



**An Empirical Study on Total Quality Management (TQM) Practice in
Commercial Banks of Bangladesh**

Submitted in accordance with the requirements of the University of Dhaka
for the Doctor of Philosophy Degree in Business Studies

By

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Dedication

I dedicate this research project with heartfelt thanks and respectfulness to my beloved mother Kamrun Nahar who is my inspiration for alleviating my pressure when I faced various difficulties throughout my life.

I would also dedicate to the soul of my late father Neyamal Islam, who always dreamt of me as an achiever. I know he would be very happy with my achievement and giving lots of blessings from the world which is unreachable.

Declaration of Authorship

Herewith I declare that I wrote this thesis paper independently. I declare it as my original exertion as I did not incorporate any material or information without acknowledgment and only used the sources of printed, electronic and personal references indicated in the text. All verbatim citation has been distinguished and the sources precisely acknowledged. I also affirm that the work in this thesis was carried out by the regulations of the University of Dhaka and has not been presented for a degree or award in any other university. **55052 words** are counted in this research paper.

In the meantime, as the groundwork of this research work, two papers were prepared and submitted for publication (under review process) which numbered below and the remaining parts have not yet been positioned for publication anywhere.

1. *Grouping of TQM Barriers: An Empirical Study on Banking Sector*
2. *An Empirical Study on Consciousness of Total Quality Management in Banking Industry: A Study on Management Employees*

Nafiza Islam

Sign

Date.....

This paper has been submitted for evaluation with my approval as University Supervisor.

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Abstract

Globalization has made drastic changes all over the world in terms of advancement in information flow proficiencies, a new wave of advancement in technology and most importantly a new dimension in customer choices which leads to forced competition in the open markets. Business organizations responding to these changes with transformation in order to become more challenging, more dynamic, and more competitive. Total Quality management (TQM) is considered as an emerging philosophy of management therefore aligned with this new transformation of business firms. Since the last two eras, a swift revolution in the implementation of TQM principles, methods, tools, and techniques has been observed in major fields from manufacturing to service. TQM has become a management attitude in the region of production, education, banking, hospitality, information and communication technologies even in the state-owned sector on account of the robust effect of TQM on organizational performance and practicing frequently by the decision-makers, managers, quality practitioners and professionals all over the world. Due to the rising binge and acceptance of fierce competition in business with the liberalization of the economy, the banking sector is now more focused on creating new values for its clientele, and in this regard, TQM has got high attention from scholars around the world. Therefore, banks have chosen TQM principles and activities through which differences they are making and formulating new strategies to satisfy customers, accomplish customer loyalty and try to exhibit better values than their competitors. Heretofore, the banking industry is besieged to introduce and offer a new dimension in service which can intensify the attention of customers over their smarter rivals. To date, in the attempt to recognise the practice of total quality management (TQM) in the banking industry of Bangladesh, the empirical studies conveyed in the literature

only a handful quantity. Considerations are given to the manufacturing sector highly but the service sector is drawing attention as it requires customer satisfaction most. The banking sector is also betrothed to TQM not only to develop new strategies but also to outmanoeuvre their rivals' strategies to gratify customers' needs and gain customers' loyalty through value addition.

With regard to this, an endeavour has been executed to contemplate the level of TQM practice in private commercial banks of Bangladesh. This study has explored the literature pertinent to critical success factors which lead the effective implementation of TQM in manufacturing, service, and banking. After conducting FGD with mid-level bankers and an in-depth literature review, a questionnaire has been developed and checked the reliability by academicians, research scholars, and field experts in the banking sector. The study used both qualitative and quantitative methodology supported by the information obtained from the survey. Within the universe of existing service organizations, the banking sector has been framed for this study as it is vastly structured and competitive. The private sector, exclusively has emphasized due to having differences in structure with state owned and specialized banks.

This study is aimed to scrutinise and confer the most critical success factors affecting TQM practice in the banking industry of Bangladesh. An inclusive literature review was conducted on the major concepts being explored on TQM focusing on the banking sector. Plentiful arguments put forward by various researchers, academics, and practitioners. After an extensive literature review, conceptual framework was developed. Dependent and independent variables were identified and the measurement scale was fixed. Top management leadership (TML), customer relationship (CR), supplier partnership (SP), employee involvement (EI), continuous

improvement (CI), and organizational culture (OC) were recognized as independent variables and TQM implementation was counted as dependent variables.

Subsequently, an FGD was conducted with mid-level bankers of different banks on references. The top level bankers responded to a semi-structured interview. The conceptual framework was amended after analysing the FGD findings, interview outcome, and feedback from the first seminar. Formerly questionnaire was finalized and checked by reputed research and field experts. More than four hundred questionnaires were analysed by SPSS (version-26) and PLS-SEM using Smart PLS 3.0 to examine the level of TQM in private commercial banks of Bangladesh. During the data collection stage, complimentary interviews in semi-structured manner were directed with top level managers in order to accomplish a better interpretation of some supplementary issues concerning TQM practices in the banking sector.

The current study result revealed the TQM practice in private commercial banks of Bangladesh with some important variables which are addressed as critical success factors of TQM supported by the literature and input from FGD. The study observed the consequence of TQM implementation on TML, CR, SP, EI, CI, and OC. It was shown, after the analysis, that TQM underwrites significant and positive influence on TML, EI, CI, and OC with regard to the banking sector of Bangladesh. A surprising outcome highlighted from the findings that TQM has a negative association with CR and SP which are utmost significant and positive predictors for quality management practices. TQM programs are aligned with the goals to understand customers, surpass needs, satisfy through providing quality products and services which can be achieved by supplier partnership.

The customers of banks, in this digital age, not only borrowing and depositing money but want to be fully embraced with the convenience of technology. All sort of

banks needs to adopt a contemporary technology-oriented customer-focused approach to cope up with the increasing and ever-changing customer demands and competition as well. A relationship-based marketing approach ensures the loyalty of customers. The sooner and better banks understand the requirements and preferences of customers, the greater the chance to tailor and launch services leads to customer satisfaction in this customer-centered industry. But the study revealed a very important loophole in the banking sector of Bangladesh and that is, customer relationship is not getting that much attention that it needs to be. On the contrary, in some cases, this aspect is fully ignored. Surprisingly, banks are developing and offering services to their customers regularly without considering them as the prime decision-makers of their banks. Banks need to understand the need and preferences of customers in terms of maintaining long-term relationships, personal counseling before a purchase decision, emotional and psychological needs, service with consistent quality, the guarantee of security, privacy, and confidentiality, use of the internet for transacting, discretionary portfolio management, global accessibility and so forth. In this day and age, banks should not only focus on quality services but to cement long-term, mutually beneficial relationships as customers want full packages of luxury concerning the selection of appropriate loan packages, investment packages and loan repayment methods, planning for cost-cutting, availing of tax redemption, experiencing expertise on financial statements, stock reports, valuation reports, etc. A sense of belongingness in customers' minds create a long-term association with the bank. Collecting feedback from customers is a very common practice in banks of Bangladesh but responding promptly and incorporating customer input for developing quality statements might not. Faster and better service with error-free result leads long term bonding which can be achieved by incorporating the customer's voice.

As a service industry, banks need to focus on supplier and supplier partnership which can play the core role in providing uninterrupted services along with quality to customers. Conforming to the result of the study, supplier partnership is not taken into consideration for quality purposes. The possible reasons might be addressed as focus on short, rather than long term partnership, no principles for improving partnership, deficiency of information for suppliers' quality facts, selection of suppliers on the basis of prices rather than the quality system, lack of proper suppliers' evaluation system and lack of understanding to incorporate suppliers as an input for quality services. To pursue effective supplier partnership, banks should identify core suppliers, create long-term co-operative relations with suppliers, arrange joint training sessions regarding quality activities, promote the exchange of information concerning quality, provide feedback of suppliers' products on the basis of performance, conduct supplier quality audits on regular basis, practice suppliers award based on performance in terms of quality, price, on-time delivery, publication, etc. and select suppliers on product quality.

Furthermore, the study exposed and highlighted some of the impediments which have negative effect on the accomplishment of effective TQM practice in the context of the banking industry of Bangladesh. In conformity with the data analysis outcome, strategic barriers of the TQM implementation program are the crucial TQM barrier in the banking sector of Bangladesh. These barriers are associated with the strategic feature of continuous quality improvement. It includes the insufficient budget for quality initiatives, shortage of resources, ineffective information system, lack of employee devotion due to overload of work, and lack of technological resources. Contextual barriers are firmly associated with communication and cultural context such as deficiency of continuous quality development culture, absence of

cross-functional teams, lack of executing a quality management system, poor communication, confrontation to modification organizational culture between departments and these barriers placed 2nd based on the findings. Human resource barriers ranked third which includes lack of employee understanding on TQM concept, lack of challenging job, lack of training needs assessment, lack of employee training, absence of teamwork to figure out problems, absence of implicit appraisal system. The intricacy of the process, absence of apprising the process improvement, shortfall of active controlling of manufacturing processes, lack of practicing of benchmarking of the current process, knowledge gap about quality cost, identified as procedural barriers which placed fourth according to the study findings. Structural barriers ranked fifth to implement TQM which includes unsuitable organizational structure, absence of adequate physical resources, insufficient information system, deficiency in financial support, and shortage of time. TQM implementation is a very new concept in the context of Bangladesh. Even though, the highest managerial body has little knowledge, information and understanding about the contribution of diverse barriers throughout TQM implementation. Consequently, they are not able to formulate an operative design for TQM implementation. The study findings identified and ranked the barriers to TQM implementation which would contribute to designing an effective TQM implementation program. It is highly projected that the findings of this study would make an original as well as a practical contribution to the banks. But it should be noted that practical implications apply to private commercial banks only and not be generalized. It is an exploratory study, among very few, to have assessed TQM implementation in the banking industry of Bangladesh. The key findings of this study also contribute to the academic and research field. In addition, bestowing some recommendations for private commercial banks of Bangladesh, the research offers

suggestions, a way to further research in this area. The discussion on findings and implications would act as a designed platform to the field of TQM for successful implementation and also make a wake-up call for analysis trends, figures, gaps, and infirmity in implementing TQM. An integrated understanding of TQM by the top management by concentrating on all stakeholders for fundamental improvements will make a positive quality movement. A body of knowledge has been framed which is very useful for scholars, intellectuals, practitioners, and researchers in the TQM field, certainly provide a vibrant road map in an evidence-based approach to develop TQM worker's proficiencies and embedding new ones.

The study high points the necessity of quality and recommends a TQM perspective management practice. Intending to develop an interactive approach, the concept can be applied by quality experts, spokespersons, employees, and banks through integrating resources. The steps can be taken in the light of recommendations made to implement TQM to attaining its vision in the future, the banks of Bangladesh stand to become able to realize.

The study articulated the implication in the light of decision-makers of banks, academicians, and future researchers. The study would contribute to the banks' top management understanding the concept, practice, technique of TQM and create the awareness and culture of TQM. It is highly expected that the discussion on findings would provide some useful insight to start a headway toward TQM. The academicians can shed some light on the importance of TQM by introducing more courses on the applicability of TQM. The study also tried to stimulate interest for further research on TQM to draw the attention of bankers.

Key Words: *TQM, commercial banks, banking industry, top management leadership, customer relationship, supplier partnership, employee involvement, continuous improvement, organizational culture, TQM implementation, TQM barriers.*

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List of Abbreviations

AVE	-	Average Variance Extracted
AVP	-	Assistant Vice Principal
BB	-	Bangladesh Bank
BOD	-	Business Operation Division
BIBM	-	Bangladesh Institute of Bank Management
BPDB	-	Bangladesh Power Development Board
BUP	-	Bangladesh University of Professionals
BUET	-	Bangladesh University of Engineering and Technology
CEO	-	Chief Executive Office
CI	-	Continuous improvement
CMB	-	Common method bias
CR	-	Customer relationship
CSFs	-	Critical success factors
DU	-	University of Dhaka
EI	-	Employee involvement
FAVP	-	First Assistant Vice Principal
FGD	-	Focus Group Discussion
FL	-	Factor loading
GM	-	General Manager
HOD	-	Head of Department
HRD	-	Human Resource Department
HR	-	Human Resource
HTMT	-	Heterotrait-monotrait ratio of correlations
JU	-	Jahangirnagar University
MD	-	Managing Director
MLBs	-	Mid- level bankers
OBU	-	Offshore Banking Unit
OC	-	Organizational culture
PLS	-	Partial Least Square
ρ_A	-	DijkstraHenseler's rho_A
ρ_c	-	Composite Reliability
PO	-	Principal Officer
R&D	-	Research & Development
SEM	-	Structural Equation Modelling

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SP	-	Supplier partnership
SPO	-	Senior Principal Officer
TLBs	-	Top Level bankers
TML	-	Top management leadership
VIF	-	Variance inflation factor

Chapter One

Introduction & Synopsis

Prelude

This preliminary chapter is presenting a synopsis of the study conducted in this study on the implementation of TQM practices in private commercial banks of Bangladesh. It inaugurates with a short discussion of the prelude of the study, shadowed by identification of the research gap, formulation of the research objectives, research questions, portrayal of the implication, structure, and limitations of the study. This chapter also highlighted the scope of the study which pronounced and explained how the research questions are associated with the proposed methodology.

1.1 Context of the Study

The outcomes of globalization are an open marketplace, international trade, and rapid technological innovation which affect businesses and their environment worldwide to a great extent. New ways of thinking and comprehensive strategies are an absolute must to cope up with an environment that is categorized by rapid change in terms of technology, customer needs, and preferences, government regulation, social structure, and ideology, in particular, resulting in a high lead in the high requirement of quality. Utilizing the thrust of economic conditions is the fundamentals of banking, this sector is considered as a vital module of the financial system for every country which mobilizes resources for productive investments and develops the economy by increasing GDP. An appropriate strategy is required for banking operational activities to evade the national economic slowdown (Otaviya & Rani, 2020).

Conferring to Bose (2002), the concurring economy is categorized by rapid globalization, growing competition, and advancement in communication and

information technology which imposes corporations adopting a customer-centric approach with the focus on customer relationships management over the traditional marketing dogmas. As a result, this situation leading a drastic shift from products and services towards customers that most of the companies synchronize to their strategies (Teo et al., 2006). Many organizations, as well as countries, have comprehended that to thrive in the increasingly competitive international environment where they are operating, continuous quality improvement of products and services is the most vital strategy for their business. To occupy as well as secure a privileged position in the international economy, the advancement, and application of effective company-wide quality control and continuous improvement are widely known as TQM. Oakland (1990) stated TQM as an arranged method to the practice of management, needing variations in organizational operations, strategic primacies, individual beliefs, attitudes, and behaviours. It has gotten high attention in many countries outside the Western World, and in particular Asian countries for the last few decades. Numerous examples are available of successful TQM implementation which lead to achieving better quality products, gaining higher productivity through the methodical amputation of waste, organized elimination of non-productive activities, and satisfying the demand and expectations of their internal and external stakeholders like shareholders, customers, employees and the community that they are serving.

The sector-wise GDP contribution of Bangladesh in the fiscal year 2020-2021 was agriculture: 13.47%, industry: 34.99%, and services: 51.53% (Finance Division, 2021), which indicates that the service sector has the major contribution with high potentiality. As the largest in the service sector, banking sector is highly equipping to the requirements of the different groups of people and contributes to the economy by providing funds for investment not only in the private sectors, but also in public

sectors. Remarkably, the service excellence of commercial banks inclines to demonstrate a leading role in high contribution sectors (Angur et al., 1999; Elango & Gudep 2006). Undeniably, offering and arranging the best service quality is the prerequisite to appealing and retaining clients in the service industry. According to Barkat-E-Khuda (2019), four major drivers generate the economic growth in Bangladesh which are performing by banks and contributing to building up a strong economy.

- (i) rise in export earnings;
- (ii) rise in remittances sent by migrant workers;
- (iii) progress in the agriculture division; and
- (iv) growth in medium, small and micro enterprises (MSMEs).

Focusing on the financial sector of Bangladesh, it is small and underdeveloped and consists of the banking sector and capital market sector which is emerging but developing. The Financial Intermediations has the contribution of 3.36% in the sectoral share of GDP and under this sector, the banking industry of Bangladesh represents a 2.86% share in the economy and has a foremost role in financing the economy's activities (Finance Division, 2021). There are 60 scheduled banks, comprised of 6 state-owned, 3 specialized, 51 private commercial banks including 42 local private and 9 foreign banks, according to Bangladesh Bank Publication (2021a), along with a structural network of 10753 branches (around 48% in rural areas and 52% in urban areas) (Bangladesh Bank, 2021b). Apart from that, there are 5 non-scheduled banks. The private commercial banks (PCBs) manage around 2/3rd of the total assets and total deposits, followed by the state-owned commercial banks (SoCBs), foreign commercial banks (FCBs), and specialized banks (SBs) (Barkat-e-Khuda, 2019).

The banking sector has been coupled with dynamic changes over the last few years. In Bangladesh, banks have tremendously grown concerning increased revenue, bonds, guarantees, assets, and a variety of services in terms of their products. However, dynamic changes such as continued growth have been a major driving force in the banking industry of a country and Bangladesh is not the exception to that. This industry has been faced with organizational efficiency challenges, stiff competition, complex demands of real-time and digital customers, the changeover from high in-house costs to more responsive and manageable services, amendment in government regulation, difficulty to cope with central bank regulations, and customers changing demands to technology-friendly services. The business environment is evolving; hence banks have to change their thinking and strategy on how things are done. To stay relevant, banks need to step up their game and align their processes with quality. Quality has grown as a premeditated mechanism for gauging corporate performance in today's rapidly shifting environment (Hassan et al., 2012). As banks are the underpinning of a modern economy, quality service of banks is highly required. The level of the quality of bank assets is one of the indicators of a comprehensive assessment of the bank's activities, and it helps to determine the acceptability of the structure of assets, profitability, and its sufficient diversification. Competitive customer service can be gained through the quality strategy. Precise attention should be rewarded to the quality of the service which pointedly affects customer trustworthiness in the banking industry.

In regard to the challenges of globalization together with the fast enhancement in information technology, not only have risen competition in the business sector intensely but also created an urge for the companies to adopt various strategic attitudes to attain competitive advantages. (Parnell et al., 2003). As a result, quality

management becoming a considerable facet especially in a competitive sector like banking all over the world. It is indeed very logical to assume that globalization will highly affect banking efficiency. The concept of TQM in banking sector has developed over years with a new and robust concentration on customer relationships (Talib et al., 2012 b). In accordance to Venkateshwarlu et al. (2011), “Total Quality Management is observed as a management philosophy, aiming to uphold the standard in acquiring raw materials, crafted to control the standard in manufacturing procedures, highly maintained to produce the excellence of goods aligned with standard, directed to control eminence in logistics and distribution processes, eventually promised to the suppliers and end customers by offering the high-end goods and services according to requirements”. Understanding customer requirements is the prime aspect of TQM aiming to get the updated customer needs for better customer service. Globalization, industry growth, technological change, and fierce competition in the banking sector continuously increase the role as well as the importance of TQM implementation to create an internal and external environment with varying levels of dynamism and intricacy which arouse the urge for realignment of operation strategies.

1.2 Role of Banking in the Economy of Bangladesh

Economic growth is the highest priority and crucial objective of every country of the world and the development of the banking sector is playing a vibrant role in this regard. In the context of economic growth, Bangladesh has derived a long way after the liberation war. Bangladesh's economy is the 35th largest in the world in nominal terms and 30th largest in terms of Purchasing Power Parity (PPP) (World Economic Forum, 2020). As Bangladesh is an import-dependent country, banks facilitate

expenses, finance, and risk management services to the RMG sector which is the major contributing sector in the economy of Bangladesh.

The role of banks in enabling remittances by migrant workers is very significant. Bangladesh is receiving higher remittances due to a robust pick-up in international monetary events, specifically in the Middle East countries. Barkat-e-Khuda (2019) identified the major aspects facilitating to higher remittances through the banking channels and those are: (a) “devaluation of the BDT against US\$”; (b) “higher rate presented by local banks”; (c) “deficiency of US\$ increased import payments against a waning in export earnings, have deepened their efforts to upsurge remittance inflows through their corresponding channels”; and (d) “Bangladesh Bank's (BB) reinforced scrutiny on hundi, the illegal opening by many migrant workers for sending currency home”.

Barkat-e-Khuda (2019) also identified various challenges of banks like weedy management, absence of robust leadership, poor governance and failure to compliance with ethical standards causing to numerous kinds of banking scams such as money laundering and Non-Performing Loans (NPLs). The commercial banks of Bangladesh are dealing with these day-to-day challenges to provide as well as ensure better quality service to their customers.

Due to the government's uppermost precedence to the agricultural sector and its connected sectors for sufficient loan with lower cost, loan disbursement of banks surpassed the target; and the crop sub-sector acknowledged about one-half of total agricultural credit, followed by livestock and other agriculture activities between 2013 and 2017. The share of short-term loans was higher compared to long-term loans between 2007 and 2017, and during the past five years, the gap has been broadening. (Barkat-e-Khuda, 2019). To safeguard suitable funding for SMEs, Bangladesh Bank

in 2010 framed the "SME Credit Policies and Programmes" to boost up the SMEs in achieving sustainable comprehensive growth. BB also encourages all banks to take necessary actions to promote SME loans.

Undoubtedly, financing is one of the prime paraphernalia to empowering women entrepreneurs economically and socially as well. Funding is the main challenge for women's entrepreneurship development. To endorse female entrepreneurs, Bangladesh Bank has acknowledged supportive measures such as single-digit interest loan, less time and formality for loan disbursement process, training facilities, separate 'Women Entrepreneurs' Dedicated Desk' in every branch supervised by a trained and experienced woman official, special advice and service centre for women entrepreneurs' in branches which are designed to ensure service-friendly approach towards women (Bangladesh Bank, 2014). The SME and Special Programmes Department of Bangladesh Bank conducted a fair to endorse women entrepreneurs and their products in 2019. Business of fabric tailoring, crafting furniture, delivery of seeds, agro-business, poultry farm, boutique garment sector leather industry and the leather industry were the prime sector and 58 stalls of 54 banks demonstrated products of female entrepreneurs. They all took a loan from various banks and become successful entrepreneurs (Hasan, 2019).

Bangladesh is a developing country and its banking sector epitomizes the mainstay of the financial system of this country. It has thrived over decades concerning to the number of banks and their branches, volume of assets, and engrosses to the economy since independence. A good number of acts have been reformed to expand the economical proficiency of this sector. Nonetheless, presently this sector has been beleaguered by numerous problems including inadequacies of resources, malpractice and scams, poor governance, shortage of efficient employees

and so on which impacted the reliability of the banking system in the country resulting in vast losses in the sector. New-fangled challenges enduring to appear in different forms while the sector is yet to convalesce from its existing shocks. The government has taken some essential steps towards restructuring its banking system to deliver a banking sector focusing on international ambitions for economic regeneration and achieving more vigorous contribution in the globalized economy. Some major reforms which have been taken over the decades to boost up this sector, highlighted in a report presented by the Centre for Policy Dialogue (2018), stated some of them below.

Table 1

Major Reforms in the Banking Sector of Bangladesh (2009 onwards) (Pg. no. 38)

<i>Date</i>	<i>Changes - Brief Description</i>
2009	“Anti-Terrorism Act is passed to address terror financing (GoB, 2009)”
2011	“Whistle-blowers’ Protection Act 2011 states that no criminal, civil or departmental proceedings can be initiated against a person for disclosing information in the public interest to the authorities, and his or her identity will not be disclosed without his or her consent. (GoB, 2011)”
2012	“Customer Interest Protection Centre’ (CIPC) is established in the head office and branch offices of Bangladesh Bank”
2012	“Money Laundering Prevention Act gives Bangladesh Bank responsibility for money laundering offenses (GoB, 2012)”
2012	“Bangladesh Financial Intelligence Unit (BFIU) is established for analyzing Suspicious Transaction Reports (STRs), Cash Transaction Reports (CTRs) & information related to money laundering (ML) or financing of terrorism (TF) received from reporting agencies and other sources and disseminating information/intelligence thereon to relevant law enforcement agencies. (Bangladesh Bank, 2012)”
2013	“Bank Company Act is amended. More than two members of the same family are not allowed to be on the board of directors, and the tenure of the directors is restricted to six years. (GoB, 2013)”
2014	“Bangladesh Bank imposes “Regulations on Electronic Fund Transfer” (Bangladesh

	Bank, 2014)”
2015	“Financial Reporting Act is passed which requires the establishment of a new oversight body, referred to as the Financial Reporting Council (FRC), whose main purpose will be to regulate the financial reporting process followed by the quoted companies (GoB, 2015)”
2015	“Bangladesh Bank introduces “Guideline on ICT Security for Banks and Non-bank Financial Institutions” (Bangladesh Bank, 2015)”
2017	“Code of Conduct for banks and non-bank financial institutions introduced by Bangladesh Bank to implement National Integrity Strategy in the financial sector of Bangladesh (Bangladesh Bank, 2017)”
2017	“Bangladesh Bank introduces ‘Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh’ (Bangladesh Bank, 2017)”
2018	“Bank Company Act is amended allowing increasing the maximum number of family members on the board of directors from two to four and extending the tenure of the board of directors from six to nine years (Dhaka Tribune, 2018)”

1.3 TQM in Banking

In the area of application of TQM from manufacturing to service organization, showed visible rapid swing as voluminous studies undertaken recently. In this TQM era, it has been defined in the banking sector as a management method and a set of disciplines that are synchronized to confirm the institution constantly meets and surpasses customer necessities. The aim is to distribute the maximum worth for the customer at the lowest cost with the involvement of all branches, departments, and tiers of organization for attaining rational turnover and economic steadiness for the bank (Morehouse, 1996).

TQM has occupied a robust role in all sort of sectors, public and private, manufacturing and service, and appeared as an appropriate approach for waste minimization, process upgrading, business optimization, and quality performance. Furthermore, to achieve sustainable competitive advantage, the practice of TQM

exclusively for service organizations, accredited by plentiful researchers and academicians as well.

Service organizations have lagged behind the manufacturing organization to advance their services centred to quality by applying quality management systems such as TQM. TQM concept and application of TQM tools and techniques in a service organization are not the same, either way, is different from an industrial organization (Fatemi et al., 2016). The success stories of quality management practices illustrated by manufacturing and industrial organization by way of improving performance and increasing competitive advantage boost up the likelihood of adaptation of TQM philosophy in service organizations. Talib and Rahman (2010) acknowledged the Total Quality Management (TQM) method as one of the utmost significant-quality practices leading to progress and superiority in diverse sectors, counting to the service sector at the scopes of national and global scale. The authors also claimed that having certificates of quality management (TQM) benefits customers to become more assured about their service organization choices. TQM not only improves product quality but also many aspects such as employee engagement, customer satisfaction and business performance.

The banking division is the prime sector among the service industry which attends to the requirements of diverse groups of people. Presently, TQM has grown as the new-fangled technique to strengthen competitive advantages and organizational performance which is the central of a company's triumph (Ooi et al., 2011). Banks are mainstream of the financial system of a country. The banking system must be strong and comprehensive for effective inter-mediation of financial resources. The absence of any one or more than one prerequisite would not only cost the real sector but bring catastrophe for the country as a whole.

The banking sector of Bangladesh has thrived over the years, generating double-digit profit proportions, nourishing progress, and persisting cut-throat competition while offering striking revenues to shareholders. In a couple of years, banking establishments have been exposed to concentrated competition and growing customer expectations. Some influences can be mentioned that have subsidised to the competition such as rapid globalization, swift changes in information and communication technology, and amendments in government regulations. In order to obtain competitive advantages, banks can practice Quality management as a powerful instrument. This research explores and categorizes the extent of the practice of TQM in the banking sector of Bangladesh focusing on its critical success factors - top management leadership, employee involvement, supplier partnership, customer relationship, continuous improvement, and organization culture. The study also lightens on the problems facing implementing TQM, benefits that can gain from this philosophy, and the way for improvisation. Further discussion has been portrayed on a proactive recommendation for quality management program and future research guidelines in the banking sector.

1.4 Justification and Logical Reasoning

Changing levels of dynamism and complexity demand the realignment of operational strategies to meet the new era of customer requirements in the business world. To cope up with this situation and meet current business requirements, all businesses are focusing on quality. To measure business performance, quality has become one of the essential elements and strategic tools. The intensity of global competition and the increasing demand from customers for better quality in the market has stimulated numerous companies to design and offer high-end products and services (Worlu et al., 2019).

TQM is measured as a significant catalyst in this framework and this is the reason the TQM concept has drawn the attention of all sides of commerce and industry, as well as that of politicians and academics (Davood et al., 2013). A very recent study on the leadership of TQM conducted by Bouranta (2021), highlighted that in regard to TQM practices, the manufacturing companies involved more than did service companies which clearly pointing the importance of TQM implementation in the service industry.

Like all sorts of businesses, banks are also determined to adopt quality parameters. Running business operations according to the global requirements becomes an absolute must to fascinate new customers and retain an existing one. As a result, the banking sector all over the world facing serious challenges from local and global competition and started to adopt the TQM approach to satisfy global competitiveness in little range. A good extent of literature review advocates that capacious research effort has been thru on the service quality, but limited focus carried on TQM in the banking sector. Many researchers like Sureshchandar et al. (2002), Meyer and Dornach (1997) have identified the dire need for research work in this area to understand the best way to apply TQM. They also argued about the critical success dimensions for implementing TQM to achieve sound financial performance, fulfilment of customer requirements, high employee involvement and surpass in quality of service. The adaptation of TQM practices by banks not only supports survival in the market but also achieves anticipated progress in the business. Banks have got little attention in terms of studies that have been conducted till now on TQM. In Bangladesh, the issue is quite new, and a considerable lack of literature concerning TQM in this sector attempt to bridge the gap.

Because of high competition in this sector, this research will add value in this regard. The effort will demonstrate that the practices of TQM can be of great benefit to the banks, as it will lead to an upsurge in the organization's customer orientation and competitive edge. Banks can consider the findings and recommendations of this study while strategizing ways that will ensure high-quality service in this sector by practicing TQM methods, theories, models, and techniques.

The study further reinforces its importance from the fact to assess TQM implementation in the banking industry of Bangladesh in response to cope up with the growing technology, social and economic changes. Finally, the study attains distinct standing from the potentiality of applying it not only to state-owned banks but also to another service sector that is thrusting to meet customer demands and consequently enabling decision-makers in business organizations to formulate strategies on the ground of continuous improvement. It is also hoped the policy makers at the highest level can use the information to make a vibrant move to run the economy either.

1.5 Problem Domain & Problem Statement

Companies succeed because they have a certain advantage over their rivals (Pearce & Robinson, 2007). Innovation, upgrading, hierarchical follows, advertising structures, and government arrangements have brought massive changes which today's global world is encountering (Collins & Smith, 2006; Malik & Kotabe, 2009). At present time, the companies are facing a challenge for surviving in this competitive market forum through the consequences of privatization, liberalization, globalization and competition (Velmurugan & Akhilesh, 2019). The emergence of major forces like customer knowledge, concentrated competition, swift advancement in technology, and product/ service proliferation creates challenges in all sectors of business is quite noticeable and the banking sector is not an exception. As a result, organizations, as

well as banks, are now more concerned about quality issues. Quality has turned out as a critical instrument for gauging company performance in this competitive environment (Sadq et al., 2020). Another way round, quality is now considered as a strategic requirement for gaining a competitive advantage. When reviewing the literature, it has been apparent that a lot of transition has occurred in cultivating processes from process routines, designs, and quality over the last three decades. These forces that drove quality according to Juran (1995) include;

- greater intricacy and precision of products
- pressures to human safety and health, and the environment
- government regulations on quality aspect
- the rise of the consumerism drive
- strengthened competition on quality at global level.

So, it is obvious that quality management has got a new direction in the business world. Most organizations all over the world have pointed quality as an elementary part of their premeditated business devices to encounter the local as well as global challenges of the new comprehensive environment. TQM has recurrently been implemented concerning to attain better product excellence, refining the quality of services, and nourishing the needs and hopes of customers. It is evident by many studies that TQM has a higher effect on productivity (Belay et al., 2014; Chapman & Al-Khawaldeh, 2002). Danlami et al. (2020) argued higher output and higher production is an indication of an increase in productivity. In that study, productivity upgrading is stated as synonymous with minimization of wastages of resources in the process of production and proper utilization of factor inputs through getting more results by applying fewer inputs. Powell et al. (1995) established a connection between quality and productivity. Many kinds of literature specified that successful

TQM systems improved operational efficiency (Faeq et al., 2021; Ganapavarapu & Prathigadapa, 2015; Othman et al., 2018; Talib et al., 2012 b). TQM also gets attention on waste reduction so implementation of TQM leads to higher productivity. Like many countries of the world, our country also has commenced to generate and provide national quality awards to endorse the implementation of TQM at a national level. The importance of TQM is also illustrated through the success of the Malcolm Baldrige Award (MBNQA) in the USA and the European Quality Award (EQA) in Europe. Many researchers proclaimed TQM as a method to progress efficiency and competitiveness of a business to encounter customers' requirements (Oakland,1993), as the basis of sustainable competitive advantage for business organizations (Terziovski, 2006), as a foundation of reaching excellence, forming a right-first-time attitude, obtaining resourceful business solutions, appreciating customers and suppliers, etc. (Mohanty & Behera, 1996). TQM which is flourishing as the new management method and culture of directing an organization has increased the consideration of the world over last couple of years as a management strategy that is positively linked with the successful performance of many organizations. Increased levels of competition in the global marketplace, made TQM an absolute requirement to stay in business (Shahin & Dabestani, 2011). Hackman and Wageman (1995) have recognized TQM as a new social movement. According to Adeoti (2003) measuring the quality of service is more complicated than that of manufactured goods. In a general way, a user of a service occupies very few features and attributes in attention as fundamentals that he or she makes use of comparison among alternatives. They are not only become less tolerant of interruptions, delays, and service letdowns but also expect top-notch service performance from the banks. In such circumstances, the client's decision to frequent one and not the other is based on the quality service

offered. As a result, banks are becoming day by day more clients need prone. Almost all banks perform the same functions but still, there is a huge possibility that the absence of one feature in a bank might generate second thought to the customers to prefer another. Consequently, the clientele of banks considers the relative competence and efficiency while deciding for banking activities with a particular bank. Many studies have demonstrated that the performance of banks is pointedly and positively connected with service quality, and to accomplish service quality in the banking sector, the TQM is exceedingly indispensable (Talib et al., 2012 b).

Banks are being financial intermediaries and the backbone of monetary system immersed in channelling funds through balancing surplus and shortage, (Luckett, 1994). It is also very obvious from the literature review that quality management is a significant aspect of the highly competitive banking sector in today's competitive business world. But banking sector all over the world facing global challenges for achieving higher business performance in the international market (Zakuan et al., 2010). Formisano et al. (2020) suggested transforming the role of banks in regard to international growth from sheer financiers to dynamic partners by offering an extensive array of services in terms of counselling and care professionals rather than just financial.

TQM plays a dynamic role in enlightening business performance. Psomas and Jaca (2016) stated the positive effect of TQM on business performance. The concept of TQM banking has developed over years to comprise more developments and service relationships with customers. Adding to that, the huge development in technology makes it necessary to focus on the continuous improvements of electronic and online services. TQM is extremely important to achieve quality, providing the best service which is a prerequisite to survive and succeed by meeting challenges of

the private banking sector of Bangladesh to face global competition. The positive outcome of TQM implementation in the banking sector is evident in many kinds of literature (Al-Shobaki et al., 2010; Okine, 2019; Sit et al., 2011; Tagger & Gupta, 2020). Since the performance of banks is pointedly and positively linked with the service quality, the research is designed to investigate the level of implementation of TQM by measuring practice of top management leadership, employee involvement, supplier partnership, customer relationship, continuous improvement, and organization culture. Venkateshwarlu et al. (2011) found that the TQM implementation leads to reduced raw materials rejection, inventory, defect rate, variations in the processes, quality cost, machine breakdown time, and improved manufacturing processes, sales, productivity, and performance which directly and indirectly lead to committed leadership, strong supplier partnership, cohesive customer relationship, and improved cultural habits and cooperative working environment. Alike other industries, quality improvement is captivating a strong area at a radical pace in the banking industry. Practice of TQM principles, tools, and techniques to different departments with appropriate strategies, guidelines, and assessment can improve the banking branch operations. Another way round, it can be said that there is a dire need to develop TQM models, tools, and techniques that are compatible with the banking sector in Bangladesh as this industry is passing a crisis period due to some recent scams and highly local as well as international competition. Therefore, improving service quality is the prime challenge that the banking sector of Bangladesh needs to solve at present.

The role of the banking sector in economic and financial activities in respect of developing and developed countries is unquestionable. Despite having all the supporting and logical reasons, TQM implementation is confronting some barriers.

Haque et al. (2014) have found that TQM implementation in Islamic banks of Bangladesh is not that much success because of the absence of responsiveness of the benefits of TQM at the workplace. Banks need to be aware of and understand the major barriers of TQM implementation and respond proactively to avert these constraints at an earlier stage to have the expected outcome of TQM for meeting customer demands.

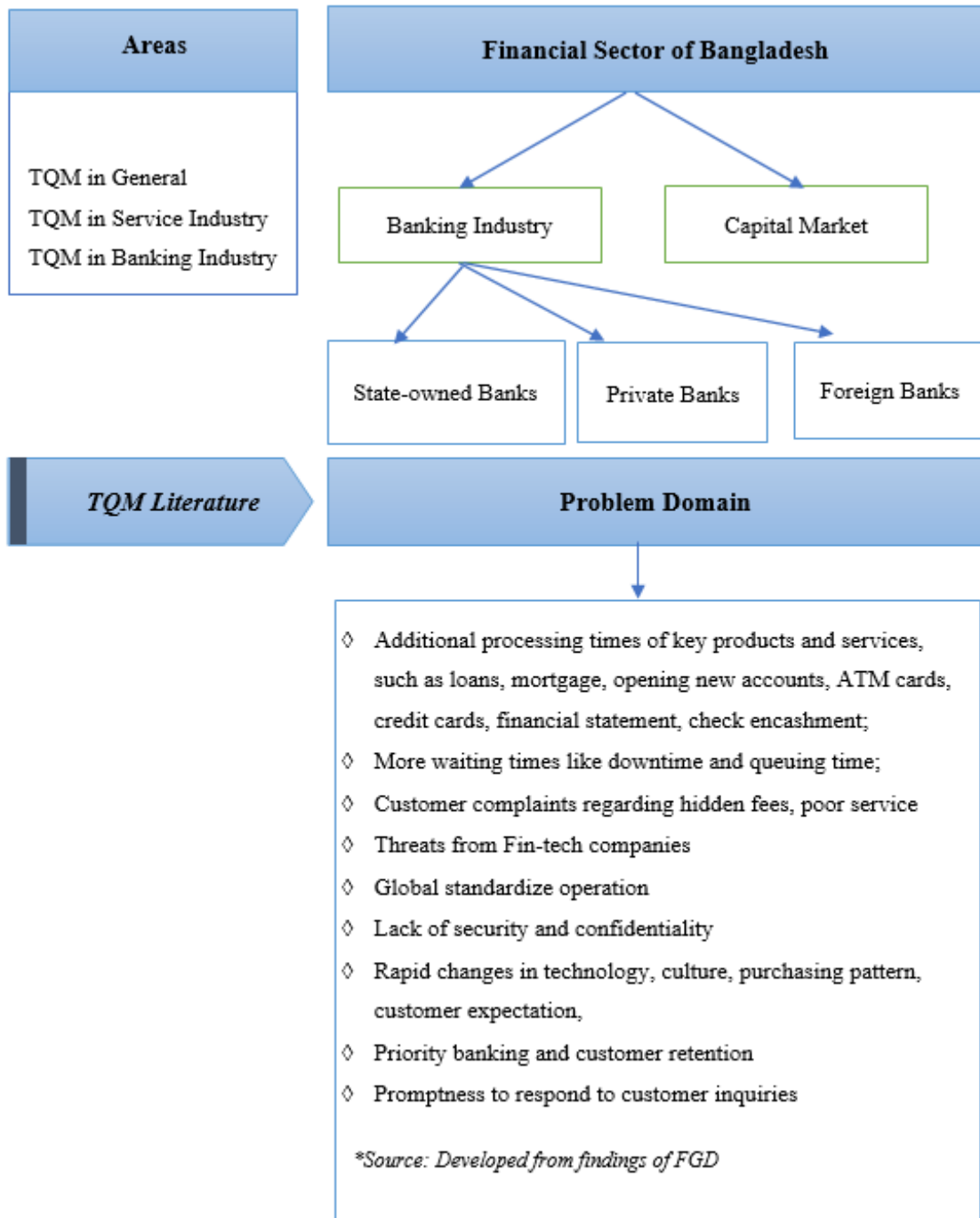
Going through in-depth review and analysis of relevant literature, the problem domain of this study has been identified which is illustrated in Fig 1 and the following statements developed.

- *To what extent TQM is implemented in commercial banks of Bangladesh?*
- *What factors are working as the barriers to successful TQM implementation in banking sector of Bangladesh?*

Therefore, this exploratory study is premeditated as an extension to the existing body of knowledge found in the world and to fill the gap on a study in a Bangladesh setting. To bridge the gap and provide informative, reliable, and practical data on TQM for banks to not only implement TQM practices but also identify the barriers for getting the best outcome to achieve business performance, this study proposes a framework of recommendation in order to TQM implementation in the banking industry of Bangladesh.

Figure 1

Mapping for Problem Domain & Problem Statement: Developed for the study by the author



1.6 Objectives of the Study

1.6.1 General Objective

This study is attempted and designed to investigate the level of TQM practices in commercial banks operating in Bangladesh.

1.6.2 Specific Objectives

- To explore the level of top management leadership in TQM implementation
- To investigate the practice of customer relationship in TQM implementation
- To examine the level of supplier partnership in TQM implementation
- To scrutinize employee involvement in TQM implementation
- To explore the activities of continuous improvement in TQM implementation
- To find out the influence of organizational culture on TQM implementation
- To identify and rank the barriers that hinder the applicability of TQM in this sector
- To induce substantial implications from the research
- To construct an appropriate framework of recommendation that can serve as a guiding tool for successful TQM implementation.

1.7 Research Gap

TQM is merely a very unexploited concept in Bangladesh. Much of the work on TQM in Bangladesh is focused on the manufacturing industries. The study aims at exploring the application of TQM in the banking industry of Bangladesh and recognising problems areas addressed as barriers and possible remedies to make this sector competitive.

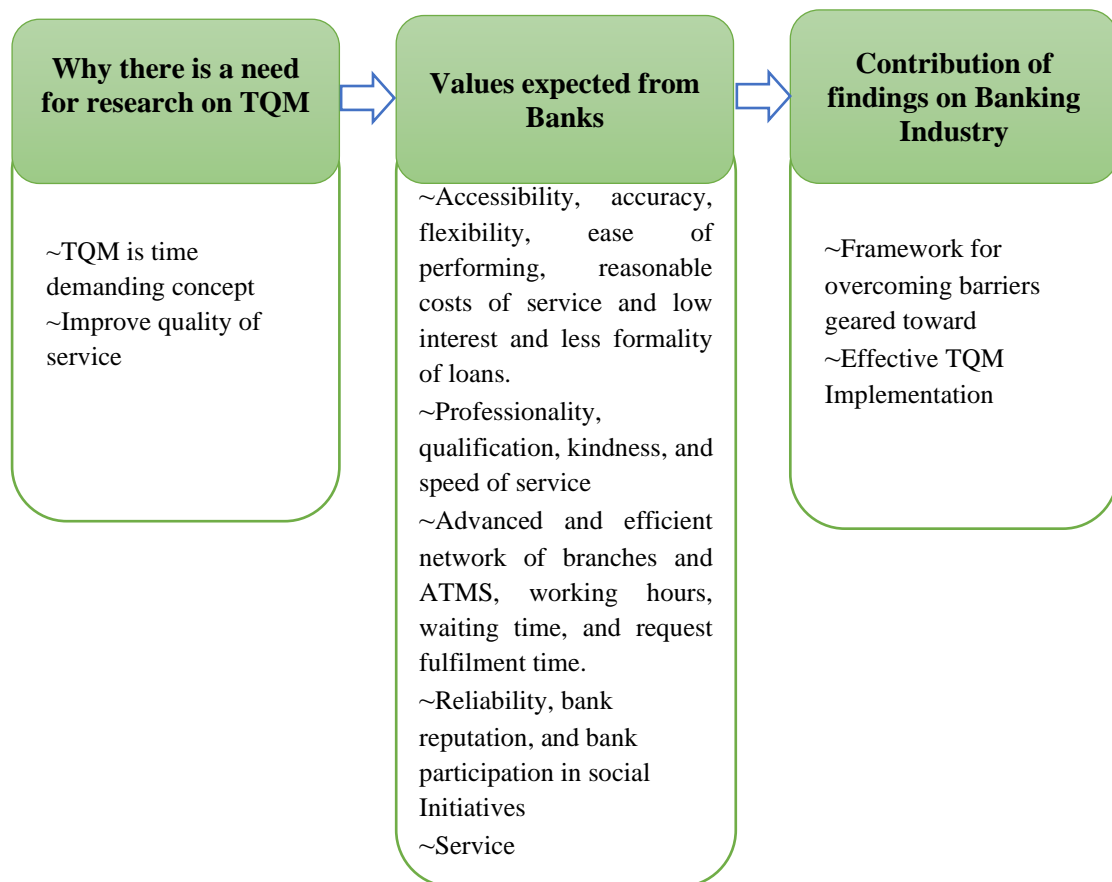
- ❑ Lack of empirical evidence in Bangladesh that determines the implementation of TQM along with barriers.
- ❑ Very few studies were found in the service sector, more particularly in the banking sector.

- ❑ TQM in the area of banking got little attention.
- ❑ Barriers to TQM implementation failed to converge for improvement.

The following chart is illustrating the identification of the research gap to generate research questions geared toward the objectives of the study.

Figure 2

Mapping for Research Gap: Constructed for the study by the author



In response to the above information presented in the chart, increasing attention needs to be taken care to establish the urge to the necessity for innovative managerial practices in the banking industry of Bangladesh. Notwithstanding the present popularity of TQM both in manufacturing and service arena, more specifically banking industry of Bangladesh has a dearth of knowledge on the concept and

implementation of TQM which need to be addressed for satisfying the increasing number of quality-conscious customers expecting better excellence in service.

1.8 Research Questions

The purpose of this study is to explore the extent of TQM implementation practicing in private commercial banks of Bangladesh. The research question and sub-questions intended to be answered are;

Q1: To what extent are private commercial banks in Bangladesh implementing TQM principles?

Q1.1. To what extent does top management leadership support TQM implementation?

Q1.2. To what extent does customer relationships support TQM implementation?

Q1.3. To what extent does supplier partnership support TQM implementation?

Q1.4. To what extent does employee involvement support TQM implementation?

Q1.5. To what extent does continuous improvement support TQM implementation?

Q1.6. To what extent does organizational culture support TQM implementation?

Q2. What are the possible barriers that limit the effective practice of TQM in the banking sector of Bangladesh?

A research methodology framework was established for this study based on these research questions in order to find out the answers.

1.9 Significance of the Study

Due to enduring and contend in an environment characterized by swift change, many organizations all over the world have started thinking a new way and formulate quality-oriented approaches to advance their organizational performance intending to turn out with more efficiency and flexibility, and to experience the benefits achievable with quality management, particularly, Total Quality Management (TQM) (Al-Khalifa & Aspinwall, 2000). Till now TQM is considered new philosophy and its principles, methods, and tools are not that much accustomed for more or less all types of business organizations. The existed theoretical research that focused on TQM is still inadequate to generate an in-depth understanding of the concept of total quality management (Thiagarajan et al., 2001). TQM is an established strategic management system across all industry sectors to achieve business brilliance by focusing on customer needs and wants for high-quality, cost-effective services or products (Irfan et al., 2014). Authors identified quality importance in the banking sector all over the world which leads to the need for TQM practices. Rebaia et al. (2012) argued that sustainable banks should consider global satisfaction for all stakeholders, customers need accessibility and service quality. Santouridis and Tsachtani, (2015) explored the impact of human, organizational and technological CRM resources on CRM processes over the customer life-cycle. Jain et al. (2015) advocated those channels must continuously attempt to add superior value to customers concerning distributing services through innovative channels. Elshaer and Augustyn (2016) documented the direct effect of TQM on competitive advantages. A large number of literature (Addae-Korankye, 2013; Ganapavarapu & Prathigadapa, 2015; Othman et al., 2020; Talib et al., 2012 a; Tangtatswas, 2019; Zhang, 2000) supported the connection of competitive advantage and TQM.

However, alongside this tremendous growth in preference of people on banking activities, the challenges of this industry to meet the growing demands of customers, who are continually comparing one experience to another and expect improved services in all areas, imparts a strategic look on quality for banks. Offering higher levels of quality of service is the strategy that is increasingly creating pressure for banks. Implementation of fundamentals of TQM has been announced and experienced in the manufacturing sector especially in the RMG area for quite some time. Empirical evidence of its application in the banking sector has not been identified much yet.

The findings of this research will also provide a comprehensive guideline for decision-makers of banks regarding the concept and understanding of methods, techniques appropriate models, and philosophy of TQM. Expectantly, the study will throw light to improve the TQM implementation in order to provide better quality services heading toward customer satisfaction.

Last but not the least, this study will gauge the implementation of TQM in the banking sector of Bangladesh focusing on some variables which are identified as critical success factors in recognized literature for TQM implementation. So, this research will offer empirical data for further research carried out by other researchers in this field on the banking sector as well as other sectors.

The significance of this study lies in the following:

- ✓ A very limited number of studies are available, based on empirical, reliable, and validated data, on the implementation of TQM in the banking sector. The study will contribute to this sector in the context of Bangladesh.
- ✓ As the study strives to fill the gaps in the literature on TQM, a dynamic survey and related studies should be launched in this area. Such a study has the

potential to create a platform for other researchers not only in Bangladesh but also in other developing countries.

