Assessing the Impact of Corporate Governance and TQM on Service Quality in the Telecom Sector

Michael Owusu-Kyei
Business School, Department of Marketing.
Ghana Communication Technology University, Ghana

Paul Dzifa Dzasa
Evangelical Presbyterian University College, Ghana

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Total Quality Management, Corporate Governance, Telecommunication, Company, Service Quality.

Abstract

The objective of this study is to assess the impact of corporate governance and TQM on service quality in the telecom sector. The study relied on questionnaires as survey instruments to gather data on corporate governance and TQM on service quality. A self-completion questionnaire was administered to customers, employees, and management of MTN Ghana, Telecel Ghana, and AT Ghana. There were 800 respondents from both companies' customers, employees, and management, although 850 questionnaires were administered using the structural equation model (SEM). The collected data were analyzed, and conclusions were derived from the study results. The key finding states that corporate governance and Total Quality Management significantly impact service quality. It is also concluded that the key practices of corporate governance and TQM positively influence employee engagement and equipment & materials, respectively, which positively influence service quality. Moreover, employee engagement and equipment & materials have been identified as significant mediating variables of corporate governance and TQM in achieving service quality in the telecommunication companies in Ghana.

Introduction

In order to link individuals and facilitate global communication, the telecommunications sector is essential. Telecommunications firms face the challenge of providing their consumers with exceptional service experiences due to the rapid improvements in technology, the growing demand for high-quality services, and fierce competition (Sacco, 2020). The methods, procedures, and frameworks that control how a company's board of directors and management behave and make decisions are referred to as corporate governance. It includes the values and procedures that guarantee openness, responsibility, and moral behavior inside the company.

Likewise, the management strategy known as overall quality management places a strong emphasis on staff engagement, customer happiness, and ongoing improvement (Ababneh, 2021). By emphasizing process optimization, quality control, and customer input, TQM seeks to improve the caliber of goods and services. In the telecom sector, TQM procedures help to improve customer happiness, lower mistakes, and provide better services (Ghodke, 2021). Research and attention have been focused on the connection between service quality, TQM, and corporate governance in the telecom sector. Research has examined how corporate governance practices—such as CEO salary, board composition, and ethical standards—affect the results of service quality (Rezaee & Safarzadeh, 2023). According to the results of the literature currently under publication, telecom businesses' service quality is positively impacted by good corporate governance procedures.

The objectives of this study are:

(1) To assess the impact of corporate governance and total quality management (TQM) on service quality in the telecommunication sector.
(2) To examine the mediating effects of employee engagement and equipment & materials on corporate governance, TQM, and service quality in the telecommunication sector.

(3) To provide practical recommendations for telecommunication companies on optimizing corporate governance practices and enhancing TQM implementation to improve service quality.

The following are the researcher's questions at the end of the study.

(1) What impact do corporate governance and TQM have on service quality in the telecommunication sector?
(2) What role do employee engagement and equipment & material play in the relationship between corporate governance, TQM, and service quality in the telecommunication sector?
(3) What are the practical recommendations for telecommunication companies on optimizing corporate governance practices and enhancing TQM implementation to improve service quality?

Literature Review And Theoretical Concepts

Researchers, academics, managers, supervisors, governments, business organizations, etc. frequently mention corporate governance, a worldwide phenomenon (Mallin, 2019). Nevertheless, they usually fail to define corporate governance. Consequently, corporate governance may imply many different things. Different people have different and vague definitions of corporate governance (Shu & Chiang, 2020). There is still no widely accepted definition or demonstrated unified concept of corporate governance, despite much research. This is due to the fact that the varied or multicultural social systems of various countries have a significant impact on corporate or institutional governance. The set of guidelines, procedures, and policies that regulate how a company is run is known as corporate governance (Solomon, 2020).

Theories of Corporate Governance

The function of the board of directors in providing the firm with the resources it requires is the main emphasis of resource dependency theory (Oliveira, Kakabadse, & Khan, 2022). Furthermore, they claim that resource dependency theory focuses on the role directors play in obtaining or providing essential resources to a company through their external relationships. It is true that representatives of independent organizations ought to be nominated in order to have access to the resources required for the growth of a corporation. This concern is emphasized by resource dependency theorists. According to (Larcker & Tayan, 2020), directors provide the business credibility and resources, including knowledge, experience, and connections to key stakeholders like suppliers, buyers, legislators, and social groups.

Since its incorporation into the field of management in 1970, stakeholder theory has grown to encompass accountability to a broad range of stakeholders (Dmytriyev, Freeman, & Hörisch, 2021). The organizational and social domains were combined to develop stakeholder theory. In fact, rather than being a formal, unified theory, stakeholder theory incorporates philosophy, ethics, political theory, economics, law, and organizational science. "Any group or individual who can affect or is affected by the achievement of the organization's objectives" is how stakeholders are defined. Stakeholder theory theorists assert that managers in businesses have a network of relationships to watch out for, including those with suppliers, customers, and business partners. In addition to the owner-manager-employee connection, this network is said to be important (Guilaire, Nicaise, ESSONO BELLA, & Achile, 2024).

Businesses have broader societal objectives than just boosting shareholder wealth, according to the Stewardship Theory, which forms the basis of the stewardship thesis (Gordon, 2021). According to this theory, enterprises are social structures that affect the welfare of multiple stakeholders. Stakeholders are organizations or people who interact with a business, influence its objectives, or are affected by them. Success is measured by an organization's ability to deliver value to all of its stakeholders. Some scholars contend that the environment is a significant stakeholder. Stakeholders have legal and ethical rights and can play a significant role in a company's success (Stahl, Brewster, Collings, & Hajro, 2020).

According to the stewardship hypothesis, a company's board of directors and CEO, acting as stewards, should be driven to act in the company's best interests rather than their self-interests; this is because, over time, senior executives tend to view a firm as an extension of themselves (Shaikh, Drira, & Hassine, 2019). The stewardship idea contends that a company's senior management is more concerned with the long-term prosperity of the company.

Agency theory defines the relationship between the principals (like the firm's shareholders) and the agents (like the Directors of the company) (Jensen & Meckling, 2019). According to this theory, the owners of the business hire the agents to complete tasks. The principles provide the responsibility of running the business to the directors or managers, who act as the representatives of the shareholders. The agents' actions and decisions are expected to be in the best interests of the principal by the shareholders. Conversely, the agent is not obligated to act in the best interests of the principal while making judgments. The agent could fail to meet the principal's expectations due to self-interest and opportunistic behavior. The core idea of agency theory is the separation of ownership and control. According to the principle, individuals or workers should be held accountable for their duties and commitments. Agents' priorities can be adjusted through rewards and penalties (Gupta, Chaturvedi, Prasad, & Ananthi, 2022).

The Theories of TQM

Deming identified the Shewart Cycle (Plan-Do-Check-Act) and the system of profound knowledge, which form the foundation of his theory of Total Quality Management (TQM). Deming is well-known for his ratio, which states that quality is equal to the sum of the costs and the results of labor. The issue is that when a business focuses on expenses, quality declines, and costs increase (N. M. Agrawal, 2019). The Plan-Do-Check-Act (PDCA) cycle was developed for ongoing enhancement. Actions and goals are delineated at the planning stage.

Another individual who is recognized for having initiated the TQM movement is Philip Crosby (N. Agrawal, 2020). Like Deming, he emphasized the importance of quality as an investment that is worthwhile. Crosby based his list of fourteen steps to quality improvement on his four absolutes of quality management. According to Crosby, "quality is free." It's free, but it's not a gift.

