

Prospect of Implementing Total Quality Management Approach in Commercial Banks of Bangladesh

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ABSTRACT

Total Quality Management (TQM) drives an organization towards better performance through developing a concrete organizational system. In this paper, the objective is to identify the prospect of TQM implementation in the commercial banks of Bangladesh. The implementation of Total Quality Management in banking services all over the world is surveyed through literature review, both from theoretical and practical perspectives. The concepts of quality through the terms of the Malcolm Baldrige National Quality Award (MBNQA) are determined. Then the implementation of Total Quality Management in the banking sector is investigated. While investigating the implementation, several criteria were established according to MBNQA standard under different categories such as leadership, strategic planning, customer focus, information and analysis, human resources focus, and process management. Primary data on performance and TQM implementation categories were collected through questionnaire survey among the managers and upper level personnel in different commercial banks. Data collected from survey is processed through regression analysis where a relationship is attempted to establish between performance of bank, namely Return on Equity (ROE), with the implementation categories. From the results, it is found that banks although have not adopted the TQM system formally but are carrying out some of the necessary activities that are required for implementing the program. Banks have established a very good information system and a very good personnel practice system. Moreover, leadership of management, customer focus, and strategic planning are also at a good level. However, the banks are at moderate level with respect to process management. So, there is a very good prospect for commercial banks of Bangladesh to implement TQM program.

Keywords: Total Quality Management, TQM implementation, Prospects of TQM in commercial banks of Bangladesh, TQM and performance level, Malcolm Baldrige National Quality Award (MBNQA).

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Introduction

Total Quality Management is a structured system for satisfying internal and external customers and suppliers by integrating the business environment, continuous improvement, and breakthroughs with development, improvement, and maintenance cycles while changing the whole organizational culture (Cole & Mogab, 1999). This is the comprehensive approach towards quality management covering all areas of business. Total Quality Management (TQM), a modern concept and a phrase that is most commonly used by strategists, is based on the assumption that quality is manageable. This fashionable approach focuses on customer satisfaction, accurate measurement of all significant factors of business, continuous improvement, employee empowerment and development and their relationships based on mutual trust and teamwork. (Pearce and Robinson, 2005).

Like other industries, quality improvement is taking place at a revolutionary pace in banking sectors too (Rana, 2005). So, banks are not left behind in quality race. In today's highly competitive environment, success of banking is based upon the satisfaction of both internal and external customers. The philosophy of Total Quality Management leads towards this direction i.e. satisfaction of both internal and external customers. Banks play their own important role, being the backbone of an economic system and as financial intermediaries involved in channeling funds from those having surplus to those having shortage (Luckett, 1994).

Keeping in view the competitive environment in banking sector of Bangladesh where bank management is trying their best to offer high quality services to their customers there is a need to formalize the quality management concept for commercial banking operations. In this regard, a study conducted by Barua and Islam (2009) reveals that QMS operates in more than half of the banks in Bangladesh. Moreover, the authors have found that higher customer satisfaction, better service quality, better financial situation, and higher staff motivation are found to be mostly perceived benefits of QMS. Implementation of quality management system is an essential initiative to step forward towards implementing the TQM program (Besterfield et al. 2003). In light of that, further initiatives for adopting more sophisticated quality management program like TQM will provide the banks with higher competitive advantage through satisfying its internal and external customers (Naeem and Saif, 2008). Melidonioti and

Gotzamani (2007) conducted a study on the quality and standardization of Greek banks based on the European Foundation of Quality Management (EFQM). This paper aims to perform similar study based on Malcolm Baldrige National Quality Award (MBNQA). Thus, the objective of this paper is to identify what other initiatives the commercial banks in Bangladesh have undertaken apart from implementing QMS. Based on the initiatives, it will be possible to consider the possibility or prospect of implementing TQM system in the commercial banks of Bangladesh.

