management philosophy and concept as well as tools, technique and system into organization's culture (Goetschs and Davis, 2010).

Again, confirmation about the influence of total quality management on business routine is also based on broad diversity of cause which may possibly be different crosswise studies and sometimes be conflicting particularly concerning monetary feat, which is considered in terms of returns on assets or returns on investment. A number of studies have established an affirmative impact on the latter (Easton and

Jarrel, 1998; Hendricks and Singhal, 2003a,) while additional studies reported the depressing occurrence of Total Quality Management on the measure (Chapman et al 1997, Powell, 1995, York and Miree, 2004).

The diverse procedural and theoretical approaches used by researchers may possibly have led to contradictory outcome, however, in reaction to this contentious proof, a new body of research is probing a reliant move toward the total quality management performance connection. This move assumed that the impact of Total Quality Management on business outcome are mediated by both non-controllable environmental factors such as marketplace competitiveness, uncertainties or complexities (Fuate, 2003; Chong and Rundus, 2004) and by in-house causes which comprise the duration of which total quality management has been executed.

To obtain sound evidence of the influence of total quality management on performance, different context should be of priority as a means of addressing the potential moderators of this link. The most multifaceted actions that any organization could engage itself is total quality management. It requires implementing an innovative way of running business and a new effective culture which does not only influence the complete firm course of action and all employees but called for allotment of important organizational assets. Execution of total quality management tools and practices enabled organizations to decrease expenditure, add to the output of human and physical resources and perk up the quality of their goods (Sila, 2007).

Total Quality Management (TQM) system extended superiority enhancement methods and procedures to all departments and hierarchical levels within an organization. These body of methods and techniques or decision-making practices emerged from the early investigations of quality gurus such as Deming, Taguchi and Juran and their most

important aim was to improved customers anticipation through improvement in the superiority of goods and processes.

Wilkinson (1992) projected a difference involving “soft” and “hard” Total Quality Management (TQM) practices .The “soft” side of Total Quality Management is basically concerned with creating consumer alertness in an organization emphasizing, management ,employee participation and loyalty. Total Quality Management “hard” practices involves manufacture techniques as well as arithmetical procedure , control, value purpose exploitation ,design processes and just-in-time inventory control. Total quality management practices are faultily immutable and can be considered a possible source of viable advantage (Douglas and Judge, 2001; Powell 1995)

1.2 Statement of Problem

Insufficient work on determination of the organizational culture and structure variables that manipulate total quality management implementation makes it difficult for organizations to realize the full benefits of total quality management (Noronha, 2002). Inappropriate organizational culture presents negative communal standards and beliefs with associate organizational structure which served as a barrier to any new innovative programme (Hofstede, 1994). Further cross-culture study seeks to enlighten the influence of organizational culture and structures were carried out in other jurisdiction, not Ghana, (Ali Mosadegh Rad (2004). Lack of the use of a replica to scrutinize relations among appropriate variables and TQM, makes it difficult for organizations to successfully implement total quality management. Gaining this competitive advantage cannot be well harvested without thriving accomplishment of total quality management; therefore, it is very essential to understand limitation factors that might impede successful TQM implementation.

1.3 Aim

The aim of the study was to determine the influence of organizational culture and structural dimensions on total quality management implementation.

1.4 Objectives

Attempting to achieve the above mentioned aim of the study, the following specific objectives were outlined;

1. To determine the key barriers to total quality management implementation
2. To identify cultural and structural variables that influence total quality management implementation.
3. To assess the extent to which the organizational culture and structure variables contribute to the successful implementation of total quality management implementation.
4. To develop a model for evaluating the influence of the organizational culture and structural variables on total quality management implementation.

1.5 Relevance of Study

Results obtained from this research will assist future efforts towards total quality management implementation. This study will serve as a source of reference material for future researchers. It will equip future researchers to understand how cultural and structural variables impede on the success of TQM implementation. Reduction of cost and waste within organizations that house inventory by paying for storage, management and tracking of inventory will be achieved. Since the cost of having inventory is built into the price of the product. Implementation of total quality management programme reduces the amount of inventories that cost the organization and occupy space. Ensuring that there is a systematic approach (use of JIT) to of

keeping inventories at acceptable levels without incurring waste. This study will help organizations achieve the “Kaiser”’s principle” of continuous improvement of quality product and services.

1.6 Limitation of the Study

Expected time for the circulation and collection of the data with the respondents was heartbreaking, since agreed time for the return of the data bedeviled consistent postponement. Financial constraints on transportation to the various Districts for the distribution and collection of the data including the travelling risk cannot be overemphasized. The refusal of some potential respondents to accept the questionnaire for answering on the ground of no time was a worry.

1.7 Scope of the Research

The research is restricted to the management of the four (4) Education Offices, namely; Kumasi Metropolitan Education Office, Bekwai Municipal Education Office, Bosomtwe Education Office and Ejisu Municipal Education Office. The researcher’s attention is on the influence of the organizational culture and structure on total quality management implementation. Little research work is done in services industry for as much as total quality management; organizational culture and structure are concerned. Total quality management can improve procurement practices ensuring value for money, when it is successfully implemented without the influence of the organizational culture and structure. Hence the reason to focus on the services industry.

1.8 Organization of the Study

The first chapter of the research contains the introduction of the research. Sections within this chapter include the aim and objectives of the research, setback declaration; reason of the study, research questions as well as range of the study. The second chapter consists of

the review of the relevant literature. Hofstede's theory on the cultural and structural values and a model presenting a relationship among the success of total quality management execution, organizational culture, structure and national culture, national culture influence on the TQM implementation, four –steps proactive approach to TQM implementation and potential benefits of cultural differences are some of the components of the literature review. The third chapter describes the methodology used to carry out the research. The sample sizes, research instrument, tools for data analysis and research design are discussed vividly. Chapter four of the research contains data collected and its analysis. Chapter five contains conclusion and recommendations; this section presents the major result, conclusion and recommendations which presents in depth knowledge of cultural and structural variables influencing TQM implementation.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to Hofstede (2005), an organizational culture can be defined as the communal training of the mentality that separates the associates of one organization from others. The training of the mind of the members of the organization make it intricate for accommodating any innovative execution programmes which could be valuable to the organization, such as total quality management.

Organizational culture is made up of collective ideals and values of its associates, which show in the trimmings essential to the organization and the procedure adopted to obtain them (Hofstede, 1994). One of such procedures „is the organizational structure which established the worth rudiments selections preferred by the organization (Quinn, 1988; Zammuto & O'Connor, 1992).

Quinn's (1988) opposing value replica establishes how dissimilar dimension orientations of organizational culture control structure. An aspect of the assessment set-ups that is connected to formation is the control –flexibility values (Quinn, 1988; Zammuto & Krakower, 1991).

Control- Oriented assessment set-ups try to combine administrative power by centralizing decision-making in management retention and diminishing worker's judgment. Thus domino effect in extremely mechanistic formation (Anderson et al., 2006). Within such organizations, coordinating and issues - resolving take place at the extreme levels of the chain of command. Workers seem implausible to be on familiar terms with issues as they happen owing to their insufficient consideration in general

procedure. Though when workers identify the problem they do not have the influence to put them accurately exclusive of top management endorsement (Liu et al., 2009).

Contrary to organization's by means of control-oriented culture and mechanistic formation, those with flexibility –oriented principles set-ups try to dispense decision –making. Issues are determined on the spot at whenever they crop up. Subunits serve as the rudiments to work flow and procedure as an alternative to task. This occurs in an extremely organic structure (Anderson et al., 2006). Employees in such organizations are multi- skilled as the range of responsibilities carried out and the intricacy of their tasks. Assessment of making decision is accorded to workers who are educated to scrutinize troubles and find solutions. Bringing together strategies and tactics crosswise subunits includes task forces and cross-functional teams decreasing dependence on perpendicular power mechanisms and increases the flexibility and velocity of synchronization within the organization (Dean & Bowen, 1994).

The above statements heightened that the organizational culture and structure could hamper total quality management execution despite the excellent system and the benefits the concepts of the total quality management could bring to the organization, the thematic areas to be measured in the literature review to help in addressing the aim of this study include the determination of the influence of organizational culture and structure on total quality management execution and the magnitude on national culture.

2.2 Organizational Culture

Organizational culture involves standards and behaviors that add to the exceptional societal and material environment of organizations.

Needle, (2004) affirms that governmental customs stand for the communal ideology, attitude and also ideology of governmental members includes manufactured goods, marketplace, expertise and plan, types of staff, organization styles and nationwide way of life.

Culture encompasses the organization's dream, standards, norms, systems, signs, speech, assumptions, attitude and behavior. Ravasi and Schultz (2006) confirm that organizational culture is a combination of communal assumptions that guides occurrences within an organization through significant and appropriate conduct for a variety of events. Certainly, it is a pattern of their collective behavior and assumptions that are taught to new organizational members as a way of perceiving and, even, thinking and feeling. Hence, organizational culture influences the procedures, populace and associates interrelate with one another with consumers and other clients.

Thus in accumulation, organizational culture possibly influence to a large extent how human resources are identified within an organization. Schein, (1992), Deal and Kennedy (2000), and Kotter and Heskett (1992) progress the ideology and perfected it that organizations have contradictory cultures and subculture. They further proposed that although an organization may possibly possessed culture of their own, in bigger organizations there are occasionally contemporaneous or inconsistent subcultures since each culture is connected to a diverse administration players. Within commerce, expressions like commercial culture and organizational culture at times referred to related concept. Organizational culture is viewed as changeable, when it considers the viewpoint that traditions are somewhat that which characterizes an organization, therefore, can be controlled and misrepresented according to management and members.

Culture is fundamental and special experiences triggering diversity of perspective. The organizational message perspectives on culture sees culture in three diverse means; firstly, as traditional values, which views culture from side to side objective things such as stories, rituals and signs. Secondly, as interpretive, views culture through a system of communal meanings, that is organizational members giving out prejudiced meanings According to Hofstede (1991) Organizational culture represent significance and conducts which contributes to the exceptional societal and mental circumstances of an organization. Organizational culture consists of an organization's outlook, experiences, way of life and principles which embrace it collectively, which is articulated and shown self –reflection, internal- mechanism, relations with external humankind. Found on the foundation of collective attitudes, thoughts, and traditions, written and unrecorded regulations that have been structured eventually and are well thought-out valid.

Robbins and Coulter (2005) shared the same ideal with Hofstede when they describe organizational culture as the common values, beliefs or perceptions held by employees in an organization or organizational component. This is because organizational culture reflects the values, beliefs, and behavioral norms that are used by workers in an organization to offer importance to the situations that they come across. It can influence the attitudes and behaviors of the staff.

Denison, (1996), defined organizational culture as manner for which organizations carry out tasks. Culture is constant, recognizable picture of conduct within organizations. Aristotle said, "We are what we constantly do." His scrutiny high ranked recurring conduct or practice as the nucleus of culture and not placing much significance on what community experience, consider or suppose. It also considers our awareness on what triggers and form conduct in organizations, and so places interest

on significant inquiry: They are triggering forces combines with structure, procedures and rewards culture or is culture basically results of conduct?

Watkins and Watkins (2013), defined culture as manufactured goods of compensation. Culture is strongly formed through rewards. Significant forecaster of what people are determined to perform what they are motivated to perform. Determined through motivation, we indicate here the complete set of achievements: financial reward, non-financial rewards such as rank, acknowledgment and improvement, and sanctions to which member of the organizations are subject to. However, where does motivation come from? Considering preceding explanation, there are possible chicken –and-egg issues. Were the mental- picture of conduct the result of motivation? Or is it that motivation been formed in basic ways by attitude and standards that emphasize the culture? Watkins and Watkins (2013), defined culture as a “procedure of intelligence building in organizations”. Intelligence – building has been explained as a mutual method of establishing common alertness and appreciative out of diverse personal stands and diverse benefit.”

Without doubt, there was the explanation of organizational culture further than mental picture of conduct keen on the territory of communal-held values and denotation of what it is. It was affirmed that fundamental reason of culture is to assist become conversant with its member to actualize in a manner that offer a foundation for position of reason and common accomplishment.

Denison et al. (2000), explain organizational culture as the “summation of standards and routine activities that provide attachment to amalgamate the members of the organization.” Culture is a transporter of denotation. Cultures do not only offer a common outlook of “what is” as well as “why is.” In this perspective, culture signifies

“the narrative” within which organization members are implanted, and principles and routine activities that strengthen those narratives. Consideration on the significance of cryptogram and the call for comprehends them, together with peculiar languages used in the organizations with the reason of appreciating culture.

Again, Adler (2008), defined organizational culture as “Civilization in the work place.” It implies that culture is a communal structure. Here the focal point is on the responsibility of culture in improving and reengineering “right” thoughts and conducts, and punishing “wrong” thoughts and conducts. That is, how have the accessible norms improved the endurance of an organization in the precedent?, It is very essential to note that means in this revolving thoughts is the thought that recognized cultures can develop into barriers to sustained survival.

Watkins and Watkins (2013), definition was incomparable when he defined organizational culture as “The organization’s untouchable system.” Culture signifies fortification which is borne out of situational pressures. It disallowed “wrong thinking” and “wrong people” from being part of the organization in the initial position. The organizational culture was likened to the human immune system which function was preventing viruses and bacteria from captivating and destroying the body.

In contrast, Martin (2002), defined organizational culture as culture formed by the major culture of the humanity, although with greater importance on particular parts of it.” It is an undeniable fact that an organizational culture is formed by and extended to other cultures, particularly, the wider traditions of the organization in which it operates. This scrutiny recognizes the barriers that worldwide organizations countenance in forming and stabilizing an integrated culture when operating in the perspective of several national, regional and local cultures. How should management smack the

correct equilibrium among promoting “one culture” in the organization, whereas permitting influences of local culture?

2.2.1 Types of Organizational Culture

A number of procedures were carried out to categorize organizational culture. Even though, at present there is no one type of organizational culture and structure. They differ extensively from one organization to the other, Common ideals typically exist and are the fundamentals reasons a number of researchers have developed models to give details varied individual organizational cultures.

Hofstede (1980) attempted discovering the aspect of culture that influences business behavior. He recognized the larger and large cultural community that control the procedures of organizations and approved four scope of culture which afterwards became five and then six , explaining the types of organizational culture;

1. Power distance (Hofstede, 2001). Diverse societies discover diverse solutions on social inequality. Even though unseen, within organizations distribution of power unequally by the top-management and employees relationship is practical. This mirrors how inequality issues are resolved in society. Power distance certainly reduces theory. Employees“ heart-desire is to decrease the level of power distance among ranks and files and top-managements whereas their top-management heart-desire is to enlarge or sustain it. Between these two lie the society whose expectation is to share the power to certain degree of variation. When there is high power distance it indicates that there are certain individualism who wield large amount of authority than others. In contrast, a low power distance demonstrates that there should be equal power distribution.

2. Uncertainty avoidance; This is about how individuals can withstand future uncertainties. In this modern days", society withstand the future through technology, law and religion. Nevertheless, various societies and individuals have their own ways of addressing it. It has been confirmed that organizations deal with the future knowledge, legality and customs or in both ways of rational and non-rational identifying rituals as memos and reports.
3. Individualism vs. collectivism; Societies judgment on individualism and collectivism is to be reflected by the employees in an organization context. Societies referred as collectivist exhibit touching and reliance whereas individualism exhibits equilibrium to show responsibility on members.
4. Masculine vs. femininity; The principle is to identify societies as whether it is principally male or female dominated in accordance with cultural values and power relations to gender roles.
5. Long vs. Short –Term Orientation; This brings about the connections and the relationship between the past with the current and the future actions and barriers. On the types of organizational culture O" Reilly, Chattman & Caldwell (1991) formed a replica on the rudiments of making culture memorable through values that are resistant within organization. The developed model or replica is suitable and very significant due to its dexterity to measure organizational influence on the performance as well as classifying the organizational types. The developed model has the capacity to measure the skilled persons in the organization. Where employees worth are considered in antagonism to organizational values to envision workers intention to be maintained and looking forwards to earnings. It is possible by the use of Organizational Culture Profile instrument to measure worker"s loyalty.

Denison's model (2000) on various organizational culture affirms the description of organizational culture through the universal four dimensions which are; consistency, involvement, adaptability and mission. These universal four scopes were further significantly described by another set of three-sub - dimensions;

- Consistency –central principles, agreements, harmonization and incorporation.
- Involvement – decentralization, team centered and potential expansion.
- Adaptability – Establishing change, client centered, and organizational learning and
- Mission – top-management development, and desire, targets and objectives and dream.

This model plays additional roles as explaining organizational culture in general and identified as within or outside or internal or external to stability and flexibility.

Handy (1993) popularized Harrison (1972) for connecting organizational culture to structure by recounting or establishing four types of cultures;

- Power culture: This symbolizes power in the hands of small number of people where powers are centralized. It is likened to central points of a shinning web. Regulations and less bureaucracy are the only two things needed in this type of culture. There is the possibility of taking decisions which may be deemed as swift.
- Role culture: Power is delegated in an exceptionally well structured system. Hierarchical walls are built in this types of organization where power is derived

personal or individual's positions. The presence of procedures made it possible for controlling high values. Separation of roles by specialty. Due to the consistent nature of system availability the activities of the organizations are predictable. Pictographically, is the Roman Building with the usual pillars denoting functional departments.

- Task culture: Teams are established purposely to mitigate a challenge. Authority emanates from the team as outcome of responsibility discharged based on know-how. Experts are specialists in their own areas of expertise are always few in numbers.
- Person culture: This type of culture is created when each individuals values each self as relevant to the organization. It can be so complicated for the organization's operations due to each group of individuals like-minded set apart to achieve the organizational goals. However, it can be perfect when there is partnership where each group members of each firms contributes ideals bringing particular expertise to fruition.

Lastly, Cameron and Quinn, (2007) in their attempt to develop Organizational Culture Assessment Instrument classified organizational types into four;

- The Clan Culture: It has friendly working surroundings, representing a large family. Those in the helms of affairs serve as Counselors, and fathers connecting the organization with extreme dedication and belief. Accomplishment is recognized through the laid down structures providing solution to the needs of the customers. Working together as a team, contributions and agreement are encouraged within the organization. Training

and human resource development is significant, hence, connects fellow personnel by morality. Team builders, Counselors and facilitators are the leader types. Faithfulness, development and communication are the value drivers training, human resources development are the theory efficacy.

- The Adhocracy Culture: It has innovative and vigorous surroundings for workers. Management is seen as innovators and are ever ready for taking risk. Innovation and experimentation are identified as a bonding force within the organization. Accomplishment is simply by accessibility of new product or service. An ingenuity and liberty are encouraged. Entrepreneurship, visionary and innovators are the leader types; however, dexterity, efficiency, change and ground breaking are identified as theory of efficacy.
- The Market Culture: Critical goals are sets for the members of the organization to work towards, hence, can be considered to be a result based organizations. Leaders are seen as hard drivers, producers and competitive. They are described as strong and desiring a towering expectations. A captivating goal always keeps the organization.
- The Hierarchy Culture: It has an environment described as formal and structured. Harmonization based on efficiency enthused leaders of the organization. Centrally, running the organization consistently with much effort is assured. Constancy, results orientations are the permanent goals matched with competency and duty implementation. Success is determined by truthful delivery, planning and value for money. Counselors, organizers, and coordinators are the leaders types. Whereas, value drivers are efficiency and control and uniformity.

2.2.2 Functions of the Organizational Culture

Just like any other social mechanisms, organizational culture carries certain significant functions which are identified as unintentional and intended just, like organizational structure, it is difficult to monitor, compute and map culture. Some circumstances permit culture to sustain and reinforce structure whiles in others it disagrees with structure. There are certain circumstances that reduce diverse behavioral as a functional substitutes acted by culture. The following are identified as the main frequently noted functions of the organizational culture.

- Behavioral control: Most at times, managing the diverse behavior of members are required by social organizational systems. It does not matters the kind of the organization it may be, there is the need to border certain behaviors whiles influencing the others. Organizations set rules procedures and standards for either compliance or non-compliance. This serves as a formal system of the organization. Nevertheless, one often finds a towering degree of conduct regularity which is the individual's behavioral consistency devoid of a strong formal system. Notwithstanding, it is the cultural groups and organizations that provides informal trends (Peterson, 2004).
- Encourages stability: Return and conversion exists in a good number of social systems. Notwithstanding modifications in members and management, some organizations keep up certain uniqueness. There are also a number of organizations that also maintain some uniqueness; hence, in an attempt at resolving problems, the same trend is followed whereas behaviors are directed towards the same goals and reasons of existence. What generation upon generations approved is termed as organizational culture. Individuals repeatedly, look for to describe their social recognition. Occasionally,

recognitions are denoted by roles or profession, in the process members of the organization are able to define themselves through the organizations they belong to, considering organizations as the origin of uniqueness, people are changed on values and achievements of their organizations, (Peterson, 2004).

- Liabilities of culture: looking at the function of the organizational culture, suggestive and constructive terms of analyzing the functions one can presume that a tough culture would certainly be directed towards the organizations achievement. Nevertheless, a tough culture sometimes hampers the measures taken by managers in addressing certain critical issues. It occurs in unpredictable and anticipated way. It is prudent for us to keep information that even though if culturally control mechanism direct behavior; it will not be directed in a way constant with the mission or leadership goals of the organization. Typically, workers setting production standard procedures and enforcing it on group members. Usually, these production standard procedures set by the workers are limited and at times lesser than manufacture standards preferred by management. Groups frequently put forth commanding influences on their members in an attempt to defend each other from managerial actions. (Peterson, 2004).

2.2.3 Characteristics of Organizational Culture

Dess, et al, (1997) affirm the seven characteristics of organizational culture, they are;

- Innovation (Risk Orientation): Some active and lively organizations are identified with the ability to encourage their workers to be extremely innovative in their presentations. On the contrast, there are some other organizations that place low emphasis on innovation and consequently

allow their workers to do the work the way they have been educated to do them without searching for ways to improve upon the previous.

- **Attention to Details (Precision Orientation):** In order to establish a culture that places extremely high value on accuracy, workers are provided with detailed standards to discharge their responsibilities. Nevertheless, there are some organizations that place low value on accuracy, hence, characteristically, does not keep standards. .
- **Emphasis on the Outcome (Achievement Orientation):** Organization that principally aimed at outcomes or results however, do not determine how the results are achieved encourage achievement orientation. An organization that instructs its sales force to do what on earth it takes to get sales orders has a culture that places elevated value on the outcome.
- **Emphasis on People (Fairness orientation):** The primary characteristic is to put much more importance on how decisions can influence the workers in the organization. Managing their workers with admiration and good manners is their hall mark.
- **Teamwork (Collaboration Orientation):** Organizations that position career actions about teams as an alternative of individuals put a towering value on this characteristic of the organizational culture. In an organizational context where there are positive and cordial relationships between the colleague workers and their various managers.
- **Aggressiveness (Competitive Orientations):** The organizational culture dictates whether group members are to be certain or undemanding, while in business with organizations that are opposing with the market.

Organizations with an aggressive culture places elevated value on competitiveness and outperforming the opposition at all cost.

- Stability (Rule Orientation): Rule orientation, predictability and bureaucratic organizations are known to encourage extreme value on stability. Provision of regular forecast on productivity levels in non-changing market circumstances is recognized.

