Impact Of Total Quality Management On Organizational Performance: A Case On The Shipping Industry Of Pakistan

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Abstract

This study is aiming to assess the impact of total quality management factors on organizational performance. Explanatory research type was used to examine the connection between total quality management factors and organizational performance, via using the deductive approach to test the claims. The data was collected for one time period only. A survey method was executed to gather the data from the shipping industry of Pakistan with a sample of 206. After the analysis of the congregated data, it has become evident that total quality management aspects including top management commitment as well as policy and strategy along with training and development, communication, and process management have a substantial influence on the performance of shipping-related organizations. Researchers have welcomed the concept of TQM in the last few decades very warmly, particularly in developed countries while Pakistan and other developing countries have paid scarce focus on this aspect of Management. So, therefore, shipping needs to put focus on the above-mentioned prospects to flourish in the competitive scenario. Thus, this study provides evidence to develop strategies for managers who are working in this setup to see how these factors can be implemented which in turn improves the organizational performance.
Keywords: Total Quality Management, Organizational Performance, Shipping Industry.

Introduction

In the 21st century, businesses are facing increased competitiveness due to the constantly changing environment that made it inevitable for businesses to consider the variables that are significantly different from already investigated variables (Jamshidi et al., 2012). Besides, to attain sustained quality and customer satisfaction firms have focused on the factors of total quality management (TQM) (Mesfin, 2022; Thai & Jie, 2018). TQM is referred to as a philosophy dealing with facets of management, which coordinates all functions of an organization in an appropriate manner which leads towards achieving the organizational objectives and customer expectations (Kumar, Choisne, Grosbois & Kumar, 2009). Odoh (2015) and Kumar & Raut (2021) identified that TQM is a sum of viewpoints and methods for the management of corporations. Moreover, it offers the basis for continuous improvement hence it acts as strength of statistical analysis and recognizes the employee’s role at all levels in the direction of meeting the demands of a customer to remain competitive (Besterfield et al., 2011; Othman, 2021).

According to Ahmed & Lodhi (2015), the adoption of TQM practices can vary from industry to industry as well as small to large enterprises, public and private setup along with manufacturing towards service segment; the reason for adoption can lead to help in meeting the objective set by the organizations. Shipping is one of the most reliable and economical sources of transportation of a huge volume of goods. Sea transportation played an integral part in developing the economies of developed countries. Literature studied that shipping has been a significant factor in the development of modern human society. The carriage of 90% of the world trade is been facilitated through the shipping industry. The economical and safe transportation of finished goods and raw materials is not possible without shipping. The shipping industry is facing both the traditional challenges (Capital investment, return on investment) and new challenges such as environmental protection and new technology adaptation. To be competitive, the shipping industry needs continuous improvement in its processes.

Employment of practices linked to TQM can increase employee performance and organizational performance which in turn increases product quality and customer satisfaction while reducing the industrial operating cost (Alsaedi, 2014; Guzmán, Domínguez, & Brun, 2021). Complete implementation of TQM increases the performance, productivity, and profitability of the firm as specified by Montes et al. (2003). Awan, Raouf, Ahmad, & Sparks (2009) studied that the execution of TQM principles has a relationship with the performance of manufacturing firms in a positive way. Organizations are implementing TQM to encourage the participation of organizational members which results in increased efficiency of products and services (Brata & Soediantono, 2022; Temtime and Solomon 2002).
Researchers studied that companies can achieve economies of scale, efficient productivity, and content customers through the implementation of TQM. Initially, the concept of TQM has followed by Japan and then by US and European countries; however, the developing countries i.e., Pakistan, Bangladesh, and SAARC countries have not adopted the practices of TQM yet (Sadeghian, 2010). It illustrates that the impact of TQM implementation is yet to be identified in developing countries and that is a literature gap. Although TQM is studied thoroughly by numerous researchers but is not agreed upon unanimously on high-performing TQM factors (Calvo-Mora et al, 2014). According to Zhang (2000), the extent of TQM, implementation in industries determines the strengths and developments of those industries.

