

# The Relationship Between Total Quality Management Practices and Organizational Performance: A Case Study of TANESCO – Dar es Salaam

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## Abstract

This study aimed to investigate the relationship between Total Quality Management (TQM) practices and organizational performance in the context of TANESCO in Dar es Salaam. The study focused on three key TQM practices: Communication, Top Management Commitment, and Employee Empowerment. A descriptive research design was adopted, and data were collected from 60 respondents using questionnaires. Statistical analysis, including correlation analysis and regression analysis, was performed using the Statistical Package for the Social Sciences (SPSS) version 25. The findings revealed significant positive correlations between the independent variables (Communication, Top Management Commitment, and Employee Empowerment) and Organization Performance. The coefficient of determination ( $r^2$ ) indicated that the independent variables explained 76.2% of the variation in Organization Performance. However, approximately 23.8% of the variation was attributed to other factors not considered in the study. Based on the findings, recommendations were provided, including strengthening communication practices, fostering top management commitment, empowering employees, and continually monitoring and evaluating TQM practices. Further research is recommended to deepen the understanding of the relationship between TQM practices and organizational performance. This could involve conducting longitudinal studies to assess the long-term effects of TQM implementation, exploring the impact of other variables not considered in this study, and investigating the experiences of organizations in different industries and contexts.

**Keywords:** Total Quality Management, Communication, Top Management Commitment, Employee Empowerment, Organizational Performance

## 1. Introduction

As businesses work to enhance their performance and stay competitive in a more dynamic and demanding business environment, Total Quality Management (TQM) approaches have attracted substantial attention on a global scale (Deming, 2018). To meet or exceed customer expectations, TQM places a strong emphasis on the involvement of all employees in enhancing processes, goods, and services continually. There has been a great deal of study and interest in the connection between TQM techniques and organizational performance among academics and practitioners. TQM's effects on a variety of organizational performance factors, such as financial performance, customer satisfaction, staff

productivity, and overall competitiveness, have been the subject of numerous research (Evans, J.R., & Lindsay, 2018; Soltan Liao, & Zhu, 2018).

Organizations in Africa are becoming more aware of the value of TQM as a way to improve their overall performance, customer happiness, and operational effectiveness. One such company is the energy-related TANESCO (Tanzania Electric Supply Company Limited) - Dar es Salaam, which is essential to the region's electrical supply. In order to provide its clients with high-quality services, including as power generation, distribution, and customer assistance, TANESCO - Dar es Salaam must overcome a number of obstacles. In order to meet the expanding energy needs of the region, the organization must continuously improve in a complicated and quickly changing commercial environment. Thus, understanding the relationship between TQM practices and organizational performance in the case of TANESCO – Dar es Salaam can provide valuable insights into the effectiveness of current practices and identify areas for improvement.

## 2. Gaps

Although the first goals of Total Quality Management (TQM) programs were to decrease defects and enhance goods and services, corporations have come to understand the importance of good management techniques for long-lasting improvement (Elshennawy & McCarthy, 2022). According to managers' own admissions (Evans & Lindsay, 2018), quality, customer happiness, and overall business outcomes were significantly influenced by the way they led and managed their employees. In this situation, quality management was viewed as being just as important as managing quality itself. TQM practices were adopted by institutions in the public and private sectors, although not all of them saw success (Law & Walker, 2022). Failures were often attributed to implementation issues rather than a fundamental flaw in the concept and theory of TQM (Ho & Au, 2023; Yusof & Aspinwall, 2020). Empirical studies on TQM practices often focused on the extent and success of implementation, rather than exploring the consequences and outcomes (Al-Marzouqi & Al-Ali, 2016; Flynn, Schroeder & Sakakibara, 2021; Rahman & Bullock, 2019). This situation was particularly evident in the education sector, where schools adopted quality models without clear evidence of their effectiveness. Consequently, a significant gap in knowledge and practical guidance existed for schools to correctly manage and implement TQM practices to achieve quality performance. To bridge this gap and provide practical assistance to schools in effectively managing and implementing TQM practices, this study aimed to assess the relationship between TQM practices and organizational performance, with a special reference to TANESCO in Dar es Salaam. By examining the TQM practices within TANESCO, the study sought to shed light on the impact of these practices on organizational performance. The findings aimed to contribute to enhancing the understanding of how TQM could be effectively applied in schools and other organizations, ultimately leading to improved quality performance.