2.2.4 Organizational culture change

An organization's culture is made up of moderately constant uniqueness based on extremely held morals which are durable by many organizational practices. Nevertheless, there could be a variation in an organizational culture. Culture variations are probable when there are striking setbacks such as monetary problems or when there is a change in top leadership. Again, lesser and infant organizations with feeble culture are said to be more agreeable to variation in culture. Significantly, altered culture deliberately orchestrated by executive fiat, beginning side by side, execution of plan, but, a blend means; leadership commitment to change, or when management changed. That is when management realized that the old mentality of doing things which they were previously contended with can no longer be useful to them. Subsequent to a fusion or predictability, "How things are done here" team of management executes intended procedures for culture change. Procedure mostly consists of consistent two-ways communication drawing out current predictions, restore confidence of workers to whose advantage the change would be, bringing in occasionally progressively the new direction of the organization and assiduously working to gain loyalty and assistance, should leadership omit the procedure or perform insufficient work, workers at all level certainly experience pressure, uncertainty and annoyance. Whenever a change is carried without the intention of causing fear and bitterness, nevertheless

transition may possibly be comparatively smooth, (Kotter and Heskett, 1992). Organizational culture is communal predictions, thoughts and principles accepted by the elements of the organization. Culture is portrayed in both open and hidden ways. New recruits into the organization must speedily absorb most of the cultures. Whereas old hands must still be aware of the possibility of change of culture, particularly when there is a change in leadership.

Cummings and Worley (2004), states the following six guiding principles for culture change;

- Formulate a clear strategic vision: To establish a change in culture, efficient unambiguous direction of the organizations innovative approach communal principles and behavior is desired. This direction should provide purpose and course for the desired change, (Cumming and Worley, 2004).
- Display senior -management dedication: Essentially a change in culture should be managed from the senior management or top leaderships. As readiness to change, shall be senior management imperative indicator (Cumming and Worley, 2004). The senior management ought to support the intended variation of culture by demonstrating commitment to really put into practice the intended change.
- A model culture change: At the highest degree, the demeanor of the leadership requirements to presents the kind of the desired principles and conducts ought to be achieved in the organization.
- Aligning the organization to support the change: There is the need to scan the existing system examines the existing and incoming policies and the procedures and rules which are needed to change so as to bring into line with

the preferred culture. This implies a change of responsibility system, remuneration, competitive advantage, retention of employees bringing into force the new standards propelling unambiguous message to workers.

- Select and socialize new comers and terminate deviant: A way of executing a traditions is to join it to organizational relationship. Workers can be chosen and end in provisions of their fits in the company of the new traditions (Cumming and Worley, 2004), the organization and change managers involving the preferred conduct and how it will influence and progress the organization's accomplishment .
- Develop moral and lawful compassion: Culture changes can bring about tension connecting individuals and organizational interest, which is consequent in moral and lawful troubles for implementers. This is predominantly appropriate for changes in worker reliability, direction, reasonable conduct and worker safety (Cummings and Worley, 2004). Indeed, agreeably, significant as parts of the change procedures, to involve an assessment processes, carried out occasionally to check and transform the development and recognition of areas that require additional expansion.

2.2.5 Cultural Variables Influencing Behavior

- Individual behavior within a culture context is influenced by scores of variables, (Sanchez-Burks, 2000). The way in which services are offered may possibly be subjective by universal cultural norms in blend with variables exclusively to the entity(Anderson,1994; Payne, 2005).Hence, it is prudence for professionals to appreciate not only the universal uniqueness of diverse cultural entities, but also

the variable that work together to create every learner and family exceptional in that cultural throng.

The following are significantly considered variables:

- Educational level
- Languages spoken
- Number of year residence in an area and number of years knowledge at job
- Country of origin (settler vs. citizen)
- Cities vs. countryside conditions
- Personal selections within the intrapersonal real (e.g., idiosyncratic conduct)
- Socio- economic rank/ increasing class mobility
- Year attained and sexual category
- Religious values and their influence on each day existence conducts
- Neighborhood of residence and peer group
- Level of acculturation into main American living
- Generational membership (first, second, third generation)

Rosberry-McKibbin (1995), Consciousness of professionals to decide a suitable course of accomplishment is determined by the information that cultural diversity as well as similarities exists which is implied by cultural sensitivity, (RoseberryMcKinbbin, 1995). It is wise to state that associates of one cultural group hold a fixed idea about elements of an extra cultural group, the possibility for misinterpretation is huge. Hence, professionals must be ethnically receptive and understand that colossal variation exist contained by the worldwide cultural structure of every organization or groups.

In addition to the above mentioned variables, there is an individual cultural variable.

The following are the individual cultural variables:

- Manners
- Acceptable dress
- Time
- Decision making
- Space
- Food

2.2.5.1 Manners

Manners have values during interaction with one another. It is expected that a visitor to European Homes goes with gifts. Presenting flowers as a gift keep away from presents of Red Roses in France, Germany, Japan and Belgium.

In Saudi Arabia, You will learn that the junior prince is unspoken when a senior enters.

2.2.5.2 Dress which is acceptable:

Just as manners have values in communication so as dress. Dressing with good dress sound clear.

2.2.5.3 Time:

Time is an important factor in any serious organization that wants to accomplish her goals. How workers observe time is an imperative factor to the achievement of the organization. Critical illustration in time precision of the Germans. It is not common to wait for an appointment in Germany. Nevertheless, in Latin American cultures you wait for an hour your host is not showing any respect, reflecting a diverse concept of time; arriving late is social acknowledged custom in Ghana.

2.2.5.4 Space

Can you allow your client to get close to you? When a stranger is getting closer than 18inh, the Americans feel uncomfortable. Body language depends on communication in which culture you are.

2.2.5.5 Decision-making:

Transaction businesses with other organizations and countries demands endurance in inter cultural communication. The Americans are described as typecast who usually asked for rapid decisions, giving more consideration to communication, Americans are being faster “we wish to get the point quick”. That is different in Japan; decisions time is held back as group agreement geared in the direction of decision. Here much is exhausted on reaching an answer. Prompting patience and understanding of the decision process which adds to success in dealing with a foreign environment.

Furthermore, the table below presents organizational cultural variables to be considered to succeed in implementing any policy of continuous improvement.

Table 2.1 Organizational cultural variables

Category of variable	Specific Indicators
Organizational cultural variables	Language, Religion, Channel of communication, Dress sense and clothes fashion, Product distribution system, Management style, Delivery speed and time, Mode of finance, Level of education and literacy, Internal and external customer expectations, Employment regulations, Gender sensitivity, Employees involvement, Decisionmaking rules, External customers involvement, Norms and customs, Social responsibility theory acceptance, Acceptance of change, and separation of powers.

Source (Fieldwork, 2016)

2.3 Total Quality Management

Total quality management is a philosophy which aims at connecting every element of the organization beginning from the top management to the subordinates to get better quality of produce and services. Arditi and Gunaydin (1997) clarify that total quality management cut-across every area of the organization ensuring that quality becomes a strategic objective. Focus on consumer contentment by continuous improvement is seen as a way of life for organizations that put into practice total quality management.

2.3.1 Barriers to TQM Implementation

Johnson and Kleiner (2013) argued that the major challenges are deficient in benchmarking and Employees opposing to modification of system. An organizational instrument that usually helps to recognize the strength and limitations of the organization is benchmarking, in contrast with the best organization in the industry. Employees opposing to change may possibly be mitigated by involving the employees in initial planning of execution phase of the total quality management. It was established that inadequate resources and materials were an impediment to the execution of the total quality management. Another author, Mosadegh Rad (2014), addresses the barriers to operations of total quality management in more multifaceted manner, in the wisdom that his study was investigated in 32 countries of which 18 studies were carried out in developed and 14 in developing countries. It affirms that the study carried out ever since 1990s made known very soaring rates of disappointment in the discharge of the total quality management (Mosadegh Rad 2014). Schonbergers (1992), addition to other scholars confirmed better report between 20-23% performance enhancement organization after accomplishment of the total quality management whiles Burrow reported a failure in 1992 of the total quality management rate of 95% (Sebastianelli and Tamimi, 2003), whiles total quality

management was adjudged first with all the best principles for excellence development during 1993.

- Unproductive or unsuitable total quality management models; Total quality management does not make available precise hypothesis. There is less conformity on what is and its necessary characteristics are; fundamentally, a total quality management model is made up of dual mechanism; Value and philosophy (e.g. the top leadership allegation, client centered, worker participation, cooperation etc.), and strategies and tools (statistical control tools process). Consequently, diverse replica of total quality management may possibly lead to dissimilar outcome.
- Ineffective or inappropriate procedure for the operation of the total quality management: Many procedures for the total quality management. Many of the disappointment are accredited to total quality management operation procedures. Affirmed by Claver et al., (2003); Hansson and Klefsjo,(2003); Seatharaman et al. (2006). Even though several total quality management scholars made several impacts towards the growth of the total quality management. They are presented comparatively with few practical implementation procedures for total quality management implementation standards. Cooney and Uhlenberg (1990) recognized that the total quality management presents a vision of an organizational change. Correspondingly, Zairi, Letza and Oakland (1995) wrap up that total quality management leaders being distinct, nevertheless, suggest no typical methods for establishing the principles and values of the total quality management in an organization.
- The erroneous atmosphere for the execution of the total quality management; It demands a setting of effective support to implement the total quality

management. In this situation, the author categorized the challenges that are impediment to the execution of total quality management in five classifications:

1. Strategic: This presents impediments that are imperative challenges for the implementation of total quality management and have the maximum unconstructive influence on its achievement. The challenges are largely connected to the leadership of the organization.
2. Structural: This is connected to the arrangement, settings and substantial resources essential to execute the total quality management.
3. Human resources: These are impediments which are connected to human factor, as well as deficient in workers appointment and confrontation to change in total quality management.
4. Contextual: Are those challenges that take place when there are developed circumstance and a culture suitable to accomplish the maximum probable of the practice of the total quality management.
5. Procedural: Largely are brought about by the complication of the procedurals, deficiency in consumer centred, the absence of teaming-up with the suppliers, limitation on official procedure, lack of appraisal and self assessment.

Table 2.2 below presents the categories of challenges and its corresponding specific factors (indicators).

Table 2.2 The five (5) main challenges of implementing TQM

Categories of challenge	Specific challenges of each category
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Strategic challenges	-Inappropriate TQM program, Challenges to adoption of the total quality management, impractical anticipation, Difficult management, Poor management, Lack of top management support, Poor involvement of managers, Strength of middle management, Inadequate planning, Lack of consistency of objectives, Lack of long term vision, Lack of vision of vision and clear direction, Conflicting objectives and directions, Lack of priority improving the quality, Previous failure in terms of initiation of challenges, Lack of government support, Political uncertain.
Structural challenges	Inappropriate organizational structure, Lack of organizational flexibility, Lack of physical resources, Lack of information system, Lack of financial support, Lack of time.
Human resources challenges	Lack of interest of workers, lack of commitment and participation of workers, workers unwilling to change, A difficult human resources management, Poor designation at all hierarchical levels, Fewer employees work task and increasingly higher, Lack of training and education of employees, Lack of motivation and satisfaction of workers, Lack of acknowledgment and rewarding of success.
Contextual challenges	Inadequate organizational culture, Difficulties in changing organizational culture, Lack of guidance and ineffective, Poor coordination, Lack of confidence of employees in management, Cultural issues resolution, Lack of innovation, Political behavior the diversity of the workforce, Barriers mentality.
Procedural challenges	Lack of focus, Lack of an adequate process management, Lack of attentiveness on the client, Lack of involvement of suppliers, Bureaucracy, Lack of evaluation, The change agent or counsel incompetence in implementing quality, Ineffective action and Efforts to improving quality are time consuming.

Fieldwork (2016)

It can be seen that strategic challenges are the major types of challenges that inhibits the successful execution of total quality management system. Also, the Human resources challenges have a very hefty influence on the success of the total quality management completion. It is confirmed that among the strategic - echelon challenges and the limitations connected to human resources management are key indicators in implementing changes essential to execution of the total quality management philosophy.

2.4 Organizational Structure

It is an arrangement used to describe a chain of command in an organization. It recognized each work, functions and reporting place in the organization.

2.4.1 Evolution of Organizational Structure:

Organizational structures formed from the prehistoric era of hunters and collectors in ancestral organizational throughout extremely majestic and religious authority structures to manufacturing structures and nowadays are post –manufacturing structures.

The early theorist of organizational structure, Taylor, Fayol, and Weber “saw the significance of structure for efficiency and competence and implicit devoid of the least assertion that no matter what structure was required, citizens could trend consequently. In the early 1930s, where there was the rebellion that came to be recognized as Human Relation Hypothesis, at hand was still the recognition for structure as an artifact, but to a certain extent a preserve of the foundation of a diverse kind of structure, single in which the requirements, information and suggestion of workers might be given better attention.” nevertheless, a diverse observations arose in the 1960s, symptomatic of the organizational structure is “an outwardly caused occurrence, a result instead an manufactured article.”

2.4.2 Definition of Organizational Structure

The classically arrangement of outline of power, interactions, privileges and responsibilities of an Organizational structure assesses how the roles, control and roles are allocated, proscribed and harmonized, and how sequence flows between dissimilar degree of management. Meehan (2013).The objectives and the tactic of an organization determined the structure applicable to the organization. Where

decisionmaking are carried out by the senior management demonstrating a centralized structure where clinical control higher than that of departments and divisions are executed. Whereas decentralization empowers employees to exercise their discretions in a way of dispersing authority among employees.

2.4.3 Types of Organizational Structure

Morgan (2014) demographics of employees are changing and so are employee expectations, values, attitudes, and styles of working below are listed types of Organizational Structure;

- The Traditional Hierarchy:

There are a lot of challenges with this model. Communication normally flows from the apex to the base which means innovation stagnates, appointment suffers, and teamwork is virtually non-existent. This type of situation is riddled with bureaucracy and is enormously sluggish. This is why the hierarchy is perhaps the major exposure for any organization still employing it. It opens up the doors for oppositions and new incumbents to rapidly take over. There is no focal point for workers awareness in this type of structure and as organizations around the world are exploring alternate organizational models.

- Flatter organizations:

In contrast to the traditional hierarchy which classically sees one way communication and all and sundry at the top with all the information and power; a “flatter” structure seeks to open up the lines of communication and teamwork while doing away with layers within the organization. It shows less layers and arrows referring to both ways. For larger organizations this is the most convenient, scalable and reasonable approach to deploy across a whole organization. It is true, some form of hierarchy still does survive within this

model but that is not essentially a bad thing in this case. In flatter organizations, there is still a strong focal point on communication and teamwork, improving the employee know-how, demanding the status quo around conventional management models, on the other hand, instead of entirely reinventing the whole organization and introducing a radical new structure and approach to work, it achieves comparable result in far shorter term and with much less effort and resource allotment.

- Flat organization:

Different from any other corporate structure that exists; flat organizations are precisely that, flat, meaning there are usually no job titles, seniority, managers, or executive. All and sundry is seen as equal. Flat organizations are also time after time called or referred to as self –managed organizations. If an employee wants to start their own project then they are responsible for securing funding and building their team. For some this sounds like a dream for others, their worst nightmare. This model is not practical or scalable for larger organizations when we think about the future of work. Smaller and some medium size companies might be able to operate in this type of an environment but when one get to organizations with thousands of employees then it becomes difficult.

- Flatarchies:

Flanked by hierarchies and flat organizations lie flatarchies. These types of organizations are a little bit of both structures. They can be extra hierarchical and then have impromptu teams for flat structures or they can have flat structures and form impromptu teams that are more structured in nature.

Organizations with this type of structure are very active in nature and can be thought of a bit more like an amoeba without a constant structure. The ordinary

type of examples with this structure is an organization with an internal incubator or innovation program. In this type of setting the organization operates within an accessible structure but usually permits workers to put forward and then run with new ideas. Thoughts the organization permits employees to move ahead with usually result in separate teams being created.

Lockheed Martin, the aerospace organization was famous for launching their skunk works project which was responsible for the design of the SR-71 spy plane. Google, 3M, Adobe, LinkedIn, and many other organizations have internal innovation incubators where employees can try to get their ideas funded and then developed into new products or services. However to do this, new teams must be formed which often times must operate with far more autonomy, more resources, and much less bureaucracy.

This type of a structure can operate within any type of organization, big or small. Nevertheless, flatarchy is to be considered as more provisional structure which creates remote pockets of new structures when required, such as in case of emerging new product or service. This is starting to turn out to be more widespread as organizations around the world spend more time and money into creating innovation programs that seem further than a set of R&D department. It is not hard to picture having a stable structure as a “flatter organization” which then gives workers the opportunity to make extraordinary teams when needed. This model is quite powerful yet also more disruptive than the other structures explored. The main benefit is the focal point on innovation which is fairly a strong competitive advantage in the future of work.

□ Holacracy organization:

Brian J. Robertson was the founder of this Holacracy organization. The basic goal with this structure is to permit for dispersed decision making while giving all and sundry the chance to labor on what they do most excellent. There is still some form of structure and hierarchy but it is not based on people as much as it is based on circle or what most people would think of as departments. Information is openly accessible and issues are processed within the organization during special and ongoing meetings. Within Holacracy organization, there are ways to achieve some of the desired effects without having to go through such a radical change. It is sort of trying to improve the way a car runs by taking out the entire engine and rebuilding it instead of working on some of the core areas that might really drive performance. Sometimes ripping out the engine and starting from scratch is not always as an option, especially as the car is moving, like most organizations always are. For example decentralized decision making is something that does not necessarily require a whole new organizational structure to thrive in. It can just as easily happen in a “flatter structure” that can leverage some of its existing infrastructure. Holacracy can be more viable for smaller or medium size organizations or perhaps larger organizations that have started off with holacracy as their base operating model.

Contrary to the above named organizational structure types; Mintzberg (2009) has also developed another different five types of organizational structure:

Mintzberg (2009) emphasized that centralized and decentralized decisionmaking are a key determinant of organizational type. Mintzberg, 2009 is a well-known management theorist who developed a record of five

fundamental organizational types. He recognized the variety of organizations as outcome of their blend of strategy, environmental forces and the organizational structure. The five organizational types are: Entrepreneurial, Machine, Professional, Divisional and Innovative.

- Entrepreneurial: An entrepreneurial organization has a loose organizational structure and is typically driven by entrepreneurial-minded or creative types of leaders. Start-up organizations managed by their founders commonly exemplify this organizational type. Forward-thinking ideals, energy and enthusiasm are common strengths. Limited structure, poor task discipline, inefficiency and controlling management are potential drawbacks or risks if emphasis is not placed on defined work processes.
- Machine: Mintzberg (2009) labeled a highly bureaucratic organization as being like a “machine”. Government agencies and other types of large, set-in-their ways Corporation epitomize this style. While structure, consistency and longevity are strengths, limited openness to new perspectives and inefficiencies resulting from bureaucratic processes are common deficiencies.
- Professional: The professional organization type has a similar level of bureaucracy to the machine type. However, it is characterized by a high degree of professional, competent knowledge workers who drive the economic engine. This technically skilled usually have specialized skills and autonomy in their works, making for more decentralized decision-making than is prevalent in the machine type.
- Divisional: A divisional structure is most common in large corporations with multiple business units and product lines. In some cases, organizations divide their businesses and products into divisions to promote specific management

of each division. Centralized control is common in this format with divisional vice presidents overseeing all facets of work within their respective divisions.

- Innovative: An organizational type that allows for cutting-edge leadership is the innovative type. This is common in new industries or with organizations that want to become innovative leaders. Decentralized decision-making is a key trait as talent leaders are allowed to make judgments with efficiency in mind. The potential for leadership conflict and uncertainty over authority are drawback.

Additionally, there are five major organizational structures for businesses (Cheney, et al., 2004).

- Functional: Organizations that assembly positions by comparable roles go after a functional structure. The structure follows a hierarchical replica that comprises of a clearly recognized roles power and promotional pathways. Workers in each subdivision fill up duties not covered somewhere else in the organization, minimizing an overlap of everyday jobs. Work units can be categorized by resources, know-how, skills and activities. For example, your organization may take in production, money, human resources and marketing groupings.
- Divisional: The divisional structure is distinct by the grouping of departments and is peculiar to bigger organizations. The divisional structure follows a useful replica in each division. Expert departments“ assist managers maintain track of the products and actions the organization develops. Departments might differentiate among consumer service, invention and geographic location. Managers can focus resources and results on their precise departments. The

structure assist managers supervise performance extra easily than a number of other models.

- Matrix: The matrix structure combines the specialism provided by a functional structure and the focus provided by a divisional structure. Workers may be element of teams that join practical roles with divisional roles. Each worker belongs to at least two formal groupings; one is functional group, and the additional is a project, manufactured goods or program teams. Workers also account to two superiors- a functional group boss and a team boss.
- Team: Team structures systematize each function into an objective-based group. Members from each of the departments work jointly to resolve trouble and find opportunities. Workers might be concerned with product development teams or a variety task force. The team structure can help eliminate barriers connecting departments and promote successful problemsolving relationships. It can also remunerate workers and maximize decisionmaking period.
- Network: In a network structure organizations would depend on another organization to execute significant roles. For instance, an accountant possibly will be appointed, website administrator or security personnel on contractual basis. This means that the organization's operating costs are reduced because you need not hire as many staff members to absolute critical works

According to Max Weber (1948), the following are the Organizational structure types that can be observed in the modern business organization:

- Pre-bureaucratic structures: This kind of organizational structure lacks homogeneity and consistency of responsibilities. This structure is the major universal in lesser organizations and is most excellently used to resolve easy responsibilities. The structure is completely centered. The tactical leader offers

significant decisions and the major communication is whole through face-to-face interactions. It is predominantly constructive for new business as it helps the designer to manage increase and enlargement.

- Bureaucratic structures: Weber (1948) affirms the correlation that “the fully formed bureaucratic mechanism contrasts with other organizations precisely as the machine comparison with the non-mechanical process of manufacture. Accuracy, pace, unambiguity, stringent subjection, decline in resistant and substance and individual worth- were raised to the optimal end in the severely technical organization, They are improved appropriately for more multifaceted or huge level organization. Bureaucratic structures create assured level of consistency, more often than not adopting a larger structure.

The Weberian features of bureaucracy are:

- apparent defined roles and responsibilities
- A hierarchical structure
- Admiration for merit
- Given that there are large degree resolution making, power has to go by additional layer than flatter organization. Bureaucratic organization creates flexible and fixed methods, principles and influence. This structure is reluctant to adapt or change what they have been doing since the organization started. Availability of charts for every department enhances understanding of who is in helms of affairs and their roles at particular circumstances. Decision is channeled through organized procedures and limited control and power present at every point in time. Decision making is channel through the top management as well as top down

communication. Additional rules and values for the organization is required for operational procedure since close monitoring is required.

- Post-bureaucratic structure: Within an organizational literature, there are two ways by which post bureaucratic structure could be used; Firstly, generic and one much more precise. In regard for the generic view, the term is frequently used to portray a variety of thoughts formed since 1980s that particularly differentiate themselves with Weber's type ideal type bureaucracy. This possibly will involve total quality management. Nevertheless, not even one of the above mentioned left behind the central tenets of bureaucracy. Hierarchies are certainly in existence. Power is still Weber's coherent, lawful kind and the organization is still rule bound. Heckscher and Donellon (1994), in disagreement beside these lines, describes them as cleaned up, bureaucracies, instead a fundamental shift from bureaucracy.

2.4.4 Importance of Organizational Structure

- Function: Organizational structure is predominantly imperative for decision taking. The majority organizations either have a tall or flat organizational structure. Little organizations regularly use a flat organizational structure. For example, a manager can report directly to the president as a replacement for a director, and her deputy are only two levels under the president. Flat structures enable little organizations to make faster decisions, as they are repeatedly increasing rapidly with new products and require this flexibility. The Business plan, an online orientation website, says little organizations ought not to be disturbed about organizational structure, except they contain at least 15 workers. The rationale is that workers in particularly little organizations have a lot of tasks, a few of which can comprise multiple functions. For example, a

product manager also might be in-charge for marketing research and advertising.