The "Quality Trilogy" as it has come to be known was created by Joseph Juran. Quality planning, quality improvement, and quality control comprise the quality triad (Chisty & Adusumalli, 2022). All quality improvement activities need to be meticulously thought out and managed if a project is to succeed. Juran, noted several expenses related to product distribution and manufacturing. He proposed a three-pronged strategy based on projects, control, and an annual quality program to reduce costs. Juran, emphasized the importance of the human element, the understanding of which is essential for solving technical problems (N. Agrawal, Rabiee, & Jabbari, 2023).

Nine quality management principles form the basis of the European Foundation for Quality Management (EFQM) Model (Heydari, Lai, & Xiaohu, 2019). There are four results (criteria covering what a firm accomplishes) and five (criteria covering the foundation of what a company does). The result is a paradigm that acknowledges diversity management approaches rather than recommending any particular approach.

The graphic that bears Dr. Kaoru Ishikawa's name is well-known. Nevertheless, he also created a philosophy that outlines how businesses should manage their quality improvement initiatives. Ishakawa examines quality from a human perspective. He notes that there are seven fundamental tools for improving quality. According to Ishikawa, customers should be satisfied with the quality of goods or services at the lowest possible cost (Antony, McDermott, & Sony, 2021). He advocated participation by all to realize the quality goals. He emphasized the need for all employees to know the seven basic tools of quality.

In order to avoid producing defective goods, quality control was implemented to identify and address issues along the production line. In this field, statistical theory was crucial. Dr. W. Shewhart, created statistical techniques for quality management in the 1920s (Montgomery, 2020). He created the first contemporary control chart and proved that changes in the production process result in changes in the final product. As a result, removing process variation results in high-quality final products.

Merging Corporate Governance and TQM

The collapse of well-known business giants like Enron brought the importance of ethical and sound corporate governance home more than ever before (Rebeiz, 2024). But can strong corporate governance alone satisfy investors in a business that has been struggling because of fraudulent threats, bad management, and a lack of accountability in the boardroom? Organizations may only fully benefit from strong corporate governance if they also strive for business excellence. A best practice model for business excellence that pleases stakeholders, customers, and regulators can be created by combining the complementary ideas of ethical corporate governance and total quality management (Neri, Pinnington, Lahrech, & Al-Malkawi, 2019). Although providing exceptional customer service has always been a top concern for businesses, this is no longer sufficient. They now have to take it a step further and provide them even more than they expect. Quality management systems are primarily responsible for improving customer service. In the interim, corporate governance and stakeholders' interests have garnered international attention after the collapse of Enron and other major companies, including WorldCom, Tyco, and Parmalat, as well as the establishment of numerous new regulatory requirements (Markham, 2022).

Literature Review Summary

Six TQM theories and four important corporate governance theories serve as the primary guiding principles for this study. The resource dependency, stakeholders, agency, and stewardship theories in corporate governance, although leaning more toward the latter. The emphasis of resource dependence theory is on management's role in establishing connections to both internal and external contexts. The stewardship theory incorporates significant elements of philosophy, ethics, politics, economics, legal theory, and organizational science.

The theories of TQM: Deming's theory, Crosby's theory, Joseph's theory, the European Foundation for Quality Management, Ishikawa's theory, and Quality Control and Statistical theory are accepted ones. Deming's theory focuses on a known ratio- Quality is equal to the result of work efforts over the total costs. If a company is to focus on costs, the problem is that costs rise while quality deteriorates. This theory is a good plan to ensure absolute TQM application. Crosby also made the same points as Deming. While Joseph Juran's theory talks of quality planning, quality improvement, and quality control.

Conceptual Framework And Development Of Hypothesis

The conceptual framework suggests that corporate governance practices and TQM practices serve as independent variables that directly influence service quality. Corporate governance practices, such as board structures, board composition, and ethical conduct, are expected to have a direct impact on service quality. Similarly, the implementation of TQM practices, including quality control, process improvement, and employee empowerment, is expected to influence service quality outcomes directly.

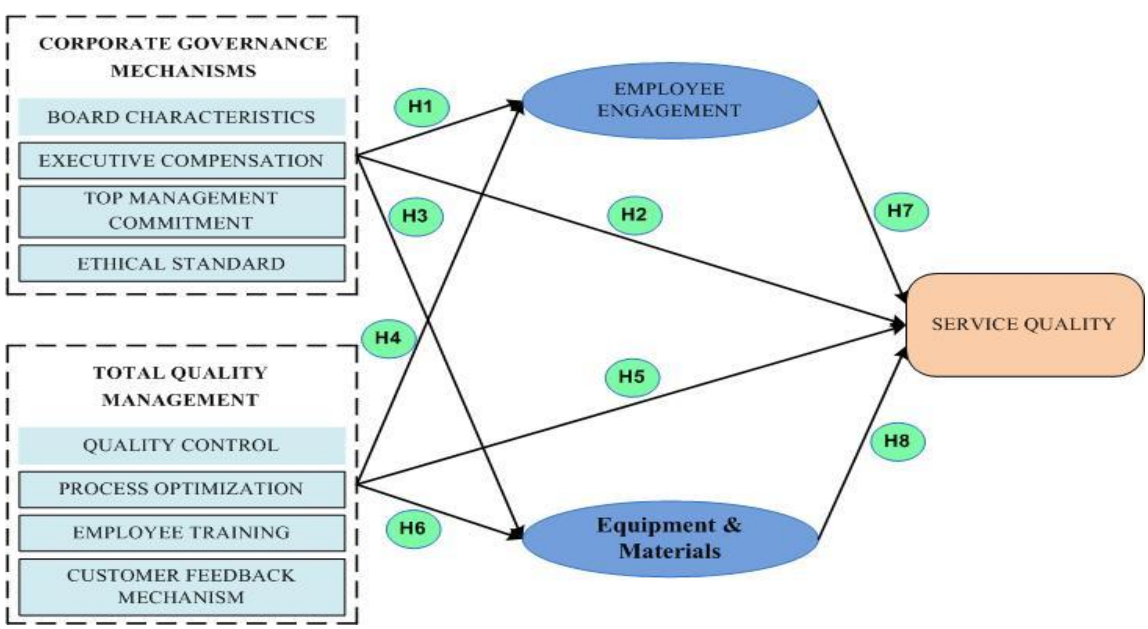

Figure 3. 1: Conceptual operative framework
Source: Author's Design

Hypothesis Development
Three sets of hypotheses are examined in this sector. These are:

(1) Research Hypothesis I (H1, H2, H3): Corporate Governance, Employee Engagement and Equipment & Materials on Service Quality Outcomes

H1: Corporate governance practices have a positive impact on employee engagement in the telecommunication industry.

H2: Corporate governance practices have a positive impact on service quality in the telecommunication industry.

H3: Corporate governance practices have a positive impact on equipment & materials in the telecommunication industry.

(2) Research Hypotheses II (H4, H5, H6): TQM, Employee Engagement and Equipment & Materials on Service Quality

H4: Total quality management (TQM) practices positively influence employee engagement in the telecommunication industry

H5: Total quality management (TQM) practices positively influence service quality in the telecommunication industry.

H6: Total quality management (TQM) practices positively influence equipment & materials in the telecommunication industry.

