### KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

### SCHOOL OF BUSINESS

# EFFECT OF TOTAL QUALITY MANAGEMENT ON FIRM PERFORMANCE: THE MODERATING ROLE OF COMPETITIVE INTENSITY.

BY

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(BBA-HUMAN RESOURCE MANAGEMENT)

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MASTER OF SCIENCE

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NOVEMBER, 2023.

#### DECLARATION

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



#### **DEDICATION**

This work is dedicated to my beautiful family and good friends for their immeasurable support and assistance in the successful completion of this course work.



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#### ABSTRACT

The main objective of the study is to examine the relationship between total quality management, competitive intensity and firm performance. The resource-based theory which is a management model for identifying strategic resources that a company can use to gain a sustainable competitive advantage and contingency theory, which indicates that any firm has a variety of strategic options that it can use to build a longterm competitive edge are used in this study. The study used a descriptive research design. The targeted population for the study comprises registered SMEs in Tamale which is the capital city of the Northern region of Ghana. The sample size for this study is based on the "rule of five", therefore the sample size for this study was 250. The study is using a non-probability sampling method called the purposive sampling technique. Bearing in mind the analysis mission, information is obtained directly from primary sources. A closed-ended questionnaire with 44 questions is the instrument being used to collect the data. Cronbach's alpha is used in SPSS to determine the validity of the research instrument. The rate of recurrence, percentages, means and standard deviations are included. The study used regression and correlation analysis in testing the significance of the variables to the dependent variable at a 95% confidence level. The study found that TQM has a positive and significant influence on the firm performance. It was also revealed that competitive intensity has a negative and significant influence on firm performance. Therefore the study concluded that TQM has a positive relationship with firm performance and this relationship negatively influences competitive intensity. It is recommended that businesses make sure that their employees obtain the appropriate quality training and support ongoing improvement under the direction of senior management.

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#### CHAPTER ONE

#### **INTRODUCTION**

#### **1.0 Background of the Study**

The goal of Total Quality Management (TQM) is to instill a discipline of quality into the culture and processes of an organization through the use of strategy, data, and effective communication in order to achieve a state of continuous improvement. Hamzah (2019). To be more specific, TQM analyzes the methods manufacturers utilize to make their goods. Definition, regular monitoring and assessment, and use of the findings of these assessments to encourage improvements are all recommended for businesses. In addition, it's crucial that everyone in the company and every division take part. Businesses in the manufacturing sector were early adopters of this management paradigm, but other sectors have since followed suit.

The TQM management concept is based on the idea that an organization may prosper in the long run if all of its members, from the lowest-ranking employees to the most senior executives, work toward enhancing quality and, consequently, guaranteeing customer happiness, according to Hamzah (2019). Businesses need to constantly be searching for ways to improve if they want to apply TQM. It considers the big picture and gives process improvements more weight than quick financial gains. Positive and significant effects of TQM are shown in the development of both people and businesses. According to Hoe and Mansori (2018), organizations can create and uphold cultural norms that foster long-term success for clients and the business as a whole if all staff members place a strong emphasis on quality control and ongoing development. With TQM's focus on quality, it is easier to spot where there are skill gaps among employees and what kind of mentorship, education, or training would be necessary to close them. TQM aims to ensure that an organization's product (or service) is produced correctly the first time, decreasing waste and increasing productivity, according to Antony et al (2022). To achieve customer satisfaction, cost effectiveness, and defect-free production, TQM prioritizes process improvement, customer and supplier engagement, cooperation, training, and education.. Total Quality Management promotes a culture and environment that are favorable to technical growth and innovation. The profitability, customer happiness, staff morale, and productivity of businesses that have implemented a quality-focused strategy have all increased, according to Said (2021). Additional performance dimensions including financial performance, customer satisfaction, and other stakeholder performance concerns can be improved as a result of internal process effectiveness and an operational viewpoint (Hoe and Mansori, 2018).

According to Othman et al. (2020), customer satisfaction is the key objective of TQM and competitive advantage refers to a company's capacity to outperform its rivals in the market. Long-term competitive advantage leads to superior results. According to the correlation between quality and competitiveness, a company's efficiency and market advantage improve in proportion to the strength of its functional quality. As long as the company is able to keep up with the rest of the industry, operations should proceed smoothly. Udriyah et al. (2019) argue that a company's success is enhanced by a competitive advantage since it allows it to better meet the needs of its clientele. Simply put, a company has a competitive advantage if it can provide its customers with benefits that outweigh those costs. Customers' willingness to pay establishes value, and providing greater value can be accomplished by either undercutting competitors' prices for equivalent features and services or by providing unique benefits that more than compensate for the higher cost.

#### **1.1 Problem Statement**

Sahoo and Yadav (2018) state that a lack of total quality management (TQM) application may be the primary cause of SMEs' poor financial performance. According to Kumar and Sharma (2017), if foreign companies in China want to boost their operational performance, they must implement TQM. Several studies have proved the importance of TQM implementation in improving corporate firm performance (Jong et al., 2019; Bakoti and Rogoi, 2017; Bouranta et al., 2019). Companies (termed "contingent businesses") that are in tune with their surroundings and employ strategies well-suited to dealing with external environment contingencies stand a better chance of succeeding in the market (Hoe and Mansori, 2018). That is to say, if a company wants to succeed over the long term, it must interact with its surroundings. Therefore, the idea of contingency clarifies the methods used by companies to remain in operation (Bouranta et al., 2019).

A company's connection score on a certain competitive dimension may determine whether or not it outperforms rivals in that area. We do not rule out the possibility that performance is influenced by a single competitive factor and that superior performance results from a competitive advantage in just that factor (Ozdemir and Kilincarslan, 2021). Competitive advantage is unique in this respect because it is not based on any generic measure of performance. Firm performance has been enhanced by considering a wide range of antecedents, including organizational culture and market orientation. The aim of this study is to investigate the effects of overall quality management on small and medium-sized firm (SME) performance while accounting for the influence of competition. A review of the literature indicates that companies that employ a comprehensive quality management approach achieve better outcomes.. Examining TQM strategies in light of their potential to boost organizational output is a necessary step toward this end (Bakoti and Rogoi, 2017).

There has been study into the connection between TQM and business success, as evidenced by a review of the relevant literature. According to studies (Ross, 2017; Asad et al., 2020; Aquilani et al., 2017), there is a connection between overall quality management and organizational success. TQM and, according to research by Mehralian et al. (2019), Kemenade and Hardjono (2019), Younis and Sundarakani (2020), and others. In the face of contradicting data on the relationship between TQM and organizational success, it is imperative to include a moderating variable in order to improve the current relationship between TQM and firm performance. Total quality management was selected as the primary independent variable because, according to the literature, no research had been conducted to look at the combined effects of these components, which increase the performance of small and medium-sized businesses. The literature on the topic of the business environment would be the main source of evidence for the moderating influence of competitive intensity, given that competitive

intensity is one of the key components of the external business environment. The amount of competition has been shown to be a crucial component in determining an organization's performance in earlier research. For instance, Ramaswamy (2001), who studied the impacts of competitive intensity on the relationship between ownership and performance of large industrial businesses in India, made a substantial contribution to both the public and private sectors.

Their empirical studies have shown that the level of competition affects how ownership and output are related. Li, Lundholm, and Minnis show that an increase in competition has a detrimental influence on a company's future profitability and stock returns (2011). According to Lahiri, when industry competition rises, the relationship between a company's resources and performance weakens (2013). The application of TQM may have a higher impact on SME performance, according to recent theoretical and empirical studies, when rival companies in the same industry employ aggressive client retention tactics (such quality planning and continuous improvement).

The goal of this study is to ascertain whether the level of competition in Ghana's smalland medium-sized enterprise (SME) factories has an impact on the relationship between performance and total quality management. This is accomplished by offering a thorough analysis of the literature and a theoretical model that defines competitive intensity as a criterion for determining if complete quality management is effective and whether a SME will succeed in its entirety. The conceptual framework is described using the lenses provided by theories of resources and circumstances..

#### **1.2 Objectives of the Study**

#### 1.2.1 General/Main Objective

The main objective of the study is to examine the relationship between Total Quality Management, Competitive Intensity, and Firm Performance.

#### **1.2.2 Specific Objectives**

Specifically, the study is to achieve the following objectives:

- To assess the various forms of Total Quality Management among the Ghanaian Manufacturing SMEs
- 2. To determine the nature of firm performance in Ghanaian manufacturing SMEs
- 3. To investigate the relationship that exists between total quality management and firm performance in Ghana's manufacturing SMEs.

4. To identify the moderating role of competitive intensity on the relationship between total quality management and firm performance.

#### **1.3 Research Questions**

The study aims to answer the following research question:

- What are the various forms of Total Quality Management among the Ghanaian Manufacturing SMEs?
- 2. What is the determine the nature of firm performance in Ghanaian manufacturing SMEs?
- 3. What are the relationship that exists between total quality management and firm performance in Ghana's manufacturing SMEs?
- 4. What is the moderating role of competitive intensity on the relationship between total quality management and firm performance?

#### 1.4 Significance of the Study

Governmental and non-governmental groups, policymakers, and all other stakeholders in the manufacturing sector and the country at large will find the paper to be important study material. Information from it would also be helpful for Ghanaian SMEs who are conducting research.

Additionally, this research will give SMEs the chance to learn about some of the competitive intensities that plague their sector and how to mitigate them to maintain efficiency in Ghana's print industry.

The research analysis will be beneficial to many SME owners in terms of total quality management and a strategic edge by developing innovative goods and entering new markets.

Furthermore, the research will assist SME operators in thoroughly comprehending the entrepreneurial effect of competitive intensity and firm performance on their industry to cope with the increasing advances in firm performance on one side and the complexities of the micro business functioning in such an atmosphere on the other.

#### 1.5 Overview of Research Methodology

For the study, descriptive research methodology was used. The study's target demographic consists of registered SMEs in Tamale, the capital of Ghana's Northern region. The study will take place in Tamale. According to the "rule of five," a sample size of 250 individuals was chosen for this investigation. In this investigation, a non-probability sampling strategy called "purposeful sampling" is being applied. With the goal of analysis in mind, data is directly acquired from original sources. A 44-question, closed-ended questionnaire is the tool being utilized to collect the data. Using Cronbach's alpha, the study instrument's validity is evaluated in SPSS. The frequency, percentages, means, and standard deviations are all included. Regression and correlation analysis were used in the study to examine the significance of the factors for the dependent variable with a 95% level of confidence.

#### 1.6 Scope of the Study

The study's scope is divided into context and geography. Geographically, the study would be limited to the firm performance of manufacturing SMEs in Tamale Municipality, Ghana. Contextually, the study would be restricted to figuring out how total quality management, level of competition, and firm performance interact.

#### **1.7 Organisation of the Study**

There are five separate chapters in this survey. The backdrop of the survey, problem description, survey objectives, survey questions, survey effectiveness, and

methodology are all covered in the first chapter, along with the survey's scope, constraints, and structure.

In Chapter 2, the literature on theoretical and experimental research interest is reviewed, along with the facts that motivated additional study. Additionally, Chapter 3 discusses some of the difficulties in data collection as well as the research methodologies used in the study. The experimental findings and research implications are presented in Chapter 4. A summary, conclusions, and suggestions for the study are included in Chapter 5 to wrap things up.

### **CHAPTER TWO**

#### LITERATURE REVIEW

#### **2.0 Introduction**

The study's review of other authors' research initiatives may be found in this chapter. The four sections of this section are conceptual review, theoretical review, empirical review, and conceptual framework. Total quality management, level of competition, and company performance are all phrases used in conceptual review.

