International Journal of Management and Business Studies ISSN 2167-0439, Vol. 12(3), pp. 001-005, October, 2022. Available Online at www.internationalscholarsjournals.com © International Scholars Journals

Review Article

Effect of total quality management on organization performance: A case study on national cement s.co.

Gezew Megersa*

Department of Logistics and Supply Chain Management, Bule Hora University College of Business and Economics, Bule Hora, Ethiopia

Received: 03-Aug-2022, Manuscript No. IJMBS-22-71205; Editor assigned: 05-Aug-2022, PreQC No. IJMBS-22-71205 (PQ); Reviewed: 19-Aug-2022, QC No. IJMBS-22-71205; Revised: 03-Oct-2022, Manuscript No. IJMBS-22-71205 (R); Published: 11-Oct-2022.

ABSTRACT

The purpose of this study was to examine the effect of total quality management on organization performance of national cement share company. The study aimed to bridge gap in literature and knowledge of total quality management. The study was employed an explanatory and descriptive research design and used mixed approach. A survey was conducted by using self-administered and structured close ended questionnaires which was distributed to employees of national cement share company who are working in different unit of the company. Descriptive statistics, and correlation statistical tools were used to examine the relationship between total quality management ingredient and organizational performance and multiple regression analysis was used to measure effects of independent variables on dependent variable. Data for the study was gathered from both primary and secondary data source. The study adopted probability sampling technique, specifically stratified random sampling and simple random sampling technique. Data was analyzed using correlation and multiple regression analysis. The correlation analysis was performed to identify the direction and the strength of the relationship between variables, whereas multiple regression analysis was used to describe causal effect between and among dependent and independent variables under investigation. The study found that there is positive and statistically significant correlation between all TQM constructs and organization performance. Concerning regression analysis the study found total quality management has positive and significant effect on organization performance. The study concluded that the implementation of total quality management practice leads to enhanced organization performance. It is recommended that firms should continually implement TQM to improve performance.

Keywords: Total Quality Management (TQM), Quality and organizational performance, Performance measurement, Critical Success Factors (CSFs) of TQM.

INTRODUCTION

Total quality management is an integration of all the functions and process within an organization to achieve continuous improvement in goods and services [1]. TQM first implemented in the developed countries, particularly in USA, Japan and Western Europe countries to maximizing customer satisfaction, gaining better product quality, and obtaining higher productivity through the systematic removal of waste and the reduction of non-productive activities [2]. In the last two decades, especially in the 1990's, a significant volume of research was performed to investigate the relationship between practices of total quality management and organizational performance; TQM appeared to be a well accepted system of management [3]. Previous studies revealed in various countries in the world that competitive advantages and performance benefits can be generated and sustained through the adoption of the TQM practices [4].

LITERATURE REVIEW

Globally, manufacturing firms apply quality management practices mainly for meeting customers satisfaction. However, supply chain management is seen as a way of improving competitive performance through integrating internal functions of a firm with the external operations of the suppliers, customers and other members of the supply chain network. This

*Corresponding author. Gezew Megersa, E-mail: gizamagu2008@gmail.com.

might lead to changes in the traditional structure of the organization. Supply chain management has shifted focus to coordination and configuration of processes that are essential in manufacturing of products in time and ensuring quality products and service delivery to customers. Quality aspects have become one of the most important factors in global competition today. Increasing demand by customers for better quality of product in market place has encouraged many companies to provide quality product and services in order to compete in the marketplace successfully. To meet the challenge of this global competition, many businesses have invested substantial resources in adapting and implementing quality management practices in their operations. Quality management is viewed as a strategy to meet or exceed customer's requirements and expectations. Quality management seeks excellence in all aspects of business through organization wide continuous improvement, commitment by all, and customer focus. It is a firm wide management philosophy of continuously improving the quality of the products, services and processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance [5]. Rust, observed that, financial performance of organizations can be increased by improving quality performance. Their study showed that organizations whose principles relate to quality are guided by focus on value created for customer. Organization Performance measures refer to that process of gathering, analyzing and or reporting information regarding an individual, group, organization, system or component on its outcome for decision making. Moreover, performance is monitored through the model of Plan Do Check Act (PDCA) [6,7]. This section is critical to the organization since it suggested to them whether there was a continuous improvement in terms of customer satisfaction, market share, productivity, cost reduction, and profitability and so forth. In fact, total quality management is a description of the culture, attitude and employee involvement to provide customers with product and service that satisfy their need. Evidences shows that successful implementation of TQM benefited organization through improving organizational performance, through incorporating TQM as a method enhance product and service quality, it is considered as a very important to investigate the effect of total quality management on organizational performance.

