

Assessing the Dynamic Impact of Total Quality Management (TQM) Practices on Organizational Performance: A Critical Review

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Received 19 Mar 2024

Accepted 13 Jun 2024

Abstract

In today's globalized economy, organizations are competing intensely based on quality and are concentrating on meeting the demands of their customers. The application of total quality management has become a source of economic benefit for organizations and quality has evolved as an essential business management strategy. Over the past 20 years, researchers, businessmen, managers, experts and academics have come to the starting value of TQM greatly because of its impact on business success. An organization's continuous quality improvement across all levels is the core objective of management that concept is known as total quality management. It is a commonly used strategic tool for guaranteeing business success and changing companies. The purpose of this study is to evaluate the study on TQM procedures and how they affect organizational performance. This study also discusses the previous research, its values, recommendations and future suggestions. To accomplish this, a thorough analysis of the articles published over 30 years, was conducted and a tabular representation of the results was developed including research insights, author, methodology, region, area, results, suggestions, software and conclusions. Additionally, the significance of the argument between convergence and divergence in TQM adoption and organizational performance is another key topic that this study adds to the total quality management literature. The literature TQM argues that it helps businesses grow and empowers them to consistently provide higher quality services that consistently meet customers' expectations. However, the literature shows the positive impact of TQM on organizational behaviour. It also has been determined where gaps exist in the literature and what needs to be investigated.

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Keywords: Total Quality Management; Organisational Performance; Manufacturing; Implementation of TQM.

1. Introduction

Globalization, over the past few decades' businesses in the market have faced more challenges and increased competition due to the rapid growth of technology and the ever-changing demands of customers. To survive, businesses had to increase the quality of their products and meet the needs of customers [1]. As a result of the ever-changing environment in the twenty-first century, businesses are now dealing with greater competition [2]. Over the past few years, industries have begun to realize the significance of incorporating their green strategy [3]. One of the primary concepts derived from the Japanese industry is Total Quality Management (TQM), which mandates that all employees in a particular organization take part in enhancing the quality of the product or service a task that was previously the responsibility of the staff members in the quality control department [4]. TQM is a management philosophy and set of business practices that aim to utilize

an organization's economic and workforce resources as efficiently as possible in order to accomplish its goals, as stated by ISO 9004 [5]. TQM is a holistic management idea that focuses on satisfying customer expectations to improve the overall performance of the business. Its goal is to continuously improve the product's quality, procedures and services [6]. Total quality management strategies have become a critical tactic for improving organizational performance and obtaining customer satisfaction in recent decades [7]. To improve business performance; companies utilize TQM a widely recognized and valuable tool for both manufacturing and service organizations. Quality management strategies are used by industrial companies worldwide primarily to satisfy customers [8],[9], [10]. TQM has emerged as a key tenet of development and growth as a result of the global manufacturing sector's rapid expansion [2]. Organizational performance in the public and private areas is significantly influenced by total quality management. TQM is implemented by companies to obtain a competitive advantage [11]. TQM has emerged as one of

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the most well-known and demanding management concepts in the light of the developments in the business world particularly during the previous 20 years [12]. The competitiveness, efficiency and adaptability of the entire company can be increased with the application of TQM [13]. To increase business efficiency, TQM is regarded as an approach for controlling and constantly enhancing the entire organization with each employee [7]. The aim of implementing TQM is to provide high-quality goods and services to customers while reducing expenses and boosting output [14]. The total quality management concept is being used by a growing number of enterprises to enhance their output, adaptability, responsiveness and efficiency. Total quality management produced greater quality, better employees, improved customer satisfaction, and increased profitability and productivity.

Performance is the result of work that needs to be completed [15]. Performance is a reflection of an individual's behavior as determined by a person's capacity to help the organization achieve its goal [16], [17], [18]. The effectiveness of a company's operations, employee satisfaction, delivery of good products, and employee happiness are all indicators of its organizational success [19], [20], [21]. In general, TQM and organizational performance have a strong and positive association. To enhance performance, businesses should prioritize rising quality and innovation [2]. It is widely believed that measuring organizational performance is an essential component of all managerial strategies [22], [23]. The two main indicators of organizational success that are directly impacted by total quality management methods [24]. Total quality management and organizational performance are positively correlated in numerous studies. Examining how TQM affects organizational performance has been the focus of the majority of studies. The objective of the study was to examine the connection between total quality management practices and the performance of an organization. The purpose of this topic is to provide a thorough and delicate exploration of how TQM practices influence global organizational performance, offering valuable insights for both academic research and practical application in various organizations.

2. RESEARCH QUESTIONS

1. The present research paper was based on the analysis considering the questions.
2. What is the impact of TQM on organizational performance?
3. What are the key practices of TQM that influence organizational performance?
4. How TQM influences the performance or organizations in different sectors?
5. How TQM influences the performance or organizations in different countries?

