UNIVERSITY OF CAPE COAST

TOTAL QUALITY MANAGEMENT PRACTICES AND PROJECT OUTCOME IN THE ELECTRICITY COMPANY OF GHANA: THE ROLE OF ORGANISATIONAL CULTURE

CHARLES KOFI KORANG

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BY

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Thesis submitted to the Department of Marketing and Supply Chain Management of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfillment of the requirements for the award of Master of Commerce degree in Project Management.

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in the university or elsewhere.

Candidate's Signature……. Date ……

Name: Charles Kofi Korang

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of the thesis laid down by the University of Cape Coast.

Supervisor's Signature……. Date ……

Name: Prof. Francis O. Boachie-Mensah

ABSTRACT

The concept of total quality management has become a top priority for businesses and organisations worldwide as it ensures that management takes a strategic approach to quality, focusing on prevention rather than inspection, and is a crucial motivator for continual improvement in an organisation's performance. The aim of the study is to examine the moderating role of organisational culture on the relationship between TQM practices and project outcome at ECG. The study used an explanatory design and a quantitative approach in which respondents from ECG were targeted. A census technique was used for the study, and out of the total population size of seventy-five (75) employees, the accessible population for this study was sixty-eight (68) ECG employees at the operational unit in the Greater Accra region of Ghana. Microsoft Excel 16 was used to code, tabulate, and evaluate raw data, while the descriptive statistics of the respondent were evaluated using SPSS. With the aid of Smart PLS 4, structural equation modelling was used to analyse the data collected with respect to the three objectives set. The results revealed that there is a significant positive relationship between total quality management and project outcome. Leadership commitment, customer focus and continuous involvement are the TQM practices that contributes to project outcome. Also, there is a significant positive relationship between organisational culture and project outcome. Finally, the results revealed that organisational culture is significant in moderating the relationship between total quality management practices and project outcome.

KEY WORDS

Adhocracy

Clan

Continuous Improvement

Customer Focus

Employee Involvement

Hierarchy

Leadership Commitment

Market

Organisational Culture

Project Efficiency

Project Impact

Project Outcome

Stakeholder Satisfaction

Total Quality Management

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DEDICATION

To my mum, siblings, and my late dad

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LIST OF ACRONYMS

AVE	Average Variance Extracted
BE	Business Excellence
ECG	Electricity Company of Ghana
EFQM	European Foundation for Quality Management
EQAE	European Quality Award in Europe
GDP	Gross Domestic Product
GEDAP	Ghana Energy Development and Access Project
HTMT	Heterotrait Monotrait
ISSER	Institute of Statistical, Social, and Economic Research
MBNQA	Malcolm Baldrige National Quality Award
PLS-SEM	Partial Least Squares Structural Equation Modelling
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

The implementation of Total Quality Management (TQM) is a strategic approach aimed at enhancing the effectiveness and flexibility of an organisation. Toke and Kalpande (2020) assert that the approach involves the comprehensive coordination and engagement of the entire organisation, encompassing all units, undertakings, and personnel. According to Mosadeghrad (2014), the most crucial determinant of successful total quality management implementation is an organisation's capacity to effectively incorporate, unify, and establish total quality management procedures in the workplace. Total quality management is a management approach that emphasises a strategic focus on quality, with an emphasis on prevention rather than inspection. Total Quality Management serves as a significant driver for promoting continuous improvement in an organisation's performance, as noted by (Alkelani, Hasnan, Mohammad, Ahmad, & Ataalah, 2016). A thorough comprehension of the concept of organisational culture can facilitate the harmonisation of a project with an organisation's objectives and pre-existing protocols (Leitão, Pereira, & Gonçalves, 2019).

Background to the Study

Various stakeholders in the field of soft skills (Carvalho & Rabechini Junior, 2015), non-governmental (Keleckaite & Meiliene, 2015), governmental and private sectors (Derakhshan, Turner & Mancini, 2019) have emphasized on the importance of project management. According to Kerzner (2018), project management minimizes the risk in project failure, hence, the need to adopt project

management practices that ensures successful outcome of projects. Due to the immense importance project outcomes, authors have suggested the need for organisations to ensure project success (Chou & Yang, 2012; Peter et al., 2019). Project outcome is described as a project that has experienced optimized resource allocation, increase performance and beneficial to stakeholders (Chou & Yang, 2012). Also, project outcome pertains to the anticipated or attained results, deliverables or accomplishments that arise from the completion of a project (Peter, Diekötter & Kremer. 2019).

According to Kerzner (2022), the outcome of a project determines the longevity and the usefulness of the project. As a result, there is the need to adopt measures that improves project. For instance, The United Nations Office for Project Services (UNOPS) who oversees projects and programs of various magnitudes have emphasized the conviction that projects have the potential to improve the well-being of individuals in disadvantaged circumstances, while also promoting the effective and enduring utilization of resources.

Apart from relying on the expertise of decision makers to execute projects (Eweje, Turner & Müller, 2012), scholars have suggested the importance of quality management practices as antecedents to desired project outcomes (Ekrot, Kock, & Gemünden, 2016; Lindhard & Larsen, 2016). For instance, a study conducted by Shafiq, Lasrado and Hafeez (2019) evidenced that total quality management practices support weaker projects and improves its efficiency. Also, Yusr, Mokhtar, Othman and Sulaiman (2017) asserted that when TQM is well implemented, it gets everybody involved contributing to the overall success of

projects. TQM is a managerial ideology that seeks to improve the quality of products, services and procedures by engaging all members of an organisation, ranging from top-level executives to frontline staff (Chen, Anchecta, Lee & Dahlgaard, 2016). Continuous learning, adoption of new practices and maintenance of the requisite behaviour, incentive and perspectives are crucial for the development of the mindset necessary to embrace TQM principles (Dahlgaard-Park et al., 2018).

Additionally, few authors have explained TQM as a multiple dimensional concept arguing that TQM can be measured by leadership commitment, employee involvement, customer focus and continuous improvement. Strong leadership commitment is crucial for the successful adoption of TQM (Zehir, Ertosun, Zehir & Müceldilli, 2012; Chen, Lee & Wang, 2020). The primary responsibility of top management is to establish the vision, values and objectives pertaining to quality while also allocating the essential resources and provide support for TQM endeavors (Chen et al., 2020). Also, leadership commitment guarantees the allocation of essential resources, such as financial, human and technological resources to the project (Pambreni, Khatibi, Azam & Tham, 2019). Committed leaders facilitate prompt and effective decision-making (Pambreni et al., 2019). They actively participate in resolving issues, eliminating barriers and offering guidance to the project team. Additionally, when team members observe the dedication of their leaders to the project's success, they are more likely to be motivated and engaged in their work (Patiar & Wang, 2016).

The second dimension of total quality management reflects employee involvement. TQM acknowledges the significance of engaging employees at every hierarchical level in the process of enhancement (Chen, Lee, & Wang, 2020). Employees are motivated to offer their insights, actively engage in decision-making, and assume responsibility for their tasks (Lam, O'Donnell & Robertson, 2015). This fosters a culture of cooperation and empowerment. Engaged employees are more inclined to offer inventive ideas and pioneering solutions to project obstacles (Lam et al., 2015). Their varied viewpoints and backgrounds can result in the creation of innovative strategies that enhance project results. Engaged staff are more apt to recognize and resolve problems promptly. By possessing direct and intimate familiarity with the specifics of the project, they are able to suggest efficient remedies and actively participate in overcoming obstacles, so averting possible hindrances (Pambreni et al., 2019).

Placing emphasis on customer focus reflects the activity of the organisation to be customer centered. TQM places a strong emphasis on understanding and meeting customer needs and expectations (Chen et al., 2020). Customer satisfaction is a central goal, and organisations strive to deliver products and services that consistently meet or exceed customer requirements (Abbas, 2020). Projects that are in accordance with the objectives and preferences of the customer are more likely to achieve success (Sahney, 2016). By consistently prioritizing the needs and goals of the client during the whole duration of the project, the project team may guarantee that the final outcomes directly contribute to fulfilling the customer's objectives (Kerzner, 2022).

After, ensuring customer focus, leadership commitment and employee involvement, there is the need to ensure continuous improvement. TQM is based on the belief that improvement is an ongoing process (Chen et al., 2020). Organisations are encouraged to continuously identify areas for improvement, implement changes and measure the impact of projects (Goetsch, D. L., & Davis, 2016). Continuous project involvement entails the consistent engagement of essential stakeholders, such as project team members, sponsors and customers during the whole duration of the project. This continued dedication and active participation significantly impact the final results of the project (Berwick, 2019).

It is believed that high project performance can be ascribed as a phenomenon of developed countries such as; United States, the United Kingdom and Japan (Ika & Donnelly, 2017; Shafiei, N., & Puttanna, 2022), however, there are few projects that have been successful in developing countries such as (Osei-Kyei & Chan, 2017). It is evident that there are more project failures than project successes in developing countries (Ika & Donnelly, 2017). According to Okereke (2017), most projects in Africa do not span the test of time, hence leading to the decline in growth and development. It is unclear why this phenomenon is prevalent in most developing countries.

The phenomenon of project failure is no different from some situations in Ghana. For instance, the Electricity Company of Ghana (ECG) has experienced some number of project failures in the past and in recent times. The Ghana Power Compact in collaboration with the energy sector (ECG) has embarked on some projects such as; the ECG financial and operational projects, regulatory

strengthening and capacity building project, access project and energy efficiency and demand side management project (Fiasorgbor, Abdulai & Antwi-Yeboah, 2022; Ohemeng & Zaato, 2023). These projects are focused on addressing issues of constraints in power supply of adequate and reliable power and also mobilize revenue (Fiasorgbor et al., 2022). In the midst of these projects, there are still issues of poor lightening system, low power voltages and power theft (Ohemeng & Zaato, 2023).

Aside the positive linkage that exist between TQM and project outcome (Jong, Sim & Lew, 2019; Lu, Cai, Wei, Song & Wu, 2019; Rajaratnam, Jayawickrama & Perera, 2022) authors such as (Hilman, Ali & Gorondutse, 2020; Patyal & Ambekar, 2020) have argued that TQM practices in itself cannot guarantee desired project outcome. Rather, a conducive environment should be created where TQM is appreciated and ready to be practiced. In other words, for organisations to be satisfied with their project outcome, there should be a culture that appreciates total quality management. Drawing from the assumption of the ethical theory that suggests that, in order for decision makers to attain their desired goal, they should have organisational policies that outlines how people (employees) ought to be and behave (Schwartz, 2016). In a nutshell, organisations that have the culture of appreciating total quality management have better chances of improving their project results. Organisational culture encompasses the shared values, beliefs, norms and practices that define how individuals within an organisation interact and work together (Nguyen & Watanabe, 2017).

Organisational culture can be measured by the level of adhocracy, clan, hierarchy and market. Organisations that have an adhocracy culture are distinguished by their dynamic and entrepreneurial nature (Ergün & Tasgıt, 2013; Anna, Igor & Natalia, 2015; Strengers, Mutsaers, Van Rossum & Graamans, 2022). They possess adaptability, ingenuity and a willingness to embrace uncertainty. Clan culture prioritises fostering a familial ambiance within the organisation. There is a significant focus on collaboration, teamwork and mutual support (Ergün & Tasgıt, 2013). Market cultures prioritise achieving outcomes and foster a competitive environment by fulfilling customer requirements, and attaining a competitive advantage in the market (Anna et al., 20215). Hierarchical cultures are distinguished by a pronounced focus on stability, organisation and effectiveness (Anna et al., 20215). These organisations possess clearly defined roles and duties, explicit hierarchies and formalised procedures (Strengers et al., 2022).

In a nutshell, argument surrounding successful project outcomes suggests that, project successes can be improved when such institutions have a working environment where the cultural is support total quality management. On this note, this study seeks to investigate the moderating effect of organisational culture on the relationship between total quality management and project outcome with Electricity Company of Ghana as the center of investigation.

Statement of the Problem

Despite the availability of literature that have supported the significant positive relationship between total quality management and project outcome

(Jong et al., 2019; Lu et al., 2019; Rajaratnam et al., 2022), there are still issues of literature lacking in the Ghanaian context. A few of the studies in the Ghanaian context have only focused on construction industry (Attakora-Amaniampong, Salakpi & Bonye, 2014), manufacturing sector (Agbola & Ankrah, 2013) and SMEs (Kwamega, Li & Ntiamoah, 2015). Again, the suggested moderating role that organisational culture plays in interacting the relationship between TQM and project outcome have been rarely considered in existing studies. The absence of much empirical and statistical evidence to support antecedents of project outcome have rendered stakeholders in the field of project management with not much procedure to improve on project successes.

Although there are other sectors that have suffered project failures, the energy sector is considered crucial to this study because, it gives "life" to the rest of the sectors (Kukah, Anafo, Kukah, Blay Jnr, Sinsa, Asamoah & Korda, 2022). Without the effort of ECG to provide quality, reliable and safe electricity services, the rest of these sectors will suffer productivity and eventually shutdown (Kukah et al., 2022). As a result, it is crucial to examine the project outcome of some projects at the Electricity Company of Ghana. The Electricity Company of Ghana has the mandate of supplying electrical energy to the people of Ghana within operations areas (Aboagye, B., Gyamfi, S., Ofosu, E. A., & Djordjevic, 2021). ECG aims at operating on sound commercial lines in the discharge of its duties. It also aims at judicious supervision of rural electrification projects on behalf of the Government of Ghana. To construct, reconstruct, install, assemble, repair,

maintain, operate or remove sub-transmission stations, electrical appliances, fittings and installation are all operational activities carried out by ECG.

In recent times, ECG has suffered some project failures in executing its mandate of providing quality and reliable safe electricity services. In June, 2022 the ECG embarked on the ACCESS project which sought to improve security and theft reduction in market and economic places. Also, to ensure power reliability, increase power supply to new customers and reduction in power theft (Seidu, Owusu-Manu, Kukah, Adesi, Oduro-Ofori & Edwards, 2023; Kukah et al., 2022). Despite the relevance of this project which was meant to solve the menace in the power sector, it is revealed that this project has not attained its goal as expected. There are still issues of poor lightening systems in economic enclaves (Seidu et al., 2023). Also, there are still issues of illegal connection, shortage of electricity metre and sometimes low voltage of power (Seidu et al., 2023). On this premise, this study evaluated the condition of total quality management as antecedent to project outcomes at the Electricity Company of Ghana and also examining the moderating effect of organisation culture on the relationship between total quality management and project outcome.

Purpose of the Study

The purpose of this research is to examine the moderating role of organisational culture on the relationship between TQM and project outcome of the Electricity Company of Ghana.