METHODOLOGY

Design and methodology

The aim of this study is to examine the effect of total quality management on organizational performance a case study on national cement share company. So as to answer the research questions and meet the objectives of the paper the research adopted both explanatory and descriptive design. Explanatory studies establish causal relationships between variables and focuses on studying a situation or a problem in order to explain the relationships between variables [8]. Descriptive researches are those studies for which the purpose is to produce an accurate representation of persons, events or situations [9]. The main focus of descriptive research studies is to describe the characteristics of a particular individuals or group. This study was conducted by using mixed research approach; quantitative research method is best suited for looking at cause and effect between and among variables, and testing of theories and hypothesis [10]. The method used to explain relationships or phenomena by collecting numerical data and analyzing based on mathematical method. The objective of the study was to examine the causal relationship between the TQM practices and organizational performance, quantitative research approach was applied to this study since it is an appropriate method to create quantifiable cause and effect relationship between the variables of the study. In addition to this the study applied descriptive technique through direct quotation of response and facts.

Data type and source of data

The study was conducted based on Primary and secondary data. The primary data are those which are collected a fresh and for the first time, and thus happen to be original in character and collected through observation, interview method, through questionnaires, while secondary data refer to the data which have already been collected and analyzed by someone else, it is either be published data or unpublished data [11,12]. Regarding sources of data the study was depended on primary and secondary source of data. Primary source of data used was questionnaire and a secondary source of data was company internal documents, journals, articles, books, and the internet.

Target population

The population of this study was employees of national cement share company, dire dawa who are working in different units. Specifically, the focus of the study was concerned with more related departments and functional units to total quality management which have direct contact and relation with quality management in the operation. These are quality control, production, purchasing and supply chain, sales and distribution, fleet and logistics operation, and finance.

Sampling technique

In determining the sample size the paper was used probability sampling technique. From probability sampling technique Stratified random sampling and simple random sampling techniques was applied. Stratified sampling is where the population is divided into strata (or subgroups) and a random sample is taken from each subgroup. A subgroup is a natural set of items. Subgroups might be based on company size, gender or occupation (to name but a few). Stratified sampling is often used where there is a great deal of variation within a population. Its purpose is to ensure that every stratum is adequately represented [13]. The simple random sampling means that when every case of the population has an equal probability of inclusion in sample [14]. Simple random sampling was used to randomly select respondents from each strata of population.

Sample size

Determining sample size is very complex as it depends on other factors such as margins for errors, degree of certainty and statistical technique [15]. A general rule, one can say that the sample must be of an optimum size *i.e.*, it should neither be excessively large nor too small [16]. It needs to be emphasized that when the universe is a small one, it is no use resorting to a sample survey. When all items are covered, no element of chance is left and highest accuracy is obtained [17,18]. The researcher was taken sampling technique by determining the sample proportion success and failure based on the experience

from previous survey research and response rate. According to the rate of return or success rate if 50%, is adequate, rate of return 60% is good and if it is 70% and above is very good. For the study the researcher assumed 75% response rate which is very good and remaining 25% non-response rate, and sample size was determine at 95% confidence level and 5% margin of error. Based on the above condition, to determine the sample size of the respondents the researcher used the following formula:

$$n = \frac{Z^2(p\ *q)N}{2ae^2(N-1)\ +\ Z^2\ (p*q)}$$

Where:
n-sample size,
z-confidence interval,
p-proportion of success,
q-proportion of failure,
N-number of target population,
e-standard error.
Thus:

$$n = \frac{196.^2\ (\ 0.75 * 0.25)301}{(0.05)\hat{}2(301-1)\ +\ 1.96^2\ (0.75*0.25)}$$

n = 147

Data collection technique

According to Kothari each method of data collection has its uses and none is superior in all situations, selecting the appropriate method depends on the nature, scope and objective of the study, the availability of time and fund and precision required for the study. Primary data was collected through survey method by using close ended questionnaires which was self-administered in nature. Closed ended, self-administered-questionnaire was developed based on tested previous empirical literatures. The reason that questionnaire was applied was due to the fact that it gives full confidence for the respondents to freely give their opinion on each survey question without fear of others. The five points Likert scales which was developed by Rensis's Likert was utilized in order to simplify the questions to respondents and enhance their cooperation. Secondary data was collected by thoroughly analysis of different sources.