- ✓ The study is an effort to recognize and appraise the level of TQM implementation in the banks of Bangladesh, and is, therefore, one among very few of its kind. The commercial banks can get a framework of recommendations to apply TQM.
- ✓ The study will generate evidence and information that has practical application for the management of banks in evaluating TQM practices, identifying weaknesses, and pledging appropriate measures to increase organizational performance and competitive advantages.
- ✓ TQM dimensions will be advantageous to practitioners for signifying and illuminating the benefits of TQM applications.
- ✓ More generally, however, since TQM is required an effort to organizational change, the study also highlighted the TQM to contrivance change initiatives concerning TQM.
- ✓ In addition, the evidence and information of this study will deliver a plot in determining needs for further research.
- ✓ The study is an effort to identify the barriers that avert the implementation of TQM in commercial banks of Bangladesh that will lead to a successful implementation of TQM.

1.10 Scope of the Study

This study will examine the several TQM practices practiced by commercial banks in Bangladesh focusing on the six critical factors – top management leadership, employee involvement, customer relationship, supplier partnership, continuous

improvement, and organizational culture. The critical success factors which were adopted for this study is more suitable to the banking sector. Below has a glimpse.

Table 2

Scope of the Study: Illustrated for the study by the author

Areas	Details	
Sector	Banking	
Geography	Dhaka, Bangladesh	
Type	Private Commercial Banks	
Time Frame	2018 to 2022	
Variables of the Study	Independent Variables	<i>Top Management Leadership</i> <i>Customer Relationship</i> <i>Supplier Partnership</i> <i>Employee Involvement</i> <i>Continuous Improvement</i> <i>Organizational Culture</i>
	Dependent Variable	<i>TQM Implementation</i>
Bank Selection Criteria	<i>Bank generation</i> <i>Number of branches</i> <i>Number of employees</i> <i>Financial performance</i>	
Respondents' Profile	Top and mid-level bankers	
Research Methodology	Questionnaire survey through direct interview and emailing.	

1.11 Relevance

Globalization of international business (Fotopoulos & Psomas, 2010), expanding marketplace for survival (Zakuan et al., 2010), upgrading in productivity, profitability, satisfaction of customer (Sadikoglu & Zahir, 2010), shifting organizational culture (Prajogo & McDermott, 2005), consumers escalating demands for better products and services (Thiagaragan et al., 2001), economic success of companies (Curkovic et al., 2000) indicating a more complex business world in

future. The competitive advantage becomes a buzzword for every organization on the edge over rivals in attracting customers and defending against competitive forces. For achieving competitive advantage, organizations are focusing on the best-made product in the market with lower costs than rivals, updating technology, being in a more convenient geographical location, emphasizing product features and styling with more customer appeal, offering value created products and services with attractive combination, creating a brand name and investing highest on innovation. Many scholars recognized TQM as a premeditated process of generating sustainable competitive advantage on condition to be well implemented (Crosby, 1979; Feigenbaum, 1994; Juran, 1974; Sila & Ebrahimpour, 2003). In today's competitive business world, maintaining quality has become the top priority for any industry and the banking sector has got focus either. Bank services are a significant representation of the services industry (Mishkin, 2007). Because of the problem of profitability and firm competition in this industry, commercial banks are in dire need to improve quality intending to maintain a competitive advantage and circumvent the exclusion of the market. Retaining existing customers through meeting requirements and at the same time attracting potential customers through extensive promotional activities is undoubtedly vital for banks. To attain customer needs and prerequisite by providing the extended line of financial products and services is the prime focus of private banks which drive them to outperform in order to gear up the competition. Thus, it is needless to declare that the significance of TQM practices in the banking industry is unquestionable and time-demanding.

Based on the previous discussion, it appears that so far, very inadequate number of research has been directed on TQM implementation in the context of Bangladesh, and with regard to the banking industry is not very rich. The academic

relevance of this paper is therefore its contribution to the research area to close this gap. Academicians and researchers will use the findings to enhance to the body of knowledge and provide background information to those who would wish to further research this area. The findings will broaden their understanding of TQM and might attract other researchers to undertake further studies in the context of Bangladesh.

Furthermore, the discussion of the results obtained in this research with findings can be important information for the banking industry of Bangladesh. Therein, the practical relevance lies in gaining an understanding of the implementation of TQM in this sector. Salim et al. (2019) addressed TQM as a comprehensive philosophy that comprises a set of mechanisms like critical success factors, tools, techniques, and practices. Understanding these critical success factors of TQM can provide a better insight into the process of TQM implementation in this most promising sector of Bangladesh. Top management who are the think tanks for banks can streamline the operations of banks, which will enhance efficiency by curbing wastages, increase automation, utilize organizational resources optimally, and set better-standardized performance. This study can also be of practical relevance to bank clients as they would become an important part of business decisions. It is also hoped that the framework which is drawn on success factors and approaches from the study will assist this sector to appreciate various concepts used in their operations and revamping its sustainability, for the benefit of its stakeholders and competitiveness. This study will help in recognizing the fact that constrain TQM implementation and also hinder the application of continuous improvement practices. Apart from that, policy makers can use the findings in policy formulation and the development of a framework for governance purposes. In addition, the findings might help to point out areas in which BB can develop parameters for measuring the competencies and

capabilities of banks. Consequently, knowledge of TQM in developing countries, and in particular Bangladesh, is almost completely deficient. Therefore, this study will contribute knowledge to the existing literature, create an informative platform for academicians, reframe guidelines for banks, make nexus for clients to banks, and provide information to policy makers.

Table 3

Research Stakeholders with TQM Benefit: Identified for the study by the author

<i>Stakeholders</i>	<i>TQM Benefit</i>	
Banks	Top Management	Formulate quality-oriented strategies
	Mid Management	Set goals and objectives
	First Line Management	Provide quality service to customers
Academicians & Practitioners	Body of knowledge, set practical examples, explore new dimensions and variables.	
Researchers	Information for further research	
Service Receivers	Get high-end services	
Policy Makers	Quality-oriented policy formulation	

1.12 Expected Benefit of the Research

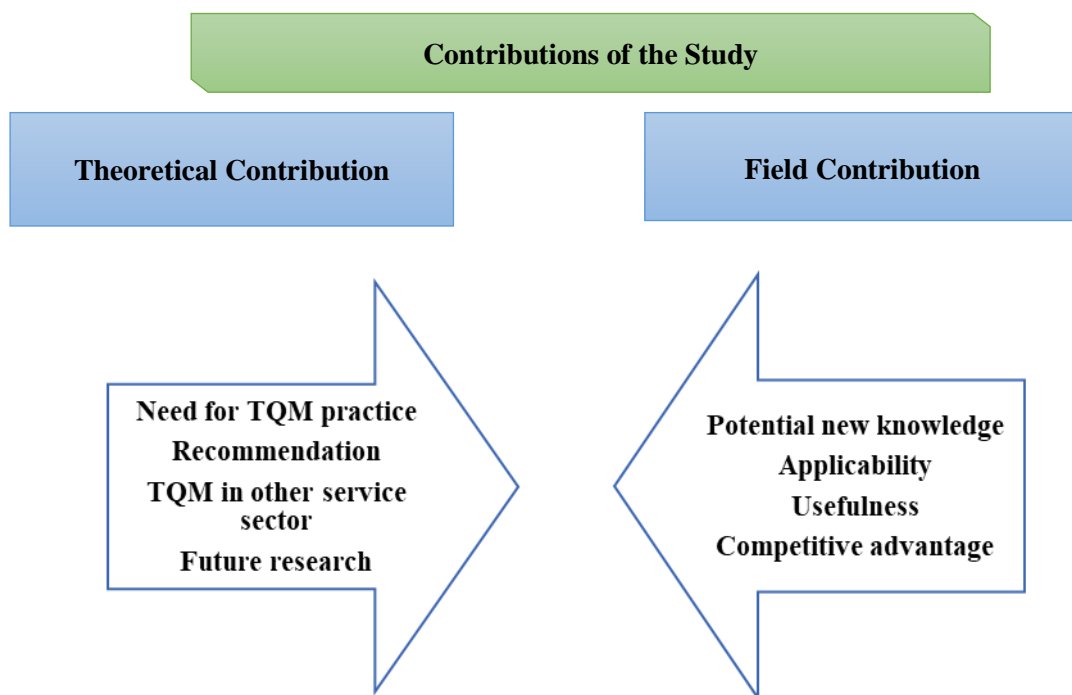
Banks are facing financial crisis due to rising pressure from rougher regulations, arising of new rivals such as fintech companies, telecommunication providers, and payment services from technology colossuses. Quality customer service is the ultimate solution for surviving in this competitive environment attempting to minimize costs, expand revenue, and appeal to potential customers with innovation and retain existing customers with modification. Studies on TQM proposed that the fruitful implementation of TQM resulted in better-quality communication, amplified productivity, enhanced customer satisfaction, and competitive advantage. (Antony et al., 2002; Prajogo & Sohal, 2003; Tsang & Antony, 2001). The result of this study will be very useful for banks in Bangladesh in implementing TQM practices by removing barriers that will lead to gaining a competitive advantage. This will, in turn,

increase and support to build up a strong economy. As this is the least analysed topic in this country, it would become the base for further future research in this regard. This yawning gap is filled by the conceptual model developed for this study and demonstrates a framework of recommendation for effective TQM implementation in the banking sector of Bangladesh. Below is a glimpse of the potential benefit of this study.

- Potential new knowledge
- Generalizations
- Applicability
- Usefulness
- Competitive advantage
- Future research

Figure 3

Mapping of Study Contribution: Developed from literature review



1.13 Assumptions of the Study

Some assumptions have been made for the study which is as follows:

- Respondents have an understanding of TQM.
- Respondents responded accurately and honestly to the survey.
- Respondents have adequate information regarding the quality practices of their respective banks.
- Respondents expressed their insightful thoughts and opinion regarding quality practices.
- The study was designed to scout the critical success factors of TQM in private commercial banks of Bangladesh.
- The survey was designed to recognize the barriers to TQM implementation in commercial banks of Bangladesh.
- The sample size, sample frame, data collection procedural is compatible with the study.
- The development of instruments covers the important quality practices in banks.

1.14 Layout and Sequence of the Study

The paper consists of eight chapters. Following this introduction, more than seven chapters are constructed to portrait the research work. Chapters two, three, four, and five provide an extensive literature review on the fundamentals of the TQM philosophy along with the significant contribution of TQM gurus, CSFs in TQM, research work on TQM in Bangladesh, and empirical evidence on TQM barriers. Chapter six detailed the research design and methodology of the study which derived from the research objectives and the literature reviews. A rigorous investigation of the measurement items and instruments is reported in this chapter either. Chapter seven

talked about data analysis and interpretation undertaken. Chapter eight designed the summary of findings, conclusion, and structured recommendation for the formulation of fruitful TQM strategies as well as overcoming the barriers to implementation. The recommendation part highlights general recommendations for the government and local institutions to endorse TQM in this sector of Bangladesh. The paper lastly culminates with the parameter for future research. A conclusion is also drawn, to sum up, the whole work.

The following table demonstrates the layout and structure of the study in a nut shell.

Table 4

Research Paper Structure

Chapter 1 Introduction	Outcome
The chapter commenced with a brief discussion of the prelude to the study, followed by identification of the research gap, formulation of the research objectives, research questions, portrayal of the significance, structure, and limitations of the study. The scope of the study is also pronounced and explained how the research questions are associated with the proposed methodology.	Justification
Chapter 2 TQM: A Literature Overview	Outcome
Total Quality Management (TQM) is considered an unparalleled practice to achieve customer satisfaction through the constant delivery of quality. The concept, definition, contribution of quality gurus, benefit, the importance of TQM is stated in this chapter as an effort of portraying the overview of TQM.	Development of framework
Chapter 3 CSFs in TQM Literature: A Focus on Banking Sector	Outcome
The banking industry is considered as largest in the arena of the service sector which furnishes the requirements of the diverse groups of people in today's diversified society. This chapter delivered a thorough and specific literature review on the CSFs of TQM addressed by different authors in the manufacturing, service, and banking sector.	Development of framework
Chapter 4 TQM in Bangladesh: Research Studies	Outcome
In this chapter, some research studies conducted in Bangladesh on the TQM concept have been reviewed to light up the focus of TQM in Bangladesh.	Research gap

Chapter 5 Barriers to TQM Implementation: Literature Evident	Outcome
An organized literature review is portrayed in this chapter on the barriers to TQM implementation.	Identification of barriers
Chapter 6 Research Methodology	Outcome
When embarking on research, a series of logical order has been followed right from problem formulation, through study design and execution, to results analysis and interpretation. The methodology that was used to convey through this research to accomplish the study objectives has been highlighted in this chapter. This chapter incorporated the research design, population under attention, sampling strategy, data collection approaches, ethical matters, research actions, and the methodology that the researcher employed in the study. It also underpinned the reasons for the choice of the research method.	Questionnaire Pilot Study
Chapter 7 Assessment, Interpretation & Explanation of Current TQM Practices in Banking Industry of Bangladesh	Outcome
This chapter underpinned data analysis and interpretation undertaken. Data were analyzed through Smart PLS 3.0 and described and interpreted based on the result and attained the objectives of the study.	Statistical analysis, charts.
Chapter 8: Summary of Findings, Conclusion & Recommendations	Outcome
This chapter summarized the findings of the study, presented the worth of the developed framework and showed its contribution to knowledge from research and practical viewpoint. Furthermore, a structured guideline has been given for future work highlighting the potential capabilities for practical and academic development.	Implication Future direction

The following figure illustrates the process of the study.

Figure 4

Sequential steps of the study

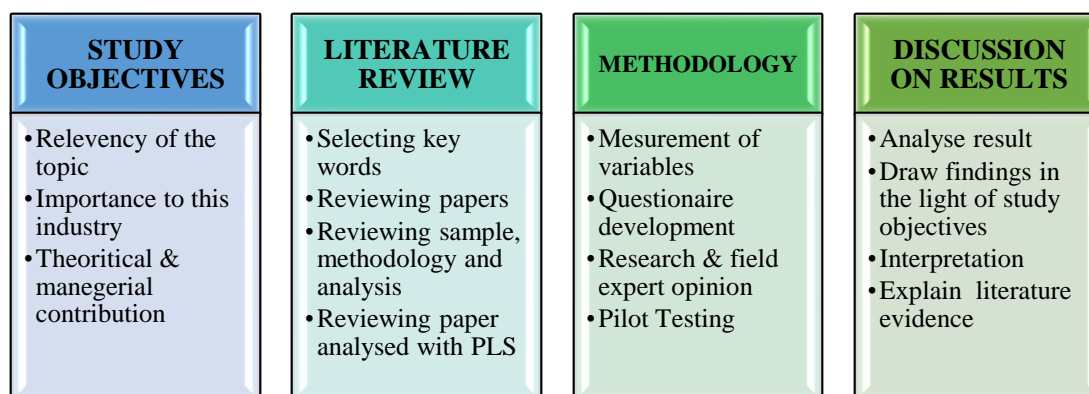


Figure 5*Sequential steps of the chapters*

Chapter One			
Background, problem statement, objectives, research gap, justification, scope, limitations			
Chapter Two	Chapter Three	Chapter Four	Chapter Five
Operational definition, Contribution of TQM Gurus, TQM benefit	TQM in the bank, CSFs of TQM, TQM in banking sector of Bangladesh	TQM literature in Bangladesh, Research work	TQM barriers, Grouping of barriers
Chapter Six			
Research design, sampling design, data analysis, research frame, GANTT Chart.			
Chapter Seven			
Assessment, interpretation & explanation of data analysis			
Chapter Eight			
Summary of findings, conclusion, implication, recommendation			

1.15 Limitations

Despite a fair share of limitations and constraints, the study was carried out with all possible thoroughness. It is needed to discuss the limitations of the study for future research before discussing the research implications. The following points below are the notable barriers that are estimated to encumber the smooth execution of the work.

Like any empirical research work, this study also comprises some methodological strengths and limitations and firstly mentions the area of the study. The results obtained from Dhaka city only and may differ for banks located in different areas particularly outside the Dhaka city, functioning in diverse cultural, environmental, and political conditions.

The primary data were collected through the distribution and collection of a survey questionnaire and in this regard, there is a limitation to responses provided by

respondents. The study presumes that the respondents were truthful and honest to give their opinions. The secondary data were collected through databases and search engines. The constrained number of keywords used in searching these sources might be considered a limitation.

The language might be become a constrain as it is written in English. Though English is widely spoken and understood among the managerial ranks in most of the banks in Bangladesh, some individuals might have confined their language proficiency and prefer their mother language.

This study collects the data using the self-report study method, future studies can use the non-self-report study method. The result and recommendations of this research which is drawn from the findings and literature review cannot, therefore, be guaranteed for all types of banks in general. A structured questionnaire was provided to the respondents and some may respond with bias or special interest.

As the TQM initiative must come from top management, it was necessary to get information from a high level. But getting complete access to the data bank was difficult, some cases impossible since management may be petrified of being exposed if TQM implementation has not been conducted in the best possible method.

The data has been obtained from the bank employees rather than customers. Since the data collected for the study, was not considered external stakeholders of the banks, the responses may not deliver customer views concerning TQM.

To research, this magnitude entails, financing is a big issue for transportation and logistics. Sufficient funds for financing may bring a deeper picture on this topic.

Without any question, a questionnaire survey is a cost-effective as well as a dependable research method, but it might suffer a lack of respondent awareness and

response bias. Unlike a personal interview, the questionnaire has the risk of misinterpretation of responses.

The concept of TQM in Bangladesh, especially in the banking sector is new so there is a chance of a bare understanding of the topic. Time has also become a limitation for this study.

Chapter Two

TQM: A Literature Overview

Prelude

A core definition of total quality management (TQM) pronounces a management approach toward gaining customer satisfaction through the involvement of everyone. In a TQM culture, all associates of an organization partake in refining processes, products, services, and technology as a whole. Total Quality Management (TQM) is considered an unparalleled practice to achieve customer satisfaction through the constant delivery of quality. The concept, definition, contribution of quality gurus, benefit, the importance of TQM is stated in this chapter as an effort of portraying the overview of TQM.

2.1 Mapping of the Chapter

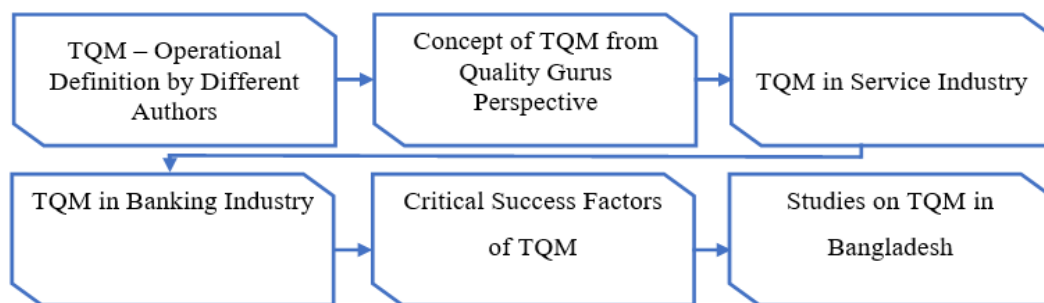
USA manufacturers documented the need for improving quality observing the triumph of Japanese companies in international competition, (Cusumano & Takeishi, 1991). TQM forerunners, such as W. Edwards Deming, Joseph Juran, and Philip Crosby, established philosophies, practices, and tools in order to minimize the hindrances produced by quality related difficulties (Suarez, 1992). In the field of TQM, these quality gurus such as Deming (1986), Juran and Gryna (1993), Crosby (1979), Feigenbaum (1991), and Ishikawa (1985) have developed certain propositions which have increased substantial acceptance throughout the world and also breed the platform for further elucidation. Their insights not only provided a good insightfulness of the TQM concepts, philosophy, techniques, principles, and practices but also promote the concept to enlighten its competitive benefits. After careful study of TQM literature, it has been found that a significant number of research works on

TQM have been presented all over the world with different viewpoints of different researchers.

The literature review has attempted to develop the questionnaire and propose a model for successful TQM implementation in commercial banks of Bangladesh in this study. A concept map has been drawn which leads the discussion on different relevant TQM literature.

Figure 6

Concept Map for Literature Review



2.2 Presenting TQM

Today, with great reason, the long-term existence of organizations especially service organizations, is measured to be indistinctly connected to the facility to meet customers' requirements and therefore searching for an approach to cost-effective input, appropriate process, and high-end output to meet customers' demand, become the major strategic focus for every organization nowadays. TQM got high attention because of its focus on customer needs. TQM is a vast concept as it requires the total involvement of all stakeholders. The area of TQM activities is very wide such as management engagement, quality management, training and education, product/service design, employee engagement, continuous improvement, data on quality and policy of reporting, inflow of communication to boost up quality, supplier collaboration and alignment of customer satisfaction (Muslim et al. (2020). The

fundamental thoughts of total quality management (TQM) were presented in the mid-1980s by, most markedly, W. Edwards Deming, Joseph Juran, and Kaoru Ishikawa who are well-thought-out as quality gurus.

The word “quality” derives from the word “qualis” from Latin which means “how it’s made” The concept of quality changes in terms of culture, country, and society at large extent as it is exaggerated by the traditions and the organization of the society (Simsek, 2007). Quality can be defined as the sum of characteristics of a product or service to meet needs and demands (Kuruşcu, 2003). Garvin (1987) identified eight steps to define customers’ perception of quality and they are performance, features, reliability, durability, ability to serve, aesthetic, and perceived quality.

Various studies observed the effect of service quality (Rather et al., 2019) and customer experience (Cetin et al., 2017) on customer outcomes as the most common features of aspects of customer behaviours. Cetin (2020) measured the impact of service quality and customer experience as a substantial antecedent for customer satisfaction and loyalty.

According to past research by Kingır (2010), quality management means the assurance of restriction on mistakes. In a broader sense, it involves quality planning, strategic planning, and resource distribution, management, and valuation.

Irechukwu (2010), has broken down the term TQM as follows.

- *Total (participation of every person including supplier and customer);*
- *Quality (accommodating customers ‘exact requirements)*
- *Management (commitment of senior management)*

2.3 Evolution of TQM

Over the last two decades, the thoughts of TQM had been drawn large attention in the management literature. Studies on TQM conducted so far, portraying the availability of several applications of TQM for the service and manufacturing industries. TQM is a thought revolution over the period, which is viewed as an effective tool for maintaining quality, a practice by which management can upsurge organizational performance, and a system that is based on some principles. Literature in this area is empirical and used different models to assess TQM practices in organizations. It is considered that in the last 20 years the manifestation of TQM is one of the most significant advances in management practice. The principles of TQM which are the bedrock for TQM implementation, provide divergent opinions according to the philosophies of recognized quality gurus as some emphasis on customer fulfillment of needs, some on continuous development, and some others on evading mistakes. Aiming to focus on the competitive encounter from Japanese firms, TQM was first carried up into the USA around 1980. Therefore, predominantly in the Western countries, TQM had been documented as a source of competitive advantage around the world, precisely in the sector of manufacturing (Dean & Bowen, 1994). Diverse studies, surveys, reviews, cases and researches exhibited that even though TQM benefits at the operational level, altogether, TQM supports to get advantages for those organizations where implementation performs properly (Terziovski & Samson 1999). TQM is the art of working in total with an aim of excellence. It is also considered as a philosophy and a set of managerial standards and principles which linkage to the keystones of a boundless enlightening and embryonic organization. TQM integrates the basic management techniques, existing perfections, and also the different technical tools beneath a well-organized strategy (Talukder & Ghosh, 2004).

Recognized TQM writers (Bounds et al., 1994; Hill and Wilkinson, 1995) distinguish TQM as integrating fundamentals of earlier quality management eras, predominantly the contributions of Shewhart, Deming, Juran, and Feigenbaum. In this way, TQM has progressed into a philosophy. The journey of TQM is very comprehensive as it revolves around a lot of transitions with the changing business environment. The following table is presenting different stages of TQM starting from the very narrower scope.

Table 5

The Evolution of Total Quality Management (Adapted from Dale (1996), Quoted from Al-Khalifa, 2000)

<i>Quality Concepts</i>	<i>Quality Activities</i>
First Stage: Inspection	“Salvage, Inspection, Re- blending, Sorting, Grading, Corrective actions, Identify sources of non-conformance”
Second Stage: Quality Control	“Develop quality manual, Process performance data, Quality Control, Product testing, Basic quality planning, Self-inspection, Use of basic quality planning, Paper controls, Use of basic statistics”
Third Stage: Quality Assurance	“Quality systems development, Advanced quality planning, Quality Assurance, Use of quality costs, Comprehensive quality manuals, Failure Mode and Effects Analysis, Involvement of non-production operations, Statistical process control”
Fourth Stage: Total Quality Management	“Policy deployment, Total Quality Management, Employee involvement, Involve all operations, Process management, Involve suppliers and customers, Teamwork, Performance measurement.”

In the present era, TQM is considered as the management philosophy of a comprehensive and systemic approach for maintaining quality in all aspects. Quality award programs and Quality standards such as the Deming Prize and the Malcolm Baldrige National Quality Award and the ISO 9000 series respectively are getting prevalent all over the world defining the process and principles of TQM. The current

trends of TQM provide a much-required competitive edge with customer gratification. A thought-provoking analysis for further development of TQM would take the world into a new dimension of quality.

The following table notifies some recent development of TQM.

Table 6

Recent Development of TQM; Quoted from Sawalim (2014)

<i>Terms</i>	<i>Estimated year of formerly use</i>	<i>Explanation</i>
Statistical quality control (SQC)	The 1930s	“The applications of statistical methods (control charts and approval sampling) to QC (Juran 1995, p. 556).”
Total quality control (TQC)	1956	“Feigenbaum (1956) and (Ishikawa, 1985, pp. 90-91) stress the participation of divisions in addition to production (i.e., finance, human resources, accounting, purchasing, design, marketing, sales).”
Statistical Process Control (SPC)	1960s	“SPC is the use of control charts to screen a single industrial process and comment performance to the operatives accountable for that process. Stimulated by control systems.”
Company-wide quality control (CWQC)	1968	“Japanese-style total quality control.”
Total Quality Management (TQM)	1985	“It is a Quality movement created in the U.S. Department of Defense that practices the methods of statistical quality control (STC) to enterprise nonstop organizational development (Evans et al., 1999, p. 118).”
Six Sigma (6σ)	1986	“Six Sigma is a set of techniques and tools for process improvement. It was developed by Motorola in 1986. STC functioned to business strategy. Created by Motorola. Tennant (2001, p. 6).”

2.4 Operational Definition of TQM by Different Authors

TQM is recognized as a quality management approach necessitating the accommodating endeavour of organizations through producing and offering customer-oriented services or products. The business environment has experienced enormous variations and enhanced superiority and paying the highest attention to customers to accomplish competitive advantage. In addition, due to the continuing increase in the global labour market, organizations must keep going enlightening the quality of their products and services intending to endure among other competitors. Nonetheless, TQM becomes the best alternative for enhancing organizational performance and improving customer satisfaction which can be implemented in several ways (Hackman & Wageman, 1995). With great pleasure, it can be acknowledged that the academics have accredited TQM for essential management practices and provided a lot of views to define TQM to be offered with remarkable consideration. However, TQM remnants an obscure and vague concept as the term TQM means different interpretation to different people might be having a large number of articles and books (Dean & Bowen 1994). Plentiful definitions have been given on TQM by Quality gurus, scholars, practitioners, and academicians. The following table presents the definition of TQM by different authors in different time periods.

Table 7

Operational Definitions of TQM by different Authors

<i>Authors</i>	<i>Operational Definitions</i>	<i>Key Concept</i>
Zhengwei et al. (2019)	Total Quality Management is the complete way to continuously develop products, services, equipment, procedures, atmosphere, and employees to meet consumer needs and get to the upper profitability limit.	Continuous development, consumer focus, higher profit
Ganapavarapu	Aiming to maximize productivity by confirming the	Involvement of

and Prathigadapa (2015)	gratification of customers, employees, and society at large, TQM is viewed as a policy, supervisory, and administrative approach that seeks the involvement of all employees.	employees, customer focus, social benefit
Rothlauf (2014)	TQM is an inclusive process that organizes customers, suppliers, and employees through integrating statistical observation for leading a continuous improvement process.	Relationship with supplier, customer, and employees, statistical tool
Davood et al. (2013)	TQM is a firm-wide methodical quality improvement approach for achieving progress in performance regarding quality, productivity, customer satisfaction, and profitability.	Improve performance, customer focus, higher profitability
Taddese and Osada (2011)	TQM is a philosophical thought practiced for market development and gains the business success of the firm.	Strategic tool, business success
Hill (2008)	Total quality management is measured as an approach of continuous improvement in all quality aspects regarding operations, goods, services, and employees within the firm, aiming to add value to the delivered products to customers.	Continuous improvement, add value to product and customers
Moghaddam and Moballeghi (2008)	TQM is the application of a synergized activities with perfection. Customer-driven quality; Top management direction and commitment; continuous improvement; quicker response; actions upon facts; employee involvement and TQM culture are the main features of TQM.	Customer focus, top management, commitment, continuous improvement, employee involvement, TQM culture
Palo and Padhi (2005)	TQM aimed to meet customers' hopes constantly through integrating continuous improvement in products and services using appropriate tools, tech know-how, and training.	Continuous improvement, statistical tools, employee training, customer focus
Prajogo (2005)	Total quality management is a process to boost up flexibility, efficacy, and business competitiveness to meet customer needs and opportunities.	Effectiveness and competitive advantage

Kartha (2004)	TQM is a systematic approach to management aiming at the enhancement of value to customers by designing and continually improving organizational processes and systems.	Continuous improvement, customer focus
AL-Asiri (2004)	Total quality management is viewed as a philosophy of continuous organizational progress through gaining customer satisfaction with a permanent worker's contribution to progress goods, services, and operations.	Continuous improvement, customer satisfaction
Kaynak (2003)	TQM is a holistic management philosophy determined to continuous improvement in all functions of an organization.	Continuous improvement
ISO 9000 (2000)	TQM is the function of management for conforming to the customer's requirements.	Confirmation of customer requirement
Dahlgard et al. (1998)	TQM is recognized as a management process implementing long-term planning and continuous quality management plans leading towards the fulfillment of its vision.	Continuous improvement, long term strategy
Besterfield (1995)	TQM is both a philosophy and a set of supervisory principles that characterizes the underpinning of a continuously improving organization.	Continuous improvement
Roosevelt (1995)	TQM is a strategic architecture demanding assessment and modification of continuous improvement practices in all zones of business.	Continuous improvement
Jurow and Barnard (1993)	TQM is a structure of continuous improvement encompassing participative management with a focus on the needs of customers.	Continuous improvement, customer focus, participative management
Sashkin and Kiser (1992)	TQM is a culture and a management practice that promotes a shift in firms' vision and operations.	TQM culture
Berry (1991)	TQM is total business attention on meeting and exceeding customers' expectations with a significant reduction on costs which result in a conversion from poor quality to adaptation new management system and corporate culture.	Customer focus, cost reduction, TQM culture

Oakland (1990)	TQM is an arranged approach to the practice of management, needing variations in organizational operations, strategic primacies, individual beliefs, attitudes, and behaviors.	Organizational change, people management
Kanji (1990)	TQM is the way of life of an organization devoted to customer fulfillment of needs with continuous improvement.	Continuous improvement, customer focus
Deming (1986)	TQM is the actions connecting everyone in organization management and non-management employees to improve performance at every level.	Increase performance, involvement of all
Feigenbaum (1994)	TQM is an efficient system aiming to accomplish total quality through the mutual effort of all the employees within the organization to produce customer-oriented and low-cost products/services.	Employee involvement, customer focus.

Reviewing the definition of TQM, the following avenues are pointed out.

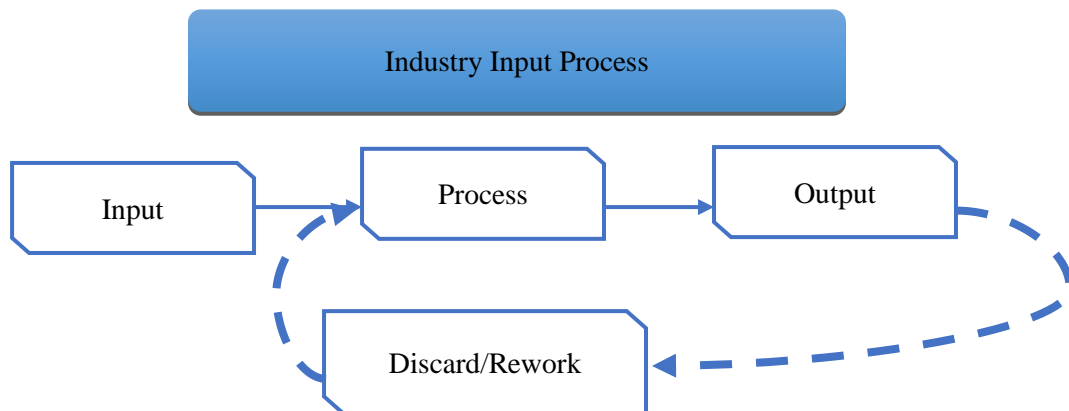
- It is a human-oriented management system requiring the involvement of every member of the organization.
- It aims to continually upgrade of operational process achieving customer satisfaction at a continually lower cost.
- It highpoints the role of top management in leadership, commitment, and fostering cultural shifts to meet the needs of the customer.
- It applies statistical tools and techniques with the technological requirement.
- It improves organizational as well as employee performance continuously.
- It reduces errors and reworks aiming to reduce cost.
- It concentrates on the optimal deployment of organizational resources to achieve organizational goals.
- It is a management practice, strategic tool, and philosophy.
- It entails the incorporation of long-term strategic planning and the high commitment of senior management.

- Meeting customer requirements is the priority of TQM.
- TQM enables a system to facilitate improvement.
- It focuses on the efficient utilization of team work emphasizing the total commitment to greater performance at a higher level.
- Employee involvement and empowerment along with recognition and celebration of goal attainment ensures the effective functioning of TQM.
- It is considered as the strategic tool to improve customer satisfaction in order to boost up the business success of the firm.

2.4 TQM in Industry Input Process

Figure 7

A Simple Model for Industry Process (Crawford and Shutler 1999)

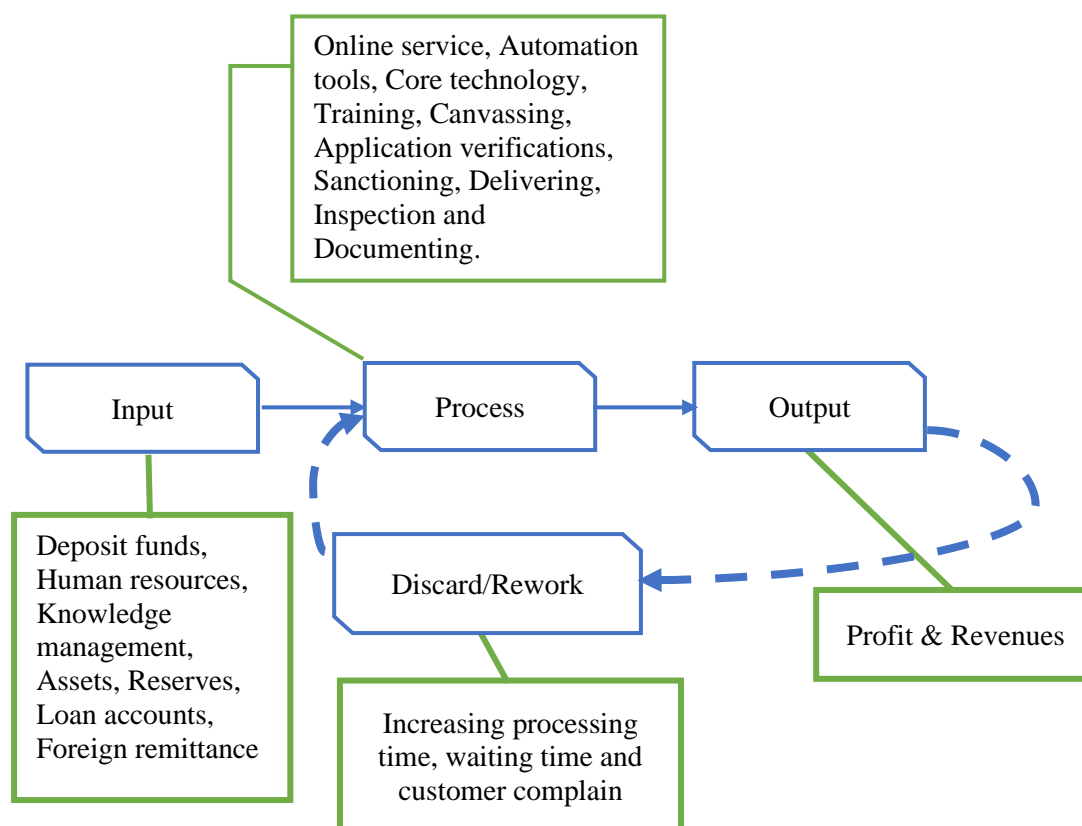


TQM in the manufacturing sector has become a vital management practice in recent times to meet customer requirements. But customers in the service sector are more delicate and aware of service quality and service delivery as they interact with front-line service personnel. The customers decide on this points-of-purchase to stay with the existing service or move to the next-door competitor. Financial institutions, like banks, investment houses, leasing companies, insurance companies are going relatively in slow peace in shifting into this customer-first paradigm. Paradoxically,

most of the banks are devoted more to managing assets and finance and a little handful are paying much attention to the dilemma of their clients' issues. The banking industry which is considered the biggest service sector in any nation to boost up the economy, stands to benefit from TQM. TQM implementation in banks would design intricate systems and structures supportive to monitor, evaluate and sustain customer trustworthiness. The following figure illustrated the industry process applied in the banking industry of Bangladesh shadowing the model developed by Crawford and Shutler in 1999.

Figure 8

TQM in Banking; Applied Concept of Model Developed by Crawford and Shutler (1999); Information Collected from FGD & Literature Review



2.5 Concept of TQM from Quality Gurus Perspective

2.5.1 Deming's Approach to TQM

Dr. W. Edwards Deming, a statistician, went to Japan and taught statistical process control to leaders of protuberant Japanese businesses after World War II. He has proven himself as a transformative thinker in the field of TQM by focusing on the concept that companies will reduce their expenses, productivity, and market share by improving quality. His basic philosophy was that quality and productivity increase and variability decrease. He advocated that the ultimate goal of quality improvement is to lessen disparity which can be achieved by using statistical methods of quality control.

The theoretical core of the Deming approach to TQM apprehensions the formation of an organizational structure that promotes education for enabling the implementation of process management practices and fosters collaboration, which, in turn, primes to continuous improvement of processes, operations, products, and services aiming to an employee as well as customer satisfaction, and eventually, to firm endurance (Anderson et al., 1995). In the book 'Out of Crisis' (1986), Deming proposed 14 points as the principles of TQM for management to improve quality which is listed below:

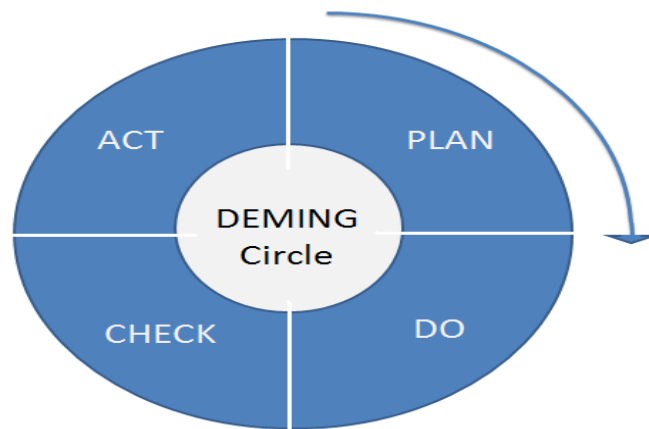
- Create a persistent drive toward improvement.
- Espouse the new philosophy.
- Stopover dependency on inspections.
- Practice a single supplier for any one item.
- Progress constantly and forever.
- Practice training on the job.
- Implement leadership.
- Eradicate fear.
- Break down fences between departments.

- Abolish blurred mottos.
- Eradicate management by objectives.
- Eliminate barriers to pride of workmanship.
- Implement edification and self-improvement.
- Construct "transformation" of job.

'Plan, Do, Check (or Study), Act' in the 1950s have been introduced by Deming as the cycle which is referred to as PDCA cycle.

Figure 9

Deming's PDCA Cycle (Deming, 1986)



2.5.2 Juran's Approach to TQM

Juran (1988) distinct quality as fitness for use about design, accessibility, conformance, safety, and operational use. He highlighted rising conformance and reduce the cost of quality. According to Juran and Gryna (1993), TQM is the system of functions focused on attaining enchanted customers, higher revenues, lower costs and empowered employees, Juran firmly thought that the key quality difficulties are due to management rather than employees. Quality accomplishment entails activities in all purposes of a firm. Juran underlined on the team (QC circles and self-managing teams) and project work to endorse quality development, improve communication between management and employee's coordination, and advance harmonization

among employees. Like Deming, Juran recommends the practice of statistical process control. However, on top-down management and technical methods are engrossed by him over worker pride and satisfaction. Management commitment and empowerment, recognition, participation and rewards are more significant to progress quality. Nevertheless, Juran's acclaimed customer needs are very vital in this regard. This is a prerequisite that all are involve in designing, developing, manufacturing, and promoting the products and services. Meeting product specifications is not enough for quality, rather confirming the product encounters customers' requirements and is fit for its envisioned use, it is required to identify a customer with more vigorous analysis. Therefore, research on market is indispensable for recognizing customers' requirements. So as to confirm design quality, the guru projected the use of techniques including reliability engineering, experimental design, quality function deployment and synchronized engineering. According to Juran (1986), there are three basic processes in quality management which are known as Juran Trilogy and they are Quality control, Quality Improvement, and Quality planning.

Juran distinct four comprehensive categories of quality costs, to use to assess the organization's costs connected to quality. This sort of evidence is treasured for quality upgrading. Internal failure costs, external failure costs, appraisal costs and prevention costs are the four quality costs recognized by Juran.

2.5.3 Crosby's Approach to TQM

Philip Crosby (1926-2001) was a persuasive author, advisor, and philosopher who established practical concepts to describe and connect quality and quality improvement practices. *Quality is free* -his best-seller book was published in 1979 at a time when the quality drive was an intensifying issue and business society acknowledged quality as a competitive tool. He states quality as 'conformance to

requirements' which can be measured by the cost of non-conformance. He promoted zero defects which can be achieved through prevention.

Crosby acknowledged several vital principles and practices such as management participation, employee appreciation, management accountability for quality, a decrease of the cost of quality (prevention costs, appraisal costs, and failure costs), education, weight on prevention instead of after-the-event inspection, undertaking things right the first time, and adopt zero defects culture. Crosby fortified a 14-step program for management guiding companies in achieving quality improvement.

Waldman (1994) identified the shared ground of TQM established by Deming, Juran, and Crosby which is specified below.

1. A comprehensive definition of quality as confirming customers' expectations
2. Top management commitment is the top priority for quality improvement
3. Empowerment and participation of all organizational members directed to quality improvement with positive reinforcement and rewards;
4. Training and education to advance employees' competencies is a continuous process
5. The development of a quality culture through continuous improvement of operations.

The variances lie in the prominence of their approach to a measurement tool. Deming offers manufacturers weight the disparities in a production procedure in order to determine the reasons for poor quality with the use of methods like Statistical Process Control or SPQ. Juran highlights setting explicit annual goals and founding teams to work on projects. Crosby indorses a program of zero defects with should be promoted as well as motivated all over the organization.

2.5.4 Feigenbaum's Approach to TQM

According to Feigenbaum (1991), TQM is an effective system with the active participation of several clusters in an organization for integrating the quality development, quality maintenance, and quality improvement aiming to qualify marketing, engineering, production, and service at the most cost-effective levels leads to complete customer satisfaction. According to him effective quality management entails four key stages, pronounced as follows:

“Setting quality standards, appraising conformance to these standards, acting when standards are not met, planning for improvement in these standards.”

He projected a quality chain starting with the identification of the requirements of customers and ends only after the delivery of the product or service to the customer, which relics satisfied. In this way, the functional doings, such as purchasing, marketing, design, manufacturing, inspection, shipping, installation, and service, etc., are prejudiced by customer prerequisites. Feigenbaum pronounced the term TQC (total quality control) in place of TQM in his book. He appealed with the proper utilization of the complete space of the product and service “life cycle” from product commencement through production and customer service which might be addressed as total quality management.

2.5.6 Kaoru Ishikawa

‘Father of quality circles’ - Kaoru Ishikawa is referred to this, owing to his influence on the Japanese understanding of quality and in 1960s he initiated the quality movement in Japan. He established the thought of quality control circles (QCCs) to contrivance the philosophy of contribution. A quality circle is formed by a small group of volunteers from a unit in an establishment where any member of this group plays the role of leader and holds meetings regularly to focus on the ways to

carry out important tasks effectively and efficiently (Neyestani, 2017). Ishikawa contributed with seven basic quality tools which will endorse continuous improvement such as cause and effect diagrams, flowcharts, check sheets, Pareto diagrams, scatter diagrams, histograms and control charts. Training is required to use these tools to get the expected output (Zairi, 2013).

2.6 Benefits of TQM

The main goal of any organization is to create and earn customer trustworthiness and to achieve that the strategy is to emphasize using high-quality information to improve and develop new processes, decrease waste, and save time which will result in lower costs that ultimately can be offered on to customers utilizing lower prices. TQM aims at to improve the process, discourage failures, evaluate the capacity of the system and track behavioural modifications. If any organization applies and practices TQM methods, tools, and techniques it will help them to streamline processes and provide assurance of a proactive working system combined with management leadership, employee involvement, and supplier support which make the organization equipped to counter nonconformities from the standard state. Talib et al. (2010) scrutinised the associations between TQM and a firm's operational performance by gauging the quality performance as a performance pointer. The implementation of TQM not only leads to the enhancement of performance but also increases business performance (Kanwal, 2018). As TQM discourses the key tricky areas such as faults in work procedures, redundant processes, redundant tasks, and spare efforts, with the prediction and removal of such mistakes and unproductive activities promote productivity and process efficiency. Researchers tried to identify and explain the benefit and importance of TQM implementation in the organization. Alkhazali et al. (2019) showed in their study the

direct relationship of organizational performance with HRM practices and knowledge management strategies where HRM practices denote training and development, performance appraisal, and compensation and on the other side, KM strategies represent knowledge acquisition, knowledge conversion, knowledge protection, knowledge application, and knowledge sharing. The study used TQM as the moderating variable and found a positive effect on the relationship between independent variables (HRM practices and KM strategies) and the dependent variable (organizational performance). Improved quality, productivity, employee satisfaction, teamwork, employee participation, profitability, communication and market share, and involving and empowering employees at all levels can improve organizational performance by applying TQM (Abdullahi et al., 2020). TQM is considered as an absolute tool for reducing cost and cycle time by eliminating unproductive activities, establishing clear ownership of processes, measuring performance based on swift feedback (Davenport & Short, 1990; Mohrman et al., 1995; Partlow, 1996). Alhih and Tambi (2020), conducted a study where established total quality management as deliberate orientations letting the attainment of business superiority. The researchers also developed a model showing the positive connection between TQM business excellence and acknowledging corporate social responsibility (CSR) practices as a mediator.

Studies are evident that the awareness of implementing TQM is rising at a global level in recent years (Khawka, 2015). The following table summarizes some benefits of TQM that organizations can avail drawn from a voluminous literature review.

Table 8*Literature Evident of TQM Benefit*

<i>Areas</i>	<i>Researchers</i>		<i>Observations</i>
The fundamental goal of TQM is to involve all the levels and functions of an organization to retort customer needs and constantly exceed customer expectations concerning its daily operations, products, or services.	Dudu and Agwu (2014); Davies (2003); Kaynak (2003); Antony et al. (2002); Chin and Pun (2002); Walsh et al. (2002); Juran (2001); Deming (1981).	Lower costs	Reducing errors, reducing rework, and reducing non-value-added work.
		Higher revenues	Delighted customers, increased market share, improved customer retention, more loyal customers, and premium prices.
		Empowered employees	Measuring and comparing self-work progress, taking action if necessary, understanding customers, their needs and expectation, designing new products and services, developing quality measurements, improving processes continuously.
Better quality	Mohanty and Lakhe (1998); James (1996); Reed et al. (1996); Holloway et al. (1995); Oakland (1989); Deming (1986).	Total quality management focuses on improving quality to build long-term growth and success involving all members of the organization, from the low-level workers to the high-ranking executives, continually.	
Factors increasing the importance of TQM	Al Daradka and Shalabi (2012)	Increasing competition	Leads to offer the best products at the lowest price possible.
		Global Level competition	This leads to the creation of new management methods to keep pace with

		global developments in the field of quality.
		Reducing quality cost
		Leads to reduce customer complaints.
		An increasing percentage of profit
		Leads to increase in market share.
		Reducing work-related mistakes
		Leads to contribute to raising production efficiency.
		Improving Communication
		Leads to ensure effective participation of all members in improving performance.
TQM & Organizational Performance	Abbas (2020); Abdullahi et al. (2020); Khan et al. (2019); Pambreni et al. (2019); Saleh et al. (2018); Al-Qahtani et al. (2015); Agwu et al. (2014); Al-Swidi and Mahmood (2011); Dahar et al. (2010); Salaheldin (2009); Das et al. (2008); Demirbag et al. (2006); Saravanan and Rao (2006); Yasin et al. (2004); Kaynak (2003); Brah et al. (2000); Kunst and Lemmink (2000); Zeithaml (2000); Zhang (2000); Lee et al. (1999); Roa et al. (1999); Easton and Jarrell (1998); Hendricks and Singhal (1997).	Organizational performance has three practices that have direct effects on TQM such as operating performance (inventory management and quality performance), supplier quality management, product/service design, and process management. The relationship between Total Quality Management and quality/operating performance, organizational performance, and profit is well established and empirically confirmed.
TQM & Innovation	Prajogo and Sohal (2003)	TQM pointedly and positively donates to innovation performance in terms of product and process.