(3) Research Hypothesis III (H7, H8): Effect of Employee Engagement and Equipment & Materials on Corporate Governance, TQM and Service Quality Outcomes

H7: Employee engagement mediates the relationship between corporate governance and service quality in the telecommunication industry.

H8: Equipment and materials mediate the relationship between total quality management (TQM) and service quality in the telecommunication industry.

Corporate Governance Mechanisms

Corporate governance is the framework of regulations and procedures that determines how the board of directors manages a company (Merendino & Melville, 2019). It includes balancing the interests of the stakeholders in a company, including shareholders, senior executives, customers, suppliers, financial intermediaries, the government, and the community. It helps establish who has power and accountability and who makes decisions. The goal of governance is to facilitate effective, entrepreneurial, and prudent management that helps the company achieve long-term success. Based on the above review, hypotheses H1, H2, and H3 are developed.

Total Quality Management Mechanisms

TQM can be summarized as a management system for a customer-focused organization that involves all employees in continual improvement (Helmold, 2023). It uses strategy, data, and effective communications to integrate quality discipline into the culture and activities of the organization. Many of these concepts are present in modern quality management systems, the successor to TQM. Here are the eight principles of total quality management:

Based on the above review, the hypotheses H4, H5, and H6 are developed.
Employee Engagement

Employee engagement is the strength of the mental and emotional connection employees feel toward the work they do, their teams, and their organization (Clack, 2021). Highly engaged employees hold very favorable opinions of their place of work. When employees feel connected to their teams, love their jobs, and have positive feelings about your organization, they are going to want to stay and put in extra effort to help the organization succeed. These "brand advocates" speak highly of their company to family and friends.

Based on the above review, the hypothesis H7 is developed.

Equipment & Materials

Equipment & Materials means all components (aside from labor) required or appropriate for the pursuit and completion of all aspects of the Contract Work, including materials, manufacturing, manufacturing plants and facilities, storage containers, storage space, warehouses, warehouse space, tools, supplies, schedules, scaffolds, appliances, equipment, utilities, photographs, surveys, permits, licenses, training, transportation, and all other items. In the fields of engineering and production, materials and equipment are two distinct ideas (Black & Kohser, 2020). Materials are the unprocessed substances or mixtures that are used to build things, whereas equipment is the apparatus and tools that are used to process, move, or work with those materials.

Based on the above review, hypothesis H8 is developed.

Service Quality

Modern service marketing theory places a strong emphasis on quality enhancement and adherence to accepted standards of quality (Schiavone, Pietronudo, Sabetta, & Ferretti, 2023). Because it reinforces the idea that the value of the service received exceeds the price paid for it, high-quality service delivery leads to customer satisfaction and retention. High Service quality greatly increases profitability, according to research. Providing what consumers desire, both internal and external, is what service excellence is all about. After using a product or service, a customer's attitude or feeling toward it is known as customer satisfaction, which is a function of the customer's perceptions and expectations. Satisfaction and service quality are frequently treated in tandem. By identifying the consumer's expectations, perceptions of quality, and preferences, customer satisfaction can be calculated .(Rane, Achari, & Choudhary, 2023)

Methodology

SEM model was used in the study as a result. The model was chosen for the analysis of causal linkages in scientific research due to the variations in their configurations. The structural equation model (SEM) is categorized as the second generation. The research hypotheses, which intended to investigate the effects of corporate governance and TQM on the services offered by telecom businesses, were tested using the structural equation model (SEM). The exogenous variables are used to model the variations and covariance of the endogenous variables.

$$\begin{bmatrix} y_1 \\ \dots \\ y_p \end{bmatrix} = \begin{bmatrix} 0 & \dots & \beta_{1p} \\ \dots & \dots & \dots \\ \beta_{p1} & \dots & 0 \end{bmatrix} \begin{bmatrix} y_1 \\ \dots \\ y_p \end{bmatrix} + \begin{bmatrix} \gamma_{11} & \dots & \gamma_{1q} \\ \dots & \dots & \dots \\ \gamma_{p1} & \dots & \gamma_{pq} \end{bmatrix} \begin{bmatrix} x_1 \\ \dots \\ x_q \end{bmatrix} + \begin{bmatrix} \zeta_1 \\ \dots \\ \zeta_p \end{bmatrix}$$

$y = \beta_y + \Gamma x + \zeta$

The causal parameters from the above matrix are represented by γ's and β's, including their corresponding subscripts. The γ's denote the parameter estimates of the exogenous variables, while β's represent the parameter measurements of the endogenous variables. The p by q matrix Γconsists of coefficients of the y's on the x's, whereas the error vector,ζ, is p by 1.

Findings And Discussion

As seen in Table 1, the author had four latent/implicit variables: Corporate Governance (F1), TQM (F2), Employee Engagement (F3), Equipment and Materials (F4), and Service Quality (F5). For Corporate Governance (F1), its observable/explicit variables are Board Characteristics (CGOV1), Executive Compensation (CGOV2), Top Management Commitment (CGOV3), and Ethical Standards (CGOV4). Concerning TQM (F2), the factors are Quality Control (TQUA1), Process Optimization (TQUA2), Employee Training (TQUA3), and Customer Feedback Mechanism (TQUA4). The Employee Engagement (F3) has Allowances (EMPG1) and Study Grants (EMPG2) as its observable/explicit variables. In addition, concerning Equipment & Materials (F4), the factors are Quality equipment (EQPM1) and Quality Materials (EQPM2). The factors for Service Quality (F4) are Poor Service Prevention (SQUA1) and Effective Complaint Handling (SQUA2).

Table 1: Selected Latent and Observable Variables

Latent / Implicit variables	Observable / Explicit variables
Corporate Governance (F1)	Board Characteristics (CGOV1)
	Executive Compensation (CGOV2)
	Top Management Commitment (CGOV3)
	Ethical standard (CGOV4)
TQM (F2)	Quality Control (TQUA1)
	Process Optimization (TQUA2)
	Employee Training (TQUA3)
	Customer Feedback Mechanism (TQUA4)
Employee Engagement (F3)	Allowances (EMPG1)
	Study Grants (EMPG2)
EQPM (F4)	Quality Equipment (EQPM1)
	Quality Materials (EQPM2)
Service Quality (F5)	Poor Service Prevention (SQUA1)
	Effective Complaint Handling (SQUA2)

Results and Analysis

Table 2 shows that all of the variables passed the Cronbach's Alpha test with values more than 0.70, and all of the AVEs in this study had values over 0.50. Therefore, the data in this study had satisfactory reliability and convergent validity for the investigation. Composite reliability (CR) demands that outputs should be more than 0.70 (Fornell and Larcker, 1981). However, the discriminant validity test (CR) measured between 0.891 and 0.919 for all the constructs (Table 2), showing excellent reliable figures.

Table 2: Factor loadings, Cronbach's Alpha, AVE, and CR of the variables

Construct	Indicator	Factor Loading	Cronbach's Alpha	AVE	CR	Reliability / Validity Tests
Corporate Governance	CGOV1	0.789	0.913	0.741	0.919	Established
	CGOV2	0.902				
	CGOV3	0.785				
	CGOV4	0.956				
Total Quality Management	TQUA1	0.801	0.876	0.651	0.881	Established
	TQUA2	0.897				
	TQUA3	0.799				
	TQUA4	0.721				
Employee Engagement	EMPG1	0.739	0.782	0.634	0.775	Established
	EMPG2	0.850				
Equipment & Materials	EQPM1	0.911	0.890	0.815	0.898	Established
	EQPM2	0.894				
Service Quality	SQUA1	0.887	0.905	0.803	0.891	Established
	SQUA2	0.905				

Model fit statistics

The estimation of the model fitness, which demonstrates how well the given model replicates the observed covariance matrix among the indicator items, is shown in Table 3. Various indices relied on are Chi-square, $\chi 2$ (CMIN), Degrees of Freedom (DF), the Goodness of Fit Index (GFI), the Normed Fit Index (NFI), the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), the Adjusted Goodness of Fit Index (AGFI), and the Root Mean Square Error of Approximation (RMSEA).