Data analysis technique

The quantitative data gathered through self-administered questionnaire which was developed by reviewing previous studies on TQM and performance literatures and quantified them through five point likert scale. The questionnaire which was properly filled by respondents selected, are coded and entered into SPSS version 23. The collected data was analyzed in the form of descriptive, correlation, and multiple regression analysis. The descriptive statistics was employed to quantitative ly describe variables using mean, standard deviations, frequency or mode. The correlation analysis was performed to identify the direction and the strength of the relationship between variables using correlation analysis, and multiple regression analysis was used to describe causal effect between and among dependent and independent variables under investigation. The data was analyzed and presented in the form of diagrams, charts, and tables by using SPSS (Statistical Package for Social Science) software version 23. Finally, conclusions were made based on the findings/results of the study and a recommendation was forwarded on the basis of the data analyzed.

Model specification

The best fitted model selected, for the purposes of fulfilling the objectives of the study, was multiple regression model. Multiple regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable X is associated with a value of the dependent variable Y. The multiple regression formulas that adopted for this study is presented as follows:
$Y= \beta0+(\beta1X1)+(\beta2X2)+(\beta3X3)+(\beta4X4)+(\beta5X5)+e$
Where,
Y=Dependent variable (organization performance).
β0= Constant term.
β1, β2, β3, β4 and β5=Coefficient of the variables.
X1=Management commitment.
X2=Strategic planning.
X3=Information sharing and communication process.
X4=Employee empowerment.
X5=Customer orientation.
e=Error terms

DISCUSSION

The main purpose of the study was to examine the effect of TQM practice on organizational performance of national cement S. Co. The company TQM practice was evaluated through five TQM dimensions including Top management commitment, strategic planning, information sharing and communication process, employee empowerment and customer orientation. Based on the results of the study the summaries of major findings are discussed as follows: From the descriptive statistics of the findings it is summarized as all TQM practices and organization performance constructs have a mean value of greater than the cut point three, which indicates the majority of the respondents were believed that the company has been implementing TQM practices and it has an impact on overall organization performance. Information sharing and communication process (4.06), employee empowerment with mean of (4.05), customer orientation (4.00), strategic planning and top management commitment has group mean of has mean of (3.76 and 3.79) respectively. With regards to the correlation analysis, it can be clearly seen as the five TQM practice constructs namely top management commitment, strategic planning, information sharing, employee empowerment and customer orientation has positively correlated with organizational performance.

- Top management commitment and organization performance has positive and significant correlation (r=.555).
- Strategic planning and organizational performance has a positive relationship (r=.539).
- Information sharing and communication process has a positive relationship with organizational performance (r=.649).

- Employee Empowerment and Organizational Performance has a positive relationship (r=.681), and
- Customer orientation has a positive relationship with organizational performance (r=.636).

To test hypothesis, multiple linear regression analysis was performed the overall model statistics ANOVA table indicated (p=.000), which tells goodness of the model. The R square of model statistics value of (R=.584) indicated that all independent variables included in the model explained (58.4%) of variance in the dependent variable, and only (41.6%) of variation of dependent variable is due to other variable not included in the model. Hence, the overall model statistics is supported the notion that total quality management has a positive effect on organization performance. From the regression coefficient table positive and statistically significant relationship found. Out of five independent variables; four variables top management commitment (β=.131, p=.037), information sharing and communication process with (β=.297, p=.001), employee empowerment (β=.374, p=.000), and customer orientation (β=.185, p=.044) are found there is positive and statistically significant impact on dependent variable. Hence, a change in the independent variables results in a substantial change on the dependent variable organization performance. On the other hand strategic planning found it had insignificant influence on organization performance with (β=.030, p=.665).