Research Objectives

The following objectives are developed to investigate the problem;

1. To examine the how TQM affect project outcome at ECG.
2. To examine the effect of organisational culture on project outcome in ECG.
3. To examine the moderating role of organisational culture on the relationship between TQM and project outcome at ECG.

Research Questions

This study will be guided by the following research questions:

1. What is the effect of TQM on project outcome at ECG?
2. How does organisational culture affect project outcome?
3. Does organisational culture moderate the relationship between TQM and project outcome in ECG?

Research Hypothesis

To achieve the stated objectives, the following hypotheses were stated:

1. There is a significant effect of total quality management on project outcome
2. Organisational culture has significant positive effect on project outcome.
3. Organisational culture positively moderates the relationship between TQM and project outcome in ECG.

Significance of the Study

The study contributes to knowledge because it adds existing theoretical and empirical literature in academia on TQM practices, project outcomes, and organisational culture, particularly for students pursuing a career as professional project manager. Furthermore, it provides line managers of organisations,

especially managers at ECG, with helpful knowledge to enable them to appreciate TQM practices that contribute to a desired project outcome within the company. Also, the outcomes of this study will serve as a basis for further research into TQM. Finally, the recommendations are a reference point for project champions, management, policymakers, and stakeholders on establishing TQM practices to enhance the desired project outcome in other sectors.

Delimitation

The study covered staff and management of ECG in the Greater Accra region of Ghana, who are part of the organisation's project team.

Limitations

Despite the diligence taken in discussing the concepts, collecting data, and analysing the results, this study, like other social sciences studies, had some limitations. In generalisability, its applicability in the northern part of Ghana may be difficult since the investigation only focuses on the southern part of Ghana. Due to time constraints, the study adopted a census sampling technique to gather responses from participants in the Greater Accra region of Ghana.

Definition of Terms

Total quality management

Integrating the different processes comprise an organisation's operational dynamics, in which all actions aim to efficiently and effectively satisfy customers' needs.

Leadership commitment

The highest level of management's direct involvement in all specialized and crucial parts of an organisation.

Continuous improvement

The gradual improvement of products and processes to increase quality and minimise waste.

Customer focus

Efforts to delight customers by meeting their needs to maximise profit and enhance loyalty and retention.

Employee involvement

Active involvement of employees and internal stakeholders in the decision-making process, problem-solving, and planning activities that affect the organisation.

Project outcome

The project outcome is the classification of a project as either successful or unsuccessful, depending on whether it achieves the intended project goals or objectives.

Project efficiency

Assessing the relationship between a process's outputs and the resources used to carry out a project.

Project impact

It is the way an organisation's project has an impact on the things it interacts with.

Stakeholders' satisfaction

The fulfillment of an organisation's programme, project, or initiative gives to stakeholders.

Organisational culture

The taken-granted assumptions and practices shared by members of a project team.

Adhocracy

Any type of organisational culture that promotes a collaborative workplace where employees discover the best solution to an issue.

Clan

Any type of organisational culture seeks to create a corporate environment that promotes agreement and shared goals and values similar to those of a family or tribe.

Hierarchy

Any style of organisational culture that strongly emphasises stability and control, as well as general company activity and, in particular, rules and procedures.

Market

Any style of organisational culture that prioritises competition among employees and between the firm and its market competitors.

The Organisation of the Study

The research was structured into five distinct chapters. Chapter one serves as the introductory section of the research, which delves into the study's

contextual background, problem statement, research purpose, objectives, inquiries, and hypotheses. The text elucidates the importance of the research, outlines its boundaries, acknowledges its constraints, defines key concepts, and presents the structure of the investigation. Chapter two of the study provides a comprehensive review of pertinent literature, encompassing empirical evidence and theoretical frameworks related to the subject matter. Chapter three examined the research methodologies employed in the execution of the study. This study encompasses various components including the research design, study area, population under investigation, sampling technique employed, research instruments utilised, data collection procedures, data processing, and data analysis. Chapter four provides a comprehensive examination of the outcomes and deliberations of the research, whereas the concluding chapter encompasses the study's summary, findings deduced and suggestions for future studies.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study aims to examine the total quality management practices and project outcome in the Electricity Company of Ghana while determining the moderating effect of organisational culture on TQM practices and project outcome. This chapter reviews the study's relevant literature. It covers the theories underpinning the study.

The present chapter provides a comprehensive overview of the scholarly literature pertaining to the development and definition of total quality management (TQM), as well as the various dimensions that comprise this approach. These dimensions include leadership commitment, continuous improvement, employee involvement, and customer focus. The chapter provides a comprehensive analysis of the existing literature pertaining to project outcome and its correlation with organisational culture. Additionally, the chapter examines the impact of Total Quality Management (TQM) practices on project outcomes, the influence of organisational culture on project outcomes, and the role of organisational culture as a moderating factor in the relationship between TQM practices and project outcomes.

Theoretical Review

Ian Mitroff, an organisational theorist, introduced the concept of stakeholder theory in his book Stakeholders of the Organisational Mind, published in 1983. In 1983, philosopher and business administration professor R.

Edward Freeman published an article on stakeholder theory (Freeman & Reed, 1983) Freeman's book examines and characterises stakeholder groups within an organisation, providing insights and suggestions on how to effectively handle their interests and ascertain the individuals that hold significant importance from the company's standpoint. Enhancing value for stakeholders would enhance the business in all dimensions.

Stakeholder theory is a managerial and ethical framework proposing that organisations should take into account the concerns and welfare of all stakeholders, rather than solely focusing on shareholders, when making decisions (Miles, 2017). Stakeholders are individuals or groups with a vested interest in the operations and results of an organisation (McGrath & Whitty, 2017). The theory underscores the importance of organisations maintaining equilibrium between the wants and expectations of different stakeholders in order to attain long-term sustainability and success (Crane, 2020).

Also, stakeholder theory pertains to the ethical considerations, moral principles and values that guide the management of stakeholders in a project or organisation (Dmytriyev, Freeman & Hörisch, 2021). The objective is to enhance interactions with stakeholders, therefore enhancing operational effectiveness across a project, task or duties. The theories ensures that stakeholders are managed properly in order to achieve expected goals. Stakeholder theory finds application in various significant domains, including project management (Uribe, Ortiz-Marcos & Uruburu, 2018), corporate social responsibility (Freeman & Dmytriyev, 2017) and strategic management (Minoja, 2012).

This study incorporates the stakeholder's theory to explain the extent to which organisational stakeholders interact harmoniously with each other to achieve expected results. The application of the theory suggests that management should establish a conducive environment (organisational culture) where total quality management can be practiced leading to successful project outcomes. Total quality management includes stakeholders' activities such as; leadership commitment, employee involvement, customer focus and maintaining continuous improvement.

Conceptual Review

This section explains various concepts that supported various variables used in this study. It included concepts on total quality management, project outcome, and organisational culture.

Evolution of Total Quality Management

Total Quality Management (TQM) has been widely adopted by organisations since the 1980s as a management framework to enhance their managerial capabilities, enhance performance, and attain superior quality and excellence (Dahlgaard-Park et al., 2018; Fu et al., 2015). Total Quality Management (TQM) is a managerial ideology that strives to achieve ongoing enhancements in both goods and procedures through the attainment of perpetual enhancements in the organisation and surpassing the demands of consumers, among other advantages (Chen et al., 2016). Continuous learning, adoption of new practices, and maintenance of the requisite behaviour, incentive, and perspectives are crucial for the development of the mindset necessary to embrace

Total Quality Management (TQM) principles, methods, and techniques in daily work (Dahlgaard-Park et al., 2018).

Famous quality pioneers who made significant contributions to the development of TQM, including Philip B. Crosby, W.A. Shewhart, W. Edwards Deming, Joseph M. Juran, Genichi Taguchi, Armand Feigenbaum, Kaoru Ishikawa, and Shigeo Shingo, helped to shape its core principles (Kumar et al., 2016). These authors empahsised the importance of successfully and efficiently leading the organisation to satisfy customer expectations and requirements. They also empahsised the importance of continuous improvement through everyone's participation. Many quality experts, groups, and corporations from across the world have developed models to create a better understanding of how the process for enhancing organisational management functions works, such as the 4P Toyota Production System [TPS], Peter's and Austin's Simple Model of Excellence, the Xerox Business Excellence Models, the EFQM/European Excellence Model, and the 4P Excellence model for fostering organisational excellence (Dahlgaard-Park et al., 2018).

Experts have attributed TQM's success to Japan's post-war economic resurgence, citing its management philosophy's holistic and systematic approach and its wealth of practical tools and procedures (Dahlgaard-Park et al., 2018). TQM is widely hailed as one of the main influential sources of current management theories, as well as the theoretical and practical foundations for creating numerous managerial models. described above (Dahlgaard-Park et al., 2018). Businesses have frequently created these management models, consultants,

or theorists to operationalise, apply, practice, perform, and evaluate TQM's core values, methodologies, tools, and approaches. According to Dahlgaard-Park et al. (2018), the Deming Prize model in Japan, the Malcolm Baldrige National Quality Award model in the US, and the EFQM/European Excellence Award model are among the most widely recognised Total Quality Management (TQM) or Business Excellence (BE) models worldwide.

According to Boulter et al. (2013), the total quality management methodology has proved successful not just in North America but also in Europe. According to a European study carried out between 1990 and 2004 among outstanding organisations, applying TQM successfully improves organisational performance in financial, share price, and other important market indicators (Boulter et al., 2013). Furthermore, a North American study effort involving 140 award bodies and a sample of over 600 publicly traded award-winners, implementing TQM successfully improves financial indicators, saves costs through process improvements, and minimises defects, re-work, and waste (Boulter et al., 2013). The information given herein suggests that TQM could be seen as a paradigm shift for contemporary management philosophies.

The Concept of Total Quality Management

Total quality management emerged as one of the utmost evident essential alternatives and has since been widely implemented worldwide (Shafiq et al., 2019). TQM on the other hand is still developing in the service sector and belongs to the ranks of developmental concepts (Talib & Rahman, 2015). Generally, TQM has been considered and expressed in a variety of ways, as well as the pursuit of

"excellence", a "right-first-time" approach, "zero defects", and client satisfaction (Mukhopadhyay, 2020). In essence, TQM is an industry-wide approach in which people are challenged and empowered to do things correctly the first time and every time, review their work, and progress in their careers (Zairi, 2010).

According to Sahoo and Yadav (2017), TQM is a strategy for improving an enterprise's overall flexibility, competitiveness, and effectiveness. Including everyone in improving how things are done is also a method of reducing loss. Burrata et al. (2019) stated ten TQM factors: ownership, commitment, leadership, total customer delight, continual improvement, education and training, recognition and reward, collaboration, and total involvement. Besterfield et al. (2014) mentioned eight key TQM characteristics: meeting client expectations is a broad definition of quality; it entails establishing a quality culture and the dedication of top management to placing quality first; TQM vision and values; the dedication to constantly improving employees' abilities and work procedures through training and benchmarking; the focus on managing by facts; the participation and empowering all members of the organisation in joint efforts to enhance quality; and the involvement of customers in the process.

TQM, as a strategy for obtaining and retaining excellent quality outcomes, focuses on process maintenance and continual enhancement in process, as well as mistake avoidance at all ranks and in all areas of the organisation, in order to satisfy or surpass the client needs (Abdallah, 2013). TQM, as a technique, seeks to improve an organisation's flexibility, competitiveness, and effectiveness. Additionally, it decreases losses by getting everyone involved in enhancing the

way things are done (Besterfield et al., 2014). For this study, TQM will be measured in four dimensions: continuous improvement, customer focus, employee involvement, and leadership commitment.

Continuous Improvement

Singh and Singh (2015) consider continuous improvement as a catch-all phrase that has been the subject of debate from the start of the industrial revolution. However, the following concept of continual progress is put forth: a culture of ongoing improvement that involves everyone in the organisation and aims to reduce waste in all systems and procedures (Singh & Singh, 2015). Product improvement must be maintained to keep TQM on track (Modgil & Sharma, 2016). To increase and achieve high productivity, quality, satisfaction, and effectiveness, an organisation must engage all of its employees through a continuous improvement process, which is a set of planned, organized, and systematic continuous change processes that are interrelated throughout the entire organisation (Jurburg et al., 2017). Hence, increased quality and satisfaction are always the results of improvements.

Customer Focus

Customer focus is one of the best-known effective technique used by professional marketers to satisfy customers and meet their requirements (Madhani, 2020). With the help of a customer-centric framework, reward system, lifestyle and culture, and regulations, most businesses hope to develop effective customer relationships (Lee & Lee, 2020). A service provider becomes essential to its most profitable clients after establishing such a relationship. Additionally, to

build a fantastic and exceptional connection, it is also essential to have a strong customer-centric focus, consistently supply high-quality goods and services, and add value for the targeted core customers through personalized or customized offers (Papaioannou et al., 2018). It is recommended that experts and marketers employ a variety of approaches to develop a fruitful customer-centered plan. The recommendations include fostering user collaboration, ensuring users feel included, informing clients of your whereabouts, and using user feedback (Islamgaleyev et al., 2020; Madrakhimova, 2021).

Employee Involvement

Employee development must be prioritised and structured with the understanding that it is an asset that will increase in value over time (Dale & Plunkett, 2017). All available strategies must be considered to achieve widespread interest of the employee, engagement, and involvement to the development procedure, from plans of suggestions to different types of collaboration (Dale & Plunkett, 2017). Additionally, this entails asking for, attentively considering, and acting upon employee feedback. The TQM methodology includes ensuring everyone knows what is expected of them, how their procedures relate to the business, and how their internal customers depend on them (Dale & Plunkett, 2017). The more people know about the company and their surroundings, the more they can contribute to the improvement process (Dale & Plunkett, 2017).

Leadership Commitment

Leaders must set an example, so they should act in a way that demonstrates their dedication to and supports quality management. This shows

their commitment to quality management (Wong et al., 2018). When leadership prioritise both the resources needed and continual improvement, for instance, the resources needed for quality management of training, they display a commitment to leadership (Hall et al., 2018; Talib & Rahman, 2015). The commitment of a leader comprises both cognitive and emotional elements (West & Cianfrani, 2014). Some studies on leaders' commitment strongly emphasise the emotional state or element (Els et al., 2021; Luburic, 2015; West & Cianfrani, 2014). Therefore, leaders' attitudes are also included in leadership commitment's affective state or component. On the other hand, a leader's disposition may also reflect their dedication to high-quality training management (Els et al., 2021).

Project Outcome

The project outcome is measured using objective, widely accepted, and measurable criteria. They adhere to the traditional trio notions of scope, time, and cost (Albert et al., 2017). Completing a project within a specified scope, time, cost, user satisfaction, stakeholder acceptance, and commercialisation, are all defined as a project outcome (Ika et al., 2012). Aga et al. (2016) demonstrate success factors such as the project's value delivered to the organisation's primary stakeholders, team member satisfaction, client satisfaction, and project accomplishment on time. The project outcome is the completion of a project within a specified scope, time, cost, and quality, as well as satisfaction of customer and stakeholder, and attainment of project objectives.