Literature Review

Total Quality Management (TQM) has been popular and well adopted over the years in the manufacturing industry. The manufacturing organizations are practicing this concept quite successfully. But, it is limited to practice in service organizations and a few of the financial institutions have adopted this culture. Banks are one of those. Although TQM is not adopted formally in the banking sector, many of the leaders in this sector apply TQM principles in all of their business processes (Melidonioti and Gotzamani, 2007).

Application of SERVIQUAL model in different banks led to the improvement in service quality. Newman and Cowling (1996) conducted an empirical study as major quality improvement initiatives undertaken by two British banks using this model. In their study, the researchers measured the gap between customer expectations and experience.

Implementing TQM requires change in organizational processes, cultures and outlook. Implementation of this principle results in resistance and needs to be addressed by the change agents. Thus, it is necessary to have strong leadership and top management commitment to implement this system (Frick, 1997). Moreover, leadership style and culture must be congruent with the TQM (Burton and Philip, 1999).

Saffran and Vogt (1999) studied the implementation of quality management system based on ISO 9000 at Deutsche Bank AG. To establish the quality system, a structural plan was divided into four steps: determination of tasks and responsibilities; studies; implementation; and certification. A major component of the second step was the quality manual, the creation of which followed three guidelines: simple language, understandable illustrations, and focusing on the

essentials. Guidelines for this documentation included: outcome-based planning; uniform methods of describing procedures; readability; and employee focus.

Edwards and Smith (1999) conducted a research on TQM in Banking focusing on quality performance standard setting, measuring and monitoring. The study concluded that customer care programs, action teams and improved communications were the first step; the next step in maintaining the competitive edge was the establishment of quality performance standards, and devising systems for measuring and monitoring their effectiveness. The best way to institute quality into an organization, particularly a bank, was to train employees to do their job better through a top down training structure.

Brah, Wong and Rao (2000) conducted a research on TQM and business performance in service sector in Singapore. A clear evidence was found that TQM implementation improved business performance in the service sector of Singapore. The study found that while accrued benefits could be attributed to some of the tools of TQM, such as, customer focus and quality improvement rewards, the key to the success of TQM lay in its intangible and behavioral features such as top management support, employee empowerment and employee involvement.

A TQM study by Tsang and Antony (2001) analyzed TQM practices in the UK. The results focused on 11 critical factors of quality management such as continuous improvement, teamwork and involvement, customer focus, top management commitment and recognition, training and development, quality systems and policies, supervisory leadership, communication within the company, supplier partnership or supplier management, measurement and feedback and cultural change. It was found that customer focus was the most successfully driven factor for TQM programs in UK service organizations.

Gupta et al. (2005) conducted a study on Quality management in service firms: sustaining structures of total quality service. The research proposed a conceptual model may be developed that may be used in understanding the relationships between sustaining structures that support the total quality service (TQS) philosophy and customer satisfaction.

Samat (2006) conducted a study on TQM practices, service quality, and market orientation. The main purpose of this study was to explore the relationship between total quality management (TQM) practices and service quality as well as the relationship between TQM practices and market orientation. The results showed that employee empowerment, information and communication, customer focus, and continuous improvement had a significant effect on service quality whereas only employee empowerment and customer focus had a significant effect on market orientation.

Rahman and Siddiqui (2006) conducted a survey among insurance, banking, software, manufacturers etc of 300 Indian companies to know about the use of TQM in these departments. The most important outcome of the study revealed top management support as the perceived benefit for implementing TQM. Another study by the same authors (Siddiqui and Rahman, 2007) on managers of banks state that TQM philosophy is based on top management commitment, benchmarking for problem solving etc. TQM and Information System can be fruitful in improving the quality of products and services offered to the end customers.

A study conducted on 204 bank customers regarding the relationship between relational benefits and customer satisfaction, (Molina, Consuegra and Esteban, 2007) found that confidence benefits had positive impact on customer satisfaction with their banks from the set of social benefits, special treatment benefits and confidence benefits,

Data collected from 250 banks in UAE to examine the critical success factor of TQM implementation in UAE banking sector (Khalid Al-Marri, Abdel Moneim and Mohamed Zairi, 2007) identified 16 critical factors for successful TQM implementation. Some are top management support, strategy, recognition and reward etc.

