

ISSN 2072-0149

The AUST

JOURNAL OF SCIENCE AND TECHNOLOGY

Volume - 6 Issue - 1 & 2
January 2014 & July 2014
(Published in May 2017)



**Ahsanullah University of
Science and Technology**

EDITORIAL BOARD

Prof. Dr. Kazi Shariful Alam
Treasurer, AUST

Prof. Dr M.A. Muktadir
Head, Department of Architecture, AUST

Prof. Dr. Kazi Shariful Alam
Head, School of Business, AUST

Prof. Dr. Md. Mahmudur Rahman
Head, Department of Civil Engineering, AUST

Prof. Dr. S. M. Abdullah Al-Mamun
Head, Department of Computer Science & Engineering, AUST

Prof. Dr. Satyendra Natyh Biswas
Head, Department of Electrical & Electric Engineering, AUST.

Prof. Dr. Ahmed Jalal Uddin
Head, Department of Textile Engineering, AUST.

Prof. Dr. AFM Anwarul Haque
Head, Department of Mechanical and Production Engineering, AUST.

Prof. Dr. Md. HamidurbRahman Khan
Head, Department of Arts & Sciences, AUST

EDITOR

Prof. Dr. Kazi Shariful Alam
Treasurer
Ahsanullah University of Science and Technology

An Assessment of the Relationship between Total Quality Management and Organizational Performance: A Study on Textile and RMG Industry of Bangladesh

Parul Akhter¹

Abstract: This paper presents total quality management (TQM) and its impact on organizational performance. For identifying TQM in relation to organizational performance, the study searches to understand TQM in a broader perspective. It also highlights the relationship between TQM and organizational performance. Through survey methods data have been collected for this paper from 250 respondents of 100 selected Textile and RMG firms in Bangladesh. The study employed Descriptive Statistics, bi-variate Pearson Correlation, and Non-parametric Tests for analysis collected data. Findings suggest that there is positive and significance relationship between TQM and organizational performance. Researcher has also used grouping variable as age of the respondents or employees and found that there are no significant impacts on TQM implication in Textile and RMG industry. This paper provides guidelines for managers and decision makers to perform their regular responsibilities through TQM.

Key words: Total quality management (TQM), Textile and RMG industry, organizational performance, relationship and impact.

Introduction

Textile and Readymade garment (RMG) sector plays an important role to create employment opportunity in Bangladesh. It has a great contribution to develop our economy but this sector faces various barriers to maintain organizational performance (Mahmud R. B., 2012). TQM is an approach that helps the organization develops their performance. TQM mainly focuses on customer satisfaction (Islam & Haque, 2012; Daniel et al. 2006). TQM technique provides proper support to maintain customer satisfaction and improve competitive advantages of an organization. By applying a successful TQM approach RMG industry can maintain the excellence of products and services (Pinho, J.C., 2008; Ahmad et al. 2012). TQM provides support for employees to develop their skills, adoption of modern technology, and producing of quality products (Shahid Mehmood, et al. 2014; Mădălina et al. 2013; Daniel et al. 2008). RMG industry has accepted TQM principles for achieving competitive advantage. TQM approach helps the organization improve product quality and attain superior profitability (Sureshchandar et al. 2001; Ana et al. 2008; Deming 1986). TQM is a vital factor to maintain firm performance (Masood et al. 2014; Arawati et al. 2011; Abdul et al. 2013). It deals with some management principles i.e. leadership, employee motivation, continuous improvement process, effective management process, learning and training, cooperation and customer satisfaction for developing firm performance. These management principles have significant correlations with TQM application and organizational performance. (Veeraphat et al. 2013; Ahmad et al. 2014; Huarng et al. 2002).

¹ Assistant Professor, School of Business, Ahsanullah University of Science and Technology, Dhaka.