The project outcome no longer depends on meeting the three limitations of budget, time, and quality because of the increasing importance of projects to

organisations and their increasing complexity (Kerzner, 2017). It evolved into a complex assessment of stakeholders' benefits. The idea of the project outcome has been revised numerous times, and we will continue to improve it and bring it into line with the actual requirements of organisations. Because there is no standard set of project outcome criteria, scholars and practitioners continue to disagree on the variables that influence the selection of project outcome metrics (Albert et al., 2017). Some project management experts think each project should be evaluated according to its unique environment (Castro et al., 2020). However, each project is distinct due to the interaction of the project's type, complexity, size, nature, industry, sector, stakeholders' expectations, as well as other factors.

Between the years the 1960s and the 1980s, scope, time, and cost were the key criteria for project outcome (Castro et al., 2020). Project outcomes in the 1990s and 2000s depended on technical performance and how well they contributed to the organisation’s strategic objective (Martens & Carvalho, 2016). The project outcome is constrained to a premeditated value because traditional ideas of project outcomes tend to be restricted to three metrics: quality, money, and time (Castro et al., 2020). This is not to say that the quality, money, and time indicators are ineffective, because project performance can influence the final outcome of a project. Furthermore, late and overbudget projects may still have an excellent net worth (Turner & Xue, 2018), nonetheless, early projections of time and cost for megaprojects having a high level of complexity are sometimes far off the mark (Turner & Xue, 2018).

Regarding project outcome criteria, the iron triangle is still applicable. However, researchers and project professionals are more focused on an organisation's strategic goals, financial performance, end-user satisfaction, and stakeholder benefits (Mok et al., 2017). Broader ideas of project measurements were developed to address the absence of opinion of stakeholder benefits and introduce post-project success indicators, adapting the previously restricted understanding of project outcome metrics to a corporate level (Castro et al., 2020). As long as "project managers are the new strategic leaders, who must take on ultimate responsibility for project business results," this argument makes sense (Castro et al., 2020).

The project outcome requirements must align with the organisation's requirements. Some authors believe each project's outcome criteria can be unique (Ika et., 2012; Müller & Jugdev, 2012). The complexity and type may influence this variation and phases of the life cycle of a project, as well as industries, nations, and organisations (Serrador & Pinto, 2015; Qazi et al., 2016). Furthermore, due to divergent views on the performance and outcome criteria for the project, many stakeholders may see project outcomes differently (Pankratz & Basten, 2018; Davis, 2014).

Ika (as cited in Castro et al., 2020) proposed two approaches for measuring project outcome: a subjectivist technique, where the project outcome is founded on factual stories of success and failure, and a contingency technique in which the project outcome is a specific to the context instrument for attaining goals and objectives. Specific to the context instrument for gauging project

performance must be regularly established and updated due to the difficulties brought on by differences in the project's industry, sector, nature, and stakeholders (Castro et al., 2020). Due to this, determining a project's outcome can be challenging. Additionally, previous studies have no clear trends across diverse context-specific application domains for selecting project outcome criteria (Castro et al., 2020).

The project outcome is influenced by how organisations define project outcomes (Hussein et al., 2015). A specific criterion's importance determines how probable the project's completion is to be met (Bayiley & Teklu, 2016). This is because adequately specified project outcome criteria enhance results and resource use (Müller & Jugdev, 2012). A more basic concept should be developed to provide a standard framework for the project outcome. The dimensions considered in this study are project efficiency, project impact, and stakeholder satisfaction.

Project Efficiency

In the International Journal of Managing Projects in Business, while addressing project effectiveness, most authors explicitly pointed out time and cost as critical factors (Zidane & Olsson, 2017). The project's scope, however, is also a critical component that is only briefly discussed in the explanations provided (Dalcher, 2012). According to several experts, one of the foundations of project efficiency is quality. Nonetheless, we must determine if the term "quality" here refers to the caliber of the finished product or the caliber of the project management (Zidane & Olsson, 2017). Zidane and Olsson (2017) define project

efficiency as the issue of carrying out tasks correctly and delivering project outputs by the cost, scope, time, and quality specifications. They continue by saying that quality is not a restriction; instead, it's the outcome of every one of the three components (time, money, and scope). It is generally affected when the other two are improperly managed.

Project Impact

The notion of project impact refers to the effects that a project exerts on the entities it interacts with. According to Rodrigo and Wilkinson (2021), providing an impact analysis for a project involves identifying and outlining the expected effects of the project on various entities such as the environment, organisations, communities, and individuals. This analysis should encompass both favourable and unfavourable outcomes. When starting and designing a project, you should always consider its impact because specific initiatives may produce adverse effects that can cancel out all anticipated benefits (Szymański, 2017). The impact of a project is related to two key factors: the project's goals, or what you hope to accomplish with it, and the strategies you will use to get there (Al-Hajj & Zraunig, 2018).

Stakeholder Satisfaction

Stakeholder satisfaction has generally been acknowledged as a critical component of performance assessments for project outcomes (Serrador & Pinto, 2015). The stakeholders' satisfaction cannot be compromised because it is the primary factor in determining the project's outcome, even though time and cost factors can be compromised (Rajhans, 2018). Stakeholder impressions of a

program, project, or initiative are measured by stakeholder satisfaction. It is assessed by asking stakeholders to score their satisfaction on a scale or index (Huijgens et al., 2017). Stakeholder satisfaction is one of the project performance indicators based on how well the project's goals and its operations or implementation (service) meet or exceed the stakeholders' expectations (Al Hammadi, 2021).

Organisational Culture

Organisational culture is a multidimensionnel concept (Wei & Miraglia, 2017). Again, it refers to an employee's shared attitude toward a particular setting due to societal interactions among the employees of an organisation. Organisational culture is commonly regarded as a critical environmental aspect in the workplace (Gu et al., 2014). The concepts, values, and norms that are replicated in an organisation's activities and behaviours are referred to as organisational culture (Gu et al. 2014). OC is a commonly accepted norm for work-related tasks (Oyemomi et al., 2019). Zheng et al. (2019) characterises it as a set of shared beliefs produced by an organisation to meet external adaption and internal collaboration difficulties, which have previously worked effectively and are thus recognised as valid within the framework of a particular organisation.

Due to its inability to be observed, an organisation's culture is invisible. This affects thinking, behavioural patterns, and behaviour. Therefore, internalising organisational culture is critical for organisations to maintain their position in the marketplace (Habib et al., 2014). The organisational culture dimensions considered in this study are adhocracy, clan, hierarchy, and market.

Adhocracy

Adhocracy, according to Piwowar-Sulej (2021), derives from the Latin "ad hoc," which implies "for this unique purpose" and, by extension, "improvised." Adhocracy is a company culture built on the capacity to swiftly adapt to changing conditions. Adaptability, innovation, empowerment of staff members, and an emphasis on an employee innovation are traits of such organisations. Corporate levels exist in an adhocracy culture; however, they are less clearly defined than in more hierarchical organisations. Adhocracy is distinguished from bureaucracy, which is typically characterised by strict adherence to regulations and limited adaptability.

Clan

Piwowar-Sulej (2021) posits that clan culture is linked to an amicable and congenial demeanour, akin to that of a familial unit. A managerial relationship can be approached in a mentorship capacity. The cohesiveness of an organisation is maintained through the principles of loyalty and tradition. Typically, effectively addressing the needs of both clientele and personnel is a crucial component of achieving success. The values of teamwork, involvement, and consensus are highly regarded.

Hierarchy

Piwowar-Sulej (2021) defines a hierarchy culture as a structured and systematised workplace setting. Personnel execute routine activities in accordance with predetermined procedures. The values of paramount importance are efficient coordination and organisation. The principal aim is to maintain stability and

optimise functionality, with the results being achieved through the efficient execution of tasks. The criteria for achieving success are effective planning and judicious expenditures.

Market

According to Piwowar-Sulej (2021), market culture is a premium on shareholder value and customer happiness. It emphasises deadlines and goals. Individuals tend to have a strong inclination towards achieving objectives and engaging in competition. Individuals who exhibit traits such as diligence, productivity, and a competitive spirit are often regarded as exemplary leaders. Individuals with elevated standards may exhibit a propensity for exactingness and rigorousness. The group's cohesiveness is maintained due to the prioritisation of achieving victory. The most important criteria are accomplishment and repute. The long-term priority is on competitive activities and accomplishing goals. Market domination, meeting objectives, and having great indicators describe success. Competitive pricing and market dominance are critical. The framework of the company is focused on competition.

Empirical Review

This section gives details of the various literature evidence that supported the formulation of the hypotheses for the study.

Total Quality Management practices and Project Outcome

Studies have indicated that TQM adoption and application will probably boost an organisation's performance. The link between TQM and other factors, such as corporate performance, organisational effectiveness, and marketing

performance in various sectors, has been extensively researched. Studies from non-Ghanaian perspectives did, however, include one by Jong et al. (2019). The study looked at how Malaysian construction organisations' project performance was affected by TQM. The study's target population was Malaysian construction firms. The sample size was derived from a list of members of the Construction Industry Development Board, a statutory organisation representing Malaysian construction firms.

The mode of data gathering used was cross-sectional. The study's sampling method was convenience sampling, and the results showed a partial correlation between Malaysian construction organisations' project performance and TQM practices. Other TQM practices like strategic planning, customer focus, and leadership do not directly affect how well a project performs. However, other research suggested that these characteristics, and eventually performance, might be influenced by other mediating factors (Laird, 2016; Fung & Ramasamy, 2015; Zwikael et al., 2014). TQM, as a whole, significantly influences the outcome of Malaysian construction projects.

The implication is that TQM is a holistic strategy that should be used in connection with other strategies because one practice depends on the other (Zwain et al., 2017). Additionally, several researchers have looked into TQM in the construction sector (Mir & Pinnington, 2014; Kuo & Kuo, 2010). Kuo and Kuo (2010) considered using structural equation modelling the relationship between TQM and project performance in Taiwan. The research showed that TQM directly and positively impacts project performance. Ali and Rahmat (2010) conducted an

investigation into the performance indicators of construction projects in Malaysia that were managed by contractors certified by the International Organisation for Standardisation (ISO). The research findings indicate that functionality and client satisfaction are the most crucial performance indicators for construction projects, while time and cost are considered relatively less significant.

Al-Sabek (2018) conducted a study that examined the primary factor that will have a significant impact on the implementation of Total Quality Management (TQM) within the construction industry of the United Arab Emirates. The examination of the most notable result stemming from the implementation of Total Quality Management (TQM) was conducted. The research utilised a quantitative methodology. A survey comprising of 15 questions was administered to a sample of 60 participants in a construction company located in Abu Dhabi. The objective of the survey was to evaluate the crucial factors that could influence the implementation of Total Quality Management (TQM) and the resultant impact on project outcomes. The survey findings suggest that the implementation of Total Quality Management (TQM) in a construction firm is contingent upon the level of organisational commitment exhibited by its members.

Organisational Culture and Project Outcome

Organisational culture refers to a set of implicit or explicit values, conventions, beliefs, attitudes, and assumptions that shape the behaviour and performance of individuals within an organisation. Ayegun (2018) conducted a study in Ondo State, Nigeria, to evaluate the effect of organisational culture on

the project performance of contracting organisations. This was done to develop a strategy that will assist construction companies in performing their projects more effectively and modifying any potential outcomes of their cultural orientation.

The study used a quantitative method with a survey design. A questionnaire was used to gather data from each organisation's three hierarchies of construction professionals as part of an assessment of 49 registered contracting organisations. Out of 147 questions sent to experts in the contracting organisations using the census survey, 112 were completed. The study showed that there is a significant correlation between contracting organisations' project performance and their organisational cultures.

Another study from the perspective of Kenya by Abdullahi (2018). The author conducted a study to determine how organisational culture affected the performance of the Waso Trust Land Project in Isiolo County. A descriptive survey design was employed for the study. The 65 Waso Trust Land Project employees in Isiolo County constituted the target population. 65 people participated in the study. Data was gathered for the study using questionnaires. The results showed that culture has an impact on project outcomes. The study concluded a solid and positive relationship between project outcome and culture.

Organisational Culture, Total Quality Management practices and Project Outcome

Several studies have been conducted to determine whether organisational culture may play a role in the relationship between TQM and organisational performance (Alghamdi, 2018). The application of TQM significantly improved

organisational performance. The effectiveness of the organisation project was statistically impacted by TQM practices (Alghamdi, 2018). Additionally, the study supported the notion that organisational performance is influenced by organisational culture and TQM practices (Jabnoun & Sedrani, 2005). There was a negative and statistically significant interaction between organisational culture and TQM (Abdullah & Rosli, 2012). Some TQM implementation difficulties have been documented in the literature from a practical standpoint. According to several studies, failure rates can reach 60–70%. Consequently, one potential explanation for such failure is the underappreciation of the importance of organisational culture (Mosadeghrad & Ansarian, 2014).

A descriptive cross-sectional methodology was used in the investigation. Three key variables that were measured were included in the study instrument. The three components of TQM are top management commitment, customer focus, and human resource focus. 7-items provided were used to measure the first dimension (Sabella et al., 2014). Sadikoglu and Olcay (2014) used 5-items to measure the second dimension. The final dimension was measured using 3-items coined by Powell (1995). The careful selection of these three dimensions is notable based on an extensive review (Ebrahimi & Sadeghi, 2013). There are more than two hundred quality management practices, but only seven were consistently reported after thoroughly assessing the literature in this area.

The following are significant findings from the prior empirical review: most studies were not conducted in organisations focused on the public sector. Again, the majority of the studies were conducted in the construction industry.

Although the review also acknowledged the moderating role of organisational culture in the relationship between TQM and organisational performance, it did not explicitly look at the project outcome. The previous comment suggests concerns, such as the lack of literature in Ghana's public sector and, more specifically, TQM and project outcomes in the Ghanaian Electricity Company. This proposition guided the development of the study's conceptual framework.

Conceptual Framework

The conceptual framework below shows the model suggested to address the study's research hypotheses (figure 1). TQM practices, project outcomes, and organisational culture are the three primary constructs included in the model. Eleven variables and three hypotheses are used to measure these constructs. The project outcome is modelled as a causative variable, whereas TQM practices measurement is modelled as a causal variable. The framework examines the predicted effect between the parameters. The framework enables the investigation of the effects of TQM practices on project outcomes, the individual effects of organisational culture on project outcomes, and the combined effects of organisational culture and TQM practices on project outcomes.