#### **2.1 Definition of Variables**

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

According to Androniceanu (2017), TQM is the art of overseeing all organizational processes in order to attain perfection. It is a way of thinking and a group of guiding ideas that form the basis of a company dedicated to ongoing development. According to Saffar and Obeidat (2020), the organization aims to improve all of its internal processes to consistently meet and surpass the expectations of its consumers by utilizing quantitative approaches and human resources. It is a tried-and-true strategy for securing survival in the age of global commerce.

#### 2.1.2 Performance of the Organization

According to Kramar (2014), corporate performance is the overall effectiveness of a company, which includes the creation of goods and services, the effectiveness of numerous business divisions, the effectiveness of personnel, and the overall effect of labor. This means that business development can analyze the efficacy of the organization and reflect the company's results.. It is important to emphasize here that a company's performance is primarily evaluated in terms of its performance.

#### 2.1.3 Competitive Intensity

According to strategy, the level of pressure that companies in a certain sector apply to one another is referred to as competition intensity (Dupire and M'Zali, 2018). Businesses benefit from competition, so there should be some of it. According to Mayer and John (2017), the level of competition between rival businesses determines how much pressure is put on one another and how much each business can profit from the other.. Rival companies will aim to steal each other's consumers and market share if there is intense rivalry.

#### **2.2 Conceptual Review**

#### **2.2.1 Total Quality Management**

Sahoo and Yadav (2018) sum up TQM as an integrated organizational strategy for pleasing consumers (internal and external) by continually exceeding their expectations. To achieve this goal, the company as a whole is dedicated to improving its operations at all levels. According to Sutirna (2020), Total Quality Management (TQM) is a strategy for achieving sustained growth and prosperity by prioritizing the needs of the clientele. TQM encourages all workers to contribute to the betterment of the company's processes, outputs, and ethos. TQM is a management paradigm for a client-centered firm that involves all employees in constant improvement, as described by Bretcu and Demyen (2018). To incorporate quality discipline into its daily operations, the organization uses technique, information, and clear communication. Modern quality management systems, which are TQM's successor, incorporate these ideas.

The Total Quality Management (TQM) philosophy stresses the importance of every person making an effort to improve the company's working conditions, services, systems, procedures, and so on (Younis and Sundarakani, 2020). To achieve long-term success through customer satisfaction, TQM is a management strategy for an organisation that depends on the engagement of all of its members (including its employees). This plan serves the interests of the group as a whole and of the community at large.

According to Othman et al. (2020), TQM is defined as an approach to doing business that prioritizes satisfying customers while also seeking constant improvement. It ensures that all connected activities, especially employee work, is geared toward enhancing the ultimate product or service quality and expediting the manufacturing or

service provision process. However, performance indicators are used to monitor development, and decision-making is based on data.

Sahoo and Yadav (2018) state that, for the TQM implementation to be successful, the workers involved must receive substantial training. If the training program keeps employees from performing their regular tasks, it could be ineffective in the short run. Total Quality Management's propensity to produce a continuous stream of incremental improvements can also result in a negative reaction from workers who value the current system or who worry about losing their jobs as a result of it. Total Quality Management prospers when top-level management is totally committed and invested.

#### 2.2.2 Performance of the Organization

According to Kumar et al. (2020), the more efficiently a business's operations are performed, the better the organization's performance; on the other hand, low efficiency of the firm's operations and staff performance indicates bad firm performance. Employee performance is a significant aspect of the firm's performance in this regard because, in today's business environment, human resources are a valuable marketing tool for any company.

It is crucial to keep in mind that corporate performance is a significant metric for investors and stakeholders, according to Rodrigue et al. (2013). What counts in this case is that a company's success demonstrates if it is a good investment. Investors, for example, are willing to put money into companies that have a positive marketing performance, whereas poor marketing performance implies concerns with a company's business development. As a result, investors avoid investing in underperforming companies since they are unsure of the return on investment and the significant risks associated with such investments Chen, Qian, and Wen (2021).

Cicea et al. (2019) indicated that the performance of SMEs is measured as a percentage of the total value added (VA) by enterprises and the efficiency, financial outcomes, level of output, and number of clients of SMEs may all be measured quantitatively. Improving SMEs' capability and performance is crucial for increasing country, regional, and city productivity, creating jobs, reducing inequities, and fostering more resilient and sustainable growth (Cusmano et al., 2018).

A framework for "performing things well" is what Borgström (2006) defines as an organizational performance standard. Efficiency is generally considered to be best stated as some ratio between the typical input level and the actual output level, according to Fugate et al. (2010), who define efficiency as it relates to the internal operations of logistics. When looking at things from the standpoint of using resources as inputs, efficiency is more specifically the ratio of resources used to outputs generated.. Organizational productivity can be measured independently by efficiency (Hamid and Ibrahim, 2015).

Performance is viewed as a quantitative metric that is "worthless" but is still highly appreciated when used to justify initiatives like improvement programs or as the foundation for incentives. a relationship that is measured as well as taken into account. Consequently, efficiency is the assessment of various trading system participants, and efficiency objectives are determined by the negotiated interdependence. Resources consumed and losses are the final two components that need to be developed from the efficiency formula. Costs and the capacity for innovation are both impacted by the usage of scarce resources (Fredriksson and Gadde, 2003). Accordingly, it may be inferred that losses in the relationship between the firm and its value also affect the supply chain. Utilizing resource control, dependability, and interdependence is therefore essential for efficiency. So, according to Borgström (2006), supply chain efficiency serves as an internal performance standard.

#### **2.2.3 Competitive Intensity**

Competitive dynamics, as defined by Lamberg et al. (2017), is the study of inter-firm competition that takes into account competitive actions and reactions, their micro- and macro-level contexts, as well as their causes and effects. Wolter et al. suggest a measure of competition intensity based on the strategic and tactical components (2017). This two-dimensional design allows managers to optimize operations and resource allocation by taking into account both dimensions, which may help to better understand the competitive struggle.

The intensity of competition affects a business's ability to be profitable. Economic theory demonstrates that when companies must compete for customers, the end effect is lower price, better products and services, more choice, and more innovation. You learn how to overcome obstacles, handle pressure well, and adjust to new situations through competition in order to succeed more. To get back up and keep going in this world, you must learn how to deal with disappointments and setbacks just like everyone else does.

#### **2.3 Theoretical Review**

#### 2.3.1 Resource-Based View

The term "resource-based viewpoint" refers to a management strategy that focuses on identifying strategic resources that a business can utilize to obtain a long-term competitive advantage. The influential 1991 essay "Solid Resources and Sustainable Competitive Advantage" by Barney is widely credited as playing a key role in popularizing the resource-based perspective on the world. Utilizing limited or superior resources can give you an advantage. In other words, a company's distinctive internal resources contribute to shape its competitive advantage. These resources, whether tangible or intangible, are priceless. According to the conventional perspective of the business in strategic management, which is based on Porter's theory, an industry gives a company a competitive edge (Ocasio & Radoynovska, 2016).

The physical capital of a corporation, which includes its technology, production facilities, equipment, location, and raw material availability, is one of the three main categories of company resources identified by Barney (1991). The knowledge of a company's leadership and personnel is one example of an intangible resource, along with things like education, life experience, common sense, expertise, and connections. Organizational capital is a term used to describe the resources a company has in terms of its human capital, its formal and informal methods of planning, controlling, and coordination, as well as the informal ties that exist between various departments and between the business and the community at large.

The resource-based perspective looks at the strengths and skills currently available within an organization as a means of developing sustainable competitive advantages. According to Donnellan and Rutledge (2019), companies that take a resource-based view of their operations better understand their internal workings, which in turn provides them with a sustainable competitive advantage.

Many factors, including the number of workers, the presence of foreign businesses, the suitability of factory structures, the inventory of equipment and machinery, the right financial resources, skilled production personnel, and human resource development policies, influence a company's capacity to fulfill export orders, as stated by Scholes et al. (2016). According to Westhead et al. (2021), the RBV theory provides strong

support for the positive impact of a firm's age on its tendency to export. According to the resource-based perspective, disparities in local or global business performance can be linked to access to key resources. Scholes et al. (2016) prioritized the availability of a large number of full-time employees when considering RBV determinants, but they neglected the effect of firm size on the case study companies' ability to complete export orders.

Understanding the outsourcing decision better requires an appreciation of the resourcebased perspective. To better understand how outsourcing might contribute to an organization's performance and, ultimately, its competitive advantage, it is useful to adopt a resource-based viewpoint. In the context of outsourcing, the resource-based view can be used to evaluate the competitiveness of a company's resources relative to those of its competitors.

Barney (1999) states that there are certain criteria that a resource must meet before it can be considered a source of competitive advantage. These include its value, rarity, imitability, and organization. The value of a company's assets increases when it can both seize opportunities and fend off threats. As a result, with these tools at hand, the company should be able to successfully navigate the challenges presented by its industry.

#### 2.3.2 Contingency Theory

The contingency theory states that any company can gain a sustainable competitive advantage by utilizing a range of tactical options. Depending on the circumstances or environment in which the firm operates, an organization may choose the appropriate alternative from a range of options (Pfeffer, 2019).

It might be able to comprehend the moderating role that competitive intensity has in the relationships between entrepreneurial orientation, organizational learning, overall quality management, and SME success by conducting further study on contingency theory. Using Donaldson's (2001) explanation of contingency theory, the linkages between competitive intensity, entrepreneurial orientation, organizational learning, overall quality management, and SME performance are explained in the current study. The link between organizational factors and organizational performance, according to Donaldson (2001), is significantly impacted by one or more situational variables, commonly known as contingencies (Donaldson, 2001).

A contingency in this context is any alteration to how an organizational attribute impacts organizational performance (Donaldson, 2001). The links between entrepreneurial attitude, organizational learning, overall quality management, and SME performance can therefore be inferred to be influenced by the degree of competition in the industry in which a firm works. The contingency perspective, which has an allencompassing theoretical underpinning and is applicable in a variety of real-world scenarios, will be used in the present study to explain the moderating effect of competitive intensity (i.e., a contingent variable) on the relationship between entrepreneurial orientation, organizational learning, total quality management, and SME performance.

#### 2.4 Literature Summary on TQM, Competitive Intensity, and firm performance

This section of the study presents the literature search and summary of the research topic which includes TQM, Competitive Intensity, and firm performance. The presentation is shown in Table 2.1.

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### Table 2.1: Literature Summary

Author(s)	Article Title	Theoretical	Research Context	Industry	Key	Indicated	Limitations
		Foundation	Country/Contine		Results/Findings	Contribution from	
			nt			the Study	
Darja et al.	Total quality	contingency	Slovenia	all sectors	We find that joint	Our study points	the usual
(2016)	management	theory			use is associated	to the existence of	limitations of
	and				with a decrease in	tensions among	cross-section
	performance				the perceived	different	research
	management				importance of	managerial	design apply
	systems: team				customer	concepts.	our data were
	players or				perspective. This		collected at a
	lonely riders?				implies that only		single point
					the importance of		in time and
					the customer		they provide
					measures changes		therefore a
					for managers		snapshot of
					because they use		the
					TQM and PMS.		population
							characteristic
							s at this given
							point in time.
Ramatu et al.	Total Quality	resource-	Nigeria	manufacturing	Results supported	This implies that	The first
(2021)	Management,	based view		SMEs	the hypothesised	to promote	limitation
	Firm	and theory of			main effect of	customer	relates to the
	Performance,	quality			TQM	satisfaction and	use of
	and the	management			implementation on	achieve superior	subjective
	Moderating				SME performance.	performance for	measures of
	Role of				However, our	their firms,	SME
	Competitive				empirical study	owners, and	performance
	Intensity				revealed that	managers of	in the present
					competitive	SMEs ought to	study.