Textile and RMG Industries in Bangladesh

In 1971, the RMG sector of Bangladesh began to grow and in 2012-13, the growth of textile and RMG industries were continued and total number of industry were 5600. Moreover, this sector's total employed people were 4 million and earned 21515.73 million US dollar (<http://bgmea.com.bd>). Bangladesh exported RMG products which is 77.10% of total exported items (Mahmud R. B., 2012). Bangladesh has all opportunities to expand this sector. Textile and RMG industry require some important initiatives, such as, introducing variety of products, and increasing volume of production, producing quality of products, product innovation as well as process innovation. This sector needs more efforts, less cost to improve the product quality. TQM may provide proper support for maintaining organizational performance.

Literature Review

Masood UI Hassan et al. (2014) conducted a study about TQM practices in the Textile Sector of Pakistan. They collected data through questionnaire method. The data gathered from 175 executives of Textile Sector of Pakistan. They used SPSS for analysing by factor, reliability, and correlation and regression analysis. The results showed positive and special effects with TQM and organizational performance. The study provided guidelines for top management to maintain quality of management by using TQM. The aspects of TQM developed employee & customer satisfaction, operational efficiency, product & service quality, social responsibility and monetary performance. Salman Khalid et. al., (2011) examined the relation between TQM and organizational performance in the Pakistani textile manufacturing industry. They applied questionnaire and observation method to collect the data about TQM. The results found that TQM approach is mainly adopted by large organizations, and small and medium enterprises ignored it. They suggested SMEs need to adopt TQM techniques for developing quality of product or services. Muteb (2012) analyzed TQM practices in the educational sector. This study identified significant variables of TQM. The data was collected from 125 faculty members of King Saud University through using questionnaire. Inferential statistics was used to interpret the collected data. The researcher showed mean's analysis and ANOVA (abbreviation). He represented the correlation of scientific resources managing and planned excellence was extensively high with TQM practices. The findings showed that the execution of TQM improve the quality of the faculty.

Ana Abrunhosa, Patrícia Moura E. Sa (2008) studied executing scope of TQM that is acquired for innovation of products. Their research site was the Portuguese footwear industry. They collected empirical data from a selected organisation's experts. Findings supported that TQM philosophy have a positive relationship with the technological innovation. Another research made by Prajogo et al. (2008). They conducted an empirical study on the effectiveness of TQM for research and development purposes in the Korean manufacturing firms. They emphasized relationship between TQM practices and product quality and product innovation. The data gathered from 130 R & D divisions. The researchers used two research questions: one for pertaining to the application of TQM approaches in R & D atmosphere and other one for the consequence of TQM on R & D concert. They applied structural equation model for analysis data. The findings explained the significant positive relationships between TQM and R & D performance, TQM emphasized product quality and product innovation. Nurazree Mahmud et al. (2014) analyzed the issues of the TQM and SME performance. These research developed hypothesis and provided conceptual framework about TQM and SMEs excellence. The researcher identified that TQM technique provides support to develop SMEs performance. Prajogo et al. (2006) examined the TQM implements that highlight the affiliation among organization approach and organizational performance. Researchers collected data through a survey of 194 senior or middle levels managers of Australian organizations. They used structured equation model to analysis the collected data. They identified that TQM technique

helps organization to innovate the product quality, product innovation as well as process innovation.

Firm performance is well-defined as the production of the firm's actions or accomplishments of firm's aims. The firm's performance has three dimensions: operational efficiency, financial benefits and managerial efficiency (Venkatraman et. al., 1986). Organizational performance is two dimensions i.e. judgmental performance: product or service quality, customer approval and retaining, objective performance: profit, sales growth, market share and competence (Agarwal et al. 2003; Guo, 2002).

In Bangladesh, some researchers have undertaken about relationships with TQM and organizational performance but those are in very small scale. Other researchers did not consider welfare activities and age of employees as a factor which might affect the relationships between TQM and organizational performance.