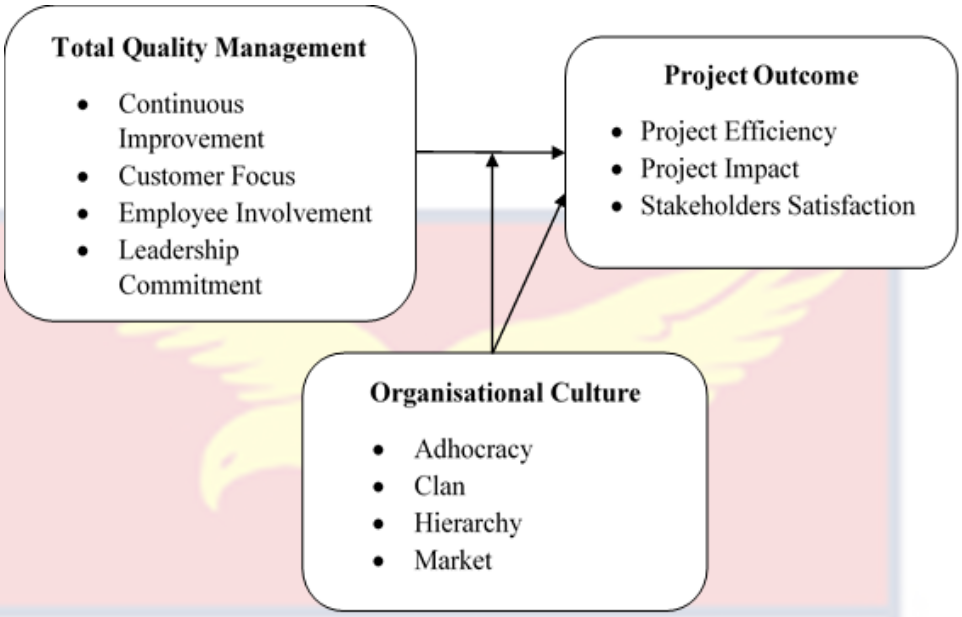

Figure 1: Conceptual Framework

Source: Author's Construct

Chapter Summary

This chapter reviewed the relevant literature, including reviews of the theoretical, conceptual, empirical, and conceptual frameworks. The theories employed were precisely defined, and it was evident how they related to the research. Additionally, the conceptual review provided a thorough and understandable explanation of each concept employed in the study, including TQM, project outcome, and organisational culture. Finally, the researcher developed a conceptual framework after reviewing several empirically related papers.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study aims to examine the total quality management practices and project outcomes in the Electricity Company of Ghana while determining the moderating effect of organisational culture on TQM practices and project outcome. This chapter outlines the research geographical area and the methodology used to carry out the fieldwork by the study's objectives. This chapter discussed the research design, the research philosophy, the study area, the population, the sampling procedure, the data collection instrument, the data collection procedure, reliability and validity, data processing and analysis, and ethical consideration are all covered in detail in this section.

Research Design

A research design is a detailed plan that defines the strategy and methods for acquiring and analysing the data required for a study (Hancock et al., 2021). Researchers can respond more appropriately, objectively, precisely, and affordably to study questions that are attributable to the research design (Asenahabi, 2019). Three forms of research design exist: exploratory, descriptive, and explanatory (Rahi, 2017). Descriptive research focuses on giving a generic description of a phenomenon. It asks the questions of what, who, where, why, and when. Exploratory research is a form of inquiry that seeks to unearth new ideas and developments. Contrarily, an explanatory research design is a form of research that emphasizes establishing a relationship (cause-and-effect) between

variables. The study's use of an explanatory research design was deemed suitable since the study aimed to determine the effect of one variable (total quality management) practices on the other (project outcome).

According to Cresswell (2008), research approaches are considered the activities or manner in which the researcher goes about discovering what is to be known. Again, the researcher is aware of these three different research approaches: qualitative, quantitative and mixed-methods (Cresswell, 2008). The quantitative research approach adopts numerical features for collecting and analysing data and results, whereas the qualitative approach focuses on collecting non-numerical information subjected to textual, written, and oral opinions (Cresswell, 2008). A mix-method is a combination of both quantitative and qualitative research approaches.

The strength associated with the quantitative research approach is that it facilitates the faster collection of data from large respondents. Responses can be easily validated using statistical measures and tools. On the other hand, the quantitative approach is limited to the kinds of responses collected from respondents. Respondents are not allowed to share opinions on subjects aside from those that have been provided by the researcher (Cresswell, 2008). Statistical analysis in quantitative research enables researchers to make generalisations about a larger population based on findings from a sample. This facilitates the generalization of finding (Cresswell, 2008). Also, quantitative approach ensures that closed ended questionnaires are used to collect data which will further be enumerated and analysed numerically (Cresswell, 2008). The

nature of this study demanded that data be collected from a sample of respondents using closed questionnaires and also making generalisations of the findings statistically (Rahi, 2017); As a result, a quantitative research approach was adopted for this study.

Research Philosophy

According to Saunders, Lewis and Thornhill (2012), a researcher's research philosophy is their method for acquiring information. The study adopted the positivist in the other hand, the researcher's approach to knowledge development her hand is influenced by how they see the world. According to Remenyi, Williams, Money and Swartz (1998), positivism is employed whenever researchers try to produce generalisations similar to the laws created by scientists while dealing with observable social reality. As a result, it is assumed that the positivist researcher, who adopts the philosophical viewpoint of a natural scientist, has no influence over or is influenced by the investigation. As a result, a positivist approach develops a systematic methodology that lends itself to replication and statistical validation (Saunders et al., 2012).

Study Area

Geographically, the study area was the ECG operational offices in the Greater Accra region of Ghana. The reason for choosing Greater Accra as the study area is that it has the most significant number of operational offices in the southern part of Ghana. Information on ECG's website indicates that there are seventy-five (75) operational offices in the Greater Accra Region (https://www.ecg.com.gh/index.php/en/regional-status/accra-west-region).

Population

Cooper and Schindler (2016) define a population as the whole list of elements or individuals from which the study seeks to generalise its findings. In other words, it is the complete data from which a researcher wants to derive conclusions. The study's population was solely 75 employees in all the operational regions in the Greater Accra region who are directly involved in projects. The Greater Accra region is divided into three regions: namely, Accra East, Accra West, and Tema. The study focused on all 75 employees directly involved in projects in all three selected operational offices, namely Accra East, Accra West, and Tema in the Greater Accra region. These 75 employees are made up of operation managers, accountants and engineers who are responsible for quality management activities and are aware of organisational activities.

Sampling Procedure

The list of all ECG employees served as the sample frame for this study. They are solely involved in projects in the selected operational offices in the Greater Accra region obtained from the Human Resource Department. Due to their number, the researcher adopted a census technique to include all district managers, district accountants, district engineers, regional managers, regional engineers, and regional accountants from all three operational regions within the Greater Accra region. The reason for employing a census is to enable the researcher to enumerate all the people in the population to give adequate information or provide the information required to achieve this study's research objectives and questions (Maholtra Naresh & Dash, 2015). Although it is

expensive and time-consuming, the results are reliable since each member is surveyed, so there is little error and high reliability.

Out of the total population size of seventy-five (75) employees, the accessible population for this study is sixty-eight (68) ECG employees at the operational unit of the Greater Accra office.

Data Collection Instruments

The term data collection instrument refers to the tools used to collect data or information in research (Maholtra et al., 2015). The data collection instrument employed to conduct this study is a structured questionnaire. It was made up of only closed-ended questions. A questionnaire is a research instrument that gathers information from many people. The questionnaire was structured so that participants could provide quantitative data. Compared to other instruments, a questionnaire has the following advantages: the researcher may collect data from large samples, there is less risk of bias because it is usually done on paper, and anonymity is maintained (Nardi, 2018). The questionnaire is divided into four sections: section A, section B, section C, and section D. Section A captured the background details of the respondents. Section B included items that sought to measure total quality management practices. Section C included items that collected information on measuring organisational culture. The final section (section D) included items that measured respondents' perceptions of the project outcome.

Cooper and Schindler (2016) recommend self-administered questionnaires for explanatory research since they are less expensive than personal interviews.

During the administration of the questionnaire, the researcher clarified any issues that the respondent may not have understood and described the purpose of the study. There were four main sections and 47 total items in the questionnaire. Three statements in the first section determine the respondents' demographic information. 16 items are included in the second section and were used to determine TQM practices. 12 items were used to measure PO in the final section, while 16 items were used to measure OC in the third section. A seven-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Either Agree or Disagree, 5=Somewhat Agree, 6=Agree and 7=Strongly Agree) was used to assess the second to last sections.

The instrument used to measure the constructs was adapted from the literature review. The Malcolm Baldrige National Quality Award (MBNQA) items were adapted to measure total quality management practices. Project outcome measurement items were adapted from Khan, Turner and Maqsood (2013), while items used to measure organisational culture are based on Cameron and Quinn (2011); Kalliath, Bluedorn, and Gillespie (1999); Quinn and Spreitzer (1991). The justification for adapting these measurement items is that reliability and validity have been established in various research studies (Malcolm Baldrige National Quality Award; Khan et al., 2013; Cameron and Quinn (2011); Kalliath et al. (1999); Quinn and Spreitzer (1991).

Although the study has been tested reliably in other jurisdictions, it further investigated the instruments' reliability and validity in the Ghanaian setting to examine contextual response differences (Hair et al., 2017). About reliability,

Cronbach's alpha value and a composite reliability value of a threshold greater than 0.70 were used (Hair et al., 2017). With regard to validity, discriminant validity was ensured using an HTMT value of less than 0.90 (Hair et al., 2017).

Data Source

Primary data was used in the study. The primary data sources are the information acquired through the survey given to respondents. A structured survey questionnaire with a specific question was utilised to minimise and make it easier to analyse the difference in responses among respondents. The researcher employed suitable question forms when developing questionnaires to get the right data from the respondents. Closed-ended questions were employed to restrict respondents' options. The researcher used primary data. They are trustworthy because they were gathered for the study's objective and came from original sources. The researcher retrieved all 75 questionnaires that were given to the respondents.

Data Collection Procedure

Collected questionnaires must be handled appropriately if informed decisions are made out of them (Hair et al., 2015). The respondents were informed of the study's objectives, which made it easier to collect the questionnaires from them successfully. Data distribution and collection were done in 30 days from November 1, 2,022 to December 13, 2022 excluding weekends during working hours 9 am to 4 pm by the researcher. The questionnaire was completed in 30 to 40 minutes by participants. The drop-and-pick method of data collection was employed during this phase.

This method is the most appropriate for this study because the sample participants are located in the three selected operational offices in the southern part of the Greater Accra region of Ghana. Following the collection of the completed survey, which was a bit of a challenge to the researcher, the researcher was able to get in touch with the receptionists' at the various operational offices involved in the survey by calling them before going to pick up the questionnaire due to the busy schedule of the respondent.

Reliability and Validity

Reliability and validity of the data are important considerations when analyzing an instrument to get accurate information from respondents. A measuring instrument's level of dependability is determined by its Cronbach's alpha value. According to Smith and Sparkes (2016), participant error, bias, and observer error are the three basic flaws in data collection consistency. Saunders et al. (2007) suggested that determining a measuring instrument's internal consistency involves comparing each question's responses to those of the other questions in the questionnaire. However, an instrument's validity indicates how effectively it evaluates the specific definition it intends to measure (Saunders et al., 2007).

They also stated that a measuring device must be reliably reproducible for it to be considered valid. Following this, the instrument may be examined to see whether it is exactly what it claims to represent. To guarantee the validity of questionnaires, which acted as evidence and validated the responses obtained using the questionnaire, the significance of which was established by the

relevance of their research issue and their decision (Saunders et al., 2007). The research supervisor reviewed, approved, and corrected the questionnaire before it was given to the respondents.

Data Processing and Analysis

Before the actual analysis, the researcher conducted pre-analysis tasks such as data screening, data coding and checking the response rate. Initially, the response was checked. This can be checked checking the difference between administered questionnaire and completed/filled questionnaire. Out of the seventy-five (75) administered questionnaire, sixty-eight (68) were filled and completed representing 90.6% response rate, consistent with the suggestion of (Daikeler et al., 2020) which suggests that a response rate above 80% is acceptable in a quantitative study.

Furthermore, the questionnaires were screen to check for response anomaly and missing information. Information on the questionnaires were coded using numeral symbols using Microsoft Excel 16. While entering, the study did not consider questionnaires with incomplete entries as legit and qualified for the study; hence, they were not considered for further analysis. The researcher used descriptive statistics such as frequency distribution to analyse the data. In analyzing the relationship between the variables, Structural Equation Modelling [PLS-SEM] was used using SMART PLS 4.0.

Table 1:Coded Items

Name of Construct	Code
Total Quality Management	
Continuous Improvement	CI
Customer Focus	CF
Employee Involvement	EI
Leadership Commitment	LC
Organisational Culture	
Adhocratic	A
Clan	Cl
Hierarchy	H
Market	Mk
Product Outcome	
Project Efficiency	PE
Project Impact	PI
Stakeholders Satisfaction	SS

Ethical Consideration

During the data collection procedure, the researcher considered some ethical issues. A letter of introduction was obtained by the researcher from the Department for Marketing, Procurement and Supply Chain, School of Business, College of Humanities and Legal Studies, University of Cape Coast, and it was sent to the ECG head office in Accra. This made it simple for the researcher to

explain the study's purpose and seek permission to collect data from the district managers, district accountants, district engineers, regional managers, regional engineers, and regional accountants from the Greater Accra region.

Again, the researcher sought the respondents' permission before requesting information. Respondents were allowed to express their willingness to participate if they wanted to without being coerced. The respondents were informed of the questions to expect and the reason for the data collection. Furthermore, respondents received assurances regarding the privacy of their answers. Also, the respondents' privacy was not invaded.

Chapter Summary

The present chapter centres on the research methodology, research design, study location, population, sampling methodology, sample size, data source, data collection tool, data processing and analysis, and variable measurement for the study. The topic also addressed ethical implications. A questionnaire was utilised as the primary tool for data collection from participants. The process of encoding the data was carried out utilising the software application Microsoft Excel. Furthermore, the software package SPSS was employed for the purpose of conducting both descriptive and inferential statistical analyses. The study employed regression analysis to evaluate hypotheses through the utilisation of Smart Partial Least Square-Structural Equation Modelling [PLS-SEM]. The study adhered to ethical principles.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter provides the data presentation, discussions, and findings of the study. The purpose of the study is to examine the total quality management practices and project outcomes in the Electricity Company of Ghana while determining the moderating effect of organisational culture on TQM practices and project outcome. The data analysis was presented in three sections: first, the researcher presented the demographic data from the study; second, the researcher examined the structural analysis carried out through PLS-SEM using Structural Equation Modelling (SEM); and finally, the relationships were discovered through the data analysis. A descriptive analysis was performed using SPSS. For SEM research, PLS was employed due to its ability to manage small sample numbers, the fact that the data being analysed has a normal distribution, and the fact that the model is correctly defined.