Table 3: Measures of the Model Fitness

FIT STATISTICS	RECOMMENDED RANGE	STRUCTURAL MODEL
Chi-square, χ2 (CMIN)	-	52.428
Degrees of Freedom (DF)	-	31
χ2 Significance	Significant ($p \leq 0.05$)	0.001
χ2 / DF	< 5.0	1.350
Goodness of Fit Index (GFI)	> 0.90	0.922
Adjusted Goodness of Fit Index (AGFI)	> 0.90	0.957
Normed Fit Index (NFI)	> 0.90	0.932
Relative Fit Index (RFI)	> 0.90	0.929
Incremental Fit Index (IFI)	> 0.90	0.970
Tucker Lewis Index (TLI)	> 0.90	0.959
Comparative Fit Index (CFI)	> 0.90	0.974
Root Mean Square Error of Approximation (RMSEA)	≤ 0.05	0.031

From Table 3, the overall model fitness of this study was found to be suitable. Even though the model seems good, it is also proper to check the value of Chi-square, χ2 divided by Degrees of Freedom (DF), since χ2 statistic is generally sensitive to the sample size. However, χ2 divided by DF is suggested as a better fit. From Table 3, χ2 / DF was 1.350 (which is less than the threshold, 5.0), signifying an acceptable model fit. The model also exhibited a high significance level (.001). With recommended cut-offs for various indices pegged at 0.90, the study produced 0.922, 0.957, 0.932, 0.929, 0.970, 0.959, and 0.974 for GFI, AGFI, NFI, RFI, IFI, TLI and CFI respectively as found in Table 3. However, all the indices were known to be acceptable within the recommended range, which is indicative of a good fit.

Table 4: Results of R2 and Q2

Small: 0.0 < Q^2 effect size < 0.15; Medium: 0.15 < Q^2 effect size < 0.35; Large: Q^2 effect size > 0.35

	R^2	Q^2	Effect Size
Employee Engagement	0.852	0.403	Large
Equipment & Materials	0.981	0.436	Large
Service Quality	0.582	0.384	Large

Small: 0.0 < Q^2 effect size < 0.15; Medium: 0.15 < Q^2 effect size < 0.35; Large: Q^2 effect size > 0.35

In the study, the R^2 values of the endogenous variables such as Employee Engagement, Equipment and Materials, and Service Quality are 0.852, 0.981, and 0.572, respectively. These R^2 values measure the predictive accuracy of the model, and they are used to assess the structural model. The R^2 values denote the combined effects of the exogenous variables on the endogenous latent variables. It epitomizes the amount of variance in the endogenous constructs explained by the exogenous construct (s) related to them. The R^2 value of Service Quality (dependent variable) for this study is 0.572. The study indicates that the amount of variance, 57.2%, in the endogenous constructs is explained by the entire exogenous construct (s) connected to it. However, the amount of variance in Employee Engagement and Equipment and materials explained by the entire exogenous construct (s) linked to them happened to be 85.2% and 98.1%, respectively. The study shows that the structural model developed in this study has realistic predictive power and significance. According to Table 4, the R^2 values were high (between 80 and 100 percent), demonstrating that the endogenous variables' predictive power was strong.

The Q^2 values of Employee Engagement, Equipment and Materials, and Service Quality are 0.403, 0.436, and 0.384, respectively. As the R^2 values signify the predictive accuracy of the model, Q^2 figures show the predictive relevance of the model. The Q^2 values, also known as 'Stone-Geisser's Q^2 value', demonstrate the path model's predictive relevance for the endogenous latent variables. From Table 4, the Q^2 produced values between 0.403 and 0.436, which are all greater than 0.384. The study indicates that the path model's predictive relevance for the endogenous latent variables is high. The study results show large effect sizes for Employee Engagement, Equipment and materials, and Service Quality. The study establishes the fact that the structural model for the study has predictive relevance.

Parameter estimation

The model's statistically distributed parameter estimates to standard errors are significant at the 0.05 level of their value. According to Table 5, the model's parameter connections were all extremely significant.

Table 5: Regression Weights

Parameter Relationships			Estimate	Lower	Upper	P	Sig
CGOV1	<---	F1	0.789	0.724	0.854	0.001	***
CGOV2	<---	F1	0.906	0.871	0.941	0.000	***
CGOV3	<---	F1	0.785	0.705	0.864	0.002	***
CGOV4	<---	F1	0.945	0.898	0.991	0.003	***
TQUA1	<---	F2	0.811	0.805	0.816	0.001	***
TQUA2	<---	F2	0.886	0.829	0.942	0.000	***
TQUA3	<---	F2	0.797	0.743	0.851	0.001	***
TQUA4	<---	F2	0.711	0.651	0.771	0.002	***
EMPG1	<---	F3	0.747	0.701	0.793	0.004	***
EMPG2	<---	F3	0.845	0.778	0.912	0.003	***
EQPM1	<---	F4	0.917	0.893	0.940	0.000	***
EQPM2	<---	F4	0.890	0.819	0.961	0.001	***
SQUA1	<---	F5	0.886	0.668	1.104	0.002	***
SQUA2	<---	F5	0.906	0.695	1.117	0.000	***

Depending on the units in which the variables are related, regression weights in the model were assessed. The selection of identification restrictions has no impact on the regression weights and correlations since they are independent of the units in which the research variables are assessed. Table 5 shows that estimates for the model's routes gave strong findings for the links between the parameters. As seen in Table 5, CGOV1 ---> F1 is 0.789, CGOV2 ---> F1 is 0.906, TQUA1 ---> F2 is 0.811, TQUA2 ---> F2 is 0.886, EMPG1 ---> F3 is 0.747, EMPG2 ---> F3 is 0.845, EQPM1 ---> F4 is 0.917, EQPM2 ---> F4 is 0.890 while SQUA1 ---> F5 is 0.886 and SQUA2 ---> F5 is 0.906. The magnitudes of path coefficients were larger, indicating high effects. The paths for all the relationships were highly significant ($p < 0.005$).

Path Analysis of the Structural Equation Model

The pathway diagram (Figure 5.1) shows the impact of corporate governance and TQM on service quality. The features of corporate governance are Board Characteristics (CGOV1), Executive Compensation (CGOV2), Top Management Commitment (CGOV3), and Ethical standard (CGOV4) on Service Quality, which also consists of Poor Service Prevention (SQUA1) and Effective Complaint Handling (SQUA2). This influence is mediated by Employee Engagement, which is made up of Allowances (EMPG1) and Study Grants (EMPG2) to improve service quality. The features of TQM are Quality Control (TQUA1), Process Optimization (TQUA2), Employee Training (TQUA3), and Customer Feedback Mechanism (TQUA4) on service quality (Poor Service Prevention (SQUA1) and Effective Complaint Handling (SQUA2)). This influence is mediated by Equipment and Materials that consist of Quality Equipment (EQPM1) and Quality Materials (EQPM2) to improve service quality.