Keeping in view the current developments in the Gawadar shipping industry is the potential source of income for the Pakistani economy. Furthermore, Pakistan’s economy is still underdeveloped and needs improvement in its processes thus industry like the shipping industry of Pakistan helps in economic development by implementing significant TQM programs, tools, and practices. This study would help both the academicians and practitioners by providing empirical evidence regarding the best forming TQM aspects and assessing the impact on Organizational performance in the shipping industry of Pakistan.

TQM plays a dynamic part in managing as well as building products and services that fulfill the quality perspectives as it involves every stakeholder i.e., employees, customers, and suppliers which results in a productive mindset. TQM also emphasizes achieving excellence at the operational level of both the manufacturing and services firms (Wiengarten et al., 2013). Even though many organizations have implemented TQM but only a small portion of the firm could successfully achieve better organizational performance (Taylor & Wright, 2003). However, several companies in Japan and western countries have successfully enhanced their performance through the TQM approach, which leads the way to increased performance of other stakeholders and the whole community (Elhuni & Ahmed, 2014).

All the companies in the shipping industry of Pakistan are currently facing these challenges henceforth to increase their organizational performance through efficient employees these companies in the shipping industry of Pakistan need to adopt the TQM philosophy. The reason for conducting this study on the development of the TQM framework in the shipping industry of Pakistan is that currently, it is facing multidimensional challenges such as increased competition around the globe and decreased employee and organizational performance. The inefficiency in the performance of the companies arises mainly due to numerous reasons i.e., inappropriate management, poor commitment, weaknesses in training and development programs, and disregard of line managers (Aleqaby, 2013).

This research study has engrossed in the application of TQM in the shipping industry of Pakistan. The main reason for opting for this industry is its potential ability to act as a cause of income along with the mainstay of the Pakistan economy. In the 1950s, Pakistan had 14 ocean
ships which constitute Marchant marine and that number increased to 71 until the 1960s. The Karachi port was regarded as the best performing port and a huge number of ships arrive at the port for maintenance. In 1974, the nationalization of privately owned industries eliminated the competitive environment. The National Shipping Corporation of Pakistan, established in 1979, could not meet the requirements of customers. This inefficiency led to a decrease in several Marchant ships to 14.

In addition, the UN conference on trade and development reported that national vessels carry only 5% of seaborne trade as compared to the required 40%. However, after the recent development of the China Pakistan Economic Corridor (CPEC) with the cost of US$ 46 Billion, new opportunities are approaching. To capitalize on these opportunities shipping industry must be proactively ready so that maximum benefits could be achieved for the economy of Pakistan. Therefore, Pakistani shipping companies must implement new management techniques that improve organizational performance along with the employee performance so that better services could be provided to customers. TQM factors have been implemented by industrialized countries as a way to upsurge the performance of an organization from the stance of better goods and services in the direction of the customer's need fulfillment (Al-Khalifa and Aspinwall 2000).

Despite the global advancement in implementing the TQM concept, Pakistani companies are still in the initial stage of adopting the TQM concept. Furthermore, the literature review also suggests a limited number of studies exploring the TQM concept in the shipping industry of Pakistan so therefore this study would bridge the literature gap in this regard. Keeping in view the aforementioned reasons this study intends to progress an outline of implementing TQM in the shipping industry of Pakistan and its impact on employee and organizational performance. Therefore, based on the questions mentioned above; the following objectives are put forth to analyze the effects of TQM elements on the shipping industry of Pakistan.

- To scrutinize the effect of top management commitment, policy and strategy, training and development, communication and process management on the performance of an organization.

**Literature Review**

**Organizational Performance**

In simple terms, the actual yield or results of an organization that are assessed against its projected outputs is termed organizational performance. Organizational performance is measured based on numerous factors i. e. HRM, diversification, team composition, operational efficiency, acquisition and mergers, and external environment management (Rezaei, Khalilzadeh, & Soleimani, 2021; Wanasida, Bernarto, Sudibjo, & Pramono, 2021).
Organizational performance is seen as a multi-dimensional facet and it is influenced by different internal and external environmental factors. Measurement of organizational performance always remained controversial. Different researchers have identified different measurement methods of Organizational performance including the measurement matrix related to performance, the fallouts and determinants framework, the performance pyramid as well as the balanced scorecard.

