

## Factors affecting Total Quality Management Implementation on Service Industry: A Systematic Literature Review

Chandra Hosen<sup>1\*</sup>, Ardhianiswari Diah Ekawati<sup>2</sup>, Anita Maharani<sup>3</sup>

<sup>1,2</sup>Industrial Engineering Department, BINUS Graduate Program – Master of Industrial Engineering, Bina Nusantara University, Jakarta, Indonesia 11480

<sup>3</sup>Master Program, BINUS Business School – Master of Management, Bina Nusantara University, Jakarta, Indonesia 11480

Email: chandra.hosen@binus.ac.id

### ABSTRACT

Companies in the service industry are trying to make changes to meet the needs of the company and the needs of customers. Over the last few years, Total Quality Management has been developed and is one way to provide various changes in improving the quality of relationships with consumers. The purpose of this research is to find out what factors influence the implementation of Total Quality Management in the service industry using a systematic literature review (SLR). Search databases and article sources using the Harzing's Publish or Perish application. Database sources vary from Science Direct, Emerald, Springer, SSRN Papers, Growing Science, Cogentia, Research Gate and Academia. Meanwhile, the keyword to search the database is *Total Quality Management* and *Service Industry*. After the SLR process was carried out to the previous studies that fulfill criteria of the keywords, there were 5 factors that were mentioned the most in almost all studies: top management commitment, continuous improvement, focus on customers, training and education as well as employee management and involvement.

**Keywords:** *Total Quality Management, service industry, factors, implementation*

### Introduction

The service industry is one of the industries that plays an important role in a country because it is related to increasing national economic growth. The service sector is the main source of Indonesia's economic growth through various service industries, such as tourism, logistics, and transportation. This sector can contribute to an increase in national GDP, job creation, and poverty reduction. The service industry sector was able to create 21.7 million jobs in the period 2000-2010 (Ika, 2016). The service sector is experiencing rapid growth, even in the last five years, the growth of the service sector is much higher than the manufacturing industry sector. Corporate services which in 2019 grew 10.25 percent, health services and social activities grew 8.68 percent, education services grew 6.29 percent, financial services and insurance grew 6.60 percent, and other services grew 10.55 percent (Herman, 2020) This shows how much influence the service industry has on national economic growth.

At the end of 2019, the COVID-19 pandemic began to hit one of the countries in Asia,

namely China, and began to enter Indonesia in March 2020. This pandemic has changed various aspects of human life, including health, economy to technology and communication. COVID-19 is also affecting various industries. Almost all service sectors, such as the information and communication services sector, financial services, and health services experienced a slowdown. The transportation services sector, trade services, and accommodation and food-beverage provision services are the three sectors that experienced the highest slowdown in growth, which were 1.27%, 1.6% and 1.95%, respectively (Syarif, 2020).

Various important activities that initially had to be carried out face-to-face at the branch office had to be limited and began to switch to virtual technology process. The implementation of work from home and physical distancing policies has made many changes to how the economy works. Tourist attractions were closed, public transportation was restricted, offices were also closed. In addition, the community is also asked to fully stay at home to work and do other activities. Many cafes and restaurants are also only giving

takeaway and delivery order service. This makes the service industry experience great difficulties, where service consumption is very related with direct interaction between providers and consumers (Waluya, 2021).

A number of service industry companies are trying to adapt, either by changing services in digital form, or making digital platforms a means of selling products. As another example, a number of services, such as design services, animation, to financial audits are currently starting to be traded through digital platforms or outsourcing across national borders (Syarif, 2020). This shows that companies in the service industry are trying to make changes to meet the company's needs and customer needs. Service is an effort made directly or indirectly in a comprehensive analysis. Service in the service industry is very influential to the level of customer satisfaction. Service are given to make customers feel loyal, and able to attract new customers so that it can make a big profit for the company. But on the other hand, the threat of exposure to the Covid-19 virus is a challenge for the service industry. Various innovations carried out in the service industry show how companies are trying to maximize the potential of their employees to be able to improve organizational performance so that they can produce products and giving services that can facilitate the community and compete with other companies.