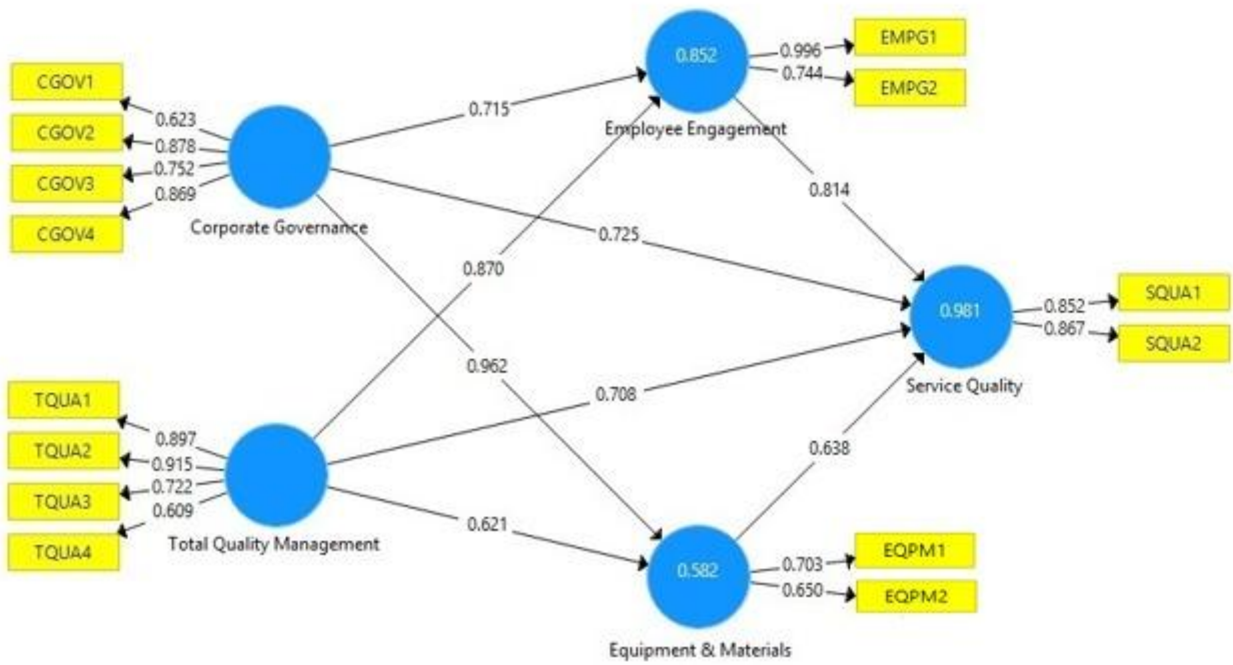

Figure 2: Structural model showing cross-loadings and path coefficients in the constructs.
Source: Author's design

Figure 2 shows the structural model evaluation used to determine how endogenous and exogenous factors relate to one another. Path coefficients are included in the evaluation to calculate the importance of the connections in the structural model and to determine the significant influence of an exogenous variable on an endogenous variable. Figure 2, Corporate Governance is related positively to Employee Engagement, Service quality, and Equipment and Materials, which supports H1, H2, and H3 (Figure 2). The figures produced through the influence of those mentioned above implicit (latent) variables are 0.715, 0.725, and 0.962, respectively. Therefore, the telecom industry must embrace Corporate Governance and ensure that facility rules, guidelines, and policies are adhered to because Corporate Governance has a direct and positive impact on Employee Engagement, Service Quality, and Equipment and Materials, this conforms with (Fatmawatie & Endri, 2022). In addition, following H7, it was established that Employee Engagement has a positive effect on Service Quality (0.814). Equipment and materials have a positive influence on the Service Quality, supporting H8. It signifies that Service Quality can be enhanced when Employee Engagement and Equipment and materials are improved. The results are consistent with the study of (Prentice, Wang, & Loureiro, 2019), which established a positive effect of Employee Engagement and Equipment & Materials on Service Quality. However, the path coefficient value of the Equipment & Materials to Service Quality (0.638) is somewhat lower than other paths, which indicates that telecom companies should also place more emphasis on equipment and materials while considering service quality.

In Figure 2, the cross-loadings between the latent and observable variables exhibited high scores except for Board Characteristics in corporate governance and Customer Feedback Mechanism in TQM, which recorded 0.623 and 0.609, respectively. Cross-loadings allow comparison of correlation among factors. The measurement of cross-loadings has to be more than 0.7 (Yusoff, Peng, Abd Razak, & Mustafa, 2020). The constructs of this study achieved the inference criteria, whereby the outer loading happened to be higher than 0.70. The study reasonably produced cross-loadings between 0.725 and 0.915. For instance (as displayed), the cross-loading between Service Quality and F1 and F2 were 0.708, respectively, which signifies that the constructs have strong relationships with their indicators.

Mediation Analysis

The research model has two mediation effects: the influences of Employee Engagement and Equipment and materials (Figure 2). Employee Engagement is mediated through Corporate Governance to Service Quality. Similarly, TQM and Service Quality are mediated by Equipment and materials. Corporate governance has a direct effect on employee engagement and Equipment and Materials with values of 0.715 and 0.962, respectively; this means that there is a mediation. However, TQM has a direct effect on employee engagement and equipment & materials with 0.870 and 0.621, respectively, and this also shows that there is a full mediation. There is also a direct effect of 0.814, which tells a full mediation from employee engagement to service quality, which also means that there is a direct effect of employee engagement on service quality. In addition, there is a direct effect of 0.638 from equipment & materials to service quality, which also means there is a full mediation and shows that equipment & materials have a direct effect on service quality.

The study used Baron and Kenny's (1986) method for testing mediation analysis. In this method, the independent variable (Corporate Governance and TQM) must predict the dependent variable (Service Quality), and the independent variable must predict the mediators (Employee Engagement and Equipment and Materials). In this study, mediation is tested through three regressions:

- Corporate Governance and TQM are predicting the service quality.
- Corporate Governance and TQM predicting Employee Engagement and Equipment & Materials.
- Corporate governance and TQM, employee engagement, equipment, and materials predict service quality.

Hypotheses Testing

The outcomes of this study's empirical research support hypothesis H1 by showing that there is a beneficial association between corporate governance and employee engagement. Previous research has supported the notion that corporate governance affects employee engagement. A research work by Afriyie, 2019, shows a positive relationship between Corporate Governance and employee engagement that is similar to the results of this study. The results of this study also indicate that corporate governance relates positively to service quality; therefore, H2 is accepted. Effective corporate governance structure helps organizations to improve their quality drive, which then boosts the service quality of the firm. The outcome of this study is similar to the investigation done by Adel & Christine 2019, indicating that there is a positive relationship between corporate governance and service quality.

The experimental results demonstrate that there is a positive relationship between corporate governance and Equipment and materials. Correspondingly, the researcher accepts the postulation H3. This study accepts the hypothesis that corporate governance exerts a positive influence on Equipment and materials. Researchers such as Sofyani, H., Riyadh,2020, agreed that corporate governance relates positively to Equipment & Materials. The study conducted by the researcher shows that TQM positively affects employee engagement. Therefore, the hypothesis, H4, set for the research is accepted. The evidence supports the assertion that employee engagement is enhanced when TQM is improved. The finding is confirmed by a study done by Cavallone et al., in 2022. The empirical investigation provided in this study establishes that there is a positive relationship between TQM and service quality, and thus, H5 is accepted. TQM positively influences service quality (prevention of poor service, proper handling of customer complaints, and growth in sales) of organizations. This study is confirmed by earlier work done by Zaid, et al., 2020, signifying that TQM has a positive relationship with organizational service quality. Does TQM affect Equipment and materials? This study's results reveal that TQM has a positive relationship with equipment & materials. However, the investigator deems it fit to accept H6. If TQM is improved, it has a positive repercussion on equipment & materials, which shows that elements of TQM positively affect equipment & materials.