**Total Quality Management**

Quality is well thought-out as one of the imperative elements of products and services that satisfy customers the most. Oakland (2004) defined quality as meeting customer requirements. TQM has evolved through four different stages related to quality such as inspection, control, assurance, and total quality management. After Second World War, the concept of quality inspection was introduced as a large workforce had assigned to numerous supervisors. Quality inspectors have been appointed to guarantee the product's quality. The second stage of evolution is quality control where standardized procedures have been developed for production. Any variation from standard processes is been observed and rectified. The third stage is quality assurance, which deals with the set of actions taken before the start of the production process for assurance of good quality. The TQM is the fourth stage of quality development. It has been adopted by US organizations in response to Japanese organizations. TQM not only deals with the production of goods and services but also takes care of all stakeholders of the company i.e., customers, employees, suppliers, and distributors.

Several researchers have contributed to understanding the concept and implications of TQM. Among them, William Edwards Deming is unanimously considered the founder of modern-day TQM. Deming presented a cyclical solution to problems i.e. Plan, Do, Check and Act (PDCA) (Galli, 2021). Juran, another TQM guru has focused on management’s role in adopting the new rules and procedures. He considered three important aspects of quality such as 1). QC deals with controlling any deficiency 2). Quality improvement means a proactive approach to minimize the deficiencies 3) Quality planning which means that planning based on feedback from stakeholders is very important. Feigenbaum was the first quality guru who used the term total quality control furthermore, he analyzed that it is the responsibility of the manager to handle both the technical and social issues. Feigenbaum identified four stages of quality control 1. Setting benchmark 2. Monitoring the achievement 3. Taking corrective measures 4. Continuous improvement. Finally, Kaoru Ishikawa is considered the father of quality circles due to his involvement in the 1960s. He emphasized that the optimum level of TQM required the participation of employees (Kriswanto & Yusuf, 2021).

**The TQM Factors Implementation**
To avail the maximum benefits of TQM, companies need to recognize the important factors of TQM as asserted by Hietschold et al. (2014). In addition, identifying the suitable TQM factors is a very complex phenomenon and it required rigorous study of literature review to agree upon the best-performing factors. Based on work done by Crosby, Deming, and Feigenbaum researchers have identified several TQM factors. Motwani (2001) identified the following important TQM factors i.e. leadership, Suppliers management, data as well as reporting with the quality department, training, process along with product management, and managing the relations with the employee.

Likewise, the following TQM factors are identified by Flynn et al. (1994) i.e. top management support, quality information, process management, product design, workforce management, supplier and customer involvement. Furthermore, other researchers have also identified different TQM factors including people and customers, managing partnerships with suppliers, communication-related to upgrading information, orientation concerning customer satisfaction along with management and improvement of external interface, strategic quality, teamwork structures, operational planning as well as measurement systems link to the quality and corporate culture towards the improvement of the quality. Top managers’ responsibility, top management vision, and customer satisfaction, customer needs and process feedback, strategic alignment and deployment of the needed policy, commitment and training of the employees by keeping the focus on continuous improvement on one side whereas a focus on fact-based processes.

Keeping in view the aforementioned factors, a general conclusion can be drawn that each company specifies its own set of TQM factors. Henceforth, this study emphasizes the factors that are related to Human Resource Management field and frequently used by different researchers, these factors include top management commitment, policy and strategy, training and development, communication, and process management.

**Top Management Commitment and Organizational Performance**

Top management commitment is defined by Dess and Lumpkin (2003) as a goal-oriented approach that concentrates on the implementation of the original vision. Top management commitment is the main TQM factor and it is considered by most the researchers in their models such as the European Foundation for Quality Management (EFQM) and Malcolm Baldrige National Quality Model (MBNQA) due to its effectiveness in the employment of TQM. Therefore, the literature studied leadership or top management commitment as one of the perilous reasons aimed at achieving organizational performance (Zairi, 1999).