Objective of the Study

This study looks for to investigate the relationships between TQM and textile and RMG industry performance in Bangladesh. Following are the explicit objectives –

- ◆ To assess the TQM indicators among textile and RMG industry of Bangladesh.
- ◆ To evaluate the TQM practices among textile and RMG industry of Bangladesh.
- ◆ To recognize whether any relationship exists among TQM practices and textile and RMG industry performance.
- ◆ To determine if there any significant relationship between TQM practices and textile and RMG industry performance in Bangladesh.
- ◆ To identify whether any relationship exists between age of the employees and TQM implementation.

Methodology of the Study

For this study both secondary and primary sources of data and information have been used. As secondary sources of data national and international standard journals, publications, and websites of various authors have been studied. The studied researches are of both qualitative and quantitative in nature.

For collection primary data survey method has been used. This research has used 5-Point Likert Scale for each statement. Likert Scale modifies as “strongly disagree” to “strongly agree”. This indicates a degree of agreement of respondent's statements. This associates to the required aim (Malhotra K. Naresh, 2006). Primary data has been collected from the export-oriented Textile and Readymade Garment Industry through questionnaires. Five questions enquired to respondents for demographics view points and 47 questions (variables) arose for assessment and analysis of TQM implementations and for measuring organizational performance 6 variables were used. Respondents were asked to tick the concerned scale point to express their experience.

The data were analyzed using SPSS. The study used Cronbach's Alpha to test the scale reliability of all the measures variables. For understanding the nature of data, Descriptive Statistics is used. Pearson Correlations estimate for bi-variate correlations used as non parametric test.

Sample Design and Sample Size for the Study

The research mainly took place in Dhaka city because Dhaka is the capital city of Bangladesh, where most of Textile and RMG industry are situated. The population of the research is manager and assistant manager of Textile and RMG industry, because they are responsible for TQM implementation. The sample includes 100 Textile and RMG factories and 250 respondents were interviewed. Textile and RMG factories have been selected through purposive sampling method because it is a way for selecting specific people or employees within the population for a particular purpose. From each factory two or three managers or assistant managers have been selected. Researcher has fixed inclusion criteria to select the respondent. Exclusion criteria is 35 to 50 years old and having more than 2 years job experiences. I have used 250 self-administered questionnaires to collect the primary data.

Limitations of the study

There has been a great challenge for the researcher to enter in the textile and RMG industry. Researcher has collected data through snow-ball sampling technique to solve this problem. This problem has been solved through a repeated communication with the authority as well as respondents or employees.

Analysis

Construct Validity and Reliability of Survey Data:

The SPSS 20 output gives case processing summary. It shows valid 250 cases and excludes 2 cases. It also provides different sets of values about scale. The overall scale measuring instrument is Cronbach's coefficient alpha. Cronbach's alpha range is between 0 - 1. 1 represents ideal internal reliability and 0 is as no internal reliability (Pallant, et. al., 2005). In this study, there are 54 dimensions of information.

Table 1: Case Processing Summary

		N	%
Cases	Valid	250	99.2
	Excluded	2	.8
	Total	252	100.0

a. List wise deletion based on all variables in the procedure.

Table 2: Reliability Statistics for Overall Dimension

Cronbach's Alpha	N of Items
.895	54

The value of Cronbach's alpha is .895 that means the internal Cronbach's and reliability of construct is accepted, which imply that there is internal consistency. The research calculates scale of reliability of each construct.

Descriptive Analysis:

The descriptive analyses of each variables of TQM are shown in table 3, organizational performance and categories variables mean and standard deviation.

Table 3: Descriptive Statistics

	N	Mean	Std. Deviation
Customer satisfaction	250	4.0320	.81093
Managerial issues	250	3.9960	.64315
Motivate the employees	250	4.0080	.55963
Welfare activities	250	4.0880	.69440
Quality improvement goals	250	3.9600	.73796
Teamwork and training of the employees	250	3.6800	.86056
Continuous process - improvement.	250	4.0560	.65619
Measure the employee's - performance.	250	3.7920	.79452
Benchmarking to improve - competitive advantage	250	3.9640	.90220
Organization performance	250	3.8680	.68443
Age	250	44.5000	3.52530