The finding is analogous to the research executed by Abror & Patrisia,2020. Employee engagement has a positive influence on service quality. Thus, H7 is also accepted. When employees are engaged on the job for quite a long, they give their best based on the experience acquired over a long period. A study by Jenkins, N. A. (2020), confirms this assertion. Equipment and materials, then again, have a positive influence on service quality. When equipment & materials are in good condition, it shows in the quality of services rendered. The findings realized by Ramya, & Dharanipriya. (2019), clarified equipment & materials through service quality.

Table 5: Summary of hypotheses

	Hypothesis	Conclusion
H1	Corporate governance has a positive influence on employee engagement	Supported
H2	There is a positive relationship between corporate governance and service quality.	Supported
H3	Corporate governance positively affects equipment & materials	Supported
H4	TQM exerts a positive influence on equipment & materials	Supported
H5	TQM has a positive effect on service quality.	Supported
H6	A positive relationship exists between TQM and employee engagement.	Supported
H7	Employee engagement has a positive influence on service quality	Supported
H8	There exists a positive relationship between equipment & materials and service quality.	Supported

Summary

By enabling the application of fundamental concepts that will promote the prosperity of the telecom sector and its clients, corporate governance and TQM are successful in raising the quality of the services offered by telecom enterprises. Good telecom governance provides strategic directions so that the board, CEO, and management may avoid responsibility, accountability, probity, honesty, and integrity while attaining telecom goals. Better service quality is expected when the telecom sector abides by good governance principles, which will demonstrate that, as long as telecom industry stakeholders have good governance systems in place, the goal of eliminating subpar services and effectively addressing complaints may be accomplished. In this study, corporate governance standards are successfully communicated to prevent poor service and appropriately handle complaints.

Additionally, all staff members are required to cautiously assess the corporate governance system's effectiveness to see whether substandard services are avoided and complaints are appropriately handled. The telecom personnel must periodically distribute customer complaint forms to analyze customer feedback on service quality. These directives given to telecom employees are focused on control efforts (preventive, investigative, and remedial) to avoid or lessen poor service quality and to handle complaints effectively.

However, attracting customers to the telecom business depends on its TQM. Users could then easily join their favorite telecom provider whenever they wished to join a network. Since clients could always rely on the quality of the service to TQM practices being monitored, there would be less advertising. Additional customers subscribe to a certain telecom network because of the telecom provider's strong TQM services. Several telecom companies in Ghana have carved out a space for themselves by offering clients innovative, creative, and stand-out services. Telecom companies have also established call centers so that users may contact the network provider in the event of a network outage. In addition, the clients are questioned about the quality of the service they receive from the telecom firm when they contact the call centers. Customers feel somewhat relieved and proud to be valued customers of the telecom provider as a result.

Service quality has been proven to be significantly influenced by employee engagement. It is thought that long-term employees gain valuable experience that improves the quality of the services they offer while employee fatigue is monitored. Long-term personnel are better equipped to handle the challenging problems that the telecom company faces. Equipment and materials are also factors in determining the quality of a service. When equipment and materials are in good condition, service quality can be easily achieved.

Conclusion

Based on the research findings, effective implementation of TQM practices in telecommunication companies is critical for leadership effectiveness and service quality, as well as the survival of telecommunication companies in Ghana. However, efficient management leads to service quality enhancement; therefore, it is important to place more prominence on TQM practices to improve organizational service quality. According to the investigation, TQM practices such as quality control, process optimization, employee training, and customer feedback mechanisms implemented by telecommunication companies yield significant results for the firm's service quality.

Nonetheless, some criticisms are received from clients, which shows that TQM practices must be boosted to address their clients' grievances. The major reasons for customers' grievances are intermittent network interruptions, unaddressed complaints, and mobile money fraudsters and hackers, which affect the operational activities of these telecom operators and the quality of service rendered. Therefore, top management must be up to their game of ensuring effective practices of TQM at all levels of the organization. However, board characteristics, executive compensation, top management commitment, and ethical standards were seen as corporate governance mechanisms that influence service quality.

In addition, the top management also associated part of their inabilities with the lack of quality equipment. Telecommunication managers in Ghana believe that a large amount of money must be channeled through the procurement of high-value telecom equipment through the board as resource dependency theory is applied in Ghanaian telecommunication companies, and must therefore be protected to have a smooth system to monitor the daily operations of the business, as there is a need to focus more on ensuring client contentment through successful corporate governance and TQM implementation. The reason that corporate governance and total quality management are widely recognized as critical instruments for Telecom Company's long-term success, it is unfortunate that clients expect rapid results, making long-term accomplishments a source of dissatisfaction. Nonetheless, when top management is committed to their work, service quality will be achieved by the Ghanaian telecom companies. However, the needs and prospects of these stakeholders should be balanced to forestall satisfaction.

Corporate governance and TQM mechanisms must be strategically deployed to achieve service quality. Telecommunication companies render services, and the variable nature of service must be observed, so employee training must be regular to have consistency in service delivery. Employees must also understand the perishability nature of service. Therefore, services lost today cannot be recovered since they cannot be stored. The same applies to the inseparable nature of services, knowing that the person rendering the services cannot be separated from the service, so employees must be well-trained to give customers quality service. Therefore, in service operations, employee engagement must not be toiled since experienced employees offer experience services.

Nonetheless, employee engagement must be monitored since fatigue can have adverse effects on performance, thereby affecting service quality. When customers are satisfied, it gives the impression of good service quality; therefore, telecom companies must know the positive influence of customer satisfaction on service quality. Customers always expect consistent service quality, which the governing body of the organization can enforce, so the corporate governance system must be strengthened.

Policy Implications

Quite several policies can be espoused from the conclusion suggestions in the research. Corporate governance mechanisms must be strictly adhered to, so the governing board must be active, as well as the agent and stakeholders, if they want growth and development in the telecom industry. The implication purports that if mechanisms are critically monitored, service quality is assured, as well as improving and achieving quality of service.

Considering the analysis of TQM practices in the telecommunication sector, the quality of telecom service can be improved if guidelines and principles are meticulously followed. The implication is that so long as the TQM practices are addressed, service quality will be enhanced. Based upon the conclusions drawn in the research work, it is recommended that telecommunication companies survive in the competitive environment by emphasizing quality control, process optimization, employee training, and customer feedback mechanisms.

The report also recommends that for businesses to thrive in the current economic climate, they should concentrate on these quality management techniques. Telecommunication companies are generally recommended to build pertinent policies for the improvement of strong total quality management policies, which in turn might produce satisfactory returns for them to grow effectively in the sector. The goal of the well-implemented total quality management rule is to improve the Telecommunication Company's service quality and prevent major setbacks from happening. However, the study recommends that employee training should be strengthened to mediate the other policies into action. It is believed that when employees are well trained, quality control, process optimization, and customer feedback mechanisms will be properly practiced because employee training catalyzes the other practices to improve service quality.