TQM & Knowledge Sharing	Ooi et al. (2012)	TQM practices result in an improvement of middle management employees' knowledge sharing.
TQM & Business Excellence	Alhih and Tambi (2020); Androniceanu (2017); Gómez et al. (2017); García-Bernal & Ramírez (2015); Benavides-Velasco et al. (2014); García-Bernal and Ramírez- Sadikoglu (2015); Zehir et al. (2012).	TQM positively affects business excellence.
TQM & Competitive advantage	Othman et al. (2020); Tangtatswas (2019); Ganapavarapu and Prathigadapa (2015); Addae-Korankye (2013); Talib et al. (2012a); Zhang (2000).	TQM and competitive advantage positively and significantly connected.
Recognized Management Tool	Bou-Llugar et al. (2009); El Shenawy et al. (2007); Hendricks and Singhal (2001); Terziovski and Samson (1999).	TQM is a management tool that provides companies a competitive advantage and allows them to generate higher profits.

2.7 Findings of Literature Review

TQM has become one of the prime methods for all types of organizations to accomplish competitive organizational advantage which highly requires the development of the quality of facilities and products to survive among the rivals to cope up with the enormous changes in the economic environment and developments in quality (Abdullahi et al., 2020). From manufacturing to service, business to an educational institute, public to private, survey study to review of literature, TQM got attention in every sector and research is going on

to explore the new dimension and more applicability in this area. The present study reviewed and reported several pieces of literature on TQM to attain literature support and recognize the aspects of the managerial and organizational implications.

Table 9

Summary of Literature Review

<i>Authors</i>	<i>Country Studies/ of origin</i>	<i>Paper Type</i>	<i>Sector</i>	<i>Focus</i>	<i>Findings</i>
Addis (2020)	Ethiopia	Article	Manufacturing industry	Investigating of quality management practices	ISO companies are pointedly espoused TQM practices than non-ISO companies.
Zhang et al. (2020)	Comprises of 268 articles published between 1990 and 2017 extracted from Scopus and WoS.	Article	Service Industry	Analyzing the most discussed issues lately connected to the use of TQM in services by directing a bibliometric analysis.	TQM implementation is not a fading issue. TQM- related practices are drawing more attention while the TQM implementation outline is still under development. Top management commitment/leadership is a critical paradigm.
Abdullahi et al. (2020)	Nigeria	Article	Aviation Industry	Investigating the relationship between TQM dimensions and organizational performance	The study established a significant relationship of TQM dimensions with OP. TQM dimensions are measured by customer satisfaction and employee satisfaction.

Kaiseroglou and Sfakianaki (2020)	Greece	Article	primary and secondary schools	A critical assessment and discussion on diverse applications of TQM	The embracing of TQM in schools for better-quality learning outcomes empowered employees, and indorse a culture of continuous improvement.
AlDeeb et al. (2019)	Kingdom of Bahrain	Article	Industrial company	Examining the effect of applying a TQM approach on the institutional performance	There is a significant relationship between applying the principles of TQM with organizational performance.
Alkhazali (2019)	Jordan	Online Article	Banking	Exploring the effects of TQM on the relationship between Human Resource Management (HRM) practices and Knowledge Management (KM) strategies to organizational performance	TQM moderates the relationship between HRM practices and KM strategies and organizational performance; whereas the moderation effects of TQM on compensation, knowledge acquisition, and organizational performance are not being reinforced.
Iqbal and Asrar-ul-Haq (2017)	Pakistan	Article	Software industry	Investigating the mediating effect of individual change readiness on the relationship between TQM practices and employees' performance.	TQM practices and individual change readiness provide significant support to employee performance. Individual change readiness mediates between TQM practices and employee performance.

Lyer (2018)	India	Conference paper	Education	Conducting action-based and field research and identifying quality compliance requirements	An individual takes one-fourth of education from the teacher, another fourth by own intellectual exertions, another fourth from corresponding individuals, and the remainder during time through life experience. The elusive relationship between education and entrepreneurship is an intricate process that should be aligned to the education sector for achieving sustainable development directed to improve poverty.
Nazar et al. (2018)	Pakistan	Article	Banking	Investigating the relationship between TQM and Organizational Performance	TQM implementation, TQM management leadership, customer focus, and continuous improvement have a significant impact on organizational performance.
Maheswari and Padmaja (2018)	India	Article	Banking	Examining the impact of TQM on banking performance.	TQM hones learning of employees, progression of capabilities identified with TQM apparatuses and firming, quality control, administration accountability, consumer satisfaction, and to a lesser degree benchmarking.
Aamer et al. (2017)	Yemen	Article	Organizations	Assessing and comparing the TQM readiness level TQM	The most broadly practiced principle was customer focus, and the lowermost was continuous improvement. The level of TQM readiness in Yemeni organizations shows there is a potential for fruitful implementation of quality management standards and models.

Zwain et al. (2017)	Iraq	Article	Education	Investigating the associations between TQM core elements, knowledge management (KM) processes in educational organization.	There is a confirmed linkage between TQM, KM, and AP.
Madanat and Khasawneh (2017)	Jorden	Article	Islamic Banks	Investigating the effect of the level of implementation of TQM principles on the effectiveness of HRM practices	A strong and positive effect of TQM on HRM practices has evident. Effective management of human resources would enhance employees' satisfaction and inspire them to put the best contribution to organizational achievements.
Baidoun et al. (2018)	Palestine	Article	Gaza Strip government and non-government hospitals	Assessing the level of TQM implementation using the Malcolm Baldrige National Quality Award (MBNQA) framework.	Associating results showed that the performance of non-governmental hospitals is improving with a higher degree of TQM implementation than the governmental hospitals.
Haffar et al. (2013)	Syria	Case Study	Industrial bank	Applying TQM to industrial banks	Proposed TQM model with three phases implementation: Leadership and strategy correction, Customer focus correction, Operational and people management correction
Saleh et al. (2018)	Article	Jordan	Manufacturing organizations	The associations between soft and hard TQM practices and operational performance	Soft TQM practices have more significant importance on organizational performance than hard TQM practices.

Mashal and Ahmed (2015)	Article	Jordan	12 banks	Exploring the impact of TQM practices on organizational performance.	TQM and organizational performance have a strong relationship. Top management commitment, Human resources management, technical system, Employee satisfaction, and Customer focus of TQM practices have a significant impact on banks' efficiency.
Al-Qahtani et al. (2015)	Pakistan	Article	Business organizations	Examining the impact of TQM practices and strategies on organizational performance.	TQM has two organizational performances, either is TQM practices affect the organizational performance, or it hampers to attain their goals resulting in a negative effect on the organizational performance.
El-Tohamy et al. (2015)	Jorden	Article	Hospital	Exploring the impact of applying TQM on the overall hospital effectiveness in the accredited governmental hospitals	Application of the principles of TQM upsurges the total hospital effectiveness in the HCAC accredited governmental hospitals.
Rawashdeh (2014)	Article	Jordan	Banking	Measuring the connection between total quality management practices, business performance, and competitive advantage	A positive association has been documented between total quality management practices, bank performance, and competitive advantage.

EDOUN et al. (2016)	South Africa	Case Study	First National Bank (FNB)	Recognizing the blockades preventing the service and employee engagement portfolio for effective implementation of TQM.	Lack of skill and education, continual commitment, service quality culture ineffective communication and measurement, lack of understanding about fundamental principles of TQM, non-existent quality approach, and council to manage TQM.
Mwaniki and Okibo (2014)	Kenya	Case study	National bank of Kenya	Identifying TQM practices and examining their impact on the financial performance of the bank.	The senior management is vastly involved in day-to-day processes by setting realistic and achievable goals. Employee training got the highest priority. Customer relationships and supplier partnership lead to higher financial performance.
Haque et al. (2014)	A comparison to Bangladesh & Malaysia	Article	Islamic banks	Highlighting the main factors in the Islamic banking industry that affects the applicability of TQM, identify the areas of improvement and difficulties.	Malaysia practiced TQM but not Bangladesh. Lack of awareness of the paybacks of TQM at the workplace is identified as the main barrier.
Lai and Fan (2014)	China	Case Study	Formosa Chang Franchises Chain Restaurant	Exploring the relationship between TQM and the business model.	The case studied experienced three business model innovations such as the impact of the TQM culture, benchmarking, and organizational reform. These three business model innovations have improved business performance.

Wan and Zeng (2013)	China	Case Study	W Company	Assessing TQM implementation	After analyzing its current situation, identify existing problems and analysis the cause of existing problems, an improvement scheme of quality management for new products have been developed.
Iyidia (2012)	Nigeria	Case Study	Zenith Bank of Nigeria Plc	Level of TQM implementation	Elements of TQM are continuous quality improvement, compulsory innovations, reduced cost of service delivery, cultural change at all levels of the organization, teamwork spirit, customer satisfaction/ involvement. Limitations are lack of constant training in TQM, inconsistent approaches, and regulating of TQM practice.
Talib et al. (2012a)	India	Article	Service	Recognize, examine and rank the key TQM practices in the hospitality industry	Top-management commitment, continuous improvement and innovation, customer focus, quality culture product, and service design, and training and education is the most effective driven practice for the TQM program
Uysal (2012)	Turkey	Article	Quality awards	Discussing “human resource” focus in TQM Awards	TQM Awards distinguish that human resource of organizations is significant to implement TQM due to employee involvement and process approaches.

Pourrajab et al. (2015)	Iran	Article	Education	Identify the level and role of the role of gender and years of experience on resistance to change in the application of total quality management (TQM).	The level of resistance to change is reported as medium and the confidence in the status quo is documented as the most important factor for resistance to change. Only teachers' gender has an effect on resistance to change and years of experience came out with no effect.
Venkateshwarlu et al. (2011)	India	Case study	XYZ auto company	Assessing TQM implementation	The soft elements of TQM practices progress the strength for implementing hard elements of TQM. The hard elements of TQM practices advance the quality and total performance of the business.
Al- Shobaki et al. (2010)	Jorden	Article	Banking	Investigating the application of TQM	High consciousness from the senior management to acclimate the TQM concept and high coherent relationship between all TQM principles and the organizational performance measured in productivity and profitability.
Naeem et al. (2008)	Pakistan	Article	Commercial banks	Measuring TQM implementation level and developing a quality model for banking services	High employee involvement and high commitment to the satisfaction of both internal and external customers.
Brah et al. (2000)	Singapore	Article	Service industry	Identifying critical factors of TQM.	TQM implementation directs to better business performance. The critical aspects of TQM identified as top management commitment, customer focus,

					employee empowerment, employee involvement, and quality improvement rewards.
Joiner (2007)	Australia	Article	Manufacturing firms	Exploring the connection between the extent of TQM implementation and organization performance, and the moderating effect of co-worker support and organization support on the TQM/performance.	There is a strong positive connection between the extent of implementation of TQM practices and organizational performance. Co-worker support and organization support moderated the connection between TQM implementation and organization performance.
Vermeulen and Crous (2000)	South Africa	Article	Commercial banking industry	Importance of training and education for TQM	Findings pointed that none of the respondents' organizations have a well-developed TQM training strategy and plan.

TQM is basically understood as a unified organizational strategy for refining product and service quality (Waldman, 1994). A good considering academics have acknowledged the relationship of TQM with organizational performance. Indeed, numerous empirical researches addressing successful TQM implementation which is very obvious from the table. The above studies specify that:

- ✓ TQM implementation is more or less become inevitable due to increased competition
- ✓ The top-down training programs of employees need to make them involved.
- ✓ Top management support, commitment as well leadership are an absolute must and are considered as some of the vital critical success factors for the implementation of TQM.
- ✓ Organizational performance is closely allied with the application of TQM.
- ✓ TQM practices are the crucial enablers for the effective implementation of TQM drivers from manufacturing to the service organization.

2.8 TQM in Service Industry

There has been a series of previous studies aimed at detecting the level of implementation of TQM in the manufacturing sector but the service sector is also drawing attention in this arena and considering TQM as a management philosophy as well (Lam et al., 2011; Lee & Lee, 2013; Prajogo, 2005; Talib et al., 2012b). The operative management of service organizations can be supported by TQM (Ooi, 2012).

Defining the quality of services is more complex compared to products. Service industries have unique characteristics for fixing quality. There are five major attributes found to be significant in describing service quality according to Feigenbaum (1983) and they are; Reliability- the capacity to perform the assured

service reliably and precisely, Responsiveness- the readiness to support customers and provide swift services, Tangibles- physical accommodations, equipment and the appearance of people, Assurance- the knowledge and courteousness of employees and their capacity to carry trust and confidence, Empathy- the thoughtful, individual attention provided to customers. Since the early growth stages in the mid-1980s, TQM has drawn attention worldwide and got acceptance in all types of businesses over the past 30 years. Extensive use of TQM reproduces current pragmatic switch in the competitive setting which enforced organizations from many sectors to articulate new strategic turn around aimed at enlightening internal efficiency and external effectiveness. (Alavi & Yasin, 2008; Van Schoten et al., 2016). Some developed economies like North America, Japan and Europe, who are the first mover in this field, produced a considerable range of literature on the TQM approach subjugated by the manufacturing industries (Calvo-Mora et al., 2014; Chavez et al., 2013; Zylfijaj & Pira, 2017). However, the service sector is not kept behindhand. Presently service innovation has become a primary source of innovation (Ordanini et al., 2014). Over the past decade, many books and authors have measured the service sector and its connexion with TQM to make a innovative move towards quality service establishment (Zylfijaj & Pira, 2017).

Services, at some extent, are different from products since the TQM implementation approach introduced. The key differences are denoting the intangibility and more dependency on customer assessment. Intangibility, the prime feature of service makes dimension problems while reliance on customer assessment generates firms to be customer-led (Juneja et al., 2011). A recent study on the public service sector conducted by AlShehail and Ajmal (2021) addressed the significant effect of TQM on service innovation and sustainability performance and a mediating

role of service innovation on the association between TQM and sustainability performance. The study also claimed that TQM practices have a positive consequence on operational performance. Kanwal (2018) constructed a conceptual framework considering not only internal but also external environmental factors for the advancement of a total quality management model aiming to serve service organizations. The study documented soft and hard TQM factors for establishing organizational performance addressing quality improvement, market reimbursements, R&D performance, and quality indicators as mediators, whereas firm rivalry and entry blockades as moderators. Important dimensions of TQM practices in service recognized by Saravanan and Rao (2006) are benchmarking, senior management commitment and leadership, customer attention and satisfaction, social accountability, service marketing, employee satisfaction, continuous improvement, human resource management, service culture and information analysis. In accordance of their argument, TQM systems in manufacturing organizations and those of service organizations might have trivial distinctions. Attribute theory, customer satisfaction theory, and interaction theory are three substitute refrains of service quality (Chase & Bowen, 1991). The attribute theory believes that service quality primarily mirrors the features of the service conveyance system, therefore it applies the context of product quality to the services. Moreover, it similarly undertakes that management has a dynamic control over the input which describes these attributes (Hasan & Kerr, 2003). According to customer satisfaction theory, service quality is the variance between the quality-of-service prospects and the insights of reality (Parasuraman et al., 1985). Therefore, it mostly emphasizes the points-of-view of the customers, whereas the attribute theory mostly emphasizes the implication of the technical feature of the production process (Hasan & Kerr, 2003). Finally, the approach of interaction theory

deliberates service quality as the “shared experience of gain” by all participants in the service happenstances. Consequently, the quality service appears through the understanding and the need fulfillment of the customers as well as the employees (Hasan & Kerr, 2003). Brah et al. (2000) directed research in the service sector of Singapore intended to examine the association between TQM and business performance. Strong vibe was found that TQM implementation enhanced business performance. According to the study findings, while accumulated benefits could be qualified to some of the techniques of TQM, such as customer attention and quality improvement recompences, the key to the success of TQM fibbed in its imperceptible and behavioral structures such as upper management support, employee empowerment, and employee participation. Talib and Rahman (2010) equipped a model called “Components of TQM” which pronounces that these superiority factors will improve the organizational performance such as upper management commitment, training and education, customers attention, supplier management, continuous improvement and innovation, employee encouragement, employee participation, benchmarking, and quality information and performance whereas the output is shown concerning enhanced productivity and quality, on-time delivery, customer gratification, service quality, and amplified customer loyalty and relations. Yapa (2012) found out the absence of exhaustive understanding of TQM philosophies and techniques amid the managers in service organizations of Sri Lanka.

The following table presents some literature evident of TQM in the service industry from recent publications.

Table 10*Literature Evident of TQM in Service Industry*

<i>Year</i>	<i>Author</i>	<i>Study Aim</i>	<i>Outcomes</i>
2020	Al-Hazmia	Explores the application of scopes of service quality in Saudi Arabia.	The high correlation between the quality of service providing by the hotel facilities and the dimension of quality.
	Zhang et al.	Reviews literature on bibliometric analyses on TQM articles to classify the most salient themes, trends, gaps, and weaknesses.	The most salient themes are ‘evaluation of TQM implementation’, ‘CSFs of TQM implementation’ and ‘developing a model/framework for TQM implementation.
	Sawaeen and Ali	Investigates the connotation between determinants of organizational performance, entrepreneurial leadership, and TQM practices of Kuwait's SME.	Entrepreneurial leadership has a positive impact on organizational performance with mediating role of TQM
	Abdullahi et al.	Examines the association between TQM and OP.	TQM has a substantial association with OP through CS and ES.
2019	Aburayya et al.	Examines the affiliation between TQM practices and patient satisfaction in healthcare in Dubai.	Substantial and positive effects on patient satisfaction have been recorded in terms of leadership, human resource focus, information and analysis, strategic forecasting, and customer attention.
2018	Baidoun et al.	Measure the level of total quality management (TQM) implementation in Palestinian governmental and non-governmental hospitals through the Malcolm	Compared to governmental hospitals, the performance of non-governmental hospitals is better with a higher degree of TQM implementation.

		Baldrige National Quality Award (MBNQA) framework.	
	Nasim	Investigates the combined impact of internal and external resources on the performance of service organizations.	The model was developed by identifying hard & soft TQM aspects.
2017	Qasrawi et al.	Examines the impact of total quality management practices with mediating effect of knowledge management (KM).	The insignificant impact has been documented on organizational performance over customer focus and process management., Knowledge distribution and application procedures had a substantial impact on organizational performance. KM processes entirely mediated the influence of TQM practices on organizational performance, whereas teamwork had a partial mediating consequence.
	Honarpour et al.	Investigates relationship between total quality management (TQM) and knowledge management	KM and TQM are positively associated with each other. The reciprocal relationship between TQM and KM has synergetic effects.
2015	Khanam et al.	Identifies 'vital few' factors of TQM enablers in the IT industry	The utmost working enablers are top management commitment and support (TMCS) and resource electronic data interchange (EDI) by using the Pareto analysis approach.

Chapter Three

CSFs in TQM Literature: A Focus on Banking Sector

Prelude

Total quality management (TQM) is an inclusive philosophy that comprises a set of a mechanism consisting of critical success factors, techniques, tools, and practices (Salim et al., 2019). In this chapter, the critical success factors of TQM recognized by various scholars have been studied through an extensive literature review. Despite TQM practicing is more in the manufacturing industry, there is an acceptance to the belief that the principles of TQM are equally important and applicable in the service industry. Nevertheless, it is highly required to comprehend the exclusive features of services for an operative application of TQM in a service organization, more importantly in the banking sector. The banking sector is considered as the prime in the arena of the service sector which furnishes the requirements of the diverse groups of people in today's diversified society. Remarkably, the service quality of commercial banks inclines to play a leading role in high connexion industries (Angur et al., 1999; Elango & Gudep, 2006). In addition, among the service industry, the banking sector is huge enough to apprehend and signify almost all the critical success factors and vibrant customer perceived features for service quality which management may undertake to manage their organizations effectively and efficiently. As a result, offering the greatest service quality is regarded as the prerequisite for the high performance of service establishments like banks (Sohel & Roger, 2002). Many Researchers such as Ahmed (2002); Lewis (1990); Neyer (2000); Sureshchandar et al. (2002) have emphasized the necessity for this sort of study to reinforce the banks' performance in emerging countries and to progress the financial performance and economies what would be the optimum practices essential to being implemented.

3.1 The Fundamentals of TQM in Banking

TQM in the manufacturing industry and TQM in the service industry have some differences in terms of concept, practices and implementation. When it is the banking sector, some factors need to be pronounced for effective implementation of

TQM which ultimately direct to quality improvement of the promised services. Literature evident showed that service quality plays a vibrant role in order to build strong as well as long-term relationships among banks and customers in the banking sector which ultimately leads to competitive advantage (Ali & Reza, 2017; Berry & Thompson, 1982; Teas, 1993). Al-Swidi and Mahmood (2012) emphasized measuring the wide-ranging knowledge about the customers' needs, requirements, and expectations in designing services offered by the banks.

Table 11

Factors for TQM implementation in Banking (Takan, 2001, pp. 94-97)

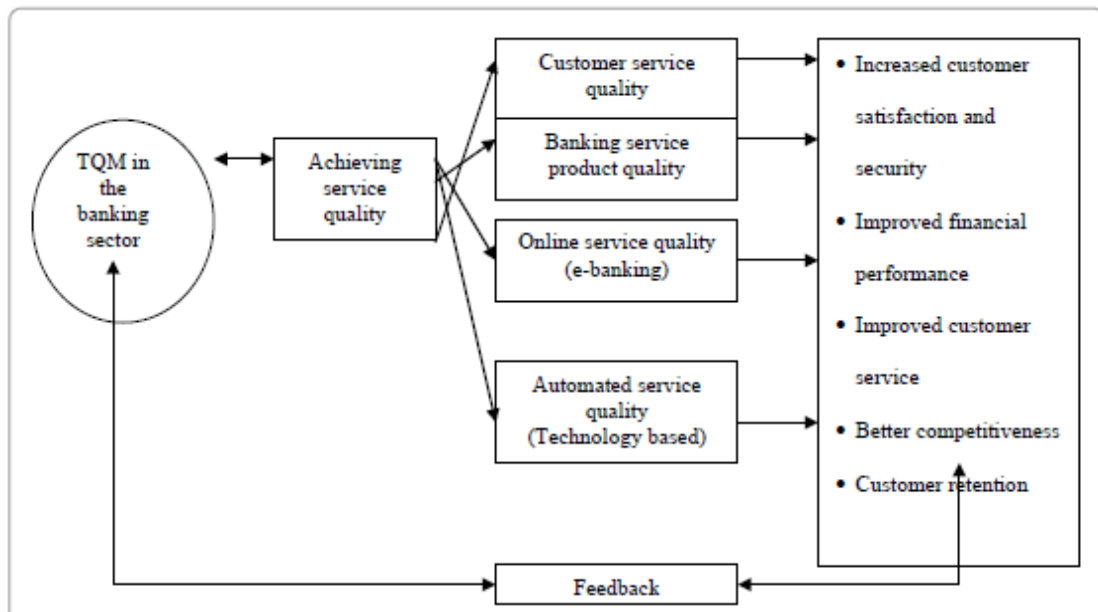
<i>Factors</i>	<i>Explanations</i>
Trusting	The bank must have decent, trustworthy personnel who work correctly and on time.
Eagerness of staff	Desire to work for employees is needed.
Proficiency and capability	Professional and capable employees can deliver better services to customers.
Good location	People prefer and recommend that bank which is located at a convenient place and deliver active as well quick customer care service.
Well-mannered staff	Politeness and cordial behavior of employees is the main reason for the satisfaction of customers.
Communication	Understandable communication among the employees and the customers is an absolute must.
Persuasive	Employees must influence that they work happily.
Safety & security	Customers want services with low risk.
Physical value	Interior and exterior, number of branches, use of machines are also the issues for measuring the quality of banks.
Understandable staff	The staff must understand clients' questions and needs.

3.2 A Review of the Emerging Literature - Writings on TQM in Banking

Banks are service organizations and service quality has deliberated role for experiencing competitive advantage in the banking industry (Harimurti & Suryani,

2019). It is firm to distinguish the product in the banking sector, henceforth the service quality becomes one of the attributes to differentiate banks from banks. Delivering high-end services allows banks to achieve competitive advantages (Barimani & Salimi, 2018). Implementation of TQM could positively affect bank service quality (Harimurti & Suryani, 2019). The study engrossed in three dimensions of TQM including Human resource development quality, employee knowledge and customer focus. It also revealed that customer engagement and customer loyalty would improve due to better service quality in the banking industry.

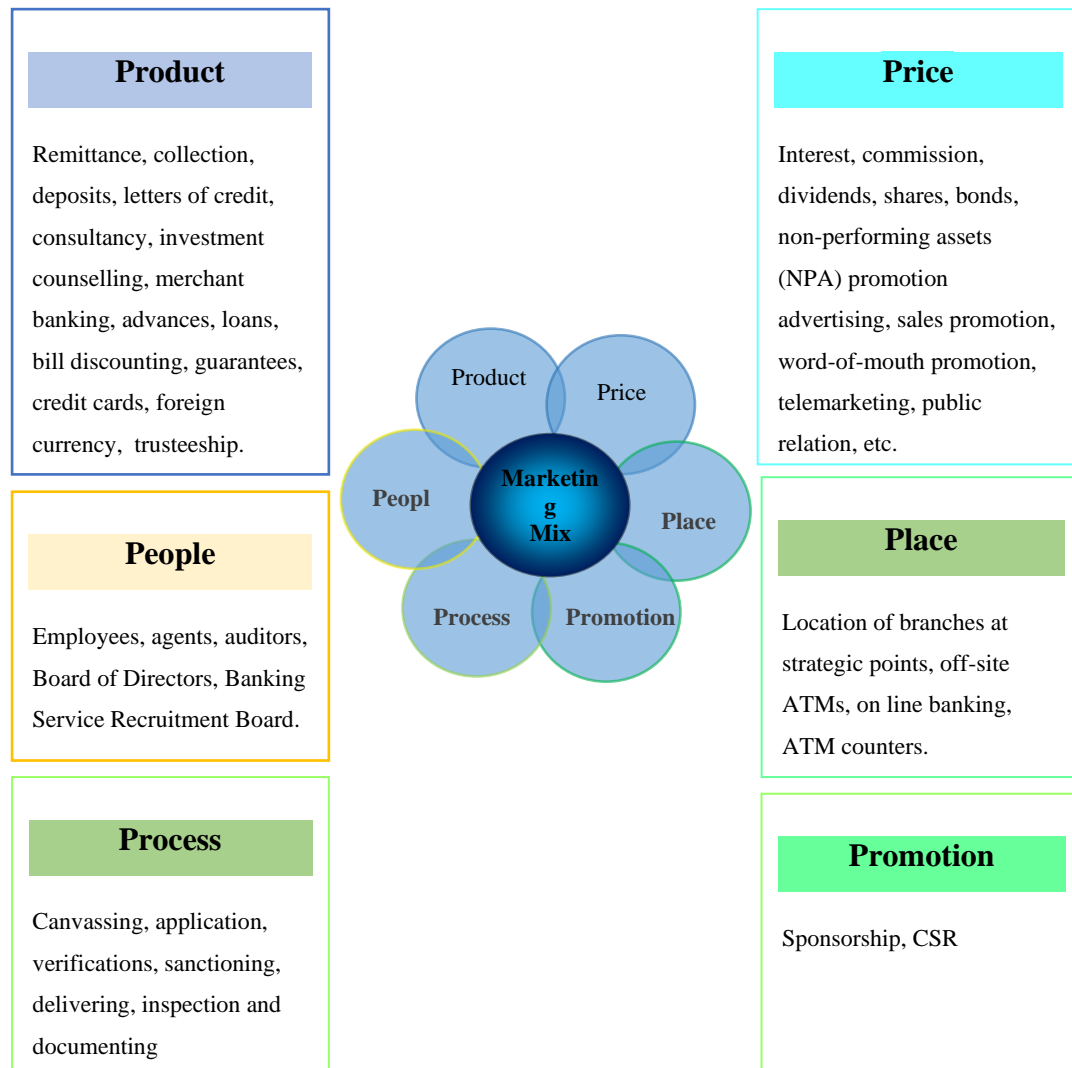
According to the academic and practical literature, service quality in banking can be recognized into several ways such as customer service quality, banking service product quality, online service quality and automated service quality aiming at attaining customer satisfaction, better-quality monetary performance, and competitiveness as shown in the below figure (Talib et al., 2012b). Moreover, the figure also portrays that service quality is a multidimensional paradigm rather than having a unidimensional connotation.

Figure 10*Service Quality as a Multidimensional Paradigm in Banking Sector*

Despite having current economic uncertainty, the leading banks are beholding to optimize their businesses and improve financial performance and make profile strategic priorities. Marketing mix optimization becoming a vital strategy to cope up with the growing need, improve profit margins, and drive innovations. Presently, the banking sector is leveraging the use of marketing mix to optimize their marketing channels as well as develop their marketing strategies to optimize customer satisfaction. As the banking sector has been chosen for this study, the marketing mix of the banking sector has been analysed and presented in the below table.

Figure 11

Marketing Mix of Banking Sector of Bangladesh: Input from FGD



There is a substantial and positive link of organizational performance of commercial banks with the internal service quality (Vanniarajan, 2007) and for delivering internal and external service quality in commercial banks, TQM is extremely vital. Researchers, around the world, supported the strong role of TQM in the banking area. For instance, Skowron and Kristensen (2012) highlighted a very positive association between TQM with customer satisfaction. According to Goetsch and Davis (2016), TQM boosts up the organization's strength to minimize the cost

and enhance the likability of growing up as a market frontrunner in a specific market. To achieve competitive market share, enhancing profitability, enlarge the customer base, and upsurge customer loyalty is the utmost necessity for the banking sector (Al-Marri et al., 2007). Baidoun et al. (2018) emphasized TQM implementation for identifying customer necessities, progressing the process to deliver services, and minimizing errors in services. Similarly, Yapa (2012) endorsed the optimum ways of applying TQM concept to expand bank performance and service quality. Mellahi and Eyuboglu (2001) suggested the successful implementation of TQM in emerging countries like western management practices despite having high cultural and organizational barriers.

Lenka and Suar (2008) grounded on the review of literature, recognized six-core thoughts, for the recognition of TQM in the service sector and the study included hotels and banks and these are: “(a) transformational leadership, (b) customer orientation, (c) HRM, (d) organizational culture, (e) continuous improvement, and (f) quality measurement.” TQM has a great influence on job performance. It is highly needed to activate employees' participation in decision-making in the Jordanian banking sector and work towards taking all required steps by the company to minimize the lost current from the company and continuously (Al-Sarayreh, 2009). Recent studies have appealed that through the application of TQM, improved products and services, minimized costs, more delighted customers and employees, and enhanced financial performance can be generated (Abbas, 2020; Abdullahi et al., 2020; Alkhazali et al., 2019; Kanwal, 2018; Talib et al., 2011b). Investigation of literature review on TQM in the banking sector, come out with TQM pillars which are considered critical success factors for TQM which relate to the financial performance of a bank.

Islam and Haque (2012) identified eight critical success factors for TQM implementation which are: “the formation of quality management environment; development of teamwork; the practice of quality control tools and techniques; focus on the customer; focus on supplier relationship; benchmarking; continuous improvement of processes and involvement of employees.” The study revealed that the best practice can be attained in the banking sector of Nigeria, depending on the firm adhering and close observation of the application of total quality management characteristics to attain the impact on banking service delivery. However, some challenges were also identified such as exploitation, ignorance, e-network failure, power failure, communication gap, and resistance to change. The study of Aziz et al. (2012) exposed that implementation of TQM practices leads to high-quality performance and also highlighted the strong relationship between strategic planning, service design, continuous improvement, and benchmarking with the financial performance of banks. According to their recommendation banks should take initiative to promote the perception of TQM company-wide wide through seminars and workshops. The content of training should be well designed to develop the implementation of the TQM.

Continuous Improvement is the significant input to the innovation process in any organization. It is highly required to stay up-to-date with customer necessities regarding service quality. Appropriate implementation of continuous improvement would firmly mean that innovation is embedded in the organizational culture and is a cohesive process (Dobrin & Stanciuc, 2013). According to Talib and Rahman (2012b), embracing the TQM program in the banking industry might be one of the best replacements that overhaul better-quality service along with higher customer gratification composed with customers retainment. The positive connotation among

total quality management practices, bank performance, and competitive advantage is evident in several pieces of works of literature. Management of banks should confirm the endured greater bank performance through investing substantial resources in acclimating and implementing TQM practices in their processes (Rawashdeh, 2014).

3.3 TQM in Banking Industry of Bangladesh

A considerable number of literatures engrossed on the benefits of TQM implementation in all sorts of organizations to gain competitive advantages. Benefits comprehended development in productivity and efficiency, enhanced employee morale, improved market shares, after-sales service image, quality improvement, cost minimization, better-quality financial performance, a rise in employee performance, and competitive advantages (Agus & Abdullah, 2000; Chan & Quazi, 2002; Nilsson et al., 2001; Reed et al., 2000; Sadikoglu & Zehir, 2010; Sousa & Voss, 2002; Tena et al., 2001; Zairi, 2013). Despite having a lot of consideration in this area around the world, TQM is comparatively a new concept in the context of Bangladesh. Some manufacturing organizations use this concept but the service sector is far away to get the benefit.

The banking industry of Bangladesh is still in its infancy in the TQM issue. Therefore, empirical research in this area is lacking. A comprehensive framework with eight pillars has been identified and developed verifying the manufacturing organization of Bangladesh focusing on the RMG sector (Islam & Haque, 2012). The pillars are Formation of quality management, expansion of teamwork, use of quality control tools and techniques, attention to the customer, emphasis on supplier relationship, benchmarking, participation of employees. Another study exposes that top management of the banks has the potency to establish leadership regarding proactive contribution in collaborating quality goals to employees and founding

strategic quality planning teams in the organization. The strategic planning of the management is also upright as this plan is articulated utilizing appropriate information concerning customer needs and expectations, employee practices, benchmarking, and required development efforts. The author also documented that the banks of Bangladesh did not apply the TQM approach methodically in their operations (Barua, 2011). Bangladesh Power Development Board (BPDB) has been started applying total quality management (TQM) in 190 since 2002. The study identified the hindrances to implementing TQM in BPDB such as the absence of higher management commitment and monitoring, collective bargaining agents, inappropriate training programs, etc. (Rahman et al., 2012).

3.4 Critical Success Factors (CSFs) of TQM

Critical success factors may be observed as variables which govern firm performance through the fruitful implementation of TQM. The factors and practices which are essential for the effective orientation of TQM can be considered as CSFs (Yusof & Aspinwall, 1999). These might be the predominant settings and drivers essential for a firm to attain its vision (Wali et al., 2003). Karuppusami and Gandhinathan (2007) considered TQM CSFs as fundamental to the success of organizations, which required efficient management and proper monitoring for further improvement.

Extant literature has echoed a lot of studies that identified critical success factors of TQM. the literature review conducted by Aquilani et al. (2017) stated that 103 academic papers covering the CSFs of TQM were available by that year. So, TQM is getting more and more consideration day by day indeed. Fotopoulos and Psomas (2010) researched Greek companies and recognized nine critical factors which lead to the sustainability of a company. “Leadership, employee management

and involvement, strategic quality planning, supplier management, process management, customer focus, continuous improvement, information and analysis, and knowledge and education” are the factors. Othman et al. (2020) have shown leadership, management of staff, information, and analysis, and customer attention as strong predictors of competitive advantage in the banking sector.

Transformational leadership, human resource management, customer orientation, continuous improvement, organizational culture and quality measurement have been recognized as core concepts of TQM by Lenka and Suar (2008) which can boost up business excellence.

Twenty critical factors analysed by Mahapatra and Khan (2006) are accountable for the successful application of TQM in the service sector. They are: “customer focus and satisfaction, leadership and top-management commitment, policy and strategy planning, process management, human resource management and control, product/service design and control, supplier management, training, continuous improvement, employee satisfaction, employee participation, employee appraisal, quality culture, quality assurance, quality system, reward and recognition, flexibility, impact on society, teamwork, zero defect and benchmarking”.

Majed et al. (2020) described 12 core practices of TQM which are “senior management involvement, optimization, quality improvement, innovative leadership, technological framework human resource management, , research and information framework, customer attention, employee satisfaction, cost limits, union participation, social responsibility, and cultural services”.

Mashal and Ahmed (2015) conducted a study and exposed that top management, technical systems, employee satisfaction, and customer focus of TQM practices have a significant impact on banks' performance and efficiency. The study

also established supporting evidence about the robust relationship between TQM practices and organizational performance.

Awolusi (2013) investigated the effectiveness of the critical success factors (CSFs) of total quality management on customer service management in the Nigerian banking industry. The study established that to improve CSM, banks need to resistor their TQM program. Henceforward, the result of the study posits the critical success factors for implementing TQM effectively which are, “workers participation setting goals and performance monitoring, effective communication, commitment and support from the top management, careful alignment of corporate strategy with TQM strategy, clear and compelling TQM vision, a constant review of TQM implementations to align with plans and budgets, effective process review and controls, quality improvement measurement systems and IT infrastructures”.

Saravanan and Rao (2006) distinct 12 quality management dimensions and they are “top-management commitment and leadership, benchmarking, customer focus and satisfaction, service marketing, social responsibility, human resource management, employee satisfaction, service culture, servicescape, continuous improvement, technical system, and information and analysis”. “Customer focus, continuous improvement, teamwork and involvement, top-management commitment and recognition, training and development, quality systems and policies, supervisory leadership, communication within the company, supplier partnership measurement and feedback and cultural change” are eleven critical success factors of TQM recognized in the study conducted by Tsang and Antony (2001).

Ten TQM practices have been identified by Kanji and Wallace (2000) and they are “top-management commitment, customer focus and satisfaction, quality information and performance measurement, human resource management, employee

involvement, teamwork, process management, quality assurance, zero defects, and communication". A wide-ranging literature review of the observed preceding studies on TQM have considered and the concept of TQM and critical success factors for successful implementation of TQM in all sorts of organization which results in enhanced productivity, market position in the leading role, increased sales volume, and customer satisfaction. Success factors are a set of considerable elements that support the organization in accomplishing its drives for restored business performance (Gupta & Mittal, 2020). Almost all of the literature of TQM identified employee involvement, empowerment, top management leadership, and commitment, and customer relationship as crucial elements in successful TQM implementation (Bowen et al., 1989; Brower, 1994; Camp, 1989; Deming, 1982; Knol et al., 2018; Kohli & Singh, 2015; Mendelowitz, 1991; Sahoo & Yadav, 2017). These factors may be considered as a prerequisite to or motivations for TQM implementation (Wali, 2003). A voluminous literature has been considered from different ranges like manufacturing, service, and banking to explore the critical success factors of TQM implementation. Apart from the notable researchers, some other areas have been explored like from quality Guru's (Crosby, 1979; Deming, 1982; Feigenbaum, 1991; Ishikawa, 1985; Juran, 1988), quality awards (Malcolm Baldrige National Quality Award, The Deming Award, European Quality Award). These studies contribute a considerable number of substantial success factors for TQM implementation.

Besides the theoretical literature, the critical success factors of TQM which are referred to and considered in this study, are acknowledged by many well-known quality and business excellence models and criteria such as MBNQA, EFQM, and Malaysian Quality Management Excellence Award (QMEA) illustrated below table.

Table 12

Critical success factors identified in the past TQM literature (CSFs of TQM), (Sorted on recent year order)

<i>Critical dimensions</i>	<i>Literature evidence</i>	<i>Related Constructs</i>	<i>Explanation</i>
Top Management Leadership	Gupta and Mittal (2020); Majed et al. (2020); Wang and Meckl (2020); Baidoun et al. (2018); Bajaj et al. (2018); Elshaer et al. (2016); Neyestani and Juanzon (2016); Lau et al. (2015); Yunoh and Ali (2015); Bhuiyan et al. (2014); Kaur and Sharma (2014); Talib and Idris (2014); Sarathy (2013); Irfan and Kee (2013); Koilakuntla et al. (2012); Zehir et al. (2012); Kumar et al. (2011); Fotopoulos and Psomas (2010); Sadikoglu and Zehir (2010); Talib et al. (2010); Selvaraj (2009); Bayrakta et al. (2008); Azizan (2007); Ooi et al. (2007); Samat et al. (2006); Ismail (2006); Saravanan and Rao (2004); Besterfield et al. (2003); Sila and Ebrahimpour (2002); Mellahi and Eyuboglu (2001).	Commitment, positive attitude of top management, top management support for employee's education and training, leadership management, management commitment, leadership, senior management involvement, innovative leadership.	EFQM, MBNQA, QMEA Top management leadership is the degree to which top management and leaders allocate TQM aims, distribute the vital resources equipped to quality improvement efforts, and appraise TQM implementation. (Bon & Mustafa, 2013).
Employee Involvement	Wang and Meckl (2020); Pambreni et al., (2019); Bajaj et al. (2018); Elshaer et al. (2016); Neyestani and Juanzon (2016); Bhuiyan et al. (2014); Sarathy (2013); Zehir et al. (2012); Fotopoulos and Psomas	Employee involvement in decision making, employee empowerment, employee involvement in	EFQM, MBNQA, QMEA Employee involvement is the level at which employees are dedicated, encompassed, and concerned with the TQM

	(2010); Sadikoglu and Zehir (2010); Talib et al. (2010); Selvaraj (2009); Bayrakta et al. (2008); Azizan (2007); Samat et al. (2006); Saravanan and Rao (2004); Sila and Ebrahimpour (2002); Mellahi and Eyuboglu (2001).	the quality management system, employee management involvement of people.		activities. (Bon & Mustafa, 2013; Rao et al., 1999).
Customer Relationship	Majed et al. (2020); Wang and Meckl (2020); Pambreni et al., (2019); Bajaj et al. (2018); Elshaer et al. (2016); Neyestani and Juanzon (2016); Yunoh and Ali (2015); Bhuiyan et al. (2014); Kaur and Sharma (2014); Talib and Idris (2014); Sarathy (2013); Irfan and Kee (2013); Zehir et al. (2012); Kumar et al. (2011); Talib et al. (2010); Fotopoulos and Psomas (2010); Sadikoglu and Zehir (2010); Selvaraj (2009); Bayrakta et al. (2008); Azizan (2007); Samat et al. (2006); Saravanan and Rao (2004); Sila and Ebrahimpour (2002); Black and Porter (1996).	Long-term partnerships with customers, customer focus, internal and external customers, customer satisfaction orientation, customer involvement, customer attention.	MBNQA, EFQM, QMEA	The organization needs to be customer positioned to attain high customer satisfaction through studying and understudying needs and demands (Bon & Mustafa, 2013).
Supplier Partnership	Wang and Meckl (2020); Bajaj et al. (2018); Elshaer et al. (2016); Neyestani and Juanzon (2016); Yunoh and Ali (2015); Bhuiyan et al. (2014); Talib and Idris (2014); Irfan and Kee (2013); Zehir et al. (2012); Sadikoglu and Zehir (2010); Talib et al. (2010); Azizan (2007); Black and Porter (1996);	Long-term partnerships with suppliers, supplier management, long-term relationships with suppliers, mutually beneficial supplier	EFQM	Establishment of cooperative relationships with suppliers in order to manage their procedures more efficiently (Tari et al., 2007).

	Saraph et al. (1989).	relationship, supplier partnership, supplier involvement, supplier quality management.		
Continuous Improvement	Wang and Meckl (2020); Pambreni et al., (2019); Bajaj et al. (2018); Yunoh and Ali (2015); Bhuiyan et al. (2014); Irfan and Kee (2013); Zehir et al. (2012); Kumar et al. (2011); Talib et al. (2011a); Sadikoglu and Zehir (2010), Talib et al. (2010); Azizan (2007); Samat et al. (2006); Saravanan and Rao (2004); Besterfield et al. (2003); Sila and Ebrahimpour (2002).	Continuous improvement, product design, innovative performance.	MBNQA, EFQM, QMEA	Continuous improvement leads to increase and sustain improvement in all organization functions, operations, and departments. (Bon & Mustafa, 2013; Lafley & Charan, 2008).
Organizational Culture	Khan (2019); Talib et al. (2011a); Talib et al. (2012b); Besterfield et al. (2003).	Organizational culture, TQM culture.		Organizational culture is a system of meanings, morals, and principles held together in an organization that varies from organization to organization and refers to action (Mas'ud, 2004).

Table 13

Critical success factors for TQM implementation in service organizations (Sorted on recent year order)

<i>Authors</i>	<i>Critical success factors for TQM implementation in service organizations</i>
Valmohammadi (2011)	“Leadership, process management, customer focus, communication and quality information system, employee management and involvement”
Al-Marri et al. (2007)	“Top-management support, customer focus, strategy, employee involvement, problem analysis, service design, human resource management, continuous improvement, quality systems, quality department”
Talib and Rahman (2010)	“Top-management commitment, customer focus, training and education, continuous improvement and innovation, supplier management, employee involvement, employee encouragement, benchmarking, quality information, and performance”
Sit et al. (2009)	“Leadership, human resource focus, process management, customer focus, strategic planning, information, and analysis.”

Table 14

CSFs of TQM in Banking Sector. Table Constructed with an Exhaustive Literature Survey. (Sorted on recent year order)

<i>Critical Dimensions</i>	<i>Literature Evidence</i>	<i>Related Constructs</i>		<i>Explanation</i>
Top Management Leadership	Hossin and Islam (2017); Sreenivas and Babu (2017); Anil and Satis (2016); Al-Ettayyem and Zubi (2015); Priya (2015); Idam et al. (2014); Mwaniki and Okibo (2014); Jamali et al. (2010); Selvaraj (2009); Lenka and Suar (2008); Al-marri et al. (2007).	Top management commitment, top management involvement, top management support, transformational leadership.	EFQM, MBNQA, QMEA	Top management leadership is the degree to which leaders and top management assign TQM objectives, deliver the required resources equipped for quality improvement efforts, and appraise TQM implementation. (Bon & Mustafa, 2013).
Employee Involvement	Sreenivas and Babu (2017); Hossin and Islam (2017); Anil and Satis (2016); Priya (2015); Idam et al. (2014); Selvaraj (2009); Lenka and Suar (2008); Al-Marri et al. (2007).	Employee involvement, motivation, and retention of good employees, employee satisfaction service culture, employee empowerment.	EFQM, MBNQA, QMEA	Employee involvement is the level at which employees are dedicated, encompassed, and concerned with the TQM activities. (Bon & Mustafa, 2013; Rao et al., 1999).
Customer Relationship	Sreenivas and Babu (2017); Hossin and Islam (2017); Anil and K. P. (2016); Al-Ettayyem and Zubi (2015); Priya (2015); Mwaniki and Okibo (2014); Idam et al. (2014); Selvaraj (2009); Lenka and Suar	Customer focus quality information analysis QIA, customer satisfaction, customer relationship total customer relationship	MBNQA, EFQM, QMEA	The organization needs to be customer positioned to attain high customer satisfaction through studying and understudying needs and demands (Bon & Mustafa,

	(2008); Al-Marri et al. (2007).	management (TCRM). customer focus, customer orientation.		2013).
Supplier Partnership	Anil and Satis (2016); Mwaniki and Okibo (2014).	Supplier quality management, supplier relationship.	EFQM	Establishment of cooperative relationships with suppliers in order to manage their procedures more efficiently (Tari et al., 2007).
Continuous Improvement	Sreenivas and Babu (2017); Hossin and Islam (2017); Anil and Satis (2016); Idam et al. (2014) ; Al-Ettayem and Zubi (2015); Al-marri et al. (2007); Lenka and Suar (2008).	Continuous improvement, product design product innovation, state-of-the-art technology.	MBNQA, EFQM, QMEA	Continuous improvement leads to increase and sustain improvement in all organization functions, operations, and departments. (Bon & Mustafa, 2013; Lafley & Charan, 2008).
Organizational Culture	Anil and Satis (2016); Al-Swidi and Mahmood (2012); Kaluarachchi (2010); Al-Marri et al. (2007).	Learning organization, appropriate culture.		Organizational culture is a system of meanings, morals, and principles held together in an organization that varies from organization to organization and refers to action (Mas'ud, 2004).

3.4.1 Top Management Leadership

Due to the high level of cut-throat competition and the persistent process of change in the contemporary business environment, management of all sorts of the organization is under pressure to implement quality systems for achieving reduced production process errors and maximum profit aiming to customer satisfaction. Providing high-end service has converted to a deliberate domineering for senior management all over the world and in this regard, a good number of quality tools and techniques have been introduced and practiced for achieving this management goal whereas Total Quality Management (TQM) demonstrated to be amid the utmost operative quality practices that have been implemented. A very recent study on the leadership of TQM conducted by Bouranta (2021), exposed that transformational leadership has a positive consequence on customer focus, human resource management, process management, strategic planning, and learning which were addressed as the TQM implementation regardless of the industry type, manufacturing or service. Moreover, the author concluded that the service industry requires employee education and transformational leadership has a more positive influence on employee education in the service industry rather than manufacturing.

Research on TQM has constantly come over the strong association between fruitful TQM implementation and leadership (Ehrenberg & Stupak, 1994; Rao et al., 1997; Zairi, 2002). Many scholars such as Venkatraman (2007); Aspinwall (1997) and Kanji et al. (1999) have recognized and addressed the importance of leadership for successful TQM implementation. In general, they have contended that top management's capability to make a vision and endorse change is at the core of the effective implementation of TQM. The strong role of top management through strong commitment is very critical in the implementation process of TQM and

stereotypically acts as a frontrunner and driving force for generating values, goals, and structures for customer's need fulfillment (Yunoh & Ali, 2015). Top management commitment ranked first and established as fundamental for implementing TQM initiatives successfully in the findings of the study conducted by (Gupta & Mittal, 2020). In order to respond to customer requirements and to enhance an organization's performance, top management plays a role of a driver for TQM implementation by generating principles, goals, and structures (Al-Khalifa, 2000). To be successful in the area of TQM implementation, top management should win over its implementation by portraying leadership and engrossing the entire workforce in the work of nourishing the customer with a continuous quality improvement (Islam & Haque, 2012). Top management should gain excellence in training the entire workforce in order to produce the knowledge required on the effective utilization of mission, vision, direction, and strategy of the organization together with the required skills needed to implement TQM.