TQM is measured by 9 indicators, such as customer satisfaction, managerial issues, motivation of the employees, welfare activities, quality improvement goals, teamwork and training of the employees, continuous process improvement, measurement of the employees performance, benchmarking to improve competitive advantage. Category variable is age for the employees. This analysis also represents organizational performance. The mean for customer satisfaction is 4.0320 with a standard deviation (SD) of .81093. It seems that customer satisfaction plays an important role to implement TQM in an organization. The mean for managerial issue is 3.9960 and a SD of .64315, it means that management is very concerned about managerial issues for executing TQM in a firm. The mean value is 4.0080 and a SD of .55963 for motivation of employees. It represents that employee motivation is an important element for applying TQM technique. The mean for welfare activities is 4.0880 with a SD of .69440. It appears that welfare activities require for developing TQM in a textile and RMG industry. The mean value is 3.9600 for quality improvement goals with a SD of .73796. It is found that quality improvement goals are concerned for executing of TQM. Team work and training of employees and the mean value is 3.6800 with a SD .86056. It focuses that team work and training of employees are required for applying TQM approach. The mean for continuous process improvement is 4.0560 with a SD of .65619. It seems that continuous process improvement plays an important role for implementing TQM in a firm. The mean value for measurement of employee performance is 3.7920 with a SD of .79452. It presents that measure of the employees' performance is necessary for implementing TQM. The mean for benchmarking to improve competitive advantage is 3.9640 with a SD of .90220. It appears that benchmarking to improve competitive advantage is an important indicator or element for implementing TQM in a firm. The mean value for organizational performance is 3.8680 with a SD of .68443. It seems that TQM provides support to maintain organizational performance.

According to respondents, it is revealed that TQM has significant impact on organizational

performance. TQM provides proper support to improve organizational performance. Moreover, it presents that most of the respondent's average age is 44.5 years. It appears that they are experienced employees or respondents of firms.

The Relationships with TQM and Organizational Performance:

Correlation analysis has been arrived out to see the linear association among variables. The positive sign of correlation value shows positive relation between the variables and the negative sign represents the negative relationships between the variables. Cohen (Cohen, 1988) suggested the following guidelines for correlation coefficient:

Weak Correlation $r=.10$ to $.29$; Moderate Correlation $r=.30$ to $.49$; and

Strong Correlation $r=.50$ to 1.00

Table 4: Correlation Matrix

	CS	MI	MoE	WA	QIG	T&T	CPI.	EPM.	BM	OP
CS										
MI	.693**									
MoE	.079	.134*								
WA	.344**	.343**	.195**							
QIG	.868**	.719**	.088	.407**						
T&T	.147*	.027	.022	.067	.176**					
CPI	.548**	.543**	.043	.421**	.643**	.139*				
EPM	.154*	.211**	.067	-.032	.164**	.008	.138*			
BM	.172**	.242**	.144*	.011	.197**	-.025	.119	.718**		
OP	.833**	.647**	.118	.396**	.864**	.167**	.562**	.163**	.194**	

**Correlation is Significant at the 0.01 level (2- tailed)

* Correlation is Significant at the 0.05 level (2- tailed)

Correlation matrix (Table 4) represents that correlation between TQM indicators and organizational performance. The r value is .693** for customer satisfaction (CS) and managerial issues (MI). It seems that customer satisfaction and managerial issues have strong correlation and the association is statistically significant. The value of r is .134* for managerial issues (MI) and motivation of employees (MoE). It appears that managerial issues and motivation of employees have weak correlation but statistically significant. The r value is .195* for motivation of employees (MoE) and welfare activities (WA). It looks that motivation of employees and welfare activities have weak correlation but statistically significant. The