3. LITERATURE REVIEW

In this section, the various theoretical and empirical investigations regarding TQM and its relation to the performance of an organization that was carried out in the past are reviewed. The studies that were examined in this part were taken from various sources including research

papers, journals, textbooks, and manuscript databases the concentration on quality has grown and is being utilized as a competitive strategy in today's business environment [12]. In the last two decades, there has been a notable surge in the significance of quality management inside business organizations.

3.1. Total Quality Management

In 1961, Vallin introduced the concept of total quality control. He suggested a comprehensive system approach to quality with a primary focus on preventive rather than remedial actions [14]. The ISO 9001 quality management system was initially published by the International Organization for Standardization (ISO) in 1987 [25]. In Japan after World War II, quality experts like Deming and Juran contributed to and assisted in identifying TQM for the first time. Then, an important part in developing this effective management technique was contributed by Feigenbaum, Crosby, Ishikawa and others [26]. In today's global marketplace, where there is intense competition to attain and maintain a competitive advantage in efficiency and quality, quality is an essential factor that is frequently dismissed [27]. The quality concept is a crucial competitive tool for an organization's transformation as noted by TQM pioneers Philip Cosby, Edward Deming, Armand Feigenbaum and Joseph Juran [28], [29], [30]. The meaning of quality has evolved over time. Originally, it was defined as "conformance to genuine client demands [31]. The term TQM first appeared in 1920, originating from the "production quality control ideas". By the mid-1980s, TQM was being applied in Japan according to Deming [32]. Many national and international quality awards were evolved between the 1980s and 1990s to offer directions for implementing the TQM framework in the real world [33]. In addition to meeting customer expectations, the quality management process reduces costs by implementing an appropriate total quality management structure [34], [35]. TQM advocates for including every employee in an organization's efforts to raise the caliber of its goods and services. To guarantee adherence to technical requirements, TQM uses strategies like statistical process control [30]. Nowadays, the TQM philosophy is becoming more and more popular in manufacturing as well as different businesses which is driving construction companies to apply TQM to raise the caliber and effectiveness of their projects [26], [36]. The successful performance of operation systems in assisting organizations in accomplishing their goals is now substantially enhanced [37]. Attention has been devoted to maintaining quality and performance since this effect emerged [38]. It was referred to as enhancing maintenance quality through the implementation of Total Quality Management (TQM) techniques [10]. In organizations, the quality is becoming a major issue [39]. A new method for quality evaluation was developed by [40]. A study was conducted to focus on the service quality, loyalty and overall satisfaction [41]. A physical quality system framework was created to evaluate, confirm and predict the industry's quality control system [42]. The significance of evaluating the social and environmental effects of industrial products quality and supply chain has grown in recent years [43].

Additionally, numerous studies have shown that TQM in construction companies can increase the quality of products, market share and customer satisfaction [44], [10], [45]. Positive impacts of organizational networking can be seen from the same time of establishment when quality management techniques are used [19]. By utilizing quality management dimensions as the inputs and excellent performance as the outputs, organizations that embrace a comprehensive quality management approach concentrate on producing and maintaining a high-grade output [2]. Total quality management adopting organizations generates several benefits including increased performance, improved service and products, enhanced customer satisfaction and reduced cost [12], [46], [38].

The principles of total quality management are illustrated in Figure 1.

The subsequent eight elements are usually found in the concept of Total Quality Management (TQM): process-centric strategy, relationship management, employee involvement, integrated structure, customer focus, systematic flow, and fact-based decision-making.

3.1.1. Critical Success Factors (CFs) of Total Quality Management (TQM)

Maintaining successful strategies in tremendous competition in the market is challenging nowadays [41]. Nowadays According to Saraph (1989), CFs are administrative planning and actions that must be practiced to accomplish effective quality management in an organization. Critical success elements are the best practices, facilitators, or drivers that accelerate an establishment’s attainment [48]. Every process that helps an organization enhance its quality, whether directly or indirectly is integrated by TQM. The success or failure of TQM implementation is influenced by these CSFs [49]. Many researchers; [2], [19], [50], [51], [52], [48] have given different definitions of CSFs. The limited regions in which successful outcomes would guarantee efficacious modest performance for the association, department, or individual are known as critical success factors [53].