A defective system can be corrected promptly through quality control to retain optimal internal mechanisms. To ensure high-quality services, all telecom companies must have qualified senior managers who will oversee the entire management and workforce. However, management must develop and adhere to commendable quality management standards that would not limit the telecom company's innovation and technology advancement operations. The researcher also suggests that telecom companies in Ghana adopt technological devices that will drive innovation to achieve maximum quality and maximum satisfaction, as well as machines that can easily detect and trace fraudsters.

In addition, board characteristics, executive compensation, top management commitment, and ethical standards must be well integrated to achieve service quality in a competitive environment. Another policy implication is that when corporate governance and TQM practices are addressed, employee engagement and equipment and materials will be enhanced, which will go a long way to improve service quality. Based upon the conclusions drawn in the research work, it is recommended that by enhancing equipment and materials and employee engagement, telecommunication companies can survive in the competitive environment. The research also suggests that telecom establishments need to focus on corporate governance and total quality management practices to be sustained in the business environment. For organizations to thrive well in the industry, the corporate governance system must work to develop relevant mechanisms for the enhancement of good total quality management policies, which in turn could generate satisfactory returns. Well-executed corporate governance and total quality management policies through service quality are intended to increase customer satisfaction in telecommunication companies and to circumvent massive adversities before they occur. From the findings, it is candidly suggested that corporate governance and the TQM system should improve employee engagement by increasing allowances and giving study grants to boost employees' zeal to work harder. However, the study recommends that corporate governance and TQM must mediate the role of employee engagement and equipment and materials and must constantly check to help put other policies into action. It is believed that when employee engagement and equipment and materials are constantly checked, it will aid in the effective completion of responsibilities assigned to employees, which catalyzes the achievement of service quality.

However, before and during service, which is also a component of service quality, it should be checked by the top management regularly, and reports should be issued without delay to ensure the efficient functioning of the telecom structure. Most of the time, customers experience network disruption that poses a lot of stress on customers when contacting the service providers. Timely corrective action makes a flawed system get back on track to maintain optimum internal mechanisms. Therefore, all telecom companies must have competent top managers who will supervise the entire management team and staff for quality service. However, after-sales service must be adopted and stick to admirable total quality management policies that would regulate the shortfalls of the service rendered to customers of the telecommunication companies.

However, physical facilities and infrastructure must be improved to suit the standard of customers, thereby increasing the service quality level of their customers. Nonetheless, prompt handling of customer complaints needs to be in constant check to offer better service quality to their customers. The research proposes that telecom companies should stress more on corporate governance and TQM variables, which have a positive effect on employee engagement, and equipment and materials that lead to service quality and thus can increase their market share and revenue. The researcher concludes that with good implementation of corporate governance and TQM policies, telecommunication companies would be able to achieve service quality.

Concerning the findings, this study will be appropriate for managers, Chief Executive Officers, directors, and academicians.

Theoretical Implications

Corporate governance is a complex system of organizational frameworks, procedures, guidelines, and norms. The highest level of corporate governance in the telecom business, the Board of Directors, should make sure that results are delivered. Governance theories offer a thorough frame of reference, yet the rules of corporate governance cannot be effectively applied without clear variety.

Agency theory explains how agents and principals interact within an organization. In this scenario, the agent and principal act and decide on behalf of the other. The Chief Executive Officer of the telecom and the board have an agency relationship in which the executive is required to work in the institution's owners' best interests. In this sense, the management faces significant difficulty in achieving both financial and non-financial success while adhering to the organization's ethical standards. Employees who violate the telecom's ideals, however, can seriously harm the facility's finances and reputation. Sometimes, the damage done by these dishonest workers is too great to be repaired, and the company must restructure its business. As a result, the Chief Executive Officer and management must put strategies in place that reflect the opinions of the owners and conduct business in their best interests. Similar to this, directors and owners should have faith in the organization's management and go above and beyond to show their appreciation for their day-to-day business judgments. Directors and owners should receive clear communication from Chief Executive Officer and management whenever a significant business decision is to be made, which will assist them in comprehending and appreciating the changes made. Directors and owners should concentrate on adhering to regulations, supervising employees, and evaluating employee performance concerning the telecom company's goals. The monitoring role of the board, supported by practices like audit and performance reporting, is likely to have the propensity of reducing the issues of managers pursuing their interests or performing poorly as against the institutional mandate, according to agency theory, which places a strong emphasis on conformance. The focus is on avoiding performance issues brought on by ineffective telecom management or inappropriate managerial discretion. The need for the board of directors to oversee management actions is clearly stated by agency theory.

The chief responsibilities of telecom governing bodies include establishing the strategic parameters within which the Chief Executive Officer will run the organization daily, supporting the operation of the telecom facility through effective monitoring and evaluation of business objectives, and ensuring accountability through the sharing of information (disclosures) with and from stakeholders. Industry participants are required to be held accountable and to assert ownership of or develop interests in the organization. According to the notion, businesses exist to generate value for their many stakeholders. Organizational management and corporate ethics, which are responsible for fulfilling business objectives, are influenced by groups including the board, Chief Executive Officer, personnel, local community, government, investors, and others. That is why it is prudent from a realist perspective to involve all stakeholders in providing a comprehensive framework that enhances service quality.

Stewardship theory has some intuitive appeal in the context of the telecom business since it assumes that the board of directors and managers will both focus on reaching the quality goals of the telecom company. The power of the "joint endeavor," when the board and management share a similar attitude of generating improved results, is provided by stewardship theory. A social contract that acts in a community-focused manner may be seen in the alignment between the principals and agents. The telecom board and leadership collaborate to make sure the telecom firm fulfills its purpose and objective by paralleling community and societal needs. The Chief Executive Officer and board of trustees are probably interested in the same things when it comes to running the telecom facility. Under stewardship theory, the Chief Executive Officer or manager moves from being an opportunistic slacker to principally wanting to do a good job and be a good steward of corporate assets.

This study reveals that industry participants use resources wisely by being trustworthy and acting morally toward the firm and its stakeholders. Managers are more likely to serve the organization zealously to meet the set objectives if they demonstrate a higher commitment to the corporate principles. With this charisma, the executive is ready to set strategic policy direction and ensure that service quality goals are met. Financial and non-financial performance may be achieved when trustees and managers collaborate on a single goal.

The study's crucial theoretical implication is that good corporate governance sustains a firm's integrity and effectiveness. Enhancements in both the financial and non-financial aspects of a firm can result from good corporate governance, which affects an establishment's reputation over the long run. It aims to ensure ethical business conduct, including openness, justice, accountability, independence, responsibility, and adherence to all applicable laws and regulations. Balancing the interests of an organization's stakeholders, including shareholders, customers, managers, financiers, suppliers, the government, and the community, is a crucial component of corporate governance. To guarantee that stakeholders are aware of and committed to adhering to activities and conducts that are commonly acknowledged as suitable, proper, and desirable, discipline will be upheld. At the same time, telecom businesses are directed and controlled. According to the research, every institution that carefully considers positive corporate characteristics orients its activities toward effectiveness and general adherence to prudent management that can ensure the establishment's long-term success; this will make it easier to plan effectively and strategically to increase shareholder value and safeguard the interests of other stakeholders while also enhancing service quality.