Research Methodology

Primary data for research purpose was collected through questionnaire survey. The questionnaire incorporated questions regarding practicing different dimensions of TQM. The survey considered only the Private Commercial Banks (PCBs) and Nationalized Commercial Banks (NCBs). It ignored Foreign Commercial Banks (FCBs) as it may dilute the actual result. A total of 170 questionnaires were distributed to the managers or upper level people of the 34

(Thirty Four) commercial banks of Bangladesh. Out of which 102 questionnaires were filled in and returned with a response rate of Sixty percent.

The questionnaire was designed following the Malcolm Baldrige National Quality Award (MBNQA) standards and prior researches on TQM implementation in different banks (Frick, 97; Melidonioti and Gotzamani, 2007; Naeem and Saif, 2007; Naeem, Saif and Qasim, 2008; Naeem and Saif, 2008). The questionnaire items fell under the following six categories of TQM performance excellence: 1) leadership, 2) customer focus, 3) information and analysis, 4) strategic planning, 5) human resources, and 6) process management. The respondents were asked to rank their frequency of performing the provided statements on a seven-point scale with 1=never, 2=seldom, 3=fairly frequently, 4=relatively frequently, 5=frequently, 6=very frequently, 7=always.

Performance measure indicator that is used in the analysis is Return on Equity (ROE). This indicator is used because it is the measure bank owners are concerned more about (www.fdic.gov/banks/statistical/statistics/0106/cbr) and it is used as a measure of performance according to both CAMEL rating and Balanced Score Card Method (Purohit and Mazumder, 2006). Moreover, TQM has been reported to be positively correlated with profits, with better stock performance and with, up to 84%, rise in ROE (PIMS, 1986). Moreover, a worldwide survey by the American Institute of Quality Inc., has shown that service providing companies that have applied TQM systems, have decreased their operating costs, have improved their financial features, and now have more satisfied customers (Harrington, 1996).

The statistical data was analyzed by Multiple Linear Regression (MLR) method using Minitab statistical package (version14). For analysis purpose, different criteria were developed under each category of six MBNQA framework. The regression method established the relationship between performance criteria (ROE) as dependent variable and different criteria of each of the six MBNQA categories as independent variables. Coefficient of regression for different independent variables and corresponding p values significant at different levels (***) $p < 0.01$; ** $p < 0.05$; * $p < 0.10$) were considered for analysis purpose (Montes, Fuentes and Fernandez, 2003).

Seventeen per cent of the banks fell under small category with the number of employees less than 500, Thirty Four percent was categorized as medium-sized

with employees between 500 and 100, and Forty Nine percent were large-sized with employees more than 1000. Based on the number of years spent working for a bank, respondents were distributed as follows: 50% worked for up to 5 to 7 years; 40% 7 to 10 years; and 10% over 10 years.

Results and Discussions

The regression analysis results of the TQM implementation prospects using ROE as dependent variable and each of the factors for six performance measure categories as independent variable are presented below:

Leadership

Table- 1 presents the results for Leadership category. In this category, significant relationship is found between ROE and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were shown in order of importance based on beta coefficients. The regression equation for ROE and with respect to independent variables for leadership category is presented below,

$$Y_R = \beta_0 + B_1L_1 + B_2L_2 + B_3L_3 + B_4L_4 + B_5L_5 + B_6L_6$$

Where,

$$Y_R = \text{ROE}$$

$L_1, L_2, L_3, L_4, L_5, L_6$ = independent variables under leadership category presented in Table- 1.

$B_1, B_2, B_3, B_4, B_5, B_6$ = regression coefficients of independent variables.