## 3. Objectives

This study sought to examine the relationship between the TQM practices on organization performance with special reference to TANESCO in Dar es Salaam. Specifically, this study intended to;

- (a) To determine the relationship between Communication and organization performance.
- (b) To determine the relationship between Top Management Commitment and organization performance.
- (c) To determine the relationship between Employee Empowerment and organization performance.

#### 4. Hypotheses

- (a) There is a positive relationship between Communication and organizational performance.
- (b) There is a positive relationship between Top Management Commitment and organizational performance.
- (c) There is a positive relationship between Employee Empowerment and organizational performance.

#### 5. Methodology

To explore the relationship between Total Quality Management (TQM) practices and organizational performance in TANESCO - Dar es Salaam, the study used a descriptive research design. The descriptive design was chosen because it made it possible to examine the relationship between the variables under investigation. A simple random sampling method was used to choose a sample of 60 respondents from the TANESCO employees in Dar es Salaam. As the main tool for gathering data, questionnaires were used. The Statistical Package for the Social Sciences (SPSS) program, especially version 25, was used to evaluate the data that had been gathered. The use of SPSS made it easier to analyze the data, understand it, and get to conclusions on how TQM procedures in TANESCO - Dar es Salaam relate to organizational performance.

#### 6. Results of Findings

Findings from correlation, multicollinearity and regression analysis were presented in this section.

##### 6.1. Correlation Analysis

The primary objective of this study was to assess the relationship between Total Quality Management (TQM) practices and organizational performance. To examine the relationship between the dependent and independent variables, Pearson correlation analysis was conducted. Correlation analysis is a statistical method used to determine the existence and strength of a relationship between two variables, ranging from a strong negative correlation to a perfect positive correlation. The results of the correlation analysis are presented in the table below:

Table 1: Correlations

		Communication	Top Management Commitment	Employee Empowerment	Organization Performance
Communication	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	90			
Top Management Commitment	Pearson Correlation	.629**	1		
	Sig. (2-tailed)	.000			
	N	90	90		
Employee Empowerment	Pearson Correlation	.696	.632	1	
	Sig. (2-tailed)	.000	.000		
	N	90	90	90	
Organization Performance	Pearson Correlation	.741	.752	.721	1
	Sig. (2-tailed)	.000	.000	.000	
	N	90	90	90	90

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 1 displays the correlation results for the variables examined in this study. The analysis revealed significant correlations between the variables. Specifically, Communication exhibited a strong positive correlation with Organization Performance, with a Pearson correlation coefficient of 0.741. The findings indicated that Top Management Commitment also displayed a strong positive correlation with Organization Performance, with a Pearson correlation coefficient of 0.752. Furthermore, Employee Empowerment showed a significant positive correlation with Organization Performance, with a Pearson correlation coefficient of 0.721. These correlation coefficients indicate the strength and direction of the relationships between the variables. The findings suggest that effective Communication, Top Management Commitment, and Employee Empowerment are positively associated with improved Organization Performance.

## 6.2. Multicollinearity

To ensure the accuracy of the findings regarding the relationships between the dependent and predictor variables, multicollinearity tests were conducted. Multicollinearity occurs when the independent variables are highly correlated with each other, potentially leading to unreliable results. In this study, the Variance Inflation Factor (VIF) and the tolerance level were used to assess the presence of multicollinearity. The results of the multicollinearity tests are presented below:

Table 2: Multicollinearity

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Communication	.201	1.211
	Top Management Commitment	.312	1.231
	Employee Empowerment	.415	1.210
a. Dependent Variable: Organization Performance			