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						intensity does not	work hand in hand	Although
						moderate a	with all strategic	subjective
						positive	business units	measures of
						relationship		firm
						between TQM		performance
						implementation		are widely
						and SME		used by
						performance.		researchers
								and generally
								treated as a
								surrogate for
								objective
								measures,
	Saragih et al.	The Impact of	resource	Indonesia	manufacturing	The findings reveal	n/a	There are
	(2020)	Total Quality	advantage			that sustainable		some
		Management,	theory			competitive		limitations of
		Supply Chain				advantage could be		the study as
		Management				achieved through		well. The
		Practices, and				supply chain		conceptual
		Operations				management.		model
		Capability on						proposed in
		Firm						this study has
		Performance						not
								considered
								performance
								in various
								aspects.
	Liu et al.	An empirical	institution	China	national	The results	This study also	this paper
	(2021)	exploration of	theory			indicate that while	highlights that the	only
		quality				quality award	positive impact on	considered
		management				winners have	profitability may	national and
I		practices and				advantages in	disappear after the	state-level



	firm performance from the Chinese manufacturing industry				terms of their profitability and operating efficiency, their sales growth has not improved as expected.	certification and that the most significantly positive stimulus occurs in the certification year	quality awards,
Thi (2020)	On the relationship between total quality management practices and firm performance in Vietnam: The mediating role of non- financial performance	TQM theory	Vietnam	Vietnamese enterprises	The estimation results propose that non – financial performance plays a vital role as a full mediator in the relationship between TQM practices and financial performance in the Vietnam context.	The study suggests that Vietnamese enterprises should have strict	
Saragih (2020)	the impact of total quality management, supply chain management practices and operations capability on firm performance	The organization al theory	Indonesia.	manufacturing firm	The findings reveal that sustainable competitive advantage could be achieved through supply chain management. Further, evidence has been provided by the study for the direct influence of SCM practices and	The result is crucial as it not only supports managers in recognizing the way to leverage their internal capabilities through establishing relationships with partners in the	The conceptual model proposed in this study has not considered performance in various aspects.



							î
					operations	supply chain but	
					capability on the	also signifies the	
					firm's	need to sharpen	
					performance.	these capabilities	
					-	for expertise.	
Ljiljan et al.	The interplay	resource-	South-Eastern	South-Eastern	Our results show	Thus, this study	Several
(2020)	of	based view	European region	European	that TQM partially	contributes to the	limitations
	entrepreneuria	theory		country	mediates the	EO and TQM	should be
	1 orientation,				relationship	literature by	noted. Our
	total quality				between EO and	arguing that EO as	dependent
	management,				firm performance	a strategic	variable
	and financial				and that as the	orientation is	represents
	performance				intensity of	positively related	financial
					competition	to firm	performance.
					increases. the	performance	measured on
					direct effect of EQ	outcomes through	the Likert
					on firm	the mechanism of	scale and as
					performance	TOM practices	such it
					becomes stronger	i Qivi praenees.	represents
					becomes subliger.		the
							nercention of
							financial
							norformanco
							in relation to
							the main
							the main
							respondent s
	T1 F CC + C		D 1 ' /	C			competitors.
Altar et al.	The Effect of	resource-	Pakistan	manufacturing	From the findings,	This study also	The focus of
(2020)	Total Quality	based theory			it is revealed that	bears some future	this study
	Management	and			KM mediates such	directions. To	was on the
	on Firm	institutional			a relationship and	enhance the firm	manufacturin
	Performance	theory				performance this	g sector



				1			· (7 11
	with the				It is also supported	study has	specifically
	Mediating				by the data.	significantly	SMES' and
	Roles of					identified the role	disregarded
	Innovation and					of innovation and	other
	Knowledge					KM. the	favourable
	Management					concerned leaders	sectors.
	in Small and					must decrease the	
	Medium					barriers that make	
	Enterprises					employees	
			2			concerned.	
Jo-Ting et al.	Performance	n/a	Taiwan	manufacturing	Our findings		Our findings
(2017)	measurement			firms	suggest that firms		should be
	systems, TQM				adopting TQM		interpreted
	and multi-				should redesign		within the
	level firm				PMS by combining		limitations of
	performance: a				financial and non-		the study.
	person-				financial measures		First, the
	organisation				(customer, internal		usual
	fit perspective				business process,		limitations of
					learning and		cross-section
					growth, and		research
					supplier).		design apply
							– our data
							were
							collected at a
							single point
							in time and
							they provide
							therefore a
							snapshot of
							the
							population



							characteristic
							s at this given
							point in time.
Ismail (2018)	Investigating changes in TQM's effects on corporate social performance and financial performance over time	stakeholder theory	Turkey	all sectors	Our empirical findings suggest that the implementation of TQM practices does indeed improve firms' CSP. Implementing TQM also positively influences FMP both directly and through	This consistency between the results of the two studies provides strong evidence for the argument that firms can meet their CSP goals while remaining financially viable as a result of their TQM practices.	point in time. Our study suffers from some of the limitations common to all survey research. We based our analyses on the respondents' perceptions, which may potentially
					improvements in		create bias.
Ondiek et al. (2018)	Supply Chain Quality Management Practices, Complementar y Firm Assets, Competitive Advantage and Firm Performance	General systems theory	Kenya	all sectors	The found the relationship between the variables of the study specifically highlighted the links between SCQM and performance, SCQM, CFAs and performance, SCQM, competitive	The study was concluded by formulating hypotheses based on the developed conceptual framework.	n/a



# I/NILICT

Vinh et al. (2018)	The Impact of Total Quality Management and Supply Chain Integration on Firm Performance of Container Shipping Companies in	social exchange theory	Singapore	shipping companies	advantageandperformance,andSCQM,firmcharacteristics,competitiveadvantageandperformance.StatisticalresultssuggestthatbothTQMandSCIpracticeshavepositiveeffectsservicequality(SQ)and FPdifferentextents,whileTQMalsocontributespositivelyto		The small sample is the main limitation.
	Singapore				integration (SCI)		
Kriengsak et al. (2017)	Influence Of Organisational Culture On Total Quality Management Implementatio n And Firm Performance: Evidence From the Vietnamese	na	Vietnam	Construction Industry	Findings showed that Vietnamese construction firms are dominated by clan and hierarchy cultures rather than adhocracy and market cultures according to the Competing Value Framework (CVF)	This study also confirmed the significant and positive relationship between TQM implementation and organisational performance improvement.	Firstly, the limited sample size included in this study might not represent the full range of cultural profiles of construction organisations



# IZNII ICT

	Construction				of OC		across the
	Industry				classification.		industry.
Imran et al. (2017)	Total Quality Management,	n/a	Pakistan	all sectors	It has been suggested that total	This article has described the	n/a
25 25	Export Market				quality	predecessor of	
	Orientation,				management	firm export	
	and Firm				influences directly	performance and	
	Export				to export market	their relationship	
	Performance:				orientation and	such as total	
	A Conceptual				indirectly to firm	quality	
	Framework				export	management and	
					performance	export market	
					through market	orientation.	
					orientation.		
Angelos et al.	Role of the	Management	Greece	maritime	The findings	n/a	n/a
(2017)	human talent	theory			confirm the		
	in total quality	-			positive		
	management-				association		
	performance				between TQM and		
	relationship:				performance and		
	an				indicate that the		
	investigation				form of this		
	in the transport				relationship is		
	sector				influenced by the		
					different		
					perceptions about		
					the		
					exclusive/inclusive		
					nature of talent.		
Jeevan et al.	Impact of total	Social	India	automobile	The results showed	the study makes a	the scope of
(2017)	quality	Exchange			that there was a	contribution to	the study is
WY BY	services on	Theory			favorable and	theory by testing a	limited to the



Seyhan et al. (2017)	financial performance: role of service profit chain The impact of management leadership on quality performance throughout a supply chain: an empirical study	Leadership theory	Turkey	all sectors	significant impact on the structural relationships between TQS, ISQ, employee happiness, employee commitment, employee loyalty, ESQ, customer satisfaction, and financial performance. The results show that the level of the TL style of managers has a significant and positive impact on a firm's supply chain quality performance.	complete service profit chain in the automobile sector research findings show that managers in Turkish organisations need to improve their behavioural leadership skills, particularly on the 'fostering acceptance of group goals' and 'individualised support' dimensions of TL	service sector only. First, this study provides a general view because it combines random samples from a wide range of both manufacturin g and services enterprises operating in
						dimensions of TL.	operating in Turkey.
Parvadavardi	Impact of	n/a	India	manufacturing	The result showed	The research	n/a
ni et al.	quality			B	a positive	reported in this	
(2017)	management				relationship	study has	



	practices on quality performance and financial performance: evidence from Indian manufacturing companies				between QM practices, quality performance, and financial performance. In addition, the result illustrates the direct impact of quality performance on financial performance	empirically proved that QM practices have a positive impact on the quality performance and financial performance of the firm.	
Kevin and Vinod (2015)	Firm characteristics, total quality management, and financial performance	n/a	USA	all sectors	We find that smaller firms do significantly better than larger firms. Firms that have won awards from independent awards (a proxy for more mature TQM implementation) do significantly better than just supplier award winners.	The key implications of these results are that many organizational characteristics moderate the benefits of TQM implementation.	n/a
Carmen and Evangelos (2015)	Total quality management practices and performance outcomes in Spanish	n/a	Spain	Service companies	performance dimensions describing outcomes relating to all company employees	the study contributes to the literature by determining the dimensions of the performance	the small sample size of the participating service companies


## IZALI ICT

	service				including the top	outcomes from	limits the
	companies				management team.	ТОМ	possibility of
					are not included in	implementation	applying
					the perceived	p	more
					categories of the		advanced
					TOM benefits that		statistical
					rompanies derive		techniques
Domrodorrondi	Immost		India	monufo sturin a	The magult showed	In addition the	n/o
Parvadavardi	Impact of	n/a	India	manufacturing	The result showed	in addition, the	n/a
ni et al.	quality				a positive	result illustrates	
(2015)	management				relationship	the direct impact	
	practices on				between QM	of quality	
	quality				practices, quality	performance on	
	performance				performance, and	financial	
	and financial				financial	performance	
	performance:				performance		
	evidence from						
	Indian						
	manufacturing						
	companies						
Samra et al.	Does total	The theory	Pakistan	all sectors	To the best of our	The important	The
(2014)	quality	of TOM			knowledge no	point to remember	proposed
(2011)	management				study on TOM and	is that the proxy	model needs
	still shine? Re-				financial	for financial	to be tested
	evamining the				nerformance has	measures should	empirically
	total quality				vet successfully	he abcolutely	looving solid
	iotal quality				addressed the	absolutely	arraying solid
	management				addressed the	meaningful to	grounds for
	effect on				research question	snareholders.	Iuture
	Inancial				we proposed		research.
	performance				earlier.		
Thomas et al.	Human	human	USA	all sectors	we and a causal	n/a	n/a
(2019)	Capital, Top	capital			relationship		
	Management	theory			between		



## IZALLICT

	Quality, and Firm Performance				management quality and firm operating performance, market valuation, and stock returns		
Hsu-Hua and Chen-Ying (2019)	The effects of total quality management and organisational learning on business performance: evidence from Taiwanese insurance industries	n/a	Taiwan	insurance	the principal findings of this study are shown as follows: (1) TQM has significant and positive effects on OL, (2) Both TQM and OL have significant and positive effects on business performance, (3) OL fosters business performance and plays a mediating role between TQM and business performance, and (4) The non-life and the life insurance industries, which carry out TQM, OL and business performance, are	The results show practical implications for the insurance industry in Taiwan.	n/a



### IZALLICT

					significantly		
					different.		
Ahmad et al.	Total quality	n/a	Spain	SMEs	Results derived	If Palestinian	Sample
(2013)	management				from this study	SMEs want to	distribution
25 92	practices,				show that TQM	survive intense	may be
	competitive				practices have an	competition in the	regarded as a
	strategies, and				indirect, positive,	local market from	limitation of
	financial				and significant	other international	the study
	performance:				relationship with	companies, they	because all
	the case of the				financial	need to improve	the
	Palestinian				performance	the quality	respondents
	industrial				through	standards of their	were from
	SMEs				competitive	products.	West Bank
					strategies.		and none
							were from
							the Gaza
							Strip in
							Palestine.

ource: Field Work (2023).