- **Communication:** The significance of organizational structure is principally essential for communication. Organizational structure assists the allocation of power. Whilst an individual starts work, he is aware who to report to. Most organizations channel their communication all the way through department head. For example, marketing workers will talk about a variety of anomalies with their director. The director, in reaction, will talk about these anomalies with the vice president or top leaderships.
- **Evaluating worker performance:** Organizational structure is significant for appraisal of worker performance. The linear structure of practical and result organizational structures permits monitors to improve evaluation of the work of their subordinate.
- **Achieving Goals:** Organizational structure is mainly imperative in achieving target and outcome. Organizational structure allows for the sequence of control. Department heads are in control of decentralizing responsibilities and projects to subjects so the department can get together task deadlines.

Regards to importance, organizational structure encourages cooperation, where all and sundry in the department work for achieving communal targets.

- **Avoidance and Solution:** Organizational structure helps organizations to better supervise changes in the market place, together with customer wants, government regulations and new technology. Department and managers can get together to draw various areas and come out of clarification as a group.

Change can be probable in some business.

2.4.5 The Six Elements of Organizational Structure

The arrangement of an organization comprises addition of six different elements. Each of these elements has an impact on how the responsibilities are carried out in an organization.

- **Work specialization:** The first elements that influence the structure of an organization is how responsibilities are subdivided into separate jobs. Is a job accomplished by an individual, or is it divided into separate steps and finished by several individuals?.
- **Departmentalization:** This is how jobs are categorized. Jobs can be grouped in several ways, including job function, production line, or territory.
- **The span of control:** The structure of every organization must also order how many managers are needed to guide their workforce. This is called span of control and examine how many individuals a manager can efficiently and competently manage.
- **Chain of command:** Every organization has a chain of command, which presents a line of authority that reaches from the top of the organization to the lower level and higher level spells out who reports to whom in the organization.
- **Centralization and decentralization:** Another element of the organizational structure is centralization and decentralization, which determines where decision-making authority does, should be positioned? If top management makes all the organizational decisions with contribution from the lower – level personnel, the organization is considered to be centralized
- **Formalization:** The final element of the organizational structure is formalization, which is the degree the jobs in the organization are standardized. An extremely formalized job has clearly defined procedures and leaves

organizational members“ small freedom in view of how they carry out their responsibilities.

2.5 Effects of organizational culture and structure on total quality management

Organizations that practice control-oriented culture and mechanistic structure usually focus on stability by concentrating more on internal issues than external. They are involved in planning, organizing, directing and controlling the employees instead of creating a vision and delegate than controlling and organizing. These do not match with the total quality management principles which strive to satisfy customers who are outside the organization. This philosophy is highly to be thriving in the flexibility oriented cultures and organic structures which give confidence to employees“ participation in day to day running of the organization and prioritize customer focus.

2.6 Theoretical Framework

This study was based on the Hofstede“s cultural dimension and Cameron and Quinn“s Competitive Value model. Hofstede“s explain the influence of societal culture on the standards of its members and how this standard connects to deeds, by means of structured derived factor analysis. Hofstede creates his original model as an outcome of using factor analysis to determine the outcome of global survey of workers value of an organization connecting intervals, periods of time. The original theory suggests four dimensions next to which values could be determined: Power distance, Individualism vs. collectivism, Uncertainty avoidance and masculinity vs. femininity which is also termed as task orientation vs. person orientation. There was autonomous study which led to the discovery of the fifth dimension, Long term vs. short term at Hong Kong. It was necessary due to certain gaps that needed to be covered-up which were not covered in the original paradigms of principle.

Indulgence vs. self restraints was the sixth dimension added by Professor Geert Hofstede in 2010.

Hofstede, Dimensions of culture on which the models could be analyzed are:

- Power distance: This is the degree to which less power elements of organizations agreed and anticipate that power is shared unfairly. The lesser degree of this signifies that elements question authority and endeavor to share power equally. Whereas organizations with high power distance demonstrates disparity in power distribution.

Organizations with high or large power distance are characterized by the following:

- Authority which is centralized
- Undemocratic leadership
- Paternalistic ways of management
- A number of hierarchy levels
- Supervisory staff are many
- Acceptance of rights that comes with power
- Expectation of power differences and disparity

Organizations and societies with low or small power distance possess the following: ➤ Supervisory staff is small in quantity

- Flat structure of organization
- Decision making tasks and power decentralized
- Involvement or consultative technique of management
- Lack of approval and questioning of the authority
- Consciousness of rights
- A Tendency toward egalitarianism

□ Individualism vs. collectivism: This is the extent to which populace in a society is incorporated into groups. There are some societies described as individualistic which are flexible and frequently connects to immediate family. The pronoun, “I and we” phrases are emphasized. Collectivism as the counterpart of individualism explains societies which tightly integrate relationship tie extended family and others into group’s in-groups.

Individualistic cultures are identified by:

- Promoting contractual connection that revolves around the essentials of exchange. These cultures employ in the measure of turnover prior to commitment in a performance.
- Attentiveness on personality or at a good number of very close dear ones, and anxiety with conduct relationships as healthy as own goals, wellbeing, and needs. Stress on individual pleasure, amusing, and enjoyment, in excess of duties and communal norms. They are a fraction of a number of in-groups which hardly have any manipulation on their lives.

Collectivistic cultures are characterized by:

- Taking into consideration the larger community with regards to implications of their proceedings
- Allocation of capital and willingness to give up individual attention keeping in mind the communal concern.
- Conduct as per common norms that are established for maintenance of communal agreement among in-group members.
- Directive of conduct with the assistance of collective norms.

□ Uncertainty avoidance: This is “an organization’s self-control for uncertainty,” whereas people having the same opinion or turns away an occurrence of

something, astonishing, unidentified, or away from the normal. Organizations that attain a soaring level in this index demonstrate for rigid codes of conduct, guiding principle, laws, and normally rely on total truth, or the conviction that single distinctive fact dictates the whole lot and people recognize what it meant.

Feeble doubt prevention comes with the following features:

- Executing danger
- Flexibility
- Acceptance in the direction of contrary opinions and behaviors.

Tough doubt prevention is represented by the following features:

- Tendency to prevent danger
- Strong requirement for consensus
- Organizations that demonstrate a number of consistent trial, documented rules, and obviously separates arrangements

Masculinity vs. femininity: In this measurement, masculinity is explained as “a liking in for attainment, great courage, boldness and substance motivation for achievement.” Its corresponding item connotes a favorite for collaboration, humility, compassionate for the feeble and excellence of life.” Women in the individual societies have a tendency to show diverse values. In feminine societies, they distribute humble and kind opinion equally with men. In more masculine organizations, women are more resounding and aggressive, but particularly less resounding than men. In other words, they are still familiar with a fissure stuck between male and female principles (Hofstede, 2011)

Masculine culture demonstrates the following characteristics:

- Generosity has small or no importance
- Clearly unique gender responsibilities

- Men are predictable to be physically powerful and sure with a attentiveness on substance achievements

A feminine culture also demonstrates the following features:

- Men, just like women are predictable to be kindhearted, humble, with focus of quality of life
- Overlapping of common gender responsibilities
- importance on the non-materialistic angels of achievement
- The favored character in boyfriends and husbands are the same

□ Long-term orientation vs. short-term orientation: This measurement connects the relationship of the precedent with the present and future actions and barriers. A lesser level of this indicator shows that way of life are satisfied and set aside, while resoluteness is appreciated. Organizations with a high level in this index identify adjustment and incidental, practical coherent as a requirement. Furthermore, this is formed on the Confucian enthusiasm. Based

on the wisdom of the Confucius, the subsequent aspects of existence are apparent:

- Responsibilities in life are apprehensive; virtue including acquiring skills, functioning firm, learning, being prudence in expenses as well as demonstrating determination and fortitude.
- Disproportionate relationships between people ensure the constancy of society.

Long-term direction or high Confucian principles demonstrate the following

- An innovative, full of life state of mind
- prominence on a connection, order recognizes on status, and observation of this order

Short-term orientation or less Confucian principles shows the following

characteristics

- Focus on respect for tradition
- Orientation toward past and present
- A comparatively static, more conventional mentality

The dimension of indulgence vs. restraint focuses on happiness. A society that practice indulgence makes room for comparatively free gratification of natural and basic human drives pertaining to indulging in fun and enjoying life. The quality of restraint describes a society that holds back need gratification and tries to control it through stringent social norms.

In addition to Professor Geert Hofstede's cultural value theory, there is another organizational culture framework built upon a theoretical model called the "Competing Value Framework by Cameron and Quinn (1999)." This framework demonstrates doubt about an organization having a mainly interior or exterior focal point and in case it stands for flexibility and independence or constancy and control. The framework is also built on six organizational culture proportions and four principal culture types (clan, adhocracy, market and hierarchy). Furthermore, the structure produces an "Organizational Culture Assessment Instrument (OCAI)" typically, used to establish the organizational culture outline based on the nucleus principles, perceptions, interpretations and approaches that characterized organizations (Cameron and Quinn, 1999).

The Competing Value structure has four quadrants:

- Internal Process Model: Based on hierarchy, significance on capacity, certification and information management. These processes bring steadiness and power. Hierarchies function most excellent when assignment to be completed is well understood.

- Open System Model: Attached to a natural classification, emphasis on adaptability, willingness, enlargement, resources achievement and exterior support.
- Rational Goal Model: Based on profit, prominence on balanced accomplishment. It perceives that scheduling and setting results into productivity and competence. Responsibilities are clarified, aims are set and actions are undertaken.
- Human Relation Model: Based on solidity and moral with prominence on human resources and education. Populaces are not seen as inaccessible individuals.
- Although the models appear to be four totally diverse angles or domains, they can be seen as intimately connected and interwoven.

The competing value framework is not regular in ideological perspective and carries conflicting messages. The first perspectives suggest to organizations to be adaptable and flexible, but the second perspective suggest to organizations to be stable and controlled.

2.7 Conceptual framework for evaluating the influence of organizational culture and structure on (TQM) implementation

A conceptual framework can be presented as a written or visual output that is been in a narrative or graphical form. The function of a conceptual framework is to indicate and explicitly explain factors, variables and concepts in the study (Sinclair, 2007). It is also said to show the inherent relationship between variables and concept identified including strategies to obtain them (Sinclair, 2007). Comprehensively, the influence of the organizational culture as the first sets of the exogenous variables (construct) and the organizational structural variables as the endogenous variables , a total quality management implementation indicate an evaluative objective and a predictive approach as stated by the hypothesis (Organizational culture and structure influence TQM implementation). The study employs the conceptual framework to help

understand the relationship between the mentioned variables and at which conditions they promote TQM implementation.

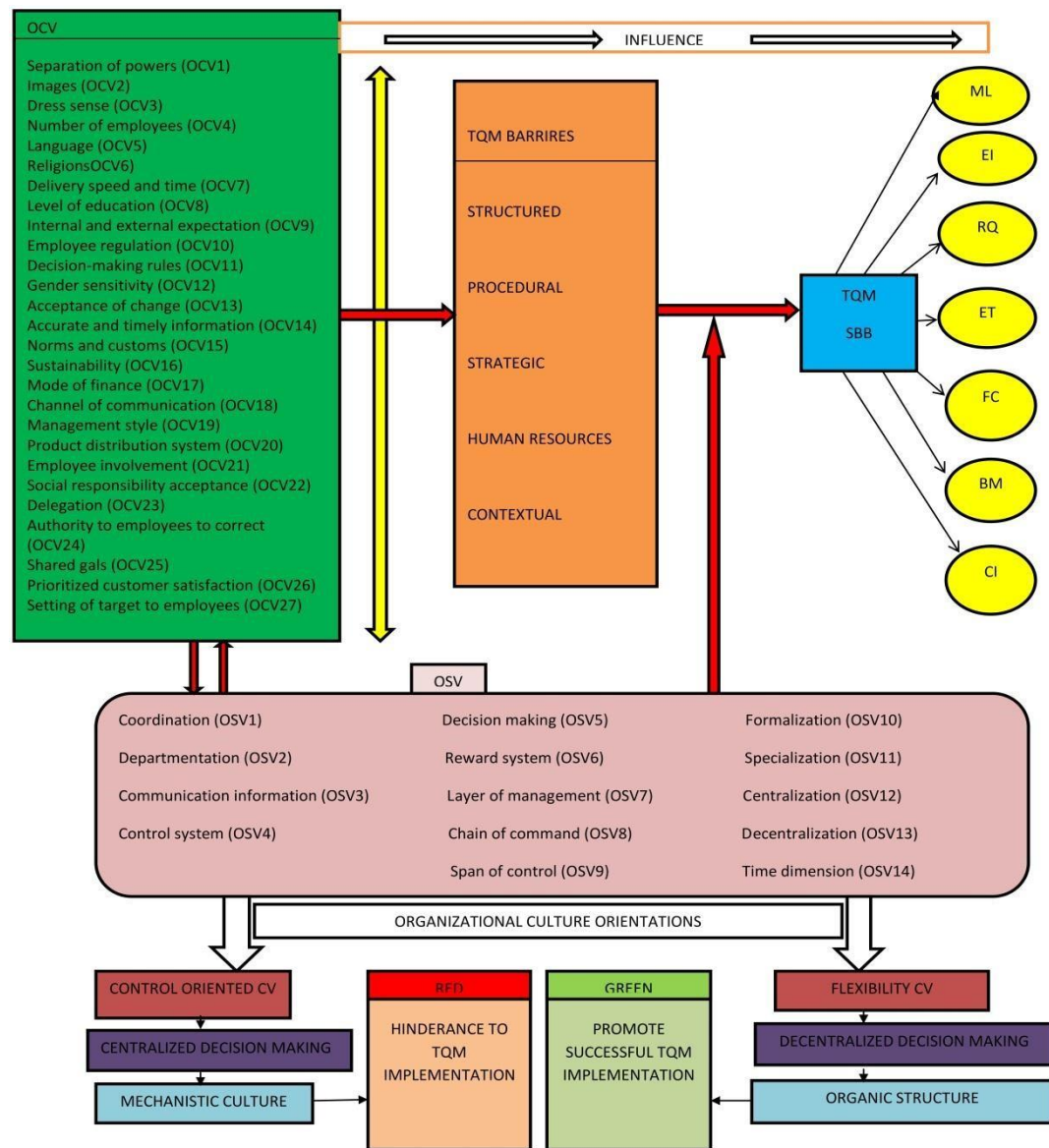


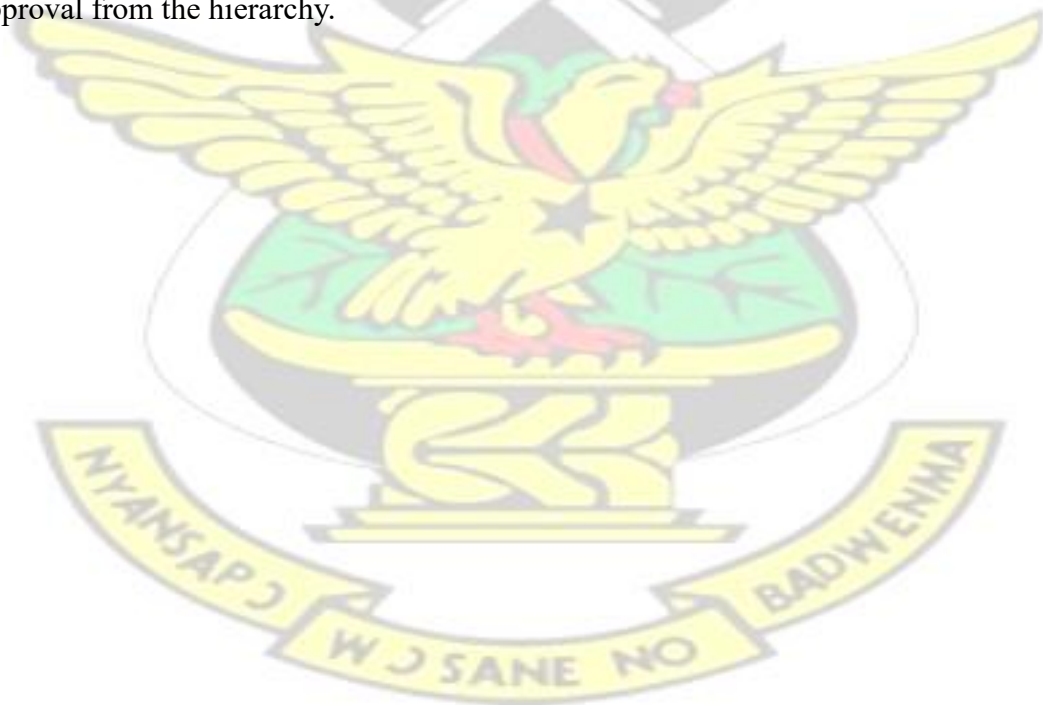
Figure 2.1 Conceptual framework for evaluating the influence of the organizational culture and structure on TQM implementation.

2.8 Structural Components of the conceptual model

The hypothesis underpinning the conceptual model is that organizational culture and structure influence TQM implementation. The organizational culture variables (construct) were twenty eight indicators (28), however, one was dropped as a result of making insignificant influence due to the communality value been below 0.5. The

organizational structure variables (construct) were fourteen (14). The former and the latter are all two different sets of exogenous variables influencing the endogenous variables (ML, EI, RQ, ETC, FC, BMK and CI). The five main barriers to TQM implementation support the effort of the other two sets of the exogenous variables to influence the endogenous variables.

There are two different organizational culture orientations that influence structure; Control – oriented culture and Mechanistic structures and flexibility – oriented value and organic structure. The former is supposed to centralized decision – making decreasing the discretion of employees whereas the latter, Flexibility – oriented culture and organic structure is supposed to decentralize decision- making allowing the employees discretion on quality problems corrections without necessarily taking approval from the hierarchy.



CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter gives in depth details of the method and procedures of the study. Extensive studies conducted in the search for influence of organizational culture and structure on TQM implementation brought about diverse suggestions made on the methodology of the study. Lists of factors as well as the extent to which cultural and structural variables influence TQM implementation was obtained from literature 3.2

Research Process

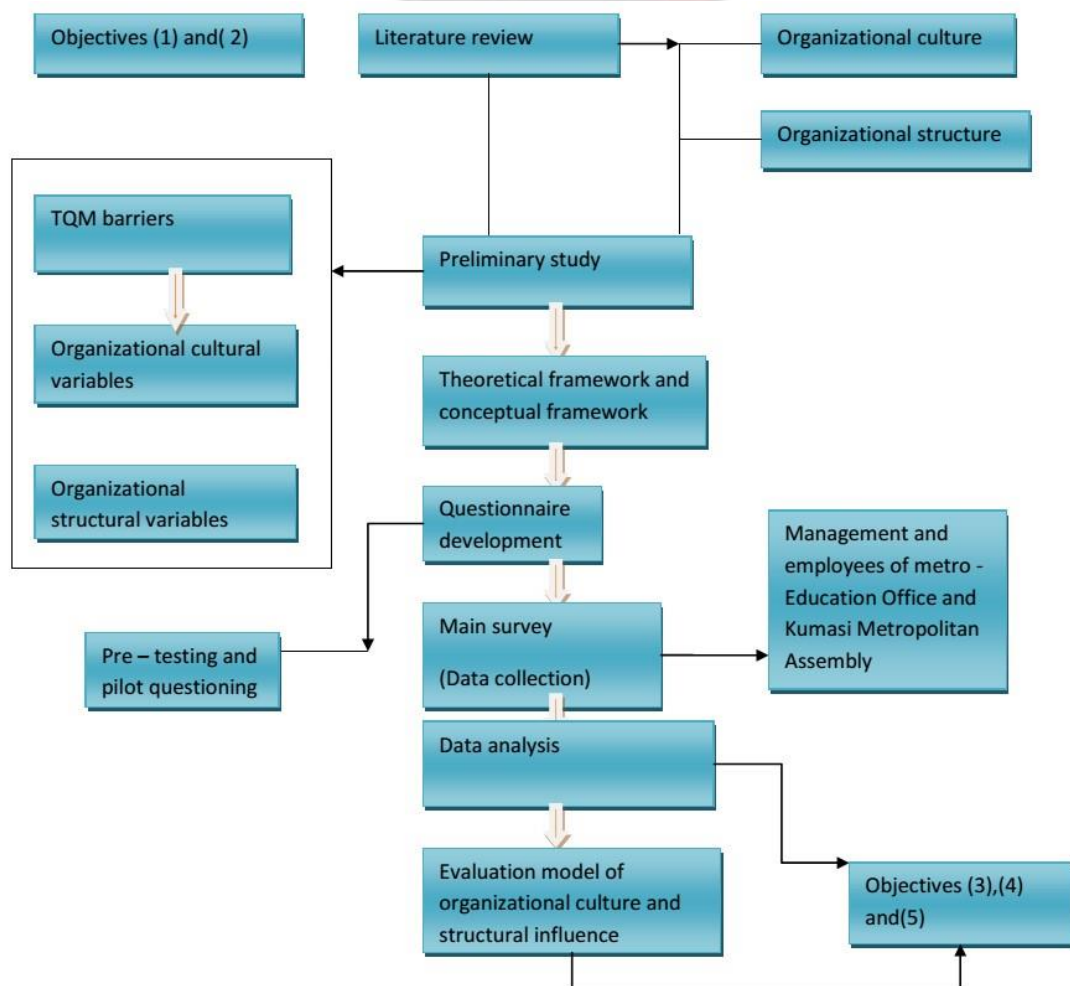


Figure 3.1 Research process

3.3 Research Approach

Researchers had asserted to the fact that research approaches are significant to the validity of social research and seen as an effective strategy, Baxter, (2003) and Creswell, (2009). This made the choice of research approach to be suitable and appropriate so that it could be influenced by the philosophical paradigm underpinning the study and this must always be considered in the first instance (Bryman, 2001; Saunder et al., 2009). It stands for answering the research question s and solving the problems. According to Saunders et al., (2009) model, two main approaches are available for any research work. These are Deductive and inductive.

3.3.1 Deductive Approach

According to Naoum, (2002), Deductive approach moves from the general to the specific in the phenomenon and uses a top-down approach in relation to theory formulation and testing of hypothesis (Naoum, 2002). Deductive approach is also called quantitative method or design (Baxter and Jack, 2008). It employs mathematical and statistical techniques to collect data, analyzed by identifying facts and causal – relationships among variables so that hypothesis could be tested and conclusion made (Neumann, 2003; Creswell, 2009; Naoum, 2002). This leads to the researcher's independency which involves scientific rigor and lean towards hard positivism paradigm (Oppenheim, 2003; Neuman, 2003). In this approach survey questionnaires and statistical tests are the most suitable and predominant instrument and analytical approach for data collection involving sampling for generalizing or drawing conclusions (Creswell, 2009; Oppenheim, 2003). This approach is also known as hard measures and is most suitable for evaluation and predictive analysis using complex statistical techniques and inferences (Creswell, 2009; Bryman, 2009).

3.3.2 Inductive Approach

According to Naoum (2002), Inductive approach moves from specific to general and uses bottom-up approach. Observation of phenomenon toward broad generalization and theory formulation are parts of inductive approach. Inductive approach is also known as qualitative approach (Neumann, 2003; Baxter and Jack208). Inductive approach is subjective in nature exploratory and maintains full participation of the researcher. It is interpretive in nature and follow non-linear research path that leads to broad base generalization (Neumann, 2003; Yin, 2009, Creswell, 2009). Sometimes case studies are applicable to deductive approach, however, it remains the most suitable and appropriate in inductive approach as well as interview (Yin, 2003). Inductive approach is also known as soft and lean towards interpretive philosophical domain (Oppenheim, 2003; Creswell, 2009; Yin, 2009).