r value is .407** for welfare activities (WA) and quality improvement goals (QIG). It seems that these two variables have strong correlation and it is statistically significant. The value of r is .176** for quality improvement goals (QIG) and teamwork and training (T&T). It shows that there has weak and statistically significant correlation. The r value is .139* for teamwork and training (T&T) and continuous process improvement (CPI). It means that these two variables have weak and statistically significant correlation. The value of r is .138* for continuous process improvement (CPI) and employees performance measurement (EPM). It presents that these two variables have weak correlation but statistically significant. The r value of .718 for employees' performance measurement (EPM) and benchmark (BM). It appears that employees' performance measurement and benchmark have strong and statistically significant correlation. The r value is +.833** for organizational performance (OP) and customer Satisfaction (CS), the r value is +.647** for organizational performance (OP) and managerial issues(MI), the r value is +.864** for organizational performance (OP) and quality improvement Goals (QIG) and the r value is +.562** for organizational performance (OP) and continuous process improvement (CPI). These seem that strong positive and statistically significant correlations have for four indicators. The best predictor of organizational performance is continuous process improvement goals (CPIG) with a sample correlation of +.864**. The value of r is +.396** for organizational performance (OP) and welfare activities (WA). It appears that organizational performance and welfare activities have a moderate positive and statistically significant correlation. The r value is +.167** for organizational performance (OP) and Teamwork and training (T&T), the value of r is +.163** for organizational performance (OP) and employee performance measurement (EPM), the r value is +.194** for organizational performance (OP) and benchmark (BM) and the value of r is +.118 for organizational performance (OP) and motivation of employees (MoE). It represents that weak positive and statistically significant correlations have for three variables relationships. Furthermore, the lowest predictor of organizational performance is motivation of employees with a sample correlation coefficient of +.118.

Therefore, most of the TQM variables or indicators have strong relations with organizational performance by customer satisfaction, managerial issues, quality improvement techniques, and continuous process improvement. On the other hand, some TQM variables have weak correlations with organizational performance such as: employee motivation, teamwork and training, employee performance measurement and benchmarking to improve competitive advantage. Moreover, welfare activities for employees, customers and environment have moderate correlation with organizational performance. Positive correlations have for nine variables or indicators of TQM as well as organizational performance.

Nonparametric Test:

Non parametric test has been performed to test whether different category is same over different age. Independent –Samples Kruskal- Walls test has been performed for testing the following hypothesis.

Hypothesis tests are performed by using Independent Samples Kruskal-Wallis test. The results are shown in table 5. It reveals that the data distributions focus on similar across grouping of age at 5% level of significance.

Table 5: Hypothesis test for using Independent Samples Kruskal-Wallis Test

	Null Hypothesis	Sig.	Decision
1	The distribution of Customer satisfaction is same across categories of Age.	.258	Retain the null hypothesis
2	The distribution of Managerial issues is same across categories of Age.	.359	Retain the null hypothesis
3	The distribution of Motivate the employee same across categories of Age.	.518	Retain the null hypothesis
4	The distribution of Welfare activities is same across categories of Age.	.421	Retain the null hypothesis
5	The distribution of Quality improvement goals is same across categories of Age.	.208	Retain the null hypothesis
6	The distribution of Team work and training of employees is same across categories of Age.	.590	Retain the null hypothesis
7	The distribution of Continuous process improvement is same across categories of Age.	.226	Retain the null hypothesis
8	The distribution of Measure employees' performance is same across categories of Age.	.357	Retain the null hypothesis
9	The distribution of Benchmarking to improve competitive advantage is same across categories of Age.	.123	Retain the null hypothesis
10	The distribution of Organizational performance is same across categories of Age.	.351	Retain the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Discussion

The primary objective of this paper is the assessment of relationship between TQM and organizational performance. TQM indicators are customer satisfaction, managerial issues, motivation of employees, welfare activities, quality improvement goals, teamwork and training of employees, continuous process improvement, measurement of employee performance, benchmarking to improve competitive advantage. It also finds, age of respondents or employees impact on TQM implementation in an organization.