Various companies also face many challenges due to a number of institutions merging, organizational collaborations, development of various products and services, and quality improvements. To respond effectively to these challenges, the creation of a system that meets the quality of banking services according to the concept becomes a real challenging issue. Meanwhile, to gain competitive advantage on a global scale, a company is required to be able to present every process that is better in order to produce goods or services that have high quality at reasonable prices and are able to compete. Hence, the main key to increase competitiveness is through quality improvement. One way of development that many companies do is to use one of the management tools, namely Total Quality Management. In the perspective of Total Quality Management, quality is viewed more broadly where it is not only the outcome aspect that is emphasized, but also the process, the environment, and people. Thus, Total Quality Management is oriented in a process that integrates all human

resources and customers in the corporate environment.

The focus of the study is to identify factors affecting TQM implementation in service industries. Hence, it is important to identify how TQM has successfully implemented in various industries as a comparison. From previous studies, it was found that TQM was successfully applied in various service industries through its strategy to improve the quality of customer-focused services (Al-Bayati, Hasan, Alomari, 2021; Egnuwatum, Anumudu, Eze & Awodele, 2021; Hussain and Khan, 2020; Jaggannathan & Faisal 2019). This proves that the TQM method is still the main choice for various service industries in maximizing their quality in order to serve consumers. Especially during the pandemic, where the service industry has limitations dealing directly with consumers, so TQM is the right method to maximize service quality apart from the quality of relationships with consumers.

From these various studies, there are many factors that influence the success of TQM implementation, such as education, customer focus, top management commitment, and others. Many research factors are different from one study to another, which encourages research with an SLR approach, namely Systematic Literature Review. SLR is a research method that aims to identify, assess, and also interpret findings on a research topic to answer pre-defined research questions. With this SLR, various implementation factors can be narrowed down and the most influential factors for the service industry today can be found.

## Research Method

This study using the SLR approach is divided into defining the research question that already explained in the introduction, determining the research source of literature, accomplishing the process using the keyword, after that do the extracting data and analyzing the result to answer the research question.

The source for this research SLR are:

1. Science Direct ([www.sciencedirect.com](http://www.sciencedirect.com))
2. Emerald Insight ([www.emeraldinsight.com](http://www.emeraldinsight.com))
3. Springer Link ([link.springer.com](http://link.springer.com))
4. Research Gate ([www.researchgate.net](http://www.researchgate.net))
5. Academia ([www.academia.edu](http://www.academia.edu))
6. SSRN Papers ([www.papers.ssrn.com](http://www.papers.ssrn.com))
7. Cogentoa ([www.cogentoa.com](http://www.cogentoa.com))
8. Growing Science ([www.growingscience.com](http://www.growingscience.com))

Apart from the database above, the search also used google for papers that are not available in the database mentioned above. Based on the research question discussed earlier, it was determined that the keywords to be able to answer the research question were: (Total Quality Management) AND (service industry). After entering the keyword into the database, the paper related to the specified keywords and a summary of the total of all these papers is shown as 'studies found'. Next is reading the title of the paper. If the title cannot be used, whether it is related to the research question or not, then proceed with reading the abstract. If it is appropriate, this paper will be downloaded for further investigation. The number of papers downloaded is called 'candidate studies'. All the results of the 'candidate studies' paper will be read thoroughly to find answers to research questions. The paper that will be used in the study as 'selected studies'. To ensure that the paper is still up to date, the paper used as the 'study is selected' are papers published in 2016 – 2021. Using the method described earlier, there were 293 studies found. By reading the title and abstract, there are 62 related papers as candidate studies. All of the papers are read and then selected in accordance with the research question in which there are 11 papers for the selected studies.

**Table 1.** Source, Studies Found, Candidate Studies and Selected Studies

Source	Studies Found	Candidate Studies	Selected Studies
Emerald	92	15	0
Growing Science	4	0	0
Springer	13	3	0
SSRN Papers	26	7	2
Science Direct (Elsevier)	11	6	3
Research Gate	108	26	4
Cogentoa	3	1	1
Academia	36	4	1
<b>Total</b>	<b>293</b>	<b>62</b>	<b>11</b>

**Results and Discussion**

**Source of Publication**

Based on the source of the publication, all papers were published in journals, and every paper were published in different journals.