3.3.3 The Right Approach to this Study

Deductive approach is the most suitable approach to this study after careful evaluation of the two main paradigms, based on the philosophy as the main influence and the kind of the research questions and the problems to be considered, it is a deductive approach that is most suitable for this research study. For the fact that the adoption of the positivism philosophy for this study is considered, the deductive approach becomes the most suitable in answering the research questions making it authentic to be used.

3.4 Research Design

This is the theoretical arrangement in which studies are carried out. It encompasses the blue- print for the gathering, dimension and examination of information. Furthermore, the research plan outlines ambitions of the investigator from writing the proposition and its process effects to the ultimate examination of the information.

A study plan answers research questions appropriately through logical plan of information needed to be collected and analyzed (Creswell, 2009). A choice of particular research design deemed suitable, most explicitly address the research questions as well as expressing causal correlation among variables is a very important step in this study.

The “Onion model” which was propounded by Saunders et al. (2009), served as the basis to select an appropriate design for the study.

There are six layers of the Onion which specifically categorized philosophy as the outer shell or envelope to the techniques or instruments at the central point. The Onion model asserts to the fact that, the philosophy controls and influences all the other choices as the researcher approaches the central point.

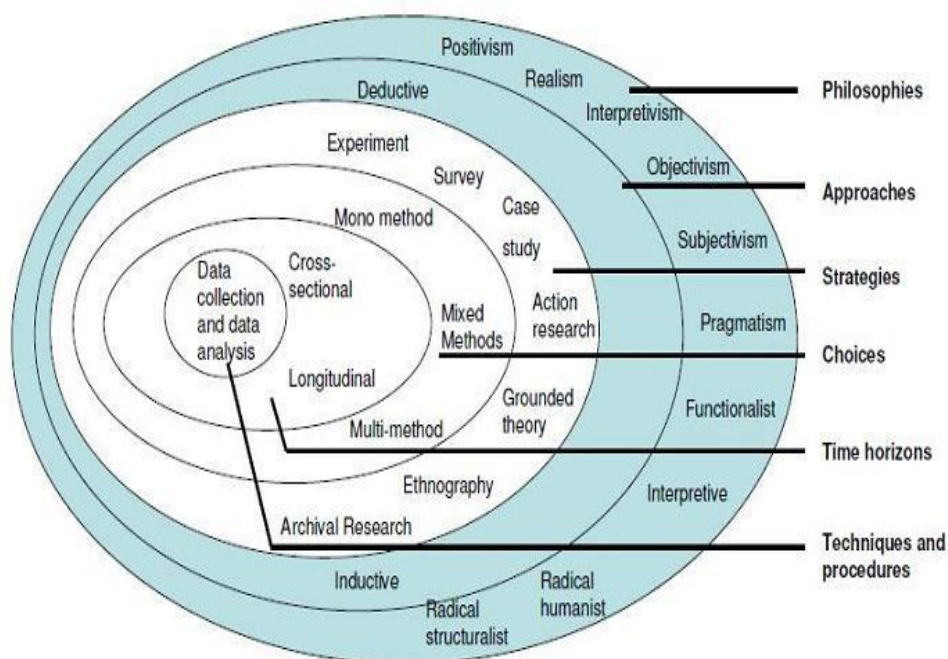


Figure 3.2 Research “onion model” sources: Saunder et al., (2009)

3.5 Philosophical Stance

Any research consideration is underpinned with philosophical positions (Creswell, 2009). Bryman, (2009) affirmed the Epistemological, Ontological and Axiological deliberations as concepts that explain philosophical position of any kind of research. This means that a choice of a philosophy for research needs the understanding of the concepts (Creswell, 2009). The philosophical paradigm selected in any research is critical in the choice of an appropriate research methodology (Easterby-Smith et al., 2003; Creswell, 2009). Hence, to adopt a suitable philosophical position for this research, the Epistemological, Axiological and Ontological assumptions were vividly considered.

3.5.1 Epistemological Stance

This relates to the issues of acceptability of knowledge in any discipline (Vanderstoep and Johnston, 2009; Creswell, 2009). It outlines the causal relationship between the researcher and the subject under consideration. According to (Creswell, 2009; Bryman, 2009) there are positivism and interpretivism as the two main Epistemological stance, especially in social science researches.

The positivist epistemological position asserts that natural science method can be applied to the study of social phenomenon (Bryman, 2009; Creswell, 2009). It upholds the belief that the world conforms to fixed laws of causes- and –effects, hence, complex issues can be resolved by the use of simplified mathematical or fundamental approach (Creswell, 2009; Bryman, 2009). Again, it is asserted that research problems and questions can be solved by process objective measurement and repeatability approach, where the researcher is detached and remains neutral from the process (Bryman, 2009; Saunders et al., 2009). Again the positivist upholds the assumption of knowledge being generated through observable facts phenomenon and measured

through objective methods (Saunders et. al 2009; Creswell, 2009). However, the interpretivist Epistemological stance on the other hand asserts that the research context and phenomenon does not follow any universal truth but rather are subjective to the understanding and interpretations from the researcher's perspective and point of reference (Marczyks et al., 2005; Saunders et al., 2009; Creswell, 2009). Also, interpretivist indicate that researchers always show strong biased commitment to the study and interpretation where researchers are always immersed in the study where the values and beliefs of the researcher influence the findings (Marczyk et al., 2005; Vanderstoep and Johnston, 2009; Bryman, 2009).

Critical considerations of this research objectives and research questions affirmed that this research seeks to investigate the causal relationship between variables (Influence of organizational culture and structure on TQM implementation). Hence, the researcher's needed to adopt positivism epistemological stance which seeks to explore causes and effects through the use of simplified mathematical approach.

3.5.2 Axiological stance

Axiological stance of any research indicates whether the research phenomenon is either "Value free" or "Value laden" (Marczyk et al., 2009; Creswell, 2009). A research study is tagged to be "value free" when the phenomenon can be subjected to evaluative objective criteria whereas „Value laden" research is considered to be driven by subjective criteria (Creswell, 2009).

The „value free" position encompasses positivism paradigm whereas the „value laden" phenomenon leans towards interpretivism.

This research is based on value free phenomenon where evaluative objective criteria is suitable for investigating the causal relationship between predetermined structures in variables (Pathirage et al 2005).

3.5.3 Ontological stance

The ontological stance assumed that any research concerns the nature of reality or idealism which influences the research phenomenon (Vanderstoep and Johnston, 2009; Creswell, 2009). The ontological stance view research phenomenon from the realist and idealist perspective (Creswell, 2009).

The realist views the research reality with predetermined structure whereas the idealist posits that research reality is based on different perceptions from the different observers (Creswell, 2009; Vanderstoep and Johnston, 2009). The realist view is in line with the positivist whereas the idealist view is in line with the interpretivist domain (Bryman, 2009; Creswell, 2009). Conclusion can be drawn that this study is in the realist perspective such that the relationship among determined and definite variables reflects characteristics of realist view (Pathirage et al., 2005; Bryman, 2009), where the realist view is in line with the positivist paradigm.

3.6 Research Strategy

The approach to use in research can be assessed, according to Yin (1994), by analyzing three diverse circumstances. They are; the kind of study problem posed the degree of control an investor has over authentic behavior proceedings and, the level of focus on modern-day as opposed to past events, Table 3. 1 shows how Yin (1994) connected to each circumstance to the five substitutes research strategies.

Table 3.1.Relevant Situations

Strategy	Form of Research Questions	Required Control Over Behavioral Events?	Focus on Contemporized Events?
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival Analysis	Who, what where, how many, how much.	No	Yes or No
History	How, why	No	Yes
Case study	How, why	No	Yes

The reason of this study is to determine the influence of organizational culture and structural dimensions on total quality management. This is made possible by recognizing the various organizational and structural variables. To achieve the objectives set for the study four (4) how and what questions are set for the study;

1. What are the various key barriers affecting total quality management implementation?
2. What are the organizational culture and structural variables that influence total quality management implementation?
3. How can the influence of the organizational culture and structural variables be determined on total quality management implementation?
4. How can you evaluate the influence of organizational culture and structural variables on total quality management implementation?

An experiment is done when a researcher control behavior directly and precisely.

This happens in a laboratory and center of attention on isolated variables. (Yin, 1994).

In this study, this could not occur, we could not controls behavioral events and thus the experiment strategy was not suitable.

A case study is explained as “a pragmatic investigation that investigates a modernday occurrence in its actual living circumstance (Yin 2003). In common, case study is the ideal strategy when “how “and “why” questions are posed when the investigator has

less influence over actions and focal point is on the modern-day happening within some actual life context, (Yin, 1994), which does not make this strategy appropriate for this thesis. Furthermore, Yin (1994), affirms that analysis of archival records were expelled. Yin (1994), further presents a historical strategy as working with the “dead” past. This is when no significant persons are living to report and the researcher must rely on documents and cultural physical artifacts as the main source of evidence.

However, since this thesis focuses on identifying cultural and structural influence on TQM implementation, which occurs at the current instant, the past approach was expelled. It made it impossible to use any other strategy than the survey.

The survey is the most appropriate research methodology which brought about efficiency by the use of cross sectional and longitudinal studies to a common behavior on phenomenon through statistical analysis (Bryman, 2009). It encompasses samples used as a representative of a larger population which is viable for the investigation of the relationship between variables, perceptions and predicting behaviors (Bryman, 2009; Oppenheim, 2003) Surveys are also efficient in researches that are to demonstrate causative connection among exogenous variables and endogenous variables without manipulation of the independent variables by the researcher (Oppenheim, 2003) this made this strategy the best of all.

A survey study explained by Yin (1994) concerned with logical gathering of information from respondents, generally in the form of a questionnaire. It regularly answers the questions of what, where and who. With this strategy one could be investigating more variables, consequently making it the most appropriate and dependable strategy to be used for this researcher.

Since survey resides in the positivism stance and geared toward deductive paradigm, it is indeed considered the most appropriate in the examining of the causative connection among an exogenous variables and endogenous variables without the researcher manipulating the independent variables (Oppenheim, 2003; Trochim 2005). Against this background, the survey strategy undoubtedly becomes the most suitable choice for the study.

3.7 Sources of Data

The primary source of data for the research was in the form of structured questionnaires to collect information from the organizations under consideration.

Secondary source of data were also used in the form of journals, and books on organizational culture and structure, national culture and quality management. The use of the two types of data was very useful and accorded the researcher the opportunity to compare existing information with contemporary views of stakeholders within the organizations under consideration.

Questionnaires were distributed personally to the respondents at their various offices. However, there were situations where questionnaires were mailed to some respondents. Personal observation of some activities of the stakeholders during visits also provided useful opportunities to obtain special information for the research.

3.8 Population and Sample

The population for this research was the management of the following Education Directorates;

1. Kumasi Metropolitan Education Directorates,
2. Bekwai Municipal Education Directorate,
3. Bosomtwe District Education Directorate and

4. Ejisu Municipal Education Directorate)

The importance of sample size in research work cannot be over emphasized. This was supported by Tong,(2007), who opined that sample size significantly influence the model fit in Structural Equation Modeling (SEM) analysis and model testing . This research has adopted Structure Equation Modeling (SEM) as main analytical approach for the data analysis .The approval and significant of the use of appropriate sample size had been proposed many times for effective results towards model testing (Kenny and McCoach, 2003). Interestingly, there is some school of thought which said that when a small sample size is to be used, consideration of the characteristic of the model under study should be considered. Keeping in mind the quality of the results and the aim of the study to be achieved.

Iacobucci (2010) and Kline (2010) considered a sample size of 100 cases as small sample thus the resultant analysis tend to be very challenging as well as yielding unexpected results in Structural Equation modeling (SEM) analysis. Effective use of Structural Equation Modeling (SEM) analysis should have a sample size of 200 cases or more with a number of observed variables,(Iacobucci, 2010 and Tong ,2007).

Importantly, many academic assertions affirmed that variables ratio remain very convenient towards the determination of an appropriate sample size in Structural Equation Modeling (SEM) analysis, (Bentler, 2005; Curran et al., 2000; Kline, 2010; Tong, 2007). It was in view of this that Bentler, (2010) and Tong (2007) recommended that a variable ratio of an ideal Structural Equation Modeling (SEM) model should be at least 5:1 to be considered an appropriate sample size. It means that a structural Equation Modeling Model with 20 observed variables should have more than 100 respondents as an appropriate sample size. In view of this procedure this study has 42 hypothesized observed variables. Therefore, a consideration of the variable ratio of 5:1

for an ideal Structural Equation Modeling (SEM) model, a sample size of two hundred and ten (2010) can be deemed fit and appropriate thus meeting Bentler (2005) and Tong (2007) recommendations.

This research has adopted the Bentler (2010) and Tong, (2007) Variable Ratio technique of 5:1 for the selection of the sample size. There are 42 variables considered, hence, the 210 sample size.

3.9 Methods of Data Collection

There are number of methods of collecting data principally in survey study. This includes questionnaire, observation, interview method, through schedules and other methods.

Since the researcher is using deductive approach or quantitative approach to this research, addition to the careful study of the study questions and the plan of this research, the researcher is left with no option than to use questionnaire to collect the data. Questionnaires were used in the collection of the data for the research.

Questionnaires were widely used in distribution of structured numerical data for respondents to answer according to the instructions given them. The objectives for the questionnaires were to attain data on their understanding of the influence of the organizational culture and structure variables in implementing TQM. Questionnaires developed went through the following four stages as proposed by Hair et al. (2003);

- (i) Initial consideration
- (ii) Clarification of concepts
- (iii) Typology of the questionnaires
- (iv) Pre-testing and resolving issues

Cohen et al., (2007) also set out eight procedures for planning questionnaires which guided the researcher in developing the questionnaire to this study.

(a) Deciding the purpose or objectives of the questionnaire:

A comprehensive reason of the questionnaire ought to be obtained and then transformed into a set of objectives. This survey study intends to identify the organizational culture and structure influence on the TQM implementation.

(b) Make a decision on the population and the sample

The population of this research is the management of the four (4) Education Offices (Kumasi Metropolitan Education Office, Bekwai Municipal Education Office, Bosomtwe Education Office and the Ejisu Municipal Education Office) .

(c) Generate the topics including construction of concepts and issues.

Grandzol and Gershon (1998), proposed accepted factors for total quality management so that the aims and objectives of the study could be met. Shown below in table 3.2

Table 3.2 Indicators for TQM Surveys

Construct (Seven Building Blocks of TQM)	Variables
Customer focus	Customer driven focus, addressing complaints, adherence to quality rules.
Effective Teamwork and coordination	Organization-suppliers joint venture, sole supplier point of reference, joint organization, collaboration, organizations participation, removal of panic, system view and trust.
Employee fulfillment	Job commitment, job satisfaction and pride of workmanship
Responsibility of quality at source	Understanding variations, avoidance point of reference, decrease of throng assessment, plan excellence, arithmetical procedure management, removal of numerical quota, accepting incentive, whole cost bookkeeping constant service
Management leadership	Planning and implementation of change, instruction leadership approach, involvement in modification, worker authority, Long range orientation and clarity of vision.
Continuous improvement	Refinement cycles, improvement
Benchmarking	Educational development, foundation knowledge, training, constant personality development, decision-making education and procedural knowledge.

Source: Field work 2016

(d) Decide the sort of procedures, scales, question needed

Varied kinds of data that can be collected includes; Nominal, Ordinal, Interval, and Ratio.

Nominal data shows classifications; ordinal data shows order (high to low, first to last, least to maximum, and strongly agree to strongly disagree, great deal to not at all “); Ratio data shows uninterrupted values and a accurate zero.

An undemanding regulation for thumb for preparing questionnaire; the bigger the range of the sample, the extra structured closed and statistical the questionnaires may have to be, and the smaller the range of the sample, the lesser structured, further open and word –based the question may be.

Questionnaires can be structured or unstructured.

Using closed and prearranged questionnaire helps to observe the regular way of happenings where comparism are made, then the questionnaires will require to be pre-tested and polished so that the ultimate edition contains as full as a series of likely responses can be logically foreseen (Cohen et al., 2007). Even though construction of questionnaires is time consuming throughout design, the merit is that data analyses can be done speedily. Formless questionnaires have open ended questions permitting the respondents to respond on their own expressions. Whenever the researcher is not convinced of several issues connected to the study at hand, then the open ended questions are posed. In this research, closed questions were used to make possible the data collection and analysis. A few open questions were asked to permit the respondents answer in their own words.

The five points Likert scale was used to determine the respondent’s relation to the extent to which the organizational culture and structure variables affects the seven TQM building blocks. The scale provide a collection of responses to a given question or declaration and was set out as;

1= Very low, 2= Low ,3=Medium, 4=High, 5= Very high

(e) Put in writing the questionnaire items

(f) Make sure that each issues from (3) has been resolved, by means of several items for each concern

(g) Manage and organise the final questionnaire. Questionnaires were self administered.

Where individuals were without much knowledge on organizational culture and structure were briefed on it before answering the questions.

3.10 Design of the Questionnaires

The questionnaire was designed based on the literature research objectives. The questionnaire dealt with the general information on respondents and their views on the organizational culture and structure, the types of the organizational culture and structure and their respective functions. The first sets of questions were intended to seek information about the demography of the respondents (sex, age, educational level, years of experience and number of years working in the organization).

The second part of the questionnaire relates to the background of the organization, where the respondents were asked to identify selected definitions of organizational culture and structure that best describes their various organizations.

The third section has to do with the barriers to total quality management, and the fourth section had to do with the organizational culture and structure variables that affect the seven building blocks of TQM.

3.10.1 Pre testing Questionnaire Instrument

According to Oppenheim, (2003) and Creswell, (2009) pre testing as well as piloting survey proceeding the main survey are appropriate and necessary to stabilize a

methodological and systemic rigor in data collection. Therefore, the designed questionnaire instrument was pre tested prior to the main survey.

Reasons for pre testing the designed instrument are:

- Ensuring face validity of the questionnaire in the survey Creswell, (2009) and Yin, (2009).
- Judgments of the clarity
- Understanding
- Feasibility of questionnaire
- Time of completing the questionnaire by the respondents
- Elicit the view of the respondents
- To minimize ambiguity that might be posed by the questionnaire (Creswell, 2009; Oppenheim, 2003).

The consideration of encountering any challenge during the main survey and how to correct such challenges was the idea of pre testing the questionnaire instrument preceding the main survey (Creswell, 2009; Oppenheim, 2003). There were five (5) respondents, each from the management of the four Education Directorates involved in the pre-testing of the questionnaires. After the pre-testing, the full meaning of TQM was written at each instance it appears.

3.10.2 The Main Questionnaire Survey Instrument

Research findings can be affected by the nature of the questionnaires and this is the reason why data collection instruments needed to be cautiously designed distributed and interpreted (Trochim, (2005); Bryman (2009), It is in this direction that Wilkinson and Birmingham (2003), affirmed that research instruments are tools used to collect structured data and transformed it into useful information through rigorous and systematic inquiry to help in interpretation of the research data.

It is obvious that the two categories of variables were identified. These variables are endogenous and exogenous variables that are dependent and independent variables. It is in this direction that the main data collection to meet the aim of examining the organizational culture and structure influence on total quality management implementation was carefully structured gearing towards identification of the causal relationship between these variables and the influence on total quality management implementation. The main survey instrument was constructed into four main components. These include the background as the demographic component as section “A”. Organizational background detailing selected definitions of the organizational culture and structure forms section “B”. Section “C” relates to the five domains of the barriers to TQM implementation and the final section has the impacts of the organizational culture and structure variables on the seven building blocks. Total quality management Simple questions with clear language were created to be posed to the respondents to ensure accurate and precise response from the respondents which in turns increase the validity and reliability of the data collected (Creswell, 2009).

3.11 Methods of Data Analysis and development of the model

Quantitative approach to data analysis was employed for the study. The data collected were edited, sorted and coded. A Structure Equation Modeling (SEM) was used to determine which factors correlate with each other such that a change in one will affect the other. Frequency tables and charts were used to present the results.

The results from these analyses provided the basis for finding out what pattern and common trends run through the responses with respect to organizational culture and structure variables influence on TQM implementation. Usually data analysis consist of mainly an activity of organizing, examining, categorizing, tabulating and testing of

collected data to elicit evidence intended to respond to the questions (Saunders et al., 2009; Yin, 2003; Easterby-Smiths et al., 2003). Data for this thesis was put into two statistical analyses. The first part involved the thoroughly descriptive analysis of the background information contained in section “A” of the questionnaire instrument as well as section B. Detailed inferential statistics were put in Section “C and D” of the questionnaire to meet the main objectives of the study.

3.11.1 Choosing Statistical Analysis Appropriate for the Evaluative Model

In model development, the following statistical Analysis can be used; General Linear Modeling, Group of statistics such as Analysis of Variance (ANOVA), Multivariate Analysis of Variance (MANOVA) and Multiple Regression and Multilevel Multivariate Analysis such as Structure Equation Modeling (SEM) has been the dominant analytical approach for such models (Hair et al., 2013; Kline, 2010).

In addition, Structure Equation Modeling (SEM) has more merits and demerits over the other General Linear Modeling Group of Analysis in development of a model. It allows for conducting other multivariate analysis on variables and revealing latent characteristics which are not possible in multiple regression and Analysis of Variance (ANOVA), In view of these merits of Structure Equation Modeling over others, the researcher is left with no option than to select it as the suitable and appropriate techniques for the development of the evaluative model. In addition to its numerous merits over Multiple Regression, the Structure Equation Modeling has the capacity to reveal causal relationships among multiple variables as compared to

Multiple Regression which is said to be very exploratory in nature (Byrne and Stewart, 2006; Bentler, 2005) .It is very effective for analysis involving the direct judgment or assessment of one or more independent variable(s) on one or more dependent variable(s) as compared to Multiple regression which handles only one dependent

variable (Bentler, 2005). Furthermore, Structure Equation Modeling (SEM) determines a difference between the true variance and error variance which is very useful in model development (Bentler, 2005). Both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are effective and useful approaches in the analysis of the variables contained in the construct in Structure Equation Modeling (SEM) analysis. Enriching the robustness in factor (measurement) model in Structure Equation Modeling (SEM) analysis are considered very crucial (Kline, 2010; Bentler, 2005). However it should be noted that Exploratory Factor Analysis (EFA) is very useful in exploring possible factor structure of a set of observed variables without imposing a preconceived structure on the outcome (Byrne and Stewart, 2006; Bentler, 2005).

A confirmatory Factor Analysis (CFA) on the other hands permit the already established indicator forms of a sets of observed variables and their fundamental latent constructs exist (Bentler, 2005).

In this study, it can be observed that the factor structure of the hypothesized evaluative model is already established on the first set of independent (exogenous) factor of fourteen (14) and the second sets of twenty seven (27) independents (exogenous) factors of organizational culture and structure influence on the dependent factors of seven (7) . This made the Confirmatory Factor Analysis (CFA) becomes the most suitable in analyzing the construct in the model. Confirmatory Factor Analysis was carried out in the first place on the exogenous variables in the quest of fishing out its best fit for the model as suggested by Bentler, (2005).