Background Information of Respondents

This section accounts for the demographic characteristics of the respondents. The study considered their gender differences, position at the time of data collection, and years of working experience. Table 2 gives details on the background information of the respondents.

The gender of the respondents was checked. Respondents were generally grouped into male and female groups. It resulted in a higher number of male respondents than female respondents. The sampled male respondents (45)

represented 66.1% of the population, whereas twenty-three (23) female respondents represented 33.9% of the respondents. By implication, there are more male employees at the Electricity Company of Ghana who are in charge of project activities. These results may be used in the future to assess male employees' commitment to total quality management and project outcome.

Another piece of information required from respondents had to do with their portfolio or the position they hold in their workplace. Three main positions were evident: manager, engineer, and accountant. The dominant position at the workplace included managers (n=35, 51.5%). Followed by 19 engineers representing 27.9%, and finally, 14 accountants representing 20.6%. These statistics show that more employees are occupying the manager's role than the rest of the positions. By implication, the results of this study are likely to be dominated by the perceptions of managers other than engineers and accountants.

The last demographic information retrieved from respondents included years of working experience. This information helped the researcher examine the extent to which respondents are familiar with in-depth knowledge of the concerns of total quality management practices and project outcome. The study's findings showed that most of the respondents (30 respondents), representing 44.1% of the sampled participants, had more than 5 years of working experience. 39.1% more than ten (10) years of working experience. This result is satisfactory considering the caliber of persons who desired to fill out this questionnaire. Only 16.2% of the respondents had working experience of less than 5 years.

Table 2: Descriptive Statistics of Respondents' Background Information

Variable	Description	Frequency	Percentage (%)
Gender	Male	45	66.1
	Female	23	33.9
Position	Manager	35	51.5
	Engineer	19	27.9
	Accountant	14	20.6
Years of working experience	Below 5 years	11	16.2
	5 to 10 years	30	44.1
	10 years and above	27	39.7

Source: Field Data (2023)

Partial Least Square-Structural Equation Modelling

Generally, structural equation modelling is a contemporary analytical technique that enhances the easy assessment of complex models including mediating and moderating variables (Ali et al., 2018). Other factors that warrant the use of structural equation modelling include the existence of latent variables, that is, variables that cannot be directly measured (Hair et al., 2019). Since the study is considering a moderating role as well as measuring latent variables such as total quality management practices and culture, it is important to use the structural equation modelling analytical technique.

Structural equation modelling is noted to include the assessment of quality criteria known as measurement model and analysis (Hair et al., 2017). The measurement modelling considers the relationship between latent variables and

the measurement items or indicators. Structural modelling looks at the relationship between the main variables in the work, that is, the relationship between endogenous variables and exogenous variables.

Assessment of the Measurement Model

The outer loadings, internal consistency (construct reliability), and construct validity of the measurement model are all assessed (Hair et al., 2019).

Outer loadings

Outer loadings are the estimated relationship between items/indicators and their respective variables. It also explains how well an item represents its construct (Hair et al., 2019). Factor loadings of 0.70 and above are usually recommended in the social sciences (Hair et al., 2014). Additionally, factor loadings above 0.5 are considered credible when its deletion does not affect the AVE values (Hair et al., 2014). On this note, loadings below 0.5 are deleted from the model. The initial total items for the various variables were 44. Using the criteria of deleting item loadings less than 0.5, total item reduced from 44 to 35. Nine (9) items did not qualify the criteria, hence were deleted (See Table 3).

Reliability of Construct

Reliability measures the extent to which measurement items are consistent with results when they are tested more than once (Hair et al., 2014). A construct or variable is said to be reliable when its internal consistency values are 0.7 and above (Henseler et al., 2015). Chronbach Alpha (CA) and Composite Reliability were used to measure the construct's reliability. Detailed information on reliability results using Cronbach's alpha and composite reliability values are shown in Table 3.

Table 3: Factor loadings, Reliability and AVE

Construct	Loadings	Cronbach Alpha	Composite Reliability	AVE
TQM				
Continuous Improvement	0.830			
	0.888			
	0.869			
	0.796	0.867	0.870	0.716
Leadership Commitment	0.842			
	0.863			
	0.897			
	0.680	0.839	0.853	0.68
Customer Focus	0.811			
	0.860			
	0.858			
	0.798	0.852	0.852	0.693
Employee involvement	0.791			
	0.761			
	0.892			
	0.884	0.852	0.863	0.695

Source: SMART PLS 4 output

Table 3: Cont… Factor loadings, Reliability and AVE

Organisational Culture				
Clan	0.799			
	0.858			
Market	0.841			
	0.822			
	0.869			
Hierarchy	0.750			
	0.807			
Adhocracy	0.828			
	0.787	0.939	0.943	0.670
Project Outcome				
Stakeholders' Satisfaction	0.762			
	0.870			
	0.842			
Project Efficiency	0.837			
	0.876			
	0.901			
	0.885			
Project Impact	0.876			
	0.905			
	0.881	0.955	0.957	0.747

Source: SMART PLS 4 output

Validity of Constructs

Validity measures the accuracy of measurement items. It measures the extent to which items can measure items accurately (Clark & Watson, 2019). According to (Hair et al., 2019) validity can be measured in two dimensions: convergent validity and discriminant validity. Using an Average Variance Extracted (AVE) value above 0.5 as the threshold (Hair et al., 2019), convergent

validity is established when items measuring a particular construct merge to measure it appropriately. Discriminant validity measures the distinctiveness of the constructs in the study.

Convergent Validity

Convergent validity is established in this study by assessing the AVE of the various constructs. Table 3 gives details of the convergent validity results. The results in Table 3 show that convergent validity is established with an Average Variance Extracted (AVE) value above 0.5.

Discriminant Validity

Discriminant validity is largely assessed using three quality criteria: Heterotrait Monotrait (HTMT), cross-loadings, and Fornell-Larcker score values (Hair et al., 2014). For most contemporary studies, HTMT is considered robust in determining discriminant validity (Hair et al., 2019). HTMT values less than 0.90 can be used to establish discriminant validity (Hair et al., 2019). Since the correlational values between constructs are less than 0.90 (see Table 4), discriminant validity is established for this study. The summary of the measurement model is shown in the pictorial form shown in Figure 2. The figure explains the overall scores of the measurement model for this study.

Table 4: HTMT Results

	CI	CF	EI	LC	OC	PO
CI						
CF	0.805					
EI	0.690	0.861				
LC	0.794	0.803	0.87			
OC	0.600	0.543	0.705	0.637		
PO	0.548	0.548	0.748	0.634	0.818	

Source: SMART PLS 4 output

Note:
CI means continuous improvement
CF means customer focus
EI employee involvement
LC means leadership commitment
OC means organisational culture
PO means project outcome

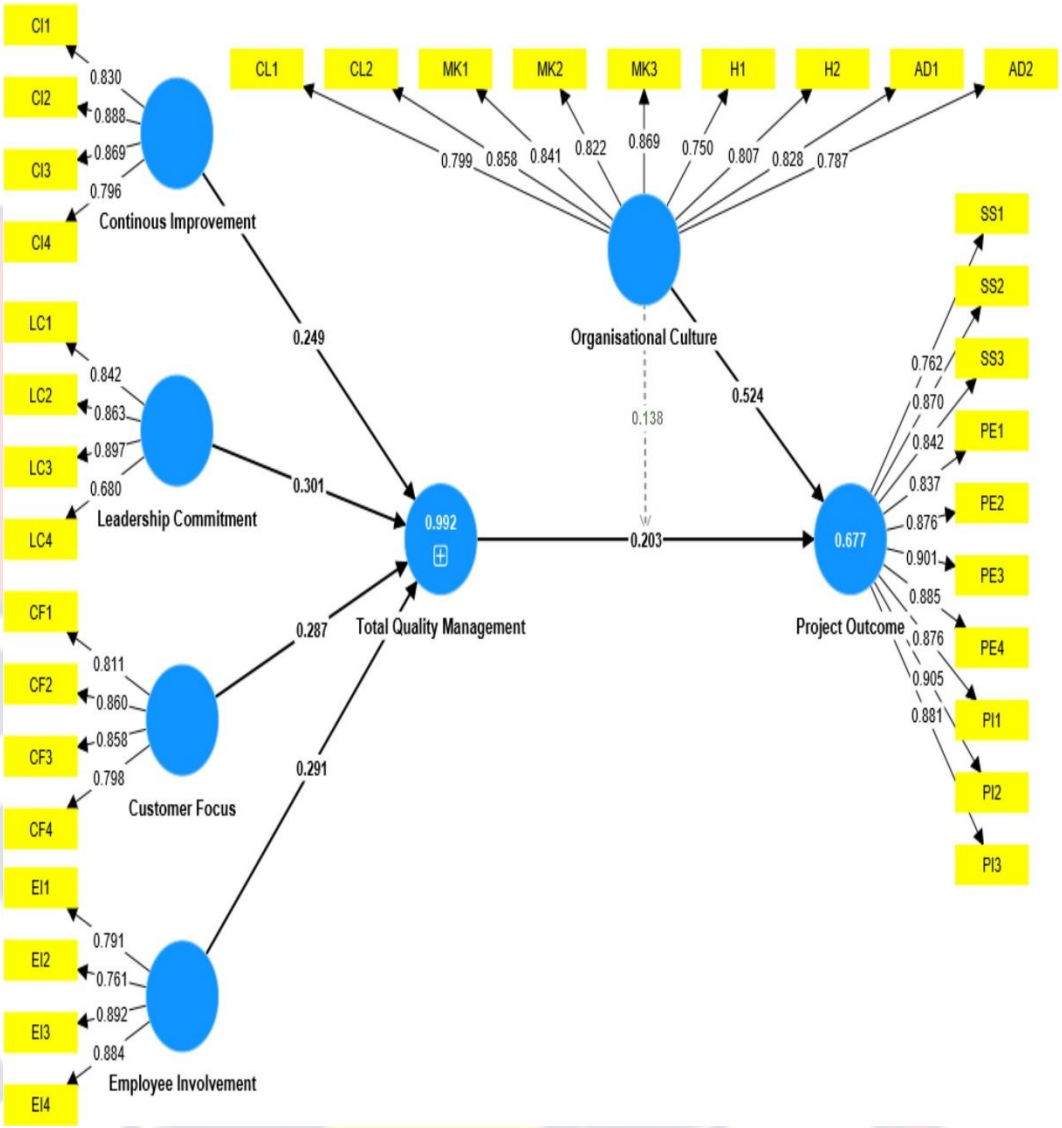

Figure 2: Measurement Model for the Study

Assessment of the Structural Model

Structural modelling assessment is a phase of the structural equation modelling technique. According to Hair et al. (2019), structural modelling could be assessed by evaluating multicollinearity, checking the significance of path coefficients, and determining coefficients.

Multicollinearity

Issues of bias in regression are checked by examining collinearity. The variance inflation factor (VIF) value is used to assess issues of multicollinearity. The assumption is that if VIF values are above 5, then there are issues of collinearity; otherwise, the collinearity issues are satisfaction (Hair et al., 2019). From Table 5, all VIF values are less than 5; hence, there are no issues of multicollinearity in this study. See Table 7 for an examination of VIF values for each construct in this study.

Table 5:Multicollinearity Output

	VIF
Continuous Improvement -> Total Quality Management	2.157
Customer Focus -> Total Quality Management	3.207
Employee Involvement -> Total Quality Management	2.582
Leadership Commitment -> Total Quality Management	3.118
Organisational Culture -> Project Outcome	2.263
Total Quality Management -> Project Outcome	1.746
Organisational Culture x Total Quality Management -> Project Outcome	1.848

Source: SMART PLS 4 output

Coefficients of Determination (R^2, f^2, Q^2)

The coefficients of determination constitute the last aspect of evaluating the structural model. R^2, f^2, and Q^2 were used to measure the coefficients of determination. R^2 is used to measure the variance of the endogenous variable (dependent variable) explained by each of the exogenous variables (independent variable) (Hair et al., 2019). It is also known as the explanatory power of the

exogenous variable. The R^2 ranges from 0 to 1. R^2 values above 0.75, 0.50, and 0.25 are considered substantive, moderate, and weak (Hair et al., 2019). From Table 6, the R^2 is considered moderate (0.677). The structural model output is also shown in Figure 3. By implication, 67.7% of project outcome can be explained by total quality management practices and organisational culture.

f^2 explains the extent to which the value of R^2 is affected when one of the exogenous variables is removed. It is also used to measure the effect size of each of the endogenous variables on the exogenous variable. An effect size value of 0.02, 0.15, and 0.35 is considered small, medium, and large respectively (Hair et al., 2019). From Table 6, the effect size of organisational culture has a large effect size (0.375), and total quality management practices has a small effect size (0.073). Predictive relevance of 0.02, 0.15, and 0.35 indicates small, medium, and large respectively.

According to Hair et al. (2017), predictive relevance can also be determined using an acceptable criterion known as predictive relevance (Q^2). If the value of Q^2 is greater than zero, the path model has the potential to be useful for making predictions for a certain reflective endogenous construct. A predictive relevance of 0.02 suggests a small amount, 0.15 implies a medium amount, and 0.35 shows a considerably large amount of prediction. Table 10 shows that total quality management and organisational culture have large predictive relevance (0.639). The structural model output is considered useful in explaining the path relationships for this study; hence, these relationships are shown in Figure 3.

Table 6: R^2, f^2 and Q^2 Output

Variable	R^2	Adjusted R^2	f^2	Q^2
Project Outcome	0.677	0.670		0.639
Total Quality Management			0.073	
Organisational Culture			0.375	

Source: SMART PLS 4 output

Significance of Path Coefficients

Another critical factor to be considered in assessing the structural model is the significance of path coefficients. The path coefficients measure the relationship and the degree of significance between the various constructs (Henseler et al., 2015). The nature of the path (negative or positive) and the significance level (p-value) are used to determine the significant path coefficients. With a p-value of less than 0.05, the path is considered statistically significant (Hair et al., 2017). Table 6 gives details of the path coefficient results. It contains the β values, the sample mean, and the P values for each hypothesis tested.

Various hypotheses that were tested in this study were examined using the p-values and the T-values. The assumption is that hypotheses with p-values less than 0.05 and T-values greater than 1.96 are considered satisfactory for the study (Altair et al., 2021). Table 7 gives details of the hypotheses output for this study. It contains the β values, standard deviation, T statistics, P values, and the outcome of the hypotheses tested.