Top Management possesses the capacity to keep the individuals motivated and enable them to take the obligations willingly for the fulfillment of organizational goals (Goetsch and Davis 2006). Leadership act as a role model for the employees to follow hence organizational targets
can be achieved through better-performing employees (Uygur & Sumerli, 2013). Nowadays businesses are changing rapidly, therefore leadership have to lead their employees for the achievement of organizational goals, and employee leadership also takes care of other stakeholders of the organization (Rao 2008). Successful leaders possess three major qualities first vision; leadership must determine a vision for the company. The second quality of leadership is ensuring the values, the leader always stands by its organizational values so that it can inspire its employees and other stakeholders. The third quality is continuous improvement, which learns from mistakes and always striving for the best (Evans 2005).

Accordingly, it is the concern of management at the top level to transform an organization into a TQM organization. This can be achieved through empowering the employees and setting their goals in line with organizational goals as explained by Seetharaman et al. (2006). During the 21st century, a new concept of a learning organization emerges, it can only be achieved through inculcating a learning culture in an organization. Learning must be aligned with organizational goals(Kumar, Paul, Misra, & Romanello, 2021). Top Management’s task is to change the attitude and behavior of its employees and the whole organization for the achievement of an optimum level of organizational performance (Kirst-Ashman, 2013).

**H1:** Top management commitment affects organizational performance.

**Policy & strategy and Organizational Performance**

Organizations should clear along with a well-communicated vision as well as the mission to implement TQM. This can be achieved through empowering the employees and hence sustained organizational performance (Dahlgaard et al., 1998; Dale et al., 2013). In addition, strategy and policy for setting the organizational goals is the very crucial factor for the successful implementation of TQM in any organization (Thiagarajan and Zairi, 1998).

Successful organizations design their policies and strategies according to their vision and mission while considering all stakeholders of the organization i.e., employees, customers, suppliers, and distributors as explained by Marosszeky (2006). Furthermore, Zairi (2006), Identified successful policy deployment based on regular control activities. It helps in identifying the strengths and weaknesses of organizational performance. Regular control can be achieved by focusing on results than taking corrective measures and developing new policies according to needs and requirements (Lee & Dale, 1998).

Nasseef (2009) identified that successful implementation of policies and strategies is vital for organizations that keep them right on track and aligned with their vision and mission. Moreover, the guideline can be developed by having a proper policy and strategy work for additional important features like focus on the customer, management of process and people, etc., towards effectually achieving the results and performance. Besides achieving
organizational performance, the policies and strategies in the TQM organization should also cater to the need and requirements of other stakeholders as well such as environmental protection for the community where it operates (Madan, 2006).

TQM organizations develop their strategies according to the feedback given by customers so that level of performance can be raised, as performance depends upon customer confidence. Japanese organizations develop their strategies based on fact that every employee is an expert in their job. This principle makes the individuals desirous to participate prominently in the success of the organization.

**H2:** Policy & Strategy affects organizational performance.

**Training and Development Link with Organizational Performance**

Farooqui et al. (2008) stated that training and development is a fundamental element of an organizational quality system as it enhanced its performance by many folds. Training and development are defined as basic or specific skills that an organization offers to develop in their personnel to increase organizational performance, and customer satisfaction and decrease operational cost and time (Tsang and Antony 2001). Furthermore, continuous improvement in the working of employees required continuous training and development programs. Oakland (2004) stated that with the advent of new technology, the demand for training and development of employees increases in order enhance the skills of employees according to modern technology.

Implementation of the TQM approach becomes easy due to training and development programs as without proper training the focus of teams will be lost. Training and development enhance the employee’s awareness of policies and procedures of the organization which ultimately leads to enhanced capability to solve the production problems. It also shapes the attitude and behavior of employees towards quality culture in an organization (Dale et al., 2013). Likewise, the entire TQM program will fail if proper training is not involved in it because appropriate training enables the employees to understand the processes that develop a positive attitude towards the job. Employees become more aware of their tasks and they may help other staff to overcome obstacles (Vermeulen and Crous, 2000).