Customer satisfaction means fulfillment of customers' requirements as well as needs of customers. It has a significant role to improve organizational performance. This result is consistent with Agus (2004) and Brah et al. (2002), they reported that customer satisfaction positively affects organizational performance. In Bangladesh, RMG industry tries to achieve customer satisfaction through quality, performance, features, warranty, and pricing of products. Customer satisfaction is directly related with organizational performance.

Effective utilization of all resources is depending on management issues. It has a positive correlation with organizational performance. This result is similar with Sit et al. (2009). Managers try to improve their regular activities. They provide proactive decision, consider first issue, emphasis to improvement, and focus organization development. It has a great impact to raise organizational performance.

Leadership definitely provides proper support the employees and encourage their initiatives. Textile and RMG industry use different techniques to motivate their employees such as: controls, empowerment, supportive environment, and trusting relationship, encourage and recognize team effort, encourage and recognize competition of the employees. Motivation of employees play significance role to increase organizational performance. It has a positive relationship with operational performance. This result is consistent with Yang (2006).

Welfare activities help for developing the organization reputation and it has a positive relation with firm performance. This result is similar with Yang (2006). RMG industry provides support for their employees, customers, environment and also social development.

A quality improvement goal is a technique of TQM. It has a strong significant involvement to maintain organizational performance. This result is consistent with Sit et. al., (2009). They represented that it provides proper support for achieving quality performance of an organization. Textile and RMG industry provide initiatives to improve quality improvement goals through select quality basis suppliers, importance to the employees, empower employees and prepare documentation of customer views.

Teamwork indicates a group of people actively working together to attain their target (Decenzo and Robbins, 1999). This result is similar with Yusuf (2007) and Reed et al. (2000). They concluded that teamwork and training have a positive correlation with organizational performance Textile and RMG industry promote teamwork, train and reward employees to develop organizational performance.

Continuous process improvement has a significant role with organizational performance. This result is similar with Fuentes et. al., (2006) and Sadikoglu et. al. (2010). Textile and RMG industry present proper support to maintain continuous process improvement by eliminate waste and rework, cycle time reduction, as well as use effective process to identify customers' needs.

Organizations use tools and techniques for measure of employee performance through evaluation, sufficient information as well as standards of performance. It has a consequence of the organizational performance. Its result is consistent with Sit et. al., (2009)

Textile and RMG industry exercise benchmarking to improve competitive advantage through innovate of production, a statistical tool to assess the organizational performance as well as incorporate learns. It has a significant role to develop organizational performance. This result is similar with Yusuf et. al., (2007). They found that benchmarking for developing the organizational performance and to attain competitive advantage have positive correlations.

TQM approach plays similar effect on grouping as age of employees or respondents. Employees' age have no direct relation with the implementation of TQM approach in an organization. Employees try to execute TQM techniques to maintain an organizational performance.

Conclusion

This study finds the good responses from respondents or employees about TQM's nine indicators or elements. TQM has important effects on organizational performance. Besides, it presents that most of the respondents are experienced.

This paper also identifies positive relationships with TQM's nine indicators and organizational performance. Positive and statistically significant correlations have been shown between for customer satisfaction, managerial issues, welfare activities, quality improvement

goals, teamwork and training, continuous process improvement, employee performance measurement as well as benchmarking for improving competitive advantages and firm performance. Moreover, the research finds that age of the respondents or employees have not any impact on TQM implementation in the firm.

Textile and RMG industry may consider TQM techniques through improve product quality, proactive to management issue, motivation of employees, welfare activities, priority to the quality improvement goals, team work and training of employees, continuous process improvement, employees' performance measurement and benchmarking to improve competitive advantage. These all factors focus on customer satisfaction to improve organizational performance. Most of the employees are illiterate in Textile and RMG industry. They require proper training to improve their quality. Textile and RMG industry may more concern about employee motivation, team work and training of employees, measurement of employee performance and benchmarking to improve competitive advantage. In addition, this paper presents deeper information for managers, decision makers and employers about the importance of TQM approaches and proper execution of TQM in the Textile and RMG industry. Managers need understand and implementation of TQM to accomplish their regular activities.