From Table- 1, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.86$. Moreover, the R^2 value of 0.732 reveals that 73% of the variation of ROE is explained by the six factors in the leadership category.

Lastly, the beta coefficients from regression analysis in Table- 1 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under leadership is concerned, establishment of a strategic quality planning group in the

organization by top management, L_4 (0.37); demonstration by top management through their words, actions that quality is the top priority of the organization, L_3 (0.23); and active and personal involvement of top management in communicating the goals and standards to the employee, L_2 (0.19) are significantly related to the performance of the organization. This means that one unit increase in L_4 will increase ROE by 0.37 unit, one unit increase in L_3 will increase ROE by 0.23 unit, and one unit increase in L_2 will increase ROE by 0.19 unit.

Table- 1: Regression Analysis Result along Leadership Dimension

Dimension	Coefficient	t	p-value	
Constant	-3.1120	-4.00	0.001	F=10.94 R = 0.855 R ² = 0.732
L_1 . Active and personal involvement of top management in developing the quality goals and standards for the organization	0.08016	0.90	0.378	
L_2 . Active and personal involvement of top management in communicating the goals and standards to the employee	0.19150	2.14	0.043**	
L_3 . Top management demonstrate through words, actions that quality is the top priority of the organization	0.23435	2.44	0.022**	
L_4 . Top management establishes a strategic quality planning group in the organization	0.37227	4.90	0.000***	
L_5 . Top management has the willingness to create a cooperative environment inside the organization	-0.07365	-0.79	0.438	
L_6 . Evaluates its management effectiveness	0.06063	0.76	0.453	

Note: Significant at *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

Strategic Planning

Table- 2 presents the result for strategic planning category. In this category, significant relationship is found between performance and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were shown in order of importance based on beta coefficients. The regression equation

for ROE and with respect to independent variables for strategic planning category is presented below,

$$Y_R = \beta_0 + B_1S_1 + B_2S_2 + B_3S_3 + B_4S_4 + B_5S_5 + B_6S_6$$

Where,

$$Y_R = \text{ROE}$$

$S_1, S_2, S_3, S_4, S_5, S_6$ = independent variables under strategic planning category presented in Table- 2.

$B_1, B_2, B_3, B_4, B_5, B_6$ = regression coefficients of independent variables.

From Table- 1, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.86$. Moreover, the R^2 value of 0.74 reveals that 74% of the variation of ROE is explained by the six factors in the strategic planning category.

Lastly, the beta coefficients from regression analysis in Table- 2 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under strategic planning is concerned, existence of a structured strategic quality plan, S_1 (0.215); adequate dissemination of the information of quality plan within the organization, S_4 (0.169); and evaluation and improvement of the planning process by top management, S_6 (0.167) are significantly related to the performance of the organization. This means that one unit increase in S_1 will increase ROE by 0.215 unit, one unit increase in S_4 will increase ROE by 0.169 unit, and one unit increase in S_6 will increase ROE by 0.167 unit.

Table- 2: Regression Analysis Results along Strategic Planning Dimension

Dimension	Coefficient	t	p-value	
Constant	-3.2699	-5.09	0.000	
S ₁ . The organization has a structured strategic quality plan	0.21498	2.24	0.035**	
S ₂ .The quality plan reflects the mission, vision and value of the organization	0.1438	1.19	0.246	
S ₃ .The plan considers input from people beyond who have actually developed it	0.03508	0.48	0.635	F=11.76 R = 0.863
S ₄ . The information of quality plan is adequately disseminated within the organization	0.16984	2.44	0.023**	R ² = 0.746
S ₅ .Constantly determine the future requirement of the customer	0.1471	1.16	0.256	
S ₆ . Top management evaluates and improves the planning process	0.16770	1.68	0.100*	

Note: Significant at *** p<0.01; ** p<0.05; * p<0.10.