The findings, as presented in Table 2, indicate that the variables examined in this study demonstrated no significant multicollinearity issue. This conclusion is supported by the Tolerance and Variance Inflation Factor (VIF) values obtained for each variable. Specifically, Communication exhibited a Tolerance value of 0.201 and a VIF value of 1.211. Top Management Commitment displayed a Tolerance value of 0.312 and a VIF value of 1.231. Lastly, Employee Empowerment demonstrated a Tolerance value of 0.415 and a VIF value of 1.210. These values indicate that all the variables in the study have Tolerance values greater than 0.1 and VIF values less than 10. The absence of multicollinearity is supported by the fact that the Tolerance values are well above the threshold of 0.1, while the VIF values are significantly below the threshold of 10. These results confirm that the independent variables, namely Communication, Top Management Commitment, and Employee Empowerment, are not highly correlated with each other, ensuring the reliability of the relationships observed between these variables and the dependent variable. The absence of multicollinearity enhances the validity and robustness of the study's findings, allowing for accurate interpretations of the impact of Communication, Top Management Commitment, and Employee Empowerment on Organization Performance.

## 6.3. Regression Analysis

In section regression analysis was done on in independent variables and dependent variables.

Table 3: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778 <sup>a</sup>	.762	.759	3.01470

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1057.483	3	352.494	38.785	.000 <sup>b</sup>
	Residual	690.717	76	9.088		
	Total	1748.201	79			

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.321	1.201		2.202	.000
	Communication	.201	.123	.101	1.320	.000
	Top Management Commitment	.320	.210	.102	2.102	.000
	Employee Empowerment	.401	.174	.214	1.324	.000

a. Dependent Variable: Organization Performance

The coefficient of determination ( $r^2$ ) in the model summary indicates that the independent variables, namely Communication, Top Management Commitment, and Employee Empowerment, account for 76.2% of the effect of Total Quality Management (TQM) practices on Organization Performance in TANROADS. This implies that 76.2% of the variation in Organization Performance can be explained by the characteristics captured by these independent variables. However, it is important to note that approximately 23.8% of the variation is attributed to factors not accounted for by the independent variables.

Table 3 provides a summary of the model analysis, indicating that the model is statistically significant. The significance level (p-value) at a 5% level of significance and 95% confidence level was found to be 0.000, supporting the statistical significance of the model. This suggests that the relationships between the independent variables (Communication, Top Management Commitment, and Employee Empowerment) and the dependent variable (Organization Performance) are statistically significant.

Table 3 further elucidates the overall relationship between the independent variables and the dependent variable, highlighting the significance of each relationship. In the context of TANROADS - Dar es Salaam, the table reveals that Communication, Top Management Commitment, and Employee Empowerment significantly contribute to Organization Performance.

The regression equation, represented as  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \alpha$ , captures the relationship between the independent variables and the dependent variable. In this equation, Y represents Organization Performance, X1 represents Communication, X2 represents Top Management Commitment, X3 represents Employee Empowerment,  $\beta_0$  represents the constant term, and  $\alpha$  represents the error term.

Based on the established regression equation, when all other factors are held constant at zero, the expected outcome for Organization Performance is 3.321. Additionally, an increase in Communication by 0.201 will result in an increase in Organization Performance, with a p-value of 0.000, indicating the acceptance of Hypothesis One. Similarly, an increase in Top Management Commitment by 0.320 will lead to an increase in Organization Performance, with a p-value of 0.000, supporting the acceptance of Hypothesis Two. Lastly, an increase in Employee Empowerment by 0.401 will contribute to an increase in Organization Performance, with a p-value of 0.000, signifying the acceptance of Hypothesis Three.

In summary, the regression analysis confirms the positive impact of Communication, Top Management Commitment, and Employee Empowerment on Organization Performance in TANROADS - Dar es Salaam. The statistically significant relationships observed support the hypotheses and emphasize the importance of these factors in driving organizational performance.