Table 7: Path Coefficient and Hypotheses Diagnostics

s/n	Hypotheses	Path Coefficient (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Remarks
H1	TQM->PO	0.203	0.103	1.978	0.048	**Supported**
H1a	CI->PO	0.155	0.076	2.036	0.042	**Supported**
H1b	CF->PO	0.058	0.029	1.986	0.047	**Supported**
H1c	EI->PO	0.059	0.031	1.925	0.054	**Not supported**
H1d	LC->PO	0.599	0.088	6.84	0.000	**Supported**
H2	OC->PO	0.524	0.124	4.216	0.000	**Supported**
H3	TQM x OC -> PO	0.138	0.062	2.224	0.026	**Supported**

Source: SMART PLS 4 output

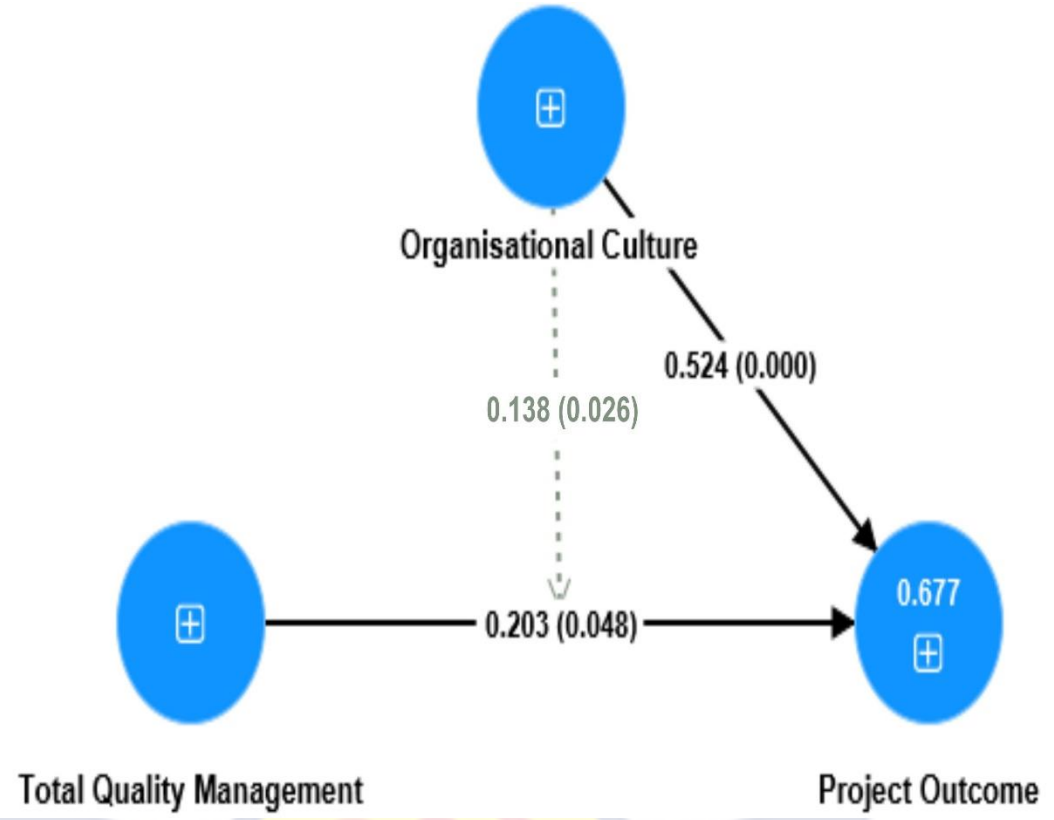

Figure 3: Structural Model Output

Discussion of Results

The study sought to examine the moderating role of organisational culture in the relationship between total quality management practices and project outcome. This section discussed the research findings about the objectives that were formulated for the study.

The effect of total quality management on project outcomes at ECG.

The effect of total quality management practices on project outcomes at the Electricity Company of Ghana was found to have a positive link with a path coefficient value of (β=0.203) and a P-value of (0.048). This implies that total quality management significantly contributes to improving project outcome. Hence, this result supports the assertion of Jong et al. (2019), who opines that

quality is a generic phenomenon that can be experienced when applied effectively. Although Laird (2016) raised concerns about the level of total quality management practices in most developing countries, there seems to be a contrary view in this study. The study was conducted in Ghana (a developing country), yet total quality management was noted to be a predictor of the project outcome.

The hypotheses that there is a significant positive relationship between total quality management and project outcome were supported. The effect size of (0.073) shows that total quality management practices is a minimal predictor of the project outcome. Hence, the dimensions of the total quality management practices (continuous improvement, customer focus, employee involvement, and leadership commitment) could be reconsidered and improved to suit the Ghanaian setting, most especially the Electricity Company of Ghana.

The

Additionally, the individual total quality management practices were assessed. That is leadership commitment, employee involvement, customer focus and continuous involvement. It was resulted that out of the four dimensions examined, three (Continuous improvement, customer focus and leadership commitment) were found to significantly contribute positively to project outcome. Continuous improvement was found to have contributed to 15.5% of project with p values less than 0.05. This result is not different from the assertion of Besterfield et al. (2014), who have opined that product and services should be consistently applied to new projects and programmes. Also, customer focus-based environment is considered relevant to this study. Thus, customer focus contributes

to 5.8% increase in project outcome. This evidence is in line with the findings of Lee & Lee (2020) who have echoed on the customers as the drive for project successes. Leadership commitment has the greatest impact on project outcome, thus, contributing to 59.9% increase in project outcome. Leaders' commitment boosts the confidence of stakeholders of institutions to achieve desired goals (Wong et al., 2018).

The effect of organisational culture on project outcome in ECG.

The effect of organisational culture was also assessed on project outcome at the Electricity Company of Ghana. The outcome in Table 9 showed that organisational culture positively improves project outcome (β=0.524, p=0.000). This implies that a unit improvement in organisational culture will contribute to a 52.4% increase in the project outcome. The positive link between organisational culture and project outcome is in line with the outcome of Ayegun (2018), who has emphasized the effectiveness of organisational culture and project performance. He opines that organisational culture is an internal phenomenon in the organisation that can be easily controlled by management; hence, organisational culture can be easily influenced to get the desired outcome.

The effect size measured for this study shows that organisational culture (0.375) is a good predictor of project outcome than total quality management practices (0.073). Hence, when considering project outcomes in public institutions such as the Electricity Company of Ghana, organisational culture should be emphasized. Although total quality management practices are relevant in predicting project outcome, organisational culture should be emphasized more.

The role of organisational culture in moderating total quality management practices and project outcomes in ECG

The interaction effect of organisational culture on total quality management practices and project outcome at the Electricity Company of Ghana was assessed. The results showed a significant positive moderating effect of organisational culture on the relationship between total quality management practices and project outcome (β=0.138, p=0.026). The positive significant effect implies that organisational culture is a variable that has the potential to improve the link between total quality management practices and project outcome. This result is in line with the assertions of various scholars (Alghamdi, 2018; Mosadeghrad & Ansarian, 2014) who have suggested the assessment of a moderating effect on the relationship between total quality management practices.

The moderating effect shows that organisational culture weakens the relationship between total quality management practices and project outcome from (β=0.203) to (β=0.138). This result is peculiar in the setting of ECG and could be a short run phenomenon. The moderating path indicates a significant path of less than 0.05, hence, will progressively increase path relationship between TQM and PO.

Chapter Summary

This chapter is a discussion of the various findings discovered in the study. Structural equation modelling primarily supported the assessment of the various objectives set for this study. Three objectives were formulated to support this study. The first object examined the effect of total quality management practices on project outcome. The second objective considered the effect of

organisational culture on project outcome. The third objective considered the moderating effect of organisational culture on the relationship between total quality management practices and project outcome. All three objectives resulted in a significant positive relationship.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of the study is to examine the moderating effect of organisational culture on the relationship between total quality management practices and project outcome. Using the explanatory research design, the study was subjected to the following objectives;

1. To examine the effect of total quality management practices on project outcome in the Electricity Company of Ghana.
2. To examine the effect of organisational culture on project outcome at Electricity Company of Ghana.
3. To examine the role of organisational culture in moderating TQM practices and project outcome at Electricity Company of Ghana.

A quantitative method was adopted to collect data from the operational offices of the Electricity Company of Ghana. The data was collected using closed-ended questionnaires. In all, sixty-eight (68) operational officers (engineers, accountants, and managers) of ECG were sampled for the study. Microsoft Excel was used for coding, tabulating, and evaluating raw data; SPSS and SMART PLS 4 were used for descriptive statistics of respondents' background information; and structural equation modelling was adopted as the data analytical technique. Objectives were quantitatively measured using closed-ended questionnaires. Based on the study's objectives, further conclusions and findings of the study were drawn.

Summary

Quantitative measures were adopted to conclude the structural equation model. The T statistics, P value, and path coefficient value were used to interpret the results. The first research question sought to examine how total quality management practices contribute to project outcome? With a coefficient value of (0.203), the results indicated that total quality management practices contribute positively to project outcome. This implies that there is a positive relationship between these variables; that is, an increase in total quality management practices will contribute to a corresponding increase in project outcome by 20.3%.

Also, the various TQM practices influence project outcome. The various practices include; continuous improvement, employee involvement, customer focus and leadership commitment. Out of the four practices employee involvement was found to have no significant effect of project outcome. Continuous improvement, leadership commitment and customer focus were the various TQM practices that have positive significant effect on project outcome. Leadership commitment has the highest influencing factor, followed by continuous improvement and customer focus.

The second research question proposed for this study is; "what is the effect of organisational culture on project outcome?" The results indicated that organisational culture is a good predictor of the project outcome. With a coefficient value of (0.524), the study shows a positive correlation between organisational culture and project outcome. By implication, an increase in organisational culture contributes to a corresponding increase in project outcome

of 52.4%. This study observed that organisational culture is a good predictor of project outcome than total quality management practices.

The third research question focused on how organisational culture plays a moderating role in the relationship between total quality management practices and project outcome. The moderating variable (organisational culture) plays a significant positive role ((p value=0.138, β=0.026) in the relationship between total quality management practices and project outcome. However, the path coefficient when the moderator (organisational culture) was introduced has been reduced from 0.239 to 0.163. By implication, organisational culture is considered a variable that can weaken the relationship between total quality management practices and project outcome.

Conclusions

Based on the discovered findings on all three objectives of the study, the researcher made conclusions on the basis of the study's findings. The first objective sought to examine the effect of total quality management practices on project outcome. It was realised that there is a significant positive relationship between total quality management practices and project outcome; hence, the study concludes under the unit of investigation (Electricity Company of Ghana) that total quality management practices are relevant in enhancing project outcome. In examining which of the various practices supports project outcome at the ECG it was evidenced that leadership commitment, customer focus and continuous improvement are the core TQM practices that has significant positive effect on project outcomes.

Examining the effect of organisational culture on project outcome was the second objective. It was evidenced that there is a positive significant relationship between organisational culture and project outcome. Based on this finding, the study came to the conclusion that organisational culture is also a factor in improving project outcome just as total quality management practices is.

The third objective focused on evaluating the moderating effect of organisational culture on the relationship between total quality management practices and project outcome. It was revealed that organisational culture is significant in moderating the relationship between total quality management and project outcome. However, the moderating effect reduces the baseline relationship (the relationship between total quality management practices). Therefore, it was concluded that organisational culture in this context reduces the strength of the relationship between total quality management practices and project outcome.

Recommendations

Recommendations suggested for this study were drawn from research findings as well as the conclusions for the study. Based on the findings that total quality management practices improves project outcome, the study findings recommend the inclusion of total quality management experts to undertake contemporary quality decisions that will ensure a sustainable improvement of project outcomes at ECG.

Also, for management's decision, management should prioritize leadership commitment, customer focus and continuous improvement should not be undermined. In a situation where there are limited resources in the application

of these practices, management should place premium on leadership commitment. Leadership commitment has the highest β value, hence management should consider implementing in situation of scarce resources.

Organisational culture was found to have a significant positive effect on project outcome. Since the β value of organisational culture is greater than the β value of total quality management practices, the study recommends more concentration on building organisational culture, which is a good predictor of project outcome than total quality management practices. The study recommends maintaining a beneficial organisational culture, and ECG should focus on building an effective organisational clan and hierarchical structure.

Objective three, which sought to examine the moderating effect of organisational culture on the relationship between total quality management practices and project outcome, discovered that organisational culture reduces the strength of the relationship between total quality management practices and project outcome. The study recommends a focus on other moderating variables aside from organisational culture because it does not contribute to enhancing the relationship between total quality management practices and project outcome.

Suggestions for Further Research

The study makes the following suggestions for further research studies in light of its limitations;

The adoption of other research approaches apart from the quantitative research approach. Quantitative research is limited to drawing determined responses from respondents. Hence, respondents are not given the liberty to air

their explicit views on relevant areas not captured by the researcher. A qualitative research approach may be adopted to collect information on other ways total quality management practices could be enhanced. Future researchers may also consider more concentrated geographical areas that have experienced poor project outcome within the ECG fraternity. This may bring out comparisons between ECG and other outlets across the country.

Future studies may also consider other variables to test the moderating effect between total quality management practices and project outcome. Variables may include integrated systems, strategic and systematic approaches, process-centered, and communication. Further studies may also consider the individual effects of the variables (leadership commitment, employee involvement, customer focus, and continuous improvement) measuring total quality management practices on project outcome.

Future research may also consider moderating the individual dimensions of the organisational culture on the relationship between each TQM practice and project outcome.

REFERENCES

Abbas, J. (2020). Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production*, *242*, 118458.

Abdallah, A. B. (2013). The influence of soft and hard total quality management (TQM) practices on total productive maintenance (TPM) in Jordanian manufacturing companies. *International Journal of Business and Management*, *8*(21), 1.

Abdullah, K. A. S., & Rosli, M. (2012). Total quality management, entrepreneurial orientation and organisational performance: The role of organisational culture. *African Journal of Business Management*, *6*(13), 4717-4727.

Abdullahi, R. I. (2018). *Influence of organisational culture on project performance in Waso Trustland project organisation Isiolo County-Kenya* (Doctoral dissertation, University of Nairobi). http://hdl.handle.net/11295/106123

Aboagye, B., Gyamfi, S., Ofosu, E. A., & Djordjevic, S. (2021). Status of renewable energy resources for electricity supply in Ghana. *Scientific African*, *11*(22), 45-61.

Aga, D. A., Noorderhaven, N., & Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. *International Journal of Project Management*, *34*(5), 806-818.

Agbola, R. M., & Ankrah, E. (2013). Does total quality management affect the performance of small and medium enterprises? A case of manufacturing SMEs in Ghana. *World Applied Sciences Journal (Economic, Finance and Management Outlooks)*, *28*, 1-9.