3.11.2 Model Analysis, Fitness, Validity and reliability.

According to Hair et al. (2013), evaluation of an evaluative model developed by using Structural Equation Model (SEM) depends on the following main dominant techniques; Covariance analysis, Score validity and reliability, Measures of goodness-of-fit of model, Test of significance and Z-test.

Due to the theoretical validity which importance cannot be overemphasized in quantitative design, this study has adopted the above mentioned approaches.

The multiple analytical techniques were adopted in this research to additionally communicate the results and increase its validity and reliability (Dainty, 2008). The data obtained from the questionnaire were recorded in excel and then fed into a Statistical Package for Social Science (SPSS) software version 23.0 which was extrapolated to the Structure Equation Modeling(SEM) software EQS version 6.2 for analysis (Bentler, 2005; Wu, 2002).

Achievement of robust model fitting should be benchmarked by statistical significance of the constructs.

The results from the statistical significance were expressed by the P-value (Kline, 2010; Hair et al., 2010; Bentler, 2005).

The P-value chosen for this study is 0.05 which indicates 95% chance of the population mean being within the range of listed values. Preference to two index presentation strategy for model fit to a single presentation strategy was debated. The reason for the former being the most preferred was its superior performance over the latter (Kline, 2010). Scientifically, the measure of chi-square (χ^2), Bentler Comparatives Fit index (CFI), Santorra Bentler Scaled Chi-Square ($S-B\chi^2$), Standard Root Mean Square Residual (SRMR), Goodness of Fit Index (GFI), Root Mean Square Error of Appropriation (RMSEA) and Root Mean Square

Appropriation with its 90% or 95% confidence interval (RMSEA at 90% or 95% CI) clearly shows how well projected hypothesis fit the data (Kline, 2010; Kaplan, 2009; Bentler, 2005; Hair et al., 2014).

Furthermore, Structure Equation Modeling (SEM) experts recommend a mix of Incremental or Comparative fit Indexes and Absolute Fit Index (Byrne and Stewart, 2006; Kline, 2010; Kaplan, 2009). The Fitness Indexes of χ^2 , CFI, and (S-B χ^2) fit in to the Incremental or Comparative Fit Indexes whereas SRMR and RMSEA on the other hand emerged from the Absolute Fit Indexes (Byrne, 2006; Kline, 2010). Additionally, in determining suitability of the prior model fits the sample data and whether the projected replica has a good number of better Fit, it is SRMR and RMSEA which were used to determine them (McDonald and Ho, 2002).

This study has adopted four index evaluation strategies to compliment suitability and appropriation of choice. These were Goodness –of –Fit Index (GFI), the Comparative Fit Index (CFI), SRMR and RSEA denoting two comparative and two Absolute Fit Indexes (Tong, 2007; Kline, 2010).

The χ^2 and normed χ^2 were used to assess the acceptance of the generated model (Kline, 2010; Hair et al., 2014). It is recommended that the conversional Goodness-for-Fit Index (GFI) results closer to 0.95 or >0.90 is preferred suitable for model test of Fit (Kline, 2010).

Wong, (2011) and Kline, (2010) assert that the acceptable slash- off criteria of fit figures should be Chi-Square (χ^2) Ratio to df \leq 3 or 5 with an insignificant or significant value of ($P > 0.05$) , CFI value should be \geq 0.95 for good fit and 0.90 for acceptable fit, SRMR= value should be \leq 0.05 as good fit and 0.08 for acceptable fit

(value of 0.1 is also acceptable); RMSEA= value should be < 0.05 for good fit (value < 0.08 indicate a reasonable and acceptable Error of Appropriation and value of > 0.10 suggests a poor fit and RMSEA at 90% CI = value to be < 0.05 to 0.08 with confidence interval).

Assessing the Internal Consistency and Reliability of the Constructs and Measure, Cronbach Alpha's Coefficient were adopted (Kline, 2010 Bentler, 2005; Kaplan, 2009; Hair et al., 2014).

According to Hair et al. (2013) and Byrne and Stewart, (2006) Cronbach Alpha's Coefficient and Rho Coefficient are extremely essential for testing the validity and internal consistency of the items contained in the research questionnaires.

Cronbach Alpha's Coefficient was used to test the survey reliability (internal consistency) by measuring the single one dimensional monotomic latent construct among the set of variables in the questionnaires (Kline, 2010).

The motivation factor of adopting Cronbach Alpha's Coefficient was the suitability of measuring the level to which the responses are dependable across all substance in a computation (Kline, 2010). There was a criticism by Byrne and Stewart (2006) that Cronbach Alpha's Coefficient alone cannot be very suitable for judging latent variables models particularly models accompanied with two or more dimensional structures. Since it is based on a limiting model that needs all factor loading and Error variance to be equivalent. It is also, seen deficient in measuring internal homogeneity (Kline, 2010). However, Byrne and Stewart (2006) and Kline (2010) agree that Rho Coefficient is very reliable in judging latent variable models particularly, models accompanied with two or more dimensional structures.

This study uses both the Cronbach Alpha's Coefficient and Rho Coefficient in the analysis of the hidden variables in the model.

3.12 Test of Model and Validation

The purpose of validation of a developed Evaluative Model was to prove the reliability and confirmation of the findings and results of the research (Bryman, 2009; Saunders et al., 2009). It was affirmed that carrying out validation within the environment and through same method of which the empirical data was collected is very useful and significant towards appropriations of results (Bryman, 2009; Trochim, 2005).

In view of this Brymans, 2009; Saunders et al., 2009; Lucko and Rojas, 2010 assert to the fact that using respondents either same or similar to those who contributed to the study for the validation of the findings have geared attention and acceptance as this method checks the findings and receives effective feedback from the respondents.

In accordance to the views expressed above, the key findings were developed into a questionnaire which was sent to the Management of Asokore Mamapongs Education Directorate for respondents to response to it. The detailed results of the validation process are recorded in chapter four. Below is the Figure 3.5 diagrammatical representation of the analytical tools used for analyzing the survey questionnaires.

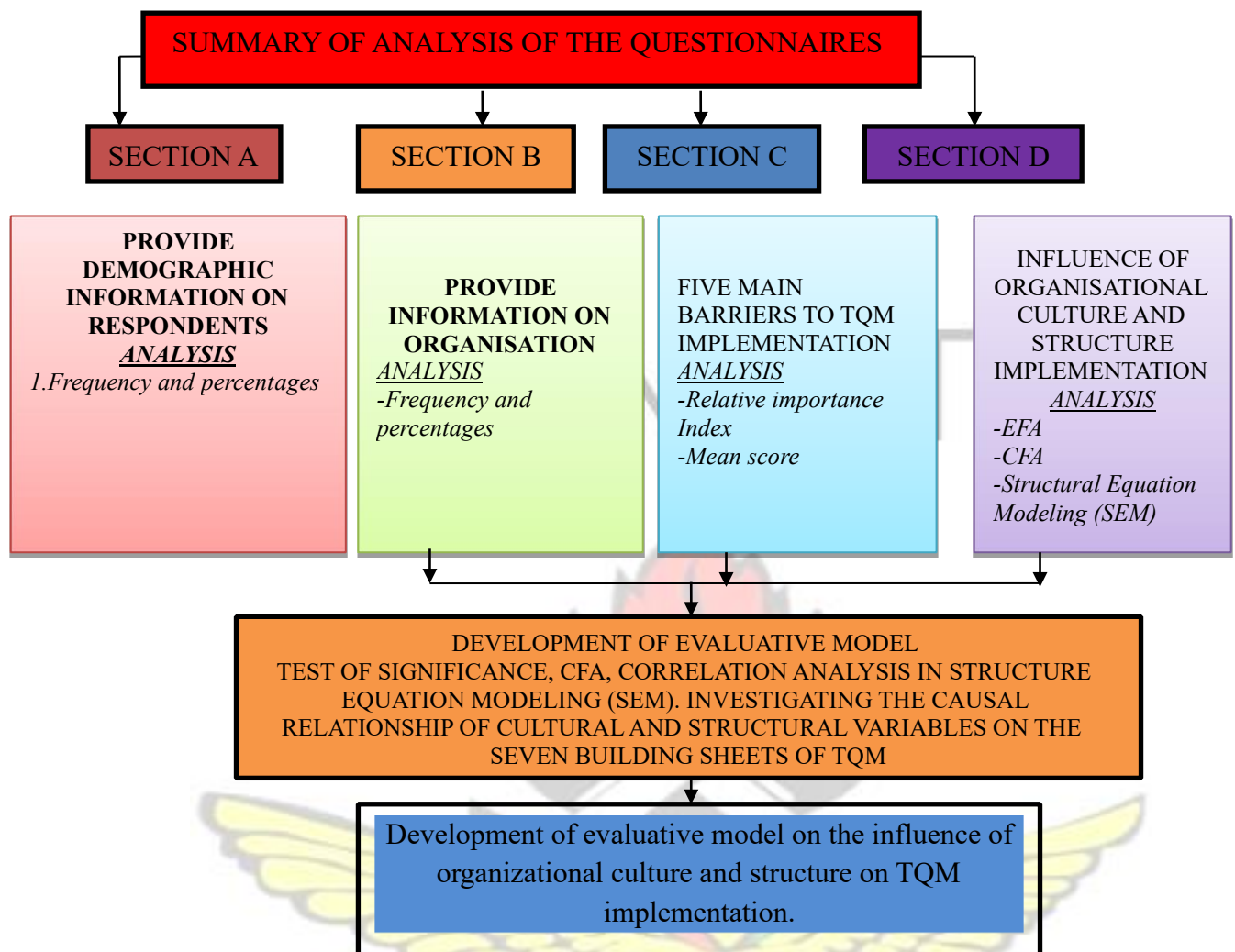


Figure 3.3 Analytical tools used for analyzing data from the survey

CHAPTER FOUR

PRELIMINARY DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

Survey questionnaire was the most important instrument used to collect the data. The data was entered into excel and then transferred to Statistical Package for Social Sciences (SPSS 23.0) . In this chapter, the investigator analyzed and discloses the outcome of the data obtained from the survey carried out in the four Education Directorates namely; Kumasi Metropolitan Education Directorate, Bekwai Municipal Education Directorate, Bosomtwe Education Directorate and Ejisu Municipal Education Directorate.

De Vos, (2002), affirms data assessment is the procedure that brings order, Structures and significant connotation of the data gathered in the fieldwork. For the purposes of obtaining the broader aim and specific objectives of this research, two hundred and ten survey questionnaires were distributed; however two hundred and six were received representing 98% (percent) which is an excellent response rate. Similar study by Ali Mohammed Mosadegh Rad (2004) yielded 90.2% rate. It worth's mentioning that the high response rate was obtained due to the consistent follow-ups and phone calls and emails made. Key elements of the data to be analyzed follow a similar order as presented in the survey questionnaire sections; (i) Background information on respondents, (ii) Background information on the organization, (iii) The five main domain of Barriers of TQM implementation and (iv) Determining the influence of organizational culture and structure on TQM implementation. The analysis to find the Cronbach's Alpha test to verify the reliability and credibility of the data collected in the survey is carried out within this chapter. Pearson's Correlation is be used to establish the potency of connection between the endogenous and the exogenous variables. The data gathered

from the questionnaire is accessible and analyzed through a variety of procedures and methods, as it is necessary and appropriate, signifying its potentiality of inclusive theory and practice.

4.2 Background Information on Respondents'

Determining the background information of the respondents in a data collection survey cannot be overemphasized. Since it influence the findings so as to make a valid conclusion and generalization (Creswell, 2009). Generation of confidentiality and credibility of the data obtained is an added inclusion (Hair et al., 2010; Dainty, 2008; Bryman, 2009).

Descriptive statistics in frequencies and percentages were used to analyze the background information on respondents. The part of the questionnaires determining the background information had four questions that related to the gender, age group, level of education and experience in form of number of years working in the organization.

The level of education and the number of years working in organization presents the expertise and experience of the respondents ensuring validity and credibility of the data obtained, (Creswell, 2009).

Table 4.1 Gender of Respondents

<u>Gender of the respondents</u>			
	Frequency	Percent	Cumulative Percent
Male	137	66.5	66.5
Female	69	33.5	100
Total	206	100	

Source (Fieldwork,2016)

Two hundred and ten (210) survey questionnaires were distributed; however, two hundred and six were received out of which one hundred and thirty seven male respondents were

representing 66.5% (percent), whereas, 33.5 % (69 respondents) were females. It means that the males dominate the management of the four Education

Directorates. Masculinity vs. Femininity is one of the six culture dimensions of Geert Hofstede. Which categorically mentioned that an organization or society can be male dominated or female dominated. From table 4.1, it indicates that the management of Education Directorates are male dominated. Each of the sexes can be identified in terms of values, cultural principles, sexual characteristics and roles, and authority relation.

Hofstede's dimensions, state that male dominated organizations defined „ preference for attainment, bravery, boldness and substance reward for accomplishment. Whereas, female dominated organizations defined preference for collaboration, humility, concerned for the feeble and excellence life. Women in the individual organization have a propensity to demonstrate diverse principles. In feminine organizations, they contribute to humility and compassionate views uniformly with men. However, in Masculine organization, women are extra categorical and competitive, but irritably less vigorous than men. Additionally, they are on familiar terms with a space between male and female's standards. This measurement is repeatedly seen as forbidden in extremely masculine organizations.

Table 4.2 Age Group of the Respondents

	Frequency	Percent	Cumulative Percent
18-30	19	9.2	9.2
31-40	61	29.6	38.8
41-49	114	55.3	94.2
50 and above	12	5.8	100
Total	206	100	

Source (Fieldwork, 2016)

The table 4.2 presents the age group of the respondents. The survey shows that 19 of the respondents (9.2 %) aged between (18-30), 29.6% (61 respondents) aged between (31-40) whereas 114 respondents (55.3%) were also aged between (41- 49), lastly, 12 of the respondents (5.8%) aged above fifty (50). It is an undeniable fact those ages between

41-49, dominates the institutions are energetic and experienced enough to carry out their responsibilities without much flaws. Their experiences certainly influence the responses they offer to the questions. Table 4.3 Respondent Educational Level

	Frequency	Percent	Cumulative Percent
Junior High	1	0.5	0.5
Senior High	2	1	1.5
Polytechnic	11	5.3	6.8
University	192	93.2	100
Total	206	100	

Source (Fieldwork, 2016)

Educational levels attained by the respondents who responded to the survey questionnaires as reported in table 4.3 ranged from Junior High, Senior High, Polytechnics and University. A total of 192 respondents representing (93.2 %) had a University Education. This was followed by 11 respondents representing 5.3% (11 respondents) the total respondents with Polytechnics Education. Also, 2 respondents representing (1 %) attained High School Education, whereas, a respondent representing (0.5) was a Junior High School leaver.

A greater proportion of the respondents (192 respondents) out of the 206 survey responded attained University Education. The greater number of University graduates who responded to the survey questionnaire means that enough and accurate information is provided by the respondents. They have enough understanding and can accord sound interpretation to the dependent and independent variables (endogenous and exogenous variables).

Table 4.4 Experience of the Respondents

	Frequency	Percent	Cumulative Percent
0-5 years	40	19.4	19.4
6-10 years	102	49.5	68.9
11-15 years	50	24.3	93.2
16-20 years	14	6.8	100
Total	206	100	

Source (Fieldwork, 2016)

From table 4.4, the experience of the respondents partaking in the survey indicates that 19.4 % (40 respondents) had 0-5 years of experience in the organization. A total of 102 respondents (49.5 %) have had between 6-10 years of experience. 11-15 years of experience were 50 respondents (24.3 %) whereas 6.8 % (14 respondents) had between 16 – 20 years of experience.

An assessment of the banded breakdown of the respondents (i.e. < 5 years, 6-10 years, 11-15 years, 16- 20 years) Show that 100 % of the respondents have at least from five years to 20 years of working experience in the management Unit.

An employee is promoted to the Principal Superintendent after successful completion of University Education. After five years of working experience, employees are promoted to the rank of Assistant Director II. This qualifies one to hold management positions, in the Ghana Education Service (G.E.S) under the Ministry of Education (M.O.E).

4.3 Inferential statistical analysis of the data collected

Inferential Statistics employed included the factor analysis and the structure equation model (SEM) analysis. The factor analysis was adopted in the assessments of the barriers or challenges affecting the total quality management implementation. The factor analysis was used primarily to reveal the undisclosed barriers in order of their significance (Field work, 2016). It was also used as a robust statistical analytical approach instead of merely using mean score and analysis of variance.

The Structure Equation Model (SEM), additionally, helps in the development of the evaluative model in assessing the influence of the organizational culture and structure on total quality management implementation.

Table 4.5 Cronbach Alpha test

Scales		Number of Items	Respondents	Cronbach's Alpha
Barriers to TQM Implementation	Strategic Challenges	17	206	0.949
	Structural Challenges	6	206	0.844
	Human Resource Challenges	9	206	0.901
	Contextual Challenges	9	206	0.887
	Procedural Challenges	9	206	0.918
Organizational Cultural Variables	Management Leadership	28	206	0.982
	Employee Involvement	28	206	0.982
	Responsibility of Quality at Source	28	206	0.982
	Effective Teamwork and Coordination	28	206	0.983
	Focus on Customer	28	206	0.981
	Benchmarking	28	206	0.981
	Continuous Improvement	28	206	0.982
Organizational Structural Variables	Management Leadership	14	206	0.937
	Employee Involvement	14	206	0.912
	Responsibility of Quality at Source	14	206	0.924
	Effective Teamwork and Coordination	14	206	0.911
	Focus on Customer	14	206	0.922
	Benchmarking	14	206	0.918
	Continuous Improvement	14	206	0.91

Source (Fieldwork, 2016)

Cronbach Alpha's Coefficient is used to assess the reliability of the instruments and the internal consistency of the measures and the scale (Hair et., al 2014, Fieldwork 2016).

An Alpha value of 0.70 or higher is considered acceptable and reliable for scale reliability and internal consistency of the instruments (Fieldwork 2016). From the above table each of the scale scored at the range of 0.844 to 0.983 indicating a very high reliability rate of the data collected.

Table 4.6 KMO and Bartlett's test.

	Variables	KMO	Bartlett's Test Sig Value	No. Comp	Percentage of Variance Explained
Barriers to TQM Implementation	Strategic Challenges	0.929	0.000	2	61.99 56.32
	Structural Challenges	0.865	0.000	1	56.06
	Human Resource Challenges	0.886	0.000	1	52.86
	Contextual Challenges	0.908	0.000	1	
	Procedural Challenges	0.923	0.000	1	60.64
Organizational Cultural Variables	Management Leadership	0.934	0.000	3	79.47 79.05
	Employee Involvement	0.945	0.000	3	80.52
	Responsibility of Quality at Source	0.946	0.000	3	79.47
	Effective Teamwork and Coordination	0.930	0.000	3	80.20
	Focus on Customer	0.911	0.000	3	
	Benchmarking	0.935	0.000	3	79.63
	Continuous Improvement	0.934	0.000	3	80.94
Organizational Structural Variables	Management Leadership	0.883	0.000	2	73.69 71.76
	Employee Involvement	0.908	0.000	2	73.42
	Responsibility of Quality at Source	0.917	0.000	2	74.52
	Effective Teamwork and Coordination	0.934	0.000	2	74.79
	Focus on Customer	0.918	0.000	2	
	Benchmarking	0.913	0.000	2	74.07
	Continuous Improvement	0.914	0.000	2	70.19

Source (Fieldwork, 2016)

Kaizer Meyer Olkin (KMO) test measures the sampling adequacy and 0.600 is considered more adequate, hence, confirming the adequacy of the sample size for the factor analysis for a study.

In the literature, KMO value of 0.5 is considered enough for sample size to merit factor analysis (Fieldwork, 2016). From table 4.6, its shown that sample adequacy value ranging from 0.883 to 0.946 was recorded indicating very adequate sample size for this study.

Furthermore, the result of the Bartlett test of sphericity recorded with an associated significance of 0.000 (see table 4.6) indicates the existence of potential correlation among the variables pointing the cluster forming factor for the variables (Hair et. al 2014, Field work 2016).

Upon thorough assessment of the vital mandatory pre-checks and preliminary tests of sampling adequacy, population matrix and scale reliability, the data obtained from the questionnaire survey on the influence of organizational culture and structure variables on total quality management implementation was tested adequately. Table 4.7 Definition of Organizational Culture

DOC	Frequency	Percent	Cumulative Percent
DOC 1	31	15	15
DOC2	79	38.3	53.4
DOC3	25	12.1	65.5
DOC4	25	12.1	77.7
DOC5	46	22.3	100
Total	206	100	

Source (Fieldwork, 2016)

There were five selected definition of organizational culture which were identified with the abbreviation DOC1, DOC2, DOC3, DOC4, and DOC5 (Definition of Organizational Culture).

A total of 31 respondents (15 %) selected DOC1, as what vividly describes their organization. 38.3 % (79 respondents) described their organization by selecting DOC2. Also, 25 respondents (12.1 %) selected DOC3 and 12.1 % (25 respondents) identified their organizational culture as DOC4, Whereas, 46 respondents (22.3 %) chooses DOC5 as the definition suitable to their organization's description.

Critical examination of the agreed definition has given the insight to the type and strength of the culture practiced in their organization. Majority of the management agreed that their organizational culture represent the communal ethics, attitude, and philosophy of the organizational elements and it is a produce, marketplace, expertise,

and approach, types of workers, leadership styles and nationwide traditions. If an organization belief in collectivism, decision-making are possible to be decentralized and flexibility culture values can be carried out. This brings about paving ways to implement any improved programme that can increase efficiency, effectiveness and competition. The opposite shall be centralization of decision making under a control culture value which does not recognized employees discretions. The definition defined an organizational culture as a strategy, management styles and a product. The recognition of organizational culture as a strategy could be influence positively and negatively. Depending upon management style adopted, a strategy to prohibit any change of activities apart from the existing practices could mitigate the implementation of TQM. This has affirmed the idea of Robbie Katanga which says „“ Culture is how organization”s do things, a consistent pattern of behavior in organization. That was why Aristotle said “We are what we repeatedly do”. A repeated practice which is anti-change can make it impossible for TQM implementations.

Table 4.8 Definition of Organizational Structure

DOS	Frequency	Percent	Cumulative Percent
DOS1	71	34.5	34.5
DOS2	29	14.1	48.5
DOS3	50	24.3	72.8
DOS4	19	9.2	82
DOS5	22	10.7	92.7
DOS6	15	7.3	100
Total	206	100	

Source (Fieldwork, 2016)

Selected definitions of organizational structure were identified as; DOS1, DOS2, DOS3, DOS4, DOS5 and DOS6. A total respondents of 71 (34.5 %) selected DOS1, as one suitable to their organization, 14.1 % (29 respondents) chooses DOS2, suggesting that

it fits the kind of the organizational structure they have been following at work. Again, 50 respondents (24.3%) stated that DOS3 represents their organizational structure. Also, 9.2 % (19 respondents) indicates that DOS4 best suited their structure and 22 respondents (10.7 %) selected DOS5 whereas 7.5 % (15 respondents) selected DOS6 as the best definition which best describes their organizational structure. Greater proportion of the respondent agreed to DOS1, Defining their organizational structure as the “typically hierarchical arrangement of lines of authority, communications, rights and duties of an organization. This definition signifies that an organization structure signifies how responsibilities, authority, and accountability are arranged, restricted and harmonized including information flows between the diverse degrees of management.