Table 2.1 demonstrates that most of the investigations were conducted in Asia, with a small number coming from the USA, Europe, and Africa. Contingency theory is the most popular theory used by academics, but Carmen and Evangelos' (2015) study found that perceptions of the TQM benefits that businesses get do not include performance aspects that describe results relating to all company personnel, including the senior management team. Researchers like Parvadavardini et al. found a link between QM practices, quality performance, and financial success (2015). The investigations mostly used quantitative research.

#### 2.5 Empirical Review and Hypothesis Development

#### **2.5.1 Total Quality Management and Firm Performance**

Sahoo and Yadav's (2017) study aims to examine the effects of TQM and EO on manufacturing output in SMEs. A survey was produced by studying existing conceptual frameworks in the literature that explain EO and TQM. Using AMOS, we test the model's predictions using information from 121 small and medium-sized manufacturers. The goal of the plan is to show how EO and TQM can help India's manufacturing sector remain competitive.

The findings show that EO affects both the level of TQM implementation (FP) and financial performance. Incorporating the indirect effect of EO via TQM into the overall effect model shows that the direct effect of EO on FP is mitigated. TQM, which encourages employees to learn new skills and boosts productivity, is more common in organizations with high levels of EO. Because of the cross-sectional nature of these studies, the lag time between implementation and effectiveness is not taken into account. The second difficulty is that the metrics used to evaluate performance are very subjective and prone to data misinterpretation.

Operational performance, total quality management, supply chain practices, and operational capabilities are all topics that Saragih et al.'s (2020) study aims to shed light on by dissecting their underlying structural relationships. A company's internal strengths and weaknesses determine its level of success. The value of the results lies in the fact that they reveal to managers how to make the most of internal capabilities by combining forces with supply chain partners and highlight the need for further development of these abilities. When internal resources are pooled with those of key partners, an unstoppable force is formed. In order to stay ahead of the competition, it is essential to have access to such a wealth of resources. The results of this study provide evidence that TQM is effective in mediating the relationship between capacity and performance in supply chain management. The research confirms the competence-based, resource-based view of the company (which is linked to the success of the industrial sector) and the resource advantage hypothesis. SCM techniques allow businesses to make the most of their manufacturing capacity by improving coordination and dialog amongst supply chain participants. As a method of analysis, the SEM-PLS is used. This is one of the most dependable structural equation modeling tools available. The current research utilized a survey design to accomplish its goals. Using a random sampling method, we acquire a response rate of 54%, which is higher than the minimum allowed response rate. The outcomes show that supply chain management can provide a durable competitive advantage. The study also showed that SCM methods and operational skills significantly affect a company's performance.

In their research from 2021, Tsou et al. undertake a comprehensive study of the relationship between CSR and TQM activities and organizational success. SCOPUS cites 233 publications from scholarly international magazines published between 1996 and 2020. The paper is to suggest a research agenda for future study on TQM and CSR activities in order to address a gap in the current literature. The purpose of this study was to examine

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the influence of TQM and CSR on the success of organizations by conducting a systematic literature review.

TQM and CSR are equally beneficial to a company's bottom line, according to the study's findings, but the former has garnered more attention than the latter. Although the concept of merging TQM and CSR projects simultaneously has gained importance in recent years, the results showed that relatively few articles were interested in doing so. This led to a number of unanswered questions being revealed by the statistics. Although it is desirable to think about integrating TQM with CSR, more study is required to identify the characteristics that may facilitate or impede business CSR efforts. The context of economies in flux should be given more attention in future research.

To what extent have TQM and SCI rules and procedures impacted the bottom line in Singapore's container shipping industry was the question that motivated Thai and Jie's (2018) study. The purpose of this study was to examine 159 Singaporean container shipping companies to better understand the relationships between SCI, TQM, and FP. SPSS 14 was used to do a multiple regression analysis using iterative steps on the data.

Although the degree to which TQM and SCI boost service quality and FP may differ, statistical research suggests that both approaches contribute favorably. These results will aid maritime executives in maximizing FP by improving their use of SCI and TQM strategies. The findings of this research will be of considerable use to the container shipping industry, which is presently stymied by challenges in the logistics and transportation sectors.

The research by Panuwatwanich and Nguyen (2017) looks at how total quality management (TQM) has impacted the culture and productivity of Vietnamese construction companies. Research-based survey methods were used to collect data from 104 Vietnamese construction company owners. Cluster analysis and structural equation modeling are two common methods of analysis.

According to the Competitive Value Framework (CVF) of OC categorization, hierarchical and clan cultures have a greater impact on Vietnamese construction enterprises than do ad hoc and market cultures. It was also demonstrated that organizations governed by clan and adhocracy are more conducive to TQM implementation than those dominated by the market and hierarchies. This study's results add weight to the argument that adopting TQM practices leads to greater efficiency in business operations.

## H1: Total Quality Management has a positive and significant influence on Firm Performance.

#### 2.5.2 Competitive Intensity and Firm Performance

The purpose of the article by Ahmed and Afza (2019) is to examine how the level of competition affects the correlation between a company's capital structure and its performance. Inferences are drawn from a panel of listed non-financial firms in Pakistan using both the panel and OLS estimating approaches.

The results demonstrate that excessive debt ratios hinder the accounting performance of the sampled Pakistani businesses. Furthermore, product market competition attenuates the negative correlation between capital structure and firm performance, suggesting that intense product market competition could be used in place of debt financing to realign the interests of management and shareholders.

In their research for 2020, Anning-Dorson and Nyamekye analyze how the engagement capabilities of service organizations contribute to their competitive advantages in value creation. They look at how developing service firms' engagement capabilities might boost innovation and productivity. The study also looks at how competition intensity acts as a moderator between the relationship between engagement capability and firm performance. They researched the service industry in Ghana, a country with a burgeoning economy in Africa. The validity and reliability of the constructs were checked using a confirmatory factor analysis. Then, they employed hierarchical regression with robust standard error to test for the hypothesized correlations. The results show that customer involvement positively affects both innovation intensity and company performance.

The study also finds that boundary factors, such as competition strength in the market, affect the correlation between satisfied customers and profits. The study's primary conclusion is that service providers should encourage customer participation in the value creation process and that they should be cognizant of their ability to fulfill the participation requirements for effective value co-creation in the present economic climate.

Although customer focus (CF) is vital, there is little evidence linking it to improved company results. This haziness is likely due to the fact that CO's impact on a company's bottom line can vary widely depending on a variety of internal and external factors. The research by Feng et al. (2019) uses social learning theory and an interactional approach to examine the joint and independent moderating effects of ethical leadership and competitive intensity. Data from a survey administered to 264 Chinese enterprises was used to confirm the hypotheses.

These findings demonstrate how the application of CO can improve organizational performance through kind and reasonable leadership. Competition has no bearing on the moderating impact, yet businesses operating in very competitive marketplaces may suffer more from a lack of moderate leadership. Additionally, organizations with excellent leaders in the justice sector are better able to appreciate the importance of corporate goal-setting.

The purpose of Lahiri's (2013) study is to examine how competition affects a company's most important resources (human capital, organizational capital, and management competence).

The authors draw the conclusion that competitive intensity positively modifies the link between firm resources and business performance based on a research of 105 service providers in India's information technology-enabled services (ITES) sector. The results show that senior managers' assessments of the effects of internal firm resources on performance are significantly influenced by their judgments of the level of competition.

#### H2: Competitive Intensity has a positive and significant influence on Firm Performance.

#### 2.5.3 Competitive Intensity, Total Quality Management and Firm Performance

Using a resource-based perspective and quality management theory, Abubakar et al. (2018) investigated the impact of competitive intensity on the association between the adoption of total quality management (TQM) and SME performance. In Kano and Kaduna, two cities in Nigeria's northwest geopolitical zone, which are both home to SMEs, 357 questionnaires were given out to the senior decision-makers. Fewer than 440 (71.4%) of the 714 questionnaires were completed and returned.

The theories were put to the test using structural equation modeling and partial least squares. According to the findings, TQM adoption greatly enhanced the productivity of SMEs. Despite the level of competition, our research demonstrates that there is a significant association between the adoption of TQM and the success of SMEs.

Kura et alresearch .'s focuses on entrepreneurship, total quality management, and small business success in a cutthroat environment (2020). The ideas of chance and available resources were blended. The top decision-makers of small and medium-sized businesses (SMEs) in the Nigerian cities of Kano and Kaduna, both of which are situated in the country's northwest geopolitical zone, were sent 714 questionnaires using stratified random sampling. Of the 714 questionnaires that were returned, 62% were useless, or 440 of them. Using partial least squares structural equation modeling (PLS-SEM), the hypotheses were tested.

The results demonstrated that general quality management and an entrepreneurial mindset are very beneficial to small and medium-sized firms (SMEs). The findings also demonstrated that competitive pressures influenced the links between an entrepreneurial mentality and the success of SMEs. TQM and higher degrees of rivalry were not definitively linked by any evidence. Using competitive intensity as a mediator of the links between entrepreneurial orientation, overall quality management, and SME performance is a novel theoretical contribution offered in this study.

The capability-based view informs Haili et al(2019) .'s research model, which examines how startups convert capabilities (including marketing, technology, market-linking, and IT) to achieve sustainable development and performance across various degrees of competition. This study uses data from 146 new enterprises in the United States and a "pick-a-point" method with ordinary least squares regression analysis to evaluate the research model and investigate the influence of skills on sustainable new venture success across a spectrum of competitive intensities.

The empirical evidence demonstrates that the advantages acquired by marketing capabilities decrease, rather than increase, as competition increases. When competition is high, it's difficult to see much of an impact from improved marketing capabilities. However, as the level of competition increases, so do the favorable effects of market-linking abilities on performance. Technology and information technology skills are unaffected by the degree of competition. New venture creation and sustainable business practices are presented as theoretical and managerial implications.

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Onditi et al.'s (2020) study set out to investigate how the presence of rivalry affects the business strategies and market focus of Kenya's private security services. Key informants included the marketing directors and CEOs of private security organizations. The research was grounded in free-market economics. The Kenya Security Industry Association (KSIA) conducted a cross-sectional census of the security industry in Kenya and received responses from 37 of the 39 businesses polled. A questionnaire with some open-ended questions was used to collect data. The results of the regression analysis showed that private security firms in Kenya benefited both financially and otherwise by adopting a market orientation.

Additionally, the results showed that the link between market orientation and non-financial performance was attenuated by competitive intensity, but not the link between market orientation and financial performance. Managers in the private security industry and elsewhere are exhorted to see market orientation as a strength that can improve their capacity to develop lasting competitive advantages by the findings of this study. Leaders were also asked to make it a top priority to instill in their companies a mindset that is centered on the customer experience.

H3: Competitive Intensity has a positive and significant moderate the relationship between Total Quality Management and Firm Performance.

#### 2.6 Conceptual Framework

In order to fully understand a phenomenon, it is necessary to analyze the current state of objects (variables or concepts) and their interactions. A conceptual framework helps in first identifying and then emphasizing the essential components of a study that you are aware of, value, and want to connect to other aspects and forces that have an impact on your research (Ravitch & Riggan, 2016). The study's conceptual framework is displayed in Figure 2.1.



The firm's characteristics, such as years in business, ownership type, and size, are selected as control variables to explore the moderating influence of competitive intensity on the relationship between overall quality management and company performance, as seen in Figure 2.1.. According to theory, the ownership structure of a firm has a significant impact on how well it performs (Kowalczyk and Kucharska, 2020). According to the agency hypothesis, costs related to the division of ownership and management obstruct firms' principal purpose of obtaining optimal performance and maximum potential shareholder value.