Customer Focus

Table- 3 presents the results for customer focus category. In this category, significant relationship is found between performance and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were shown in order of importance based on beta coefficients. The regression equation for ROE and with respect to independent variables for customer focus category is presented below,

$$Y_R = \beta_0 + B_1 C_1 + B_2 C_2 + B_3 C_3 + B_4 C_4 + B_5 C_5 + B_6 C_6$$

Where,

$$Y_R = \text{ROE}$$

C₁, C₂, C₃, C₄, C₅, C₆ = independent variables under customer focus category presented in Table- 3.

B₁, B₂, B₃, B₄, B₅, B₆ = regression coefficients of independent variables.

From table 3, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.81$. Moreover, the R^2 value of 0.66 reveals that 66% of the variation of ROE is explained by the six factors in the customer focus category .

Lastly, the beta coefficients from regression analysis in Table- 3 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under customer focus is concerned, having effective means to determine customer expectations, C_2 (0.38); responsiveness to customer need, C_4 (0.18); and adequate training to the employee regarding customer contact, C_6 (0.07) are significantly related to the performance of the organization. This means that one unit increase in C_2 will increase ROE by 0.38 unit, one unit increase in C_4 will increase ROE by 0.18 unit, and one unit increase in C_6 will increase ROE by 0.07 unit.

Table- 3: Regression Analysis Results along Customer Focus Dimension

Dimension	Coefficient	t	p-value	
Constant	-3.2774	-4.17	0.000	
C_1 . Develop strategies to maintain and build customer relationship	-0.10506	-1.41	0.172	
C_2 . Has effective means to determine customer expectations	0.3845	2.61	0.015***	
C_3 . Establish standards to meet customer expectations	0.2308	1.41	0.171	F=7.81
C_4 . Responsive to customer needs	0.1816	1.81	0.033**	R = 0.813
C_5 . Responsive to customer complaints	0.0607	0.54	0.592	$R^2 = 0.661$
C_6 . Employees have adequate training regarding customer contact (listening, behavior, complaint resolution etc.)	0.06639	1.96	0.014***	

Note: Significant at *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

Information and Analysis

Table- 4 presents the result for information and analysis category. In this category, significant relationship is found between performance and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were

shown in order of importance based on beta coefficients. The regression equation for ROE and with respect to independent variables for information and analysis category is presented below,

$$Y_R = \beta_0 + B_1 I_1 + B_2 I_2 + B_3 I_3 + B_4 I_4 + B_5 I_5 + B_6 I_6$$

Where,

$$Y_R = \text{ROE}$$

$I_1, I_2, I_3, I_4, I_5, I_6$ = independent variables under information and analysis presented in Table- 4.

$B_1, B_2, B_3, B_4, B_5, B_6$ = regression coefficients of independent variables.

From Table- 4, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.86$. Moreover, the R^2 value of 0.75 reveals that 75% of the variation of ROE is explained by the six factors in the information and analysis category.

Lastly, the beta coefficients from regression analysis in Table- 4 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under information and analysis is concerned, practicing benchmarking and using the findings to improve upon, I_3 (0.56); Pertinence of information collected through benchmarking to the improvement effort, I_4 (0.44); decisions taken based on the findings of the performance analysis, I_6 (0.35); and existence of a database designed to meet the needs of those who will use it, I_2 (0.29) are significantly related to the performance of the organization. This means that one unit increase in I_3 will increase ROE by 0.56 unit, one unit increase in I_4 will increase ROE by 0.44 unit, one unit increase in I_6 will increase ROE by 0.35 unit, and one unit increase in I_2 will increase ROE by 0.29 unit.