**Table 2.** Percentage of Published Articles

Name of Journal	#	%
Ain Shams Engineering Journal	1	9.09%
Procedia Technology	1	9.09%
Operations Research Perspectives	1	9.09%
International Journal of Recent Technology and Engineering	1	9.09%
Cogent Business & Management	1	9.09%
Journal of Asian Finance, Economics and Business	1	9.09%
European Journal of Hospitality and Tourism Research	1	9.09%
International Journal of Tourism and Hospitality	1	9.09%
Business Administration and Management	1	9.09%
Practice Periodical on Structural Design and Construction	1	9.09%
Paradigms: A Research Journal of Commerce, Economics, and Social Sciences	1	9.09%
<b>Total</b>	<b>11</b>	<b>100%</b>

**Authors**

The following is the article data produced by authors of the article. Of all the articles taken in this study, no author wrote more than one article. There are 30 authors from a total of 11 articles taken in this study.

**Table 3.** Authors List

Author names	#	%
Mukhles Al-Ababneh	1	3.33%
Tran Van Trang	1	3.33%
Quang Hung Do	1	3.33%
Idris Othman	1	3.33%
Siti Norfarahhanim Mohd Ghani	1	3.33%
Shim Woon Choon	1	3.33%
Mudassar Hussain	1	3.33%
Junaid Khan	1	3.33%

Ahmed Jalil Al-Bayati	1	3.33%
Raed Abdullah Hasan	1	3.33%
Kasim Alomari	1	3.33%
Omar Sabbagh	1	3.33%
Mohd Nizam Ab Rahman	1	3.33%
Wan Rosmanira Ismail	1	3.33%
Wan Mohd Hirwani Wan Hussain	1	3.33%
Vedant Singh	1	3.33%
Akshay Kumar	1	3.33%
Tej Singh	1	3.33%
Wu Chao-Sen	1	3.33%
Robin Nunkoo	1	3.33%
A. Mohammed Faisal	1	3.33%
V. Jagganathan	1	3.33%
Mr. Javed Iqbal	1	3.33%
Muhammad Salman Shabbir	1	3.33%
Hashim Zameer	1	3.33%
Muhammad Sajid Tufail	1	3.33%
Moeed Ahmad Sandhu	1	3.33%
Waris Ali	1	3.33%
Anu P. Anil	1	3.33%
Satish K. P.	1	3.33%
<b>Total</b>	<b>30</b>	<b>100%</b>

**Publication Trend**

From the results of the study, it was found that there was 1 article taken from 2016, 1 article taken from 2017, 3 articles taken from 2018, 1 article from 2019, 3 articles from 2020 and 2 articles taken from 2021. From this data, it can be seen that research on TQM has become one of the researchers interests and trends, especially starting in 2018 to 2021. This happens when the World Bank estimates that global economic growth will increase to 3.1 percent in 2018 after economic growth in 2017 was much stronger than expected, as a result of the continued recovery in investment, manufacturing and trade, as well as developing countries that export commodities benefit from stronger commodity prices. From this increase, various studies related to the industry emerged, and one of the research trends of industrial improvement was triggered by the TQM method which was found to be successful in supporting companies to improve their quality.

**Table 4.** Trend of Publication by Year

Years	#	%
2021	2	18.18%
2020	3	27.27%
2019	1	9.09%
2018	3	27.27%

2017	1	9.09%
2016	1	9.09%
<b>Total</b>	<b>11</b>	<b>100%</b>

**Country**

From the search results, it is found that research on Total Quality Management is mostly conducted and appears in Asian countries. This happens because many service industries are developing in Asian countries and their growth leads to economic integration and the development of the technology industry 4.0, making industrial growth on an international scale easier and faster to develop.