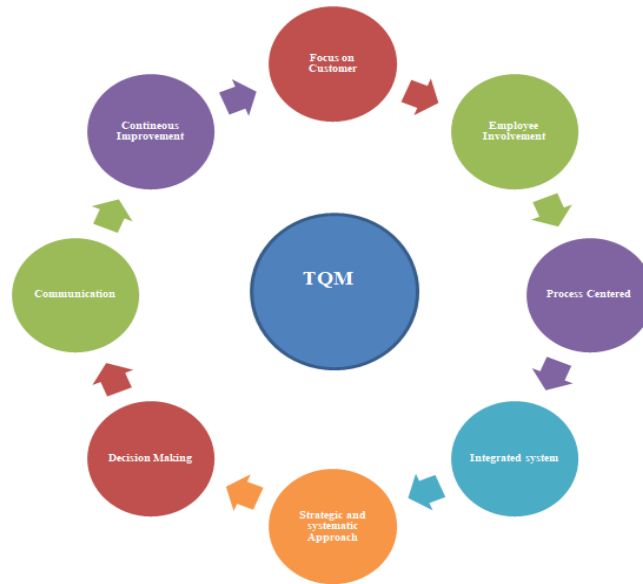


Figure 1. Principles of Total Quality Management [47]

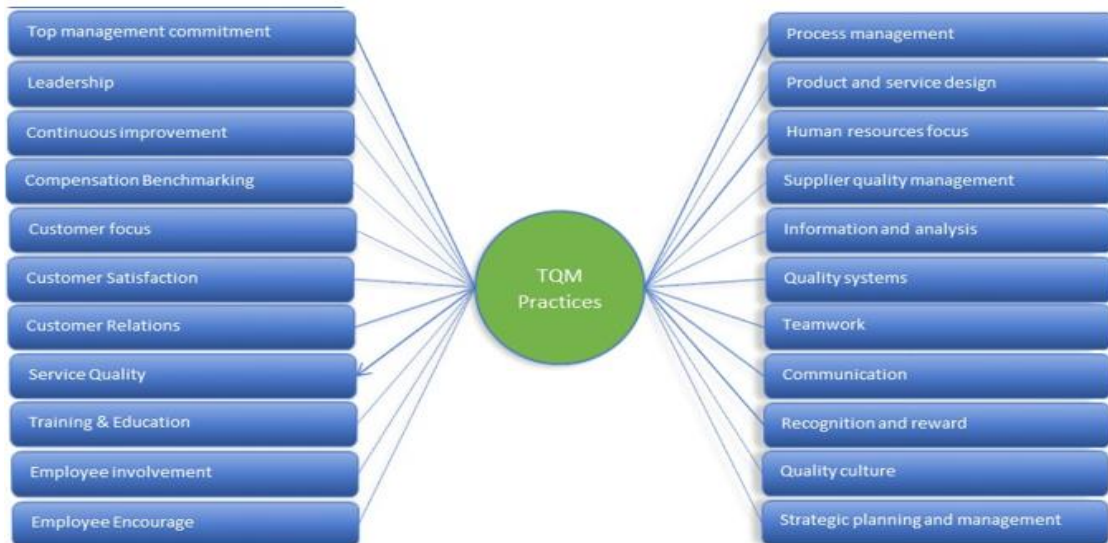


Figure 2. The factors of TQM as highlighted in the literature review

The main TQM practices that have been discussed in previous research are illustrated in Figure 2. These practices have a significant effect on an organization's performance. Leadership, maintaining a culture of quality, focusing on the needs of the customer, providing high-quality services, training and education, process management, continuous improvement, reorganization and analysis, employee encouragement, designing products, teamwork, customer relations, compensation

benchmarking, human resource functions, employee involvement, communication, strategic planning, quality systems, and top management commitment are all important components of this framework.

3.1.2. The Highlighted Factors of Total Quality Management

The contributions of many authors on organizational performance and TQM practices are highlighted in Table 1.