Al Hammadi, F. A. A. O. (2021). *The practical project manager competencies and skills for achieving success in projects in the UAE public sector* (Doctoral dissertation, The British University in Dubai (BUiD). Retrieved from https://bspace.buid.ac.ae/handle/1234/1839

Albert, M., Balve, P., & Spang, K. (2017). Evaluation of project success: a structured literature review. *International Journal of Managing Projects in Business*, *10*(4), 796-821.

Alghamdi, F. (2018). Total quality management and organisational performance: A possible role of organisational culture. *International Journal of Business Administration*, *9*(4), 186–200.

Al-Hajj, A., & Zraunig, M. (2018). The impact of project management implementation on the successful completion of projects in construction. *International Journal of Innovation, Management and Technology*, *9*(1), 21–27.

Ali, A. S., & Rahmat, I. (2010). The performance measurement of construction projects managed by ISO-certified contractors in Malaysia. *Journal of Retail & Leisure Property*, *9*(1), 25–35.

Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling

(PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, *15* (14), 54-87.

Alkelani, A. M., Hasnan, K., Mohammad, M., Ahmad, M. F., & Ataalah, A. (2016). Relationship between total quality management (TQM) practice and organisational performance: A conceptual model based on Libyan manufacturing industries. *J Eng Ap Sci*, *11*(14), 8635-8641.

Al-Sabek, F. M. (2018). Critical factors affecting the implementation of total quality management in the construction industry in UAE. *International Journal of Civil and Environmental Engineering*, *9*(5), 1509–1513.

Altair, T., Borges, L. G., Galante, D., & Varela, H. (2021). Experimental approaches for testing the hypothesis of the emergence of life at submarine alkaline vents. *Life*, *11*(8), 77-99.

Anna, Y. K., Igor, B. A., & Natalia, N. K. (2015). Organisational culture in focus of measurements. *Procedia-Social and Behavioral Sciences*, *166*, 246-253.

Asenahabi, B. M. (2019). Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches*, *6*(5), 76-89.

Attakora-Amaniampong, E., Salakpi, A., & Bonye, F. (2014). Total quality management and its impact on the level of customer focus within construction project management in Ghana. *International Journal of Business and Management Invention*, *3*(7), 36-48.

Ayegun, O. A. (2018). *Impact of organisational culture on project performance of contracting organisations in Ondo State* (Master's dissertation, Nigeria Federal University of Technology, Akure). Retrieved from http://196.220.128.81:8080/xmlui/handle/123456789/2097

Berwick, D. M. (2019). Sounding board: Continuous improvement as an ideal in health care. In *Management of Healthcare* (pp. 183-186). Routledge.

Besterfield, D. H., Besterfield-Michna, C., Besterfield, G. H., Besterfield-Sacre, M., Urdhwareshe, H., & Urdhwareshe, R. (2014). *Total quality management revised edition for Anna University* (3rd ed.). Noida, India: Dorling Kindersley Pvt. Ltd.

Boulter, L., Bendell, T., & Dahlgaard, J. (2013). Total quality beyond North America: A comparative analysis of the performance of European Excellence Award winners. *International Journal of Operations & Production Management*, *33*(2), 197-215.

Bouranta, N., Psomas, E., Suárez-Barraza, M. F., & Jaca, C. (2019). The critical factors of total quality management in the service sector: A cross-cultural study. *Benchmarking: An International Journal*.

Carvalho, M. M. D., & Rabechini Junior, R. (2015). Impact of risk management on project performance: the importance of soft skills. *International Journal of Production research*, *53*(2), 321-340.

Castro, M. S., Bahli, B., Barcaui, A., & Figueiredo, R. (2020). Does one project success measure fit all? An empirical investigation of Brazilian projects. *International Journal of Managing Projects in Business*, 14(3), 788-805.

Chen, C. K., Anchecta, K., Lee, Y. D., & Dahlgaard, J. J. (2016). A stepwise ISO based TQM implementation approach using ISO 9001: 2015. *Management and Production Engineering Review*, *7*(4), 65–75.

Chen, C. K., Anchecta, K., Lee, Y. D., & Dahlgaard, J. J. (2016). A stepwise ISO-based TQM implementation approach using ISO 9001: 2015. *Management and Production Engineering Review*, *7*(4), 65–75.

Chen, R., Lee, Y. D., & Wang, C. H. (2020). Total quality management and sustainable competitive advantage: serial mediation of transformational leadership and executive ability. *Total Quality Management & Business Excellence*, *31*(5-6), 451-468.

Chou, J. S., & Yang, J. G. (2012). Project management knowledge and effects on construction project outcomes: An empirical study. *Project Management Journal*, *43*(5), 47-67.

Clark, L. A., & Watson, D. (2019). Constructing validity: New developments in creating objective measuring instruments. *Psychological Assessment*, *31*(12), 141-167.

Cooper, D. R., & Schindler, P. S. (2016). *Research methods in administration* (12th ed.). Brazil: McGraw Hill.

Crane, B. (2020). Revisiting who, when, and why stakeholders matter: Trust and stakeholder connectedness. *Business & Society*, *59*(2), 263-286.

Creswell, J. W. (2008). The selection of a research design. *Research Design-Qualitative, Quantitative, and Mixed Method Approaches*-, 14(4), 3-22.

Dahlgaard-Park, S. M., Reyes, L., & Chen, C.-K. (2018). The evolution and convergence of total quality management and management theories. *Total Quality Management & Business Excellence*, *29*(9-10), 1108–1128.

Dalcher, D. (2012). The nature of project management: A reflection on the anatomy of major projects by Morris and Hough. *International Journal of Managing Projects in Business*, 5(4),643–660.

Dale, B. G., & Plunkett, J. J. (2017). *Quality costing* (3rd ed.). London, UK: Routledge.

Derakhshan, R., Turner, R., & Mancini, M. (2019). Project governance and stakeholders: a literature review. *International Journal of Project Management*, *37*(1), 98-116.

Ebrahimi, M., & Sadeghi, M. (2013). Quality management and performance: An annotated review. *International Journal of Production Research*, *51*(18), 5625-5643. https://doi.org/10.1080/00207543.2013.793426

Ekrot, B., Kock, A., & Gemünden, H. G. (2016). Retaining project management competence—Antecedents and consequences. *International Journal of Project Management*, *34*(2), 145-157.

Els, R., Meyer, H., & Ellis, S. (2022). A measurement scale was developed to investigate the effect of leaders' perceptions regarding attitudes towards and commitment to quality management of training. *International Journal of Training and Development*, *26*(1), 120-144.

Ergün, E., & Tasgıt, Y. E. (2013). Cultures of Adhocracy, Clan, Hierarchy and Market and Innovation Performance: A Case of Hotels in Turkey. *Journal of Travel & Tourism Research*, *13*.

Eweje, J., Turner, R., & Müller, R. (2012). Maximizing strategic value from megaprojects: The influence of information-feed on decision-making by the project manager. *International journal of project management*, *30*(6), 639-651.

Fiasorgbor, N. K., Abdulai, R. A. T., & Antwi-Yeboah, M. (2022). A Review of the Characteristics and Challenges of Electricity Distribution in Ghana: Case Study of the Northern Electricity Distribution Company. *Energy and Power Engineering*, *14*(11), 615-634.

Freeman, R. E., & Dmytriyev, S. (2017). Corporate social responsibility and stakeholder theory: Learning from each other. *Symphonya. Emerging Issues in Management*, *23* (1), 7-15.

Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review*, *25*(3), 88-106.

Fu, S.-L., Chou, S.-Y., Chen, C.-K., & Wang, C.-W. (2015). Assessment and cultivation of total quality management organisational culture – an empirical investigation. *Total Quality Management & Business Excellence*, *26*(1-2), 123–139.

Fung, H. P., & Ramasamy, S. (2015, October). *The impact of leadership roles on team satisfaction, team effectiveness and project performance – a study of project managers in Malaysia*. In Asia e University Postgraduate Research Conference. Retrieved from https://ssrn.com/abstract=2721991

Goetsch, D. L., & Davis, S. B. (2016). *Quality management for organisational excellence: Introduction to total quality*. pearson.

Gu, V. C., Hoffman, J. J., Cao, Q., & Schniederjans, M. J. (2014). The effects of organisational culture and environmental pressures on IT project performance: A moderation perspective. *International Journal of Project Management*, *32*(7), 1170-1181.

Hair Jr, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European business review*, *26*(2), 106-121.

Hair Jr, J. F., Wolfinbarger, M., Money, A. H., Samuel, P., & Page, M. J. (2015). *Essentials of business research methods*. Routledge.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24.

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*, *24*(5), 54-67.

Hall, F., Petrossian, B., & Spackman, T. (2018). 'I would recommend it to anyone!' transferring leadership development and evaluating for impact at

Skipton Building Society. *International Journal of HRD Practice, Policy and Research*, *3*(2), 7-22.

Hancock, D. R., Algozzine, B., & Lim, J. H. (2021). *Doing case study research: A practical guide for beginning researchers* (4th ed.). New York, NY: Teachers College Press.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(12), 115-135.

Hilman, H., Ali, G. A., & Gorondutse, A. H. (2020). The relationship between TQM and SMEs' performance: The mediating role of organisational culture. *International Journal of Productivity and Performance Management*, *69*(1), 61-84.

Huijgens, H., Van Deursen, A., & Van Solingen, R. (2017). The effects of perceived value and stakeholder satisfaction on software project impact. *Information and Software Technology*, *89*, 19-36.

Hussein, B. A., Ahmad, S. B., & Zidane, Y. J. (2015). Problems associated with defining project success. *Procedia Computer Science*, *64*, 940-947.

Ika, L. A., & Donnelly, J. (2017). Success conditions for international development capacity building projects. *International Journal of Project Management*, *35*(1), 44-63.

Ika, L. A., Diallo, A., & Thuillier, D. (2012). Critical success factors for world bank projects: An empirical investigation. *International Journal of Project Management*, *30*(1), 105-116.

Islamgaleyev, A., Petrova, M., Kurenkeyeva, G., Shalbayeva, S., & Kadirbergenova, A. (2020). Increasing customer focus in metal trading. *Entrepreneurship and Sustainability Issues*, *8*(1), 604

Jong, C. Y., Sim, A. K., & Lew, T. Y. (2019). The relationship between TQM and project performance: Empirical evidence from the Malaysian construction industry. *Journal of Managing Projects in Business*, *11*(3), 783-805.

Jurburg, D., Viles, E., Tanco, M., & Mateo, R. (2017). What motivates employees to participate in continuous improvement activities? *Total Quality Management & Business Excellence*, *28*(13-14), 1469-1488.

Kalliath, T. J., Bluedorn, A. C., & Gillespie, D. F. (1999). A confirmatory factor analysis of the competing values instrument. *Educational and Psychological Measurement*, *59*(1), 143-158.

Keleckaite, M., & Meiliene, E. (2015). The importance of project management methodologies and tools in non-governmental organisations: case study of Lithuania and Germany. *PM World Journal*, *4*(7), 1-17.

Kerzner, H. (2017). *Project management: A systems approach to planning, scheduling, and controlling*. Hoboken, New Jersey: John Wiley & Sons.

Kerzner, H. (2018). *Project management best practices: Achieving global excellence*. John Wiley & Sons.

Kerzner, H. (2022). *Project management metrics, KPIs, and dashboards: a guide to measuring and monitoring project performance*. John Wiley & Sons.

Khan, K., Turner, J. R., & Maqsood, T. (2013). Factors that influence the success of public sector projects in Pakistan. *Proceedings of IRNOP 2013 Conference.* (pp. 17–19). Oslo, Norway.

Kukah, A. S., Anafo, A., Kukah, R. M. K., Blay Jnr, A. V. K., Sinsa, D. B., Asamoah, E., & Korda, D. N. (2022). Exploring innovative energy infrastructure financing in Ghana: benefits, challenges and strategies. *International Journal of Energy Sector Management*, *16*(2), 248-264.

Kumar, M. P., Raju, N. V. S., & Kumar, M. S. (2016). Quality of quality definitions–an analysis. *International Journal of Scientific Engineering and Technology*, *5*(3), 142-148.

Kuo, T. H., & Kuo, Y. L. (2010). The effect of corporate culture and total quality management on construction project performance in Taiwan. *Total Quality Management*, *21*(6), 617-632.

Kwamega, M., Li, D., & Ntiamoah, E. B. (2015). Role of Total Quality Management (TQM) as a tool for performance measurement in small and medium-sized enterprise (SME'S) in Ghana. *British Journal of Economics, Management & Trade*, *10*(3), 1-10.

Laird, D. J. (2016). *The impact of planning and other organisational factors on the success of small information technology projects* (Doctoral dissertation, University of Pittsburgh).

Lam, M., O'Donnell, M., & Robertson, D. (2015). Achieving employee commitment for continuous improvement initiatives. *International Journal of Operations & Production Management*, *35*(2), 201-215.

Lee, S. M., & Lee, D. (2020). "Contact": A new customer service strategy in the digital age. *Service Business*, *14*(1), 1-22.

Leitão, J., Pereira, D., & Gonçalves, Â. (2019). Quality of work life and organisational performance: Workers' feelings of contributing, or not, to the organisation's productivity. *International Journal of Environmental Research and Public Health*, *16*(20), 3803. https://doi.org/10.3390/ijerph16203803

Lindhard, S., & Larsen, J. K. (2016). Identifying the key process factors affecting project performance. *Engineering, construction and architectural management*, *23*(5), 657-673.

Lu, P., Cai, X., Wei, Z., Song, Y., & Wu, J. (2019). Quality management practices and inter-organisational project performance: Moderating effect of governance mechanisms. *International Journal of Project Management*, *37*(6), 855-869.

Luburić, R. (2015). Quality management principles and benefits of their implementation in central banks. *Journal of Central Banking Theory and Practice*, *4*(3), 91–121.

Madhani, P. M. (2020). Building a customer-focused strategy: Developing conceptual frameworks and research propositions. *SCMS Journal of Indian Management*, *17*(3), 5-25

Madrakhimova, M. S. (2021). Customer-oriented approach as a development strategy of a tourism enterprise. *Middle European Scientific Bulletin*, pp. *12*, 311–314.

Malhotra Naresh, K., & Dash, S. (2015). *Marketing Research, an Applied Orientation (7th Edition)*. Delhi, India: Pearson.

Martens, M. L., & Carvalho, M. M. (2016). Sustainability and success variables in the project management context: An expert panel. *Project Management Journal*, *47*(6), 24-43. https://doi.org/10.1177%2F8756972816047006O3

McGrath, S. K., & Whitty, S. J. (2017). Stakeholder defined. *International Journal of Managing Projects in Business*, *10*(4), 721-748.