Generally, management is responsible to articulate the organizational vision, creating a shared philosophy, and developing a process that is value-based and customer-focused. Deming who is esteemed as the father of Japanese quality management expressed fourteen points for management for improving quality and established the requirement of management leadership role and responsibility for organizational performance. Literature has evident the linkage of competitive advantage with leadership amplified customer service, minimized costs arising from poor quality, and maximizing competitive advantage (Alharth et al., 2017). Top management leadership toward quality is indispensable to contrivance TQM successfully in an establishment and consequently commitment of top managers toward TQM implementation which includes quality planning, quality schedule,

quality policy, quality evaluation, and quality upgrading. The study by Verma (2014), specified committed leadership as one of the significant factors to achieve organizational progress. Through active participation in quality improvement programs, top management can demonstrate their commitment (Durairatnam et al., 2020).

Visionary leadership leads to development in organizational performance (Ulle & Kumar, 2014). Top management will not only manifest commitment but also involve and circulate TQM objectives and strategies throughout the company with adequate support and monitoring. It must exhibit the coherence to put quality in top priority. The role of top management leadership and continuous product improvement is vibrant for successful implementation of TQM, teamwork and measuring business performance which ultimately leads to customer satisfaction, thereby, enhancing sustainable customer loyalty through continual customer feedback (Worlu et al., 2019). Conferring to O'Mahony & Garavan (2012), practicing TQM can bring a comprehensive impression extending from top levels of the organization likely strategic planning and decision making to the level of thorough implementation at the front desk includes strategy architects, educators, and also administrative teams in an educational set up, considered as the hard and systemic features of TQM. Patel (2013) defines the role of the top management quoted below:

“Top managers have to take charge personally, lead the process, provide direction, exercise forceful leadership, including dealing with those employees who block improvement and maintain the impetus” (p. 81)

Low and Teo (2004) stated that top managers need to espouse the appropriate leadership styles for every venture and one fixed management style cannot be is appropriate to all surroundings and all ventures. In order to cope up with

the present rapidly changing market, leadership along with the focus on TQM is highly crucial (Kumar & Sharmal, 2018). It is required to make a plan for vision, mission, values, ethics, attitude, and goals for the organization to be followed beforehand of the implementation of TQM (Grover et al., 2006). The top management requires to recognize the critical success features and to analyse the structure of management (Yusuf et al., 2007). Top management participation should be confirmed by the activities that are desired and not only through words or announcements of quality policies. Hence, top management necessarily practices leadership aptitudes to encourage the behaviour of others (Talib & Rahman, 2010). Strategic thoughts, collaborative performance, empowerment and involvement of the workforce, an innovation designed to serve society, and creating a work environment to promote organizational change should be manifested by top management for implementing TQM successfully. Nonetheless, considerable studies are available that established the positive association between management commitment and organizational performance (Hilman et al., 2019; Alolayyan et al., 2011; Flynn et al.1995; Powell 1995).

Top management enters the realm of strategic planning when takes initiative for quality improvement and becomes responsible as well committed for vision, mission, objectives, and strategies compatible for continuously improving the systems and management.

Research Question: *To what extent does top management leadership support TQM implementation?*

3.4.2 Customer Relationship

Quality begins with the customer- A recognized statement for TQM practices. In banking, parlance customer accepts the services offered by the banks.

The process of economic liberalization, the globalization of markets, and swift changes in a business environment are heading toward a shorter product life cycle and making customers more demanding which ultimately creating organizations more challenging to meet customer satisfaction. Presently all types of organizations, smallest to largest, are under pressure to satisfy end customers due to the globalization of the economy (Krishnan, 2013).

Customers must be the centre portion of organizational activities for any business to succeed in this raging environment according to the marketing concept (Ali & Raza, 2017; Raza & Hanif, 2013). Customer relationship management is textured as a strategic manoeuvre for coping with competitiveness.

Some literature addressed TQM as a culture of an organization devoted to total customer gratification through Continuous Quality Improvement instead of merely management perception (Talib et al., 2011a; Vouzas & Psychogios, 2007).

The banking services are changing due to the rising of customer expectations. The more educated customers are demanding constant innovative products, convenient delivery channels, and more reliable as well as approachable services. Customer focus is the prime weapon for achieving and sustaining growth in the banking business. In a total quality setting, the customer is the driver (Goetsch & Davis, 2016). Developing a passionate and friendly symbiotic relationship with customers is getting more strategic attention in the banking industry than ever before. This sector all over the world is more focused on innovative measures to satisfy their existing customers' requirements, acquire target ones, and concurrently formulates time adopt actions to attract and win-win back the lost customers. A long-established relationship that can develop with commitment and perceived bonding through

personalized communication will lead to the successful implementation of customer relationship management.

Total quality is an expressive declaration of the culture, policy, and prearrangement of a firm that effort to deliver its customers products and services which satisfy their needs (Rezazadeh et al., 2012). In today's highly competitive business world, organizations are fronting the encounters of global competition and are more erudite with regard to their want and changing needs. Now a day due to change and advancement of technology, social status, modified needs, customers become more knowledgeable and see the quality of service as a right chosen for them by companies they have often chosen. That's why every organization needs to get the knowledge of their existing as well potential customers which is about understanding customers in a whole sense encompassing their wants, goals, requirements, emotional motives for purchasing, and other such issues. Nevertheless, a competitive advantage can be gained through understanding customers' precise requirements and offering products and services that confirm these necessities. Identifying customers articulated and latent demand eventually leads to getting the best possible way of achieving customer satisfaction. Practical experience showing that TQM success comes to the organization those who best meet and delight the needs of their customers. That is the radical reason for every sort of organization to synchronize all organizational activities by keeping in mind customer satisfaction. Yusr et al. (2014) recognized customer focus and supplier quality management as the window, the organization looks through to gain the information about customers, competitive players, and dealers that generate a platform for performing required steps for constructing the R&D competencies and strategy planning aptitude. Customer satisfaction is defined in numerous ways by various experts. Kotler et al. (1996) defined satisfaction as the

level of an individual's felt state resultant after the comparison of product's perceived performance (or consequence) in association to the individual's expectations. In short form, satisfaction level merely is a meaning of the variance between perceived performance and expectation (Stahl, 1999). A central core proposition in TQM is that customer focus is the absolute must for all products and processes. The successful implementation of TQM highly requires understanding, nourishing, and surpassing customer requirements and expectations. At the very primary stage, customer focus and satisfaction contain digging up the customer wants and expectations and gauging the level of customer satisfaction to eradicate displeasure (Dilawo & Salimi, 2019). The valuation of quality should be measured by the customers with their needs and expectations (Nagaprasad & Yogesha, 2009). Worlu et al. (2019) underlined the role of top management commitment and continuous product improvement for successful application of TQM, teamwork, and measuring business performance which ultimately led to customer satisfaction thereby enhancing sustainable customer loyalty through continuous customer feedback. Market analysis can find out the customers' needs and values to the market expectations through methodically evolving and manufacturing the product. Internal customers are termed as the employees inside the organization and the needs of every internal customer require to be fulfilled (Nagaprasad & Yogesha 2009). Agus (1994) in his study on the Malaysian industry found the robust and direct connotation between TQM and customer satisfaction. Saravanan and Rao (2006) identified a statistically substantial association between the application of TQM practices and customer satisfaction and business as well. In accordance to Nadiri and Hussain (2005), service quality endorses customer satisfaction, arouses intent to reinforce, and stimulates endorsements. Customer satisfaction produces an increase in profitability, market share, and return on

investment (Legoharel, 1998; Stevens et al., 1995). It is empirically proven by the study conducted by Tanninena et al. (2010) that the business units which had adopted TQM principles and applied its tools and techniques, positively affected customer satisfaction and had more gratified clientele than their less qualified counterparts. Calvo-Mora et al. (2014) endorsed that the quality of services to customers can be developed through effective implementation of TQM.

The customer's upshots are constantly unanticipated in-service industry (Ordanini et al., 2014). As a result, the banking sector should focus more on its customers' needs and expectations. Al-Swidi and Mahmood (2012), accentuated gauging the comprehensive knowledge about the customers' needs, requirements, and expectations in designing services offered by the banks. Customer satisfaction can be gained by capturing customer voice (Chiguvi, 2016). At each level of the product development process, the integration of customers' judgment should be respected (Wang & Meckl, 2020). Sharabi (2015) affirmed that customer attention is the expansion of the comprehensive needs and expectations of the existing and possible customers, meeting those requirements and delivering the established value to them. According to him, customer focus creates perceived value. The study conducted by Yaacob (2014) established the significant effect of customer attention on employee motivation and innovation. Psomas and Jaca (2016) identified some indicators for measuring customer focus which is affluence of customer grievance, consumer assessment, and consumer behaviour. Talib et al. (2012b) claimed customer concentration as the most important TQM theory and argued that the higher use of customer attention practice is considered to be the most competitive advantage gained.

Research Question: *To what extent does customer relationships support TQM implementation?*

3.4.3 Supplier Partnership

Earlier time, supplier associations and management were not measured as the critical element for service industries, but present time supplier partnership has grown as an indispensable element of the TQM program owing to the globalization of services, shifting customer choices, and high competition due to the growth of service companies (Talib & Rahman, 2010).

A quality performance is highly influenced by supplier quality (Flynn et al., 1994; Saraph et al., 1989). According to ISO 9000-2000, suppliers are considered as quality partners in the process of upgrading products and services. The management of an organization must have adequate time for the procuring department to categorize various low costs with high-quality suppliers after analysing the relevant information. A deadline that is not possible to meet can produce an underrated selection of suppliers grounded on inadequate evidence about supplier specifications (Islam & Haque, 2012). Supplier quality control, supplier involvement in product development, and purchasing policy accentuating on quality are the prime contents of supplier partnership according to Saraph et al. (1989). Supplier quality management is measured as an indispensable issue of TQM implementation concluded on the focus of effective supplier quality management that lets the organizations create long-term supportive relationships with their suppliers concerning supplier efficiency after conducting supplier quality audits and participation in supplier quality events (Zhang et al., 2000). World-class companies like Toyota and Nissan view suppliers as the vibrant issue of their operational processes (Thiagarajan & Zairi, 1997). These companies have espoused numerous supplier management programs aiming to

practice TQM. To achieve the best economy and quality hand in hand, careful management and maintenance and long-run working relationships are an absolute must for selecting the suppliers and subcontractors.

Research Question: *To what extent does supplier partnership support TQM implementation?*

3.4.4 Employee Involvement

Total Quality management is a shared alliance of management, employees, suppliers, and dealers to meet as well as surpass customer satisfaction levels indeed (Gupta & Mittal, 2020). The success of TQM leads to commitment to quality by the entire workforce of the organization (Singh & Dubey, 2013).

Various attempts have been made by different researchers to demonstrate that TQM practices have a noteworthy relationship with HRM practices which leads to gaining competitive advantages (Ahmed & Siddiqui, 2020; Hataani & Mahrani, 2013). Human resources are considered a critical factor to the success of a business. The organizations which are high-performing, not only necessary to improve the services and products but also require the development on handling work-life balance of human resources.

Arora and Gupta (2020) stated that employee engagement increases the belongingness among the employees toward their organizations and it is the key to success. The study exposed that the integration of HRM policies with TQM practices produces a direct effect on employee engagement. Several writings are evident that employee involvement is one of the core features marks the organizational performance and consequences of business (Abdullah et al., 2009; Lewis et al., 2006; Wehnert, 2009; Zakuan et al., 2008). According to their claim, the endowment and engrossment of the employees in the course of TQM application increase their

commitment, self-sufficiency, and ingenuity which direct to the innovation. Indumathi (2016) considered TQM as is an approach to HRM that encompasses numerous magnitudes of quality management. If employees are empowered to make a decision and to solve problems as they are the closest to the problem, can make the best decision (Al- Khalifa, 2000). According to Vermeulen and Crous (2000), the best course to attain quality, predominantly in a bank, is to train the employees to come with their best. Deming (1986) claimed that employees necessarily be empowered by conferring them with the authority and sovereignty needed to do the work appropriately. In the findings of the study by Gupta and Mittal (2020), employee participation was placed at fourth and recognized as justly significant to stimulate and indorse employees to contribute to TQM promotional actions.

TQM practices have a substantial effect on the effectiveness of HRM (Madanat & Khasawneh, 2017). The research findings concluded that improvement in implementing TQM helps the management to use the people and other resources most advantageously. Management should encourage their employees to control, manage and improve processes in their area of accountability and responsibility. Hoyle (2009) opinions that “people at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization’s benefit”. (p. 11).

Evidence in Literature has stated that employee empowerment is a precondition for fruitful TQM implementation (Fotopoulos & Psomas, 2010; Harrington et al., 2012; Kumar et al., 2009). According to the study findings of Drew and Healy (2006), employee empowerment comprehends of employees assume more authority, more grips, and more autonomy to perform their duties. However, Tari (2005) emphasized the need to have a distributive, empowering structure along with a focus on trust and partnership. Oakland (2003) argued to create an environment by

management to make employees take more responsibility. Knowledgeable employees are the prime requirement for maintaining high quality and to better comprehend quality-related matters and their roles in TQM, the employees should receive training and be given responsibility (Wang & Meckl, 2020). The study also emphasized employees' necessary knowledge to make constructive contributions to TQM heading toward innovation which is very important for reaching complete reimbursements and business superiority. Positive employee work attitudes should be fostered, which will act as mediators lead to propelling quality performance (Durairatnam et al., 2020).

The literature review also expressed that employee engagement is required at all levels of the organization and employee-oriented HRM practices have significant improvement in productivity, job satisfaction, employee engagement, and financial performance (Boikanyo & Heyns, 2019). Calabrese and Corbò (2015) emphasized the stimulation of employees' involvement towards quality-related matters as a mechanism of overcoming TQM barriers. Employee involvement is necessary for successful TQM implementation (Akpovi, 2001) and important to the adaptation of employees to quality culture.

Research Question: *To what extent does employee involvement support TQM implementation?*

3.4.5 Continuous Improvement

Continuous Improvement is the fundamental principle of TQM philosophy. Conferring by Morgan and Murgatroyd (1994), continuous improvement in quality consequences is attained over refining every process involved in distributing them. Yusuf et al., (2007) identified the principle of continuous improvement as moving up the never-ending notion in everybody's mind and every work. Learning in current processes with a motive to improve in the future is the ultimate goal of continuous

improvement and innovation (Hodgetts, 1998). According to Dean and Bowen (1994), continuous improvement is the commitment toward the continuous investigation of procedural and administrative courses in search of improved approaches. It is a fundamental part of TQM aiming at customer satisfaction. While practicing TQM, to continue and advancement of products and services, quality constantly is a force in attaining the primary drive (Goetsch & Davis, 2016). Yunoh and Ali (2015) claimed that continuous improvement is not a definite package but a continuous expedition that requires the involvement of every component of the organization. The study conducted by Lahidji and Tucker (2016) showed that the organizations have experienced high growth, which has entrenched continuous improvement in their corporate policy.

In an aggressive banking business, customer satisfaction is taken into account because of the very essence of success (Siddiqi, 2011). As a result, all sorts of organizations put effort into innovation to keep customer satisfaction remains which is the outcome of continuous improvement. In literature, the association between TQM and innovation is proclaimed a very close and complex relationship (Hoang et al., 2006; Martinez-Costa & Martinez-Lorente, 2008). Innovation is the outcome of continuous improvement and the right innovation allows to offer something unique to customers. Continuous improvement is considered as the foremost instrument for attaining the uppermost level of performance by acclimatizing a continuing effort to advance the quality of the process, product, services, and people (Mathur & Vipin, 2011). Continuous improvement not only improves consequences but also improves the capability to produce future outcomes. Consequently, if continuous improvement takes place in all processes and procedures, actions and facets will lead to customer satisfaction which is the heart of TQM. It is also believed that envisioning continuous

improvement as the strategic goal of an organization, can eliminate work mistakes. Conferring by Evans and Lindsay (2011), continuous improvement states to both incremental changes and breakthrough developments taking place in forms of refining products and services; dropping errors, defects with related cost; growing up productivity and effectiveness with proper utilization of organization resources; and enlightening performance cycle time. Improvement never stops and an organization must recognize that no process, product, or service ever reaches perfection if it remains static (Al- khalifa, 2000). Talib and Rahman (2010) stated that this is a vital share of TQM application, particularly in services, as it discovers the learning features of employees about the knowledge of principles and core concept of TQM directed to attain anticipated goals. There is no alternative to continuous improvement for the implementation of TQM which leads to flexibility of the process, responsiveness, and ability to transform to accomplish customer satisfaction. For achieving continuous improvement all processes should be combined and all the employees should contribute through participation (Wang & Meckl, 2020).

Research Question: *To what extent does continuous improvement support TQM implementation?*

3.4.6 Organizational Culture

Culture has been generically defined as, “the set of norms, beliefs, and values shared by members of the organization” (Cameron & Quinn, 1999; Detert, et al., 2000; Stock et al., 2007; Yu, 2007). Organizational culture according to De Long and Fahey (2000), is a broad concept that infers diverse levels of values, rules, and practices. The members of an organization are affected by an organizational culture that influences behaviour and performance, as well as the organization’s own external setting (George et al., 1999). Many works of literature evident that very few TQM

programs are fruitful, and the others fail mostly due to the divergence of two variables, cultural and structural factors (Burdett, 1994; Ehigie & McAndrew, 2005; Grant et al., 1994). Organizational culture is positively associated with successful TQM implementation which is suggested by many researchers (Beer, 2003; Detert et al., 2000; Gozukara et al., 2018). In a recent study, it is stated that adopting quality management practices leads to changes in organizational culture, and as a consequence, the successful implementation of TQM fosters by this new culture (Gupta, 2019). An organizational culture that is based on the variability of values with transformation and adaptability facilitates the smooth implementation of TQM with success (Gozukara et al., 2018). The contending values which could aid the organization to contrivance a TQM system could be extant in each culture.

Empowerment, teamwork, HR development, employee involvement, creating new standards, open communication such as clan culture, evolving products, customer alignment, continuous improvement, the outcome of creative solutions, error findings, control procedures, systematically solving problems, application of quality tools, measurement (hierarchical culture), gauging consumer preferences, participation of customer and supplier, productivity advances, growing competitiveness, generating collaborators are pointed out by Cameron and Quinn (1999) as those competing values. This infers the need for all types of culture. The research result conducted by Gimenez-Espin et al. (2013) concluded that managers must know the instructions, morals, and customs prevailing in their organizations which are more constant with quality administration, and endorse it for successful TQM implementation. HR management as well organizational practices should support these values and beliefs. Developing a quality culture by altering perceptions and attitudes towards quality can foster the implementation of quality standards (Abdullahi et al., 2020). Al-Swidi and

Mahmood (2012), in their study, confirmed the standing of the development of supporting organizational culture on the basis of the findings and recognized organizational culture as to be confirmed first and developing the quality and entrepreneurial culture highly requires to effective implementation of TQM. The author also firmed that the consequences of TQM practices might be frustrating or even negative due to the absence of supportive organizational culture. Green (2012) showed not only the latent associations between TQM and culture but also the influence of culture on successful TQM implementation. The author also suggested making the organization 'TQM compatible' through the application of cultural models.

Van Donk and Sanders (1993) stated the link between organizational culture and TQM in this way.

"Quality control focuses on the control of the daily routines by prescribing and formalizing how they should be performed. In most cases, such a control does not refer to such a general frame as organizational culture. Although it may be that the quality policy advocated aims at offering such a frame, such an advocated the frame will in general not be so firmly rooted in different manifestations of organizational culture and will as a consequence not be readily accepted in a fortnight. Ignoring the difference between advocated quality and quality control, on the one hand, and organizational culture, on the other hand, will probably create problems: it delays implementing quality management" (p.10).

Research Question: *To what extent does organizational culture support TQM implementation?*

The above research questions were examined and constructed from a hypothetical and observed standpoint after investigating and conversing with the prevailing literature on TQM implementation.

The below table is presenting the critical success factors which are considered as independent variables for this study and issues addressed for analysis.

Table 15

Independent Variables with Outcome Issues

<i>Independent Variables</i>	<i>Addressed Issues</i>
Top Management Leadership	Role of human resource department, role on employee empowerment, strategic leadership.
Employee Involvement	Training, communication, education, motivation, recognition and reward, teamwork, awareness.
Supplier Partnership	Certification, sourcing verification, agreement, discussion on problem issues.
Customer Relationship	Customer feedback, customer survey, customer care service, priority banking, Incorporation of the customer's voice.
Continuous Improvement	Information technology, innovation, learning environment.
Organizational Culture	Analysis through the business model, customer focus, communication, positive attitude towards quality practice.

3.5 Hypotheses Development

Table 16

Variables with Hypotheses

<i>Dependent Variables</i>	<i>Independent variables</i>	<i>Research Questions</i>	<i>Hypothesis</i>	<i>Null Hypothesis</i>
TQM Implementation	Top Management Leadership	To what extent does top management leadership support TQM implementation?	<i>H1 Top management leadership has significant influence on TQM implementation.</i>	<i>H0 Top management leadership does not have significant influence on TQM implementation</i>
TQM Implementation	Customer Relationship	To what extent does customer relationships support TQM implementation?	<i>H2 Customer relationship has significant influence on TQM implementation</i>	<i>H0 Customer does not have significant influence on TQM implementation</i>
TQM Implementation	Supplier Partnership	To what extent does supplier partnership support TQM implementation?	<i>H3 Supplier partnership has significant influence on TQM implementation</i>	<i>H0 Supplier partnership does not have significant influence on TQM implementation</i>
TQM Implementation	Employee Involvement	To what extent does employee involvement support TQM implementation?	<i>H4 Employee involvement has significant influence on TQM implementation</i>	<i>H0 Employee Involvement does not have significant influence on TQM implementation</i>
TQM Implementation	Continuous Improvement	To what extent does continuous improvement support TQM implementation?	<i>H5 Continuous improvement has significant influence on TQM implementation</i>	<i>H0 Continuous improvement does not have significant influence on TQM</i>

				<i>implementation</i>
TQM Implementation	Organizational Culture	To what extent does organizational culture support TQM implementation?	<i>H6 Organizational culture has significant influence on TQM implementation</i>	<i>H0 Organizational Culture does not have significant influence on TQM implementation.</i>

3.6 Literature Review on Statistical Method for Analysis

3.6.1 SEM - Introduction

Most of the Researchers relied on the univariate and bivariate analysis to understand data and relationships at earlier periods but the application of sophisticated multivariate data analysis methods is increasingly necessary to comprehend, interpret and explain more complex relationships. SEM is a statistical model that simultaneously analyzes multiple variables and is considered a multivariate statistical analysis technique that is used to analyze structural relationships, like a sequence of multiple regression equations. Researchers are entitled to use this tool to integrate unobservable variables measured indirectly by indicator variables. Accounting for measurement error in observed variables is also facilitated (Chin, 1998).

SEM is a second-generation method that consents to the concurrent modeling of associations among numerous independent and dependent constructs (Gefen et al., 2000). An increase in using SEM is noticed in many disciplines such as sociology, psychology, education, and economics (Khine, 2013). Covariance-based structural equation modeling (CB-SEM) and partial least squares structural equation modeling (PLS-SEM) are two predominantly protuberant (Hair et al., 2017), but conceptually and statistically different, methods for assessing structural equation models (Rigdon et al., 2017). The major advantages of SEM are:

- (1) Estimation can be performed simultaneously in multiple and interrelated dependence relationships*
- (2) Unobserved concepts, or latent variables, in these relationships and account for measurement errors in the estimation process represented by this method.*
- (3) Accounting for measurement error in the estimation process (Cooper & Schindler, 2006).*

3.6.2 Literature Review on SEM-PLS

The SEM is recognized as a more inclusive and spontaneous technique to research design and data analysis than any other statistical model (Hafeez et al., 2006). Originally developed by Wold (1974, 1980, 1982), though at the earlier period PLS-SEM was used in a science discipline, now is widely applied in many social science disciplines, including Accounting (Lee et al., 2011; Nitzl, 2016); Human Resource Management (Ringle et al., 2020); International business (Richter et al., 2016); Management information systems (Hair et al., 2017; Ringle et al., 2012); Marketing (Hair et al., 2012); Tourism management (Do Valle & Assaker 2016; Latan et al., 2018); Supply chain management (Lin et al., 2005); Operations Management (Peng and Lai, 2012). According to a review article, the use of PLS-SEM in production and operations management has accelerated over time as from 2000 to 2011, 42 studies were conducted (Hair et al., 2014). Prajogo (2005) used SEM to examine the difference between manufacturing and service firms concerning the application of TQM practices, and the connection of these practices to quality performance.

3.6.3 Justification for Using PLS in this Study

According to Hair et al. (2014), PLS-SEM offers plentiful benefits to researchers while analysing with structural equation models and the authors also did the meta-analysis of PLS-SEM review studies and come up with the most protruding explanations for using PLS-SEM ascribed to;

- nonnormal data
- small sample sizes and
- formatively measured constructs.

In this study, PLS-SEM has been chosen as the statistical tool for analysing the survey data. Choosing to use PLS-SEM on data distribution, in this study, explains to take advantage of both normal and non-normal datasets. According to Reinartz et al., (2009), in the case of the limited size of the dataset, CB-SEM can produce abnormal results when data are no-normal. On the other hand, PLS-SEM shows higher robustness in these situations (Sarstedt et al., 2016). However, PLS-SEM is recommended for smaller samples, but the population's nature governs the conditions in which small sample sizes are acceptable (Rigdon, 2016). The population is large in this study and sample size has been determined using established formula. Akter et al. (2017) noted that the PLS-SEM method is also appreciated for analysing large data quantities. In point of fact, PLS-SEM propositions significant potential for analysing large datasets, not only for primary data but also for secondary data (Rigdon, 2013).

The difference between reflective and formative constructs is that formative measures embody illustrations in which the indicators cause the construct (i.e., the arrows point from the indicators to the construct), however, reflective indicators are caused by the construct (i.e., the arrows point from the construct to the indicators). As the study constructed reflective method, PLS-SEM acknowledged substantial support as the recommended method (Hair et al., 2014).

Table 17*Literature evident of TQM with PLS analysis*

<i>Authors</i>	<i>Focused Area</i>	<i>Study location</i>	<i>Objectives</i>	<i>Methodology</i>	<i>Analysis</i>	<i>Findings</i>
Al-Tit et al. (2019)	SME	Saudi Arabia	To explore CSFs of TQM implementation	Questionnaire by 500 respondents		Business support, individual factors, capital availability, and management factors.
Iqbal and Asrar-ul-Haq (2017)	Software firms	Pakistan	To investigate the mediating effect of knowledge sharing on the relationship between TQM practices and the performance of employees	Questionnaire by 340 respondents	SPSS 22.0 and SmartPLS 2.0	Knowledge sharing mediates between TQM practices and employee performance moderately and TQM practices should be applied holistically rather than individually.
Putri et al. (2017)	Case Study in the rubber industry	Malaysia	To examine the effects of TQM application on employees' productivity and predominant factors affecting employees' productivity	Interview with 191 respondents	Structural equation modeling	TQM application had positive effects on employees' productivity.
Veltmeyer and Mohamed	Public and private business	Australia	To explore the empirical evidence supporting the existence of a multi-level	in-depth review, the panel of experts,	Verification and validation of variables. Structural	Variables like a commitment by top management and customer satisfaction have a

(2017)	organizations		hierarchical TQM model viewing the structural inter-relationships among 16 TQM variables	web-based survey	modeling and MICMAC (Impact Matrix Cross-Reference Multiplication Applied to a Classification)	strong probability to influence change, where suppliers and competitors variables are dependent on, and delicate to, the development of the influent variables.
Talib et al. (2011a)	Service sector	India	To model the key practices of total quality management (TQM) for effective TQM application	Literature review	Structural self-interaction matrix (SSIM), reachability matrix, partitioning the reachability matrix, development of digraph, and formation of ISM model.	Top-management commitment is stated to be one of the major practices of TQM. Continuous improvement of the driving observes can increase customer focus.
Zakuan et al. (2010)	South East Asian (ASEAN) countries	Malaysia	To study the relationship between total quality management and organizational Performance	Literature review	Structural equation modeling (SEM) method	A conceptual model has been proposed to link TQM constructs and organizational performance measures constructs.
Fotopoulos and	Greek companies	Greece	To determine the relationships between the	Questionnaire by 370 respondents	Exploratory and confirmatory factor	Top management is the driving force of the quality

Psomos (2010)	practicing ISO 9001:2000	TQM factors and organizational performance.	analysis, Structural Equation Modelling	management system.
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Chapter Four

TQM in Bangladesh: Research Studies

Prelude

TQM – now spreads its journey from manufacturing to the service industry, from service to all sectors of business, from business to non-profit organization as well. But in the context of Bangladesh, the concept of TQM, its principles, tools, technique, hard and soft aspect, the application is not that much wider compared to the other countries of the world. Research work in this area is less significant either due to low industrial focus. But, the attention to TQM is increasing as the business firms mostly the RMG sector of our country have a global concentration and GDP contribution from this sector is also the largest. This is the reason, now the local firms are concentrating on quality to contend internationally. In this chapter, some research studies would be reviewed to light up the focus of TQM in Bangladesh.

4.1 TQM in Public Administration

Project work on TQM was conducted as a joint effort of the Bangladesh government and Japan International Cooperation Agency (JICA), which was started in February 2012 and completed in January 2017. A report was submitted on completion entitled “Project for Improving Public Services through TQM in Bangladesh”, by the Bangladesh Public Administration Training Centre (BPATC) and Japan International Cooperation Agency (JICA).

In Bangladesh, the public servant system is confronting many encounters and perhaps one of the imperative challenges is attending the growing social requirements of the citizen in an emerging economy. The government of Bangladesh is working on restructuring policies and founding administrations to progress civil services and this project is a collaboration work with Japan government to deliver technical assistance for enhancing the capacity of training implementation for its public services. The

Project stakeholders include the commitment of ministries, department/directorates, and expanding networking with research institutes for carrying effective and continuous Upazila TQM training. Contribution of Secretariat, MOPA, was also designed. The project contains 4 outputs;

- (1) expansion of TQM training mechanism,*
- (2) progress of supporting system for Kaizen implementation at Upazila level,*
- (3) capacity enhancement of research on Kaizen application, and*
- (4) context formulation to policymaking and institutionalization for TQM training and Kaizen implementation.*

A series of activities have been done to attain these outputs. They are:

- I. Developing Mechanism for Sustainable TQM Training by BPATC/PIs”
Development of course curriculum and training materials for Upazila TQM training courses, conducted seminars, training monitoring, field trip to Japan.
- II. Developing a Mechanism for Supporting WIPs at the Upazila Level
Implementation of Upazila TQM Training Cycle in collaboration with the DC Office, framework development for Kaizen on small scale, support activities by TQM cells, development of monitoring guidelines
- III. Capacity Development for Analysing/Accumulating TQM Cases”
Selection, Accumulation, Sharing of TQM Good Cases, evaluation, networking, impact analysis, collaborative research, promotion through convention, social activities, live event, digital communication.
- IV. Establish Framework for TQM Policy Making and Institutionalization”
Meeting of decision-makers, TQM network, exchange of information.

The JICA consultant team focused on the following points:

- 1) Screening the implication of Kaizen through research activities*

- 2) *Envisaging Kaizen through PR efforts*
- 3) *Offering attention to the mindset and motivation of officers*
- 4) *Moving Kaizen as the regular work of NBDs*
- 5) *Partaking the perspective of continuous human resource development*

Tachiki (2008) in his JICA project briefing paper advocated that achieving quality entails a national institutional framework to support such activities and it includes quality awards, professional association and forums, and quality management, practitioners. He argued that government policymakers should prepare a policy-oriented perspective in delivering services to citizens. A quality circle should be formed with a small group of people from the similar or related work zone, regularly meet to use problem-solving tools and methods as a method to improve work. Collaboration with practitioners and academics can develop an integrated course curriculum with the TQM module for training and education of civil servants.

In another paper (2010) which was published on the case study of the JICA project, he pointed that eliminating waste and inefficiencies in the implementation of public policy as a bottom-up TQM approach can help governments not only to increase the number of social services but also improve the quality-of-service delivery.

Another study was conducted on the application of total quality management in Bangladesh's power generating sector focusing on advancement and hitches (Rahman et al., 2012). The study reported that 190 offices of BPDB started TQM implementation in 2002, but the result is not up to the mark. The paper aimed to recognize the problems to implementation of TQM in BPDB with possible suggestions. Lack of commitment and monitoring from higher authority, the problem of CBA, defective training program, myth against TQM, lack of proper plans to

contrivance TQM, no facility for reward or punishment, defective service rules, insufficient budget, unethical behaviour had identified as problems. The suggestion was made from both the view of workers and management. The awareness campaign, provision for punishment or reward, pledge commitment and monitoring of higher authority, rapid training program, confirm suitable supervision from TQM upgrade office were the recommendations from workers' side and commitment and monitoring of higher authority, appropriate guidelines, and constant monitoring by the TQM promotion office, campaign for awareness, deliver appropriate training, establishment for reward or punishment were from the management side.

4.2 TQM in Manufacturing

Debnath et al. (2020) conducted a study on the RMG sector of Bangladesh focusing on Total Quality Management (TQM) practices and the application of modern technology. The study aimed to review the performance of TQM in this sector with a sample of 50 garment industries. The study discussed the findings of TQM practices, for example, customer centre (client survey), worker interest (cross-practical teams, employee power), administration (employee empowerment, asset assignment), supplier relationship (supplier review) with item quality, and found positive associations.

Islam and Haque (2012) have conducted a study on RMG sectors in Bangladesh to identify the pillars of TQM. An inclusive framework for TQM application was established with indispensable pillars and their linked factors. Questionnaire-based structured interviews with the managers from the top level were conducted in 31 export-oriented organizations in the RMG sector to find out the TQM pillars through direct observation and documents authentication studied by multiple case studies. The findings revealed that the formation of a quality management

environment, growth of teamwork, the exercise of quality control tools and techniques, quicker supplier relationship, and customer focus are the main pillars of TQM application in this sector.

Critical success factors for TQM implementation in the shipbuilding industry of Bangladesh were investigated by Nur et al. (2016). Face-to-face semi-structured interviews, questionnaires, and observation were followed as a research methodology. The study explored two factors such as Individual-level factor and the Group level factor. Proper vision and plan, top management commitment, dynamic leadership, education and training (empowerment), employee fulfilment (recognition & reward), better customer service, continuous improvement process, development of human resource department came out as individual factors. Strong group cohesiveness and a strong level of cooperation among the workforce were identified as group-level factors. The study also found out the TQM barriers in this sector and they are, lack of proper strategic planning and vision, the anti-industry mindset of the nation, lack of proper marketing, delay delivery, and working environment.

Another study on RMG has been reviewed which was conducted by Rashid and Taibb (2016) aimed to examine the effect of TQM practices on the sustainable competitive advantage at ready-made garments establishments in Bangladesh. Sustainable competitive advantage was measured by organizational performance, innovation, and organizational growth and the model showed that HRM is the mediator. The study concluded that TQM is an absolute must to attain a justifiable competitive advantage. The study also emphasized the importance of focusing on TQM rather than captivating the recompenses of the cheapest laborers only.

Bhuiyan et al. (2014) identified (TQM) practices in some particular manufacturing firms in Bangladesh. The study administered a survey of 150

executives of 15 designated manufacturing firms and 10 executives from each firm including CEO, HR, and Administration Head, Marketing Head, Accounts and Finance Head, Production Manager, Production Supervisor, Finance Manager, Manager of Quality Control, R & D Manager, HR executives. The study focused on investigating the connotation between TQM and organizational monetary performance, the association between employees' participation and TQM outcomes, issues influencing the effective application of TQM, and gauging employees' job satisfaction and commitment. The foremost findings were highlighted as a substantial positive linkage between TQM practices and organizational monetary performance, the CSFs identified for the study revealed no association with TQM practices in the designated companies, and employees' job satisfaction and commitment was moderately connected to TQM practices.

The apparel industry of Bangladesh can intensify competition by practicing TQM by adopting a zero-defect policy (Syduzzaman et al., 2014). The study also highlighted the use of TQM tools like Flow charts, Scatter diagrams, Histograms, Control charts, Pareto Chart, Check sheets, Cause and effect diagrams.

4.3 TQM in Banking

TQM in banking is not a well-known term in Bangladesh. The situation is similar in the research field either. The summarised format of TQM literature in banking in Bangladesh is as follows.

Table 18

TQM literature in the banking sector of Bangladesh

	Barua (2011)	Haque et al. (2014)
Topic	Prospect of Implementing Total Quality Management Approach in Commercial Banks of Bangladesh.	Total Quality Management Practices in the Islamic Banking Industry: Comparison between

		Bangladesh and Malaysian Islamic Bank
Objective	To investigate the application of Total Quality Management in the banking sector in terms of the criteria of Malcolm Baldrige National Quality Award (MBNQA).	To compare the aspects for successful TQM implementation between Malaysian and Bangladeshi Islamic banks.
Questionnaire Design	Malcolm Baldrige National Quality Award (MBNQA) standards and literature review on TQM application in various banks.	Literature review
Research Instrument	Questionnaire survey. The questionnaire items had the following six groupings of TQM performance excellence: customer focus, leadership, strategic planning, information and analysis, human resources, and process management.	Self-administered close-ended questionnaires.
Sample	170 samples from managers of the 34 commercial banks of Bangladesh. 102 questionnaires were used with a response rate of 60%.	Maybank Islamic Berhad of Malaysia (MIB) and Islami Bank Bangladesh Limited (IBBL).150 samples taken from each bank. The rate of return was (67.67%).
Analysis	The statistical data were analyzed by the Multiple Linear Regression (MLR) method using Minitab statistical package (version14) and established a relationship between the performance of bank (Equity, (ROE), with the implementation categories.	Factor analysis with principal component and Varimax rotation was used. The critical assumptions underlying the factors analyses were examined. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) and Bartlett's Test of Sphericity to indicate inter-variables correlations were used. Regression analysis was carried out for hypothesis testing.

Findings	<p>TQM implementation in the banks of Bangladesh is not practiced systematically but some criteria are visible. Top management of the banks has the capability to establish leadership for dynamic engrossment in collaborating quality goals to employees and founding strategic quality planning clusters in the organization. The relevant information regarding customer requirements and prospects, employee practices, benchmarking, and improvement efforts are essential in order to frame the strategic planning of the management. Continual evaluation practiced was described.</p>	<p>Outcomes illustrated that the knowledge of the basic principles of TQM practices of employees in Malaysia is very high in contrast to the comparative unawareness of Bangladeshi Islamic banks concerning the practices and implementation of TQM.</p>
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4.4 Barriers to TQM Implementation

Talapatra and Uddin (2019) investigated the comparative standing of various total quality management (TQM) implementation barriers in the setting of Readymade Garment (RMG) industries in Bangladesh. An ordered framework of some TQM barriers has been framed to measure the priority based on importance. The study revealed the barriers and inappropriate planning of the TQM implementation program ranked as the most important barriers. Other reported barriers are lack of financial support, lack of empowerment of employees, lack of employee training, lack of sufficient physical resources. The study claimed that the knowledge about these barriers can promote the successful implementation Of TQM in this major GDP contribution sector of Bangladesh.

Chapter Five

Barriers to TQM Implementation: Literature Evident

Prelude

TQM integrates all organizational and managerial functions intending to satisfy customers' needs that lead to higher organizational performance. Nonetheless, the barriers to TQM implementation not only make it unsuccessful but also become the reason for the loss of customer confidence. There are many recurrent latent setbacks in the orientation and application of a total quality management system. Identification and ordering based on the priority of blockades to total quality management application is the only way to avail the benefit of it. Despite having the possible benefits of TQM uttered by quality experts and practitioners, these paybacks are not very easy to accomplish in practice. Many organizations have started TQM implementation with full effort but have experienced difficulty to implement TQM effectively. Nonetheless, the literature also divulges information on failures of TQM implementation. This chapter examines and classifies the blockades to successful implementation of the TQM program in the context of the banking industry of Bangladesh.

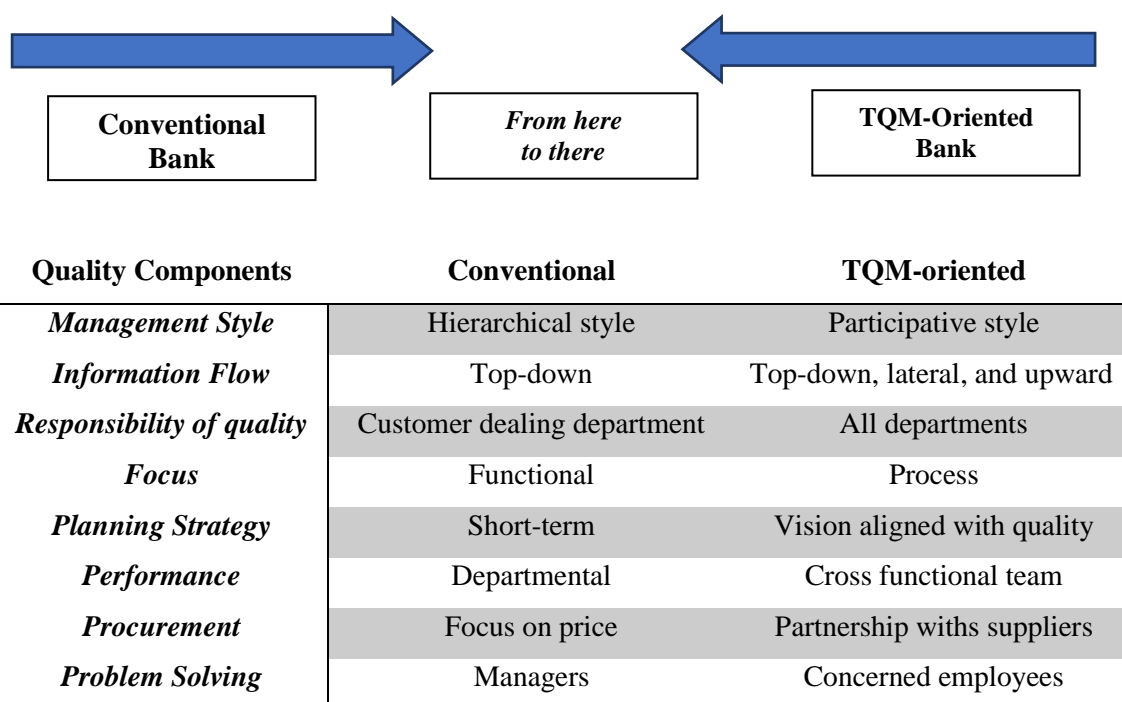
5.1 Introduction: Obstacles to TQM

The quality debate has continued unresolved for years after years as it does not have any specific parameter and is perceived differently by different individuals, people, groups, society, government and so forth focusing on the meaning of quality for different products and services. The service industries all over the world going through a large number of challenges, predominantly concerning achieving efficiency, strategic planning, developing a culture to quality management, and so forth. To confront and respond to these challenges, organizations heading toward to new direction for sustainable approaches, and in this regard, TQM is widely accepted. Kantardjieva (2015) detailed TQM as one of the most operative methods to upsurge product and service quality as well as productivity and profitability. But

unfortunately, “*quality confusion*” is the term that many organizations are overly involved in yet. A consensus has been developed over the remarkable literature that adaptation of TQM principles, tools, and techniques can upgrade the overall performance of an organization. Zairi and Youssef (1995) addressed TQM as a positive attempt adopted by an organization to upgrade, through its structure, infrastructure, attitude, behaviour, and methodology to meet the requirements to end customers, while focusing on consistency, competition improvements, and quality progress. This is unquestionable that the TQM epoch has been started but it is not just a transient fad, rather it must have a lasting impact on organizational overall performance. Another way round, whether the organization transforms to TQM organization from traditional unit that depends on the fruitful application certain of quality management practices and characteristics.

Figure 12

Expected Transition of Banks (Designed by the Author: A shadow from Besterfield, 2003-New and Old Culture, P.3)



<i>Decision making</i>	Top Management	Employees with the input from customers
<i>Error Perception</i>	Detection -working within boundaries	Prevention-learning environment
<i>Priority</i>	Services	Customer requirement

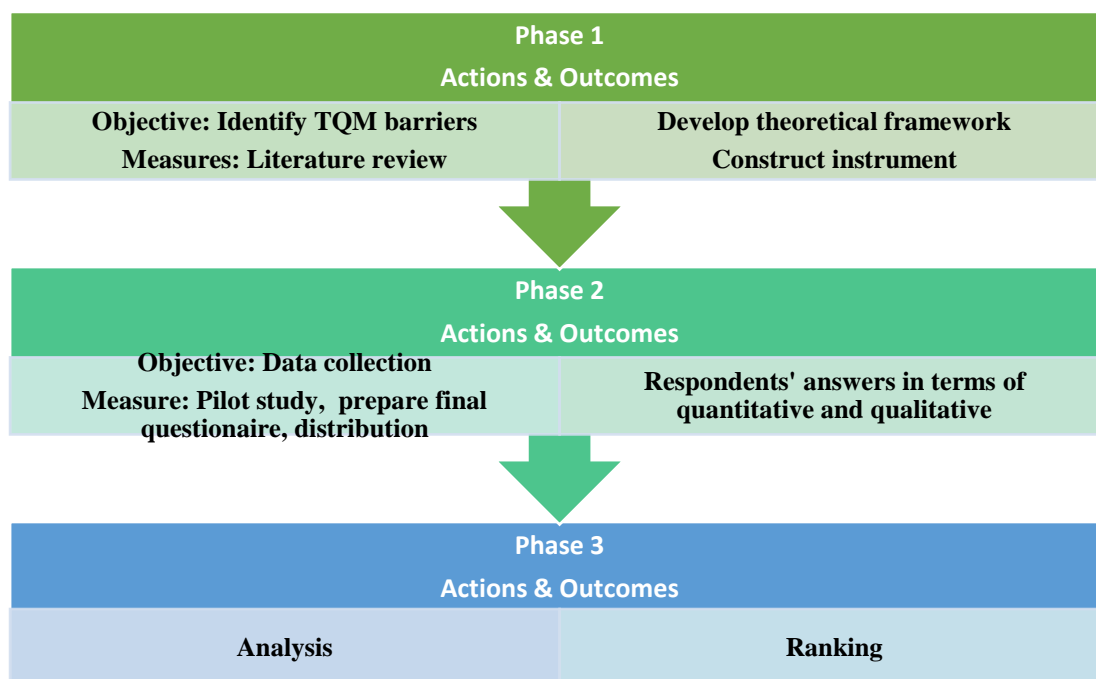
To endure in this competitive market many business firms all over the world are espousing the doctrine of total quality management (TQM) (Aamer et al., 2017; Maistry et al., 2017; McAdam et al., 2019; Saleh et al., 2018). Despite having great attention, influence, and importance of manufacturing and service organizations both, and as per the literature evidence of some government organizations either, TQM has many different obstacles and barriers to implement. Many researchers found that these pitfalls stuck the successful application of TQM and have a very negative effect on the anticipated consequences. Abandoned, overlooked, or professed a failure on TQM implementation have been reported because of these barriers. According to some recent literature (Aamer et al., 2017; Aladwan & Forrester, 2016; Aamer, 2015; Carnerud, 2018; Honarpour et al., 2017; Ketokivi and Choi 2014), the failure rate of TQM implementation is conveyed up to 41 percent. The unawareness of the vital role of organizational culture on TQM implementation is one of the commonly mentioned barriers in this literature. The lack of understanding of the degree of influence of barriers on successful TQM implementation spotted as a vital barrier in some literature either (Aamer et al., 2017; Carnerud, 2018; Cho & Linderman, 2019; Honarpour et al., 2017; Patyal and Koilakuntla, 2018; Saleh et al., 2018).

The half-hearted application of TQM is the prime reason for the TQM catastrophe in the organization. TQM requires the total cultural transformation which many firms are not willing to undertake (Ugboro & Obeng, 2000). Nwabueze (2001) reported the lack of knowledge about precisely what culture change is and how

cultural transformation can happen through the best approach, which is claimed to be the greatest dynamic element for successful TQM implementation. TQM theory and method are not to be blamed for TQM failure rather for failures in the application (Beer, 2003). One of the quality gurus, Juran (1993) proposed that many companies have abandoned TQM initiatives due to CEOs gambling to choose the best quality strategy for their company due to having proper analytical knowledge in this area and a laissez-fair attitude is common, that is, managers were not trained to manage and maintain quality inappropriate regard. The following figure illustrates the road map of the literature review on TQM barriers to implementation for this study.

Figure 13

Research Stages- Barriers to TQM Implementation



5.2 TQM Barriers Reported in Literature

Barriers of TQM implementation in the service sector is at the emerging stage as it is evident from various studies that the critical success factors (CSFs) are accountable for an effective TQM application in the service sector which have

facilitated to accomplish the anticipated outcomes such as high performance, productivity, and customer satisfaction, but still practicing and applying CSFs of TQM cannot avoid barriers (Talib et al., 2011b). If these barriers are unnoticed or proper attention is not paid, then the likelihoods of TQM letdown are optimal. Underlying the identification of TQM barriers needs to be understood to avert the failure of TQM implementation and allow room for managers, professionals, and practitioners to formulate more effective as well as operative strategies to address successful TQM employment. Otherwise, TQM initiatives will be abandoned, ignored, or declared a failure.

Mehta and Degi (2019) addressed TQM barriers in the education sector as confrontation to change, absence of administration commitment, high time investment because of employee training, exertion in applying TQM tools to higher education institutions, the inadequate experience of team leaders and staff in teamwork, the apprehensions of higher educational institutions with inadequate outcomes.

Bugdol (2020) did a systematic literature review and conclude that fear is a barrier for TQM implementation. The author also identified the grounds of fear in the TQM mechanisms and brought forward improper implementation and maintenance and incorrect allocation of resources. The author also highlighted the social processes such as the formation of the quality team which seems when only structural empowerment is applied rather than mental empowerment.