**H3:** Training & Development affects organizational performance.

**Communication and Organizational Performance**

A vital role is played in the presence of clear communication in creating effective total quality management of the organization as accurate and timely information influences the decision-making process. Bunse et al. (1998) stated that effective communication enhances process control that ultimately results in better quality. Open communication is essential among all
functional areas and departments for implementing quality systems in any organization. Essential information must be provided to individuals at all levels because it increases the employee’s performance (Truss, 2001).

Communication depends upon interaction with employees about policies, procedures, measures, and measures taken by the organization therefore organizations must communicate clearly with their employees regarding goals and targets. This open communication led the way to less bureaucratic processes and make the individuals clear about their roles and tasks (Li et al., 2006). In TQM companies communicate at right time among different parties’ which results in achieving successful TQM. Communication act as a key factor in developing trust and a knowledge-sharing environment that enables the employees to meet the customers’ requirements efficiently which in turn positively affects the performance of a firm (Sila and Ebrahimpour 2002). Hence, communication helps in developing mutual trust across the teams and their goals become integrated and aligned with organizational goals.

Charantimath (2011) classified communication into three namely downward, upward and lateral communication. In addition, downward communication is conducted through presentations and discussions by the managers with their subordinates to make them understand about principles of TQM. Upward communication allows employees to make suggestions directly to their managers about TQM implementation. It should be considered very important by management to solve the problems effectively. This type of communication is very helpful in building the relationship between management and employees. Lateral communication is where departments communicate with each other.

H4: Communication affects organizational performance.

Process Management and Organizational Performance

Tsim et al. (2002) defined process management as managing the system of processes and their integration for better organizational performance. The entire system of processes must be integrated. Process management improves employees’ productivity, and quality levels and eradicates inadequacy in an organization (Dahlgaard et al., 2007). Ludwig-Baker (1999) studied that organizations with better-managed processes achieve more proficiency in performance. High-performing companies are now developing their processes based on a customer-driven approach instead of a functional-driven approach (Zairi 1999). TQM organizations do not focus on formal structures rather they are considering establishing process management teams to find the solution for organizational problems furthermore they are educating the employees regarding organizational processes and their responsibilities (Kanji, 2007). Employee performance is characterized by tasks they are performing in their organizations. If new roles and tasks have been created for them, they will emphasize...
processes. This will lead to change in organizational culture. Hence, process management is very important in the implementation of TQM in an organization.


**Framework of the Study**

![Diagram of Framework of the Study]

**Figure 1**: Framework of the Study

**Research Methodology**

A deductive research approach was used since the hypotheses were developed. The data was collected for one time period only therefore this research is cross-sectional in its tendency. The data were collected within two months (July 2021 to September 2021). The research was quantitative in nature and the research type was explanatory. The population of the current research was managers of the shipping industry of Pakistan located in Karachi. Primarily 250 questionnaires were disseminated among the respondents for the collection of data of which 206 were received complete. On the other side, convenience sampling was used to congregate the data based on the availability of data. As per the suggestion of Sekaran (2003) in order to conduct a study sample size of 30 to 500 is considered appropriate. Thus, the sample of our study is good enough for this research. The data collected through the questionnaire were analyzed by software SPSS version 20. Descriptive, reliability, as well as correlation, and regression tests, were run to examine the data. Close-ended, structured questionnaires were used for the data collection on 5 points Likert scale which represents (1 = Strongly Disagree, 5 = Strongly Agree) as shown in the subsequent table.