Kowalczyk and Kucharska (2020) went on to say that a company's size has a good effect on its financial performance. A company's size can indicate that it is expanding, which would prompt the market to respond favorably. As overall assets and revenues rise, a corporation's size or scope expands. On the one hand, Jonson et al. (2020) claim that older organizations do better than younger companies because they have greater industry experience. This method of learning is known as "learning by doing" (Coad et al. 2013).



#### **CHAPTER THREE**

#### METHODOLOGY AND STUDY AREA

#### **3.0 Introduction**

The term "methodology" refers to a rigorous analytical evaluation of a research process. The methodologies and ideas described in the information section are the subject of this systematic investigation. Typical examples include topologies, patterns, theoretical ideals, and quantitative or qualitative systems.

#### **3.1 Research Design**

The research design for the study is descriptive. Descriptive research is appropriate since the respondents needed to address the study problem were chosen from a variety of units (SMEs). The researcher just wants to define the situation or case in their investigation while using the descriptive research strategy. It is a strategy for designing based on the theory developed via the gathering, examination, and presentation of evidence (Lawrence and Tar, 2013). This enables the researcher to explain the goals and methods of their research. Others are well helped to grasp the necessity for study through descriptive design. According to Lawrence and Tar (2013), you can conduct some exploratory research if the problem description is not clear.

Using a descriptive quantitative research design, this was done. Given that the study is focusing on a certain group, specifically SMEs, the purpose of descriptive research is to characterize as well as to explain or validate the study's objectives. For non-quantified research subjects and issues under study, the use of a descriptive research design aids in producing an analysis that is both accurate and insightful.

#### **3.2 Research Purpose**

The purpose of this study is to identify the relationships among total quality management, level of competition, and business success among SMEs in Tamale, Ghana's northern region. Through the development of scientific theories, concepts, and ideas, research aims to enhance knowledge for the benefit of SMEs. The study's objective is attained through the development of hypotheses, the gathering of data, the interpretation of the results, the drawing of conclusions, the translation of the findings into useful applications, and the emergence of new research topics.

#### 3.3 Population of the Study

Registered SMEs in Tamale, the capital city of Ghana's Northern region, make up the study's target population. Tamale is where the study will be conducted. These SMEs are found in the construction, retail, restaurant, and manufacturing industries.

SMEs' CEOs, presidents, directors, and managers made up the majority of the respondents. SMEs in four classes—Micro, Small, Medium, and Large—are included in this research, according to the National Board for Small Scale Industries (NBSSI).

#### 3.4 Sample Size and Sampling Technique

As it was not possible to sample all SMEs for the study, the sample size was utilized to reflect the full population. Based on the "rule of five," the sample size for this study is calculated (Hair, 2011). This is a typical formula for determining the required sample size.

The total number of items in the researcher's questionnaire is 44. According to the rule of five, 220 people should make up the bare minimum sample size for this study (44 x 5 = 220). The researcher gave out 250 questionnaires to collect data in an effort to get a better study sample.

The probability sampling method applied in this study is simple random sampling. Each person in this condition is totally picked by chance because every member of the population has an equal chance, or probability, of being chosen.

As with all probability sampling procedures, simple random sampling reduces selection bias and allows for the computation of sampling error. One advantage is how straightforward it is as a probability sampling technique.

#### 3.5 Data Collection

The equipment used to collect data is called a research instrument. It assists the researchers in gathering pertinent data or learning from others new information to add to the study. the main source of data used in this investigation. Primary data is information gathered from first-person accounts utilizing methods like surveys, interviews, or experiments (Wojcikowski and Kirk, 2013).

Information is gathered from original sources directly, keeping in mind the analysis aim. The main instrument utilized to gather data for the study was a structured questionnaire. A questionnaire was created to satisfy the stated research objectives. The questionnaire had questions about the respondents' demographic information as well as questions about online banking. All of the questions have been answered and the data have been thoroughly examined.

The Tamale-based target respondents will receive the printed questionnaire. The questionnaires will be given out in an envelope. It will be hand-delivered by the researcher. The questionnaire will be given to the respondents, who will have 15 minutes to complete it. The researcher will then collect the finished questionnaires. The instrument being used to gather the data is a 44-question, closed-ended questionnaire. There are four sections in the survey, numbered A through D. The questionnaire's first section asks questions about

the respondents' attributes. Section B includes TQM-related questions, Section C deals with competitiveness, and Section D deals with business performance.

S/N	Variables	riables Construct No. of Measurement		Measurement	Source
1	<b>Dependent</b> Firm Performance	Service	5	5 Likert Scale	Thai (2008)
	renormance	Other Indicators	4	5 Likert Scale	Morgan (2012)
2	Independent Total Quality	Management	4	5 Likert Scale	Saraph et al. (1989)
-	Management	leadership	M.		
		Training	4	5 Likert Scale	Vanichchinchai and Igel (2009)
		Customer Focus	4	5 Likert Scale	Kaynak and Hartley (2008)
		Supplier Quality	4	5 Likert Scale	Kaynak (2003)
-		Process	4	5 Likert Scale	Wang et al. (2012)
		Employee Involvement	4	5 Likert Scale	Saravanan and Rao
	N. L. C.			17	(2000)
3	Competitive	N/A	6	5 Likert Scale	Jaworski and
	Intensity	ac x	13	322	Kohli, 1993
4	Control	NA LAS		·c 0 5	(2012)
4	Years In Business	N/A	N/A	1f  0 = 5 years=1, 6 =	Morgan (2012)
		TY		10 years $= 2$ ,	
1-	Z		-	=316 - 20	S
	Z	1		years=4 and $Above 20 = 5$	2
5	Ownership	N/A	N/A	Local-owned	Morgan (2012)
	~)	R.	5	firm Joint =1, venture firms=	
	Z	WJSANE	NO	2 and Foreign-	
6	Size	N/A	N/A	owned firm =3 Micro	Morgan (2012)
				Small	
				Large	

Table	3.1:	Measurement	of	V	ariables

Source: Author's Construction (2023)

Table 3.1 lists the constructs used in the study, the number of items used to measure each construct, and the literary work from which the items were taken.

#### **3.6 Data Analysis**

To facilitate analysis, the acquired data will be categorized, sorted, and tabulated. In order to build the data analysis based on the study's goals and questions, the researcher uses statistical tools, such as the Statistical Package for the Social Sciences (SPSS). The data analysis is comprised, in particular, of descriptive statistics.

The frequency, percentages, means, and standard deviations are all included. The outcomes of the data processing are delivered after analysis and drawing conclusions. In the study, regression and correlation analysis are used to examine the significance of the components to the dependent variable at a 95% confidence level.

#### **3.7 Validity of the Research Instrument**

The Cronbach's alpha is a measure of a research tool's dependability used in SPSS. The overall variance, the number of test items, and the average covariance between item pairings all have an impact on Cronbach's alpha. Most typically, Cronbach's alpha is used to assess the internal consistency of a questionnaire (or survey) containing several Likert-type scales and items (Vaske et al., 2017).

If two things measure the same thing, it can be said that they are equivalent thanks to Cronbach's alpha. If the common range's internal consistency is poor, Cronbach's alpha must be at least 0.70 to be considered good. The highest projected value is 0.90, and anything above is seen as superfluous.

#### **3.8 Ethical Consideration**

Business research ethics includes the code of conduct, which specifies how researchers must do their work. The researcher took a number of steps to ensure that good ethical behavior was displayed in the report. The researcher was aware of the underlying principles and customs governing research ethics prior to beginning the study. As a result, the researcher tried to follow the procedures and rules that led to the protection of both human and non-human subjects.

The researcher took care to first obtain consent and voluntary involvement. The SMEs that were in question and the respondents who provided accurate information sought confirmation. To request approval for the research, a letter was sent.

In addition, the researcher made certain that participants respected their privacy, secrecy, and identification. The information submitted by all respondents will be kept private and used only for academic study, it has been made clear to them. The study's findings were made public in secret, thus no SME can be found in this report.

#### 3.9 Profile of the Study Area

The Tamale metropolis has a total of 219,971 households, living in 19,387 houses. The average household size in the metropolis is 6.3 persons per household. Children constitute the largest proportion of the household structure accounting for 40.4 percent and heads of household make-up 16.1 percent of the household population. Spouses form about 9.4 percent and other relatives constitute 12.9 percent of the population. The proportion of households who live in extended household structure (head, spouse(s), children and head's relatives) constitute the largest proportion (46.1%) than that of any other type of household structure. Nuclear households (head, spouse(s) and children) constitute only 19.5 percent of households in the metropolis.

There is a dominant proportion of Ghanaians by birth in the metropolis, constituting 94.6 percent of the population. Those who have naturalised constitute less than one percent (0.8) while those who have dual nationality are 2.1 percent of the total population of the metropolis.

Of the population 11 years and above, 60.1 percent are literates and 39.9 percent are nonliterates. The proportion of literate males (69.2%) is higher than that of females (51.1%). Five out of ten people (54.8%) indicate they can speak and write both English and Ghanaian languages. Of the population aged 3 years and older (84,897) currently attending school in the metropolis 52.9 percent are males and the remaining 45.1 percent are females. Among those who have attended school in the past, males constitute 58.6 percent and the females represent 41.4. It indicates that both among those who attended school in the past and those who are currently, males have higher proportions. Among those currently attending school, 15.1 percent are in nursery, 18.2 percent in JSS/JHS, 12.5 percent in SSS/SHS and the largest proportion (40.0%) is in primary. Only 5.7 percent of the population 3 years and older in the metropolis are currently attending tertiary institutions.

About 63.3 percent of the population aged 15 years and older in the metropolis are economically active and 36.7 percent are economically not active. Of the economically active population, 92.6 percent are employed while 7.4 percent are unemployed. For those who are economically not active, a larger percentage of them are students (56.0%), 20.9 percent perform household duties and 12.4 percent are either too young or old to work. About five out of ten (52.9) of unemployed persons in the metropolis are seeking work for the first time.

Of the employed population in the Tamale Metropolis, the highest proportion (33.0%) are engaged as service and sales workers. The second largest occupation is craft and related trade workers who constitute 21.5 percent of the employed population. The number of skilled agricultural, forestry and fishery workers represent 17.6 percent of the employed population. Those employed as professionals constitute only 8.1 percent.

Of the population 15 years and older, the highest proportion (60.6%) are self-employed without employees, 19.5 percent are employees, 5.9 percent are contributing family workers and 6.9 percent are self-employed with employees. Higher proportion of females are self-xi employed without employees (70.5%), compared to 51.3 percent for males. The proportion of females who are employees (11.3%) is however smaller than that of male employees (28.2%). The private informal sector is the largest employer in the metropolis, employing 83.2 percent of the employed population. Public sector is the next highest employer, engaging 11.3 percent of the employed population. All this information is sourced from Ghana Statistical Service (2024).



#### **CHAPTER FOUR**

#### DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

#### **4.0 Introduction**

The findings and discussions from the study's analysis are presented in this chapter. Once more, the findings were explored in terms of their managerial ramifications as well as how they relate to some of the literature review's empirical claims. Tables chronologically representing the sequence of the individual objectives are used to present the findings.

#### 4.1 Demographic/Background Information of the Respondents

In other to understand the background characteristics of the respondents their demographic information was inquired. Five things were asked that is the years in business, company ownership, size of business, gender of manager, and work experience. The results are presented in Table 4.1.

#### 4.1.1 Years in Business

The majority of the firms used in the study have been operating above 20 years which is 98 representing 28.00%, those with 11 - 15 years of operation are 47 representing 13.43%, firms with 0 - 5 years of operations are 66 representing 18.86%, those between 16 - 20 years are 69 which is 19.71% whiles those between 0 - 5 years of operations are 70 which is 20.00%.