Table- 4: Regression Analysis Results along Information and Analysis Dimension

Dimension	Coefficient	t	p-value	
Constant	-1.5952	-3.44	0.002	F=12.19 R = 0.867 R ² = 0.753
I ₁ . Have accurate and timely database that provides information on customers, internal operations, organizational performance, and costs and finances	-0.05225	-0.58	0.567	
I ₂ . Database is designed to meet the needs of those who will use it	0.28785	3.82	0.001***	
I ₃ . Practice benchmarking and use the findings to improve upon	0.5694	4.42	0.000***	
I ₄ . Information collected through benchmarking is pertinent to the improvement effort	0.4476	4.46	0.000***	
I ₅ . Performance evaluation criteria are well understood by all levels of employee	-0.12360	-1.35	0.188	
I ₆ . All organizational decisions are based on the findings of the performance analysis	0.35198	3.99	0.001***	

Note: Significant at *** p<0.01; ** p<0.05; * p<0.10.

Human Resources

Table- 5 presents the result for human resources category. In this category, significant relationship is found between performance and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were shown in order of importance based on beta coefficients. The regression equation for ROE and with respect to independent variables for human resources category is presented below,

$$Y_R = \beta_0 + B_1H_1 + B_2H_2 + B_3H_3 + B_4H_4 + B_5H_5 + B_6H_6$$

Where,

$$Y_R = \text{ROE}$$

H₁, H₂, H₃, H₄, H₅, H₆ = independent variables under human resources category presented in Table- 5.

$B_1, B_2, B_3, B_4, B_5, B_6$ = regression coefficients of independent variables.

From Table- 5, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.875$. Moreover, the R^2 value of 0.76 reveals that 76% of the variation of ROE is explained by the six factors in the human resources category.

Lastly, the beta coefficients from regression analysis in Table- 5 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under human resources is concerned, positive work environment, H_3 (0.28); evaluation of personnel practices, H_4 (0.27); delegating responsibility to the employee to take decisions regarding their activities, H_6 (0.18); and continual persuasion of employees to make suggestions for improvement, H_2 (0.15) are significantly related to the performance of the organization. This means that one unit increase in H_3 will increase ROE by 0.28 unit, one unit increase in H_4 will increase ROE by 0.27 unit, one unit increase in H_6 will increase ROE by 0.18 unit, and one unit increase in H_2 will increase ROE by 0.15 unit.

Table- 5: Regression Analysis Results along Human Resource Focus Dimension

Dimension	Coefficient	t	p-value	
Constant	-2.2718	-4.29	0.000	F=13.10 R = 0.875 R ² = 0.766
H ₁ . Has Training program for all levels of employees	-0.05430	-0.87	0.395	
H ₂ . Employees are encouraged to make suggestions for improvement	0.14988	1.84	0.078*	
H ₃ . A positive work environment is maintained	0.2843	2.77	0.011***	
H ₄ . Personnel practices are evaluated to find their effectiveness	0.26778	2.84	0.009***	
H ₅ . Worker satisfaction of all levels is measured	-0.1232	-1.09	0.285	
H ₆ . Employees are given responsibility to take decisions regarding their activities	0.18108	2.31	0.029**	

Note: Significant at *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

Process Management

Table- 6 presents the results for process management category. In this category, significant relationship is found between performance and independent variables. The independent variables were expressed in terms of standardized factor scores (beta coefficients). The significant factors that remained in the regression were shown in order of importance based on beta coefficients. The regression equation for ROE and with respect to independent variables for process management category is presented below,

$$Y_R = \beta_0 + B_1P_1 + B_2P_2 + B_3P_3 + B_4P_4 + B_5P_5$$

Where,

$$Y_R = \text{ROE}$$

P_1, P_2, P_3, P_4, P_5 = independent variables under process management category presented in Table- 6.

B_1, B_2, B_3, B_4, B_5 = regression coefficients of independent variables.

From Table- 6, it is found that the association between ROE and the independent variables is positive and high with correlation coefficient value $R = 0.824$. Moreover, the R^2 value of 0.68 reveals that 68% of the variation of ROE is explained by the six factors in the process management category.