**Table 1: Research Instrument**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Authors / Source</th>
<th>No. of items</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMC</td>
<td>Androwis, Sweis, Tarhini, Moarefi, &amp; Amiri (2018)</td>
<td>5</td>
<td>1-5</td>
</tr>
</tbody>
</table>
Results

Descriptive Statistics

Descriptive statistics present the summary of sample size and related observations. It states the basic details of data such as maximum value, minimum value, mean value, and data’s standard deviation. The descriptive statistics of data collected from the employees of the shipping industry of Karachi, Pakistan in which 66% of respondents have 16-20 years of experience whereas 24.8% of respondents have 11-15 and 9.2% have 6-7 years of experience respectively.

The descriptive statistics of the variables are mentioned in table 2. It portrays the data of minimum; maximum and average values of each variable and it also depicts their mean and standard deviation values respectively. The mean value for TMC is 3.69 with a standard deviation of 0.821. P & S has a mean value of 3.79 & a standard deviation of 0.773. T & D is observed to have a mean value of 4.04 with a standard deviation of 0.735. Whereas, Communication and PM have a mean value of 3.88 and 3.84 and a standard deviation of 0.784 &. 0.729 Respectively. In addition, OP has a mean value of 3.97 & a standard deviation of 0.817.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Commitment</td>
<td>1</td>
<td>5</td>
<td>3.69</td>
<td>0.821</td>
</tr>
<tr>
<td>Policy and Strategy</td>
<td>2</td>
<td>5</td>
<td>3.79</td>
<td>0.773</td>
</tr>
<tr>
<td>Training and Development</td>
<td>1</td>
<td>5</td>
<td>4.04</td>
<td>0.735</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
<td>5</td>
<td>3.88</td>
<td>0.784</td>
</tr>
<tr>
<td>Process Management</td>
<td>1</td>
<td>5</td>
<td>3.84</td>
<td>0.729</td>
</tr>
<tr>
<td>Organizational Performance</td>
<td>1</td>
<td>5</td>
<td>3.97</td>
<td>0.817</td>
</tr>
</tbody>
</table>
Reliability Analyses

The reliability Analysis test forecasts whether the questionnaire has reliability. If the reliability test value of Cronbach alpha is > 0.70, “the questionnaire is well-thought-out reliable. However, if the value will be < 0.70, afterward the decision towards the constructed questionnaire is specified as not reliable. Accordingly, a summary of the reliability analysis of each variable is undermentioned.

Table 3: Summary of Reliability Analyses

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Commitment</td>
<td>0.891</td>
<td>5</td>
</tr>
<tr>
<td>Policy and Strategy</td>
<td>0.807</td>
<td>6</td>
</tr>
<tr>
<td>Training and Development</td>
<td>0.838</td>
<td>10</td>
</tr>
<tr>
<td>Communication</td>
<td>0.770</td>
<td>4</td>
</tr>
<tr>
<td>Process Management</td>
<td>0.857</td>
<td>13</td>
</tr>
<tr>
<td>Organizational Performance</td>
<td>0.876</td>
<td>4</td>
</tr>
</tbody>
</table>

Hypotheses Testing

Accordingly, the sequence of analysis for the undermentioned hypothesis shall be as follows:

a. Pearson’s Correlation Test.
b. Regression Analysis.

Correlation analysis explains the negative or positive relationship between two variables. Its values range from -1 to 1 while values near to 1 show strong positive relationships and values approaching -1 determine the inverse relationship of variables however 0 value shows no correlation. Pearson’s correlation analysis is the most common method used by researchers to calculate the correlation coefficient of two variables. The below-mentioned table indicates a significant relationship among the study variables as the sig value is less than 0.05.

Table 4: Pearson Correlations (N=206)

<table>
<thead>
<tr>
<th></th>
<th>TMC</th>
<th>P&amp;S</th>
<th>T &amp;D</th>
<th>C</th>
<th>PM</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P&amp;S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>.894**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As per the result, a strong correlation exists as the value of R is 0.948 whereas the 89.9% variation in organizational performance is explained by the specified independent variables of the study.

Table 5: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.948*</td>
<td>.899</td>
<td>.896</td>
<td>.263</td>
</tr>
</tbody>
</table>

The below table specifies that the model fit with the data set as the sig value is < 0.05. Thus, the data is fit for further analysis.