#### 4.1.2 Company Ownership

The ownership structure of the companies was inquired it was revealed that those are localowned firms 230 representing 65.71%, those that are joint-venture firms are 74 which represents 21.14%, and foreign-owned firms made up of 46 which is also represents 13.14%. The majority of the firms are local-owned.

Particulars	Frequency	Per Cent
Years In Business		
0 – 5years	66	18.86
6 – 10 years	70	20.00
11 - 15years	47	13.43
16 – 20years	69	19.71
Above 20years	98	28.00
Total	350	100.00
Company Ownership	200	~ = = 1
Local-owned firm	230	65.71
Joint-venture firms	74	21.14
Foreign-owned firm	46	13.14
Total	350	100.00
Size of Business		1.00
Micro	14	4.00
Small	17	22.00
Medium	141	40.29
Large	118	33.71
Total	350	100.00
Work Experience		
1-5 years	144	41.14
6 – 10 years	14	4.00
11 - 15 years	34	9.71
16 - 20 years	88	25.14
> 20 years	70	20.00
Total	350	100.00
LW 100	- 20	
Gender of Manager	NE NO	
Male	173	49.43
Female	177	50.57
Total	350	100.00

#### Table 4.1: Demographic Information

Source: Field Work (2023)

#### 4.1.3 Size of Business

It is revealed that the majority of the firms are medium-level which is 141 representing 40.29%, and the small-size firms are 77 (22.00%). The firms found to be micro size are 14 which is 4.00% and large are 118 which is also 33.71%.

#### 4.1.4 Work Experience

The respondents were also made to answer how long they have worked. Those who have worked within 1 - 5 years are in the majority which is 144 (41.14%). Those between the years of 6 - 10 years are 14 (4.00%), those between 11 - 15 years are 42 (34 %), those between 16 - 20 years are 88 (25.14%0 and those above 20 years are 70 (20.00%).

#### 4.1.5 Gender of Manager

It is revealed that the majority of the respondents 177 representing 50.57% are females and the rest of the 173 representing 49.43 are male. This result is shown in Table 4.1.

#### **4.2 Inferential Analyses**

Using inferential analysis, it is possible to evaluate how reliable conclusions about a population that are based on data collected from a sample of the population are. Because it does not sample the complete population, inferential analysis results will always be accompanied by some degree of uncertainty. There are two inferential analyses: the normality test and the collinearity statistics.

#### 4.4.1 Normality Test

A normality test assesses whether a sample of data is representative of a population that has a normal distribution. Figures 4.1 and 4.2 show the findings of the Normality Test, which was used to determine whether the research's data had a normal distribution. Figures 4.3, 4.4, and 4.5 show the results for the control variables used with the dependent variable.





Source: Field Work (2023).

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Figure 4.1 shows the normality test for TQM and performance, and Figure 4.2 shows the normality test for competitive and performance figures showing that there is a fair distribution of the data. Therefore, these results indicate that the performance of the subjects in this dataset is normally distributed.

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Figure 4.1: Normality Test for Competitive and Performance Source: Field Work (2023).

Also the firm characteritics which include years in business, company ownership and size of business in Figure 4.3 to 4.4 shows the normality test for firm characteritics and performance figures showing that there is a fair distribution of the data. Therefore, these results indicate that the performance of the subjects in this dataset is normally distributed.



Figure 4.1: Normality Test for number of years in business and Performance Source: Field Work (2023).







#### 4.4.2 Collinearity Statistics

The study's multicollinearity is described in the section, the variables utilized in the investigation are tested for multicollinearity, and the findings are shown in Table 4.3.

The multicollinearity status of the independent variables is displayed in Table 4.8. As a general rule, if the tolerance values of independent variables are less than 1.0 and the variance inflation factor is more than 1.0, there isn't multicollinearity. Because the tolerance values were all less than 1.0 and the VIF values were all above 1.0, there was no issue with multicollinearity among the independent variables.

#### **Table 4.2: Collinearity Statistics**

Variables	Tolerance	VIF
Years in business (Firm specification)	0.81	1.23
Company Ownership (Firm specification)	0.82	1.32
Size Of Business (Firm specification)	0.66	1.52
Gender Of Manager	0.77	1.29
Work Experience	0.81	1.23
TQM	0.17	6.06
Competitive Intensity	0.17	5.8
All VIF	0.60	

**Dependent Variable:** Firm Performance *Source: Field Work (2023).* 

#### 4.2 Reliable Tests and Validity Tests

The validity and reliability analysis is presented in this section and covers the exploratory

factor analysis, the cronbach alpha test, and model fitness indices.

#### 4.2.1 Reliability Test

The reliability test was done using Cronbach Alpha is SPSS as indicated in the methodology in chapter 3 of this research and the results are presented in Table 4.3.

**Table 4.3: Reliability Test** 

S/N	Variable	Cronbach's Alpha	N of Items	AVE	CR
1	Total Quality Management	0.913	24	0.53	0.82
2	Competitive Intensity	0.816	6	0.50	0.79
3	Firm specification	0.852	3	0.61	0.81
4	Firm Performance	0.676	8	0.56	0.79

Source: Field Work (2023).

The Cronbach's coefficient alpha values for all elements that range from 0.576 to 0.91 designated good inter-item reliability for each factor. Cronbach alpha for Total Quality

Management, Competitive Intensity, and Firm Performance are 0.913, 0.816, and 0.676 respectively.

The reliability is more than the minimum Cronbach alpha of 0.7. A Cronbach alpha of 0.5 or above is generally accepted by academics to be satisfactory for instrument reliability, according to Mulabe (2012).

When the average extracted variance is less than 0.5, the convergent validity is demonstrated. All of the AVE values in Table 4.2 are more than or equal to 0.5, which is consistent with Fornell and Larcker's (1981) assertion that AVE 0.5 verifies the validity of convergent findings. Components 1, 2, and 3 each have a composite dependability rating of 0.82, 0.79, and 0.79, respectively. It provides proof of the scale components' internal coherence.

#### 4.2.2 Exploratory Factor Analysis

Factor analysis is one of the strategies for data reduction. Finding latent (unobservable) variables that are mirrored in manifest (observable) variables is how this is accomplished. The results of the study's exploratory factor analysis are shown in Table 4.4.

The study uses 38 items from three variables, which are total quality management which is 24 times, competitive intensity 6 items and firm performance is also 8 times. The confirmatory factor analysis is done to determine whether the items reflect these underlying constructs properly. This involves assessing the extent to which the data meets the expected structure (Vaske et al., 2017).

By performing a factor analysis the study provides empirical data to check whether the constructs are indeed properly represented by the items. With the confirmatory factor analysis, four results items are expected which include Bartlett's test of sphericity, the Kaiser-Meyer-Olkin (KMO), Communalities (C) of each item, and the Total Variance

Explained (TVE) of each variable. The results of Bartlett's test of sphericity and KMO are presented in Table 4.3.

Particulars				TQM	CMI	FIP
			1.20.11	1.00		
KMO Measu	re of Sar	npling	g Adequacy.	0.71	0.76	0.51
Bartlett's	Test	of	Approx. Chi-Square	1,877.94	1,049.48	703.02
Sphericity			df	45.00	15.00	36.00
			Sig.	0.00	0.00	0.00
Source: Field	Work (20	023).		The second		

#### Table 4.4: Bartlett's test of Sphericity and KMO

To ascertain whether a dataset is suitable for a data reduction technique, Bartlett's Test of Sphericity is used. According to Vaske et al. (2017), the dataset is suitable for a data reduction strategy if the p-value from Bartlett's Test of Sphericity is lower than the selected significance threshold (0.05 in this case). According to the study's conclusions, a dataset is appropriate for a data reduction strategy if the p-value is less than 0.05.

The KMO test aids in evaluating the reliability of variable factor analyses. Since factor analysis always produces factors, the objective is to verify that the resulting factor structure is objective by supplying a minimal amount of correlation within a set of variables. The results of the KMO test for firm performance, competitive intensity, and comprehensive quality management are 0.71, 0.76, and 0.51, respectively. If the KMO score is more than 0.50, it can be considered acceptable; if it is higher than 0.70, it can be considered superior. The relevance indicates that factor analysis is appropriate.

The remaining statistics are shown in Table 4.5 and comprise the total variance explained and commonalities..

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**Table 4.5: Communalities and TVE** 

#### Variable/Construct С TVE **Supplier Quality Management** 79% **Management leadership** The organization's top management (top organization executives and major department heads) is evaluated for quality 0.732 performance. The participation of major department heads in the quality improvement process. 0.613 The organizational top management has objectives for quality performance. 0.816 The organizational top management considers quality improvement as a way to increase profits. 0.639 Training Quality-related training given to hourly employees throughout the organization 0.743 Quality-related training given to managers and supervisors throughout the organization 0.752 Quality-related training is encouraged for the active improvement of teamwork 0.884 All employees are encouraged to attend quality-related training programs 0.595 **Customer Focus** Customer satisfaction surveys are used in determining/identifying customers' requirements 0.746 Managers have access to a summary of customer complaints 0.798 The organisation actively seeks ways to improve the primary service in order to achieve greater satisfaction 0.666 Customer satisfaction surveys are used in determining/identifying customers' requirements 0.767 **Supplier Quality Management** Long-term relationships are offered to suppliers 0.922 The suppliers are evaluated according to quality, delivery performance, and price, in that order 0.823 The suppliers are selected based on quality rather than price or delivery schedule 0.929 The thoroughness of the supplier rating system 0.798 **Process Management** BADWEN The services disruption is prevented from occurring is a strong attitude 0.753 The processes include in-process measures of quality. 0.737 The explanation of the variation in processes is used as an analysis technique. 0.891

The managers and supervisors continuously monitor and identify variations in work processes	0.000	
Employee Involvement	0.909	
The employees are involved in quality management programs.	0.831	
Effectiveness of Cross Functional Teams with respect to solutions to problems related to quality.	0.922	
High degree A high importance is given to employee suggestions and innovations.	0.823	
Employees are encouraged to identify loopholes in their work.	0.929	
Competitive Intensity		66%
Competition in our industry is cutthroat	0.511	
There are many "promotion wars" in our industry.	0.669	
Anything that one competitor can offer, others can match readily.	0.699	
Price competition is a hallmark of our industry.	0.710	
One hears of a new competitive move almost every day	0.782	
Our competitors are relatively weak.	0.593	
Firm Performance		73%
Timeliness (on-time delivery)	0.64	
Quick response time in case of an emergency, problem, or special request	0.66	
Speed of order handling	0.56	
Accuracy of shipment documentation	0.70	
Shipment safety and security	0.71	
Growth in profit	0.83	
Growth in market share	0.85	
Growth in sales	0.84	
Overall firm performance	0.84	
ource: Field Work (2023).		-
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When it comes to commonalities, values between 0.25 and 0.4 have been proposed as acceptable cut-off values, with ideal commonalities being 0.7 or higher. As shown in Table 4.3 all the items recorded communalities value between 0.511 and 0.929 means all the items meet the accepted values.

The final value assessed in Table 4.5 is the Total Variance Explained (TVE) which indicates the percentage at which the items explain the variable, 79%, 66%, and 73% are recorded for Supplier Quality Management, Competitive Intensity and firm respectively These results imply that the research instrument is regarded as a trustworthy instrument for the study. The study uses a questionnaire adapted from different kinds of researchers which include Saraph et al. (1989), Vanichchinchai and Igel (2009), Kaynak and Hartley (2008), Kaynak (2003) and Wang et al. (2012), these researchers used different kinds of respondents and therefore used it on SMEs to validate the questions on the instrument.

#### 4.3 Descriptive Results and Correlation Analysis

The descriptive findings and a correlation analysis for the study's variables are presented in this part. Table 4.5 presents the findings.

The correlation value for each variable in a correlation analysis cannot be higher than 0.8. Multicollinearity issues are indicated if the value is more than 0.8.