References:

1. Abdul Talib Bon, Esam M.A. Mustafab (2013), "Impact of Total Quality Management on Innovation in Service Organizations: Literature review and New Conceptual Framework", *Procedia Engineering*, 53, pp. 516 – 529.
2. Agarwal, S., Erramilli, M.K. and Dev, C.S. (2003), "Market orientation and performance in service firms: Role of innovation", *Journal of Services Marketing*, 17(1), pp. 68-82.
3. Agus, A. (2004), "TQM as a focus for improving service performance and customer satisfaction: an empirical study on a public service sector in Malaysia", *Total Quality Management and Business Excellence*, 15 (5-6), pp. 615-628.
4. Ahmad, M.F. a, Zakuan, N.b ,Jusoh, A.c and Takala, J. D (2012), "Relationship of TQM and Business Performance with Mediators of SPC, Lean Production and TPM", *Procedia - Social and Behavioral Sciences*, 65, pp. 186 – 191.
5. Ahmad, M.F. a, Zakuan, N.b ,Jusoh, A.c ,Yusof, S.M.d and Takala, J. (2014), "Moderating Effect of Asean Free Trade Agreement between Total Quality Management and Business Performance", *Procedia - Social and Behavioral Sciences*, 129, pp. 244 – 249.
6. Ana Abrunhosa, PatríciaMoura E. Sa (2008), "Are TQM principles supporting innovation in the Portuguese footwear industry?", *Technovation*, 28, pp. 208–221.
7. Arawati Agus, Za'faran Hassan (2011), "Enhancing Production Performance and Customer Performance Through Total Quality Management (TQM): Strategies For Competitive Advantage", *Procedia Social and Behavioral Sciences*, 24, pp. 1650–1662.
8. Brah, S. A., Tee, S.S.L. and Rao, B. M. (2002), "Relationships between TQM and Performance of Singapore industry", *International Journal of Quality &Reliability Management*, 19 (4), pp. 356-379.
9. Cohen, J. (1988), "Statistical Power Analysis for the Behavioral Sciences", vol.n.k. 2nd ed., New York, Academic Press.n.k.
10. Daniel I. Prajogoa, Soon W. Hongba (2008), "The effect of TQM on performance in R&D environments: A perspective from South Korean firms", *Technovation*, 28, pp. 855–863.