**Table 5.** Distribution of Publication by Year

Country	#	%
Yordania	1	9.09%
Malaysia	2	18.18%
Vietnam	1	9.09%
Iraq	1	9.09%
India	3	27.27%
Taiwan	1	9.09%
United Kingdom	1	9.09%
Pakistan	1	9.09%
<b>Total</b>	<b>11</b>	<b>100%</b>

**Industry**

Meanwhile, from the type of industry, it was found that hotel and tourism industry as well as public service industry, which are services provided by government, such as: electricity, banking, education, healthcare and telecommunication, is common for TQM studies. This finding shows that TQM is one of the methods of the public service industry to highlight the shortcomings that hinder the industry's performance in providing decent quality for the public. TQM can also be one of the comparisons and evaluations of performance and quality in the public service industry for the future. The TQM approach itself is used by many companies in the public service industry to make quality improvement plans. This quality improvement can restore public confidence in public service institutions and companies.

**Table 6.** Research Area of TQM

Type of Industry	#	%
Hotel & Hospitality Industry	4	33.3%
Supporting Industry	1	8.33%
Construction Industry	1	8.33%
Telecommunication Industry	1	8.33%

Banking Industry	1	8.33%
Electricity Industry	1	8.33%
Education Industry	1	8.33%
Automotive Industry	1	8.33%
Art & Sport Industry	1	8.33%
<b>Total</b>	<b>12</b>	<b>100%</b>

**Data Analysis Technique**

From the demographic results of the data analysis techniques used, Structural Equation Modeling is the most used data analysis technique. This shows that the success of TQM in providing

change to the company is strongly influenced by how the company implements the important factors and relating to other variables. From various research methods it is also found that TQM has a correlation and influence on various company variables; including KPI, Organizational Performance, Repurchase Intention. This shows that TQM is one of the independent variables that is quite widely used by researchers in conducting research related to improving company performance and quality.

Data Analysis Technique	Author										Total	
	Al-Ababneh & Mukhles (2021)	Al-Bayati, Hasan & Alomari (2021)	Trang & Do (2020)	Othman, Ghani & Choon (2020)	Hussain & Khan (2020)	Jaggannathan & Faisal (2019)	Sabbagh, Rahman, Ismail & Hussain (2019)	Chao-Sen (2018)	Singh, Kumar & Singh (2018)	Iqbal et al. (2017)		Anil & Satish (2016)
Structural Equation Modeling			v			v	v	v	v		v	6
Analytic Hierarchy Process										v		1
Standardized Scores		v										1
Exploratory Factor Analysis & Confirmatory Factor Analysis	v											1
Relative Important Index				v								1
Systematic Literature Review					v							1

**Table 7.** Factors affecting Total Quality Management Implementation

Factors Affecting Total Quality Management Implementation	Authors										TOTAL	
	Al-Ababneh & Mukhles (2021)	Al-Bayati, Hasan & Alomari (2021)	Trang & Do (2020)	Othman, Ghani & Choon (2020)	Hussain & Khan (2020)	Jaggannathan & Faisal (2019)	Sabbagh, Rahman, Ismail & Hussain (2019)	Chao-Sen (2018)	Singh, Kumar & Singh (2018)	Iqbal et al. (2017)		Anil & Satish (2016)
TOP MANAGEMENT COMMITMENT	v	v	v	v	v	v	v			v	v	9
CONTINUOUS IMPROVEMENT		v	v	v	v	v		v			v	7
CUSTOMER FOCUS			v	v		v			v	v	v	6
EDUCATION AND TRAINING			v		v		v	v			v	5
EMPLOYEE MANAGEMENT AND INVOLVEMENT				v	v	v	v				v	5
QUALITY DEPARTMENT			v				v	v	v			4
QUALITY PLANNING	v				v					v		3
QUALITY POLICIES		v	v		v							3
STRATEGIC PLANNING				v			v				v	3
HUMAN RESOURCE MANAGEMENT							v		v	v		3
QUALITY AND DATA REPORTING			v					v			v	3
TEAMWORK				v			v					2
COMMUNICATION RELATED		v	v									2
ORGANIZATIONAL CULTURE				v			v					2
SUPPLIER MANAGEMENT									v		v	2
LEADERSHIP SUPPORT		v							v			2
PRODUCT/SERVICE DESIGN								v				1
CUSTOMER SATISFACTION ORIENTATION		v										1
SHARED VISION										v		1

From the collection of articles found, the following table shows the results of the factors for implementing Total Quality Management.