Table 1. TQM practices and organizational performance defined in past literature

TQM Practices	Authors
Top Management Commitment	[2],[54],[52],[55],[56],[57],[58],[59],[60],[61],[62],[63],[64],[65],[66],[67],[48],[68],[69],[70],[71],[72],[73],[52],[74],[75],[76],[52],[77],[78],[51],[80],[81],[60],[8],[82],[83],[84],[85],[86],[87],[47],[88],[89],[90],[86],[91],[92],[93],[85],[94],[95]
Leadership	[73],[56],[67],[96],[97],[49],[51],[2],[98],[52],[99],[100],[101],[102],[103],[95],[104],[105],[106],[107],[108],[109],[58],[16],[110],[111],[112],[113],[114],[115],[116],[117],[118],[119],[120],[57],[108],[121],[96],[123],[124],[99],[125],[126],[127],[128],[129],[130],[63],[131],[128],[132],[133],[134],[77],[73],[78],[65],[58],[135],[84],[109],[136],[137],[54],[52],[81],[70],[111],[59],[99],[138],[55],[139],[140],[141],[142],[16],[56],[60],[86],[72]
Continuous Improvement	[2],[70],[143],[97],[111],[97],[144],[145],[146],[48],[49],[70],[96],[56],[111],[69],[54],[58],[60],[77],[64],[147],[148],[49],[71],[70],[149],[33],[58],[137],[150]
Benchmarking	[2],[151],[152],[62],[73],[153],[86],[154],[70],[143],[51],[156],[98],[157],[158],[159],[160],[14],[161],[55],[103],[124],[162],[99],[163],[99],[164],[122],[15]
Customer Focus	[48],[2],[139],[59],[165],[26],[64],[148],[66],[55],[72],[52],[166],[24],[151],[167],[168],[108],[103],[95],[169],[170],[171],[108],[172],[112],[123],[126],[110],[173],[133],[174],[109],[137],[175],[50],[176],[177],[127],[164]
Customer Satisfaction	[97],[71],[56],[171],[123],[126],[173],[178],[179],[180],[133],[181],[182],[105],[64],[58],[182],[54],[99],[183],[2],[184],[99],[51],[185],[60],[48],[186],[139],[86],[187],[188],[84],[189],[190],[104],[70],[191],[138],[119],[192],[82],[193],[143],[57],[140],[194],[87],[94],[49],[57],[84],[144],[127],[195],[196],[86],[197],[19],[103],[198],[199],[200],[201],[49],[67],[134],[139],[55],[71],[186],[157],[202],[175],[59],[171],[1],[201],[154],[135],[203],[2],[177],[204]
Customer Relations	[2],[126],[205],[173],[186],[162],[205],[154],[206],[202],[207],[138],[119],[208],[120],[138],[209],[127],[129],[148],[190],[210],[132],[49],[67],[134],[84],[142],[211],[185],[201],[154],[70],[212],[213],[203],[177],[214],[139],[72],[215],[99]
Service Quality	[2],[90],[216],[55],[52],[85],[74],[78],[59],[72],[70],[75],[8],[217],[89],[218],[185],[48],[48],[47],[219]
Training & Education	[2],[188],[55],[220],[139],[221],[55],[222],[12],[70],[217],[82],[223],[71],[85],[147],[224],[51],[156],[98],[142],[225],[54],[58],[64],[66],[72],[226],[26],[52],[74],[141],[84],[227],[111],[105],[50],[110],[127],[54],[228]
Employee Involvement	[2],[66],[229],[86],[230],[188],[139],[222],[70],[223],[71],[158],[1],[127],[56],[51],[165],[127],[71],[156],[72],[26],[55],[186],[75],[141],[77],[231],[95],[74],[137],[82],[188],[52],[84],[98],[174],[181],[137],[232],[175],[55],[110],[66],[7],[115]
Employee Encourage	[2],[66],[94],[70],[127],[71],[190],[64],[226],[52],[74],[78],[75],[202],[59],[59],[157],[7],[155]
Strategic Planning And Management	[167],[220],[99],[233],[234],[19],[233],[57],[56],[138],[235],[236],[237],[238],[127],[229],[86],[165],[51],[239],[132],[86],[176],[171],[55],[28],[67],[231],[240],[139],[52],[242],[204],[243],[244]
Process Management	[245],[80],[246],[64],[247],[140],[113],[62],[246],[109],[177],[248],[72],[132],[95],[57],[84],[249],[155],[82],[245],[113],[250],[87],[247],[62],[109],[250],[232],[107],[177],[64],[127],[162],[138],[72],[248]
Product Design	[162],[249],[199],[59],[83],[118],[122],[162],[56],[251],[82]
Human Resources Focus	[86],[113],[118],[122],[252],[253],[162],[148],[84],[134],[63],[255],[256],[155],[231],[257],[139],[204],[82],[258],[243],[57],[259],[260],[261],[70],[262]
Supplier Quality Management	[2],[162],[62],[66],[86],[55],[222],[245],[62],[162],[66],[153],[86],[263],[130],[49],[63],[264],[90],[213],[201],[67],[213],[11],[265],[204],[266],[149],[267],[243],[268],[84],[259],[269],[270],[52],[95],[271],[242],[261]
Information And Analysis	[260],[132],[258],[212],[154],[259],[268],[59],[261],[272],[70],[132],[57],[268],[82],[109],[59],[118],[122],[110],[99],[59],[127],[99],[162]
Quality Systems	[132],[261],[155],[272],[82],[186]
Teamwork	[63],[165],[181],[273],[58],[105],[274],[275],[127],[156],[162],[264],[155],[188],[176],[139],[55],[220],[222],[155],[217],[276],[274]
Communication	[95],[277],[63],[77],[261],[155],[86],[230],[55],[165],[113],[278],[77],[24],[54],[64],[58]
Recognition And Reward	[154],[52],[271],[222],[155],[55],[164]
Quality Culture	[77],[272],[59],[155],[86],[63],[8],[55],[220],[222],[1],[176],[148],[64],[105],[251],[264]

Several researchers investigated total quality management practices in past literature are shown in Table 1.