Table 4.4 shows that the correlation of each independent variable, including family conflict and family conflict, and the relaxation variables of job satisfaction and job performance are at the 0is (both sides) level.

As shown in Table 4.5, firm performance recorded a mean of 3.38 with a standard deviation of 0.51, in the case of competitive intensity a mean of 3.50 and a standard deviation of 0.80 are recorded and Total Quality Management also recorded 3.33 as mean value and a standard deviation of 0.63.

Table 4.6: Correlations		К	$\mathbb{N}$	IU	S	Г				
			1	2	3	4	5	6	7	8
1=years in business	Pearson Correlation		1							
	Sig. (2-tailed)			4						
2= company ownership	Pearson Correlation		-0.01	1						
	Sig. (2-tailed)		0.847							
3=Size of Business	Pearson Correlation	× 1	.304**	0.009	1					
	Sig. (2-tailed)		0.000	0.872						
4=Gender of Manager	Pearson Correlation	6	.162**	-0.032	240**	1				
	Sig. (2-tailed)		0.002	0.557	0.00					
5=Work experience	Pearson Correlation		.148**	0.025	134*	291**				
	Sig. (2-tailed)		0.005	0.647	0.012	0.00	-5			
6=TQM	Pearson Correlation		.165**	-0.016	-0.092	0.046	216**	1		
	Sig. (2-tailed)		0.002	0.769	0.086	0.392	0.000			
7=Competitive	Pearson Correlation	22	.189**	-0.007	0.076	0.031	185**	.794**	1	
	Sig. (2-tailed)		0.0000	0.895	0.154	0.569	0.001	0.00		
8=performance	Pearson Correlation		0.034	0.064	111*	0.075	-0.059	.542**	.414**	1
	Sig. (2-tailed)		0.528	0.23	0.038	0.161	0.273	0.000	0.000	
Mean		1	~					3.33	3.50	3.38
Std. Deviation			_	-			-	0.63	0.80	0.51
Note= N= 350 ** Correlation is significant at * Correlation is significant at t Source: Field Work (2023).	the 0.01 level (2-tailed). he 0.05 level (2-tailed).	4 12	SAT	JE N	A P	AL AL	5			

In the case of the correlation, firm performance is found to correlate with competitive intensity (r=0.414, p=0.000), total quality management (r=0.542, p=0.000), and the size of business (r=-0.111, p=0.038). Also, competitive intensity is found to correlate with total quality management (r=0.794, p=0.000), work experience (r=0.185, p=0.001), and years in business (r=0.189, p=0.000)

#### 4.4 Multiple Regression Analysis

The study's objectives were fulfilled by using regression analysis. Multiple regression analysis is a model that establishes the link between the independent and dependent variables. The goal of this study is to determine the response variable's result. Its primary goal is to model the association between the explanation and response variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.756 <sup>a</sup>	.572	.554	.30317

a. Predictors: (Constant), ownership, gender, years in business, experience, business size, competitive, TQM.

Source: Field Work (2023).

 Table 4.7: Model Summary

An easy and high correlation is indicated by an R-value of 0.756. The R2 number shows how much of the overall variation in the dependent variable's firm performance can be accounted for by the independent variables TQM, ownership, ownership type, gender, years in business, experience, and business size. In this instance, we can explain 57.2% of the data, a sizeable portion. The ANOVA table in Table 4.8 illustrates how well the regression equation accounts for the data.

Table 4.8 shows that the regression model significantly predicts the dependent variables. This suggests that the regression model used has a statistical significance of less than 0.05,
suggesting that the total regression model statistically significantly predicts the outcome variables.

Table	4.8:	ANO	VA
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Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.837	8	3.855	22.570	.000 <sup>b</sup>
	Residual	58.237	341	.171		
	Total	89.073	349	$\mathbf{\mathcal{S}}$		

a. Predictors: (Constant), ownership, gender, years in business, experience, business size, competitive, TQM.

Source: Field Work (2023).

		Unstand	lardized	Standardized		
Mo	del	Coeff	icients	Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	1.250	.248	13	5.037	.000
	Years In Business	028	.022	062	-1.278	.202
	Company Ownership	.054	.031	.076	1.743	.082
	Size Of Business	.032	.032	.054	.994	.321
	Gender Of Manager	.097	.050	.096	1.922	.055
	Work Experience	.024	.015	.078	1. <mark>59</mark> 9	.111
	TQM	.926	.121	1.147	7.676	.000
	Competitive	243	.067	383	-3.634	.000

## Table 4.9: Coefficients

Dependent Variable: Firm Performance

Source: Field Work (2023).

The Coefficients are also included in Table 4.9, which contains the information needed to forecast Firm Performance from the dependent, control, and moderation variables. Furthermore, the findings indicate that none of the control variables is found to significantly influence the dependent variable (firm performance). The study found that TQM ( $\beta$ =0.926, t=7.676, p=0.000), Competitive (β=-0.243, t=-3.634, p=0.000),

# **4.5 Moderation Effect**

The moderation function of competitive intensity in the link between total quality management and firm performance is discussed in this portion of the study. Table 4.10 displays the results for the moderating effect.

R	R-sq	MSE	F	df1	df2	р
0.7485	0.56	0.18	72.84	6	343	0.00
P <mark>articular</mark>	coeff	se	t	р	LLCI	ULCI
constant	0.28	0.35	0.81	0.42	-0.40	0.96
TMQ1	1.87	0.19	10.06	0.00	1.50	2.23
COM1	-0.19	0.16	-1.21	0.23	-0.51	0.12
Int_1	-0.24	0.07	-3.68	0.00	-0.37	-0.11
Age	0.00	0.02	0.09	0.93	-0.04	0.05
own	0.03	0.03	0.87	0.38	-0.03	0.09
Size	0.07	0.03	2.40	0.02	0.01	0.13

Table 4.10. Mouchanon Enec	Table	4.10:	<b>Moderation</b>	Effec
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Dependent Variable: Firm Performance

Source: Field Work (2023).

As shown in Table 4.10, the moderation (Int\_1), which is the interaction between TQM and Competitive ( $\beta$ =-0.24, t = -3.68, p = 0.00), has a significant influence on the firm performance. This means competitive intensity moderates the relationship between total quality management and firm performance.

## 4.6 Hypotheses Testing

This section of the study presents the hypotheses testing and the results are presented in Table 4.10.

According to the hypothesis Table (Table 4.10), it is known there are 3 hypothesis, and all three is supported due to the value being less than the P-value which is 0.05.

Hypotheses	Hypotheses Statement	Symbol	Sig	Results	Beta
H1	Total Quality Management has a positive and significant influence on Firm Performance	TQM	0.000	Supported	0.93
H2	Competitive Intensity has a positive and significant influence on Firm Performance.	Competitive	0.000	Supported	-0.24
H3	Competitive Intensity has a positive and significant moderate the relationship between Total Quality Management and Firm Performance	Competitive * TQM	0.028	Supported	<mark>-0.0</mark> 3

Table 4.11: Hypotheses

Source: Field Work (2023).

## **4.7 Discussion of Results**

The fundamental objective of this study is to dissect the interplay between comprehensive quality management, competitive intensity, and business performance. According to Kramar (2014), corporate performance includes product and service output, divisional efficiency, employee effectiveness, and the impact of an organization's activities as a whole. This paves the way for businesses to be able to show their results and evaluate how effective they are.

The primary objective of this study is to examine the impact of TQM on financial outcomes for businesses. According to Androniceanu (2017), total quality management (TQM) involves coordinating an organization's efforts to achieve the highest possible quality in its outputs. It is the mission of the organization, as stated by Saffar and Obeidat (2020), to "continuously meet or exceed the needs of its customers by enhancing all of its internal processes using quantitative methods and human resources."

Results for company success were found to be considerably enhanced by TQM (=0.926, t=7.676, p=0.000). This evidence demonstrates that TQM contributes to increased productivity in businesses. This could be interpreted as evidence that businesses are putting more focus on TQM in an effort to increase output. When evaluating the degree of association between criteria for Total Quality Management and performance, it is found that the criteria for leadership and training have the greatest impact on productivity.

The research confirms the competence-based, resource-based view of the company (which is linked to the success of the industrial sector) and the resource advantage hypothesis. Combining internal resources with those of strategic partners, as proposed by Saragih et al. In order to stay ahead of the competition, it is essential to have access to such a wealth of resources.

When the indirect effect of EO through TQM is factored into the overall effect model, as Sahoo and Yadav (2017) discover, the direct effect of EO on FP becomes less significant. Tsou et al. (2021) did a comprehensive literature review of articles addressing TQM and CSR issues from the standpoint of company performance. TQM and CSR are equally beneficial to a company's bottom line, according to the study's findings, but the former has garnered more attention than the latter. In addition, research by Thai and Jie (2018) shows that TQM and SCI practices mutually benefit SCI, improving both service quality and financial performance. TQM deployment has been shown to correlate positively with enhanced productivity in firms, according to research by Panuwatwanich and Nguyen (2017). The second objective is to learn how much competition there is and how it affects specific companies. According to Dupire and M'Zali (2018), "the degree to which firms in a market exert pressure on one another" constitutes competition intensity in the field of strategic management. The competition intensity index proposed by Wolter et al. (2017) accounts for both strategic and tactical considerations.

There was a statistically significant negative relationship between competition and firm performance (=-0.243, t=-3.634, p=0.000). That's why it's bad for business when competition is fierce. As a result of this research, it is clear that companies perform worse when faced with competition from inside their own industry. Competition between firms is healthy because it compels new approaches to old problems.

These results are consistent with those of Anning-Dorson and Nyamekye (2020), who discovered that market characteristics such as competitive intensity act as boundary conditions to shape the relationship between satisfied customers and profitable businesses. When market rivalry is high, sample companies should reduce their reliance on loan financing, as shown by the research of Mathur et al. (2021). The findings of Feng et al. (2019) that justice leadership aids in comprehending the value of CO are useful for businesses functioning in a more competitive climate. Lahiri (2013) examined the effect of competitive intensity on a sample of 105 service providers operating in India's IT-enabled services (ITES) sector and found that it positively moderates the relationship between firm resources and firm performance.

Thirdly, we seek to determine how big of an impact competitive intensity has on the link between TQM and corporate performance. According to the theory of contingency, each company can use any one of a number of possible strategies to gain a long-term competitive edge. As a result, businesses have a variety of options from which to choose based on the specifics of their industry and other factors (Pfeffer, 2019). The idea of irrelevance proposed by Modigliani and Miller (1958) that financial leverage is irrelevant to business success is at odds with the effects of competitive intensity on performance. Market conditions and corporate strategy might alter the inherent relationship between the two.

The results show that TQM has a statistically significant negative impact on competitive performance (=-0.24, t = -3.68, p = 0.00). This suggests that the strength of the correlation between TQM and company success is moderated by the level of competition in the market. This data demonstrates that competition in the market moderates the connection between TQM and company success.

Abubakar et al. (2018) discovered that the positive link between TQM adoption and SME performance is not attenuated by the degree of rivalry. Kura et al. (2020) discovered that the level of competition moderated the associations between entrepreneurial orientation and SME success. There was no link between TQM and the level of competitiveness studied. The positive effects of marketing capabilities on performance also seem to diminish rather than grow when competitive intensity increases, according to empirical results from the study by Haili et al. (2019). When competition is high, the positive effects of marketing capabilities on performance to market orientation and financial success was unaffected by competition intensity, as shown by Onditi et al.'s (2020) study.



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### **CHAPTER FIVE**

### SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

### **5.0 Introduction**

This chapter summarizes the findings obtained from data analysis in chapter four, draws conclusions based on them, and makes recommendations. The chapter is, therefore, divided into three sections. The summary of findings is the focus of section one. Section two presents the conclusion of the study. Section three offers recommendations.