CONCLUSION

The aim of study to examine the effect of total quality management practices on organization performance of the company.

- Regarding with descriptive statistics of the study it can be concluded that the company has been implementing TQM practices and it has an impact on overall organization performance.
- From correlation statistics of the study it is concluded that there is positive and statistically significant correlation between and among all total quality management construct and organization performance.
- The results of multiple linear regression analysis regarding the Effects of TQM on organization performance, it can be understood that there is positive and statistically significant effect. This result suggests that successful implementation of TQM resulted in enhanced organization performance. Among the independent variables, top management commitment, information sharing and communication process, employee empowerment and customer orientation are the most determinant construct of TQM in explaining organization performance. This implies these practices toward quality management play a critical role in improving organization performance.

REFERENCES

1. Saffar NAG, Obeidat AM (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge shari ng. Manag Sci Lett. 10: 77-90. [Crossref] [Googlescholar]
2. Ahire SL, Dreyfus P (2000). The impact of design management and process management on quality: an empirical investigation. J Oper Manag. 18: 549-575. [Crossref] [Googlescholar]
3. Adirika EO, Ebue BC, Nnolim DA (2001). Principles and practice of marketing. 2nd edition. Enugu: John Jacob's Classical Publishers. Enugu, Nigeria.
4. Ackoff R L (1953). The Design of Social Research. University of Chicago Press, Chicago. [Googlescholar]
5. Aletaiby A, Kulatunga U, Pathirage C (2017). Key success factors of total quality management and employee's performance in Iraqi oil industry. In 13th IPGRC 2017 Full Conference Proceedings, University of Salford publisher, UK. [Googlescholar]
6. Field A (2009) Discovering statistics using SPSS. 3rd Edition, Sage Publications Ltd. London, England. 264-315. [Googlescholar]
7. Andersson R, Eriksson H, Torstensson HK (2006). Similarities and differences between TQM, six sigma and lean. The TQM Magazine. 18: 282-296. [Crossref] [Googlescholar] [Indexed]
8. Ardestani A, Amirzadeh Y (2014). The impact of total quality management practices on innovation performance and organizational performance. Indian J Fundam Appl Life Sci. 4: 2050-2057.
9. Asaolu TO, Nassa M (2007). Essential of management financial managemsent. 2nd edition. Cedar Productions Ltd. Nigeria.
10. Bambauer-Sachse S, Rabeson L (2015). Determining adequate tangible compensation in processes for developed and developing countries: The role of severity and responsibility. J Retail Consum Serv. 22: 117-127. [Crossref] [Googlescholar] [Indexed]
11. Bryman A, Cramer D (1999). Quantitative data analysis with SPSS release 8 for Windows: A guide for social scientists. Taylor and Francis Group. London, New York. [Crossref] [Googlescholar]
12. Bayazit O, Karpak B (2007). An analytical network process-based framework for Success Total Quality Management (TQM): An Assessment of Turkish Manufacturing Industry Readiness. Int J Prod Econ. 105: 79-96. [Crossref] [Googlescholar] [Indexed]
13. Boshoff C, Allen J (2000). The influence of selected antecedents on frontline staff perceptions of service performance. Int J Serv Ind Manag. 11: 63-90. [Crossref] [Googlescholar]
14. Creswell JW, Creswell JD (2017). Research design: Qualitative, quantitative, and mixed methods approaches. 3rd edition.Sage publications, Washington DC and Melbourne. 304. [Googlescholar]

15. Crosby PB (1979) Quality Is Free: The Art of Making Quality Certain. McGraw-Hill. New York. [Googlescholar]
16. Wilkinson A, Marchington M, Dale B (1994). Enhancing the contribution of Human Resource function to quality improvement. Qual Manag J. 1: 35-46. [Crossref] [Googlescholar]
17. Deming WE (1986). Out of crisis, Cambridge, MA: MIT Center for Advanced Engineering: Study (CAES). Massachusetts Institute of Technology, Cambridge, MA, USA.
18. Dean JW, Bowen DE (1994). Management theory and total quality: improving research and practice through theory development. Acad Manage Rev. 19: 392-418. [Crossref] [Googlescholar]