3.2. Organisational Performance

Effective management in an organization depends on performance measurement [62]. Organizational performance is defined as the level to which an enterprise meets its financial and market-focused objectives [172], [279]. Performance is understood to be a part of "ability and motivation," which is the fundamental idea of performance, as well as effort, opportunity, and recognition [280]. Performance assessment is defined as the comparison of status to desired or benchmark values [281]. It is widely acknowledged that consistency, accessibility, and maintainability are essential metrics for assessing the performance of industrial structures [282], [283], [13], [37]. Theoretically, a performance management system uses a goal-setting process to connect business and personal goals and a performance-measuring process to relate goal accomplishments to a range of HR options [187], [284], [285], [37]. Establishing organizational goals, evaluating progress towards those goals and making changes to accomplish those goals more successfully and efficiently are all everyday operations that boost organizational performance [56], [286], [287], [288], [289], [13]. The prolonged periods of waiting connected to businesses' procedures for service require performance assessment [290]. Employee commitment is a critical component of achieving greater organizational performance since it leads to increased productivity which enhances organizational performance [195]. Various performance types including

innovative, financial and operational have been used by researchers to examine the connection between total quality practices and organizational performance [2]. Studies also show that organizational success is affected by a variety of factors including operations, organizational development, financial performance strategic planning [137]. Software for solving engineering equations has been used in a study to determine best performance, this study investigated various operating traits [291]. A maintenance performance framework is designed by an organization's management approach and managerial extents [281]. To boost productivity, several studies were carried out to enhance performance [292], [293], [294], [295], [296], [297], [298], [299], [300]. Many studies have been conducted to investigate the relationship between total quality management and organizational performance [243], [281], [176], [24], [231],[301]. Most studies' findings indicate that enhancing organizational performance and implementing quality management methods are positively correlated [19], [174], [229], [94], [8].

3.2.1. Organizational Performance

The best use of resources in order to achieve effective performance is becoming continually crucial these days [302]. Lagging and leading indicators are two major categories under which Performance practices are classified. In a system for warning, the leading sign is a performance accelerator [281]. The factors of organization performance are presented in **Error! Reference source not found.** along with the references of the research papers.

Table 2. Types of Performances

Organisational performance	Authors
Operational Performance	[2],[187],[197],[99],[188],[303],[304],[305],[49],[301],[177],[306],[99],[47],[308],[309],[56],[103],[310],[311],[197],[187],[312],[47],[188],[99],[301],[215],[313],[304],[99],[303],[49],[264],[11],[270],[309],[314]
Sustainable Performance	[2],[167],[274],[315],[92],[243],[56],[316],[152],[2],[317],[152],[318],[92],[316],[319],[315],[142],[315],[320],[321],[167],[322],[118],[122],[161]
Financial Performance	[2],[248],[149],[117],[56],[170],[303],[84],[177],[109],[156],[152],[99],[232],[67],[103],[86],[56],[2],[232],[56],[131],[232],[177],[182],[170],[135],[149],[303],[203],[263],[109],[156]

Several authors examined the organizational performance practices that were previously specified in the studies displayed in Table 2.



Figure 3. Types of Organisational Performance

An organization's success can be determined and measured in several ways, but the most widely used corporate performance indicators at present are financial, operational, and sustainable performance

3.2.2. Total Quality Management and Organisational Performance

Modern manufacturing technologies are essential for keeping up with today's quick changes in innovation and technology [9], [287], [283], [323]. Quality plays a vital role in enhancing organizational performance as evidenced by the several articles, publications, and surveys that describe this relationship [50], [20]. TQM effects on performance in the manufacturing and service zones. A set of standards that symbolize the establishment of a continuously enlightening organization is known as TQM [84]. By improving an organization's reputation and public image, total quality management has come to symbolize success for the majority of companies worldwide [324]. TQM is a method of leadership that uses techniques to enhance organizational efficiency and customer satisfaction by using quality management practices to continuously enhance performance, employee participation and high-quality products with the collaboration of every stakeholder [195]. Effective implementation of TQM within an organization's overall strategy can potentially enhance its performance. Continuous improvement, top management commitment and focus on customers were identified to find the link between TQM and performance and results show a positive association [19]. Another study identified three key TQM practices process focus, continuous improvement and employee involvement. According to the study, total quality management has a statistical and significant effect on organizational performance [176].