As mentioned earlier the challenges for successful TQM implementation are observed in nearly all sectors such as manufacturing, services, and the public sector either. Thereby, it is imperious for all sectors to comprehend, recognize and take appropriate strategies to overwhelm impediments before and during the implementation of TQM. Based on the past research it is found that the TQM

literature is enriched in contributions that have required to recognize hindrances or barriers which are responsible for failure of TQM implementation (Angell & Corbett, 2009; Amaral & Sousa 2009; Bhat & Rajashekhar, 2009; Rad, 2005; Salegna & Fazel, 2000; Sebastianelli & Tamimi, 2003). It can be said based on the study evidence that the number of literatures on barriers to TQM implementation is enormous. Identifying the most significant obstacles and ranking them based on the level of TQM implementation become the main focus of a handful of empirical studies and these pitfalls and obstacles are also widely recognized. Continuing with this issue, the obstacles that are hindering the adoption of TQM in organizations which are addressed as “TQM fatigue” (Walsh, 1995), identified by several authors are summarized in a table.

Table 19

TQM Barriers with References as Reported in the TQM Literature

<i>Researchers</i>	<i>Paper Type</i>	<i>Focus/ Study Area</i>	<i>Addressed barriers</i>
AlOqlah (2021)	Research paper	Saudi Universities	“Impediments from top management, students, financial resources and human resources.”
Egwanatum et al. (2021)	Research paper	Nigerian construction industry	“Shortage of the required machineries, equipment, tools and facilities, failure in communication and information exchange, negligence in maintaining of equipment, tools and machines and poor compensation management.”
AL-Hazmia and Alkhateeb (2020)	Research paper	Tourism services in Saudi Arabia	“ <i>Administrative Obstacles</i> : poor cooperation and coordination between different departments and departments of the hotel subsidiary. Organizational or regulatory Obstacles: weakness of staff participation, weakness in

			<p>cooperation and coordination between the departments</p> <p><i>Leadership Obstacles:</i> constraints related to the leadership aspects, comprehensive quality management system.</p> <p><i>Competitive Obstacles:</i> routine regulatory procedures</p> <p><i>Legislation Obstacles:</i> lack of legal training among the staff of hotel organizations, weak control of hotel and tourism activity in the province</p> <p><i>Culture and Social Obstacles:</i> the existence of a range of cultural and social constraints and weak relationships between the community and hotel organizations.</p> <p><i>Technological Obstacles:</i> No up-to-date and complete databases about guests, weak electronic infrastructure.”</p>
Talapatra and Uddin (2019)	Research paper	RMG Sector of Bangladesh	“Unfitting planning of TQM application, lack of monetary support, lack of employee training, lack of empowerment of employees, lack of adequate physical resources.”
Dilawo and Salimi (2019)	Research Paper	Construction Industry of Southern Africa	“Lack of quality support, poor TQM knowledge and TQM awareness, poor information sharing, temporary workers, overdependence on contract document, poor data collection measurement, undefined TQM roles and responsibilities, award to lowest bidder tendency, poor business environment, and corruption.”
Mehta and Degi (2019)	Research Paper	The education sector of India	“Lack of top management commitment, resistance to quality

			process improvement.”
Khalaf and Salem (2018)	Research Paper	Egyptian service companies	“Inadequate resources, inappropriate organizational structure, lack of interdepartmental communication and coordination, lack of adequate measurement and improvement method, inadequate use of cross-functional teams and insufficient infrastructure.”
Bajaj and Khurana (2017)	Research Paper	Steel industries in India	“Lack of quality-oriented culture, poor employees involvement, poor leadership, and management, absence of top management support, insufficient resources, ineffective planning, lack of training and education, poor measurement of quality improvement, no customer focus, lack of teamwork and cooperation, ineffective recognition and reward program, lack of communication and coordination between departments, resistance to change, no benchmarking, negative attitude of employees toward quality usage of advanced TQM tools.”
Muruganantham et al. (2016)	Research Paper	Automotive component manufacturing in India	“Barriers are identified under dependent, independent, autonomous, and linkage groups.”
Hasan and Fan (2016)	Conference Paper	Girls’ secondary schools in Saudi Arabia	“Absence of top management commitment, lack of training, lack of required tools and resources, lack of reward and recognition.”
Talib and Rahman (2015)	Research Paper	Indian ICT and Banking	“Resistance to change of employees, the attitude of employees towards

		Industries	quality, human resource barrier, insufficient use of empowerment and teamwork, high turnover at management level, lack of benchmarking, no continuous improvement culture, insufficient training and education, lack of top management commitment.”
Alsughayir (2014)	Research Paper	Medical services in Saudi Arabia	“Employees’ resistance to change, High employee turnover, lack of motivation, lack of understanding about the TQM concept.”
Mosadeghrad (2014)	Research Paper	Healthcare in Iran	“Unproductive or unfitting TQM models, Ineffective or inappropriate methods for the implementation of the TQM, The wrong environment for the implementation of the TQM.”
Shameer and Sing (2013)	Research Paper	Mauritian food industry	“Lack of leadership toward quality due to lack of strategic quality planning, inadequate HR development and management, and inadequate resources for TQM.”
Iyida (2012)	Master’s Thesis	A case study in bank	“Letdown to escalate TQM as a cultural uprising, failure of top management toward a long-term vision, extreme focus on the short run, lack of exemplified top management commitment, distress of senior management behind control, lack of Z theory application, lack of employees’ obligation, endeavoring to produce at capacity, dated accounting system.”
Talib et al. (2011b)	Research paper	Indian Service Industries	“Employees’ resistance to change, the attitude of employees towards quality, human resource barriers, inadequate use of empowerment, and teamwork.”

Hoonakker et al. (2010)	Research paper	Construction in USA	“Nature of the construction process, involvement of many parties, non-standardization, the bidding process.”
Shaari (2010)	Research paper	Japanese way (Malaysian companies)	“Lack of employees' understanding of TQM concept, negative attitudes of employees toward TQM implementation, lack of workers commitment, lack of proper knowledge and skill, lack unity.”
Soltani et al. (2005)	Research paper	Senior management	“Unsuccessful internal communication between management and employees, and less engagement of other levels of management inside the organizations.”
Jun et al. (2004)	Research paper	Mexico 's maquiladora industry	“Absence of top management commitment, low attention of customer emphasis, inaccurate measures or no measures to pathway progress of quality performance, impractical expectations regarding time frame and cost of TQM application, incapability to grow and sustain a quality-oriented culture.”
Sebastianelli and Tamimi (2003)	Research paper	Quality managers	“Insufficient resources, followed by scarce human resources development, and poor planning.”
Beer (2003)	Research paper	US companies	“Lack of capacity of management to oversee the gaps between the planned TQM system and the actual practice regarding the very process of inquiry, analysis, and action embedded in TQM.”
Amar and Zair (2002)	Research paper	Manufacturing organizations in Indonesia	“HR-related issues, management, attitude towards quality, culture, interdepartmental relationships, material, machine, and equipment,

			quality connected information, method, training, and finance.”
Chin and Pun (2002)	Research paper	Chinese organizations	“Conflicting factors with the philosophy of TQM include lack of cooperation and disproportionate time and financial commitments.”
Ljungstrom and Klefsjo (2002)	Research paper	Work development strategy	“Obstacles to management, continuous improvement, quality methods and tools, work progress, process alignment, and unions.”
Salegna and Fazel (2000)	Research paper	TQM and non-TQM Companies	“Inadequate time, poor communication, and lack of employee empowerment.”
Ugboro and Obeng (2000)	Research paper	TQM organizations	“Unwilling to accept the total cultural transformation that TQM entails.”
Tamimi and Sebastianelli (1998)	Research paper	Quality professionals	“Lack of performance-based reward system, inadequate resources, lack of training on group dialogue, communication techniques, quality development skills, problem identification and problem-solving methods, no practice of benchmarking, no team recognition for achievements in quality improvement, lack of employee empowerment to instrument quality improvement efforts, quality is treated as a dispersed initiative, resistant to change.”
Ngai and Cheng (1997)	Research paper	Hong-Kong industries	“Cultural and employee barrier, managerial barrier, infrastructure barrier, organizational barrier.”
Masters (1996)	Research paper	US companies	“Absence of top management commitment, incapability to change organizational culture, lack of correctness in quality planning, lack of continuous training and education,

unsuited organizational structure and inaccessible individual/departments futile measurement practices and lack of admission to data and results, paying insufficient devotion to internal and external customers, insufficient use of empowerment and teamwork.”

The reporting of TQM barriers to TQM implementation is got attention in the literature in nearly all sectors like manufacturing, services, public sector even and others. However, difficulties associated with TQM in the banking sector have not been addressed adequately. Consequently, it is the highest need for this sector to understand and induce safeguards for the blockades both before and during the application of TQM.

5.3 TQM Barriers (Grouping)

Obstacles to the application of TQM are categorized as organizational, administrative, cognitive, financial, social, cultural and others by many researchers (Alathathi, 2012; Aldaibat, 2018; Alhazmi, 2017). The study adopted the TQM barriers in a grouping format and analyzed the data to identify the most important barriers for TQM implementation in the banking sector of Bangladesh. The following table presents the summary.

Table 20

Literature Evident on TQM Barriers (Grouping)

<i>Group</i>	<i>Barriers</i>	<i>Authors</i>
Human Resource Barriers	“Lack of empowerment of employees, lack of appropriate training and education, resistance to change of culture, lack of teamwork to solve problems, lack of effective appraisal system”	Talapatra and Uddin (2019)

	“Lack of proper training and education, human resource barrier, resistance from employees to change, inadequate use of empowerment and teamwork”	Talib and Rahman (2015)
	“Employees lacking interest, lack of commitment and involvement of employees, employee resistance to change, deficient human resources management, a poor delegation at all hierarchical levels, few of employees work tasks and increasingly higher, lack of training and education of employees, lack of motivation and satisfaction of employees, lack of recognition and rewarding for success”	Mosadeghrad (2014)
	“Lack of effective and efficient employees for application of TQM, lack of non-monetary motivation mechanism for developing employees’ participation in TQM activities, low wages and salaries and cultural problems”	Rad (2005)
	“Lack of interest of employees, lack of commitment and involvement of employees, employee resistance to change, a deficient of human resources management, a poor delegation at all hierarchical levels, few employees work tasks and increasingly higher, lack of training and education, lack of training and education of employees, lack of motivation and satisfaction of employees, lack of recognition and rewarding for successes”	Catalin et al. (2014)
	“Lack of education and training programs, lack of expert persons, absence of well-organizational structure system. lack of motivation system, no teamwork or no team”	Sharif (2005)
Contextual barriers	“Lack of continuous improvement culture, lack of cross-functional teamwork, resistance to change organizational culture between the department, lack of practicing a quality management system poor communication”	Talapatra and Uddin (2019)
	“Inadequate organizational culture, difficulties in changing organizational culture, lack of guidance teams, poor and ineffective communication, poor coordination, lack of confidence of employees in the management,	Mosadeghrad (2014)

	cultural issues resolution, lack of innovation, political behavior, the diversity of the workforce barriers mentality”	
	“Inadequate organizational culture, difficulties in changing organizational culture, lack of guidance teams poor and ineffective, communication, poor coordination, lack of confidence of employees in the management, cultural issues resolution, lack of innovation, political behavior, the diversity of the workforce, barriers mentality”	Catalin et al. (2014)
Structural barriers	“Inappropriate organizational structure, lack of sufficient physical resources, lack of information system, lack of financial support, time shortage”	Talapatra and Uddin (2019)
	“Inappropriate organizational structure, lack of organizational flexibility, lack of physical resources, lack of information systems, lack of financial support, the cost of implementation, lack of time”	Mosadeghrad (2014)
	“Inappropriate organizational structure, lack of organizational flexibility, lack of physical resources, lack of information systems, lack of financial support, the cost of implementation, lack of time”	Catalin et al. (2014)
Procedural barriers/ process	“Complexity of process, lack of regular monitoring of processes improvement, lack of effective controlling of processes, lack of knowledge about quality cost, no benchmarking”	Talapatra and Uddin (2019)
	“Lack of focus, lack of an adequate process management, lack of concentration on the client, lack of involvement of suppliers, bureaucracy, lack of evaluation and self-evaluation, change agent or counsel incompetence in implementing quality, ineffective corrective action, efforts to improve quality are time-consuming”	Mosadeghrad (2014)
	“Fault in process formulation according to and appropriate for organizational mission and functions	Rad (2005)

	disintegration between processes in different departments of the organization, overlapping of activities in processes, non-clarity of customer and provider in processes, unnecessary complexity of processes and so on”	
	“Lack of focus, lack of an adequate process management, lack of concentration on the client, lack of involvement of suppliers, bureaucracy, lack of evaluation and self-evaluation, change agent or counsel incompetence in implementing quality, ineffective corrective action, efforts to improve quality are time-consuming”	Catalin et al. (2014)
Performance appraisal problems	“Lack of mechanisms for measuring organization’s activities, lack of continuous quality control, and Lack of feedback from customers because of their low information about health care services”	Rad (2005)
Managerial Barriers	“Lack of top management commitment, lack of coordination between the department, no benchmarking, poor planning, lack of communication”	Talib and Rahman (2015)
Organizational Barriers	“High turnover at management level attitude of employees towards quality, lack of continuous improvement culture”	Talib and Rahman (2015)
Strategic barriers	“Lack of top management commitment, poor leadership, inappropriate planning, high turnover at management level, lack of customer satisfaction”	Talapatra and Uddin (2019)
	“Inappropriate TQM program, barriers to the adoption of TQM, unrealistic expectations, deficient leadership, poor management, lack of top management support, poor involvement of managers, the strength of the middle management, inadequate planning, lack of consistency of objectives, lack of long-term vision, lack of a vision and a clear direction, conflicting objectives and priorities, lack of priority of improving the quality, the previous failures in terms of initiatives of change, lack Government support, political uncertainty”	Mosadeghrad (2014)

“Inflexibility of the organization toward environment and technologies change lack of legal elements for providing quality services; non-clarity of organization objectives; lack of planning and long-term policies; lack of a mechanism for strategy formulating for managing the organization; non-clarity of organization policy about TQM programs”	Rad (2005)
“Inappropriate TQM program, barriers to the adoption of TQM unrealistic expectations, deficient leadership, poor management, lack of top management support, poor involvement of managers, the strength of the middle management, inadequate planning, lack of consistency of objective, lack of long-term vision, lack of a vision and a clear direction, conflicting objectives and priorities, lack of long-term vision, lack of a vision and a clear direction, conflicting objectives and priorities, lack of priority of improving the quality, previous failures in terms of initiatives of change, lack of Government support, political uncertainty”	Catalin et al. (2014)

A matrix has been developed for illustrating the grouping of TQM barriers and instrument development for the study.

Table 21

TQM Barriers (Grouping) Matrix

	Talapatra & Uddin (2019)	Talib & Rahman (2015)	Mosadeghrad (2014)	Catalin et al. (2014)	Rad (2005)	Sharif (2005)
Human resource barriers	✓	✓	✓	✓	✓	✓
Strategic barriers	✓		✓	✓	✓	
Managerial		✓				

Barriers				
Contextual barriers	✓		✓	✓
Organizational Barriers		✓		
Performance appraisal problems				✓
Structural barriers	✓		✓	✓
Procedural barriers	✓		✓	✓

5.4 Reference Reporting of TQM Barriers with Instruments

Table 22

Sources of items

Barriers' groups	Items	Sources of items	Sources of items with this barrier's group
Strategic Barriers	TQM adoption barriers	Catalin et al. (2014); Mosadeghrad (2014); Rad (2005); Sharif (2005); Talapatra and Uddin (2019)	Catalin et al. (2014); Mosadeghrad (2014); Rad (2005); Talapatra and Uddin (2019)
	Inappropriate planning	Catalin et al. (2014); Mosadeghrad (2014); Rad (2005); Talapatra and Uddin (2019); Talib and Rahman (2015)	Catalin et al. (2014); Mosadeghrad (2014); Rad (2005); Talapatra and Uddin (2019)
	Lack of top-management commitment	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019); Talib and Rahman (2015)	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)
	Deficient leadership	Catalin et al. (2014); Mosadeghrad (2014); Rad (2005)	Catalin et al. (2014); Mosadeghrad (2014)
	Unrealistic expectations	Catalin et al. (2014); Mosadeghrad (2014)	Catalin et al. (2014); Mosadeghrad (2014)
Structural Barriers	Lack of financial support, cost of implementation	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)
	Lack of physical resources	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)
	Lack of information systems	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)
	Inappropriate	Catalin et al. (2014); Mosadeghrad (2014);	Catalin et al. (2014); Mosadeghrad (2014);

	organizational structure	Talapatra and Uddin (2019)	Talapatra and Uddin (2019)
Human Resource Barriers	Lack of TQM knowledge	Catalin et al. (2014); Sharif (2005); Talapatra and Uddin (2019); Talib and Rahman (2015)	Catalin et al. (2014); Sharif (2005); Talapatra and Uddin (2019); Talib and Rahman (2015)
	Lack of employee interest	Catalin et al. (2014); Mosadeghrad (2014)	Catalin et al. (2014); Mosadeghrad (2014)
	Lack of training needs assessment	Sharif (2005); Talapatra and Uddin (2019)	Sharif (2005); Talapatra and Uddin (2019)
	Lack of communication of training feedback	Sharif (2005); Talapatra and Uddin (2019)	Sharif (2005); Talapatra and Uddin (2019)
	Lack of recognition and reward for success	Mosadeghrad (2014); Rad (2005)	Mosadeghrad (2014); Rad (2005)
	Employee's resistance to change culture	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019); Talib and Rahman (2015)	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019); Talib and Rahman (2015)
Procedural Barriers	Lack of evaluation and self-assessment	Catalin et al. (2014); Mosadeghrad (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Mosadeghrad (2014)
	Complexity of process	Rad (2005); Talapatra and Uddin (2019)	Rad (2005); Talapatra and Uddin (2019)
	Lack of customer focus	Catalin et al. (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Talapatra and Uddin (2019)
	Lack of supplier involvement	Catalin et al. (2014); Talapatra and Uddin (2019)	Catalin et al. (2014); Talapatra and Uddin (2019)
Contextual Barriers	Lack of continuous improvement culture	Talapatra and Uddin (2019)	Talapatra and Uddin (2019)

Lack of cross-functional teamwork	Sharif (2005); Talapatra and Uddin (2019)	Talapatra and Uddin (2019)
Poor and ineffective communication	Catalin et al. (2014); Mosadeghrad (2014)	Catalin et al. (2014); Mosadeghrad (2014)
Lack of team orientation and innovation	Catalin et al. (2014); Mosadeghrad (2014); Sharif (2005)	Catalin et al. (2014); Mosadeghrad (2014)

5.5 Ending Notes

Today's high-tech organizations are seeking the high-end offer to customers as perceiving a good way to gain a competitive advantage to cope up with the global economy which is experiencing sophistication on customers' preferences and expectations. TQM is a managerial philosophy which is aiming at customer satisfaction not only through quality dimensions but by viewing the organization as large. Since the launching of TQM in Japan, developed countries like the United Kingdom, Australia, and the United States have adopted the concept of TQM (Khanna, 2010). Emerging economies are espousing this relatively new concept to achieve a higher market share (Sinha et al., 2016). Some scholars identified that developed countries lack a theoretical basis of TQM, whereas the understanding of TQM in developing economics is nearly close to zero (Thiagaragan et al., 2001). Many companies in developing countries do not know how to implement TQM (Madu, 1997). Employee involvement, communication, quality and less rework, customer satisfaction, high productivity, reduced costs of poor quality and competitive advantage are the outcome of TQM implementation which can be gained if barriers are removed (Antony et al., 2002). Relatively, TQM has been significantly sought after in Asian developing countries such as China, India, and Malaysia (Khanna, 2010). TQM in the context of Bangladesh is a far cry to understand. There are many declining cases are witnessed in the banking sector of Bangladesh, owing to the ever-increasing attrition rate of poor performance resulting in economic difficulties and imbalanced economic structure.

Notwithstanding the evolution of TOM as a generic set of principles and guidelines for continuous improvement is established, the practical examples are still drawn from the manufacturing area as TQM is considered an applied tool for products

only and the service area cannot gain that much of benefit from it. The service industry needs to address some specific issues which may hinder TQM implementation in several important ways as service differs from production. The present study considered Bangladesh as an emerging economy and directed an exploratory study on TQM barriers in the banking sector. A good number of barriers have been chosen to TQM implementation in the context of Bangladesh from these diverse opinions, harder evidence from studies and surveys on all sorts of organizations after in-depth go through of literature review.

Chapter Six

Research Methodology

Prelude

When embarking on research, a series of logical order has been followed exactly from problem identification and formulation, plan study design and implementation, techniques for analysis and interpretation. The preceding chapters, introduction, and literature review provided the foundation for this chapter to proceed. The methodology that was carried throughout this research study to achieve the study objectives has been designed and explained in this chapter. This section of the study embodies the research design, philosophy, population under deliberation, sampling design, operationalize each of the variables used in the study, data collection methods, the process of its fieldwork, ethical issues, research procedures, statistical analysis, and the methodology that the researcher amplified in the study. It also reinforces the details for the choice made for the research method, the approach adopted, methods of data analysis, and instruments that were chosen. The quality of the result, as well as the overall study, is highly influenced by these research methodology decisions required for the direction and implementation of the study.

6.1 Preliminary Phase

6.1.1 Literature Review

An extensive literature search resulted in widespread recognition of TQM benefits. TQM in the service sector more specifically in the banking sector is merely recognized. For this study purpose, a methodical literature review has been directed to cite and extract the pertinent as well as contemporary work on TQM. For the literature review, secondary sources were reviewed initially. Different related books, journals, magazines, academic and commercial abstracts, bibliographic databases, newspapers, and Internet search engines were consulted. Secondary data was sourced from both public and private resourced points such as libraries, e-libraries, online journals, research institutions, and printed resources.

6.1.2 Search Strategy

According to Bell (2005), defining the parameters of research should be specified. In this study the research parameter has been designed as:

Language of publication (English); Subject area (TQM); Business sector (Banking); Geographical area (Bangladesh); Publication period (2000 onward); Literature type (refereed journals and books in the local and international platform).

An inclusive search was conducted employing online databases to get the empirical studies for this study gritty in the literature for understanding “TQM-related factors, and critical success factors in applying successful TQM” published and available in the English language under referred journals. The foremost academic databases such as Scopus, EBSCO, Emerald, Elsevier Science, Taylor & Francis were travelled as the search strategy. To develop the initial framework, a literature review was conducted and considered seventy national and international research papers on TQM published from the year 2000 onwards. Each of the articles and conceptual papers was skimmed and read to ensure the contents of TQM are pertinent to this study. The articles and papers covered the foremost factors and issues of TQM, critical success factors of TQM, the connection between TQM and performance, the affiliation of TQM with other management issues, linkage of TQM with organizational outcomes such as business performance, customer satisfaction, organizational performance, cultural change and service performance, TQM integration with other disciplines such as production and operations management, HRM and business excellence. These papers founded the platform for exploring the nature of the problem, identifying the contributory issues that have an impact on the successful application of TQM in the banking sector of Bangladesh, and finalizing the critical success factors and hindrances linked to the implementation of TQM. Most of

the papers were collected through an internet search and the rest of the articles were collected from physical sources. All the articles studied and reviewed, were from the journals which were available and published in the English language only. The following table has a glimpse of the search strategy.

Table 23

Keywords Shared within Search (adopted from Saunders et al. 2009)

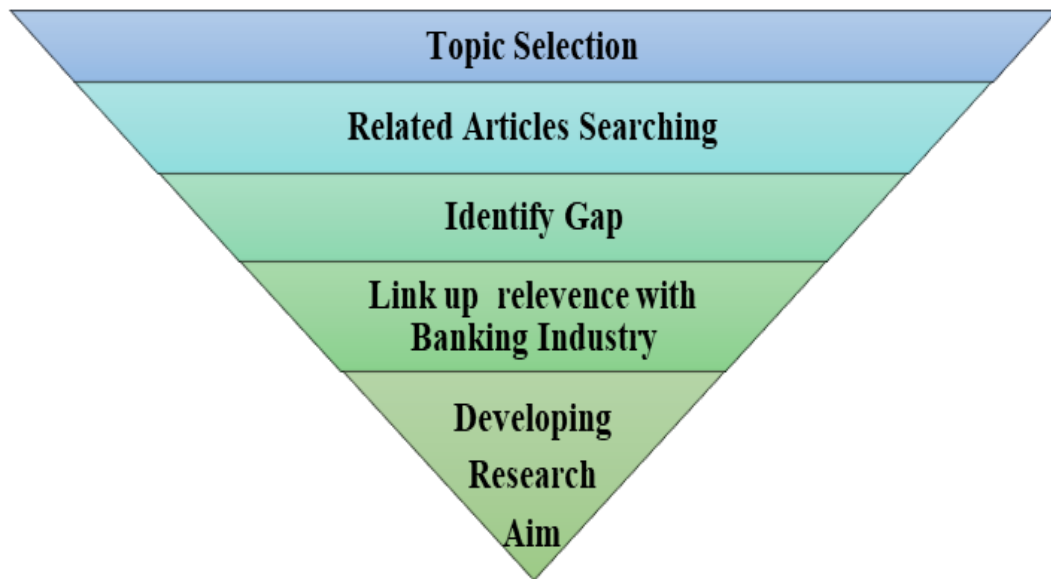
<i>Primary Keywords</i>	<i>Secondary Keywords</i>	<i>Tertiary Keywords</i>	<i>Study Type-wise Details</i>
Total Quality Management	TQM in the General sector	TQM Implementation	Empirical Study
TQM	TQM in the service sector	TQM Application	Literature Review
	TQM in service firms	TQM Tools	Journal Articles
	TQM in the banking sector	TQM Obstacles	Conceptual Paper
	TQM in the banking sector of Bangladesh	TQM Barriers	Case Study
		TQM Failure	

The search for TQM knowledge also included other sources such as annual reports, book chapters, and technical reports accessible online and found through Google searches and Google Scholar.

Literature searching is required for developing research objectives and hypotheses. It is needed to identify the gap both from the study area and study sector to rationale the significance of the study and exhibit the contribution. The following figure presents the path to develop the research aim.

Figure 14

Mapping for Developing Study Aim

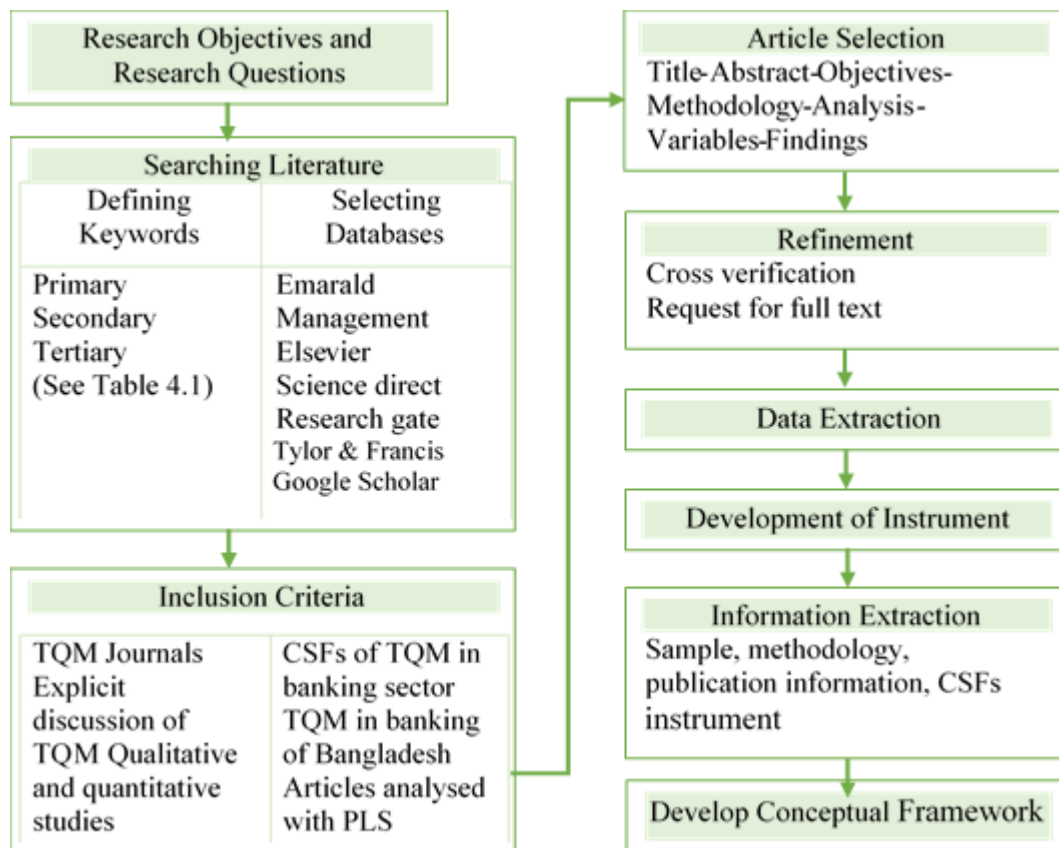


6.1.3 Screening

To screen the search results, the inclusion and exclusion criteria were followed to only the studies that described and examined TQM implementation, CSFs of TQM, TQM in banking, and barriers to TQM implementation were screened out. The summarised table has been constructed for a better presentation of the literature evident in systematic view and explicitly designated the authors' info, aims, study type, methods used, context, and findings.

Figure 15

Review Process of literature for the study: adopting from Hietschold et al. (2014)



6.1.4 Conducting FGD

A Focus group is frequently used to explore specific issues. Focus Group Discussion (FGD) is a qualitative research method and data technique conducted by a selected group of people who deliver in-depth discussion on a particular topic or topic facilitated by a professional or external moderator (Van Eeuwijk et al., 2017). It is considered as a good way to accumulate people from parallel backgrounds and experiences to deliberate on a particular topic of interest to attain the pre-planned objectives. Individuals chosen for FGD must have a specific profile and be homogenous in some dimensions. Focus groups offer a new dimension of interaction and can be used as grist for additional information.

An FGD was conducted for this research purpose not only to get an idea of this industry but also to get some information regarding TQM practices in this sector. It is not uncommon that participants have a different opinion but some common characteristics were identified to make a clear picture. The group was guided by a moderator (researcher herself) who introduced the topic for discussion and promoted the group to contribute in a sparkling and natural dialogue amongst them. The thesis supervisor was also present as the observer. The researcher attended some functions in the focus group, such as moderating, listening, observing, and eventually analysing. The analysis was conducted on understanding based on the discussion. However, the researcher administered the FGD on Saturday as the participants are mid-level bankers and hardly get spare time on working days. The researcher first got an appointment with the target participants to confirm a high turnout rate and eight (8) bankers participated. A very large quantity of information was collected from a 90-minute discussion which is recorded for future reference. The session was conducted for attaining the following purposes.

- To get information about the industry
- To get input for the qualitative part of the research
- To develop ideas for questionnaire development
- To develop ideas for constructing parameters of measures
- To understand the scope of the issues
- To understand the contours of findings

Here is the detailed information regarding the FGD conducted.

Table 24*FGD Summary*

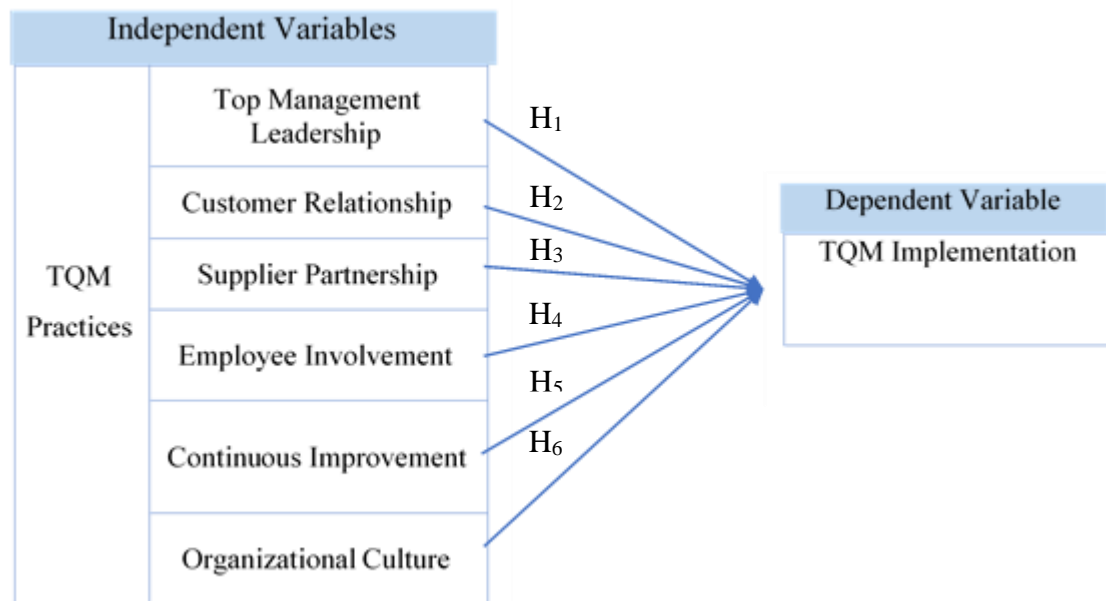
Date	3 rd March 2018	
Time	9 am to 12 pm	
Location	Seminar, Faculty of Business Studies, University of Dhaka.	
Purpose	<ul style="list-style-type: none"> ➤ To find out the perception of banks regarding quality and facilities for TQM ➤ To find out some technical as well as the operational definition ➤ To identify measuring items for the study. 	
Discussant Profile &	Recognized Banks	Bangladesh Bank, NCC Bank Ltd., Mercantile Bank, UCBL, NCC Bank, Prime Bank Ltd., IFIC Bank, One Bank, BRAC Bank.
Features of the Session	Designation	Deputy Director, Principal Officer, PO, AVP, FAVP, Executive Officer, Executive Officer, SPO.
	Department	EEK Unit, HRD, OBU, Gulshan, BOD, Retail banking & Credit.
	Mode of Conduct	Semi-structured and participants are allowed to discuss freely.
	Scope of Insights	A large spectrum of opinions, concepts, experiences, and deep individual insights.
	Level of Focus	Concentration on the given topic at high level.
	Degree of Participation	Precisely and effectively moderated and all participants bestowed equally to the discussion. The session was keen on the knowledge, attitudes, opinions, and experiences of the participants.
Ethical Aspects	Not only prior appointment was taken but also an authorization letter was sent addressing the HR Head for submitting to the Head office. The moderator did not misinform, deceive or misdirect participants. Before arranging the data, the informed consent signed by the FGD participants was obtained to ensure them all the information would be used only for research purposes.	
FDG Findings	<p>Customers are the prime focus</p> <p>Operational definition of top, mid, and entry-level bankers</p> <p>Lack of communication with top management to lower level</p>	

Identify the suppliers in banks
 Less focus on employee participation
 Lack of training needs assessment and feedback
 TQM concept is not introduced
 Statistical tools are not used for quality improvement.

In this stage, research questions were constructed and variables were acknowledged based on the literature review. The below figure illustrates the conceptual framework of the study, applying the dependence technique to identify dependent and independent variables.

Figure 16

Conceptual Framework for the Study



Constructed on the literature review and conceptual framework, the following hypotheses have been drawn:

H1 Top management leadership is significantly influenced by TQM implementation.

H2 Customer relationship is significantly influenced by TQM implementation.

H3 Supplier partnership is significantly influenced by TQM implementation

H4 Employee involvement is significantly influenced by TQM implementation

H5 Continuous improvement is significantly influenced by TQM implementation

H6 Organizational culture is significantly influenced by TQM implementation

6.1.5 Instrumentalization

The instrument that is operated to perform in this study is a questionnaire of a five-point Likert Scale which encompasses 34 questions in four major sections. Detailed has been discussed in the next phase.

6.1.6 Operationalization of Research Measurement Variables

The variables were operationalized as shown in the following table.

Table 25

Operationalization of Research Variables

<i>Top Management Leadership</i> Role of Human resource department, role on employee empowerment, strategic leadership.	<i>Employee Involvement</i> Training, communication, education, motivation, recognition and reward, teamwork, awareness.
<i>Customer Relationship</i> Customer feedback, customer survey, customer care service, priority banking, Incorporation of the customer voice.	<i>Supplier Partnership</i> Certification, sourcing verification, agreement, discussion on problem issues.
<i>Continuous Improvement</i> Information technology, innovation, learning environment.	<i>Organizational Culture</i> Analysis through the business model, customer focus, communication, positive attitude towards quality practice

6.1.7 Conducting 1st Seminar

A seminar was conducted to present the literature review and methodology of the main study. The methodology was reviewed based on the feedback. Academicians and relevant professionals have attended. Feedback and actions taken after the first seminar, have been summarized in the following table.

Table 26*Reporting to 1st Seminar Feedback*

<i>Findings of the 1st Seminar</i>		
<i>Date & Time: 7th April, 2019 at 10 am</i>		
<i>Area</i>	<i>Feedback</i>	<i>Actions taken</i>
Background	Narrow down from broad to a specific area	The banking sector got focused after TQM in the general sector, manufacturing service, general banks, and private banks.
	Research gap	It is illustrated in the introduction chapter (p.g. no. 20)
	Research questions	It is illustrated in the introduction chapter (p.g. no. 22)
	Population size under separate heading	The population is presented sector-wise in the methodology chapter (p.g. no. 185)
Literature Review	Inclusion of most recent literature	The literature reviewed till 2021
Methodology	Specialized banks should be included (e.g., BRAC Bank)	BRAC Bank has been included in the research unit.
	Ethical consideration needs to be addressed.	Ethical consideration is included with reference in the methodology (p.g. no. 185) and data analysis chapter (p.g. no. 196)
Analysis & Interpretation	Qualitative analysis needs to be done.	Qualitative analysis was done as input taken for questionnaire development from FGD findings. (p.g. no. 162)

6.1.8 Conducting 2nd Seminar

2nd seminar was conducted to present the interpretation and findings of the main study. A brief overview of the introduction, methodology, and literature review was presented and after that, the researcher illustrated the analysis result along with the discussion on hypothesis findings, implication, and future direction. Academicians

and relevant professionals have attended. Feedback and actions taken after the second seminar, have been summarized in the following table.

Table 27

Reporting to 2nd Seminar Feedback

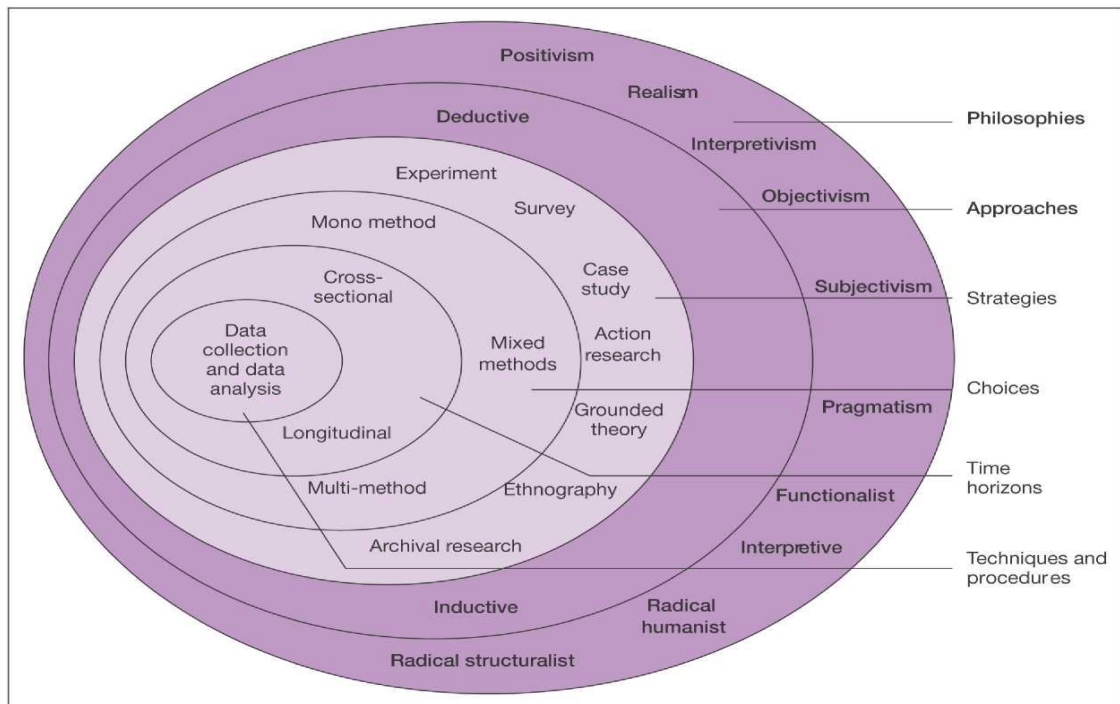
<i>Findings of the 2nd Seminar</i>		
<i>Date & Time: 2nd September, 2021 at 11 am</i>		
<i>Area</i>	<i>Feedback</i>	<i>Actions taken</i>
Research Philosophy	Needs to explain more elaborately.	Positivism has been explained elaborately in chapter six (p.g. no. 168)
Literature Review	Inclusion of most recent literature Contribution of Quality Gurus	The literature reviewed till 2021 (See references) Chapter two acknowledged the contribution of quality gurus (p.g. no. 49-54)
Analysis & Interpretation	Validity needs to be explained New model building on the interrelationship of CR & CI	Validity explained under Measurement Model Assessment (p.g. no. 209- 215) Discussed in scope for further study (p.g. no. 242)

6.2 Research Design Phase

To gain the research, aim, and objectives, the research design is developed. Research design act as the guidelines for examining the process of collecting, analysing and interpreting observation (Chava & Cathumias, 2005).

Figure 17

Step-wise Research Design Phase (Saunders et al., 2009)



The research ‘onion’

Source: © Mark Saunders, Philip Lewis, and Adrian Thornhill (2009)

Table 28

Summary Table for Research Design Selection

<i>Research Orientation</i>	<i>Decision Taken</i>	<i>Justification</i>
Philosophy	Positivism	The positivism paradigm undertook to accept or reject hypotheses.
Approach	Deductive	Developing hypotheses, collecting data, investigating data, interpreting the result, and drawing a conclusion.
Strategy		The survey strategy was used for quantitative analysis
Research Method	Mixed	A mixed approach has been used in this study. Qualitative approach for insightful interpretation and quantitative for the magnitude of impact on the findings.
Sampling	Non-probability Sampling	Convenient and snowball sampling
Data	Primary &	Primary data for fact-finding and secondary data for

Collection	secondary	instrument validation.
Data Analysis	Statistical Software	SmartPLS and SPSS.

6.2.1 Research Philosophy

The development of knowledge-based on beliefs and assumptions in a specific field to embark research is referred to as research philosophy (Saunders et al. 2009).

The research questions, as well as the research methods which is used to conduct research and the ways to interpret the study findings, are certainly shaped by the research philosophy adopted (Crotty, 1998). As a consequence of that, a well-thought-out and consistent set of assumptions contribute to developing a sound as well firm research philosophy, which leads to reinforcing the methodological choice, research strategy, time horizon, and data collection methods and analysis measures.

Noted from Johnson and Clark (2006), in regard to choosing research strategy, business and management researchers requires to be conscious of the philosophical obligations which have a substantial impact not only on study work but understanding what is investigated. According to Saunders et al. (2009), positivism, critical realism, interpretivism, postmodernism, and pragmatism are the five major philosophies in business and management. The authors stated that the positivist view of research philosophy relates to a philosophical stance with observable social reality. The research philosophy of this study explained more to positivism and therefore it has been noted as the research philosophy in this study. Development of research design and strategy based on the research problem, construction of research questions that are incorporated with the emphasis on practical outcomes followed a highly structured methodology (Gill & Johnson, 2002). Hypotheses developed, tested, and confirmed whether supported or rejected through statistical analysis and mapped for further development for future research have been performed in this study which is also

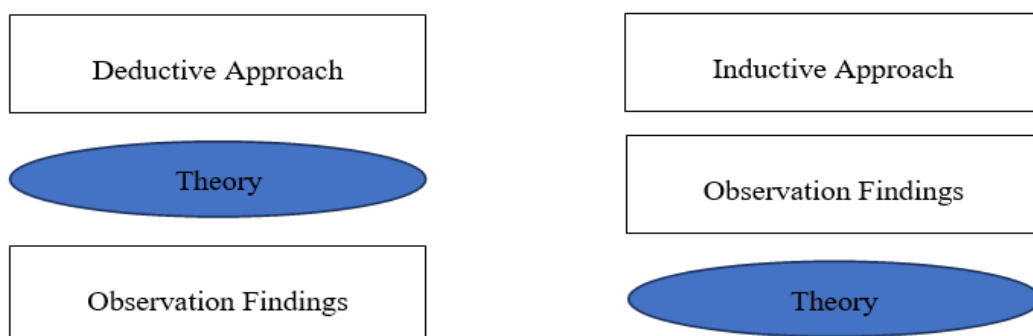
identified as the characteristics for choosing positivism as research philosophy (Saunders et al., 2009). Large sample size and quantitative measurement mainly but qualitative can be used as well also justified the philosophy that was chosen.

6.2.2 Research Approaches

‘Research approach is a systematic and arranged method used towards the gathering and analysis of data to obtain information from those data’ (Jankowicz, 2000). According to Saunders et al. (2009), a research approach might be deductive when the topic has a wealth of literature from which the theoretical framework and hypothesis lend. Under this approach, the causal relationships between independent and dependent variables explain. It is more scientific, testing data using quantitative method answering ‘What?’ and compliments the positivist philosophy (Creswell, 2003; Jon et al., 2001; Saunders et al., 2000). Therefore, the study rationalized the deductive approach as a research approach since extensive literature was reviewed for developing the framework and hypothesis, quantitative data collected and tested using statistical analysis and calculation to ensure validity and clarity, and finally generalized conclusions on the basis of the findings.

Figure 18

Deductive and Inductive Approaches (Bryman, 2012, p.26)



6.2.1 Research Strategies

The nature of the study is explanatory as it established the causal relationships between independent and dependent variables (Saunders et al., 2009). The emphasis in this study was studying the situation regarding TQM in order to explain the relationships between independent and dependent variables which were designed through extensive literature review. On the other hand, Descriptive research is the type of research that comprises surveys and fact-finding investigations of various types (Saunders et al., 2009). The major driver of this study is to describe the state of TQM implementation in private commercial banks of Bangladesh. The methods of research utilized in this research are survey methods. From this viewpoint, the study can explain the descriptive nature. Therefore, the research strategies can be illustrated as the description-explanatory studies (Saunders et al., 2009).

A survey method has been chosen for the study. According to Saunders et al. (2009), the survey strategy is generally linked with the deductive approach. It is considered as a widespread and very common strategy in business and management research recurrently used to answer who, what, where, how much, and how many questions. Following are the justifications for selecting a survey method for the study according to Saunders et al. (2009).

- It allows the assortment of a large volume of data from an ample population in a highly cost-effective way. The sample size of this study is 400.
- The questionnaire is the survey tool for this study which has acceptability to people in general and is easy to explain and to understand.

- Through survey strategy, quantitative data can be composed which can be analysed quantitatively using descriptive and inferential statistics.
- The data collected by means of a survey strategy can explain possible reasons for particular relationships between variables. The study has developed a framework consisting of independent and dependent variables.
- The survey strategy provided more control over the research process in order to generate findings that represent the whole picture regarding TQM implementation in the banking industry of Bangladesh.

6.2.2 Research Choice

When together quantitative and qualitative data collection techniques and analysis measures are designed and performed in a research design, it is addressed as a Mixed Methods approach (Saunders et al., 2009). This type of research method has been designed and used for this study as both quantitative and qualitative methods have been framed to construct and the questionnaire to do a survey and analysis. The data collection tools consist of both closed questions that produce quantitative data and open-ended questions that produce qualitative data. Input has been taken from the FGD in order to find out the most important as well as relevant CSFs in the context of the banking sector of Bangladesh. Questionnaire and in-depth interviews were used as data tools. Collecting the personnel information such as age, gender, designation, working experiences, etc. were used to accord to the objective of this research. The study is focused on the bankers who are working in Dhaka city only.

6.2.3 Time Horizons

According to Saunders et al. (2009), while planning any research a vital question needs to be asked on whether the researcher wants to conduct the research at

a particular time and make a snapshot of that or a diary perspective with a series of snapshots over a given time period in order to represent events, and then what would be the choice that depends on the research question. The time horizon is addressed by the authors as cross-sectional and the diary perspective as longitudinal. This study rationale cross-sectional as time horizon techniques due to not exploring any changes in the respective sector. The study only investigated the state of TQM implementation in the banking sector of Bangladesh. The phenomenon is specific at a particular time period.

6.2.4 Research Techniques & Procedures

According to Oppenheim (1992), there are two main types of data to be composed and produced and they are primary data and secondary data (Churchill & Iacobucci, 2009). The data which is collected straight from the researcher from sources is primary data, however, the data which is beforehand composed by other researchers is secondary data. Primary data sources include questionnaires, observations, surveys, experimentations, focus groups, interviews, etc., whereas secondary data sources include articles, journals, books, web pages, blogs, etc.

Primary data is frequently most appreciated in research on human being behaviour aiming to govern the effect on the result. any other way secondary data is generally historical and numerical related to significant pointers using for analysis or comparison. The study used both primary data for getting a real picture in the banking sector of Bangladesh and secondary data for evaluating the current landscape of available information before moving on to primary research methods.

The next concerning issue is the method used to accumulate and produce the primary or secondary data. There are three approaches: qualitative, quantitative, and mixed-method. The quantitative approach is characteristically availed to examine

numerical data and the qualitative approach is availed when the data is thru up of words (Krathwohl, 1993; Robson, 2011). The following table provides glams of these three approaches.

Table 29

Approaches to Research Methods (Research Choice)

<i>Approaches</i>	<i>Description</i>	<i>Arguments</i>
Quantitative Approach	“The quantitative approach is deductive, reasoning from general to specific, theory-based, context-free, and used to determine relationships, effects, and causes. It is a method that seeks to measure ‘how much’ or ‘how often’.” (Wiersma & Jurs, 2009).’	“Creswell (2003) argues that it is most relevant when the problem need is to identify factors that influence an outcome as well as to understand the best predictors of outcomes, or the utility of an intervention.”
Qualitative Approach	“It provides explanations that extend our understanding and endorse prospects for producing acquainted decisions concerning social action rather than forecasting dependent variables (Royce, 1995).”	“It is often also preferred when there is little previous research information.”
Mixed-Method	“Many authors agree that this approach enhances understanding of a topic (Tashakkori & Teddlie, 2010) when more than one technique is availed to collect data in a study or instrument, or more than one source of data is availed to investigate the similar subject, known as ‘triangulation’.”	“Amaratunga et al. (2002) propose that combining research methods (quantitative and qualitative) is useful and allows greater insight to be obtained and assists the researcher in determining relationships and concluding.”