Miles, S. (2017). Stakeholder theory classification: A theoretical and empirical evaluation of definitions. *Journal of Business Ethics*, *142*(8), 437-459.

Minoja, M. (2012). Stakeholder management theory, firm strategy, and ambidexterity. *Journal of Business Ethics*, *109*(1), 67-82.

Mir, F. A., & Pinnington, A. H. (2014). Exploring the value of project management: linking project management performance and project success. *International Journal of Project Management*, *32*(2), 202–217.

Mok, K. Y., Shen, G. Q., & Yang, R. J. (2017). A network theory-based analysis of stakeholder issues and their interrelationships in large construction projects: A case study. *International Journal of Construction Management*, *17*(3), 210–227.

Mosadeghrad, A. M. (2014). Essentials of total quality management: A meta-analysis. *International Journal of Health Care Quality Assurance*, *27*(6), 544–558. https://doi.org/10.1108/IJHCQA-07-2013-0082

Mosadeghrad, A. M., & Ansarian, M. (2014). Why do organisational change programmes fail? *International Journal of Strategic Change Management*, *5*(3), 189–218.

Mukhopadhyay, M. (2020). *Total quality management in education*. New Delhi, India: SAGE Publications India Pvt. Limited.

Müller, R., & Jugdev, K. (2012). Critical success factors in projects: Pinto, Slevin, and Prescott–the elucidation of project success. *International Journal of Managing Projects in Business*, *5*(4), 757–775. https://doi.org/10.1108/17538371211269040

Nardi, P. M. (2018). *Doing survey research: A guide to quantitative methods*. New York, London: Routledge. https://doi.org/10.4324/9781315172231

Nguyen, L. H., & Watanabe, T. (2017). The impact of project organisational culture on the performance of construction projects. *Sustainability*, *9*(5), 78-98.

Ohemeng, F. L., & Zaato, J. J. (2023). The Failure to Learn Lessons from Policy Failures in Developing Countries? The Case of Electricity Privatization in Ghana. *International Journal of Public Administration*, *46*(7), 471-483.

Okereke, O. C. (2017). Causes of failure and abandonment of projects and project deliverables in Africa. *PM World Journal*, *6*(1), 1-16.

Osei-Kyei, R., & Chan, A. P. (2017). Developing a project success index for public–private partnership projects in developing countries. *Journal of Infrastructure Systems*, *23*(4), 04017028.

Oyemomi, O., Liu, S., Neaga, I., Chen, H., & Nakpodia, F. (2019). How cultural impact on knowledge sharing contributes to organisational performance: Using the fsQCA approach. *Journal of Business Research*, *94*, 313–319. https://doi.org/10.1016/j.jbusres.2018.02.027

Pambreni, Y., Khatibi, A., Azam, S., & Tham, J. J. M. S. L. (2019). The influence of total quality management toward organisation performance. *Management Science Letters*, *9*(9), 1397-1406.

Papaioannou, A., Kriemadis, T., Kapetaniou, P., Yfantidou, G., & Kourtesopoulou, A. (2018). Customer-oriented strategy and business performance in the tourism and hospitality industry. In *Innovative Approaches to Tourism and Leisure* (pp. 417–432). Springer.

Patiar, A., & Wang, Y. (2016). The effects of transformational leadership and organisational commitment on hotel departmental performance. *International Journal of Contemporary Hospitality Management*, *28*(3), 586-608.

Patyal, V. S., Ambekar, S., & Prakash, A. (2020). Organisational culture and total quality management practices in Indian construction industry. *International Journal of Productivity and Performance Management*, *69*(5), 895-913.

Peter, M., Diekötter, T., & Kremer, K. (2019). Participant outcomes of biodiversity citizen science projects: A systematic literature review. *Sustainability*, *11*(10), 27-35.

Piwowar-Sulej, K. (2021). Organisational culture and project management methodology: Research in the financial industry. *International Journal of Managing Projects in Business*, *14*(6), 1270–1289.

Qazi, A., Quigley, J., Dickson, A., & Kirytopoulos, K. (2016). Project complexity and risk management: Modelling project complexity is driven by risk paths in construction projects. *International Journal of Project Management*, *34*(7), 1183–1198.

Quinn, R. E., & Spreitzer, G. M. (1991). *The psychometrics of the competing values culture instrument and an analysis of the impact of organisational culture on the quality of life*. Emerald.

Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, *6*(2), 1–5.

Rajaratnam, D., Jayawickrama, T. S., & Perera, B. A. K. S. (2022). Use of total quality management to enhance the quality of design and build projects. *Intelligent Buildings International*, *14*(5), 527-543.

Rajhans, K. (2018). Effective communication management: A key to stakeholder relationship management in project-based organisations. *IUP Journal of Soft Skills*, *12*(4), 47–66.

Remenyi, D., Williams, B., Money, A., & Swartz, E. (1998). *Doing research in business and management: An introduction to process and method*. Sage.

Rodrigo, N., & Wilkinson, S. (2021). Impact of flagship projects on the recovery of a city post-disaster. *International Journal of Disaster Risk Reduction*, p. *58*, 102191. https://doi.org/10.1016/j.ijdrr.2021.102191

Sadikoglu, E., & Olcay, H. (2014). The effects of total quality management practices on performance and the reasons for and the barriers to TQM practices in Turkey. *Advances in Decision Sciences*.

Sahney, S. (2016). Use of multiple methodologies for developing a customer-oriented model of total quality management in higher education. *International journal of educational management*, *30*(3), 326-353.

Sahoo, S., & Yadav, S. (2017). Entrepreneurial orientation of SMEs, total quality management and firm performance. *Journal of Manufacturing Technology Management*, *28*(7), 892–912. https://doi.org/10.1108/JMTM-04-2017-0064

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business Students.* (6th ed.). Harlow: Prentice Hall Pearson Education.

Schwartz, M. S. (2016). Ethical decision-making theory: An integrated approach. *Journal of Business Ethics*, *139*(6), 755-776.

Seidu, S., Owusu-Manu, D. G., Kukah, A. S. K., Adesi, M., Oduro-Ofori, E., & Edwards, D. J. (2023). An assessment of the implications of disruptive technologies on the performance of energy infrastructure projects in

Ghana. *International Journal of Energy Sector Management*, *17*(5), 887-903.

Serrador, P., & Turner, R. (2015). The relationship between project success and project efficiency. *Project Management Journal*, *46*(1), 30–39. https://doi.org/10.1002%2Fpmj.21468

Shafiei, N., & Puttanna, K. (2022). Critical success factors for international development projects in Afghanistan: An exploratory factor analysis. *Journal of Project Management*, *7*(4), 217-228.

Shafiq, M., Lasrado, F., & Hafeez, K. (2019). The effect of TQM on organisational performance: empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management & Business Excellence*, *30*(1-2), 31-52.

Smith, B., & Sparkes, A. C. (2016). Interviews: Qualitative interviewing in the sport and exercise sciences. In *Routledge handbook of qualitative research in sport and exercise* (pp. 125-145). Routledge.

Strengers, J., Mutsaers, L., Van Rossum, L., & Graamans, E. (2022). The organisational culture of scale-ups and performance. *Journal of Organisational Change Management*, *35*(8), 115-130.

Szymański, P. (2017). Risk management in construction projects. *Procedia Engineering*, *208*, 174-182. https://doi.org/10.1016/j.proeng.2017.11.036

Talib, F., & Rahman, Z. (2015). Identifying and prioritising barriers to total quality management implementation in the service industry. *The TQM Journal*, *27*(5), 591-615. https://doi.org/10.1108/TQM-11-2013-0122

Talib, F., & Rahman, Z. (2015). Identifying and prioritising barriers to total quality management implementation in the service industry. *The TQM Journal*, *27*(5), 591-615. https://doi.org/10.1108/TQM-11-2013-0122

Turner, J. R., & Xue, Y. (2018). On the success of megaprojects. *International*

Uribe, D. F., Ortiz-Marcos, I., & Uruburu, Á. (2018). What is going on with stakeholder theory in project management literature? A symbiotic relationship for sustainability. *Sustainability*, *10*(4), 13-23.

West, J., & Cianfrani, C. A. (2014). Managing the system—revision introduces a focus on organisational operating conditions. *Quality Progress*, *47*, 53-56.

Wiewiora, A., Trigunarsyah, B., Murphy, G., & Coffey, V. (2013). Organisational culture and willingness to share knowledge: A competing values perspective in the Australian context. *International Journal of Project Management*, *31*(8), 1163–1174.

Wong, W. L., Mohamed, H. A. B., Ananthan, S., Liaw, J. O. H., & Inderjit, S. (2018). Quality management dimensions for sustainable performance in a military organisation. *International Journal of Business and Management*, *2*(1), 38–42.

Yusr, M. M., Mokhtar, S. S. M., Othman, A. R., & Sulaiman, Y. (2017). Does interaction between TQM practices and knowledge management processes

enhance the innovation performance. *International Journal of Quality & Reliability Management, 34*(7), 955-974.

Zairi, M. (2010). *Benchmarking for best practice*. (1st ed.). London, UK: Routledge

Zehir, C., Ertosun, Ö. G., Zehir, S., & Müceldilli, B. (2012). Total quality management practices' effects on quality performance and innovative performance. *Procedia-Social and Behavioral Sciences, 41*, 273-280.

Zheng, J., Wu, G., Xie, H., & Li, H. (2019). Leadership, organisational culture, and innovative behaviour in construction projects: The perspective of behaviour-value congruence. *International Journal of Managing Projects in Business, 12*(4), 888-918. https://doi.org/10.1108/IJMPB-04-2018-0068

Zidane, Y. J.-T., & Olsson, N. O. (2017). Defining project efficiency, effectiveness and efficacy. *International Journal of Managing Projects in Business, 10*(3), 621-641. https://doi.org/10.1108/IJMPB-10-2016-0085

Zwain, A. A. A., Lim, K. T., & Othman, S. N. (2017). TQM and academic performance in Iraqi HEIs: Associations and the mediating effect of KM. *The TQM Journal*. 29(2), 357-368. https://doi.org/10.1108/TQM-08-2013-0096

Zwikael, O., Pathak, R. D., Singh, G., & Ahmed, S. (2014). The moderating effect of risk on the relationship between planning and success. *International Journal of Project Management, 32*(3), 435–441.

APPENDIX

QUESTIONNAIRE FOR RESPONDENTS

UNIVERSITY OF CAPE COAST

SCHOOL OF BUSINESS

DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT

Dear respondent,

The broader objective of this research is to examine the impact of total quality management (TQM) practices on project outcomes, while considering the moderating influence of organisational culture. I would greatly appreciate your participation in the study by completing the following questionnaire. The data collected will solely serve academic objectives and the anonymity of participants will be preserved.

SECTION A: Demographic information about respondents

Kindly tick in the box [√] the best answer to complete this section

1. Gender: Male [ ] Female [ ]
2. Position: Manager [ ] Engineer [ ] Accountant [ ]
3. Years of experience: Below 5 years [ ] 5 – 10 years [ ] Above 10 years [ ]

SECTION B: Total Quality Management Practices

The subsequent assertions assess the implementation of practices related to total quality management. Please indicate your level of agreement with each

statement by selecting only one option for each item using a tick mark [√]. The response options for this survey/questionnaire include the following: Strongly Disagree (1), Disagree (2), Somewhat disagree (3), Either agree or disagree (4), Somewhat agree (5), Agree (6), and Strongly Agree (7).

Leadership Commitment	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Leadership ensures that all staff are well-versed in total quality management practices.							
The quality policy's success is essential to leadership.							
The leadership has a clear vision for achieving quality objectives.							
Leadership inculcates in employees a sense of quality.							
Employee Involvement							
The company encourages teamwork rather than individual work.							
To improve skills and performance, self-improvement is encouraged.							
We ensure that all employees undergo regular training on how to improve processes.							
Employees enjoy their work and the environment in which they operate.							
Customer Focus							

The company follows up on customer complaints and strives to solve them.							
When developing new services, the company considers the opinions of its customers.							
The company strives to earn the loyalty and trust of its clients.							
The company has data to measure clients' satisfaction.							
Continuous Improvement							
Short-and long-term quality improvement goals are adhered to by the company.							
The company assesses project performance to improve it.							
The company promotes innovation and creativity.							
The company's communication methods are effective among employees and clients.							

SECTION C: Organisational Culture

The subsequent assertions serve as indicators of an organisation's culture. Please indicate your level of agreement with each statement by selecting only one option for each item using a tick mark [√].

The response options provided to the participants in the survey were as follows: Strongly Disagree (1), Disagree (2), Somewhat disagree (3), Either agree or disagree (4), Somewhat agree (5), Agree (6) and Strongly Agree (7).

Adhocratic	**1**	**2**	**3**	**4**	**5**	**6**	**7**
The company places a high value on the exploration of novel endeavours and the pursuit of potential prospects.							
The dynamic nature of the company makes people eager to take risks.							
The company's passion for innovation and development is what keeps us together.							
The corporation places significant emphasis on the acquisition of novel resources, thereby exploring potential opportunities.							
Clan							
The organisation's criteria for success are contingent upon the advancement of its human capital.							
The company is characterised by its emphasis on teamwork and collaboration.							
The organisation is a communal setting that fosters a sense of kinship akin to that of an enlarged familial unit.							
The cohesive forces that bind the company are							

predicated upon the principles of loyalty and mutual trust.							
Hierarchy							
What people do is often governed by formal procedures.							
The management style of the company is characterised by job security.							
The company is regarded as having well-coordinated operations.							
What holds us together are policies that sustain the company's smooth running.							
Market							
The company is focused on results, so getting the job done is a significant concern.							
What holds us together is the emphasis on the achievement of goals.							
The company focuses on winning in the marketplace by providing quality service.							
The company is characterised by hard-driving ambition.							

SECTION D: Project Outcome

The following statements measure project outcomes. Kindly indicate the extent to which you agree to each statement by ticking [√] **only one** of each item;

Strongly Disagree (1), Disagree (2), Somewhat disagree (3), Either agree or disagree (4), Somewhat agree (5), Agree (6) and Strongly Agree (7)

Project Efficiency	**1**	**2**	**3**	**4**	**5**	**6**	**7**
We are capable of finishing projects on time.							

Projects completed are within budget.							
Project activities are carried out as scheduled.							
Projects carried out are compliant with environmental regulations.							
Project Impact							
The reputation of our company's projects is excellent.							
Our company's project achieved its intended purpose.							
End users are satisfied with our projects.							
Beneficiaries can see our company's project's impact.							
Stakeholders Satisfaction							
The sponsors are satisfied with the project.							
The project meets the client's expectations.							
Our organisational goals are met through projects.							
The steering group is satisfied with the project.							

Thank you for being so cooperative