A typical hierarchical arrangement structures cannot promote TQM implementation rather a flatter structure can allow horizontal decision making aimed at improving efficiency, effectiveness and competitiveness through rolling of improved quality programmes such as TQM. The typically hierarchical arrangement of line of authority promotes vertical decision-making which does not recognize employee’s discretions. Hence, any problem that occurs cannot be identify and resolved by the employees, rather they wait for approval and permission to do such corrections. They feel not being a member of the decision making body. Flatter organizations respect and encourage employees to be innovative and take decisions in the interest of the organization as a whole, and correct any identified quality and other problems without necessarily waiting on to- managements.

4.4 Challenges of TQM implementation

Implementation of TQM is always faced with series of challenges or barriers hindering the successful implementation. Although, TQM implementation comes with many success stories, experience and benefits, its implementation is always faced with bans

of challenges. Rahmanet et al. (2011) proposes few challenges such as Cultural challenges, Management challenges, Language Challenges and Team challenges. In this study, the researcher is considering the five domains of challenges to TQM implementation, namely; Strategic challenges, Structural challenges, Human resources challenges, Contextual challenges and Procedural challenges within the four Education Directorates of Ashanti Region. This was to ascertain by determining the extent to which these challenges affect TQM implementation within the above mentioned organizations.

Table 4.9 Barriers to TQM implementation

	N	No. of Indicators	Mean	Std. Deviation	RI	Ranking
Structural Challenges	206	6	4.09	0.956	0.82	1
Procedural Challenges	206	9	4.02	0.997	0.80	2
Strategic Challenges	206	17	4.00	0.985	0.80	3
Human Resource Challenges	206	9	3.99	0.970	0.80	4
Contextual Challenges	206	9	3.73	0.886	0.74	5

Field work (2016)

4.4.1 Structural Challenges

According to the respondents view on this research the five domains of the barriers to (TQM) implementation, Structural challenge scored a mean of 4.09 (0.956 as a standard deviation representing 0.82 Relative indexes), meaning that structural challenge is the first critical challenge which affects (TQM) implementation High. Considered factors such as deficient in information system, deficiency in financial support within the structural challenge were ranked as highly influencing (TQM) implementation whiles the other factors of Structural challenges such as; short of organizational flexibility, inadequate material resources, short of time and inappropriate organizational structure influence total quality management implementation as Medium. This indicates that Structural challenge is the first most critical factor affecting (TQM) implementation.

Ron (1999) ascertained the fact that the most significant factor that may affect (TQM) implementation is the organizational structure (structural challenge). He emphasized that the availability of organization's players and procedures are significant. Dean and Brown (1991) revealed that a broad variety of structural options, organizations agreement with enlarged complication vagueness and interdependence.

Table 4.10 Structural Challenges

	N	Mean	Std. Deviation	Relative Index	Ranking
Lack of information system	206	4.12	1.167	0.82	1
Lack of financial support	206	4.09	1.032	0.82	2
Lack of organizational flexibility	206	3.94	1.22	0.79	3
Lack of physical resources	206	3.88	1.071	0.78	4
Lack of time	206	3.86	1.091	0.77	5
Inappropriate organizational structure	206	3.75	1.242	0.75	6

Source (Fieldwork, 2016)

4.4.2 Procedural Challenges

This study revealed that among the five domains of the barriers to TQM implementation, Procedural Challenge scored a mean of 4.02 (0.997, 0.80 representing Standard deviation and Relative indexes respectively), indicating that Procedural Challenge came as the second highest barrier affecting total quality management (TQM) implementation, within the four Directorates of Education in the Ashanti Region of Ghana. Considering factors such as deficient in participation of suppliers, short of concentration on the clients, Willingness to perk up excellence in quality efforts involves much times, short of sufficient procedure management and deficiency in assessment and self appraisal within the procedural challenge, were considered as highly influencing TQM implementation whiles Lack of focus, Change agent or council incompetence, Bureaucracy and ineffective actions affect TQM implementation Medium.

Table 4.11 Procedural Challenges-Descriptive Statistics

	N	Mean	Std. Deviation	Relative Index	Ranking
Lack of involvement of suppliers	206	4.12	1.143	0.82	1
Lack of concentration on the clients	206	4.1	1.079	0.82	2
Effort to improve quality are time consuming	206	4.06	1.156	0.81	3
Lack of adequate process management	206	4.05	1.149	0.81	4
Lack of evaluation and If evaluation	206	4.05	1.103	0.81	5
Lack of focus	206	3.88	1.184	0.78	6
Change agent or council incompetence	206	3.88	1.137	0.78	7
Bureaucracy	206	3.83	0.999	0.77	8
Ineffective action	206	3.73	1.136	0.75	9

Source (Fieldwork, 2016)

4.4.3 Strategic Challenges

According to table 4.9 on the Barriers affecting TQM implementation, Strategic Challenge scored a mean of 4.00 (0.985 as a Standard deviation and 0.80 also as a Relative index), indicating that among the five domains of the Barriers to (TQM) implementations, Strategic Challenges came third as one of the most important factors affecting the implementation of the total quality management (TQM). Within the Strategic Challenges factors such as, Inadequate planning, inadequate long term vision, short of government support, Difficult leadership and short of steadiness of aims were selected as Highly influencing the implementation of (TQM) while Lack of top management to strength of middle management were shown as influencing (TQM) implementation Medium.

Table 4.12 Strategic Challenges-Descriptive Statistics

	N	Mean	Std. Deviation	RII	Ranking
Inadequate planning	206	4.06	1.133	0.81	1
Lack of long term vision	206	4.04	1.149	0.81	2
Lack of government support	206	4.03	1.036	0.81	3
Difficult leadership	206	4.03	1.193	0.81	4
Lack of consistency of objectives	206	4.02	1.079	0.80	5
Lack of vision and a clear direction	206	3.99	1.084	0.80	6
Lack of top-management support	206	3.96	1.221	0.79	7

Conflicting objectives and directions	206	3.96	1.033	0.79	8
Lack of priority improving the quality	206	3.95	1.065	0.79	9
Poor involvement of managers	206	3.95	1.114	0.79	10
Poor management	206	3.93	1.179	0.79	11
Previous failure in terms of initiation of change	206	3.88	1.135	0.78	12
Unrealistic expectations	206	3.87	1.004	0.77	13
Political uncertain	206	3.85	1.165	0.77	14
Barriers to the adoption of the TQM	206	3.84	1.217	0.77	15
Inappropriate TQM program	206	3.8	1.339	0.76	16
Strength of middle management	206	3.67	1.071	0.73	17

Source (Fieldwork, 2016)

4.4.4 Human Resource Challenges

Human Resources Challenges were scored with the mean of 3.99 (0.970, and 0.80 representing Standard deviation and Relative indexes), which shows that among the five Barriers under consideration, Human resources challenges were selected as the fourth most important barriers affecting (TQM) implementation. Within the Human resources challenges factors such as, short of dedication and interest of workers, inadequate incentive and fulfillment and a difficult human resources management were shown as the human resources factors affecting (TQM) highly, while Poor delegation of hierarchical, levels Lack of training and education and fewer employees work task increasing higher were shown as factors of human resources affecting (TQM) implementation Medium.

Table 4.13 Human Resource Challenges-Descriptive Statistics

	N	Mean	Std. Deviation	Relative Index	Ranking
Lack of commitment and interest of employees	206	4.09	1.087	0.82	1
Lack of motivation and satisfaction of employees	206	4.09	1.149	0.82	2
A difficult human resource management	206	4.01	1.154	0.80	3
Poor delegation of all hierarchical levels	206	3.95	1.153	0.79	4
Lack of recognition and reward of success	206	3.91	1.123	0.78	5

Employees resistant to change	206	3.89	1.182	0.78	6
Lack of training and education of employees	206	3.87	1.097	0.77	7
Lack of interest of employees	206	3.77	1.169	0.75	8
Fewer employees work task and increasingly higher	206	3.76	1.133	0.75	9

Source (Fieldwork, 2016)

4.4.5 Contextual Challenges

Lastly, Contextual Challenge scored a mean of 3.99 (0.886 and 0.74 representing Standard deviation and Relative index), indicating that Contextual Challenges among the five domains of Challenges of (TQM) implementation came the fifth, hence, affecting (TQM) implementation as Medium among the five main challenges. However, within the Contextual challenges were Lack of guidance and ineffectiveness and Poor coordination which were selected as the Highly influencing factor of the (TQM) implementation while difficult in changing organizational culture, Lack of confidence of employees, Political behavior the adversity of workforce, Inadequate organizational culture, Mentality barriers, lack of innovation and Cultural issues resolutions were also considered as contextual challenge factors influencing (TQM) implementation Medium. This means that challenges that arise when there are developed context and a culture appropriate to achieve the highest potential of the deploying of the total quality management (TQM) has a less influence on (TQM) implementation.

Table 4.14 Contextual Challenges-Descriptive Statistics

	N	Mean	Std. Deviation	Relative Index	Ranking
Lack of guidance and ineffectiveness	206	4.01	1.164	0.80	1
Poor coordination	206	4.01	1.109	0.80	2
Difficulty in changing organizational culture	206	3.98	1.135	0.80	3
Lack of confidence of employees	206	3.96	1.026	0.79	4
Political behavior the adversity of workforce	206	3.72	1.062	0.74	5
Inadequate organizational culture	206	3.71	1.257	0.74	6

Mentality barriers	206	3.64	1.086	0.73	7
Lack of innovation	206	3.63	1.292	0.73	8
Cultural issues resolution	206	3.6	1.241	0.72	9

Source (Fieldwork, 2016)

Tables 4.15 Indication of the extent to which the seven (7) building blocks of TQM contribute to successes of an organization.

	N	Mean	Std. Deviation	RII	Ranking
Continuous improvement	206	4.76	0.592	0.95	1
Benchmarking	206	4.69	0.711	0.94	2
Focus on customer	206	4.62	0.665	0.92	3
Management leadership	206	4.55	0.605	0.91	4
Effective Teamwork and coordination	206	4.09	1.636	0.82	5
Employee involvement	206	4.03	1.682	0.81	6
Responsibility of quality at source	206	4.03	1.617	0.81	7

Source (Fieldwork, 2016)

4.5 TQM Implementation

This study has revealed that all the seven (7) building blocks of the total quality management (Management leadership, Employees involvement, Responsibility of quality at source, Effective teamwork and coordination, Focus on customers, Benchmarking and continuous improvement) have high influence on total quality management implementation, by existing culture and structure of an organization. This has vividly confirmed the validity of the philosophy (total quality management) programme as viable and cannot promote failure of the organizations in total quality management programme implementation. Failure of introducing new quality programme to an organization cannot be attributed to the ineffectiveness of the programme rather the existing culture and structure of the organization. Assessing the influence of the existing culture and structure on the seven building blocks has become necessary and significant due to the increasing failure of the total quality management implementation. Several literatures affirmed to the fact that its failures cannot be attributed to the total quality management as a quality programme but the existing forces of culture and structure which this study has confirmed. It is obvious that when we

determined a culture and structure challenges within an organizational context, it is a step towards reaching successful implementation of total quality management. This happens by improving on existence effort through identification and measurement of critical barriers that inhibits total quality implementation.

Continuous improvement, Benchmarking and Focus on customers were the first three total quality management principles which were identified as highly influenced by existing culture and structure. The remaining principles were scored the mean above 4, indicating high influence. Johnson (2003) argues that the main challenges of total quality management implementation were benchmarking which this study has confirmed and added continuous improvement.

4.6 The influence of organizational culture and Structure Variables on (TQM) implementation

4.6.1 Outline of section

Under this section, development of an evaluative model on the influence of the organizational culture and structure variables on total quality management implementation are essentially explained. Categorized functions and statistical assessment under the Structural Equation Modeling (SEM) approach were vividly carried out to help in developing a well fitting and acceptable model. The section ends with an in-depth discussion of the significance of the findings.

4.6.2 Structural Equation Modeling (SEM)

In testing the hypothesized models there are two main dominant approaches; Path analysis model and Measurement model (Hair et al., 2013; Wong, 2011; Kline, 2010). To choose from the two main types, it is advisable to be guided by the underlying constructs of the study and three conditions of degree of isolation, association and

directionality which usually demonstrate causality (Hair et al., 2013; Kline, 2010; Bentler, 2005).

Kline(2010), Hair et al., 2013) and Bentler (2005) suggest Measurement factor model as been more suitable and appropriate for operationalizing and testing theory that is complex in hypothetical latent constructs. However, Path analysis model accept only observed variables of which each variable possesses one indicator and its assumed that all variables are measured without error. This assertion was criticized by Hair et al. (2010) that a measure of construct through the use of statistical tool and analysis cannot be without an error, hence rendered Path analysis model not efficient and appropriate for behavioral measures psychology, education and intelligence. However, Path model are said to be appropriate and suitable for linear causal relationship which are directionality but unable to indicate the degree of isolation and association (Lie and Wong, 2008).

Realistically, measured factor structure equation models use latent variables to cater for measured error to make them more fitting and effective to measure the construct (Kline, 2010). It was noticed that this study revealed variables contained in the instrument which are unobserved latent variables (exogenous and endogenous variables) which cannot be measured directly but rather are inferred, which are indicators.

Furthermore, it could be emphasized that the evaluation and measurement of the influence of the organizational culture and structure variables on total quality management implementation is a complex construct, in view of this, clarification, measured factor model, is more appropriate and suitable for this study, since it is capable of predicting, evaluating and depiction of complex causal relationship (directionality variables in a complex hypothetical constructs (Bartler, 2005).

The above mentioned advantages inferred the use of Measure factor model Structural Equation Modeling (SEM) with Equations software (EQS) version 6.2 in evaluating the influence of the organizational culture and structure variables on total quality management implementation.

4.6.3 Structural Equation modeling analytic strategy

Suggestions were made from scholars that Structural Equation Modeling (SEM) should follow processes by using analytical strategy in order to meet the hypothesized construct model. These processes are identified as; Model identification, model specification, data collection, model estimation and model evaluation which is hypothesis testing and model modification if the need arises Bentler, 2005; Kline, 2010).

Kline, (2010), asserts that a factor model with various factor are decomposed into zillion sub-models of each of the factors.

Therefore, necessary to firstly analyze each of the sub-models to determined fitness in the main model before the main model assessment.

Others suggested that after the identification of the model and the data collection, latent factor measurement model in the construct must be firstly, be analyzed before the analysis of the full Structural Equation Modeling (SEM) model, for the purpose of building and developing fitting model, this is what is known as two-stage approach.

Analyzing and evaluating using Confirmatory factor Analysis (CFA) or Exploratory Factor Analysis (EFA) for ensuring undimensionality of the model and scale reliability test and construct validity of the factors before the main model assessment is recommended in Structural Equation Modeling (SEM) analysis when theoretical foundation underpinned the survey and the hypothesized model.

The study adopted the two- stage approach in the model analysis as it avoids model misfit.

Justification of the use of confirmatory factor Analysis (CFA) approach, made it possible for study to use it for evaluation for the model.

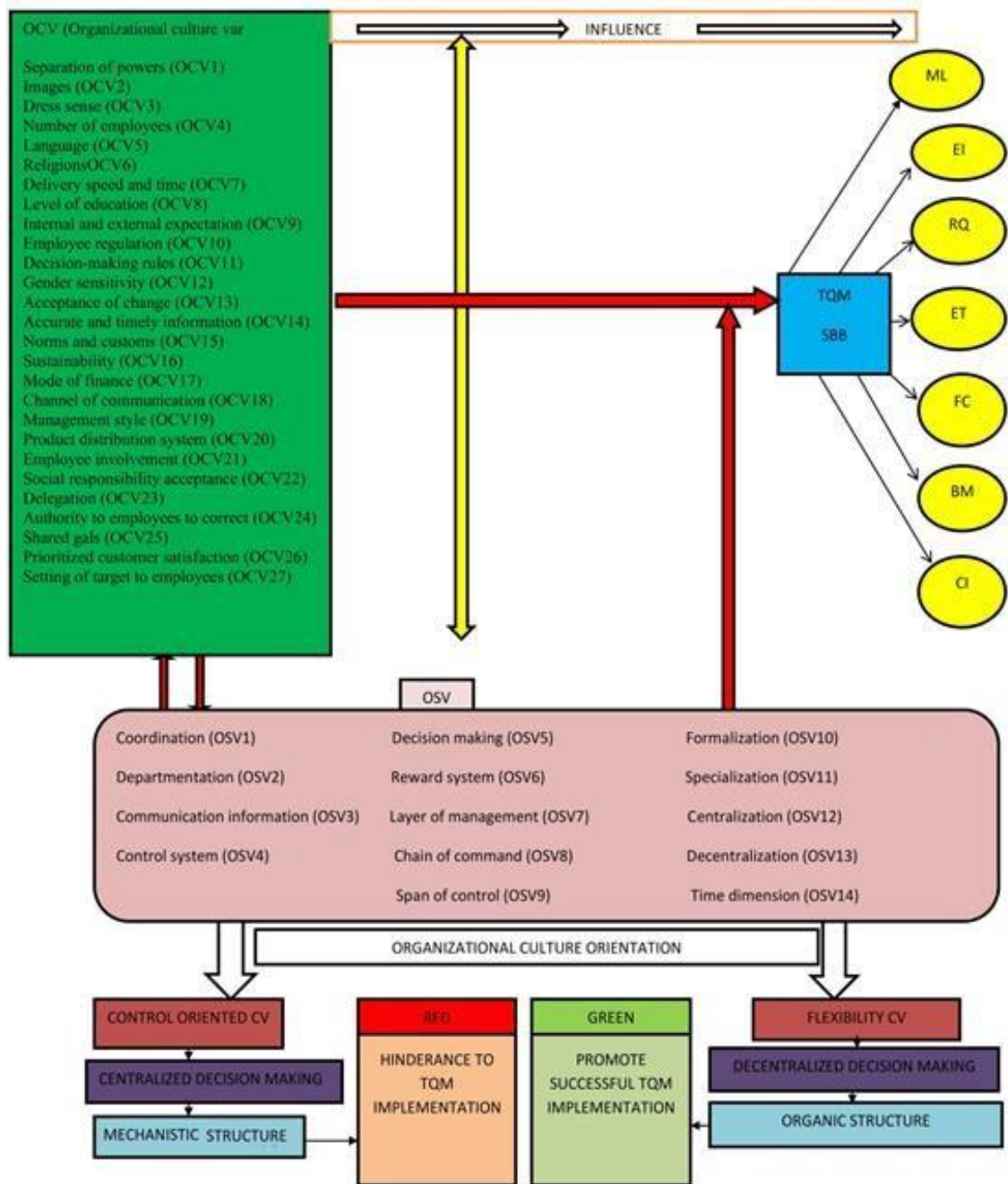
The Second stage on the Structural Equation Modeling (SEM) Analysis strategy includes testing of the full model fit for the underpinning hypothesized constructs.

This is done by determining and explaining how each exogenous variable (organizational culture and structural variables) directly influence the values of the endogenous variables (the seven building blocks of TQM). This is made possible by a comparative assessment that exist between the covariance matrix which emanated from particular sample and the covariance matrix emanating from the hypothesized model as well as fit statistics which was to determined the acceptability of the findings obtained (Kline, 2010).

4.6.4 Hypothesized Evaluative model on the influence of organizational culture and structural variables on TQM implementation (exogenous and endogenous variables).

The tested Hypothesize was based on the fact that organizational culture and structural variables influence total quality management implementation. The Exogenous variables (organizational culture and structural variables) serve as a blockage to the total quality management seven building blocks (endogenous variables).

The hypothesized model connects the exogenous variables to the endogenous variables, in a way of finding the causal relationship between the independent variable and the dependent variable.



Source (Fieldwork, 2016)

Figure 4.1. Evaluative Hypothesized Model

There are two methods or approaches to measure fitness used in this study. Although, there are several of such measures, for the purposes of this study, an Incremental Fitness and an Absolute Fitness were used to measure the fitness of the model.

From table 4.16 Confirmatory Factor Analysis (CFA) recorded 0.922. Scholars such as (Bentler, 2005) suggested an acceptable level of fit to be $x > 0.90$ and a good fit of $X > 0.95$. The CFA record, produced by this study (0.922) indicates an acceptable level of goodness-of-fit for the model. On the Absolute class of model fit assessment, RMSEA recorded 0.024 which indicates good fit. Lei and Wu (2008) suggested that RMSEA value of less than 0.05 are considered good fit whereas if the value is less than 0.08 is an indication of acceptable fit. This study recorded a RMSEA value of 0.024, which is a good fit.

The P-value significance level of 0.05 implies the considered values for this research is significantly influencing the variables.

Kline, (2010), Iacobucci (2010) and Byrne (2006) suggested that a chi-square value of 3.0 is deemed a good fit whereas 5.0 are considered acceptable fit. The chi-square value fall below the acceptable limit of the 5.0 indicating acceptable fit. (Kline, 2010; Byrne, 2006). The inference can be made that the hypothesized model is adequately fit the sample.

Table 4.17 Comparison of Goodness of-fit measures of proposed model on influence of organizational culture and structure on TQM

Goodness-of-fit Measure	Levels of Acceptable fit	Calculation of Measure	Remarks
Incremental fit			
CFI	$x \geq 0.90$ (Acceptable) 0.95 (Good fit)	$0.922 \ x \geq$	<i>acceptable</i>
Absolute fit			
RMSEA	$x \leq 0.08$ (Acceptable) 0.05 (Good fit)	$0.024 \ x \leq$	<i>good</i>
p-Value	$x \leq 0.05$	Chi-square = 3668.739, df=880, p-Value=0.000	

(Statistical Significance at 5% level)

NOTES: RMSEA, Root Mean Square Error of Approximation; **CFI**, Comparative Fit Index

4.6.5 Factor loadings, variance accounted for and construct validity of the model testing (OCV and TQM)

Determination of the predictive accuracy of the constructs of this research revealed that the R^2 value show substantial, moderate and weak level of predictive accuracy. Frank et al suggest that R^2 values can be 0.75, meaning a substantial predictive accuracy level, whereas 0.50 indicates a moderate predictive accuracy level and 0.25 which means weak predictive accuracy level. From table 4.12, the R^2 values from 0.768 to 0.442 as the least value on the exogenous variables and 0.886 to 0.098 for the endogenous variables. This indicate that the variables prediction of the constructs were accurate.

Furthermore, on the Cronbach's alpha Coefficient of internal consistency and reliability assessments, table 4.12 records 0.934 for the organizational culture variables and 0.722 for the seven building blocks of the total quality management. Conventionally, 0.7 and 0.5 suggested by Bentler, 2005 and Hair et al, 20014 respectively. The Alpha value of 0.7 was considered acceptable and reliable. Again, Path Coefficient was used to assess the relationship between the construct considered in the model.

Path Coefficient of 0.697 and 0.536 was recorded for the two sets of the exogenous variables (organizational culture and structure respectively). In the Path Coefficient the greater the values the better the determination of the relationship.

On the Standard Coefficient, where the significance of the influence was determined, the values recorded indicate significant influence of the exogenous variables on the endogenous variables. Conventionally, Standard coefficient ranges from 0 to 1.00. If the standard coefficient is closer to 1.00 then there are significant influences of the explanatory variables on the criterion variables.

Significance level of influence of 0.05 or less is said to be acceptable (Field work, 2016).

In this study all the significance levels were .000 indicating a significant influence.

Feasibility of a generated model and how the obtained findings satisfy the hypothesis being tested is the paramount rationale behind Structural Equation Modeling (SEM), (Hair et al, 2014; Kline 2010). Determining the significance of the parameters estimated and the test statistics to assess the feasibility of the model was conducted examining the values of the Standardized estimates and the Z-test (Kline, 2010; Kaplan, 2009). The standardized estimates and the z- test obtained in the findings revealed that the parameter estimates were adequate and reasonable in terms of the magnitudes, signs and the statistical significance and the adequate measure. This is because all the Z-values are more than the conventional minimum of 1.96 values. A standardized Coefficient close to 1.00 indicates significant influence on the dependent variable. The level of influence of the exogenous variables on the dependent variables increases the standard coefficient resulting in the reduction in the significance level.