A theoretical framework was proposed by [2] to inspect the relation between TQM and organizational performance. Outcomes indicated a notable and positive influence. According to [62], the key practices of TQM that improve organizational performance are knowledge and process, leadership, strategic quality, supplier quality and customer focus. Total quality management has a favorable impact on organizational performance according to [141]. A review of the literature on TQM was carried out by [47], who identified several TQM practices that directly affected organizational performance such as customer satisfaction, human resource focus, strategic planning and leadership. Šteta-Ćerimović & Mekić [192] developed a model to examine the association amount TQM, organizational performance and organizational learning. Employee participation, leadership, continuous improvement, customer focus and clear vision are some of the total quality management practices that were examined in this study to increase performance [16]. TQM and organizational performance are positively correlated with each other. The outcomes of another research demonstrated that the overall effectiveness of total quality management was favorably significant on the performance of a company. The

connection between performance and TQM is examined by [1]. The findings showed that TQM significantly improves organizational performance. To determine the liaison between total quality management and OP, a structural equation model including people, leadership, process and resources was developed. This study offered evidence in favor of TQM's noteworthy and positive impact on organizational performance [266]. TQM has a favorable influence on organizational performance [175]. All performance parameters are positively impacted by TQM practices according to [15]. To inquire how TQM quality management practices affect organizational performance, [24] suggested customer satisfaction and leadership were significant practices that have an affirmative impact on organizational performance. Another study was conducted to find TQM practices' effects on organizational performance. The findings indicated that TQM practices had a favorable impact on the performance of the organization [325]. Organizational performance is positively impacted by training, supplier quality management, customer focus, leadership and training [67]. Jaafreh and Al-Abdallah [213] state that employee involvement, process management, top management commitment and customer focus demonstrate a substantial influence on organizational performance. Another study studied the relationship between TQM and business performance. Employee focus, leadership and customer focus, and leadership were the main practices of TQM and results showed a positive impact [217]. Ismail Salaheldin [49] discovered that various TQM practices had a substantial impact on various performance outcomes. The potential effects of soft total quality management practices such as leadership, supplier management, employee involvement, quality planning and process management are expressed in terms of market benefits [254]. According to [11], TQM practices have a stronger correlation with business performance in highly competitive marketplaces. Another study was conducted to exam to find the association between total quality management and performance. The results showed positive and significant outcomes in TQM [99]. The TQM practices i.e. process management; strategic planning, benchmarking, people management, and customer focus are identified main practices in this study. A study revealed the significance of total quality management practices on organizational performance [99].

Thus, as per the above-listed quality practices, the key decision makers inside it found that TQM practices have a positive influence on organizational performance. A thorough literature review of total quality management and organizational performance has been revealed and further existing studies are identified in Table 1.1.

Table 3. Existing studies on TQM and organizational performance

RESEARCH STUDY	PRACTICES	METHODOLOGY	RESULTS
[19]	Continuous improvement, Customer focus, Top management commitments	Descriptive Analysis	A significant and positive relationship was identified.
[176]	Continuous improvement, Processes focus, employee engagement, and continuous improvement	Descriptive Analysis	Results showed a strong effect on the business performance.
[7]	Strategic planning, Management commitment, Operational focus, Continuous improvement, Knowledge management, Employee involvement and Customer focus	Multiple Regression, Mediation analysis and correlation analysis	All practices have a positive impact on organizational performance except strategic planning and customer focus.
[2]	Leadership, continuous improvement, training and education, customer relation, benchmarking, R&D, customer focus, customer involvement, top management commitment and customer satisfaction	ANOVA and Regression	Findings revealed a strong impact and relationship between TQM and organizational performance. High-impact practices include training and education, continuous improvement, leadership, and customer satisfaction.
[326]	Employee engagement, training, continuous improvement and Top management commitment.	Multiple Regression, Regression Analysis	Findings show significant results.
[327]	Top management commitment, policy and strategy, communication, and process management, training & development.	Correlation Analysis and Descriptive Statistics	All practices have a significant impact except strategy and policy.
[219]	Strategic planning, employee empowerment, communication process, customer orientation, information sharing and Top management commitment	Multiple regression, Descriptive correlation	The outcomes of the research indicated a positive impact on organizational performance.
[7]	Employee involvement, Operational focus, management commitment.	Mediation Analysis	Study shows positive results on the performance of an organization.
[12]	Leadership and Role of Management	Correlation Analysis	Total quality management has a positive influence on organizational performance.
[206]	Product Design, Continuous Improvement, Customer Focus & satisfaction, Training & Education, Supplier, Communication, Teamwork, Process Management, Employee Involvement and Quality Management.	Confirmatory Analysis Factor	The study concluded that total quality management has a highly strong impact on performance.
[62]	Knowledge and Process Management, Leadership, Supplier Quality, training Management, customer focus and Strategic Quality Planning	Descriptive analysis	Study shows a positive impact on performance.
[174]	Product value optimization, employee participation, Customer focus, top management involvement, continuous improvement.	Pilot Study	The effectiveness of businesses is positively impacted by TQM practices.
[50]	Education & Training, Customer focus	Partial Least Square Structural Modelling Equation	Study shows customer focus and training have positive results on the performance of an organization.
[47]	Customer satisfaction, human resource focus, strategic planning, supplier quality management and Leadership	Regression Analysis and Correlation	Findings revealed the substantial impact of total quality management on performance.
[304]	Strategic Planning, Process Management, Leadership, People Management, customer focus and Information Analysis	Structural Modelling Equation	The study revealed that TQM factors have a positive impact on performance.
[14]	Market orientation, entrepreneurial orientation,	Partial Least Square Structural Modelling and Composite Reliability	The results of this study show all are significant relationships.
[16]	Employee Performance, Operations Management, Customer Focus, good vision, Leadership, Employee Participation, Knowledge Sharing, and Continuous improvement.	Cronbach Alpha and Regression analysis	All practices have a positive impact on performance.
[170]	Leadership Commitment, inspection, Quality control and Benchmarking, Customer focus and Employee Training	Descriptive statistics, Multiple and linear regression and ANOVA	The study revealed significant results.
[1]	Role of management accountant, Customer focus, Service design	Descriptive analysis	Study shows these practices positively affect organizational performance.
[81]	Continuous improvement, Customer Focus, Product and Service design	Descriptive Regression Analysis, Analysis,	Aside from customer focus all practices have an optimistic impact