11. Daniel I. Prajogo, and Amrik S. Sohal (2006), "The relationship between organization strategy, total quality management (TQM), and organization performance--the mediating role of TQM", *European Journal of Operational Research*, 168, pp. 35–50.
12. David A Decenzo and Stephen P. Robbins. (1999), "Human Resource Management", John Wiley & Sons, Inc., Sixth Edition, pp. 227.
13. Dr. Md. Ariful Islam and Dr.A.F.M Anwarul Haque (2012), "Key aspects of TQM implementation in manufacturing organization- an empirical investigation", *IRACST-International Journal of Research in Management & Technology (IJRMT)*, 2 (3), pp. 2249-2263.
14. Fuentes, M. M. F., Montes, F. J. L. And Fernandez, L. M. (2006), "Total Quality Management, Strategic Orientation and Organizational performance: The Case of Spanish Industry", *Total Quality Management*, 17 (3), pp. 303-323.
15. Guo, C. (2002), "Market orientation and business performance: A framework for service organization", *European Journal of Marketing*, 36(9-10), pp. 1154-1163.
16. <http://bgmea.com.bd> (20.08.2015).
17. Huarng, F. and Chen, Y.T. (2002), "Relationships of TQM philosophy, methods and performance: A survey in Taiwan", *Industrial Management & Data Systems*, 102(4), pp. 226-234.
18. Masood Ul Hassan, Muhammad Saqib Nawaz, SadiaShaukat and Saad Hassan (2014), "An Empirical Assessment of TQM Dimensions and Their Relationship with Firm Performance: Evidence from the Textile Sector of Pakistan", *World Applied Sciences Journal*, 30 (6), pp. 696-705.
19. Mădălina Militaru, Gabriela Ungureanu, Alina Ștefania Chenic (Crețu) (2013), "The prospects of implementing the principles of Total Quality Management (TQM) in education", *Procedia - Social and Behavioral Sciences*, 93, pp. 1138 – 1141.
20. Mahmud R.B (2012), "Skills development in Bangladesh RMG sector", *The News Today*, <http://www.newstoday.com.bd>.
21. Malhotra K. Naresh (2006), "Marketing Research", 4th Edition, Pearson Education (Singapore) Pte, pp. 258.
22. Muteb Rabh Alsuhaime (2012), "The Implementation of Total Quality Management in King Saud University", *International Journal of Independent Research and Studies – IJIRS*, 1(2), pp. 80-88.
23. Nurazree Mahmud and Mohd Faiz Hilmi (2014), "TQM and Malaysian SMEs Performance: The Mediating Roles of Organization Learning", *Procedia - Social and Behavioral Sciences*, 130, pp. 216-225.
24. Pallant, Julie (2005), *SPSS SURVIVAL MANUAL A step by step guide to data analysis using SPSS for Windows (Version 12)*. Vol.12. n. k.ed., Crows Nest NSW 2065 Australia, Allen &Unwin. N. k., n. k.
25. Prajogo, D.I., Power, D.J. and Sohal, A.S. (2004), "The role of trading partner relationships in determining innovation performance: An empirical examination", *European Journal of Innovation Management*, 7(3), pp. 178-186.
26. Pinho, J.C. (2008), "TQM and performance in small medium enterprise: The mediating effects of customer orientation and innovation", *International Journal of Quality & Reliability Management*, 25(3), pp. 256-275.

27. Reed, R., Lemak, D.J. and Mero, N.P. (2000), "Total quality management and sustainable competitive advantage", *Journal of Quality Management*, 5(1), pp. 5-26.
28. Sadikoglu, E. And Zehir, C. (2010), "Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms", *International Journal of Production Economics*, 127 (1), pp. 13-26.
29. Salman Khalid, Muhammad Zohaib Irshad (2011), "TQM Implementation in Textile Manufacturing Industry to Success: Review and Case Study", *International Business Research*, 4(4), pp. 242-246.
30. Shahid Mehmood, Faisal Qadeer, and Aftab Ahmad (2014), "Relationship between TQM Dimensions and Organizational Performance", *Pak J CommerSocSci, Pakistan Journal of Commerce and Social Sciences*, 8 (3), pp. 662-679.
31. Sit, W.T., Ooi, K. B., and Chong, A. Y. L (2009), "TQM and Customer Satisfaction in Malaysia's Service Sector", *Industrial Management and Data System*, 109 (7), pp. 957-975.
32. Sureshchandar, G.S., Rajendran, C. and Anantharaman, R.N. (2001), "A conceptual model for total quality management in service organizations", *Total Quality Management*, 12(3), pp. 343- 363.
33. Veeraphat Krittanathipa, Sakchai Rakkarna, Suriyan Cha-uma, and Ananya Jindawattana (2013), "Implementation of Self-assessment Evaluation for Total Quality Management: A Case Study of Wholesale Sectors", *Procedia - Social and Behavioral Sciences*, 88, pp. 81 – 88.
34. Venkatraman, N., Ramanujam, V. (1986), "Measurement of business performance in strategy research: a comparison of approaches", *Academy of Management Review*, 11 (4), pp. 801-814.
35. Yang, C.C. (2006), 'The impact of human resource management practices in the implementation of TQM: an empirical study on high-tech firms', *The TQM Magazine*, 18 (2), pp.162-173.
36. Yusuf, Y., Gunasekaran, A. and Dan, G. (2007), "Implementation of TQM in China and Organizational Performance: An Empirical Investigation", *Total Quality Management*, 18 (5), pp. 509-530.
37. W.E. Deming (1986), "Out of the Crisis", Cambridge Press, pp. 510.