Table 6: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>122.883</td>
<td>5</td>
<td>24.577</td>
<td>354.146</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>13.879</td>
<td>200</td>
<td>.069</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>136.762</td>
<td>205</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As per the outcomes, a significant, as well as a positive effect, is present between independent (top management commitment, training and development, communication and process management and dependent variable (organizational performance) as the sig value is less than 0.05. While a positive impact is found among all the variables except policy and strategy which has a negative impact on organizational performance.
Table 7: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.353</td>
<td>.113</td>
<td>-3.111</td>
</tr>
<tr>
<td></td>
<td>TMC</td>
<td>.349</td>
<td>.052</td>
<td>.351</td>
</tr>
<tr>
<td></td>
<td>P &amp; S</td>
<td>-.334</td>
<td>.063</td>
<td>-.316</td>
</tr>
<tr>
<td></td>
<td>T &amp; D</td>
<td>.748</td>
<td>.053</td>
<td>.673</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>.169</td>
<td>.045</td>
<td>.162</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>.159</td>
<td>.046</td>
<td>.142</td>
</tr>
</tbody>
</table>

- Dependent Variable: OP

Discussion

This study is particularly attentive to identifying the execution of TQM practices that influence organizational performance in the Shipping Industry of Pakistan. This indicates that the managers working in the Shipping Industry of Pakistan are cognizant of the standing of the embedding of the TQM practices.

Whereas the implementation of TQM aspects such as communication, training, and development, TMC, and PM have a positive effect on improving the performance of the shipping industry, respectively. The results are compatible with studies of the Dahlgaard et al. (2007) for process management; Sila & Ebrahimpour (2002) for communication; Tsang & Antony (2001) for T & D; Kirst-Ashman (2013) for TMC whereas for policy and strategy the fallouts are not in line with studies of Dahlgaard et al. (1998) and Dale et al. (2013).

Results also show that the policy and strategy have a negative impact. This means that policy and strategy must be implemented by keeping the strategic aspect and consensus of the employee to improve the performance of an organization. Therefore, by adopting TQM in the shipping industry continuous progress could be achieved to improve overall performance in addition to increased employee and customer satisfaction so that the industry can compete in global markets with high-quality standards.

Conclusion

Researchers have welcomed the concept of TQM in the last few decades very warmly, particularly in developed countries while Pakistan and other developing countries did not pay much focus on this aspect of Management. Unlikely developing countries empirical studies on TQM have dominated the literature in the context of advanced countries. On one hand, numerous studies have identified the positive association between TQM factors and a firm’s
performance while on the other hand, considerable researchers denied this relationship. This nonuniformity amongst the literature indicates the need for further investigation in this area of research so that best-performing TQM factors could be identified.

**Recommendations**

This study may be considered one of the initial studies on TQM factors and their influence on the performance of organizations in Pakistan, particularly in the shipping industry of Pakistan. Therefore, it should act as a litmus assessment for TQM implementation.

- The shipping industry needs to put focus on the above-mentioned prospects to flourish in the competitive scenario. Thus, this study provides evidence to develop strategies for managers who are working in this setup to see how these factors can be implemented which in turn improves the organizational performance to its highest level.
- Top management must need to develop policies and strategies that are in favor of the industry as well as support employees to function effectually through the provision of training and development along with improvement in the process via using an effective communication system which in turn improves the organizational performance.
- Therefore, adopting TQM practices in the shipping industry continuously could be led to achieving the designated goals to improve overall performance and be able to compete in global markets with high-quality standards.

**Research Limitations and Future Research**

Numerous limitations are observed in the design and planning of this research study.

- This study is cross-sectional due to which researchers become unable to study the consequence of TQM elements on performance over one point in time. Thus, future longitudinal studies might be useful for the true association between TQM elements and Organizational Performance.
- Besides this study is conducted only on the shipping industry of Pakistan so therefore studies on different sectors will help analyze the relationship thoroughly.
- Furthermore, other TQM factors can be analyzed to study other dimensions of TQM as well.

**References**


http://www.webology.org