		Correlation Analysis	on organizational performance.
[266]	process, People, and Partnership & Resources, Leadership	Structural Equation Modelling (SEM)	Process, resources, leadership and partnership have significant relationships except for people.
[175]	Customer satisfaction	Regression and Correlation Analysis	TQM has a positive association with organizational performance.
[24]	Leadership and Customer Satisfaction	Descriptive Statistics	Total quality management has an affirmative influence on performance.
[328]	Human resource focus, Customer satisfaction, Leadership, Strategic Planning, Supplier quality management, and development.	Exploratory Factor Analysis (EFA), Structural Equation Modelling (SEM)	TQM practices have a positive relationship with organizational performance.
[229]	Continuous improvement, strategic and systematic approach, Top management commitment, Integrated systems.	Descriptive analysis	Total management practices have a constructive effect on business performance.
[301]	Continuous Improvement, Leadership, Process Management, Strategic Planning, Customer Focus, and Policies & Strategies	Modelling	Total quality management (TQM) dimensions have a significant impact.
[56]	Employee involvement, Customer focus, Leadership, Supplier Involvement, Process management, Strategic management, Continuous Improvement and Fact-based management	Statistical analysis	The study shows significant results.
[67]	Supplier quality management, Knowledge and process management, Leadership, Strategic quality planning, Training and Customer focus	Exploratory Factor Analysis	TQM has positive results on performance.
[137]	Continuous improvement, top management support, Customer focus and employee involvement	Multiple linear Regressions	Continuous improvement and employee participation are crucial practices whereas top management and customer focus have non-significant results.
[83]	Employee involvement, Leadership, effective communication, teamwork, training, self-assessment, development recognition and appreciation	Descriptive Analysis	Study shows the significant results.
[217]	Process management, Leadership, Involvement of people, and continuous improvement and Customer focus	Cronbach's Alpha	Total quality management practices have a positive influence on managerial performance.
[218]	customer focus, process management, People management, strategic planning, Leadership, supplier relationships, continuous improvement, and information analysis	Hofstede's Model	Study shows a strong effect on organizational performance.
[166]	Supplier quality, customer focus, employee empowerment, management, process approach, continuous enhancement and top management commitment	Multiple Regressions analysis	Results revealed that all practices have an encouraging impact while the process approach has a negative impact.
[172]	Strategic planning, Leadership, Process management, People management, Customer focus, Supplier management and Information and analysis	Path Analysis, Pearson product Moment Correlation	Finds revealed that total quality management practices have a substantial effect on organizational performance and competitive advantage.
[315]	Employee focus, customer focus, community focus, productivity focus and Leadership.	Multiple Regression Analysis and Exploratory Factor Analysis	The study shows the Significant results between TQM and performance.
[86]	Supplier quality management, Employee Relations, Leadership, Training, Product design, Process management and quality data	Structural Equation Modelling	The study revealed Satisfactory results except for quality data.
[99]	Leadership, Information and Analysis, Process management, management of people, customer focus, People management and Strategic planning	Factor Analysis	Management of people, focus on customer and Leadership are the strong practices of TQM.
[311]	Top Management Support, Product Design, Supplier Relationship, Customer Relationship, Process Flow Management & Feedback and Workforce Management	Multiple Regression and Path Analysis	All TQPM practices have a noteworthy connection with performance except product design and feedback.

The literature on TQM and organizational performance is defined in Table 1.

Additionally, it explains the total quality management (TQM) factors, methodologies, software, and outcomes of the studies.