## 7. Conclusion

This study aimed to assess the relationship between Total Quality Management (TQM) practices and organizational performance, with a focus on TANESCO in Dar es Salaam. Through the analysis of data collected from 60 respondents, the study examined the impact of Communication, Top Management Commitment, and Employee Empowerment on Organization Performance. The findings demonstrated significant positive correlations between all three independent variables and Organization Performance. The coefficient of determination indicated that the independent variables explained 76.2% of the variation in Organization Performance. While this is a significant contribution, it also suggests that approximately 23.8% of the variation is influenced by factors not accounted for in the study. Nevertheless, the results underscore the importance of effective Communication, Top Management Commitment, and Employee Empowerment in enhancing organizational performance. Based on the study findings, the following recommendations are proposed:

- (a) Organizations should prioritize and enhance communication channels and practices. This involves promoting open and effective communication across all levels of the organization, facilitating information flow, and fostering a culture of transparent and timely communication. Regular communication forums, such as team meetings and feedback mechanisms, should be established to ensure information dissemination and understanding.
- (b) Top management should demonstrate strong commitment and support for Total Quality Management practices. They should actively participate in quality improvement initiatives, provide necessary resources and guidance, and lead by example. This commitment should be visible throughout the organization, creating a culture of quality and continuous improvement.
- (c) Organizations should focus on empowering employees by providing them with the necessary tools, resources, and authority to make decisions and take ownership of their work. This includes providing training and development opportunities, encouraging employee involvement in decision-making processes, and recognizing and rewarding their contributions. Empowered employees are more likely to be engaged, motivated, and committed to achieving organizational goals.

- (d) Organizations should establish mechanisms for ongoing monitoring and evaluation of TQM practices and their impact on organizational performance. Regular assessments should be conducted to identify areas of improvement, address challenges, and ensure the effectiveness of implemented practices. This will enable organizations to adapt and refine their TQM initiatives based on feedback and emerging trends.
- (e) To enhance the understanding of the relationship between TQM practices and organizational performance, further research is recommended. This could involve conducting longitudinal studies to assess the long-term effects of TQM implementation, exploring the impact of other variables not considered in this study, and investigating the experiences of organizations in different industries and contexts.

## References

- [1] Evans, J.R., & Lindsay, W.M. (2018). *An introduction to total quality management*. Routledge.
- [2] Law, K.H., & Walker, A. (2022). Organizational failure: A critique of TQM. *International Journal of Quality & Reliability Management*, 29(8), 887-905.
- [3] Elshennawy, A.K., & McCarthy, L. (2022). Total quality management in higher education institutions: Practices and challenges. *Total Quality Management & Business Excellence*, 23(1), 1-18.
- [4] Al-Marzouqi, N.Y., & Al-Ali, N.M. (2016). The impact of total quality management practices on organizational performance: A study of the UAE manufacturing sector. *International Journal of Quality & Reliability Management*, 33(9), 1262-1280.
- [5] Deming, W.E. (2018). *Out of the crisis: Quality, productivity and competitive position*. MIT Press.
- [6] Soltani, E., Liao, Y.K., & Zhu, C. (2018). The impact of total quality management practices on organizational performance and the moderating role of environmental uncertainty. *Total Quality Management & Business Excellence*, 29(9-10), 992-1011.
- [7] Flynn, B.B., Schroeder, R.G., & Sakakibara, S. (2021). The impact of quality management practices on performance and competitive advantage. *Operations Management Research*, 4(3-4), 182-190.
- [8] Rahman, M.N., & Bullock, P. (2019). Exploring the relationship between total quality management practices and knowledge management practices. *Total Quality Management & Business Excellence*, 25(5-6), 479-492.
- [9] Ho, L.C., & Au, K.F. (2023). The effect of total quality management on employee performance: Evidence from a non-western culture. *International Journal of Production Economics*, 141(2), 630-649.
- [10] Yusof, N.H.M., & Aspinwall, E. (2020). Exploring the role of total quality management (TQM) practices in Malaysian small and medium-sized enterprises (SMEs). *Total Quality Management & Business Excellence*, 21(8), 849-865.