From the results of this table, it is found that there are 5 factors that appear the most or are mentioned in the study. Among them are top management commitment, continuous improvement, customer focus, education and training and employee management and involvement.

These five factors are found in various literatures related to the implementation and success of TQM in supporting company performance, especially those related to customer satisfaction. This shows how important the ability of company leaders, company development, customer focus and training are needed for successful TQM implementation. These four important factors indicate that various companies that have successfully implemented TQM, collaborate between various company management parties, and cannot be obtained in a short time, and need to be done consistently and continuously.

### **Discussion**

From the research it was found that TQM was successfully applied in various service industries through its strategy to improve customer-focused service quality. From the collection of studies above, there are 5 factors that are mentioned the most in almost all studies: top management commitment, continuous improvement, customer focus, education and training and employee management and involvement. Of these five factors, the top management commitment factor is one of the most frequent factors mentioned in the studies. This result can be one of the considerations for various companies that want to implement Total Quality Management in order to improve the quality of the company in order to compete with companies and industries in the service sector. During the process of adopting TQM, companies will usually be in confusion, instability and various obstacles in the process. Therefore, top management's consistency and involvement in all TQM activities will facilitate changes in employee attitudes towards quality improvement in the organization. Continuous or continuous improvement can be done by conducting periodic reviews by internal management. Reviews act as a medium through which companies can detect which parts of operations, systems or processes could be improved. Processes such as audits should also be

carried out extensively through all company projects or departments to ensure that all employees practice quality improvement in delivering their services or products. As part of continuous improvement actions, Quality Assurance and Quality Control teams can also be assigned to support through advice and motivate organizational members to continuously strive to maintain good products and quality for customer satisfaction.

Customer focus is one of the important factors in talking about quality, because the customer itself is the determinant of quality. To ensure the implementation of TQM can be carried out, the customer is also an important factor when compared to the factors of employees, planning, cooperation, communication, culture, and also management. Training and education have become important issues due to the rapid growth of technological innovation and development. Training in the concept of quality is a prerequisite for employee engagement and empowerment. TQM training is considered to be the key to successful TQM implementation. Employees are equipped with knowledge and skills that contribute to building quality. Employee involvement is also one of the main factors affecting organizational performance and business results. Contribution and involvement of employees in the process of implementing TQM increases commitment, independence and discovery that leads to organizational innovation.

### **Conclusion**

After critically reviewing the literature, this study has advanced the TQM theory by providing five critical elements of TQM which has been selected from many service industries. As per researcher opinion, each factor is directly or indirectly relevant to the industry business and other service sectors as well, where customer service and customer satisfaction is concerned. Each factor is directly impacting on performance and quality management implementation process. The study also revealed that the implementation of TQM has been widely accepted, but remains limited in TQM implementation. The framework is provided to facilitate TQM implementation in the service industry sector, which will produce positive results in return on overall quality performance. TQM has played an influential role in the service industry, although the beginning concept has been

perceived to be only applicable in the manufacturing industry.

### Implications

The results of this study can be used as a consideration for companies in determining how to implement TQM in their companies, which are based on five main factors, namely top management commitment, continuous improvement, customer focus, education and training and employee management and involvement. The success of TQM implementation also remains influenced by the company's situation, conditions, culture and habits, practices, policies and also the way in which the TQM method is delivered. From this research, companies, especially in the service industry, can improve the service quality for customer using the Total Quality Management approach. This research can also be one of the literature materials for subsequent research related to TQM implementation and company quality development practices related to customer satisfaction.

Suggestions for further research is to perform similar systematic literatur review in other industries to expand the results of research, for example, research can be done in the manufacturing industry. Then for further research, can be done in a comparison of the factors that affect the implementation of TQM from the period before the Covid pandemic and also after the Covid pandemic emerged.

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