Table 4.18 Factor loadings, variance accounted for and construct validity of model testing (OCV)

Indicator Variable	Standardized Coefficient	Z-Values	R Squared (R^2)	Path Coefficient (SE)	Cronbach's Alpha	Significant level at 0.05
OCV1	0.739	10.805	0.676			.000
OCV2	0.820	11.996	0.768			.000
OCV3	0.677	9.909	0.637			.000
OCV4	0.725	10.610	0.674			.000
OCV5	0.621	9.087	0.541			.000
OCV6	0.617	9.028	0.502			.000
OCV7	0.630	9.216	0.584	0.697		.000
OCV8	0.688	10.065	0.641			.000
OCV9	0.549	8.031	0.442			.000
OCV10	0.714	10.439	0.652			.000
OCV11	0.638	9.331	0.601		0.934	.000

OCV12	0.612	8.946	0.499	OCV15	.000
OCV13	0.707	10.336	0.650		.000
OCV14	0.629	9.206	0.586		.000
	9.657	0.614	.000		0.660
OCV16	0.721	10.553	0.672		.000
OCV17	0.781	11.432	0.742		.000
OCV19	0.746	10.936	0.689		.000
OCV20	0.701	10.254	0.646		.000
OCV21	0.695	10.169	0.644		.000
OCV22	0.820	11.992	0.766		.000
OCV23	0.759	11.110	0.699		.000
OCV24	0.681	9.966	0.639		.000
OCV25	0.667	9.752	0.628		.000
OCV26	0.645	9.437	0.606		.000
OCV27	0.690	10.095	0.642		.000
OCV28	0.762	11.148	0.701		.000

Source (Fieldwork, 2016)

Table 4.19 Factor loadings, variance accounted for and construct validity of model testing (TQM)

Indicator Variable	Standardized Coefficient	Z-Values	R Squared (R^2)	Path Coefficient (SE)	Cronbach's Alpha	Significant level at 0.05
TQMA		24.879				.000
TQMB	0.406	4.516	0.098			.000
TQMC	0.428	4.697	0.104			.000
TQMD	0.475	5.154	0.201			.000
TQME	0.703	24.091	0.708			.000
TQMF	0.731	24.095	0.711			.000
TQMG	0.970	30.478	0.886		0.722	.000

Source (Fieldwork, 2016)

0.792

0.784

4.6.6 Factor loadings, Variance accounted for and construct validity of model testing (OSV and TQM)

The R-Square spelled out the amount of the variations in the dependent variables explained by the independent variables. The higher the R-Square the higher the

influence .A bigger variation means multi- collineality. Critic by the econometrics states that such a perfect relationship is a retrogression and not acceptable.

Examining the predictive accuracy of the constructs of the organizational structure and the seven building blocks of the total quality management revealed that the R- Square (R^2) values denotes moderate and weak levels of predictive accuracy (Hair et al , 2014 & 13). The R- Square values recorded in this study ranges from 0.682 to 0.126. Conventionally, R- Square value of 0.75 stands for substantial predictive accuracy level, where 0.50 indicates moderate level of predictive accuracy and last but not the least 0.25 indicating weak predictive accuracy level.

Again, Cronbach's alpha Coefficient is used to assess the reliability of the instruments and the internal consistency of the constructs. An Alpha value of 0.70 or higher was considered acceptable and reliable. The Reliability Coefficient of this study was 0.883 which is considered acceptable and reliable. However, Hair et al, suggested 0.05 as an acceptable level of reliability.

Also, Path Coefficient is to measure the relationship between the variables. The relationship between the exogenous variables (organizational structure variables) and the seven building blocks of the total quality management variables are to be measured to establish the relationship between the two variables. The higher the value of the Path Coefficient the better the relationships. The study has established Path Coefficient value of 0.536 for the second sets of exogenous variables which is significant.

Additionally, the significant level of the measures are to be 0.05 indicating significant influence. The study's values of significant level are all below 0. 05 indicating significant influence between the variables.

Feasibility of a generated model and how obtained results satisfy the hypothesis being tested is the main reason behind Structural Equation Modeling (SEM), (Hair et al., 2014; Kline, 2010). Determining the significance of the parameters estimated and the test statistics to assess the feasibility of the model was conducted examining the values of the Standardized estimates and the Z-test (Kline, 2010; Kaplan, 2009). The standardized estimates and the Z- values obtained in the results revealed that the parameter estimates were more than the cut-off value of 1.96 adequate and reasonable in terms of the magnitudes. A standardized Coefficient close to 1.00 indicates significant influence on the dependent variable. The level of influence of the exogenous variables on the dependent variables increases the standard coefficient resulting in the reduction in the significance level.

Table 4.20: Factor loadings, variance accounted for and construct validity of model testing (OSV)

Indicator Variable	Standardized Coefficient	Z- Values	R Squared (R^2)	Path Coefficient (SE)	Cronbach's Alpha	Significant level 0.05 at
OSV1	0.621	9.854	0.499			.000
OSV2	0.598	9.489	0.478			.000
OSV3	0.641	10.160	0.502			.000
OSV4	0.434	6.884	0.303			.000
OSV5	0.474	7.521	0.359			.000
OSV6	0.734	11.643	0.682			.000
OSV7	0.691	10.954	0.542			.000
OSV8	0.537	8.513	0.388			.000
OSV9	0.595	9.437	0.468			.000
OSV10	0.579	9.184	0.406			.000
OSV11	0.621	9.853	0.498			.000
OSV12	0.250	3.973	0.126	0.536	0.883	.000

OSV13	0.717	11.376	0.601	.000
OSV14	0.723	11.478	0.623	.000

Source (Fieldwork, 2016)

4.6.7 Kaiser Meyer Olkin and Bartlett's Test for the OCV1A- to- OCV28A Kaisers

Meyer Olkin (KMO) measures the adequacy of a sample. Conventionally, sample adequacy of 0.5 is considered very adequate for factor analysis (Hair et al , 2014 ;Field work 2016) . In this study the (KMO) value of 0.900 was recorded confirming the adequacy of the sample size for factor analysis in this research work.

Furthermore, the results of the Bartlett test of sphericity recorded 8278.016 in tandem with the significance level of 0.000 implying potential correlation within the variables and as a confirmation of the potential cluster forming factor from the variables. The value of the Sphericity affirmed non-identity nature of the population matrix.

Earlier statement suggests a Cronbach's alpha value of 0.934 obtained affirming acceptable level of internal consistency and reliability in the measures and the scale.

Ideally, Cronbach's alpha value of 0.70 is assumed good scale reliability and internal consistency of the instruments.

Table 4.21 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.934
Approx. Chi-Square			8278.016
Bartlett's Test of Sphericity	dfs		378
Sig.			.000

Source (Fieldwork, 2016)

4.6.8 Communalities for OVCA- to- OCV28

Before carrying out the Principal Component Assessment on the first sets of exogenous variables (PCA) , the extracted variables on each assessed variables were presented in

the table 4.9.4 (Communalities).The usefulness of the communalities was to decide the variables that have to be extracted (Field work, 2016). Communalities identify total amount of original variables with each other variables included in the factor analysis (Hair et al., 2014; Fieldwork, 2016). The highest communality value of 0.883 was recorded as against 0.60 recommended by Motulsky (2005) for reliable results and interpretation in factor analysis. Hence, the communality extracted supported the use of the factor analysis. Conventional, communality values in factor analysis suggests that a potential significance variable must yield an extraction value (eigenvalue) more than 0.50 at the initial iteration (Hair et al., 2014). This means are used to determine the inclusion or removal of the variables for further analysis.

According to the table 4.16, one (1) variable (Risk taking) had its extracted eigenvalue less than the 0.50 suggested limit that does not explain much variance and thus was subsequently dropped from the analysis (Hair et al, 2014; Field work 2016).The remaining twenty seven (27) variables with communalities above 0.50 were carried to the factor analysis extraction.

Table 4.22 Communalities

	Initial	Extraction
Separation of powers	1.000	.830
Image	1.000	.728
Dress sense and clothes fashion	1.000	.866
Product distribution system	1.000	.776
Number of employees	1.000	.718
Language	1.000	.720
Religion	1.000	.746
Delivery speed and time	1.000	.791
Level of education and literacy	1.000	.749
Internal and external expectation	1.000	.818
Employee regulation	1.000	.769
Decision making rules	1.000	.724
Gender sensitivity	1.000	.689

Norms and customs	1.000	.818
Employee involvement	1.000	.810
Social responsibility acceptance	1.000	.739
Acceptance of change	1.000	.553
Delegation	1.000	.726
Authority to employees to correct	1.000	.760
Boss-subordinate teamwork	1.000	.841
Access to timely and accurate information	1.000	.802
Prioritized customer satisfaction	1.000	.761
Setting of target to employees	1.000	.883
Sustainability	1.000	.803
Entrepreneurship	1.000	.813
Individualism vs. collectivism	1.000	.805
Uncertainty avoidance	1.000	.833

Source (Fieldwork, 2016)

4.6.9 Kaiser Meyer Olkin and Bartlett's Test for the OSV1A- to- OSV14A Keizer

Meyer Olkin (KMO) measures the adequacy of a sample. Conventionally, sample adequacy of 0.5 is considered very adequate for factor analysis (Hair et al , 2014 ;Field work 2016) . In this study the (KMO) value of 0.800 was recorded confirming the adequacy of the sample size for factor analysis.

Nevertheless, the results of the Bartlett test of sphericity recorded 3071.541 in tandem with the significance level of 0.000 indicating potential correlation among the variables and as a confirmation of the potential cluster forming factor from the variables. The value of the Sphericity affirmed non-identity nature of the population matrix.

Table 4.23 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.883
Approx. Chi-Square		3071.541
Bartlett's Test of Sphericity	df	91
	Sig.	.000

Source (Fieldwork, 2016)

4.6.10 Communalities

Carrying out the Principal Component Assessment (PCA) On the second sets of exogenous variables, the extracted variables on each assessed variables were presented in the table 4.18 (Communalities). The usefulness of the communalities was to decide the variables that have to be extracted (Field work, 2016). Communalities identify total amount of original variables with each other variables included in the factor analysis (Hair et al., 2014; Fieldwork, 2016). The highest communality value of 0.880 were recorded as against 0.60 recommended by Motulsky, (2005) for reliable results and interpretation in factor analysis. Hence, the communality extracted supported the use of the factor analysis. Conventional, communality values in factor analysis suggests that a potential significance variable must yield an extraction value (eigenvalue) more than 0.50 at the initial iteration (Hair et al., 2014). This means are used to determine the inclusion or removal of the variables for further analysis.

According to the table 4.24, All the variable had its extracted eigenvalue greater than the 0.50 suggested limit that explain much variance of the variable. All the fourteen (14) variables with communalities above 0.50 were carried to the factor analysis extraction. This is to put in record that non- of the variables under the second sets of the exogenous variables were dropped.

Table 4.24 Communalities

	Initial	Extraction
Coordination	1.000	.868
Departmentation	1.000	.723
Communication and information	1.000	.791
Control system	1.000	.616
Decision making	1.000	.680
Reward system	1.000	.705
Layer of management	1.000	.880
Chain of command	1.000	.759

Span of control	1.000	.798
Formalization	1.000	.618
Specialization	1.000	.744
Centralization	1.000	.660
Decentralization	1.000	.698
Time dimension	1.000	.777

Source (Fieldwork, 2016)

Extraction Method: Principal Component Analysis.

4.6.11 Kaiser Meyer Olkin and Bartlett's Test

Keizer Meyer Olkin (KMO) measures the adequacy of a sample. Conventionally, sample adequacy of 0.5 is considered very adequate for factor analysis (Hair et al., 2014; Field work 2016) . In this study the (KMO) value of 0.700 was recorded confirming the adequacy of the sample size for factor analysis in this research work.

Furthermore, the results of the Bartlett test of sphericity recorded 1494.592 in tandem with the significance level of 0.000 implying potential correlation within the variables and as affirmation of the potential cluster forming factor from the variables. The value of the Sphericity affirmed non-identity nature of the population matrix.

Table 4.25 KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Approx. Chi-Square		1494.592
Bartlett's Test of Sphericity	df	21
	Sig.	.000

Source (Fieldwork, 20216)

4.6.12 Communalities.

Preceding Principal Component Assessment (PCA), On the Seven building blocks of total quality management (Management leadership, Employees involvement, Responsibility of quality at source, Effective Teamwork and Coordination, Focus on

consumer, Benchmarking and Continuous improvement) , the extracted variables on each assessed variables were presented in the table 4.9.10 (Communalities).The usefulness of the communalities was to decide the variables that have to be extracted (Field work, 2016). Communalities identify total amount of original variables with each other variables included in the factor analysis (Hair et al., 2014; Fieldwork, 2016). The highest communality value of 0. 970 were recorded as against 0.60 recommended by Motulsky (2005) for reliable results and interpretation in factor analysis. Hence, the communality extracted supported the use of the factor analysis. Conventional, communality values in factor analysis suggests that a potential significance variable must yield an extraction value (eigenvalue) more than 0.50 at the initial iteration (Hair et al, 2014). This means are used to determine the inclusion or removal of the variables for further analysis.

According to the table 4.26, the entire variable had its extracted eigenvalue greater than the 0.50 suggested limit that explain much variance. All the seven building blocks of TQM variables with communalities above 0.50 were carried to the factor analysis extraction. It worth mentioning that none of the variables were dropped for the factor analysis, they were all iterated to the factor analysis (Fieldwork, 2016).

Table 4.26 Communalities

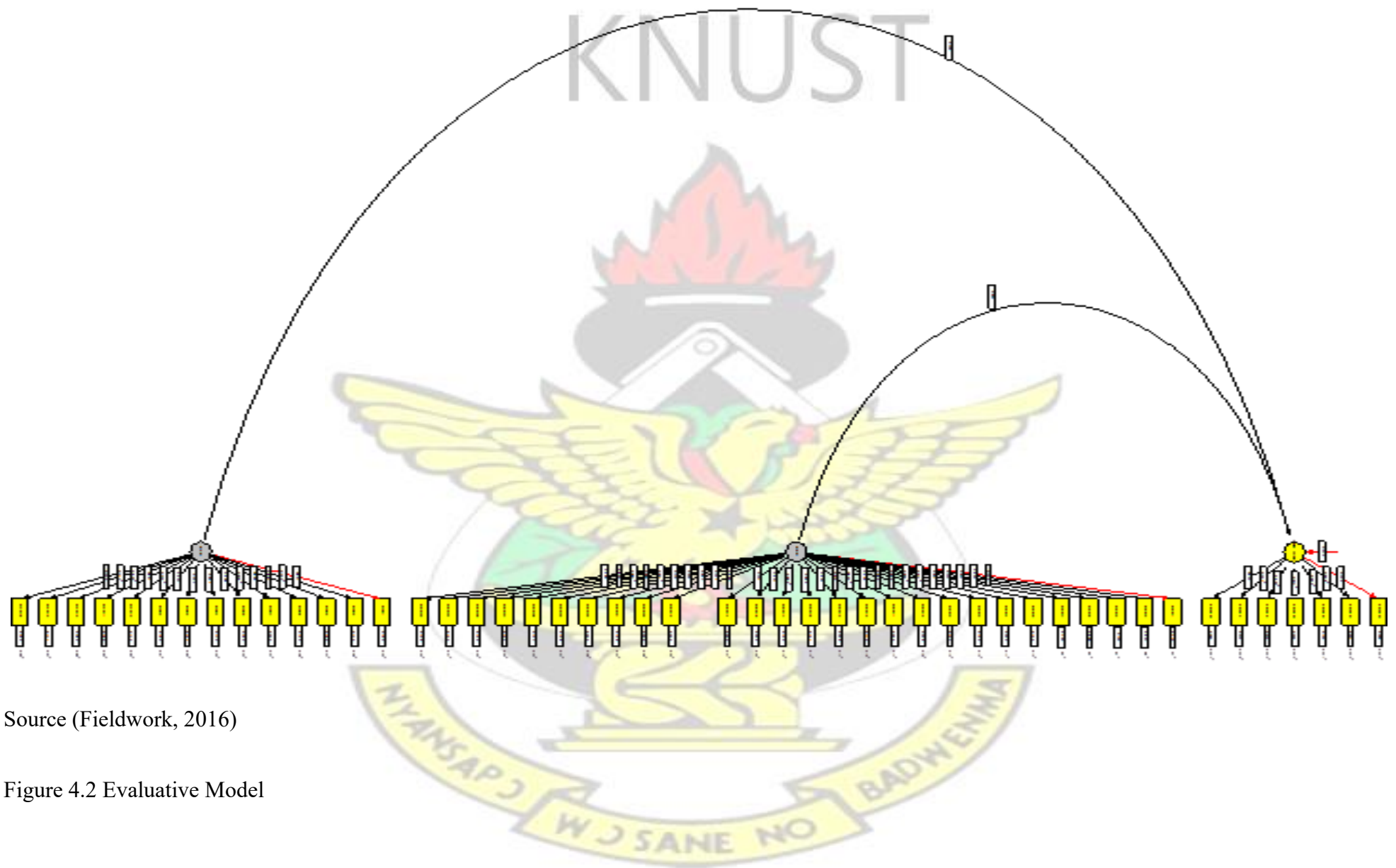
	Initial	Extraction
Management leadership	1.000	.628
Employee involvement	1.000	.924
Responsibility of quality at source	1.000	.949
Effective Teamwork and coordination	1.000	.970
Focus on customer	1.000	.806
Benchmarking	1.000	.838
Continuous improvement	1.000	.803

Source (Fieldwork, 2016)

Extraction Method: Principal Component Analysis.

KNUST





Source (Fieldwork, 2016)

Figure 4.2 Evaluative Model

112
KNUST



Figure 4.2 the evaluative model for the influence of the organizational culture and structure on TQM implementation.

Parameters (from left to right): Exogenous variable (14 independent indicator variables, Second sets of exogenous variables of OCV (27 indicators variables) and Endogenous variables (7dependent indicator variables).

4.6.13 Analysis of Covariance Estimates

Residual Covariance matrix assesses the discrepancies between the matrixes to be modeled. This usually, refers to the sample Covariance Matrix and Population Covariance Matrix. An acceptable model with no collinearity issues among the variables, average absolute residual values and average off- diagonal residual values for the unstandardized and standardized matrix should be small usually centered around 0.00 (Kline, 2010). This shows that the model is a representation of the data (Kline, 2010). The significance of the data distribution on the model are, the values are the indication of a structural model that could be described as well fitting as the distribution of the residuals are deemed symmetrical and centered around zero. (Byrne, 2006; Yuan and Bentler, 2001).

From the above information, the results suggests that the overall hypothesis structural models evaluating the influence of the organizational culture and structure variables on the seven building blocks of total quality management implementation had a good fit to the sample data and well fitting.

4.6.14 Significance of the findings towards successful implementation of total quality management

The significance contributions of total quality management cannot be overemphasized in contemporary organizations. Respondents were asked to indicate the extent to which

the organizational culture and structure variables influence total quality management implementation. The findings revealed that all the seven building blocks (Management leadership, Employees involvement, Responsibility of quality at source, Effective Teamwork and Coordination, Focus on customer, Benchmarking and Continuous improvement) of the total quality management are influenced highly by the organization's culture and structure.

Subsequently, the CFA, Structural Equation Modeling test and analysis has confirmed the goodness of fit of the evaluative mode as statistically robust, valid, reliable and trustworthy. Compelling evidence that confirms the influence of the organizational culture and structure variables on the total quality management implementation.

4.6.15 Results of the Evaluative Structural Model Hypothesis Testing

Feasibility of a generated model and extent to which the obtained findings satisfied hypothesis being tested is the paramount rationale behind the Structural Model (Kline, 2010; Hair et al., 2014). Assessments of the findings by determination of the statistics to assess the feasibility of the model, preceding the assessment of the goodness of fit of the structural equation model, (Kaplan, 2009; Kline, 2010). The standardized estimates and the test satisfies (Z-Values) obtained in the solution revealed that the parameter estimates were adequate in terms of their magnitudes, signs and statistical significance, hence, had substantial effects on the other constructs. This was a results of the Z- values being greater than the conventional minimum 1.96 and the respective factor loading, and the predictive determinant (R^2) all been significant (Bentler, 2005; Kline, 2010).

Assessing the graphical representation of figure 4.2 of the full structural equation model, the influence of the two sets of the exogenous variables (organizational culture

and structure) on the endogenous variables that is the seven building blocks of the TQM (Management leadership, Employees involvement, Responsibility of quality at source, Effective Teamwork and Coordination, Focus on customers, Benchmarking and Continuous improvement) are high. This means that the two sets of the exogenous variables inhibits TQM implementation hypothesized. This is the confirmation of the hypothesis model. The coefficient of determination (R^2) is substantive, moderate, and weak. Conventional requirement states 0.75 as substantial 0.50 as moderate and 0.25 as weak. However, Frank et al, (2008) asserts that the (R^2) value less than 0.100 is counted as insignificant influence on the endogenous variables (SBB of TQM).

Path Coefficient loadings are the composite influence of the factors (R^2) on the endogenous variables indicating the predictive accuracy of the model and represents the two sets of the exogenous variables effects on the endogenous variables (Hair et al , 2014,) . According to Hair et al. (2014), the influence ranges from 0.00 to 1.00, where 1.00 indicates an absolute predictive accuracy. It is paramount to clearly comprehend with the effects or influence of the latent variables to the endogenous (dependent) variables in structural equation modeling (Kline, 2010; Bentler, 2005). These effects or influence can direct, indirect, or total influence or effects (Bentler, 2005; Kline, 2005).

The aim and objectives of this study is to evaluate the direct influence or effect of the latent variables on total quality management implementation. In determining the direct influence of the variables, usually a weak influence of variable may suggest significance indirect influence (Bentler, 2010, Kline, 2010). This was the reason why a variable which was making insignificant contributions was eliminated in order to have a valid evaluative model.

4.6.16 Summary of the Structural Equation Model

On the bases of the results obtained, there is the indication that the postulated hypothesized model which is that organizational culture and structure influences on the total quality management implementation adequately fit the sample data. The discrepancy between the sample covariance matrix and the model population covariance matrix were insignificant.

Furthermore, the Comparative Fit Index, the Root Mean Square Error of approximation-value in tandem with Chi-Square Fit Index values met the cut- off index limit and the parameter estimates obtained were found to be statistically significant and reasonably adequate.

The Coefficient of the determination (Path Coefficient) and the standardized parameters estimates revealed weak moderate and substantial influence on the organizational culture variables as the first sets of the exogenous variables, and the organizational structure as the second sets of the exogenous variables and the endogenous variables that is the seven building blocks of the total quality management. This evidence indicates highly contribution to the reliability acceptance, accuracy and trustworthiness of the model.

4.7 Discussion of Results

From the previous sections, elaborative of the structural equation model for evaluating the influence of the organizational culture on the total quality management implementation has been presented. The outcomes (results) affirm the evidence in extant literature that organizational culture and structure influence the total quality management implementation. On the bases of the findings in addition to the practical and theoretical angles in every organization, where certain cultures and structures

inhibits success of the total quality management implementation, there is the need for detailed discussion of the significance of the results presentation and the significance of the findings to institutions being public or private.