In contrast to the quantitative approach, the qualitative approach is inductive, details from explicit to generally do not pressure a hypothetical base, is

specific to the context, and aims to increase a considerate knowledge of social phenomena.

The research aims and objectives to be achieved determines which method would be appropriate and used. A mixed approach has been used in this study. A qualitative approach has been used for giving insightful interpretations and drawing conclusions. The results of quantitative research specified the explanation of the hypothesis and responded to the research questions and the magnitude of impact on the findings.

6.2.5 Research Instrument

The questionnaire is the research instrument in this study used for collecting data. This questionnaire is proposed only to top, mid, and front level bankers who work at private commercial banks of Bangladesh. The following table presenting the validity and reliably measure taken for the research instrument.

Table 30

Measuring Validity & Reliability of Research Instrument

Validity of Instrument	<p>The questionnaire was finalized after considering the following steps.</p> <p><i>Feedback from 1st seminar</i></p> <p><i>Consulting with academicians (Variables)</i></p> <p><i>Checking with research expert (statistical analysis)</i></p> <p><i>Consulting with field expert (bank practice)</i></p> <p><i>Meeting with supervisor (finalize)</i></p> <p><i>Opinion from language tester (easy understanding)</i></p>
Reliability of the Instrument	<p>The questionnaires were pilot tested in order to test the reliability.</p>

6.2.6 Questionnaire Development

6.2.6.1 Deciding on the information required

At the very beginning, it is decided to find out the information desired to get from the respondent compatible with the study's objectives. The questionnaire is designed on the study topic and additional support gained from secondary data, previous exploratory research. In concern to secondary data, the emphasis is given on the work which has been completed on the similar or analogous problems in the earlier period, the features that have not yet been observed. Apart from that, initial informal interviews with target respondents have been conducted in a few numbers to get a glimpse of certainty so that the information which is required can be clarified.

6.2.6.2 Define the target respondents

At the outset, the population has been defined from where the sample data is to be collected. A sampling frame has drawn and in designing the questionnaire required demographic information was also fixed up.

6.2.6.3 Choose the method(s) of reaching target respondents

The technique was also developed during the questionnaire design process for approaching the intended respondents. Personal interviews, focus group discussions, emailed questionnaires, telephone interviews are used.

6.2.6.4 Questionnaire Instrumentalization

It is prearranged to design a standardized questionnaire comprised of a 5-point Likert Scale, which enabled to the gathering of data constructed on the level of agreement or disagreement of the respondents in statements designed in the questionnaire. A face-to-face interview has been taken. Online responses have been taken either through email. The questionnaire has 5 sections to produce the field experience of respondents regarding practices and key factors in implementing TQM.

The questionnaire is comprised of both structured (close-ended) and unstructured (open-ended) questions along with two types of questions:

- a. Open-ended questions, which entail the respondent to be more thoughtful and
- b. Scaled-response questions, a rating scale (five-point Likert Scale;1932) is used to measure the response choices.

Fixing up the type and number of scale points can be odd or even numbers as there are no specific rules regarding these. In previous literature, it is seen that the normal range is between five to ten. According to Parasuraman (1986), examining the existing literature on the related studies can guide to fix up the scale. A 5-point scale is fixed up for this study and the explanation are following.

- A good number of previous literatures related to TQM used a five-point scale
- Respondents are convenient to respond using five-point scales

The questionnaire contained five distinct sections where each addressing one or more magnitudes of interest. The section which contained demographic information has been prepared by the researcher. The other parts of the questionnaires were designed through an exhaustive literature review and findings from FGD conducted. Section one contained general information regarding quality initiatives implemented by their respective banks and before those respondents provided demographic information. Section two captured information about TQM implementation. Section three focused on evaluating critical success factors of TQM concentrated from the literature and these factors of TQM are the independent variables of this study and the following table summarized the prime concerning issues (top management leadership, employee involvement, customer relationship, supplier partnership, continuous improvement, and organizational culture). Respondents' perceptions of TQM barriers have been framed in section four. These are the input for quantitative analysis.

Section five has covered open responses and respondents are free to express their opinions, thoughts, and suggestions regarding TQM implementation in their respective banks. This part is considered as input for the qualitative measure in order to provide a structured framework of recommendations. When responding to the questionnaire, the respondents were enquired to specify their answers to the questions on a five-point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree).

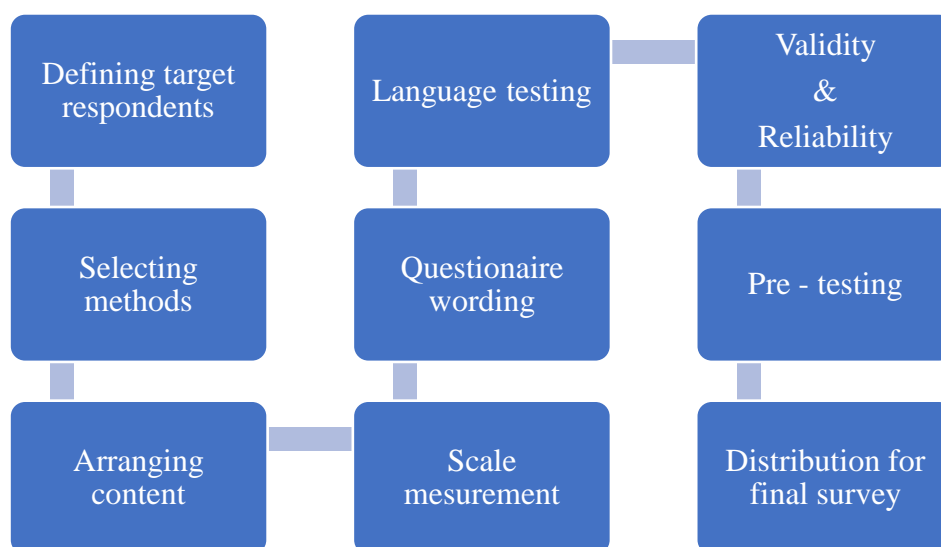
Table 31

Questionnaire Development Process

<i>Questionnaire Development</i>		
Literature Review	Local & International Articles	
Focus Group Discussion	Mid-Level Bankers	
Expert Opinion	Academician	BUET, DU, JU, ASA University
	Research Expert	BIBM & BUP
	Field expert	Top-level Bankers

Figure 19

Steps of Finalizing Questionnaire (Developed for the Study by the Researcher)



6.2.6.5 Types of Questionnaires

Self-administrated and interviewer-administrated are two types of questionnaires (Saunders et. al., 2009). The first one is categorized into three types which are internet-mediated questionnaires, postal questionnaires and delivery, and collection questionnaires. Whereas the second type is categorized into two types which are telephone questionnaires and structured interviews. In this study, the researcher used both types of questionnaires which are presented in the below table in detail.

Table 32

Types of Questionnaires

<i>Types of Questionnaires</i>	<i>Method Used</i>	<i>Level of Respondents</i>	<i>Explanation</i>
Self-administrated	Internet-mediated	Mid	Some questionnaires are sent through email and respondents fill them up and send them back.
	Postal	Mid	Some questionnaires were sent by courier and after filling it up they again courier it.
	Delivery & Collection	Top & Mid	The research assistance team went to the banks and deliver questionnaires. When respondents fill it up, they collected it.
Interviewer-administrated	Telephone questionnaire	Top	The response was taken on the telephone due to the busy schedule of respondents.
	Structured interview	Top	The interview has been taken after a prior appointment for developing the questionnaire.

6.2.6.6 Questionnaire Details - Summary & Sources

A good number of previously applied questionnaires were explored to confirm the design of an appropriate questionnaire engrossed the research questions. The associated literature about earlier researches we sought out for this purpose and sorted questions conducted by the researcher considering the functional aspect to this research.

The questionnaire started with the covering letter which was premeditated to enable admission to the banks, encourage respondents to participate in the survey, sketch the research purpose, and most importantly reassure about the high level of confidentiality regarding the supplied data by the participants. The questionnaire was designed with the demographic information from the respondents, such as their age, job title, educational level, work experience. Section one was defined with general information regarding TQM implementation. In section two some statements were presented in order to get the level of understanding of the respondents regarding TQM concepts. Section three was all about CSFs of TQM. These questions comprised 23 statements grouped into six Critical Success Factors which were recognized in the preliminary framework. The respondents' responses to the 23 statements provided some knowledge of the principles, practices, and processes of TQM according to their perception and indicated how far the following Critical Success Factors were being demonstrated: Top Management leadership (F1.1-F1.3), employee involvement (F2.1-F2.4), customer relationship (F3.1-F 3.3), supplier partnership (F4.1-F 4.4), continuous improvement (F5.1-F5.4) and organizational culture (F6.1-F 6.5). In designing the questionnaire, 5-point Likert Scale is used for the responses, and participants were asked to show their level of agreeing or disagree (strongly disagree - disagree – neutral - agree - strongly agree) with specific statements, intended to attain information on the level of Total Quality Management practices in the banks under

this study. These answers were converted to numeric to be preserved statistically by offering them the values of 5, 4, 3, 2, and 1 respectively (see Appendix).

Table 33

Configuration and Arrangement of Likert-type Scale

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Table 34

Measuring Items Sources

<i>Factors</i>	<i>No. of Measuring Items</i>	<i>Constructs Inspired by</i>
General TQM Opinion	10	Zadry and Yusuf (2006)
TQM Implementation	5	Zadry and Yusuf (2006)
Top Management Leadership	3	Ahire et al. (1996); Brah et al. (2002)
Employee Involvement	4	Lau et al. (2004); Valmohammadi (2011)
Customer Relationship	3	Ahire et al. (1996); Pattanayak and Maddulety (2013), Samson and Terziovski (1999); Zhang et al. (2000)
Supplier Partnership	4	Flynn et al. (1994); Zu et al. (2010)
Continuous Improvement	4	Antony et al. (2002)
Organizational Culture	5	Elfaituri (2012), Antony et al. (2004)
TQM Barriers	23	

6.2.6.7 Translation of the Research Questionnaire

The questionnaire was initially articulated in English and not translated to Bangla which is the official language of Bangladesh. The target sample of this study was management employees and the required educational level is good enough to understand the language.

6.2.6.8 The Question Wording

At the time of formulating the questionnaire, the questions were designated cautiously to allow the respondents. It was designed in such a way so that the respondents first comprehend them and then grip the connotation of the question, and finally responding them. In this point, Sekaran (2003), recommended that the questions asked must consider the way of the question, its language, and choose words to be compatible with the perceptions and attitudes of the respondents. In this study, the following preparations were taken care of to formulate the questionnaire.

- The questions were direct and in simple language to be understood by the respondents to respond correctly.
- The designated scale of questioning was straightforward to rate the level of understanding appropriately.
- Biasness and ambiguity in wording questions were avoided.
 - ✓ Appropriate transitions were used
 - ✓ Carefully checked redundancy
- All questions were in a positive format.

6.2.6.9 Expert Opinion

The expert opinion method is used for measuring the validity and reliability of the research. In this study, two types of experts have been considered, one was the academic expert and another was a research expert. Academicians from various reputed public and private universities (3 Professors from JU, DU, and ASA University, 1 Professor from BUET- TQM Expert) have provided their insightful opinions on question contents and checked whether the questionnaire would be properly designed with achieving study aims. Research expert (2 Associate Professor from BIBM & BUP) provided their provoking opinions regarding methodological

design and also the analysis process. Both types of experts were selected on personal reference and request.

6.2.6.10 Bankers' Opinion

Bankers' opinions (4) were sought as a field expert. Complementary semi-structured interviews were directed to top-level bankers such as branch managers, heads of the department, AVP, etc. It was aimed to gain a greater understanding of TQM practices, concepts, and perceptions in this industry. Their experience was taken into consideration for preparing the final questionnaire.

6.2.6.11 Language Testing

Language testing was conducted to check word choice, grammatical correction, sentence making, and communicating language. A postgraduate in English literature and experience in the related field played the role.

6.2.6.12 Pilot-Test

Pilot Testing of the questionnaire is an important issue in research before using it to collect data (Malhotra & Birks, 2007). Saunders et al. (2009) perceived that:

“The purpose of the pilot test is to refine the questionnaire so that respondents have no problems in answering the questions and there be no problems in recording the data. In addition, it enables you to obtain some assessment of the questions' validity and likely reliability of the data that be collected”. (p. 394)

Pre-testing is generally performed to identify deficiencies in the study design, metrics, and instrumentation. According to Saunders et al. (2009), the pilot study should go through by the researcher before beginning the survey in order to confirm response rate, discernability, reliability, and validity for achieving the aims of the research. Pilot testing was conducted to attain the following objectives.

- To go over the clarity of the items conscripted in the questionnaire.

- To get an idea about the estimated time required to complete the questionnaire.
- To confirm the practicability of the tools selected for the study.
- To gauge whether the questionnaire instructions were easily understood.
- To detect the poorly worded and misunderstood questions.
- To gauge the understanding level of the rating scale
- To check the initial reliability of the measurement scales
- To obtain an impartial impression of the respondents' reaction, towards the research study and questionnaires.

Ten respondents participated in the pre-pilot study for this research. Among them, 5 were top-level bankers, 3 academicians, and 4 were research experts in the field of TQM. According to their suggestions concerning question-wording, design, and layout, question content is taken into high consideration to prepare a second draft. The final version of the instrument was accepted after effecting necessary modifications on expert speculations. The participants involved in the pre-testing includes thirty bankers from three banks. Perneger et al. (2015) recommended a default sample size of 30 participants. So, 30 questionnaires were circulated casually to be filled out by bankers. Ten respondents have been chosen from each bank. The selection of participants was designed on reference. It is done to make sure that the questionnaire is out of ambiguous questions or questions which could be misunderstood. Recommendations were also sought out regarding the questionnaire to obtain the objectives. All questionnaires were returned and none of any respondents came with any major changes and did not complain about the difficulty to fill it up. The instrument was continuously revised and re-edited for the sequential interviews. Personal interviews were appointed with five top-level bankers to progress the

questionnaire instrument gradually concerning both content validity and construct validity. The facts discussed in the interviews include:

1. The several features of quality practice in banking.
2. The topmost critical success factors of TQM.
3. Factors affecting quality service.
4. The discernibility of the questionnaire especially in concern to the structure, language, technical term, and time to fill up of the questionnaire.
5. The clarity of the instructions is provided at the top of the cover page.
6. The ambiguity of any questions includes imprecise, unaccustomed, phrases and tough questions.

The result of pilot testing is summarized below.

Table 35

Result of Pilot Testing

Language	Clear and not difficult to understand
Clarity	Instructions and terminology are not vague
Layout	Easy to follow
Ease of completion	Tick boxes are convenient
Sequencing	Logical order is maintained
Presentations	The professional manner in a presentation followed
Length	A bit Lengthy as comprises many items
Time is taken to complete	The average time is 15-20 minutes.

6.2.6.13 Ethical Considerations of the Questionnaire

Ethical issues need to be addressed and considered in social science or management research. Ethical issues are connected to the integrity of the research and subject matter (Bryman & Bell, 2015). Ethics are applicable as well as relevant to all situations and activities (Churchill, 2002).

Ethical issues have been addressed while preparing the questionnaire for this study. Adherence to ethical standards ensures that the researcher acts in good reliance and protects the truthfulness of the information obtained. Evans et al. (2002) identified some ethical areas for the questionnaire which has been addressed on the ground of this study.

Table 36

Ethical Considerations of Questionnaire

Questionnaire Design	Research questions were clear and objective-oriented. It did not comprise any hypothetical questions or those intended to discomfit respondents.
Informed Consent	Respondents were not misled or enforced for participation. They were not confused as it is designed in audience-appropriate language. Technical explanations or jargon did not jeopardize the meaning of the research. Respondents were free to ask questions, and, if they choose, they were free to withdraw themselves at any point.
Confidentiality	Confidentiality that is promised has been protected. The study confirms anonymity by the means of hiding the actual names of respondents and their affiliated banks.
Debriefing	A debriefing session was conducted personally so that respondents do not feel any threat to provide information regarding their banks.

6.3 Research Sampling Design

6.3.1 Population of the Study

The population is expressed as the comprehensive set of cases or group members (Saunders et al., 2009). According to Deville and Särndal (1992), a survey is concerned with two different populations such as target population and survey population. The target population consists of the group of units from which information is required. The survey population is the units that are besieged to the survey.

The target population of this study constituted the management employees of the entire banking industry of Bangladesh. Nevertheless, since the population is gigantic and more homogeneous, the study selected a demonstrative sample for inclusion in the study. So, the survey population of this study is the management employees of all private commercial banks of Bangladesh registered and operating in Dhaka city. The study sought to implore responses from relevant participants in this sector which included the top and middle management. The following table is showing the total number of banks along with their types in Bangladesh.

Table 37

Types of Banks. Source: Bangladesh Bank Publication (2021a)

<i>Types of Banks</i>	<i>Segments based on the structure</i>	<i>No. of banks</i>
Scheduled Banks	State-Owned Commercial Banks	6
	Specialized Banks	3
	Private Commercial Banks	42
	Foreign Commercial Banks	9
Non-Scheduled Banks		5

6.3.2 Sample Description

A. Sample Size

In the sampling of the population for this study, the researcher has used the sampling method of Partial Least Squares Structural Equation Modelling (PLS-SEM) (Wong, 2013). According to that, the sample size should be 10 times of variables. As the study has 7 variables so sample size could be 70.

Yamane (1967) provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample sizes are shown in the table below. A 95% confidence of level and $e = 5\%$ are assumed. The formula of sample sizes is;

$$n = (I + N) / (e)^2$$

Where,

n = the sample size

N = the size of the population

e = the level of error

Applying this formula in this study to obtain the sample size as shown below:

$$n = 92742 / [1 + 92742 (0.05)^2]$$

$$n = 92742 / 232.855$$

$$n = 398.28$$

Therefore, the sample size for this study was 400. In order to avoid the shortage of required samples due to unusable, questionnaires such as incomplete, unreturned, etc. 600 questionnaires have been distributed.

B. Sample Frame & Sample Unit

Table 38

Sample Frame & Sample Unit

Sample Frame	Conventional Banks		10
Sample Unit	600	TLBs	200
		MLB's	400

C. Selection Criteria for Sample Frame

Table 39

Selection Criteria for Sample Frame

Bank	The sample has been taken from all four generations to cover the whole area.
Generations	Among them two banks from 1 st generation, two from 2 nd generation, four from 3 rd generation and two from 4 th generation of bank.
Number of Branches	The banks which have more than 10 branches are considered for the probable sample of this study.
Number of Employees	The banks which have more than 2000 employees are considered for the probable sample of this study.
Financial	Total asset has taken into consideration.
Performance	1 st Generation- Over 35000 crore, 2 nd Generation- Over 30000 crore, 3 rd Generation- Over 20000 crore, 4 th Generation- Over 10000 crore.

D. Sampling Technique

Table 40

Sampling Technique. Source: Kothari, C. R. (2004), Research Methodology: Methods and Techniques, (Second Edition), New Age International Publishers

Method	Snowball Sampling, Convenient Sampling	
Strata	Top-level bankers (SS)	BOD, AVP, MD, GM
	Mid-level bankers (SRS)	HOD, Branch Managers, Executives.

6.3.3 Data Collection

A questionnaire survey was used to accumulate primary data from the study sample. Target respondents were AVP, HOD, Branch managers, relationship manager as they are involved with quality-related issues and have the greatest knowledge about the process and quality management in the bank. Self-reported data has been used for data collection in this study. Top-level and mid-level bankers of the retail banking sector of Bangladesh participated in this survey through a self-administered questionnaire using the pen and paper method. Respondents read the questionnaire and rate their opinion on the Likert Scale. This study was also grounded on cross-sectional data collection rather than a longitudinal study.

Data sources and their application is shown in the following table.

Table 41

Data Collection Information

<i>Types of Data</i>	<i>Specific Sources</i>	<i>Instrument</i>	<i>Application</i>
Primary Data	Interview	Questionnaire	Analysis & findings
Secondary Data	Paper-based sources	Articles, journals, abstracts, research reports, conference papers, case study, annual reports, thesis papers,	Literature Review & Instrument development

newspapers and magazines		
Electronic sources	On-line databases, internet, videos, and broadcasts	Literature Review & Instrument development

To find out the useful research articles for this study, academic journals and databases were used such as; Science Direct and Scopus, Taylor Francis, EBSCO Host, Emerald, Willey online library, and Google Scholars. Phrases have been used like ‘TQM implementation’ ‘Critical Success Factors for TQM’, ‘TQM Practices in manufacturing/services’, ‘TQM Practices in the banking sector’, ‘TQM Practices in banking sector of Bangladesh’. Going through a thorough review of available articles, a good number of articles have been selected based on objectives, methodology, and analysis fit with the study topic and most recent articles got more attention. The data collected in this study used self-reported data.

6.3.4 Criteria of Respondents

A questionnaire survey was conducted as the primary methodology of this study with data composed by field visit to ensure a high response rate. Target respondents were top-level and mid-level employees. AVP, HOD, Branch managers, relationship manager were picked as they have the best information about the process and quality practices in the bank.

6.3.5 Research Assistance

A team has been formed consisting of two quality-educated members who received well-structured training for the assessment and data collection to ensure consistency. The team members were designated based on preceding research experience in data collection and interactive skills. After that, they received a one-week training session on data collection and data analysis under an expert in statistics. The concentrated course strengthened the required skills in quantitative and qualitative data collection techniques, analysis of data, reliability, and validity

assessment, dealing with respondents, and ethical issues in data collection. A pre-assessment meeting was apprehended to elucidate the purpose of the study, questionnaire format, respondents' background, and skill to interview people. Meeting apprehended after each visit to organize the data. The data was collected through a questionnaire, enter into a database formed for this study. For statistical analysis, the data was entered into SPSS.

6.3.6 Researcher's Role

The researcher got interested in this topic as this is time demanding and less focused area in the context of Bangladesh. The study is considered as an opportunity to start researching as an academic on TQM to contribute both in the theoretical and practical fields. It is equipped with unique skills and capabilities in the areas of TQM with extensive literature review. Research is very committed to sharing the findings of the study and methodological process for future researchers.

6.3.7 Location of Study

The study was conducted in private commercial banks of Bangladesh. Only the branches located in Dhaka city have been selected for two reasons. One is for convenience as the researcher resides in Dhaka and another was, mainly quality strategy and management frames at head office and the head office of all banks situated in Dhaka.

6.3.8 Personal Consultation

Apart from the questionnaires distributed to the respondents, the researcher also fixed an appointment with top managers such as the AVP, Branch Manager and Head of Departments, Relationship Manager etc. to take their understandings and thoughts on hypothesis-related issues and initiatives taken for TQM implementation. The outcome of the personal interview led to a focus on management attempts to

solve various TQM implementation-related problems to establish a successful TQM system in the bank. The followings are the questions designed for a semi-structured interview.

- I. How does the top management lead in quality-oriented strategy formulation?
- II. How do TQM practices affect service performance?
- III. How does your bank manage and resolve customer demands and complaints?
- IV. How does your bank measure employee performance?
- V. How do you identify performance indicators?
- VI. What is set up to provide tech-oriented service to customers?
- VII. What are the long-term and short-term goal for employee training?
- VIII. How do you create a platform for employee development?
- IX. Do you allow employee participation in the decision-making process?
- X. What is the motivational approach applied to improve the quality?
- XI. How do you confirm the quality of goods/ services from your suppliers?
- XII. Do you have any agreement with your supplier? If any, do you think it gives you any benefit to maintain quality?
- XIII. Has your bank undertaken any measures to practice TQM?

6.4 Data Analysis

6.4.1 Response Rate

The questionnaires were distributed from August 2020 to December 2020. Out of the 600 targeted respondents, 512 filled in and returned the questionnaires giving a response rate of 85.33 %. This good response was the outcome of efforts to give a reminder call to the respondents to fill and return the questionnaires. Although this method was time-intensive and costly and can be impracticable in some cases, it proved effective for this study. Among these 512, 98 were found to be invalid for

analysis. Completed questionnaires were therefore received from 414 respondents which were used for data analysis.

The Actions directed toward the Reassurance of the Rate of Response

Keeping in mind that a good response rate is a vital part of any research, this study has taken the following measures to ensure a high rate of response.

- The drop and pick method have been used. The research assistants went to the bank physically and provided briefing when asked. A summary of the research has been attached when emailing.
- Addressing the questionnaire to those bankers who directly or indirectly associated with quality service.
- The purpose of the survey was explained properly and confidentiality of the information provided by the respondents was guaranteed.
- It is ensured that the questionnaire is easy to read and instructions are understandable.
- Professionalism and protocol are maintained in the proper way to boost up the standing of the survey.
- Reminder follow-up for not returning or incomplete questionnaire.

6.4.2 General Profile of Respondents

The selection of banks is determined by some specific requirements such as bank generation, number of employees, number of branches and financial performance. Top and mid-level bankers were chosen as they have more knowledge, experience as well understanding regarding quality related issues compared to first line employees.

6.4.3 Data Management

The data entry was done after sorting out the incomplete questionnaires in MS Excel (XLS) format. Data were coded for the position, gender, and department and a serial number was given to identify every respondent separately. The MS Excel (XLS) file was converted to CSV format as per the requirement of SmartPLS. The dataset was exported to SPSS for demographic analysis and SmartPLS for testing the hypothesis. Further to this, all data is documented in aggregate form to ensure the unraveling of any identification of individual responses.

6.4.4 Data Cleaning

Data cleaning comprises consistent check and action of missing responses which are more through and extensive through uniformity checks recognise data that are out of array, rationally unpredictable or have extreme values which are precluded and must be amended (Malhotra et al., 2002). It is also stated that missing responses embody values of a variable that are unknown due to ambiguous answers or poorly recorded answers. In this study, data cleaning was conducted to avoid these problems that would hamper the data processing.

6.4.5 Data Analysis Process

After the data collection process, the results were analysed and summarized. Partial Least Square-based Structural Equation Modeling PLS-SEM would be adopted to examine data which is considered the second generation of multivariate analysis.

According to Latan (2018), PLS-PM has developed as a dynamic statistical tool with an assorted variety of advanced structure. Some recent studies have used this second generation of multivariate analysis in various disciplines, such as Accounting (Lee et al., 2011; Nitzl, 2016); Human Resource management (Ringle et al., 2020); International business (Richter et al., 2016); Management information systems (Hair

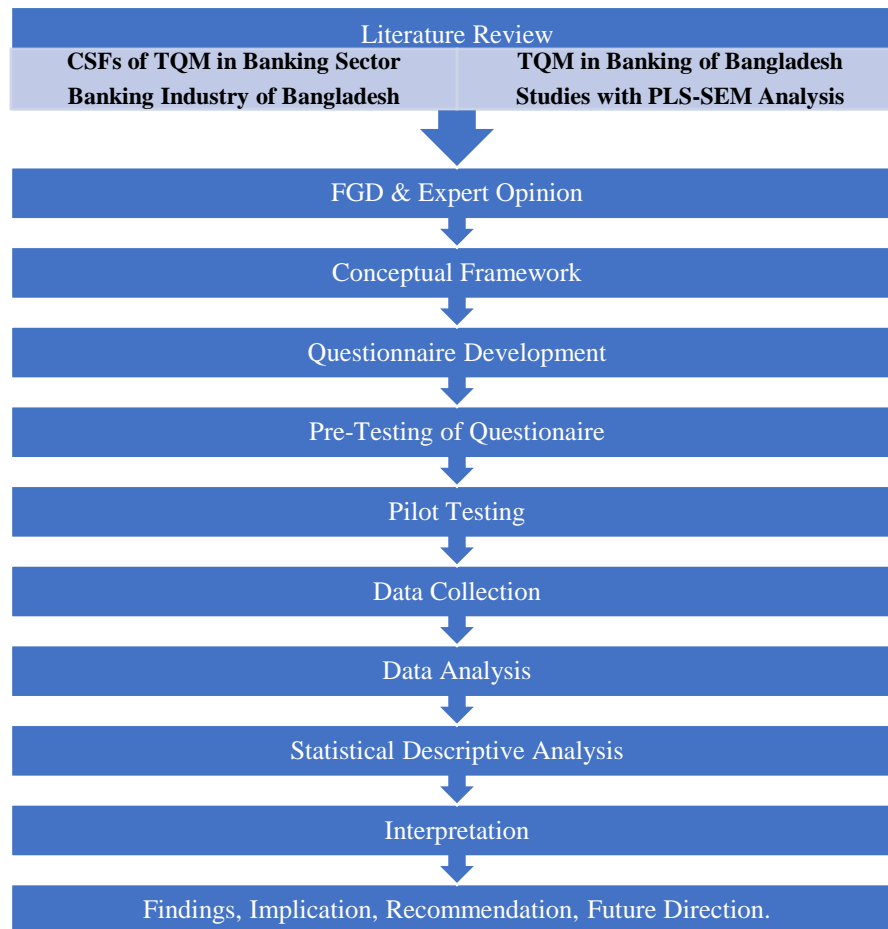
et al., 2017; Ringle et al., 2012); Marketing (Hair et al., 2012); Tourism management (Do Valle & Assaker 2016; Latan et al., 2018); Supply chain management (Lin et al., 2005); Operations Management (Peng & Lai, 2012). According to a review article, the use of PLS-SEM in the production and operations management has accelerated over time as from 2000 to 2011, 42 studies were conducted (Hair et al., 2014).

According to Lopes de Sousa Jabbour et al. (2020), SEM enables us to observe the relationships between unobserved variables and to test more complex relationships in the dominion of quantitative research. The authors also claimed that SEM offers a sophisticated approach comparing to other classical methods such as multiple regression or path analysis. to achieve and avail the benefit of SEM, the study chosen PLS-SEM for data analysis.

PLS-SEM is predominantly appealing when the research objective concentrations on estimating and explaining the variance of key target constructs (in this case, TQM implementation) by different explanatory constructs (In this case, top management leadership, employee involvement, supplier partnership, customer relationship, continuous improvement, and organizational culture). In the end, interpretation, conclusion, and discussion were contingent on the information approached through the direct research, practical and academic literature.

The data analysis method used in this research comprises three sub-processes. At the very beginning measurement model was assessed to confirm the reliability and validity of each indicator. In the second phase, the structural model has been drawn and, in the end, bootstrapping was done for testing research hypotheses using a 95% confidence interval.

The flowchart is shown an overview of how the analysis processes were carried out.

Figure 20*Data Analysis Process***6.4.6 Ethical Issues**

Bell and Bryman (2007) advocated that several ethical considerations be observed directing a study counting as shielding the privacy and confidentiality of research participants as well as organizations, safeguarding the accord of the contributors, and upholding the accuracy of the data. This study practiced these actions to confirm that ethical matters are appropriately measured.

In this study, the researcher sought out and focus on the ethical issues to be addressed at a high level. In addition, confidentiality and discretion of the information were also firmly confirmed and the objectives and drive of the study were clarified to

every participant in answering the questionnaires and interviews beforehand. Documents, transcripts, returned questionnaire forms, coded information, and analysed data will be filed away firmly for by the researcher appropriate time required.

Ensuring the safety of data and data storage were also protected for the confidentiality of information collected from the participants through some measures such as researcher only had the access to the data, collecting data in an organized way, storing the data in a password-protected computer, using pseudonyms for participants and the banks, coding of each questionnaire.

Table 42

Addressing Ethical Issues. (Source: Hay et al., 2003)

<i>Ethical issue</i>	<i>Questionnaire</i>
Access	Authorization was sought from the head office of banks with an authorization letter.
Consent	Respondents were invited to take part in the questionnaire and informed consent was pursued from key participants and inspiration for intended contribution.
Confidentiality	Respondents were not forced to mention their names as it was optional. The study confirmed the anonymity by the means of unraveling the actual names of individuals as well as their affiliated banks.
Harm	The respondents have been clear about no adverse effects if they chose to take part in the study or not.
Cultural approaches	The topic is a sensitive and new concept to banks in the context of Bangladesh. The questionnaire was phrased in such a way that participants were able to portray their perception towards TQM practiced in their respective banks.
Dissemination	An electronic version of this thesis paper will be uploaded following the authorization of the University so that participants may read the findings.

6.4.7 Conducting 2nd Seminar

The second seminar was conducted presenting the findings and draft copy of the study. The analysis result, findings, interpretation were presented and review comments were noted down.

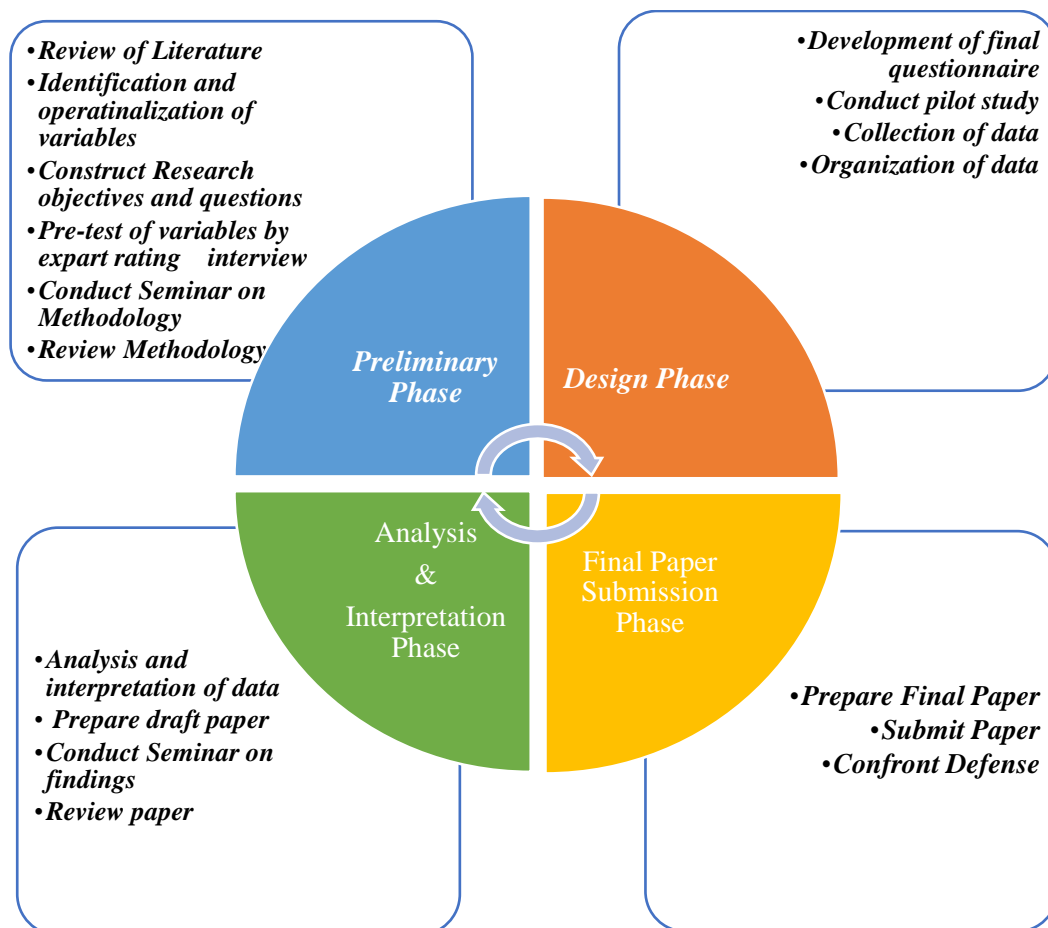
6.4.8 Paper Submission Phase

The final paper was submitted after considering the feedback from the seminar.

6.5 Research Frame

Figure 21

Research Frame (Designed by the Researcher)



6.6 Time Line presented through GANTT Chart

Figure 22

The Time Line presented through GANTT Chart

<i>Activities</i>	<i>TimeLine</i>							
	<i>Year 1</i>		<i>Year 2</i>		<i>Year 3</i>		<i>Year 4</i>	
	First Half	Second Half	First Half	Second Half	First Half	Second Half	First Half	Second Half
Preliminary Phase Review of Literature, Identification, and operationalization of variables, Construct Research objectives and questions, Pre-test of variables by expert rating interview, Conduct Seminar on Methodology, Review Methodology								
Design Phase Development of final questionnaire, Conduct a pilot study, Collection of data, Organization of data								
Analysis & Interpretation Phase Analysis and interpretation of data, Prepare draft paper, Conduct Seminar on findings, Review paper								
Paper Submission Phase Prepare Final Paper, Submit Paper, Confront Defense								

6.7 Summary Table of Methodological Steps

Table 43

Research Procedure: Methodological Steps - Own Processing

<i>Research Stage</i>	<i>Research Action</i>
Literature review	Identification of independent and dependent variables Operationalization of variables
FGD	Establishment of TQM Framework and CSFs
Initial questionnaire development	Evident from literature review, measurement items, and findings from FGD.
Pilot study	The questionnaire was tested on 30 respondents and also asked them to rate the factors for TQM implementation according to importance.
Final questionnaire development	Comments and feedback were taken into account to prepare the final questionnaire.
Data Collection	Data was collected through face-to-face interviews and email. Assessment of reliability & validity
Data Analysis	Smart PLS 3.0, SPSS
Interpretation	The result was interpreted and discussed.

Chapter Seven

Assessment, Interpretation & Explanation of Current TQM Practices in Banking Industry of Bangladesh

Prelude

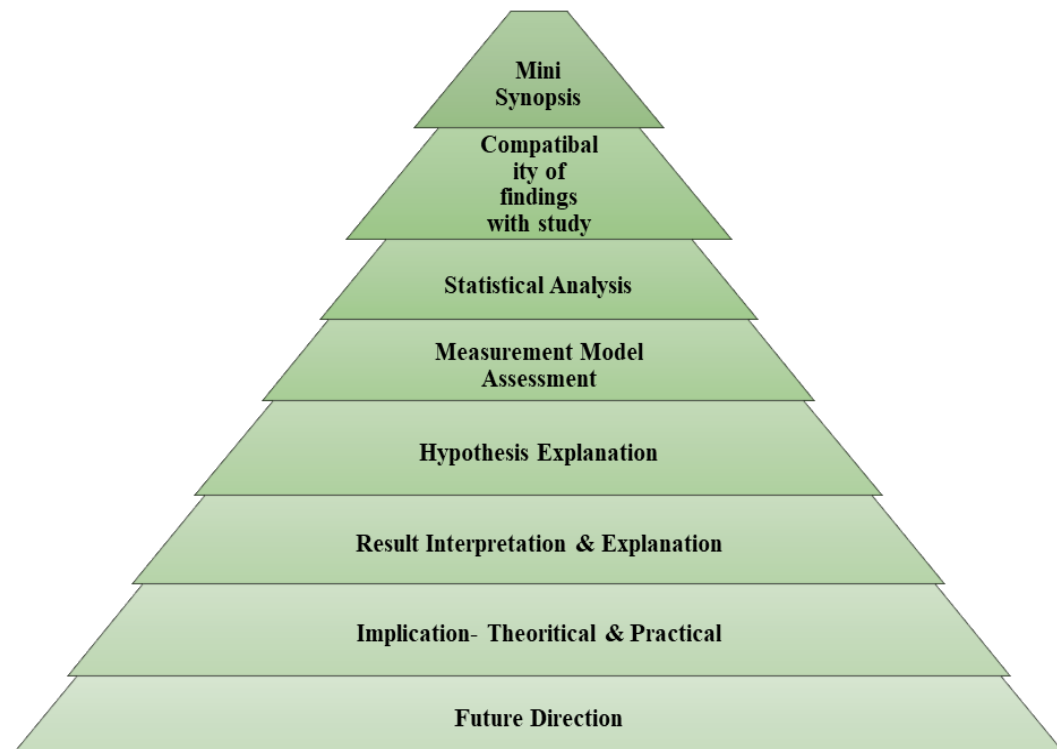
The analysis, interpretation, and findings of this study are systematically presented in this chapter. The chapter will describe and interpret the result data using SmartPLS 3.0 and SPSS. This chapter reports the empirical analyses of this study using SmartPls with the latest enhancements and illustrates the explanation in the context of the banking sector of Bangladesh. The results used for interpretation and explanation which were attained from the computation analysis software and measured with the research objectives.

7.1 Structure of the Chapter

The presentation and discussion of the results is the main goal of this chapter. The following graph offering the road map for presenting the chapter.

Figure 23

Roadmap of the Chapter



7.2 Sampling Design and Construct Measurement

The sample in this research consists of 414 bankers from top-level and mid-level, working in different private commercial banks of Bangladesh. A structured questionnaire was developed through FGD with mid-level bankers and an extensive literature review. Data collection was conducted in two steps. At the very beginning, questionnaires were distributed to 30 respondents for pilot testing. Then, Cronbach's α reliability estimate test was applied to measure validity and reliability. The questionnaire would revise if data finds invalid or not reliable. This was followed by the second step and the final questionnaire was given to sample respondents.

7.3 Process of Analysis

7.3.1 Process of Data Preparation

<i>Phases</i>	<i>Criteria</i>	<i>Techniques</i>
Selection of Sample	Commercial Banks	Bank generation, Branch number, number of employees, financial performance.
Data Screening	Manual Process	Detection of missing and inconsistent data Sorting completed data
Data Recording	Scorecard	Likert-Scale (1 to 5)
Data Input	Microsoft Excel	Data coding

7.3.2 Process of Preparation for Statistical Analysis

The flow-chart has been drawn to provide a synopsis of how the analysis processes were executed for this study. The sections are explained below.

Figure 24*Process of Analysis-Own Processing*

Step 1 Data for Analysis	Step 2 Preliminary Analysis	Step 2 Measurement Model Assessment	Step 2 Structural Model Assessment
<ul style="list-style-type: none"> • Primary data collection from structured questionnaire • Pilot testing for measuring validity and reliability of questionnaire. • Data Organization - data entry & data coding • Descriptive analysis from demographic information 	<ul style="list-style-type: none"> • Data cleaning • Content validity • Acceptance process • Removal process • Reference checking for required value range 	<ul style="list-style-type: none"> • Cronbach's Alpha • rho A • Composite Reliability • Average Variance Extracted (AVE) 	<ul style="list-style-type: none"> • Hypothesis testing • Measuring P value & T value • Hypothesis accepted • Hypothesis rejected • Interpretation • Ranking of TQM Barriers

7.4 Demographic Statistics**7.4.1 Profile of Respondents**

General information of respondents and participant banks have been framed out in this section to illustrate a sum-up explanation of the profile of the sample in this study. All respondents in this study work in private commercial banks of Bangladesh, and they have been chosen from the top and mid-level of management having sufficient data and knowledge regarding quality issues and as a result, they can provide an accurate response to the study. Frequency analysis is used to illustrate the gender ratio, participants' position in management, and bank generation.

Table 44*The Profile of Respondents*

Gender	Total	Male		Female			
	<i>number of respondents</i>						
	416	86.5%		13.5%			
Designation	Total	Top Level			Mid-Level		
	<i>number of respondents</i>						
	416	24.6%			75.4%		
Department	Total	General	Credit	Foreign	Business	HRD	Others
	<i>number of respondents</i>	<i>l</i>		<i>Remittance</i>	<i>Development</i>		
	416	44.9%	13.0%	4.3%	1.4%	7.7%	28.5%
Generation of Banks	Total	1st	2nd	3rd	4th	5th	
	<i>number of banks</i>	<i>Generati on</i>	<i>Generation</i>	<i>Generati on</i>	<i>Generatio n</i>	<i>Generatio n</i>	<i>Generatio n</i>
	416	31.4%	31.9%	26.1%	6.3%	4.3%	

Interpretation

As the above table showing, male respondents (86.5%) are visibly larger represented than female respondents (13.5%). A possible clarification for this comparatively unequal distribution of gender in this study might be found in the apparent traditional male dominance in the job sector especially in the banking sector. Another explanation might be that females are more active as well engage to balance work life and get little time to do additional tasks except for official. The respondents are almost equally distributed to top-level (24.6%), mid-level (40.6%), and first-line level (34.8%). It representing fair participation from all levels of management as the philosophy of TQM is to involve everyone. Top-level mismanagement is responsible for the overall performance of the bank as they set goals, formulate strategies, measure competitive intelligence, create the culture and take initiatives to quality

improvement. On the other hand, mid-level managers are responsible for implementing all the decisions taken by top management and also provide information regarding customer service and requirements. The table also showing that the data have been collected more or less all the important departments of the banks in terms of customer dealing. Quality practices might vary according to bank generation. This is the reason behind accumulating sample frames from all five generations of the banks.

7.4.2 Acceptability Estimates

Acceptability was estimated regarding the instruments of TQM used in this study such as top management leadership, customer relationship, supplier partnership, employee involvement, continuous improvement, organizational culture, and TQM implementation. Some barriers also presented in the questionnaire and acceptability to participants were evaluated to attain high response rates. Acceptability was measured by refusal rates and rates of missing responses. Among 500 respondents 452 were returned which contains 90.40% with a refusal rate of 10.67 and out of 452, 416 data were useable which contains 91.60% with a missing data rate of 8.41%.

7.4.3 Questionnaire Management

The second part presents the information regarding questionnaire collection such as the number of incomplete questionnaires, number of returned questionnaires, number of unreturned questionnaires, etc.

Table 45

Rate of Response

	<i>Number</i>	<i>Percentage</i>
<i>Total Distribution</i>	500	100%
<i>Responses Received</i>	452	90.40%
<i>Unusable responses</i>	38	8.41%

Total usable responses 414

91.60%

Interpretation

Of the 500 drop-off survey questionnaires, 452 usable questionnaires were returned, yielding a response rate of 90.40%. An effort to call and give a reminder to the respondents to fill and return the questionnaires brought up this good response. Although this method was time-intensive and costly and can be impracticable in some cases it proved effective for this study. Among these 452, 38 were found to be invalid for analysis. Completed questionnaires were therefore received from 414 respondents which were used for data analysis.

7.5 Variables and Measures

Six independent variables (exogenous), were identified for this study from an extensive literature review which are top management leadership, customer relationship, supplier partnership, employee involvement, continuous improvement, and organizational culture. A conceptual model is developed and used for the study with TQM implementation as the dependent variable. Respondents answered through Likert Scales that ranged from “strongly disagree” (1) to “strongly agree” (5). Respondents’ views, thoughts, and opinions were asked for framing the recommendation.

7.6 Content Validity

The extent of exposure of the items in the CSFs of TQM was measured which is addressed as content validity in the study, is related to the subjective assessment of the validity of the 24 magnitudes under six constructs. A multi-item measurement system was used to increase reliability. Hence, extensive literature review and experts’ opinions have ensured the content validity issue of the study (Hair et. al., 2006). In this study, two types of experts have been considered one was an academic expert and another was a research expert. Four academicians (DU, JU, BUET, ASA)

from various reputed public and private universities have provided their insightful opinions on question contents and checked whether the questionnaire would properly design with achieving study aims. Two research experts (BIBM, BUP) provided their provoking opinions regarding methodological design and also the analysis process. Five bankers' opinion was also sought as field expert from the top and mid-level bankers such as branch manager, head of the department, vice president, etc. with more than 10 years of experience in the banking industry of Bangladesh.

The content validity is measured and found very high for the following.

- Construct with items were derived from a comprehensive review of the literature related to TQM implementation and TQM barriers to implementation.
- Discussion occurred with academicians, research experts, and field experts.
- The experts' opinions were taken in the form of "vital", "useful but not vital" or "not required" in the sense that they are suitable indicators of the construct and according to their assessment near about 99% of the content was valid and consistent with the practices of TQM in the banking sector. A minor correction is done after the assessment.
- Pre-Testing affirmed the validity of the items.

7.7 Face Validity

To avoid misinterpretations, all the states in the questionnaire are secured with an unambiguous word which improved the face validity of the questionnaire. Leading phrases, incomprehensible terms, technical language terminology, jargon, and colloquialisms were avoided during the questionnaire design phase and checked by a language tester before placing it to final respondents.

7.8 General TQM Opinion

Table 46

General TQM opinion

Items	Mean	Rank
TO3- Teamwork, and participation are important for achieving a continuous improvement culture	4.39	1 st
TO1- TQM is a management philosophy and practice to ensure effective and efficient use of all available resources	4.38	2 nd
TO2- TQM aims to make customer satisfaction the focus of a business	4.27	3 rd
TO8- Management must provide adequate resources in every aspect of the business	4.21	4 th
TO4- Training and education are vital elements concerning TQM implementation	4.18	5 th
TO7- Management leadership, commitment, and support determine the success of new change initiatives	4.16	6 th
TO5- Statistical techniques (such as Statistical Process Control, Design of Experiments, etc.) are important to ensure consistency of product and process quality	4.07	7 th
TO9- A work environment, which is conducive for improvement, is created through management-employee partnerships	4.05	8 th
TO10- Initiatives such as Kaizen, suggestion schemes, quality circles, etc. will motivate employees to participate in quality improvement	4.00	9 th
TO6- Supplier involvement is vital in supporting quality improvement	3.97	10 th

Table 47

General TQM Opinion (SPSS Output)

	<i>Statistics</i>									
	TO1	TO2	TO3	TO4	TO5	TO6	TO7	TO8	TO9	TO10
N Valid	415	415	415	415	415	415	415	415	415	415
Mean	4.38	4.27	4.39	4.18	4.07	3.97	4.16	4.21	4.05	4.00

Interpretation

Managers' consciousness regarding TQM is very vital for the implementation of TQM which can be developed through updated knowledge, skill with training,

attitudinal and interactive changes, awareness of TQM, continuous education, and so on. This section of the questionnaire tried to reveal the level of responsiveness to the importance of TQM of the respondents. Though TQM is a new approach all over the world and in Bangladesh it is not that prominent especially service sector, knowledge and cognizance of TQM principles, standards, objectives, tools, techniques, and perception are highly required to all members of the organization for experiencing its benefit. The table presenting that teamwork and participation in the topmost requirement for generating TQM oriented culture. According to the result, effective and efficient utilization of resources can be achieved through TQM. Customer focus is the ultimate goal of TQM and sufficient resources are required to be invested for TQM implementation.