Lastly, the beta coefficients from regression analysis in Table- 5 can be used to explain the relative importance of the six independent variables in contributing to the variance in ROE. As far as the relative importance of the six factors under process management is concerned, having an effective system for improving those processes that require improvement, P_5 (0.27); and identification of all processes performed by the organization and establishment of ownership of each process, P_1 (0.26) are significantly related to the performance of the organization. This means that one unit increase in P_5 will increase ROE by 0.27 unit, and one unit increase in P_1 will increase ROE by 0.26 unit.

Table- 6: Regression Analysis Result along Process Management Dimension

Dimension	Coefficient	t	p-value	
Constant	1.6709	-2.95	0.007	F=8.5 R = 0.824 R ² = 0.680
P ₁ . All processes performed by the organization have been identified, and the ownership of each process has been established	0.2593	1.76	0.092*	
P ₂ . Performance standards for processes have been established	0.0745	0.49	0.632	
P ₃ . A system to measure process performance against the standards has been developed	-0.0385	-0.35	0.732	
P ₄ . Employees have understanding about continuous improvement	-0.0341	-0.25	0.803	
P ₅ . Has an effective system for improving those processes that require improvement	0.2718	2.14	0.043**	

Note: Significant at *** p<0.01; ** p<0.05; * p<0.10.

Conclusions

The aim of the research was to analyze to what level some of the essential initiatives of TQM according to Malcolm Baldrige National Quality Award (MBNQA) standards the commercial banks in Bangladesh are performing. The commercial banks in Bangladesh can use the outcome of the research to focus their mindset on implementing the TQM program.

The study reveals that top management of the banks has potentiality to demonstrate leadership in terms of active involvement in communicating quality goals to employees, and establishing strategic quality planning group in the organization. The strategic planning of the management is also good as this plan is formulated using relevant information regarding customer needs and expectations, personnel practices, benchmarking, and improvement efforts required. Not only that but also management disseminates this plan all through the organization. Apart from this, the plan is continually evaluated and improved to find its effectiveness. Banks are found to be a little bit weaker in process management. Although top management identifies all processes in the organization, establishes process ownership, and develops effective system for improving processes, yet

banks are lacking in formulating some more important aspects of the process management.

From the research, it is found that even though banks in Bangladesh have not implemented TQM approach systematically in their operations, yet banks are practicing some of the norms of such kind of program. It can be concluded that there is a very good prospect for commercial banks in Bangladesh to move towards formal implementation of TQM program if following imperatives are fulfilled and practiced:

- Top management needs to be actively involved in developing the quality goals and standards for the organization as well as creating cooperative environment to inculcate these goals. Moreover, top management should evaluate its management effectiveness regularly.
- The quality plan should reflect the mission, vision and value of the organization. In this regard, the plan should incorporate inputs from employee.
- The banks should constantly determine the future requirement of the customer. They need to develop strategies to maintain and build customer relationship. Banks should also establish standards to meet customer expectations and needs to be more responsive to customer complaints.
- Banks should have accurate and timely database that provides information on customers, internal operations, organizational performance, and costs and finances.
- Personnel practices should address issues such as employee performance evaluation criteria, arranging training program for employees, and worker satisfaction.
- Banks should set performance standards for processes and process performance should be measured against the standards.
- Employees should have understanding about continuous improvement and dedicate their effort to achieving it.

Future Research Scope

Like other researches, this research is also not without limitations. It will be possible to overcome these limitations through conducting future researches. This

research did not consider the implementation of different aspects of TQM with respect to public and private banks. Moreover, differences in size, length of operations, and types of services provided are not included in the research. Thus, future research should address these issues to fill the gap.

TQM categories mentioned in this research integrally affect the program. Therefore, it is necessary to conduct future research to find the integrated effect of the categories on the implementation of the TQM to find the effectiveness of the program.

This research considered the implementation of the TQM initiatives at a single time. However, TQM is a process of continuous improvement. Therefore, a longitudinal study needs to be conducted in future to find whether the TQM initiatives are ongoing effort or not.

Lastly, future research needs to perform with some other measurement system of TQM to find the exact fit of the system with respect to operations of commercial banks of Bangladesh.

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