In the telecom sector, TQM practices must be adhered to in order to attain service quality. The various TQM theories, such as Deming’s theory, Crosby’s theory, Joseph's theory, the European Foundation for Quality Management, Ishikawa’s theory, and Quality Control and Statistical theory, propose that quality assurance must be a priority for telecom companies. The telecom companies must apply the Plan, Do, and Act to influence performance and service quality.

Deming's theory is known for his ratio, where quality is equal to the result of work efforts over the total costs. Deming's theory of management details the steps that must be taken to transform a company's quality culture. It is a theory that means it is insufficient to solve problems that arise. A culture of continuous improvement must be established and maintained with the overall goal of achieving customer satisfaction. If a company has a culture of continuous improvement and maintains it with the overall goals, the telecom company will achieve consistent service quality. Therefore, telecom companies can achieve service quality by applying Deming’s theory of TQM.

Crosby’s theory also made the point, much like Deming's, that if one spends money on quality, it is money that is well spent. Crosby’s principle, Doing It Right the First Time, was his answer to the quality crisis. He defined quality as full and perfect conformance to the customer’s requirements. The essence of his philosophy is expressed in what he called “Absolute of Quality Management and the Basic Elements of Improvement.” His concept of zero defect and quality council as means of sharing information about quality and services will reduce cost and improve profitability. Therefore, telecom wants to achieve service quality and must do it right for the first time. Telecom companies must fully and perfectly conform to the customer’s requirements.

The key steps in Juran’s theory on quality encompass three fundamental stages: quality planning, quality control, and quality improvement. Today, these stages are known as the Juran Trilogy or the Quality Trilogy. They are used to both describe the quality management journey and establish quality control best practices. Joseph Juran stated that if a quality improvement project is to be successful, then all quality improvement actions must be carefully planned out, controlled, and improved. Telecom companies must improve all quality actions by planning and controlling all quality actions to achieve quality results.

The European Foundation for Quality Management (EFQM) in Brussels defines excellence as the excellent practice of managing an organization and achieving results based on fundamental principles, such as results orientation, customer focus, leadership and stability of purpose, and management based on processes. EFQM result is a model that refrains from prescribing any one methodology but rather recognizes the diversity management methodologies. Telecom companies must not stick to only one standard way of improving quality. Still, they must employ more methodologies to improve quality, as the world has become a global market with high competition.

Ishikawa's theory also stated that companies should handle their quality improvement projects. An Ishikawa diagram is a diagram that shows the causes of an event and is often used in manufacturing and product development to outline the different steps in a process, demonstrate where quality control issues might arise, and determine which resources are required at specific times. Quality projects are crucial for telecom companies. They must be able to demonstrate where quality issues might arise and determine which resource is required at a specific time, which will aid in achieving service quality.

Recommendations

Based on the findings, this study makes the following recommendations to improve the system. The study recommends that telecom companies should blend the four theories of corporate governance, which are resource dependency, stakeholders, agency, and stewardship theories, to yield effective results. The study also recommends various TQM theories such as Deming’s theory, Crosby’s theory, Joseph's theory, the European Foundation for Quality Management, Ishikawa’s theory, and Quality Control and Statistical theory should be applied by the telecom companies to influence service quality.

To survive, telecommunication operators in Ghana must drastically alter their business models and service offerings due to increased competition from non-telecom providers, lower network investments, and the rise of digital media and mobile technology. The study also recommends that employees must be properly engaged to ensure good service quality. However, to prevent the country from being overtaken by the negative effects of the telecommunications transformation, the government is also closely monitoring cyber security threats. As a result, the sector is expected to tighten up cyberspace to lessen the negative impact of charlatans. The study also recommends that telecommunication companies put much effort into establishing their quality management systems according to the obligation of ISO 9000 and 9001 for successful TQM implementation and business accomplishment. Such canons would assist the industry in ensuring that telecom companies are meeting the expectations of customers and other stakeholders while staying within the specified regulatory and statutory requirements for the product or service they are offering. Based on the findings, this study will be useful for telecommunication company managers, Chief Executive Officers, directors, and academicians. In addition, other service organizations can also use this study as a policy guide.

This study suggests that corporate governance and TQM policies in the telecommunication sector must be centered on service quality, which consists of prevention of poor service quality and effective handling of customer complaints.

The success of companies depends on how satisfied their consumers are, and one of the elements that directly correlates with customer satisfaction is TQM. If corporate governance and TQM are applied, telecom companies will respond quickly to customer requests and provide them with high-quality services.

The study gives these recommendations:

- Telecom companies must study customer relationships and develop strong communication skills with their customers if they want to achieve service quality. Telecommunication companies must know how customers rate the quality of a company's services.
- According to the results of this survey, the majority of businesses offer a wide range of TQM services, and these services help achieve customer satisfaction, so corporate governance policies must encourage this.

Some customers are only somewhat satisfied with the TQM activities, so the corporate governance system needs to work so the employees will know more about the TQM services.

The study also recommends that Telecommunication companies pay attention:

- To the tangibility nature of services like the equipment & materials.
- The companies should be reliable in their service delivery.
- They should respond to issues and complaints as quickly as possible.
- They should assure customers of good quality of services and readiness to resolve problems as and when they happen.
- In addition, telecom companies must show empathy (the ability to understand and share the feelings of their customers).
- The study finally recommends the merging of corporate governance and TQM to ascertain effective service quality results in the telecom sector.

Therefore, corporate governance and total quality management had a significant impact on service quality.

Limitations Of The Study

The research work significantly contributes to the influence of corporate governance and TQM on telecom companies to enhance service quality. Nevertheless, the study was faced with certain limitations. The first shortfall of the research is the limited data used by the researcher.

The research examination was constrained in the sense that the study could not do a thorough investigation of all the centers of the telecom companies in Ghana. Therefore, the research relied on a sample size of a few centers of the telecom companies in the sector. Data collection concerning telecom operations is difficult, which is probably due to the reluctance of employees to allow easy access to information due to bureaucratic, dogmatic, and other influences in the telecom administration. Hence, the researcher could not administer questionnaires to all possible respondents of the population except those who were reachable. However, the collated data was limited to a cross-section of the total population. In addition, in the model to estimate the impact of corporate governance and TQM on service quality, other satisfaction elements were not available, even though that could not have affected the soundness of the results. Some of the employees also think providing data about the telecom company represents leaking or divulging valuable information into the public domain for competitors to see their strategies, strengths, and weaknesses. However, these limitations enumerated did not affect the predictability, validity, and precision of the research findings.

Recommendation For Future Research

The researcher implores that other areas could also be looked into to extend academic ideas in the field.

Firstly, by hiring qualified employees by way of a good corporate governance system to execute corporate governance mechanisms and TQM policies, telecom companies should hire more qualified employees or provide the present staff with more training on corporate governance mechanisms and TQM practices to improve service quality.

Secondly, improving the understanding of the effect of technical support of TQM on customer satisfaction may be examined (as further research). Telecom operators must improve technical support of Equipment and materials to help telecom businesses cut down on customer complaints and offer customers improved TQM services.

Another worthy area of research for future academics is the influence of TQM on customer satisfaction to explore the amalgamation of TQM and consumer behaviour. Thus, this research direction could be studied from the theoretical relations between TQM and consumer behavior.

Last but not least is improving a good corporate governance system in the telecom sector in Ghana. Improving corporate governance mechanisms in the telecom sector will result in high efficiency in telecom operations, as the poor corporate governance system adopted by Expresso Ghana resulted in the collapse of that telecom company. However, if good corporate governance systems are in place, telecom companies can survive any intensive competition.

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