7.9 Measurement Model Assessment

The study used Smart PLS version 3.0 to test the results of the hypotheses. The first step in structural equation modelling is to evaluate the measurement model.

The analysis result of this study is reported according to the general reporting standards proposed by various authors (Hair et al., 2019; Latan, 2018) who used PLS-SEM for the analysis of their studies.

According to Hair et al. (2019), The PLS path modelling approach measured constructs' validity and reliability by computing two stages before attempting to draw any conclusions regarding relationships among constructs.

(1) *“The assessment of the reliability and validity of the measurement (outer) model, and*

(2) *The assessment of the structural (inner) model.”*

According to Hair et al. (2016), “the assessment of the measurement model for reflective indicators in PLS is based on indicator reliability, construct reliability, convergent validity, and discriminant validity”. The criteria of reliability, convergent

validity, and discriminant validity were measured to evaluate the adequacy of the measurement scale. So, at the very beginning, the researcher confirmed the validity and reliability for the indicators of each construct by analysing the measurement model. In this regard, convergence and discriminant validity, as well as construct reliability, were tested for top management leadership, customer relationship, supplier partnership, employee involvement, continuous improvement, and organizational culture, and TQM implementation. Convergent validity was measured using factor loading and average variance extracted (AVE). The heterotrait-monotrait (HTMT) ratio and Fornell-Lacker criterion were employed for measuring discriminant validity. ρ_c and ρ_A were selected for measuring the reliability of the constructs, as they are considered as the most appropriate measures. The study chosen PLS-SEM for data analysis and SmartPLS 3.0 software was used (Ringle et al., 2012) to analyse the model with the maximum number of iterations at 300 were calculated. After confirming the validity and reliability of the latent variables, structural equation modelling (SEM) via path analysis is used for testing the model and the hypotheses. The effects of high correlations and possible multicollinearity problems were reduced using SEM. PLS Algorithm was implemented to observe the validity of the constructs. Results illustrated convergent and discriminant validity. Bootstrapping was run to find the statistical significance. Both validity analyses are discussed below.

The reliability and validity of the model were tested. The value of Cronbach's α and composite reliability is used to measure the reliability factor. Composite reliability is known to be the most refined form of Cronbach's α values (Gefen et al., 2000). The average variance extracted (AVE) (Fornell and Larcker, 1981) is measured by the variability of any construct item. The validity of the variables is also verified with convergent and discriminant validity. Table 38 is presenting the value of

the variables and showing that the alpha values of all TQM factors exceeded the 0.70 threshold which supports the internal consistency for all constructs (Hair et al., 2016). So, it can be said that the scales of variables had acceptable reliabilities since the values of alpha were equal to or higher than 0.70. Therefore, CSFs of TQM and TQM implementation measures had statistically significant factor loadings on their assigned scales. Thus, the constructs had satisfactory reliabilities.

Table 48*Measurement Model*

<i>Constructs</i>	<i>Items</i>	<i>Loadings</i>	<i>Cronbach's Alpha</i>	<i>rho A</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted (AVE)</i>
Continuous Improvement	CI1	0.774	0.775	0.78	0.856	0.598
	CI2	0.759				
	CI3	0.829				
	CI4	0.727				
Customer Relationship	CR1	0.827	0.703	0.714	0.834	0.627
	CR2	0.817				
	CR3	0.728				
Employee Involvement	EI1	0.779	0.759	0.769	0.861	0.675
	EI2	0.822				
	EI4	0.861				
Organizational Culture	OC1	0.703	0.768	0.766	0.852	0.591
	OC2	0.773				
	OC3	0.825				
	OC5	0.768				
Supplier Partnership	SP1	0.815	0.719	0.726	0.842	0.64
	SP2	0.762				
	SP4	0.82				
Top Management Leadership	TML1	0.701	0.722	0.756	0.843	0.644
	TML2	0.887				
	TML3	0.81				
TQM Implementation	TI1	0.743	0.732	0.737	0.832	0.553
	TI2	0.765				
	TI3	0.758				
	TI4	0.707				

Note: FL = factor loading; AVE = Average variance extracted; ρ_c = Composite Reliability; ρ_A = DijkstraHenseler's rho_A.

Several scholars recommended items having a factor loading of 0.708 to pass for further proceedings (Hair et al., 2019) except exploratory researches where acceptable factor loading is 0.60 (Chin, 2010; Hair et al., 2011; Ramakrishnan et al., 2012). In case of testing the reliability of a study, the Cronbach's alpha, rho_A, and composite reliability should be more than 0.70 (Benitez et al., 2020; Hair et al., 2019). Average Variance Extracted (AVE) explicates the construct validity of a study where recommended value is 0.50 (Hair et al., 2019; Hair et al., 2011; Wah-Yap et al., 2012).

The convergent validity of the PLS-SEM model is checked by evaluating the average variance extracted (AVE) for each latent variable. Table 38 presenting the value of all AVE which is greater than the acceptable threshold of 0.5. So, it is evident that convergent validity is confirmed.

The following table is showing the Discriminant validity of the measurement model by measuring the construct cross-loading. If the correlation between a construct and measurement items is greater than it is for other latent constructs, this indicates the concerned latent construct has better measurement prediction for items compared to other latent constructs. the discriminant validity can be assessed through another method which is the comparison between the value of the square root of AVE in each latent construct and the other correlation value among the latent constructs (Fornell & Larcker, 1981). The greater value comparing other correlation values among the latent constructs proves the latent construct is well established. Next for the common method bias (CMB), the variance inflation factor (VIF) (Kock, 2015) has been tested. The VIF should be lower than 5 in reflective SEM models (Kock & Lynn, 2012). In the model of this study, the highest VIF is 2.4. which illustrating that there is no CMB.

Table 49*Discriminant Validity (Fornell–Larcker Criterion)*

	CI	CR	EI	OC	SP	TI	TML
CI	0.773						
CR	0.581	0.792					
EI	0.394	0.523	0.821				
OC	0.663	0.511	0.617	0.769			
SP	0.434	0.427	0.553	0.524	0.800		
TI	0.605	0.508	0.536	0.605	0.463	0.744	
TML	0.515	0.525	0.638	0.557	0.522	0.590	0.803

Although the Fornell-Larcker criterion elucidates the discriminant validity, a heterotrait-monotrait ratio of correlations (HTMT) can give a more comprehensive result. Through, Monte Carlo simulation it was found that the HTMT ratio can give an efficient result to test the discriminant validity of a test than the Fornell-Larcker criterion by assessing the cross-loadings of the study (Benitez et al., 2020; Henseler et al., 2015). The recommended Fornell-Larcker criterion exemplifies that, the squared root of the AVEs (diagonal values) should be higher than the correlation value among the latent constructs (Hair et al., 2019). Conversely, to achieve discriminant validity all the constructs should have an HTMT ratio of more than 0.85 (Henseler et al., 2015).

Table 50*Discriminant Validity (HTMT Criterion)*

	CI	CR	EI	OC	SP	TI	TML
CI							
CR	0.792						
EI	0.519	0.709					
OC	0.859	0.676	0.800				
SP	0.586	0.600	0.734	0.692			
TI	0.799	0.702	0.703	0.790	0.628		
TML	0.700	0.746	0.860	0.720	0.711	0.795	

Table 51*Summary of Measurement Model with Result, Referred Value, and Reference Sources*

<i>Parameter estimation</i>	<i>Analysis Value</i>	<i>Suggested Threshold</i>	<i>Reference</i>
Cronbach's Alpha	0.703 to 0.775	Minimum 0.70 Maximum of 0.95 Recommended 0.70-0.90	(Hair et al., 2019)
rho_A	0.726 to 0.78	More than 0.70	(Hair et al., 2019; Benitez et al., 2020)
Composite Reliability	The composite reliability is from 0.832 to 0.861	Which is quite higher than the required value that is 0.7	(Gefen et al., 2000).
Average Variance Extracted (AVE)	0.53 to 0.675	AVE 0.50	(Hair et al., 2019)
Fornell–Larcker Criterion		The squared root of the AVEs (diagonal values) should be higher than the correlation value among the latent constructs	(Hair et al., 2019)
HTMT Criterion	between the range	HTMT < 0.90	(Hair et al., 2019)

According to Hair et al. (2017), the factor loadings should be larger than 0.7. Indicators with loadings of 0.4 to 0.7 should only be deleted if their exclusion from the model increases the composite reliability to more than 0.7. Some items have been deleted due to poor loading and recorded in the following table.

Table 52*Summary of Accepted and Deleted Items*

<i>Construct</i>	<i>Items</i>	<i>Accepted</i>	<i>Deleted</i>
Continuous Improvement	CI1	CI1	
	CI2	CI2	
	CI3	CI3	
	CI4	CI4	
Customer Relationship	CR1	CR1	
	CR2	CR2	
	CR3	CR3	
Employee Involvement	EI1	EI1	
	EI2	EI2	
	EI3		EI3
	EI4	EI4	
Organizational Culture	OC1	OC1	
	OC2	OC2	
	OC3	OC3	
	OC4		OC4
	OC5	OC5	
Supplier Partnership	SP1	SP1	
	SP2	SP2	
	SP3		SP3
	SP4	SP4	
Top Management Leadership	TML1	TML1	
	TML2	TML2	
	TML3	TML3	
TQM Implementation	TI1	TI1	
	TI2	TI2	
	TI3	TI3	
	TI4	TI4	

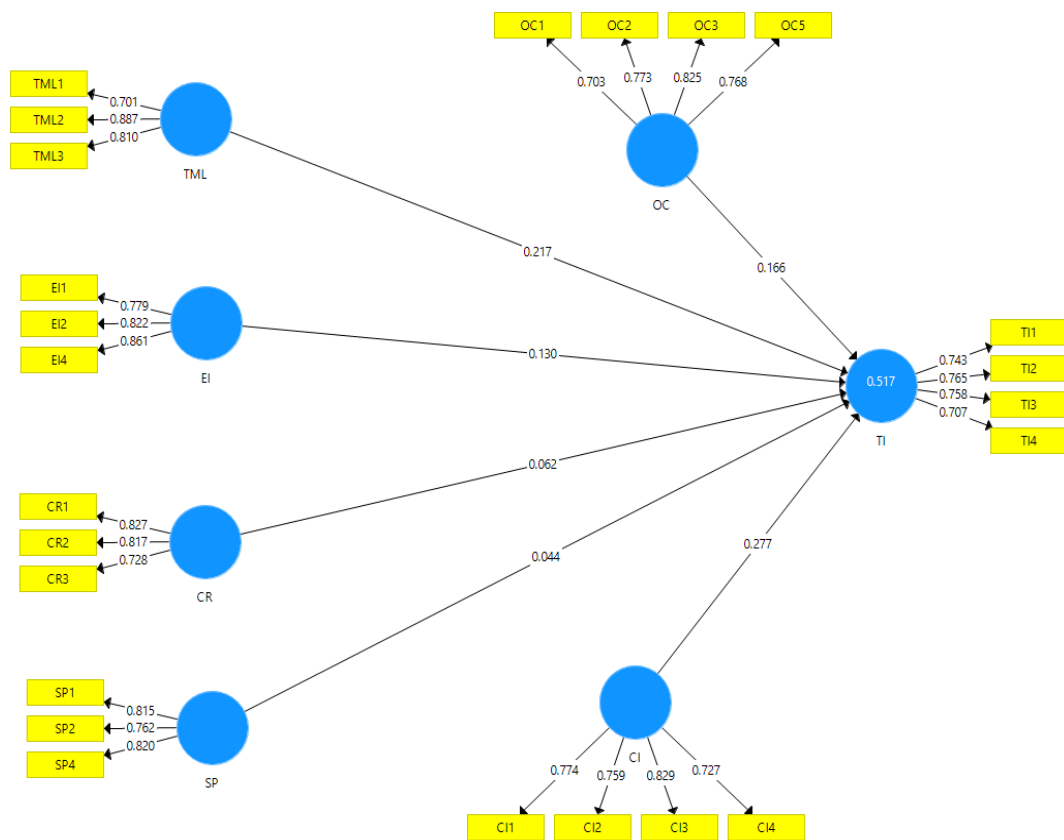
7.10 Model Specification

Path models are diagrams to visually display the variable relationships and the hypothesis that are observed. The model specification presents the construction of the

inner model and outer model. The relationship between the indicator variables and their corresponding constructs is evaluated and a reflective indicator was drawn through SmartPLS to illustrate the connection of the indicator variables with the constructs. The following figure presenting the structural model of this study.

Figure 25

Path Model



7.11 Hypothesis Testing (*Bootstrapping Results*)

Hypotheses that were constructed in light of the research objectives and research questions were tested because of the coefficient parameter and the significant value generated from the 95% bias-corrected confidence interval (BCa) of each independent variable. It was tested using the one-tailed rather than two-tailed test. Testing hypotheses using a one-tailed test is more appropriate when the hypothesis direction is clear, to minimize type II errors (Latan et al., 2018).

Table 53

*Path coefficient * Significant level at 5% structural path significance in bootstrapping (PLS-SEM results.)*

To declare a relationship to be statistically significant, the p-value should be less than 0.05 and the bias-corrected confidence interval should not have any zero (Ahmed et al., 2020; Hair et al., 2019).

<i>Hypot heses</i>	<i>Path</i>	<i>Beta</i>	<i>Std. Error</i>	<i>t- Statistics</i>	<i>P Values</i>	<i>Bias Corrected Confidence Interval</i>	<i>Results</i>
5	CI -> TI	0.277	0.049	5.715	0		Supported
H2	CR -> TI	0.062	0.047	1.304	0.097		Not Supported
H4	EI -> TI	0.13	0.055	2.34	0.01	95%	Supported
H6	OC -> TI	0.166	0.049	3.39	0		Supported
H3	SP -> TI	0.044	0.065	0.676	0.25		Not Supported
H1	TML -> TI	0.217	0.056	3.859	0		Supported

*Note: (Variables) Continuous improvement (CI), Customer relationship (CR), Employee involvement (EI), organizational culture (OC), Supplier partnership (SP), Top management leadership (TML). *p < .05; ** p < .05.*

Source: Analysis of survey data

Interpretation

Based on this analysis, continuous improvement, employee involvement, organizational culture, and top management leadership have significant positive effects on TQM implementation. From the analysis results, coefficient values (β , SE , t , p) for the relationships between continuous improvement → TQM implementation, Employee involvement → TQM implementation, Organizational culture → TQM implementation and Top management leadership → TQM implementation are (0.277, 0.049, 5.715, 0.00), (0.13, 0.055, 2.34, 0.010), (0.166, 0.049, 3.39, 0.00) and (0.217, 0.056, 3.859, 0.00) respectively, with 95% BCa < 0.05. This result exhibited that H1,

H4, H5, and H6 are statistically supported. On the other hand, coefficient values (β) for the relationships between customer relationship \rightarrow TQM implementation and supplier partnership \rightarrow TQM implementation are 0.062 and 0.044 respectively with 95% BCa < 0.01 . This result indicating that H2 and H3 are not supported.

Table 54*Summary of Hypothesis Result*

Research Objectives	Research Questions	Hypothesis	Statistical Test	Linkages in the model	Proposed effect	Result (Sign)
To explore the level of top management leadership in TQM implementation	<i>To what extent does top management leadership support the TQM implementation?</i>	H1 Top management leadership has significant influence on TQM implementation.	Correlation	TML -> TI	+	+
To investigate the practice of customer relationship in TQM implementation	<i>To what extents does customer relationship support TQM implementation?</i>	H2 Customer relationship has significant influence on TQM implementation	Correlation	EI -> TI	-	-
To examine the level of supplier partnership in TQM implementation	<i>To what extent does supplier partnership support TQM implementation?</i>	H3 Supplier partnership has significant influence on TQM implementation	Correlation	SP -> TI	-	-
To scrutinize employee	<i>To what extent does employee</i>	H4 Employee Involvement	Correlation	CR -> TI	+	+

involvement in TQM implementation	<i>involvement support TQM implementation?</i>	has significant influence on TQM implementation				
To explore the activities of continuous improvement in TQM implementation	<i>To what extent does continuous improvement support TQM implementation?</i>	H5 Continuous improvement has significant influence on TQM implementation	Correlation	CI -> TI	+	+
To find out the influence of organizational culture on TQM implementation	<i>To what extent does organizational culture support TQM implementation?</i>	H6 Organizational Culture has significant influence on TQM implementation	Correlation	OC -> TI	+	+

Interpretation

The present study result revealed the TQM implementation in private commercial banks of Bangladesh with some important variables which are addressed as critical success factors of TQM supported by the literature. The study examined the influence of TQM implementation on TMC, SP, CR, EI, CI, and OC. From, the analysis, it was shown that TQM underwrites significant and positive influence on TMC, EI, CI, and OC in the context of the banking sector of Bangladesh. The findings also established a surprising outcome that TQM has a negative association with CR and SP which are the utmost significant and positive predictors for quality management practices. TQM programs are aligned with the goals to understand customers, surpass needs, satisfy through providing quality products and services which can be achieved by supplier partnership.

The customers of banks, in this digital age, not only borrowing and depositing money but want to be fully embraced with the convenience of technology. All sort of banks needs to adopt a contemporary technology-oriented customer-focused approach to cope up with the increasing and ever-changing customer demands and competition as well. A relationship-based marketing approach ensures the loyalty of customers. The sooner and better banks understand the requirements and preferences of customers, the greater the chance to tailor and launch services leads to customer satisfaction in this customer-centered industry. But the study revealed a very important loophole in the banking sector of Bangladesh that is customer relationship is not getting that much attention that it needs to be. On the contrary, in some cases, this aspect is fully ignored. Surprisingly, banks are developing and offering services to their customers regularly without considering them as the prime decision-makers of their banks. Banks need to understand the need and preferences of customers in terms

of maintaining a long-term relationship, personal counseling before a purchase decision, emotional and psychological needs, service with consistent quality, a guarantee of security, privacy, and confidentiality, use of the internet for transacting, discretionary portfolio management, global accessibility and so on. In this day and age, banks should not only focus on quality services but to cement long-term, mutually beneficial relationships as customers want full packages of luxury concerning the selection of appropriate loan packages, investment packages and loan repayment methods, planning for cost-cutting, availing of tax redemption, experiencing expertise on financial statements, stock reports, valuation reports, etc. A sense of belongingness in customers' minds creates a long-term association with the bank. Collecting feedback from customers is a very common practice in banks of Bangladesh but responding promptly and incorporating customer input for developing quality statements might not. Faster and better service with error-free results leads long term bonding which can be achieved by incorporating the customer's voice. The acceptance of the null hypothesis indicates that the banks of Bangladesh are in dire need of a wide-ranging understanding of the connection between total quality management and customer satisfaction. Very little literature support was found in this regard. Jamali et al. (2010) identified four drivers and dependent factors for TQM implementation. The authors also argued that managers need to pay much consideration to four drivers rather than dependent factors for successful TQM implementation. According to the finding customer, the focus is included independent factors. Ahmad and Elhuni (2014) analysed and discussed the findings from three-level of TQM practices. The study documented critical quality factors at Level 3 with the lowest impact on the implementation process of TQM according to the findings. The level included the focus on focus on the organizational operations connected to

the formation of a systematic examination and analysis of the key process measures which have a direct impact on the value adjusted to the satisfaction of the client.

As a service industry, banks need to focus on supplier and supplier partnership can play the core role in proving uninterrupted quality services to customers.

According to the result of the study, supplier partnership is not taken into consideration for quality purposes. The possible reasons might be addressed as focus on short, rather than long term partnership, no principles for improving partnership, lack of information for suppliers' quality data, selecting suppliers based on prices rather than the quality system, lack of proper suppliers' evaluation system and lack of understanding to incorporate suppliers as an input for quality services. To pursue effective supplier partnership, banks should identify core suppliers, create long-term co-operative relations with suppliers, arrange joint training sessions regarding quality activities, promote the exchange of information concerning quality, provide feedback of suppliers' products on the performance, conduct supplier quality audits on regular basis, practice suppliers award based on performance in terms of quality, price, on-time delivery, publication, etc. and select suppliers on product quality. Jamali et al (2010) identified four drivers and dependent factors for TQM implementation. The authors also argued that managers need to pay much consideration to four drivers rather than dependent factors for successful TQM implementation. According to the finding supplier, the partnership is included independent factors. Ahmad and Elhuni (2014) analyzed and discussed the findings from three-level of TQM practices. The study documented critical quality factors at Level 3 with the lowest impact on the implementation process of TQM which included reliance on reasonable few dependable suppliers.

The result of the hypothesis exhibited that there is a very strong, direct, and significant relationship exists between top management commitment and Total Quality Management implementation in the banking sector of Bangladesh. Recognized TQM Gurus like Deming, Juran, and Crosby identified the critical role of top management and its responsibility in chase of quality improvement echoes (Zhang, 1999). Top management is accountable for founding policies, guidelines, and strategic objectives, aligning quality policies with the quality statement, creating a culture of continuous improvement as well as demonstrating leadership and direction for quality management within the organization. Leadership is primarily a matter of removing barriers which hinderers the TQM implementation through providing and allocation all sort of resources. The commitment of leadership toward quality is the most critical differential factor in high contact service industries like banks which ensures the retaining and maintain internal as well as external customers. Sit et al. (2011) examined the connotation between TQM practices and service quality in Malaysia's commercial banking industry. Questionnaire-based survey data and multiple regression analysis explained the positive association of service quality with top management leadership. Sarathy (2013) divulged the important role of top management commitment for TQM practices in the study on the real estate industry determining the important factors that influence the TQM practice. Jamali et al. (2010) identified four drivers and dependent factors for TQM implementation. The authors also argued that managers need to pay much consideration to four drivers rather than dependent factors for successful TQM implementation. According to the findings, top management commitment, strategic quality planning, process management, and training, are the four drivers and respectively are of high importance in TQM implementation. Ahmad and Elhuni (2014) analysed and

discussed the findings from three-level of TQM practices. The study addressed Level 1 as a fundamental component and urged to be recognized in the early stages of the TQM implementation which is top management leadership. It is documented as critical and requires active responsibility evaluation and improvement of a management system. Singh and Dubey (2013) conducted a study on Soft TQM practices in the Indian cement industry and identified top management commitment as an important factor for TQM implementation.

Results of the statistical data analysis revealed continuous improvement has a significant influence on TQM implementation. Through continuous improvement is not well introduced and trained by management as one of the critical success factors of TQM in Bangladesh, according to the study result, there is a practice of continuous improvement.

Prajogo and McDermott (2005) argued that organizational culture regulates the positive outcome of TQM implementation instead of cultural change brought up by TQM implementation. The fundamental of TQM is culture and the study revealed that culture is dominant for TQM implementation in the banking sector of Bangladesh. Antony et al. (2002) discussed the importance of open culture for communication from top to bottom and bottom to top while practicing TQM. Baird et al. (2011) Examined the relationships between organizational culture, TQM practices, and operational performance in Australian business units through a questionnaire survey. Multiple regression analysis and SEM revealed that the cultural dimension is the most important factor in TQM practices. Singh and Dubey (2013) conducted a study on Soft TQM practices in the Indian cement industry and identified culture as an important factor for TQM implementation. A study conducted by Gherbal et al. (2012) on TQM implementation in the Libyan oil and gas sector and the study

revealed that culture has a positive impact on TQM implementation. Fu et al. (2015), exhibited the positive correlation between business performance and TQM oriented culture. The study also highlighted leadership, empowerment, participation of all and systematic control as the basic fundamentals for building a TQM Culture.

Employee involvement also has a significant impact on TQM implementation. This result confirmed that the quality movement is employee-driven. Therefore, employee involvement in making decisions regarding the development of quality goals and strategies, customer-related problem solving, incorporating the voice of customers, promoting branding, and retaining customers with more than quality services. Sarathy (2013) divulged the important role of employee involvement for TQM practices in the study on the real estate industry determining the important factors that influence the TQM practice. A study conducted by Gherbal et al. (2012) on TQM implementation in the Libyan oil and gas sector and the study revealed that employee involvement has a positive impact on TQM implementation.

The result states that TQM is a relatively new spectacle in the banking sector of Bangladesh. Evidence has shown that there is a deficiency of knowledge of the key components influencing the process of TQM implementation like customer relationship and supplier partnership. The contribution to the literature is therefore needed to find out the gap. A structured framework is needed for the understanding TQM concept, tools, and techniques which are seemingly caught up in a form of a tangle right now. To the best knowledge, the study on TQM implementation with CSFs in the banking sector of Bangladesh is the first examined in this study. Banks should always emphasize the leadership quality aligned with the vision of customer satisfaction through maintaining customer relationships which can be provided by empowered and efficient human resources, supplier partnership

Table 55*Hypothesis Result with Literature Support (Sorted on recent year order)*

<i>Dependent Variable</i>	<i>Independent Variables</i>	<i>Hypotheses</i>	<i>Supporting References in Banking</i>	<i>Supporting References in General</i>
TQM Implementation	Top management commitment	H1 Top management leadership is significantly influenced TQM implementation.	Addo and Ackah (2017); Islam and Haque, (2012); Al-Marri et al. (2007)	Baidoun et al. (2018); Ahmad and Elhuni (2014); Sarathy (2013); Singh and Dubey (2013); Talib et al. (2012a); Zehir et al. (2012); Sit et al., (2011); Jamali et al. (2010)
TQM Implementation	Customer relationship	H2 Customer relationship is significantly influenced TQM implementation	Addo and Ackah (2017); Talib et al (2012b)	Ahmad and Elhuni (2014); Jamali et al. (2010)
TQM Implementation	Supplier partnership	H3 Supplier partnership is significantly influenced TQM implementation		Ahmad and Elhuni (2014); Talib et al. (2012a); Jamali et al. (2010)
TQM Implementation	Employee involvement	H4 Employee involvement is significantly influenced TQM	Addo and Ackah (2017); Islam and	Sarathy, (2013); Gherbal et al. (2012); Hua et al.

		implementation	Haque (2012)	(2000)
TQM Implementation	Continuous improvement	H5 Continuous improvement is significantly influenced TQM implementation	Addo and Ackah (2017); Al-Shobaki et al. (2010) Al-Marri et al. (2007);	Talib et al (2012a)
TQM Implementation	Organizational Culture	H6 Organizational culture is significantly influenced TQM implementation		Gozukara et al. (2018); Singh and Dubey (2013); Gherbal et al. (2012); Talib et al (2012a); Baird et al., (2011); Beer (2003); Antony et al. (2002); Detert et al. (2000)

7.12 TQM Barriers

7.12.1 Introduction

Based on the literature reviewed and the analyses performed on the survey data, it is recognized that TQM barriers are widely recognised all over the world.

With the objective of the research question which is previously recognized, an extensive review of the literature and statistical analysis was conducted to rank the barriers in the context of Bangladesh practicing in the banking sector. It is significant to mention that since a good number of researches have already been done on the obstacles to the implementation of TQM, the study firstly grouping the TQM barriers and then ranking based on the statistical result.

7.12.2 Analysis Details

Firstly, the studies on TQM barriers are reviewed to identify the factors for TQM failure. TQM studies are not easily comparable as different criteria to define success/failure have been used. The studies were focused which discuss TQM barriers on a group basis and identified the factors under certain groups.

Secondly, groups have been identified for the study and factors under each group either. Though the groups were hiding in the questionnaire and only factors were mentioned to be asked to scale responses from the respondents, a detailed discussion was conducted with references on TQM group barriers in the literature review section.

Thirdly, statistical analysis was done by SPSS on survey data, the response of the respondents on TQM barriers in their respective banks through the Likert Scale.

Fourthly, all the barriers ranked based on the result. The factors are ranked under the specific group and group ranking is also conducted to identify the top most important barriers in the banking sector of Bangladesh.

Table 56*Analysis Result of TQM Barriers*

Constructs	Barriers	Item Code	Mean	Std. Deviation	Rank	Rank Within the Construct	Factor Average	Factor Ranking
Strategic Barriers	1.TQM adoption barriers	TBT1	3.90	.756	15	4	3.96	3
	2. Inappropriate planning	TBT2	3.98	.663	7	2		
	3. Lack of top-management commitment	TBT3	4.07	.709	1	1		
	4. Deficient leadership	TBT4	3.96	.688	9	3		
	5. Unrealistic expectations	TBT5	3.90	.790	16	5		
Structural Barriers	6. Lack of financial support, cost of implementation	TBS1	3.86	.851	18	2	3.84	4
	7. Lack of physical resources	TBS2	3.74	.873	21	3		
	8. Lack of information systems	TBS3	4.07	.835	1	1		
	9. Inappropriate organizational structure	TBS4	3.68	.921	22	4		
Human Resource Barriers	10. Lack of TQM knowledge	TBH1	3.90	.832	16	6	3.96	2
	11. Lack of employee interest	TBH2	3.93	.821	14	5		
	12. lack of training needs assessment	TBH3	3.99	.740	6	3		
	13. lack of communication of training feedback	TBH4	3.99	.847	5	2		
	14. Lack of recognition and reward for success	TBH5	3.96	.834	9	4		
	15. Employee's resistance to change the culture	TBH6	4.02	.787	3	1		
Procedural Barriers	16. Lack of evaluation and self-assessment	TBP1	3.95	.836	13	1	3.80	5
	17. Complexity of process	TBP2	3.66	.877	23	4		

	18. Lack of customer focus	TBP3	3.76	.891	20	3		
	19. Lack of supplier involvement	TBP4	3.83	.885	19	2		
Contextual	20. Lack of continuous improvement culture	TBC1	4.02	.846	3	1	3.98	1
Barriers	21. Lack of cross-functional teamwork	TBC2	3.96	.840	9	3		
	22. Poor and ineffective communication	TBC3	3.96	.854	12	4		
	23. Lack of team orientation and innovation	TBC4	3.98	.855	7	2		

7.12.3 Explanation

According to the data analysis outcome, strategic barriers of the TQM implementation program are the most vital TQM barrier in the banking sector of Bangladesh. These barriers are related to the strategic aspect of continuous quality improvement. It includes “the insufficient budget for quality initiatives, shortage of resources, ineffective information system, lack of employee devotion due to overload of work, and lack of technological resources”. Contextual barriers are strongly connected with communication and cultural context such as “lack of continuous quality improvement culture, lack of cross-functional teams, resistance to change organizational culture between departments, lack of practicing a quality management system, poor communication” and these barriers placed 2nd based on the statistical result. Human resource barriers ranked third which includes “lack of employee understanding on TQM concept, lack of challenging job, lack of training needs assessment, lack of employee training, lack of teamwork to solve problems, lack of effective appraisal system”. “The complexity of the process, lack of monitoring of regular process improvement, lack of effective controlling of manufacturing processes, lack of knowledge about quality cost, no benchmarking of the current process” identified as procedural barriers which placed fourth according to the study findings. Structural barriers ranked fifth to implement TQM which includes “inappropriate organizational structure, lack of sufficient physical resources, lack of information system, lack of financial support, and shortage of time”. The concept of TQM implementation is very new in Bangladesh. Even the top-level managers have little knowledge and information about the contribution of different barriers during TQM implementation. Consequently, they are not able to prepare an operative design for TQM implementation. The study findings identified and ranked the barriers to

TQM implementation which would contribute to designing an effective TQM implementation program.

Chapter 8

Summary of Findings, Conclusion & Recommendations

Prelude

This chapter summarized the findings of the work, illustrated the worth of the developed framework and showed the contribution to knowledge in research and application.

Furthermore, a structured guideline has been given for future work that can direct more extensive study into areas where there is still potential for applied and theoretical expansion.

8.1 Summary of Findings

The customers of banks, in this digital age, not only borrowing and depositing money but want to be fully embraced with the convenience of technology. All sort of banks needs to adopt a contemporary technology-oriented customer-focused approach to cope up with the increasing and ever-changing customer demands and competition as well. A relationship-based marketing approach ensures the loyalty of customers. Customer satisfaction is positively linked with customer loyalty as satisfied customers are more likely to persist with prevailing organizations regarding availing product or service which secures generation of regular revenue for the company. Positive customer experience with the service (Anderson & Sullivan, 1993; Fornell *et al.*, 1996; Pattanayak *et al.*, 2017). The sooner and better banks understand the requirements and preferences of customers, the greater the chance to tailor and launch services leads to customer satisfaction in this customer-centered industry. According to the study findings by Pattanayak *et al.* (2017), application of TQM dimensions in the banking sector would endure better, prompt, satisfactory and reliable service, which ultimately resultant customer satisfaction and consequently customer loyalty.

But the study revealed a very important loophole in the banking sector of Bangladesh that is customer relationship is not getting that much attention that it

needs to be. On the contrary, in some cases, this aspect is fully ignored. Surprisingly, banks are developing and offering services to their customers regularly without considering them as the prime decision-makers of their banks. Banks need to understand the need and preferences of customers in terms of maintaining a long-term relationship, personal counseling before a purchase decision, emotional and psychological needs, service with consistent quality, a guarantee of security, privacy, and confidentiality, use of the internet for transacting, discretionary portfolio management, global accessibility and so on.

As a service industry, banks need to focus on supplier and supplier partnership can play the core role in providing uninterrupted quality services to customers. According to the result of the study, supplier partnership is not taken into consideration for quality purposes. The possible reasons might be addressed as focus on short, rather than long term partnership, no principles for improving partnership, lack of information for suppliers' quality data, selecting suppliers based on prices rather than the quality system, lack of proper suppliers' evaluation system and lack of understanding to incorporate suppliers as an input for quality services.

There is a very strong, direct, and significant relationship exists between top management commitment and Total Quality Management implementation in the banking sector of Bangladesh. Top management is accountable for founding policies, guidelines, and strategic objectives, aligning quality policies with the quality statement, creating a culture of continuous improvement as well as demonstrating leadership and direction for quality management within the organization. Leadership is primarily a matter of removing barriers which hinderers the TQM implementation through providing and allocation all sort of resources. The commitment of leadership toward quality is the most critical differential factor in high contact service industries

like banks which ensures the retaining and maintain internal as well as external customers.

Continuous improvement has a significant influence on TQM implementation. Through continuous improvement is not well introduced and trained by management as one of the critical success factors of TQM in Bangladesh, according to the study result, there is a practice of continuous improvement.

The fundamental of TQM is culture and the study revealed that culture is dominant for TQM implementation in the banking sector of Bangladesh.

Employee involvement also has a significant impact on TQM implementation. Quality movement is employee-driven. Therefore, employee involvement in making decisions regarding the development of quality goals and strategies, customer-related problem solving, incorporating the voice of customers, promoting branding, and retaining customers with more than quality services.

Strategic barriers of the TQM implementation program are the most vital TQM barrier in the banking sector of Bangladesh. These barriers are related to the strategic aspect of continuous quality improvement. It includes “the insufficient budget for quality initiatives, shortage of resources, ineffective information system, lack of employee devotion due to overload of work, and lack of technological resources”. Contextual barriers are strongly connected with communication and cultural context such as “lack of continuous quality improvement culture, lack of cross-functional teams, resistance to change organizational culture between departments, lack of practicing a quality management system, poor communication”, and these barriers placed 2nd based on the statistical result. Human resource barriers ranked third which includes “lack of employee understanding on TQM concept, lack of challenging job, lack of training needs assessment, lack of employee training, lack

of teamwork to solve problems, lack of effective appraisal system”. “The complexity of the process, lack of monitoring of regular process improvement, lack of effective controlling of manufacturing processes, lack of knowledge about quality cost, no benchmarking of the current process” identified as procedural barriers which placed fourth according to the study findings. Structural barriers ranked fifth to implement TQM which includes “inappropriate organizational structure, lack of sufficient physical resources, lack of information system, lack of financial support, and shortage of time”.

TQM is a relatively new spectacle in the banking sector of Bangladesh. Evidence has shown that there is a deficiency of knowledge of the key components influencing the process of TQM implementation like customer relationship and supplier partnership. TQM programs are aligned with the goals to understand customers, surpass needs, satisfy through providing quality products and services which can be achieved by supplier partnership. Therefore, banks should always emphasize the leadership quality aligned with the vision of customer satisfaction through maintaining customer relationships which can be provided by empowered and efficient human resources, supplier partnership.

8.2 Conclusion

The economy of the globe has witnessed so many fierce changes that put every type of business organization under pressure due to the impact of high information technology on decisions, planning, and action, tremendous growth in customers' value awareness and value demands, breakdown in the conventional boundaries of entrepreneur leaders and managers, growing complexities of modern business functions and structures, emerging markets with information, communication and knowledge-based services. Considering all these, gaining competitive advantage requires finding a new way and TQM is getting attention as well appreciation in this

regard. The study is saddled with the findings by examining the extent of TQM practices in the banking sector of Bangladesh which is realizing the dire need to respond to the strategies of competitors as fast as possible. TQM first appeared in the manufacturing sector, but progressively the service sector is also appreciating the benefit of TQM.

Doubtlessly the epoch of TQM is upon us. But without proper planning and effective utilization of critical success factors it may become just a fad. TQM is realized as a pathway to change some economies into a more competitive one, but literature is evident that the TQM implementation is complex, time-consuming, and costly which involves high-level exertions from employees, top management, and organizations contemporaneously. The implementation of TQM requires the process of transformational change. Coping up with this change is obligatory and top management leadership along with the involvement of all employees can encourage, uphold enthusiasm to overcome barriers.

8.3 Implications

Quality is a multidimensional concept and aspects rather than considered as a whole. The dimensions of quality must be recognized not only to a sheltered competitive position in the industry but also to elude forsaking of poor performance caused by any measurement. TQM should be focused, studied, and analysed to get them available in the chosen format. TQM implementation is a vital management practice to maintain good progress along with the new service technologies which will add value and value and create a strong image in the banking sector which is the most vibrant actor in the financial market to promote economic growth. At this juncture, the present study could contribute a lot to implement TQM successfully.

8.3.1 Organizational Implication

The findings stand applied and have hands-on implications for banks to implement TQM practices. The study will benefit banks who are in the course of planning to adopt the philosophies of TQM and also those who are unaware of the importance and benefit of TQM and lacking adequate knowledge. The HRM policies should be aligned with TQM practices to bid the heat up competition in this sector. The concentration on the role of leadership, strategic vision, the culture of continuous improvement, customer focus strategies, teamwork along with rewards and education of the employees will lead to filling the gap between the desired and current state for radical improvement in their performance. Overall, the banks especially the private commercial banks who facing fierce competition for survival, growth, profit maximization, complying with government regulations, satisfying customers, and so forth, can apply TQM as a management philosophy and gain the following expected outcomes. The study also has contributed by using a scale that was empirically tested for measuring TQM implementation barriers in the context of Bangladesh which can act as a guiding tool while planning and implementing TQM. Top management commitment and leadership would exhibit the vision of the bank.

- Banks can provide less processing times to their clients for delivery the services like key products and services such as short-term and long-term loans, new accounts, card services like ATM cards, credit cards, debit cards, check encashment.
- Less waiting times such as downtime and queuing time can be reduced.
- Customer complaints whether written or verbal can reduce by offering fast and prompt services.

- The way of delivering services would be friendly and it will lead to the efficiency of employees.
- The promptness in responding to customer inquiries would make a happy clientele.
- The principle of TQM is involving everyone. Thus, employee participation and voice make them involve and responsible.
- A long-term commitment with suppliers ensures the quality of goods.
- Banks need to ensure they define quality as well as quality policy and construct detailed measurable goals aiming to meet as well as exceed customers' expectations and to increase organizational performance.
- The fortitudes of the study providing a comprehensive understanding of TQM, present detailed guidelines and explanations for effective implementation of TQM for the furtherance of value-added service in the banking industry of Bangladesh.

8.3.2 Managerial Implications

Research and its theoretical basis have a lot of applied implications for respective industries apart from contributing to the development of literature in the TQM area. In recent years, TQM principles and practices have been engrossed by many developing nations not only in the manufacturing sector but service area as well. It has also acknowledged a great deal of consideration in the banking sector which is the bedrock of economic progress for any country. Emphasis on understanding the dire needs of the clientele in this sector and strive to provide the services that add value and completely meet the same as a means to endure in this highly competitive industry.

The documentation of the enormous literature on the implementation of TQM to banks can put light on the practical implication of TQM in a more advised and assured way. The banks are constantly searching for strategies and structures to offer high-end products and services to their customers and in this regard, TQM without any question is the best management practice to steer quality strategies for the long run. A guideline of the implication of TQM for managers is discussed below based on the findings.

- Investment is required in terms of money, resources, time to implement TQM, and that needs to be done promptly.
- The study provides a platform for managers implementing TQM successfully which can be considered as a strategic competitive weapon. The study frames an effective guideline for top management and branch managers in banks to review their TQM program on regular basis to facilitate the leadership quality, ease of information system, and maximum high level of technological adaption by prioritizing their customers as well human resources.
- The study urges to pay attention to customer satisfaction and retention by modifying different banking service quality and continuously improve them.
- TQM practices keep themselves updated by practicing different quality improvement tools and techniques.
- The study provides a practical understanding of TQM practices and their adoption process.
- The study links TQM concepts and theories, which provides a deep understanding of operational capability and readiness for TQM implementation in is sector.

- Identifying the major hindrances in TQM Implementation which is discussed in this study can be addressed and considered while formulating strategies.
- The study urges a clear direction for departmental coordination. The marketing department is not only responsible for working meticulously in fulfilling customers' s ever-changing needs, but it is the entire bank and its culture. TQM concept focusing on that.
- The critical success factors encountered in this study will make the managers more informed to apply TQM in their respective banks and to get the success story of TQM.

The challenges and difficulties which is an absolute must for managers to know since it makes them aware of obstacles they may confront. The identification of TQM barriers not only strengthens the knowledge and understanding of successful TQM implementation but also enriches the prevailing literature in the context of the banking sector of Bangladesh as well as developing countries. Likewise, this finding will also create a platform for the decision-makers to formulate an effective strategy for the successful implementation of TQM along with the proper utilization of limited resources.

- The argument brought forward in this research is that appropriate culture is direly needed to implement TQM successfully and the dominant organizational culture needs to be compatible with the standards and basic conventions proposed by the TQM discipline which increases the likelihood of success. The implementation process becomes slow, difficult, and redundant if TQM culture deviates from the organizational culture which can be formulated by the management. The study also heightened to be ensured to have

supportive organizational culture as well environment for the effective implementation of TQM.

- The study accentuates the strong standing of implementing a comprehensive TQM program comprising the key success factors of TQM not only implementing a limited selected practice.

8.4 Contribution to Knowledge

This research will make a worthwhile contribution to knowledge on theoretical and practical levels. The proposed framework identified the most important factors for implementing TQM in the banking sector. The study also provides insights into quality management practices which contributes to academic knowledge.

Moreover, this study might be considered as the beginning of the TQM journey in the banking sector and future service sectors. The study also convey invitation to other researchers to explore Total Quality Management. Another way round, the present study opens the scope and potentiality for future research which is necessary to improve quality management and development in Bangladesh. Other independent variables can be adopted and mediating or moderating variables should also be introduced and examined. Future studies could be carried out to update this research in terms of methodology, sample, variables, and period.

8.5 Scope for Further Study

The findings of this study propose some guidelines for further research. It provides a noteworthy contribution to the knowledge and practice of TQM implementation, for practitioners and TQM researchers, with a conceptual framework that recognizes and accommodates the critical success factors of TQM in this sector.

The findings can plot in other service industries such as real estate, finance, mobile/internet service provider, auto service providers, and many others where the

customers play an important role in the growth of industry and add significantly to the wealth generation with more extension of this paper and also can use to develop hypothesis for survey research by constructing a valid instrument to identify the critical success factors for TQM implementation in developing countries like Bangladesh. Future studies in other countries may comprise diversity and make the study more versatile and generalizable. A cross-cultural study can be conducted and the fundamental relationship can be analyzed.

A bigger sample size can be taken to get the real picture in a closer way. The data were collected at a single point in time. So, therefore, a longitudinal study can be conducted to understand how TQM practices evolve in organizations as quality experts believe that it takes three to five years to reach a mature level of its implementation. A lot more insightful observation into the picture can be brought out by examining the variations and progress at different stages of TQM implementation. Application of qualitative techniques and integrating approaches like quality function deployment (QFD), Fuzzy-QFD, Fuzzy-Analytic Hierarchy (AHP), Data Envelopment Analysis (DEA) which are very effective TQM tools can be studied to understand the relationship between the present TQM model and customer satisfaction.

Only six variables were measured and examine in this study. Other variables can be put in the frame. Empirical research can be conducted from the external point of view such as customers, suppliers, regulators, etc. to accompaniment with the obtained results. A new horizon can be drawn on dimensions of TQM for discussion and deliberation on other industries. A framework or model should be constructed to guide the application of TQM in services.

Further study can be conducted on the relationship of TQM with job satisfaction, customer satisfaction, organizational performance, HRM practices, and so forth. Better comprehend on the blockades and difficulties that oppose successful TQM implementation can be carried out.

Though the existing research has focused on TQM as a practice-oriented management system from the perspective of this academic research, it is stated the need to consider it as a special field of organizational research. The aim is to understand the contemporary TQM management approaches along with principles, tools, and techniques and the most effective manner of implementing them. This type of study needs to be conducted more and more for the practical understanding and development of the TQM discipline not only in this area but also in general.

The future study should review other TQM dimensions and find out the most important factors which can contribute to successful contribution to TQM implementation.

Islamic banking can also draw attention in line with the variables of this study. The CSFs in this study can be applied in other service organizations by modifying to examine the implementation of TQM to improve the service quality with effective integration of both internal and external aspects for quality improvement.

Enlarging the study population involving the banking sector both public, specialized and foreign can provide a wider picture concerning TQM. On the other hand, a larger sample size for a longer period or different period from other industries both public and private can also be investigated for effective implementation of TQM. The relationship between HRM practices, KM strategies, and organizational performance with the TQM practices can also be further explained to grow the synergic effect of TQM. Future research can be conducted by counting some other

variables to cover up dimensions of TQM like perception and operations. Considering TQM as moderating variable or even a mediating variable may also bring changes in the findings and relationships.

8.6 Recommendations

The quality issue has got a new dimension due to smart and knowledgeable customers creating more challenges that require inventing a new way. In the present business era, quality is the synonym of competitive advantage. Like other service sectors, banks are becoming customer-orientated heading toward continuous improvement practice for meeting new customer needs and expectations to survive in this globally competitive business setting. Above and beyond, continuous improvement is also regarded as critical to the success of innovation by inspiring change and resourceful thinking in the organization of works (Costa & Lorente, 2008). Not surprisingly, most of the banks in Bangladesh are less familiar with TQM issues and some cases not interested in the practice of this management philosophy. The banking industry of Bangladesh is still in its infancy in TQM issues. As a result, there is a lacking of empirical study in this regard. It is hoped that this study will create a platform on TQM ground and provide a foundation of knowledge in a holistic and homegrown context. Above and beyond, national academics and practitioners would be reinvigorated to increase their interest in this research area. As this study has covered several management issues, some recommendations have arisen from that viewpoint.

- To motivate and justify managers to invest resources along with time implement TQM programs to enhance organization performance.
- To make a vibration to all types of banks public and specialized as well, to take note of the importance of the customer to improve the performance by introducing QC, TE, adopting QS, developing effective HRM and SM.

- To identify the gaps and create opportunities for further improvement and contributes to the enhancement of quality of services.
- To provide guidelines for qualified experts in evaluating the effectiveness of their current TQM program.
- To enrich the understanding of TQM practices for implementation at the aim of creating that should be a constructive effect on customers' satisfaction.
- To build a distinguished differentiation in services for gaining sustainable competitive advantage.
- To make the bank more market-oriented by focusing on customer satisfaction which leads to loyalty. Market-oriented banks can respond swiftly and antedate the future needs and preferences of their customers. As a result, higher value for the business is created.
- To understand the relationship between improved customer satisfaction and higher market share and profit.
- To establish support among co-workers, sufficient acknowledgment from the organization, and a culture of teamwork for the effective implementation of TQM.
- To create awareness of TQM among the employees by confirming the development of supportive structure for effective functioning of TQM.
- To change employees' views, conduct, and attitude toward quality continuous training and education programs should be outlined.
- To arrange rewards and be recognized for quality improvement efforts.
- To allow a culture for proving constructive feedback along with a focus on continuous improvement from both management and employees stand.

- To align human resource planning, operational process, and employee engagement program with the quality policy.
- To generate a learning environment which is the foremost condition of continuous improvement.

8.6 Statement of Disclosure

The author reported no potential conflict of interest regarding any of the study content and did not receive any financial grant during the preparation of the paper.