4.7.1 Influence of the organizational culture and structure on TQM implementation.

The influence of the organizational culture and structure on total quality management implementation is determined through the seven building blocks of TQM:

Continuous improvement, Employee involvement, Focus on customer, Responsibility of quality at source, Benchmarking, Effective Teamwork and coordination and Management leadership. This determination suggests that control- oriented culture and mechanistic structures hinders the success of TQM implementation, however, Flexibility- oriented culture and organic structures promote success of TQM implementation.

4.7.2 CONTINUOUS IMPROVEMENT: Organizations with control-oriented culture and mechanistic structures put more emphasis on stability with the aim of increasing predictability which increases control. The total quality management plays emphasis on change and learning through strategies such as employee training, crossfunctional teams.

Flexibility –oriented culture and organic structures match with the “Kaizen” principle of continuous improvement by adapting to changes for survival.

4.7.3 Focus on Customer

Organizations with control- oriented culture and mechanistic structures pay attention to internal issues and pay less attention to interdependence with the environment. This is not in line with the TQM philosophy of getting feedback from the customers,

exceeding their needs and blurring boundaries between suppliers. This philosophy is in line with the organizations with flexibility – oriented and organic structure, which focus on external factors influencing the organization.

4.7.4 Benchmarking

The total quality management concept is benchmarking best practices of other organizations and competitors may be more favorable in organizations with flexibility –oriented culture and organic structures. This considers itself interdependence with other entities in the environment and less favorable to succeed in control- oriented culture and mechanistic structures which does not recognize the external environment.

4.7.5 Management Leadership

Planning, organizing, directing and controlling employees are management roles or responsibility in control oriented and mechanistic structures which does not match with TQM concepts of management leadership to create a vision and delegates rather than organizing and controlling. This philosophy is highly to succeed in the flexibility oriented culture and organic structures which replaces fear with vision as a trigger of motivation.

4.7.6 Effective Teamwork and Coordination

Organizations with flexibility –oriented culture and organic structures coordinate and communicate hierarchically which is in line the TQM practices and emphasis on horizontal coordination based on workflow and processes across functional areas. However, control- oriented culture and mechanistic structures which have mainly vertical coordination and mechanistic structures would not permit TQM implementation success.

4.7.7 Responsibility of Quality at Source

Total quality management implementation demand identification of challenges or problems at source and resolving them without passing through the management hierarchy. This should be easier to implement in organizations that decentralizes decision making authority and provide employees with training on quality control techniques which is flexibility oriented culture and organic structure. Unlike the control- oriented culture and mechanistic structure which mainly centralized decision making authority and pays more attention to vertical control.

4.7.8 Employee Involvement

Total quality management de- emphasis status distinction and empowers employees to make fruitful decisions by using their intelligence. This cannot be successful in control –oriented culture and mechanistic structures that centralized decision making authority in managerial hands, However, organizations with flexibility oriented cultures and organic structures decentralized decision – making authority to employees by empowerment , teamwork and coordination across functional areas is better fit with TQM practices of de-emphasizing status distinction.

4.8 Summary on chapter

In this chapter, the analyses on each of the objectives and the general aim of the study was vividly discussed and interpreted. An evaluative model was developed to evaluate the influence of organizational culture and structure on total quality management implementation. Structural Equation Modeling (SEM) with Equation Software (EQS) version 6.2 was used as the analytical approach for the development of the model.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Generally, organizations that adopt total quality management practices harvest a lot of benefits. However, it depends upon the strategic leadership management plans incorporated in the organization's vision and mission statement. This success can be achieved only if the organizational culture and structure are positively geared toward adoption of the TQM programs. Where there are no available positive organizational culture and structure that can quickly and easily assimilate the fruits of this Quality implementation program, there is the need for fundamental organizational culture change. This requires devotion and highly visible and articulate process management including evaluation and monitoring of progress.

Despite the zillion benefits accompanying total quality management implementation, several organizations failed to successfully implement the program. This failure cannot be attributed to the contribution of the TQM program, but to some extent, unsuccessful identification and determination of the barriers and the influence of organizational culture and structure variables which sometimes mount hilly blockage to the success of TQM implementation. Enthusiastically, the survey result indicates that structural, procedural and strategic challenges were highly critical barriers affecting TQM implementation.

This study focused on determining the influence of the organizational culture and structure variables on total quality management implementation. This chapter presents the summary of the findings and conclusions of the study. The identifiable variables of organizational culture and structure were mapped unto the seven building blocks of the

total quality management (TQM). Which results were used in developing an evaluative model for the influence of the organizational culture and structure variables?

To help address the aims of the study the following research objectives were used;

1. To determine the barriers affecting total quality management (TQM) implementation.
2. To identify cultural and structural variables that influence total quality management (TQM) implementation.
3. To determine the influence of the organizational culture and structural variables on total quality management (TQM) implementation.
4. To develop a model for evaluating the influence of the organizational culture and structural variables on total quality management (TQM) implementation.

Survey questionnaire was used, since this has the potential of gathering the representative view of the target population. Data gathering was limited to the four Education Directorates; Kumasi Metropolitan Education Directorate, Bekwai Municipal education Directorate, Bosomtwe Education Directorate and Ejisu Municipal Education Directorate. Two Hundred and ten (210) questionnaires were sent to the four-management Education Directorates for response. However, Two hundred and six (206) of the survey questionnaires were returned.

Deductive approach which according to Naoum (2002), moves from the general to specific in the phenomenon and uses top- down approach in relation to theory formulation and testing of hypothesis was used. This approach is also called quantitative method or design (Naoum, 2002). For the fact that deductive approach was used, the researcher has no option than to use questionnaire to collect the data as a data collection method.

5.2 Summary of the findings

5.2.1 Objective one: Determination of the barriers affecting total quality management (TQM) implementation.

Respondents were asked to indicate the extent (Very low, Low, Medium, High, and Very high) to which strategic, structural, human resources, contextual and procedural barriers or challenges affect total quality management (TQM). After computation of the data collected, there was a general agreement that structural, procedural and strategic challenges affect total quality management (TQM) highly. Additionally, there was further agreement that human resource challenges and contextual challenges had medium effects on total quality management (TQM) implementation Medium. This result is revealing the need to pay attention to organizational structure which mostly affects total quality (TQM) implementation. Also this result is emphasizing that systems and physical resources are necessary to implement total quality management successfully. Furthermore, complexity of processes, lack of focus on the clients, partnering the suppliers and bureaucracy are some of the hindrances that must be looked at when implementing total quality management (TQM). In Ghana Education service, the structure indicates that GES Council is the highest decision making body of the Ghana Education Service. Additionally, The Director General serves as the Chief Executive of the Ghana Education Service (GES). This Director is assisted by two deputies; the Deputy Director General (management and service and Deputy Director General (Quality and access).

5.2.2 Objective two: Identification of the cultural and structural variables that influence total quality management (TQM) implementation.

In the literature, there were organizational culture and structural variables which were identified as factors affecting total quality management (TQM) implementation.

The following organizational cultural variables were identified ; separation of powers, mode of finance, channel of communication, image, dress sense and clothes fashion, management style, product distribution system, number of employees, language, religion, delivery speed and time, level of education and literacy, internal and external expectations, employment regulations, decision making rules, gender sensitivity, norms and customs, employee involvement, social responsibility acceptance, acceptance of change, risk taking, delegation, authority to employees to correct, boss-subordinate teamwork, shared goals, access to timely and accurate information, prioritized customer satisfaction, setting of targets to employees, clinical supervision, sustainability entrepreneurship, individuals vs. collectivism and uncertainty avoidance.

Again, the following variables were identified as organizational structure variables; Coordination, departmentation, communication and information, control system, decision-making, leadership, reward system, layer of management, operational considerations, chain of command, span of control, formalization, specialization, centralization, decentralization, and time dimension.

5.2.3 Objective three: Determining the influence of the organizational culture and structural variables on total quality management (TQM) implementation. The identified culture and structural variables were used against the seven building blocks of total quality management. Respondents were asked to indicate the extent to which the above mentioned organizational culture and structural variables affect the seven building blocks of TQM (Management leadership, Employee involvement, Responsibility of quality at source, Effective teamwork and coordination, Focus on consumer, Benchmarking, and Continuous improvement) implementation.

Surprisingly, this study has revealed latent characteristics of the constructs which indicates that the organizational culture and structure influence total quality management implementation 69.7 % and 53.6 % respectively. Conversely, it means that organizational culture and structure contribute 69.7 % and 53.6 % success respectively to total quality management implementation.

5.2.4 Objective four: Development of an evaluative model for evaluating the influence of the organizational culture and structural variables on TQM implementation.

In order to achieve this objective, the necessary but relevant literature, theories and models were considered to establish the necessary constructs theories and conceptual model on the influence of the organizational culture and structure on total quality management implementation. The Geert Hofstede's six culture dimensions were adopted as a relevant theory for the study. In this context of focusing on the organizational culture and structural variables influence on TQM implementation, an evaluative model was established. This has supported the coherent approach for the systematic determination of the influence of the two sets of the exogenous variables (Organizational culture and structural variables) on the endogenous variables (Management leadership, Employee involvement, Focus on customer, Effective Teamwork and Coordination, Benchmarking, Responsibility of quality at source and Continuous improvement).

The main constructs identified in this study were the seven building blocks of TQM, Organizational cultural variables (OCV) and the Organizational structural variables (OSV).

According to table 4.18 and table 4.20, organizational culture contributes 69.7 % to successful implementation of total quality management whereas organizational

structure contributes 53.6 % to the success of total quality management respectively. It means that organizational culture and structure influence the total quality management implementation 69.7 % and 53.6 % respectively.

5.3 Conclusion

This study was undertaken to close the knowledge gap by developing evaluative model that can be implemented easily and successfully in cross- country context. The quantitative approach was adopted to assess the influence of the organizational culture and structure on total quality management implementation. The evaluation undertaken in this study reveals that the organizational culture variables as the first sets of the exogenous variables and the second sets of the exogenous variables (the organizational structural variables) influence the endogenous variables that are the seven (7) blocks of TQM highly.

Additionally, the result of the postulated model and its associated hypothesis testing through Structural Equation Modeling (SEM) analysis, the study has accorded the empirical evidence that the two sets of the exogenous variables (organizational culture and structure) influence the endogenous variables highly.

The Structure Equation Modeling (SEM) has revealed from table 4.18 and table 4.20 that organizational culture contribute 69.7 % to the successful implementation of total quality management whereas organizational structure contributes 53.6 % to the success of total quality management implementation. Indicating that organizational culture influence the implementation of total quality management 69.7 % and the organizational structure 53.6 % influence

5.4 Significance and Contribution of the Research

It is undebatable, the insight and the significant contributions of this study to knowledge in respect to the influence of the organizational culture and structure on total quality management implementation. Most of the previous researchers either investigated the impact of organizational culture without the structure or vice-versa. Even in situations where the two are investigated the methodology differs from this research method.

More importantly, the evaluative model developed may serve as a foundation for further studies. There may be no or few researchers using the Structural Equation Modeling to develop the evaluative model.

The evaluative model may be used to assess the influence of indicators at a different cultured context.

Denzin (2009) and Walker (1997), state that a research could make a significance and original contribution to the body of knowledge through the development of the new methodologies, tools and techniques. In respect to this, the study could be said to significantly contribute to knowledge by the use of Structural Equation Modeling (SEM). Others in determining causal relationship between factors influencing TQM implementation used univariate statistical method such as ANOVA, MANOVA, or Multiple Regression Modeling to develop model of assessment. The gap in such model is that they fail to express the relationship between individual indicators, and the individual organizational culture and structural variables.

In this study, Structural Equation Modeling (SEM) was used to obtain a robust and superior approach in determining the causality of factors in a model. Hence, it can be said that this is a pioneer study in the use of the Structure Equation Modeling (SEM)

approach in determining the influence of the exogenous variables on the endogenous variables.

5.5 Limitations of the Findings

The research was purely based on four Education Directorates in Ashanti Region. Given that the practical experiences may differ across regions and countries. It is conceivable, that there may be significant differences and variations in the findings, if this study is replicated in other regions or geographical regions. However, it can be said that Ghana Education Service has the same organogram for her Directorates across the country, hence, may possess the same characteristics measured within the four management of the Education Directorates within the Ashanti Region of Ghana.

5.6 Recommendations for Management

Procurement practitioners, Education Directorates and other management units must be conscious of the organizational culture and structures and how they could influence their quality decision-making programmes. Management should take the following recommendations seriously;

5.6.1 Management needs to understand the vision of the organizations and integrate quality programmes into their operations.

5.6.2 Decentralization of decision-making authority should be encouraged within the organization for competitiveness in the global world.

5.6.3 Flexibility – oriented and organic structure must be consolidated within the organization, since it promotes effective and efficient implementation of management ideas.

5.6.4 Dormant cultures such as stability and internal control should be changed to encourage adaptation to change without fear.

5.7 Recommendation for Future Research

Researchers need to study practical happenings in organizations for sufficient solution to the problems identified. For the purposes of future research the following are provided;

5.7.1 The need to investigate by determining the extent to which the combination of the five main barriers to TQM implementation and the organizational culture and structure variables hinders TQM implementation.

5.7.2 This study focuses on the influence of the organizational culture and structure on TQM implementation. It is thus important to carry out a longitudinal study across to build complete understandings of the organizational culture and structure effects on TQM implementation. Since, the time spent is inadequate for further investigating further probing questions.

5.7.3 The four management of the Education Directorate within the Ashanti Region was used to respond to the survey questionnaires. It is thus prudent for researchers to use two or more Regions in the next investigation.

5.8 Summary

In this chapter, the research objectives and how they were achieved had been clearly explained. The conclusion addressing the research aim, the contributions made to knowledge and the limitations of the research were mentioned and acknowledged.

Certainly, success cannot be achieved by any organization in this contemporary era without recognition and consideration of total quality management implementation. Therefore, there is the need to investigate why most organizations failed to implement total quality management.

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT DEPARTMENT OF BUILDING TECHNOLOGY QUESTIONNAIRE ON ORGANIZATIONAL CULTURE AND STRUCTURE INFLUENCE ON TQM IMPLEMENTATION

This questionnaire forms part of the Master of Philosophy research into organizational culture and structure influence on TQM implementation. This is an on- going research under the supervision of Prof. J. Ayarkwa and Dr. Adinyira from the Department of Building Technology, Kwame Nkrumah University of Science and Technology – Kumasi Ghana.

The study is to provide identifiable cultural and structural variables that influence total quality management implementation. This is to help in developing comprehensive model for evaluating the influence of organizational culture and structural variables on total quality management implementation.

The questionnaire is in four sections. Section A; requests information on the background and the experience of the respondents on organizational culture and structure issues. Section B seeks the opinion of the respondents on the background of the organization through some selected definitions of the organizational culture and structure that best described their organizations. Section C seeks the respondents to indicate the extent to which the various barriers to TQM implementation affect their organizations. Section D which is the last section focuses on examining the identified organizational culture and structure variables that influence TQM implementation using the seven building blocks of TQM.

If you have any queries on the questionnaire, please kindly forward them to any of the following:

Enoch Dotse Agbandzo (dozoanyanah@yahoo.com, 0508022942), Prof. Ayarkwa and Dr. Adinyira (eadinyirah.feds@knust.edu.gh).

Confidentiality on your response and contributions shall be treated as such and use for only the purpose for which it has been collected.

Enoch Dotse Agbandzo, Master of Philosophy Candidate.

Instructions:

Please examine the questionnaire and answer correctly and accurately, as many questions as possible. All the information gathered here will be kept strictly confidential and will be used only for research and analysis purposes without mentioning the person or the organization names.

SECTION A:BACKGROUND INFORMATION

Name of respondent (Optional).....

1. Gender :

☐ Male

☐ Female

2. Age group:

☐ 18- 30

☐ 31-40

☐ 41-49

☐ 50 and above

3. Level of Education

☐ Junior high

☐ Senior High

☐ Polytechnics

☐ University

4. How long have you worked in this organization?

0-5 years

☐ 6-10years

☐ 11-15 year

☐ 16-20 years,

Above 20 years (☐)

**SECTION B: SELECTED DEFINITIONS OF ORGANIZATIONAL
CULTURE AND STRUCTURE THAT BEST DESCRIBES RESPONDENTS
ORGANIZATION.**

In your opinion, which of the following definitions of organizational culture and structure best suit your organization? **Please** () tick under the culture and structure definitions describing your organization.

S/N	DEFINITION OF ORGANIZATIONAL CULTURE	Tick
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DOC1	Organizational culture encompasses values and behaviors that contribute to the unique social and physical environment of an organization.	
DOC2	An organizational culture represent the collective values, beliefs and principles of organizational members and it is a product, market, technology, strategy, types of employees, management styles and national culture.	
DOC3	Organizational culture may affect how much employees are identifying with an organization.	
DOC4	An organizational culture is the organization's immune system, a form of protection that has evolved from situational pressure; it prevents "wrong thinking" and "wrong people" from entering the organization in the first place.	
DOC5	Robbins and Courter shared the same ideal with Hofstede, when they describe organizational culture as the shared values, beliefs or perceptions because organizational culture reflects the values, beliefs and behavioral norms that are used by employees in an organization. It can influence the attitudes and behaviors of the staff.	
DOS	DEFINITION OF ORGANIZATIONAL STRUCTURE	Tick
DOS1	The typically hierarchical arrangement of lines of authority, communications, rights and duties of an organization. Organizational structure determines how the roles, power and responsibilities are assigned, controlled and coordinated, and how information flows between different levels of management.	
DOS2	Organizational structure refers to the way that an organization arranges people and jobs so that its work can be performed and its goals met.	
DOS3	An organizational structure defines how activities such as task allocation, coordination and supervision are directed towards the achievement of the organizational aims. It can also be considered as the viewing glass or perspectives through which individuals see their organization and its environment.	
DOS4	Organizational structure is a system used to define a hierarchy within an organization. It identifies each job, its function and where it reports to within the organization	
DOS5	An organizational structure is a group of people who together work to achieve a common goal. In order to work together efficiently, the group must find the best way to organize the work that needs to be done in order to meet the goals of the organization.	
DOS6	An organizational structure is the framework around which the group is organized, the underpinning which keep the coalition functioning. It is operating manual that tells members how the organization is put together and how it works.	

SECTION C: BARRIERS TO TOTAL QUALITY MANAGEMENT (TQM) IMPLEMENTATION.

This part of the questionnaire provides some of the barriers to (total quality management) TQM implementation, from your own observation and experience, please, by ticking, indicate the extent to which these barriers affect TQM implementation in your organization using 1. Very low 2. Low 3. Medium 4. High 5. Very high

S/N	BARRIERS TO TMQ IMPLEMENTATION	1	2	3	4	5
SC	STRATEGIC CHALLENGES					
SC1	Inappropriate TQM program					
SC2	Barriers to the adoption of the TQM					
SC3	Unrealistic expectation					
SC4	Difficult leadership					
SC5	Poor management					
SC6	Lack of top management support					
SC7	Poor involvement of managers					
SC8	Strength of middle management					
SC9	Inadequate planning					
SC10	Lack of consistency of objectives					
SC11	Lack of long term vision					
SC12	Lack of vision and a clear direction					
SC13	Conflicting objectives and directions					
SC14	Lack of priority improving the quality					
SC15	Previous failure in term of initiation of change					
SC16	Lack of government support					
SC17	Political uncertain					
STC	STRUCTURAL CHALLENGES	1	2	3	4	5
STC1	Inappropriate organizational structure					
STC2	Lack of organizational flexibility					
STC3	Lack of physical resources					
STC4	Lack of information system					
STC5	Lack of financial support					
STC6	Lack of time					
HRC	HUMAN RESOURCES CHALLENGES	1	2	3	4	5
HRC1	Lack of interest of employees					
HRC2	Lack of commitment and interest of employees					
HRC3	Employees resistant to change					
HRC4	A difficult human resources management					
HRC5	Poor delegation of all hierarchical levels					
HRC6	Fewer employees work task and increasingly higher					
HRC7	Lack of training and education of employees					
HRC8	Lack of recognition and rewarding of success					
HRC9	Lack of motivation and satisfaction of employees					

CC	CONTEXTUAL CHALLENGES	1	2	3	4	5
CC1	Inadequate organizational culture					
CC2	Difficulty in changing organizational culture					
CC3	Lack of guidance and ineffectiveness					
CC4	Poor coordination					
CC5	Lack of confidence of employees in the management					
CC6	Cultural issues resolution					
CC7	Lack of innovation					
CC8	Political behavior the diversity of the workforce					
CC9	Mentality barriers					
PC	PROCEDURAL CHALLENGES	1	2	3	4	5
PC1	Lack of focus					
PC2	Lack of adequate process management					
PC3	Lack of concentration on the client					
PC4	Lack of involvement of suppliers					
PC5	Bureaucracy					
PC6	Lack of evaluation and self evaluation					
PC7	Change agent or counsel incompetence in implementing quality					
PC8	Ineffective action					
PC9	Efforts to improve quality are time consuming					

SECTION D: EXAMINING THE INFLUENCE OF THE ORGANIZATIONAL CULTURE AND STRUCTURE ON TOTAL QUALITY MANAGEMENT (TQM) IMPLEMENTATION USING THE SEVEN BUILDING BLOCKS OF TQM.

Please indicate the extent to which these organizational culture and structural variables affect each of the seven building blocks of TQM(A,B,C,D,E,F,G,) in your organization, using the Likert scale from 1-5 1. Very low 2. Low 3Medium 4. High 5. Very high

A. Management leadership **B.** Employee involvement **C.** Responsibility of quality at source **D.** Effective Teamwork and coordination **E.** Focus on consumer **F.** Benchmarking **G.** Continuous improvement.

Example how does separation of powers as a cultural variable affect Management leadership (A)?. Writing (2) in the box of “A” indicates that it affects it low.

S/N	VARIABLES	A	B	C	D	E	F	G
OCV	Organizational Cultural variables							
OCV1	Separation of powers							
OCV2	Image							
OCV3	Dress sense and clothes fashion							
OCV4	Product distribution system							
OCV5	Number of employees							
OCV6	Language							
OCV7	Religion							
OCV8	Delivery speed and time							
OCV9	Level of education and literacy							
OCV10	Internal and external expectations							
OCV11	Employment regulations							
OCV12	Decision making rules							
OCV13	Gender sensitivity							
OCV14	Norms and customs							
OCV15	Employees involvement							
OCV16	Social responsibility acceptance							
OCV17	Acceptance of change							
OCV18	Risk taking							
OCV19	Delegation							
OCV20	Authority to employees to correct							
OCV21	Boss-subordinate teamwork							
OCV22	Access to timely and accurate information							
OCV23	Prioritized customer satisfaction							
OCV24	Setting of target to employees							
OCV25	Sustainability							
OCV26	Entrepreneurship							
OCV27	Individualism vs. Collectivism							
OCV28	Uncertainty avoidance							
S/N	Organizational Structural variables	A	B	C	D	E	F	G

OSV1	Coordination								
OSV2	Departmentation								
OSV3	Communication and information								
OSV4	Control system								
OSV5	Decision-Making								
OSV6	Reward system								
OSV7	Layer of management								
OSV8	Chain of command								
OSV9	Span of control								
OSV10	Formalization (standardizing jobs within the organization)								
OSV11	Specialization								
OSV12	Centralization								
OSV13	Decentralization								
OSV14	Time dimension (time taken to communicate one issue to different layers across organization)								

Please, kindly answer the following questions after completing the questionnaire;

1. How long did it take you to complete the questionnaire
 2. Were the instructions clear?
 3. Were any questions ambiguous?
 4. Did you object to answering any questions?
 5. Was the layout clear and attractive?
 6. Any other comments.....
-