### **5.1 Summary of Findings**

The study's primary goal is to investigate the connection between total quality management, level of competition, and business performance. The resource-based theory, a management framework for identifying strategic assets that a business can utilize to establish a long-term competitive edge, and contingency theory, which contends that any corporation has a range of strategic alternatives at its disposal, are both used in this study. Descriptive research methodology was employed for the investigation. Registered SMEs in Tamale, the capital city of Ghana's Northern region, make up the study's target population. Tamale is where the study will be conducted. The "rule of five" determined the sample size for this study, which resulted in a sample size of 250 participants.

Purposive sampling is a non-probability sampling approach that is being used in this study. Information is gathered from original sources directly, keeping in mind the analysis aim. The instrument being used to gather the data is a 44-question, closed-ended questionnaire. In SPSS, the validity of the research instrument is assessed using Cronbach's alpha. Included are the frequency, percentages, means, and standard deviations. The importance of the factors to the dependent variable was tested in the study using regression and correlation analysis at a 95% level of confidence.

### 5.1.1 Total Quality Management and Firm Performance

Examining the link between comprehensive quality management and company performance is the study's primary goal. The study discovered that TQM has a favorable and considerable impact on the operation of the organization. This finding suggests that TQM has an impact on how well businesses function. This indicates that businesses are placing more focus on TQM as they improve performance. The leadership and training criteria of TQM have a better correlation with performance than other criteria, when the findings are considered in the context of the correlation degree.

## 5.1.2 Competitive Intensity and Firm Performance

The study's second goal is to investigate the connection between business performance and the level of competition. The results of the study showed that business performance is negatively and significantly impacted by competition intensity. This implies that the level of competition has a detrimental effect on company performance. This finding suggests that a company's performance is negatively impacted by the degree to which businesses in a particular industry put pressure on one another. A certain amount of rivalry is beneficial since it spurs innovation inside businesses.

## **5.1.3 Moderating Roles of Competitive**

The third objective of the study is to determine how the relationship between total quality management and business success is impacted by competitive intensity. According to the study's findings, there is a negative and significant influence on corporate performance when there is a relationship between TQM and level of competition. This shows that the relationship between comprehensive quality management and corporate performance is moderated by competition. This shows a connection between overall quality management, business performance, and level of competition.

### **5.2** Conclusion

The study found that TQM has a positive and significant impact on how the organization operates. It was also shown that the degree of competition had a negative and significant impact on the performance of the organization. The study's findings also imply that the interaction between TQM and competitive intensity has a negative and significant impact on the firm's performance.

The study found that TQM has a favorable impact on business performance while having a negative impact on the level of competition. The findings of the present study showed that TQM implementation increases SMEs' capacity to improve performance. As a result, SME owners and managers should collaborate closely with all strategic business units, especially the marketing and quality assurance divisions, to design pertinent policies that support elevating customer happiness and achieving long-term superior performance for their businesses. Furthermore, in order to combat competition and continuously achieve greater performance, owners and managers of SMEs must thoroughly examine the environment in which their enterprises operate.

#### **5.3 Recommendations**

The following advice is offered in light of the study's findings:

Because of the strong correlation between TQM and company performance discovered in the study, it is advocated that businesses make sure their personnel receives the right kind of training and encourages ongoing improvement under the direction of senior management. The study's findings recommend that companies who want to improve performance take TQM standards more seriously. Businesses that embrace and effectively apply the TQM philosophy will be able to recognize that the outcomes are what was planned and on the right track to perfection. According to the study, the level of competition has a negative and significant effect on how well a company does. Businesses should match customer expectations rather than investing in intense competition. Owners and managers of SMEs should build a suitable corporate culture, vision, and quality policy in order to meet customer expectations and enhance performance in the face of a quickly changing business environment.

Additionally, the study found that competitiveness moderates the relationship between total quality management and firm performance. Therefore, it is recommended that practitioners and managers carry out value-creating activities, such as a focus on customer satisfaction, workers' quality of life at work, and the development and implementation of new innovative ideas. Another crucial strategic choice for creating and/or maintaining a sustainable competitive advantage is responding to a highly competitive market where competitors have aggressive programs to keep the costs of their goods very low.

## **5.4 Theoretical Implications**

This study aims to close the gaps in empirical research on total quality management, competitive intensity, and firm performance in developing nations while simultaneously making contributions to the Resource-Based View and Contingency Theory. Theoretical implications are what give research its seeming capacity for or ability to have social impact (Lasswell and Kaplan, 2013). In a manner similar to this, Barney's 1991 essay "Solid Resources and Sustainable Competitive Advantage" is seen by many as making a significant contribution to the growth of the resource-based paradigm.

The study's findings, which show that TQM has a positive and considerable impact on company performance, are consistent with the resource-based view. The components of performance that are active at a given moment around and inside the employee determine the level of competition at that moment (Shalley and Gilson, 2004). The Contingency

Theory therefore suggests specific conceptualizations of likely and believable ways for leadership to affect innovation as well as performance (Elenkov et al. 2005).

### **5.5 Managerial Implications**

The results of the study offer some potentially informative data on the application of TQM approaches and their close connection to various performance metrics, which may be used to enhance an organization's performance overall. By correctly utilizing these strategies, managers may predict gains in each of these performance categories. As a result, managers may use this technique to assess where their company sits on the quality path and as a roadmap for implementing TQM rules. They can track how TQM procedures affect various performance parameters in order to evaluate their TQM initiatives.

A quality culture must be established in order to excel in all performance-related areas. The positive correlation between TQM practices and various performance measures may serve as an incentive for managers to invest time, money, and resources in TQM implementation in the quest of quality, which will lead to customer retention and competitiveness. The findings of the study strongly suggest that holistic TQM practices must be applied for the organization to thrive.

### 5.6 Limitations and Further Studies

Given the methodological limitations of subjective measurements, future studies could profit from research replication, which would involve verifying the results of the current study using objective measures of SME performance. The second issue of the study is the restricted generalizability of its results. SMEs from Ghana's SME sector made up the majority of the SMEs included in this study. Because of this, extrapolating the findings to different industries is difficult. So, in addition to agriculture and the services sector, future study should focus on these areas as well. As a modulator of the association between TQM adoption and SME performance, the theoretically created model significantly integrated the competitive intensity. The third flaw in this study is the reality that the level of competition is just one of many external environmental elements that affect a company. Future researches might develop and test a multiple moderation model by incorporating other external environmental factors like market turbulence and technology turbulence in order to greatly benefit from understanding the border conditions between TQM adoption and SME performance.

It is crucial to stress that while evaluating the findings of this study, three limitations must be taken into account. First off, even while the results appear to support the effects of competitive intensity on the relationship between TQM and performance, other organizational variables such as managerial qualities, control styles, and types of management accounting systems may also have an impact on this relationship. These other issues might be taken into account in next investigations.



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## **APPENDIX-QUESTIONNAIRE**

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

## SCHOOL OF BUSINESS

This questionnaire is intended to solicit information on the Topic **"Effect of Total Quality Management on Firm Performance: The Moderating Role of Competitive Intensity"**. The research is purely meant for academic purposes and it is being conducted in partial fulfillment of the requirement for the award of a Master of Science Degree. The researcher assures all respondents that the answers provided would be treated as confidential and anonymous.

Section A.	Manager and Firm Characteristics					
1. Number of years in business	A)	0 – 5 y	ears	[]		
	B)	6 – 10	years	[]		
	C)	11 - 15	years	[]		
	D)	16 - 20	) years	[]		
	E)	Above	20 years	[]		
			X	1	-	
2. Types of company ownershi	р	A)	Local-owned	firm	[]	
A B	11-	B)	Joint-venture	firms	[]	
703	S.	C)	Foreign-owne	ed firm	[]	
	-		200			
3. Size of Business A)	Micro (	1-5 er	nployees)	[]		
B)	Small (	6 – 29 e	employees)	[]		
C)	Mediun	n (30 –	99 employees	.)[]		
D)	Large (	100+ ei	nployees)		E/	
4. Gender of Manager	A)	Male	[]	1	-	
S CON	B)	Female		SP-		
W.	,	_	50			
5. Work experience A) 1 -	- 5 years	HE.	The state			
B) 6-	– 10 vear	s	[]			
C) 11	– 15 vea	rs	[]			
D) 16	5-20 yea	ars	[]			
E) > 2	20 years		[]			

## Section B

# **Total Quality Management**

Kindly indicate the extent to which you agree to each of the following items using a Likert scale of 1 - 5 [where 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree and 5 =Strongly Agree].

S/N	Management leadership - Saraph et al. (1989)	1	2	3	4	5
1	The organization's top management (top organization					
	executives and major department heads) is evaluated for quality	ŝ.				
	performance.					
2	The participation of major department heads in the quality					
	improvement process.					
3	The organizational top management has objectives for quality					
	performance.					
4	The organisational top management considers quality					
	improvement as a way to increase profits.					
	Training - Vanichchinchai and Igel (2009)					
1	Quality-related training given to hourly employees throughout					
	the organization					
2	Quality-related training given to managers and supervisors					
-	throughout the organization				-	
3	Quality-related training is encouraged for active improvement	_	-			
1	of teamwork		-			
4	All employees are encouraged to attend quality-related training	£		1		
	programs		1			
	Crastering France Versite and Heatler (2009)	~				
1	Customer Focus - Kaynak and Hartley (2008)	-	_			
1	Customer satisfaction surveys are used in	1	Ν.			
2	determining/identifying customers requirements	-	Ļ.			
2	Managers have access to a summary of customer complaints	1	1			
3	The organization actively seeks ways to improve the primary	/				
	service to achieve greater satisfaction		-			
4	Customer satisfaction surveys are used in		3	E/		
	determining/identifying customers requirements	1	S,	/		
	Supplier Quality Management - Kaynak (2003)		1			
1	Long-term relationships are offered to suppliers	-				
2	The suppliers are evaluated according to quality delivery					
	performance, and price, in that order					
3	The suppliers are selected based on quality rather than price or					1
	delivery schedule					
4	The thoroughness of the supplier rating system					1
	Process management-Wang et al. (2012)					

1	The services disruption is prevented from occurring is a strong			
	attitude			
2	The processes include in-process measures of quality.			
3	The explanation of the variation in processes is used as an			
	analysis technique.			
4	The managers and supervisors continuously monitor and			
	identify variation in work processes	6		
	<b>Employee Involvement - Saravanan and Rao (2006)</b>			
1	. The employees are involved in quality management programs.			
2	Effectiveness of Cross Functional Teams with respect to			
	solutions to problems related to quality.			
3	High degree of importance is given to employee suggestions			
	and innovations.			
4	employees are encouraged to identify loopholes in their work.			

# Section C Competitive Intensity

Kindly indicate the extent to which you agree to each of the following items using a Likert scale of 1 – 5 [where 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree and 5 =Strongly Agree].

S/N	Competitive Intensity - Jaworski, B.J. and Kohli,	1	2	3	4	5
	A.K., 1993	1				
1	Competition in our industry is cutthroat					
2	There are many "promotion wars" in our industry.					
3	Anything that one competitor can offer, others can	1	/			
T	match readily.		1	5	7	
4	Price competition is a hallmark of our industry.	1	à	5	6	
5	One hears of a new competitive move almost every day	5	3	/		
6	Our competitors are relatively weak.	5				

## Section D Firm Performance

Kindly indicate the extent to which you agree to each of the following items using a Likert scale of 1 - 5 [where 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree and 5 =Strongly Agree].

SANE

S/N	Service - Thai (2008)	1	2	3	4	5
1	Timeliness (on-time delivery)					
2	Quick response time in case of an emergency, problem, or special request					
3	Speed of order handling					
4	Accuracy of shipment documentation	C		-		
5	Shipment safety and security		5			
			P			
S/N	Other performance indicators- Morgan (2012)	1	2	3	4	5
1	Growth in profit					
2	Growth in market share	1				
3	Growth in sales	3				
4	Overall firm performance					