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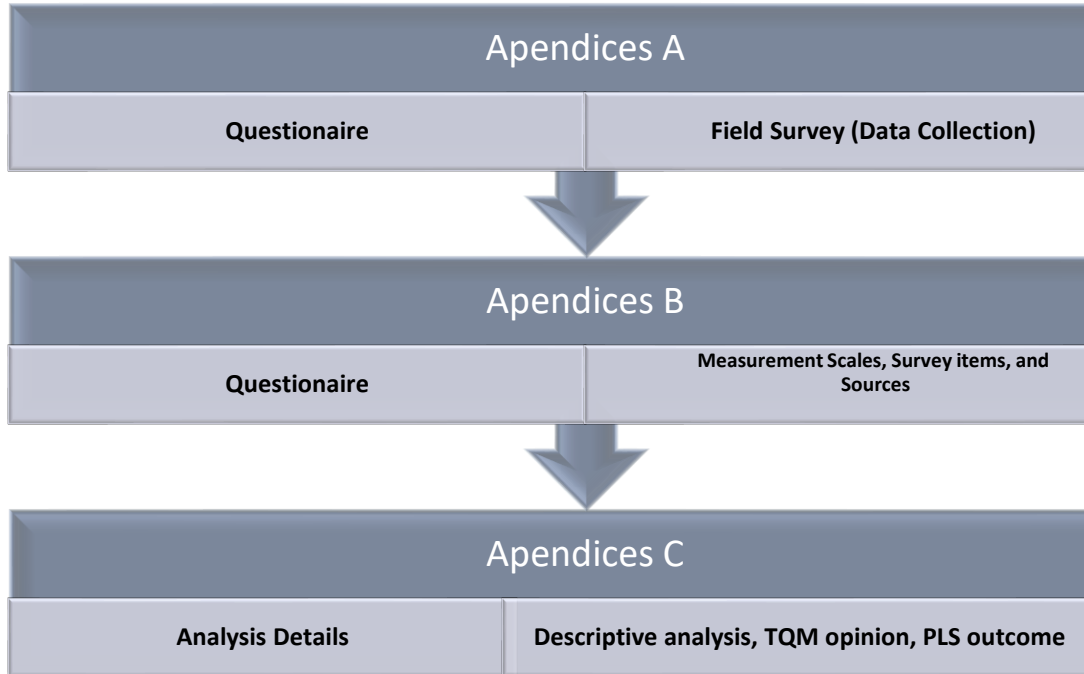
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Appendices

Index to Appendices



Appendices A

An Empirical Study on Total Quality Management (TQM) Practices in Commercial Banks of Bangladesh

Introduction

Please accept heartfelt gratitude for agreeing to take part in this survey that aimed at management employees in order to determine the degree of Total Quality Management (TQM) Practices in banking industry of Bangladesh. Your thoughts and opinions are very important as field expert in this industry. The questionnaire is constructed focusing on some tested factors of TQM and barriers to implementation. It is totally anonymous and purely for academic purposes towards research in the field of TQM. Information collected by the survey is regarded with utmost discretion with no disclosing of the identity of neither respondents nor their organizations. It will take only 15 minutes to complete and would certainly interpose to critically exploring TQM practices in this industry.

Instructions:

Please indicate on the below Likert Scale how you perceive each question from your experience in your bank with regards to TQM by ticking the appropriate box for each question. The questionnaire consists of 5 sections. Thank you for taking time to complete the survey.

Rating Scale: 5-point Likert scale.

Respondent's Information

Name (Optional)

Designation

Gender

Male

Female

Education (Most recent)

Department:

General

Credit

Foreign

HRD

Others

(Please

Remittance

Specify)

Bank Name & Branch

SECTION 1: INFORMATION REGARDING TQM IMPLEMENTATION

Which of the following quality initiatives have your bank implemented? State your agreement with tick mark.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
My bank has set up a quality department with quality system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My bank practices Statistical Process Control Tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My bank has developed cultural change program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My bank has developed strategies for quality improvement & progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality Certification (Tick as many apply)					
QS 9000	ISO 9002-2000	ISO 9001-2000	Others (Please specify)		

Section 2: General TQM Opinion

This section deals with your opinion & belief about Total Quality Management. The following statements are presented for your evaluation. Please circle the number of the response which best represents the level of agreement that indicates whether you:

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
TQM is a management philosophy and practice to ensure effective and efficient use of all available resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TQM aims to make customer satisfaction as the focus of a business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Teamwork and participation are important for achieving a continuous improvement culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training and education are vital elements with respect to TQM implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Statistical techniques (such as Statistical Process Control, Design of Experiments, etc.) are important to ensure consistency of product and process quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplier involvement is vital in supporting quality improvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management leadership, commitment and support determine the success of new change initiatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management must provide adequate resources in every aspect of the business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A work environment, which is conducive for improvement, is created through management-employee partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initiatives such as Kaizen, suggestion schemes, quality circles, etc. will motivate employees to participate in quality improvement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3: Total Quality Management Practices

This section attempts to determine the level of TQM implementation in banking sector of Bangladesh. Please circle your perception on the importance of each statement listed below and the extent practice in your bank. Please use the following scales:

<i>F1: Top Management Leadership</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
<i>F1.1</i> Top management views quality as more important than cost and schedules objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F1.2</i> Top management strongly promotes employee involvement in quality management and improvement activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F1.3</i> Top management empowers employees to solve quality problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F2: Employee Involvement</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
<i>F2.1</i> Employees are given information, continuous training and tools they need to do the job effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F2.2</i> Constant employee awareness and feedback are provided and a reward/recognition process is established.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F2.3</i> Employees' involvement and empowerment is encouraged and supported to take responsibilities and make decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F2.4</i> Every employee's thought and recommendation has been taken into consideration to make any quality decision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>F3: Customer Relationship</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
<i>F3.1</i> Customer satisfaction level are measured and monitored through survey at regular basis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F3.2 Information on quality and customers are collected and analyzed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F3.3 The bank management allows clients and listen to the customer complaints and provide an immediate solution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4: Supplier Partnership	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
F4.1 Problem issues are identified, necessary action plans agreed and progress monitored by both parties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4.2 Bank personnel are fully trained to negotiate, follow up, and fulfill organizational needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4.3 Supplier sourcing verified and recognized quality certification valued.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4.4 Long term commitment is the key factor for supplier partnership.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F5: Continuous Improvement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
F5.1 Adaptation and upgradation of new generation ATM, telephone banking, internet banking, M banking, EFT, point of sale, branch networking is regular practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F5.2 Employees striving to do the right thing in the right manner resulting to fewer mistakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F5.3 Continuously monitoring performance improvement measures and result are evaluated by comparing with goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F5.4 Improvement process are prioritized according to current issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6: Organizational Culture	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
F6.1 Management communicates its strategy and objectives to customers, suppliers and other known external agents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6.2 Training is designed to provide education on total quality concepts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6.3 Prevention of defective services is a strong attitude in this organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6.4 Use of customers' requirements as the base for quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6.5 Data on customer satisfaction are widely communicated to employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 4: Perception on Barriers to TQM

This section requires you to identify the barriers or difficulties faced in trying to adopt TQM in your organization.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Barriers to adaptation to TQM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inappropriate planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of top-management commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor leadership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unrealistic expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of financial support, cost of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 implementation

Lack of physical resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inappropriate organisational structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of TQM knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of employee interest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of training need assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of communication of training feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of recognition and reward for success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee's resistance to change culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of evaluation and self-assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complexity of process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of customer focus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of supplier involvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of continuous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
improvement culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of cross-functional teamwork.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor and ineffective communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of team orientation and innovation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Open Responses

What would you like to add? Please use the space below to talk more about your views on quality improvement. Your suggestions and contributions are highly appreciated.

Will you prefer working as a team or as individual if TQM program to be implemented?

What are the things that you think should be done by management that will motivate you to do your job?

What kind of support will you like to receive from your colleagues that can enable you meet your task?

What is the biggest problem you face on a daily basis in trying to deliver high quality of services to your clients?

If you were Chairperson of this bank for one day and could make only one change to improve quality, what change would you make?

In your opinion, what are the factors critical to the successful implementation of improvement program? Please Tick.

- Improvement in physical working conditions
- Increase in staff size
- Better job training
- More or better tools, equipment
- More employee involvement in work decisions
- Better feedback on job performance
- Better recognition for an excellent job
- Supervisors work more closely with those who perform below standard
- Better cooperation between work groups

- More information about the quality improvement process
 - Better leadership by managers
 - Co-ordination among management tiers
 - Quantity has to be balanced against quality
 - Better planning and/or scheduling
 - More attention to preventing problems
 - Employees and management have to work more as teams
 - More attention to long range planning
-

Appreciated your contribution, valuable time, honest information and thoughtful suggestions. Thank You.

“Quality in a service or product is not what you put into it. It is what the client or customer gets out of it.”

~Peter Drucker

Appendices B

(The TQM statement, TQM variables and TQM barriers along with statistical result and reference sources are mentioned in this part of appendices)

Section 1: Information Regarding TQM Implementation

This section attempts to determine the level of TQM implementation in banking sector of Bangladesh.

TQM Implementation Factors	Indicators	Item	Sources
Bank has set up a quality department with quality system	TI 1	0.743	Zadry & Yusof
Bank practices Statistical Process Control Tools	TI 2	0.765	(2014)
Bank has developed cultural change program	TI 3	0.758	
Bank has developed strategies for quality improvement & progress	TI 4	0.707	

Section 2: General TQM Opinion

This section attempts to determine the importance of TQM implementation in banking sector of Bangladesh.

Statements	Sources
TQM is a management philosophy and practice to ensure effective and efficient use of all available resources	<i>Zadry & Yusof (2014)</i>
TQM aims to make customer satisfaction as the focus of a business	
Teamwork and participation are important for achieving a continuous improvement culture	
Training and education are vital elements with respect to TQM implementation	
Statistical techniques (such as Statistical Process Control, Design of Experiments, etc.) are important to ensure consistency of product and process quality	
Supplier involvement is vital in supporting quality improvement	
Management leadership, commitment and support determine the success of new change initiatives	
Management must provide adequate resources in every aspect of the business	
A work environment, which is conducive for improvement, is created through management-employee partnerships	
Initiatives such as Kaizen, suggestion schemes, quality circles, etc. will motivate employees to participate in quality improvement.	

Section 3: Total Quality Management Practices

This section attempts to determine the level of TQM practices through TQM factors in banking sector of Bangladesh.

Top Management Leadership (a of Cronbach=0.722; reliability measurement), determines the responsibility and behaviour of the management team in leading the bank in the process of providing service according to the customer requirements with the aim of satisfying customers and promote the culture of continuously improvement.

Factors	Indicators	Item Loading	Overall Loading	Sources
<i>F1 Top Management Leadership:</i>				
F1.1 Top management views quality as more important than cost and schedules objectives.	TML 1	0.701	0.722	Ahire et al. (1996); Brah et al., (2002)
F1.2 Top management strongly promotes employee involvement in quality management and improvement activities	TML 2	0.887		Zhang et al., (2000)
F1.3 Top management empowers employees to solve quality problems.	TML 3	0.810		Zhang et al., (2000)
<i>Employee involvement ($\alpha = 0.759$; reliability measurement) refers to empower employees with information in order to upgrade their knowledge and recognize for quality goal achievement.</i>				
<i>F2 Employee Involvement:</i>		<i>* EI 3 has been removed due to poor loading</i>		
F2.1 Employees are given information, continuous training and tools they need to do the job effectively.	EI 1	0.779	0.759	Valmohammadi (2011)
F2.2 Constant employee awareness and feedback are provided and a reward/recognition process is established.	EI 2	0.822		Valmohammadi (2011) Lau et al., (2004)
F2.3 Employees' involvement and empowerment is encouraged and supported to take responsibilities and make decisions.	EI 3	Deleted*		Lau et al., (2004)
F2.4 Every employee's thought and recommendation has been taken into consideration to make any quality decision	EI 4	0.861		Valmohammadi (2011)

Customer relationship (a =0.703; reliability measurement) includes the incorporation of customer requirement, feedback, complaint and suggestion into the quality objectives and align with the quality strategic planning for successful TQM implementation.

F3 Customer Relationship:

F3.1 Customer satisfaction level are measured and monitored through survey at regular basis.	CR 1	0.827	0.703	Ahire et al. (1996); Samson & Terziovski (1999); Pattanayak & Maddulety, (2013)
F3.2 customer requirements are used in designing new products and services	CR 2	0.817		Samson & Terziovski (1999)
F3.3 The bank management allows clients and listen to the customer complaints and provide an immediate solution.	CR 3	0.728		Zhang et al., (2000)

Supplier partnership (a =0.719; reliability measurement) refers to a stable as well as reliable relationship with few dependable suppliers in order to ensure high-quality and on time supplies of materials.

F4 Supplier Partnership:

** SP3 has been removed due to poor loading*

F4.1 Supplier rating system is thoroughly evaluated.	SP 1	0.815	0.719	Zu et al., (2010)
F4.2 Suppliers are involved in our quality training.	SP 2	0.762		Flynn et al. (1994); Zu et al., (2010)
F4.3 Suppliers are evaluated according to quality, delivery performance and price, in that order.	SP 3	Deleted*		Flynn et al. (1994); Zu et al., (2010)
F4.4 Long term commitment is the key factor for supplier partnership.	SP 4	0.820		Zu et al., (2010)

Continuous improvement (a =0.775; reliability measurement), represents the culture of frequent changes and standardizing the obtained results after each improvement achieved.

F5 Continuous Improvement:				
F5.1 Adaptation and upgradation of new generation ATM, telephone banking, internet banking, M banking, EFT, point of sale, branch networking is regular practice.	CI 1	0.774	0.775	
F5.2 Implementation strategy focused on quality.	CI 2	0.759		Antony et al. (2002)
F5.3 Continuously monitoring performance improvement measures and result are evaluated by comparing with goals.	CI 3	0.829		
F5.4 Review of quality issue in top management meeting	CI 4	0.72		Antony et al. (2002)
<i>Organizational culture (a =0.775; reliability measurement), involves the need for change in order to facilitate the implementation of TQM for sustaining competitive ability in today's dynamic market-place.</i>				
F6 Organizational Culture:		<i>* OC4 has been removed due to poor loading</i>		
F6.1 Management communicates its strategy and objectives to customers, suppliers and other known external agents.	OC 1	0.703	0.768	Durairatnam et al. (2020) Irfan & Kee (2013)
F6.2 Training is designed to provide education on total quality concepts.	OC 2	0.773		Antony et al. (2004)
F6.3 Continuous quality improvement is part of all employees' responsibility	OC 3	0.825		Antony et al. (2004)
F6.4 Use of customers' requirements as the base for quality.	OC 4	Deleted*		
F6.5 develops a company-wide culture of quality	OC 5	0.768		Antony et al. (2004)

Section 4: Perception on Barriers to TQM

Barriers to TQM	References
Barriers to adaptation to TQM	Talapatra & Uddin (2019); Catalin et al., (2014); Mosadeghrad (2014); Sharif (2005); Rad (2005)
Inappropriate planning	Cho & Linderman (2019); Talapatra & Uddin (2019); Patyal & Koilakuntla (2018); Aamer et al., (2017); Jaeger & Adair (2016); Talib & Rahman (2015); Mosadeghrad (2014); Catalin et al., (2014); Abdelkrim (2013); Khanna et al., (2011); Talib et al. (2011b); Rad (2005); Sebastianelli & Tamimi (2003); Mohanty (1997); Whalen & Rahim (1994)
Lack of top-management commitment	Talapatra & Uddin (2019); McAdam et al., (2019), Tsironis (2018); Aquilani et al., (2017); Maistry et al., (2017); Teixeira et al., (2015); Talib & Rahman (2015); Mosadeghrad (2014); Catalin et al., (2014); Abdelkrim (2013); Talib et al. (2011b); Soltani et al. (2005); Soltani (2005); Mohanty & Lakhe (1998); Whalen & Rahim (1994)
Poor leadership	McAdam et al., (2019); Saleh et al., (2018); Maistry et al., (2017); Aquilani et al., (2017); Mosadeghrad (2014); Catalin et al., (2014); Rad (2005)
Unrealistic expectations	Mosadeghrad (2014); Catalin et al., (2014)
Lack of financial support, cost of implementation	Talapatra & Uddin (2019); McAdam et al., (2019); Baidoun et al., (2018); Aquilani et al., (2017); Calvo-Mora et al., (2014); Mosadeghrad (2014); Catalin et al., (2014); Khan (2011); Hafeez et al., (2006); Sohal & Terziovski (2000); Samuel (1999)
Lack of physical resources	Talapatra & Uddin (2019); Cho & Linderman (2019); Baidoun et al., (2018); Maistry et al., (2017); Aquilani et al., (2017); Mosadeghrad (2014); Catalin et al., (2014); Hafeez et al., (2006); Mosadeghrad (2005); Nizam & James (2005); Whalen & Rahim (1994); Samuel (1999)

Barriers to TQM	References
Lack of information systems	Talapatra & Uddin (2019); McAdam et al., (2019); Tsironis (2018), Aquilani et al., (2017), Maistry et al., (2017); Teixeira et al., (2015); Mosadeghrad (2014); Catalin et al., (2014)
Inappropriate organisational structure	Talapatra & Uddin (2019); McAdam et al., (2019), Tsironis (2018), Maistry et al., (2017), Aquilani et al., (2017), Jaeger & Adair (2016); Teixeira et al., (2015); Calvo-Mora et al., (2014); Mosadeghrad (2014); Catalin et al., (2014)
Lack of TQM knowledge	Talapatra & Uddin (2019); Dubey et al., (2018); Baidoun et al., (2018); Aquilani et al., (2017); Talib & Rahman (2015); Teixeira et al., (2015); Catalin et al., (2014); Sharif (2005)
Lack of employee interest	Mosadeghrad (2014); Catalin et al., (2014); Mosadeghrad (2005); Nizam & James (2005); Jun et al., (2004); Mohanty (1997)
Lack of training need assessment	Talapatra & Uddin (2019); Sharif (2005)
Lack of communication of training feedback	Talapatra & Uddin (2019); Sharif (2005)
Lack of recognition and reward for success	Mosadeghrad (2014); Hafeez et al. (2006); Rad (2005); Mosadeghrad (2005); Salegna & Fazel (2000)
Employee's resistance to change culture	Talapatra & Uddin (2019); McAdam et al., (2019), Patyal & Koilakuntla (2018); Maistry et al., (2017); Aquilani et al., (2017); Jaeger & Adair (2016); Calvo-Mora et al., (2014); Talib & Rahman (2015); Mosadeghrad (2014); Catalin et al., (2014); Talib et al., (2011b); Khan (2011); Soltani et al., (2008); Zadry & Yusof (2006); Jun et al., (2004); Sohal & Terziovski (2000)

Barriers to TQM	References
Lack of evaluation and self-assessment	Talapatra & Uddin (2019); Dubey et al., (2018), Baidoun et al., (2018), Aquilani et al., (2017); Mosadeghrad (2014); Catalin et al., (2014); Calvo-Mora et al., (2014)
Complexity of process	Talapatra & Uddin (2019); Cho & Linderman (2019); Baidoun et al., (2018); Aquilani et al., (2017); Calvo-Mora et al., (2014); Rad (2005)
Lack of customer focus	Talapatra & Uddin (2019); McAdam et al., (2019); Saleh et al., (2018); Aquilani et al., (2017); Aamer et al., (2017); Catalin et al., (2014); Calvo-Mora et al., (2014); Abdelkrim (2013); Zadry & Yusof (2006); Nizam & James (2005); Mosadeghrad (2005); Thiagarajan & Zairi (1997)
Lack of supplier involvement	Talapatra & Uddin (2019); Catalin et al., (2014); Khanna et al., (2011); Nizam & James (2005); Sohal & Terziovski (2000); Samuel (1999)
Lack of continuous improvement culture	Talapatra & Uddin (2019); McAdam et al., (2019), Baidoun et al., (2018); Aquilani et al., (2017), Teixeira et al., (2015); Talib et al., (2011b); Kumar et al., (2009)
Lack of cross-functional teamwork.	Talapatra & Uddin (2019); Cho & Linderman (2019); Tsironis (2018), Maistry et al., (2017); Aquilani et al., (2017); Teixeira et al., (2015); Sharif (2005)
Poor and ineffective communication	Cho & Linderman (2019); Saleh et al., (2018); Maistry et al., (2017); Aquilani et al., (2017); Teixeira et al., (2015); Mosadeghrad (2014); Catalin et al., (2014); Abdelkrim (2013); Gunasekaran (1999)
Lack of team orientation and innovation.	Cho & Linderman (2019); Khurshid et al., (2018); Jaeger & Adair (2016); Mosadeghrad (2014); Catalin et al., (2014); (Sharif (2005)

TQM Barriers Grouping with Reference Sources

Strategic Barriers	Structural Barriers	Human Resource Barriers
1. TQM adoption barriers	6. Lack of financial support, cost of implementation	10. lack of TQM knowledge
2. Inappropriate planning	7. Lack of physical resources	11. Lack of employee interest
3. Lack of top-management commitment	8. Lack of information systems	12. lack of training need assessment
4. Deficient leadership	9. Inappropriate organisational structure	13. lack of communication of training feedback
5. Unrealistic expectations	Sources: Talapatra & Uddin (2019); Mosadeghrad (2014); Catalin et al., (2014)	14. Lack of recognition and reward for success
		15. Employee’s resistance to change culture
		Sources: Talapatra & Uddin (2019); Mosadeghrad (2014); Catalin et al. (2014); Rad (2005); Talib & Rahman (2015); Sharif (2005)

Procedural Barriers	Contextual Barriers
16. Lack of evaluation and self-assessment	20. Lack of continuous
17. Complexity of process	improvement culture
18. Lack of customer focus	21. Lack of cross-functional
19. Lack of supplier involvement	teamwork
Sources: Talapatra & Uddin (2019); Mosadeghrad (2014); Catalin	22. Poor and ineffective communication
et al., (2014); Rad (2005)	23. Lack of team orientation and innovation
	Sources: Talapatra & Uddin (2019); Mosadeghrad (2014); Catalin
	et al., (2014)

Appendices C

Analysis Details

Respondents' Profile

Table1

Summarize the Profile of Respondents

Gender	Male		Female			
	86.5%		13.5%			
Designation	Top Level		Mid-Level		First-Line	
	24.6%		40.6%		34.8%	
Department	General	Credit	Foreign Remittance	Business Development	HRD	Others
	44.9%	13.0%	4.3%	1.4%	7.7%	28.5%
Bank Generation	1 st Generation	2 nd Generation	3 rd Generation	4 th Generation	5 th Generation	
	31.4%	31.9%	26.1%	6.3%	4.3%	

Table 2

SPSS Output

		Designation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Top	102	24.6	24.6	24.6
	Mid	168	40.6	40.6	65.2
	First-Line	144	34.8	34.8	100.0
	Total	414	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	358	86.5	86.5	86.5
	Female	56	13.5	13.5	100.0
	Total	414	100.0	100.0	

Department

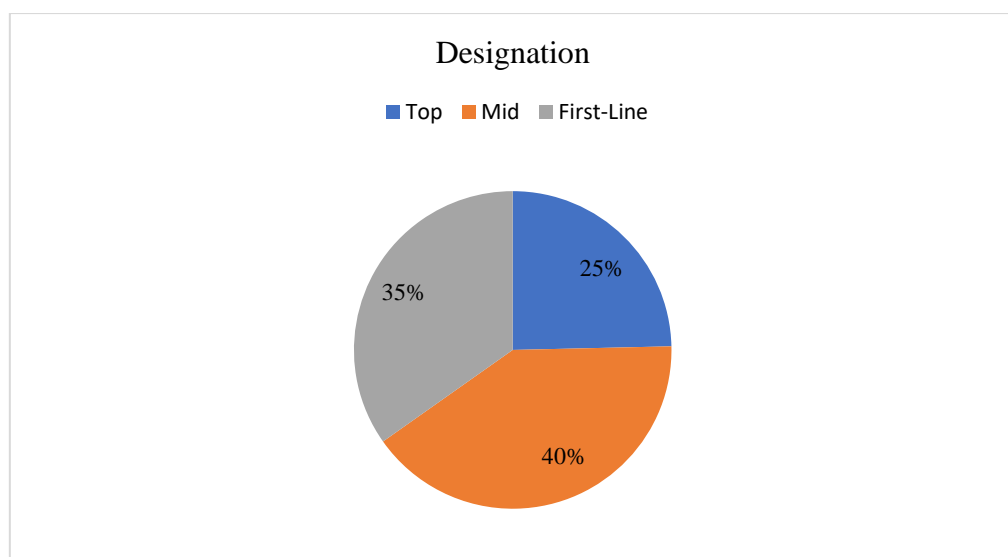
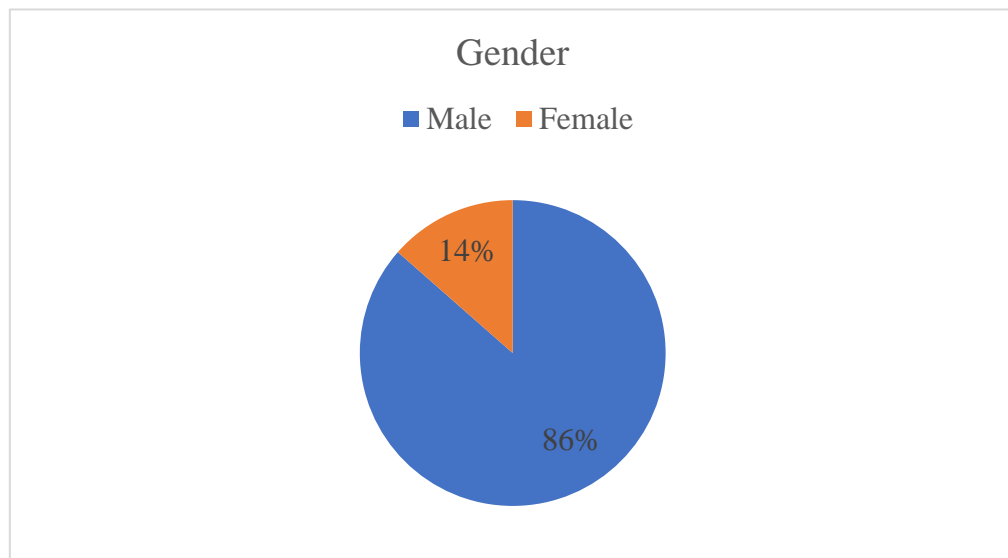
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	General	186	44.9	44.9	44.9
	Credit	54	13.0	13.0	58.0
	Foreign Remittance	18	4.3	4.3	62.3
	Business Development	6	1.4	1.4	63.8
	Human Resource Development	32	7.7	7.7	71.5
	Others	118	28.5	28.5	100.0
	Total	414	100.0	100.0	

Bank Generation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1st Generation	130	31.4	31.4	31.4
	2nd Generation	132	31.9	31.9	63.3
	3rd Generation	108	26.1	26.1	89.4
	4th Generation	26	6.3	6.3	95.7
	5th Generation	18	4.3	4.3	100.0
	Total	414	100.0	100.0	

Table 3*Response Rate*

	Number	Percentage
Total Distribution	600	100%
Responses received	512	85.33%
Unusable responses	98	16.33%
Total usable responses	414	69%



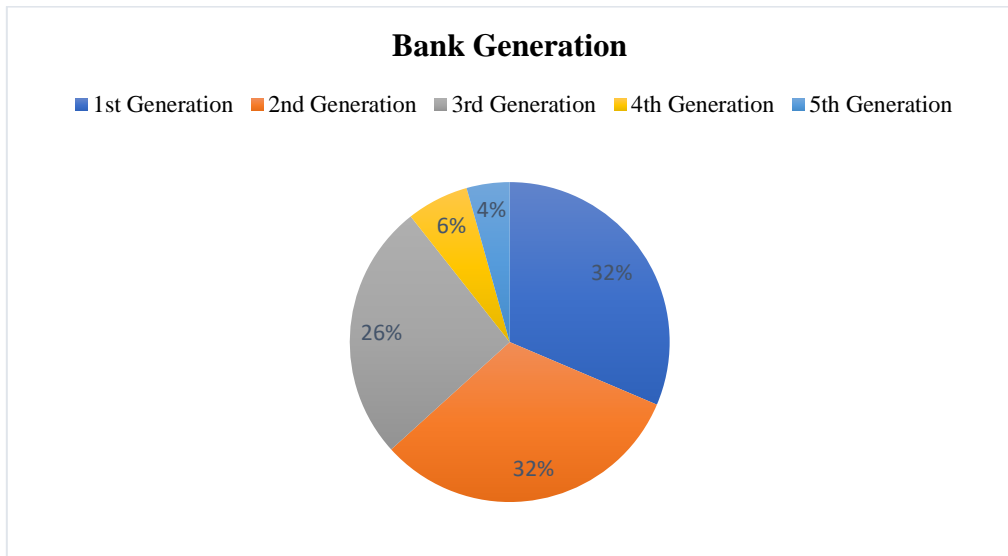
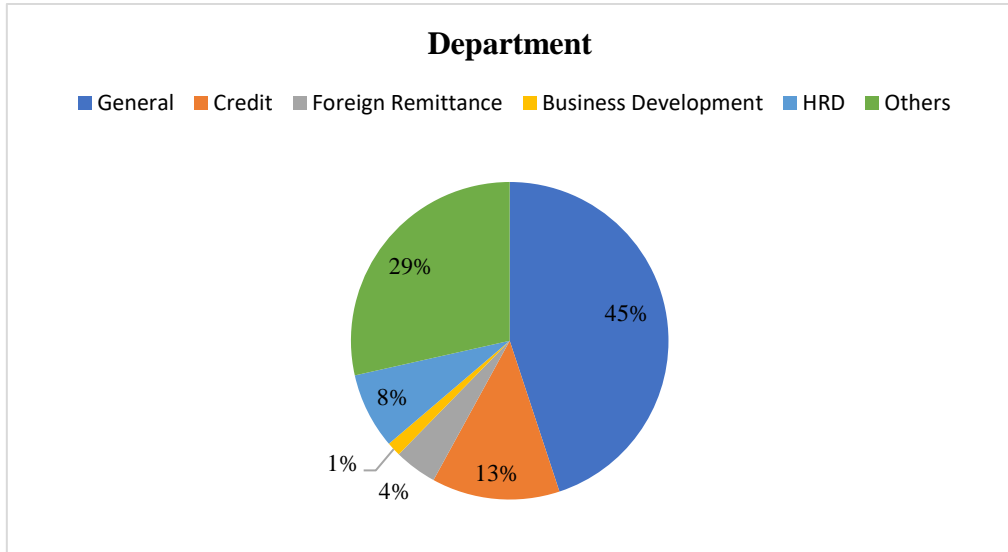
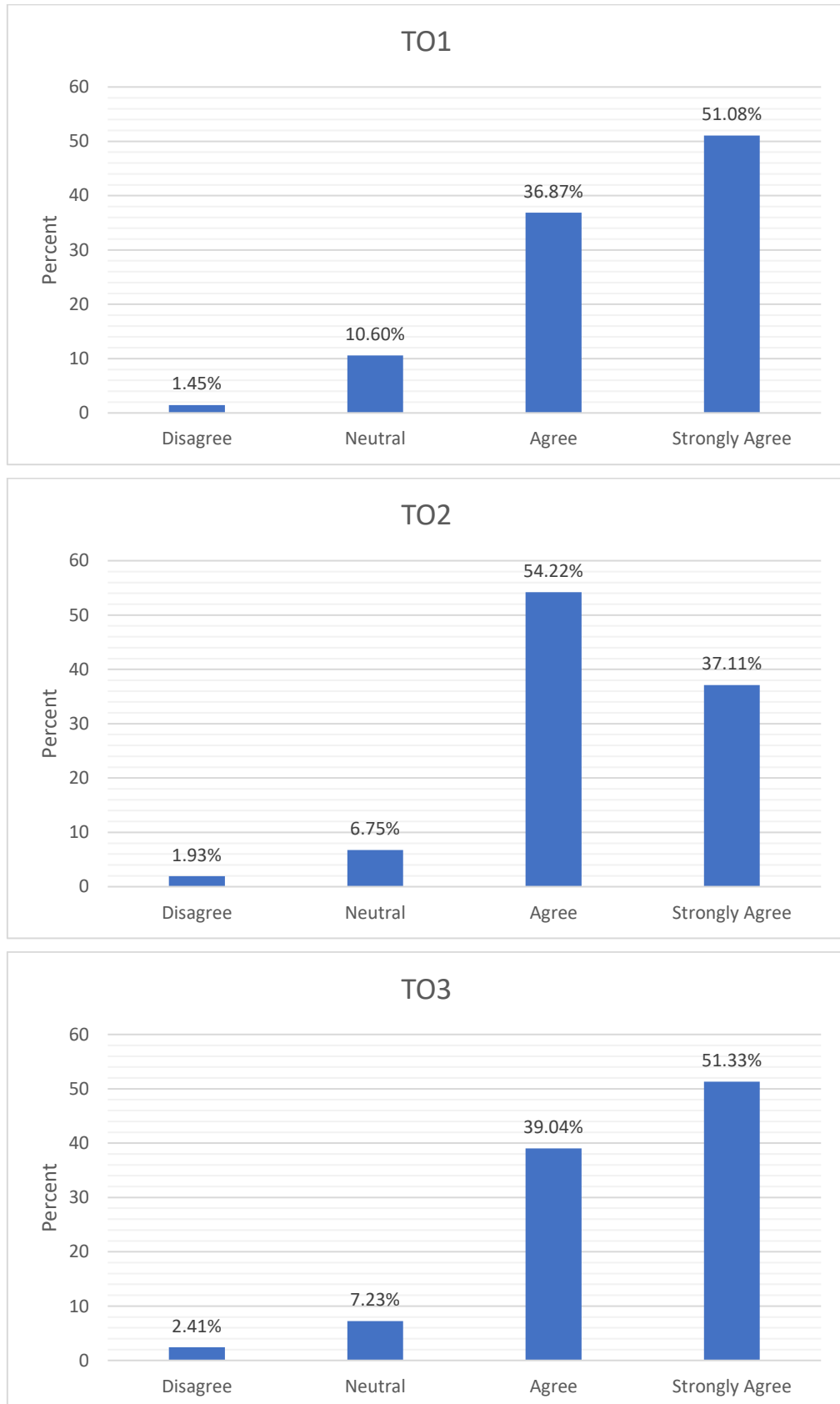
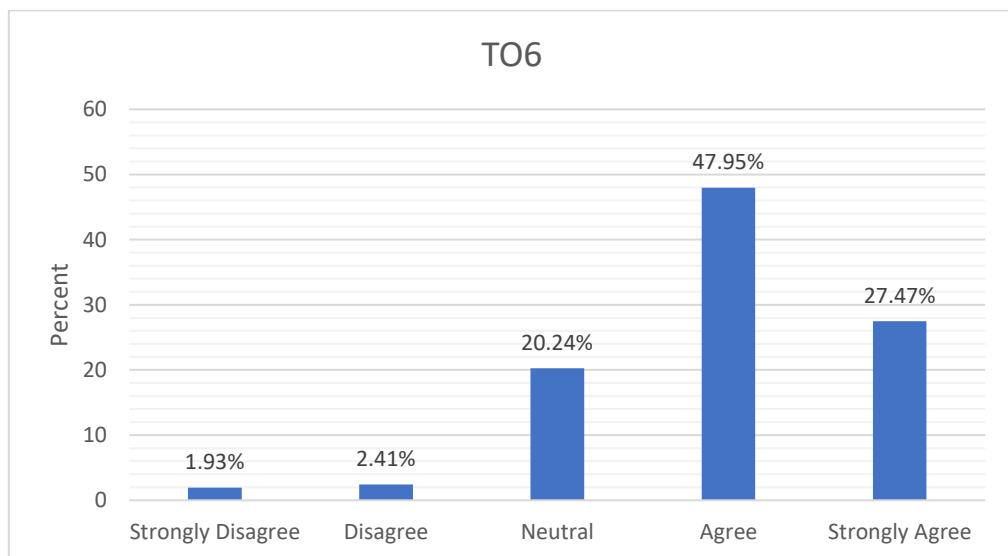
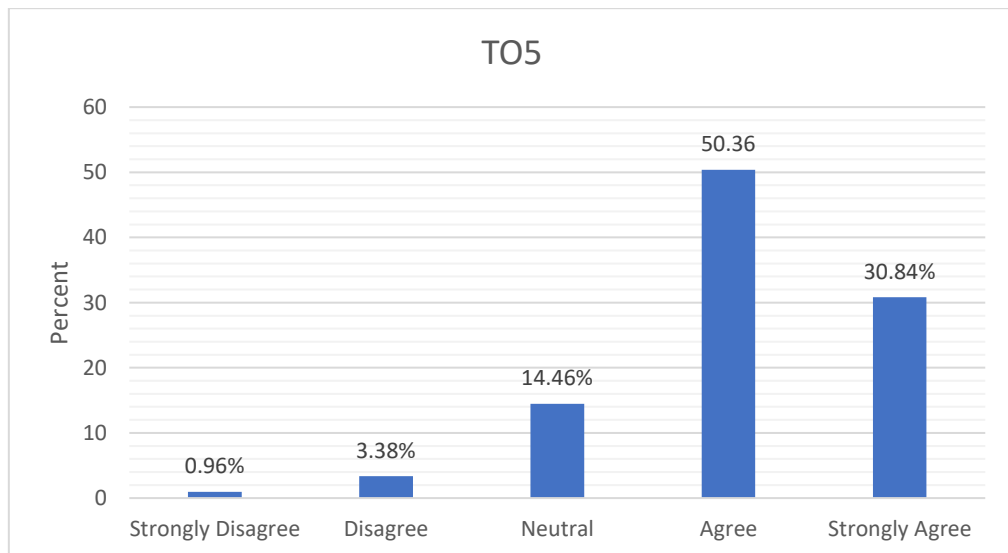
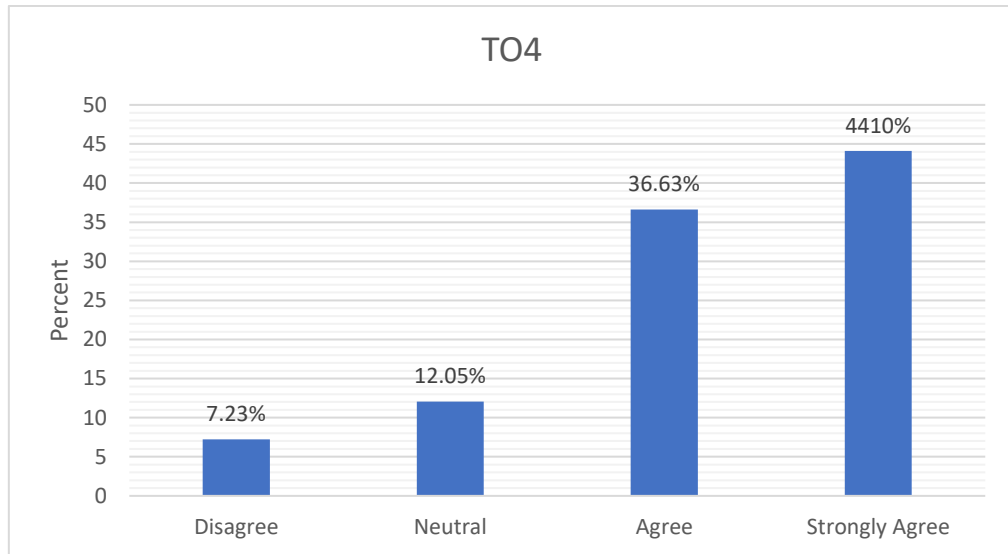
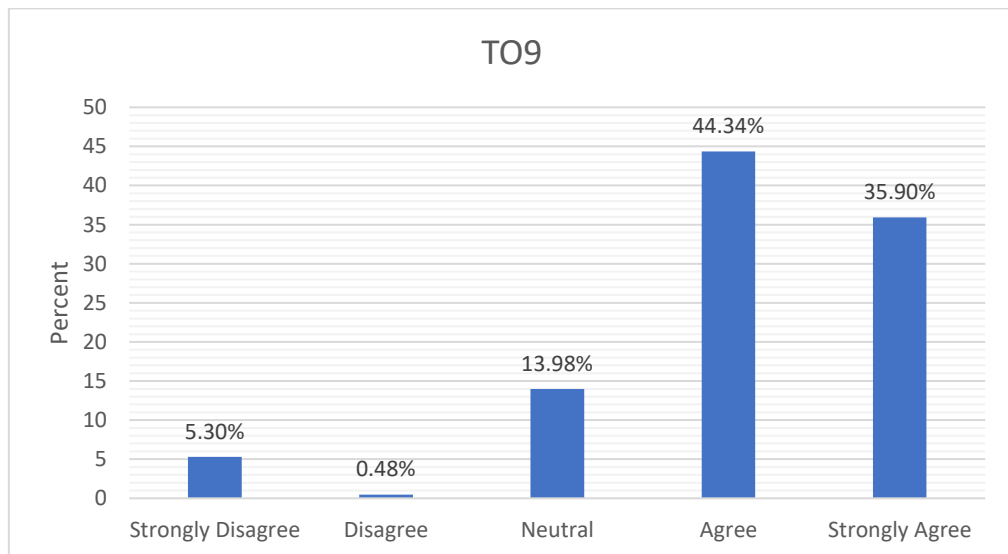
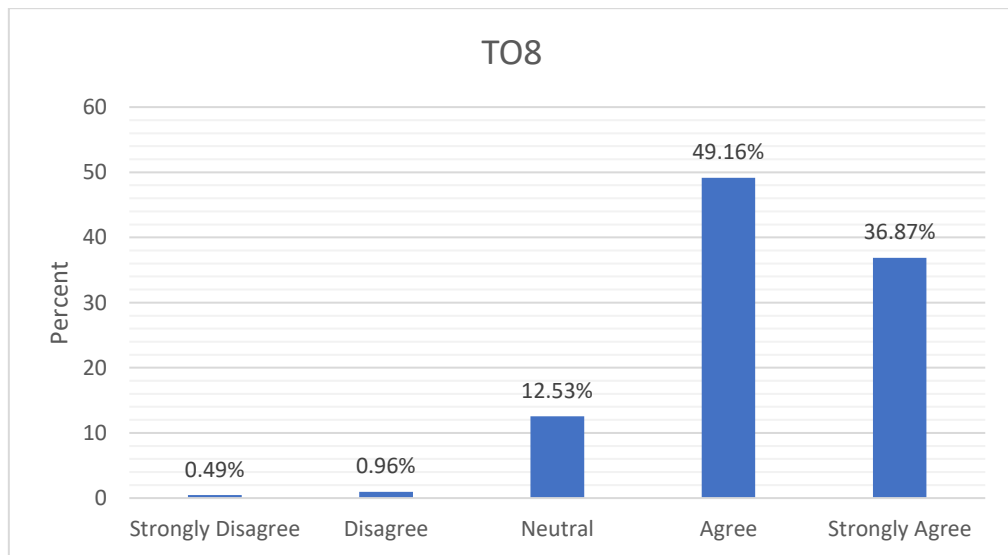
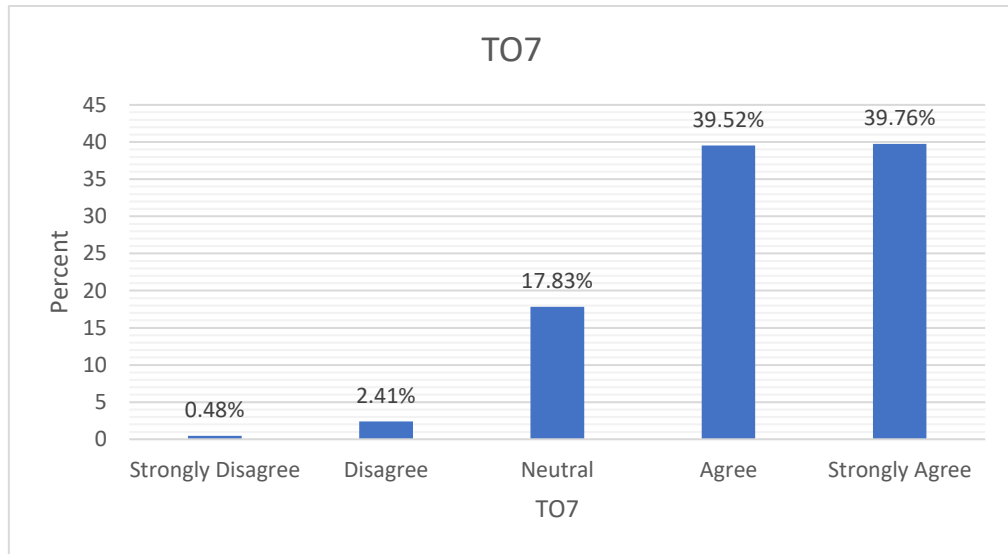


Table 4

TQM Opinion







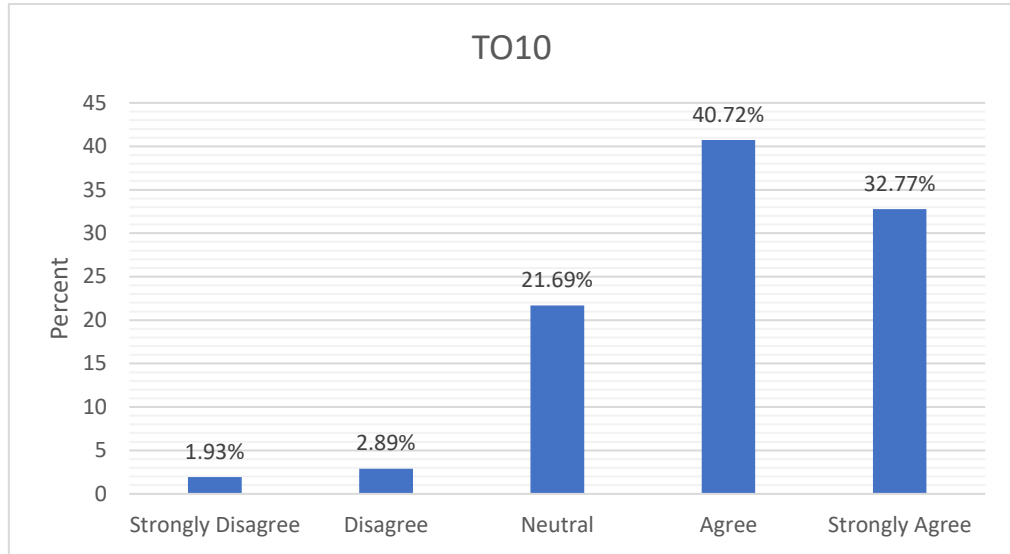


Table 5*PLS Outcome*

	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
SL	1	0	196.62	193	5	420	112.048	-0.762	0.251
TML1	2	0	3.808	4	2	5	0.889	-0.651	-0.314
TML2	3	0	3.865	4	1	5	0.961	0.125	-0.673
TML3	4	0	3.933	4	1	5	0.978	0.215	-0.792
EI1	5	0	3.731	4	1	5	0.953	0.312	-0.743
EI2	6	0	3.899	4	1	5	0.835	0.379	-0.555
EI4	7	0	3.846	4	1	5	0.948	-0.185	-0.605
CR1	8	0	3.995	4	1	5	0.788	0.117	-0.466
CR2	9	0	3.846	4	2	5	0.8	-0.597	-0.168
CR3	10	0	3.986	4	1	5	0.793	1.464	-0.901
SP1	11	0	3.899	4	1	5	0.84	1.009	-0.783
SP2	12	0	3.947	4	2	5	0.804	-0.574	-0.294

	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
SP4	13	0	3.88	4	1	5	0.844	0.389	-0.589
CI1	14	0	3.865	4	2	5	0.821	-0.631	-0.217
CI2	15	0	4.072	4	2	5	0.843	-0.264	-0.62
CI3	16	0	3.981	4	2	5	0.796	-0.03	-0.539
CI4	17	0	3.933	4	1	5	0.812	0.575	-0.58
OC1	18	0	3.99	4	1	5	0.803	1.602	-0.879
OC2	19	0	3.769	4	2	5	0.84	-0.493	-0.274
OC3	20	0	3.788	4	1	5	0.916	0.87	-0.923
OC5	21	0	3.793	4	1	5	0.981	0.24	-0.772
TI1	22	0	3.846	4	1	5	0.963	1.614	-1.242
TI2	23	0	3.562	4	1	5	1.207	-0.192	-0.789
TI3	24	0	3.856	4	1	5	1.069	1.248	-1.25
TI4	25	0	3.827	4	1	5	1.113	0.815	-1.165

Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
0.775	0.78	0.856	0.598
0.703	0.714	0.834	0.627
0.759	0.769	0.861	0.675
0.768	0.766	0.852	0.591
0.719	0.726	0.842	0.64
0.732	0.737	0.832	0.553
0.722	0.756	0.843	0.644

Fornell-Larcker

	CI	CR	EI	OC	SP	TI	TML
CI	0.773						
CR	0.581	0.792					
EI	0.394	0.523	0.821				
OC	0.663	0.511	0.617	0.769			
SP	0.434	0.427	0.553	0.524	0.8		
TI	0.605	0.508	0.536	0.605	0.463	0.744	
TML	0.515	0.525	0.638	0.557	0.522	0.59	0.803

HTMT

	CI	CR	EI	OC	SP	TI	TML
CI							
CR	0.792						
EI	0.519	0.709					
OC	0.859	0.676	0.8				
SP	0.586	0.6	0.734	0.692			
TI	0.799	0.702	0.703	0.79	0.628		
TML	0.7	0.746	0.86	0.72	0.711	0.795	

Path Co-efficient

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
CI -> TI	0.277	0.282	0.055	5.066	0.000
CR -> TI	0.062	0.061	0.045	1.368	0.086
EI -> TI	0.13	0.129	0.053	2.432	0.008
OC -> TI	0.166	0.169	0.047	3.514	0.000
SP -> TI	0.044	0.047	0.064	0.689	0.246
TML -> TI	0.217	0.21	0.054	3.988	0.000

Multicollinearity (VIF)

	VIF		VIF
CI1	1.552	OC2	1.598
CI2	1.438	OC3	1.848
CI3	1.736	OC5	1.663
CI4	1.431	SP1	1.574
CR1	1.465	SP2	1.345
CR2	1.408	SP4	1.411
CR3	1.292	TI1	1.425
EI1	1.395	TI2	1.348
EI2	1.639	TI3	1.434
EI4	1.666	TI4	1.331
OC1	1.294		

Outer Loading

	CI	CR	EI	OC	SP	TI
CI1	0.774					
CI2	0.759					
CI3	0.829					
CI4	0.727					
CR1		0.827				
CR2		0.817				
CR3		0.728				

	CI	CR	EI	OC	SP	TI
EI1			0.779			
EI2			0.822			
EI4			0.861			
OC1				0.703		
OC2				0.773		
OC3				0.825		
OC5				0.768		
SP1					0.815	
SP2					0.762	
SP4					0.82	
TI1						0.743
TI2						0.765
TI3						0.758
TI4						0.707

Appendices D***Sample Consent Form***

I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, query to any issues regarding the questionnaire and answered honestly. I comprehend that my participation is voluntary and permitted to withdraw at any time. I have been informed that my response would be used for academic purpose in aggregate form and remain anonymous and confidential. I agree to take part in this study.

Name of Participant

Signature with date

Name of Researcher

Signature with date

Name of Assigned Person

Signature with date

Note: Consent form has been attached with the questionnaire.