3.2.3. Comparing frameworks of TQM practices and OP with past studies

Table 4. Research insights of Past studies

Research study	Research insights	Purpose	Outcomes	Future suggestions
[2]	Developed a framework for TQM, sustainability and Organisational performance.	Identify the link and impact among TQM, sustainability and organizational performance.	Continuous improvement, customer focus and top management commitment, sustainable, economic, environmental, sustainable, operational, and financial performance	It is suggested that CFA and SEM will be used to carry out this study for better results. Also sample size is limited this study will proceed by enlarging the sample size.
[7]	Find out the impact of total quality management practices in the construction industries of Pakistan.	Find out the relationship and effect of TQM on organizational performance.	The study exposed that administration commitment acted as a mediating factor in the project.	This study only looks at the construction sector but it can be conducted in different sectors for numerous results.
[327]	To create management strategies and techniques for implementing elements to boost organizational performance.	This research aims to evaluate how total quality management practices affect the performance of organizations,	Findings indicated that policy and strategy have a negative impact while training, project management and top management assurance have a good influence on the performance of the shipping industry.	To determine the true connection between TQM practices and performance it is advised to conduct research in different sectors.
[47]	To discover how much management and staff in Nagpur city's industrial organization are attentive to the TQM approach.	To define the impact of TQM practices on organizational effectiveness in manufacturing firms.	Total quality management practices have a substantial influence on operational performance which has reduced costs and raised product quality and profitability.	This study is exclusively conducted in Nagpur further study is carried out in different countries.
[151]	Find out how organizational performance is impacted by TQM practices in the Bahir Dar Textile industry.	The purpose of this study is to examine the influence of total quality management on the performance of an organizational	The performance of an organization is impacted by every factor of TQM.	This study suggests that further research can be done in the future with other practices of TQM which were not stated in this study.
[84]	The study suggested a theoretical framework for connecting organizational performance with TQM.	Determine the effect of total quality management (TQM) and its implementation in companies.	The conceptual framework shows positive results among TQM and organizational performance.	Future research can incorporate performance measures such as innovation performance, project performance and social performance.
[329]	Introduce total quality management as a cutting-edge instrument for successful quality in organizations.	Examined Deming's conceptual model according to its level to find out the impact on performance.	Results show the positive effect of top management on organizational performance.	Further research will be conducted to investigate the relationship between environmental and financial by using QCA procedures.
[234]	Creating a model to use structural equation modeling to measure innovation performance.	The purpose of this study is to find out the association between innovation performance and TQM factors.	Results demonstrate that businesses need to design and implement TQM practices that utilize innovation to gain long-term advantages.	Future recommendations should focus on determining the effects of each TQM practice. This gives a good picture of TQM practices.
[67]	Analyze how TQM procedures affect various metrics of performance by using exploratory factor analysis.	This research aims to discover the effect of total quality management dimensions on the performance of the organization.	The findings point to several important implementation-related practices including employee knowledge, top management, customer focus and education.	The main components of TQM are employee involvement and continuous improvement. These practices can be incorporated into future studies for better results.
[172]	Framework was created to demonstrate how the use of competitive advantage in TQM practices can enhance organizational performance both directly and indirectly.	The main purpose of this study is to utilize TQM techniques that boost an organization's performance and competitive edge.	The outcomes show that TQM practices have a positive impact on organizational performance.	This study focused on manufacturing companies, further study will be carried out in service companies to achieve more results.
[330]	This study showed how TQM affects sustainable performance by using SPSS.	To find out the influence of total excellence management practices on performance.	The findings directed that TQM is a strategic tactical management approach for long-term success for organizations.	The application of TQM as a strategic tool in operations will be the subject of further research.
[152]	A research model for measuring TQM practices was developed.	This study aims to demonstrate the link between TQM and organizational performance.	Reliability factors i.e. employee focus, leadership, customer focus, and productivity were identified main practices of TQM in this study.	Future research suggests utilizing multiple regression analysis to determine the relationship between TQM and organizational performance.

Table 4 indicates the previous studies linked to the connection between TQM and OP and their relationship.

3.2.4. Total Quality Management and Organisational Performance in Different Sector

Companies endeavor to enhance their production and management practices to maintain their competitiveness in the world of business [331]. Practices of TQM support organizational success in a variety of sectors [332]. TQM reduces defects in the manufacturing sector. In the healthcare sector, TQM improves patient care in the healthcare industry [333]. TQM helps service businesses by enhancing relationships with customers and improving processes [218]. Total quality management enhances productivity in the educational sector [127]. Total quality management also promotes overall productivity and customer satisfaction across a range of industries and ensures reliability and security in fields like aerospace, and IT [157]. Numerous studies make contributions in several sectors.

A study was carried out within Pakistan's shipping sector. Results showed top management commitment, training, process management, policy and strategy and top management commitment are involved and impacted organizational performance [327]. [58] carried out the study to determine the main practices of TQM in the higher education sector. Results showed Performance measurement and TQM are positively correlated. Another study was carried out by the Halal Food Company Malaysia. The results showed eleven crucial success practices that producers should prioritize in their business infrastructure to enhance performance [183]. [56] piloted research in the Jordan Petroleum Refinery Company. The findings demonstrate that TQM improves organizational performance. Another study in conducted in the construction industry and the results identified five reliable and valid TQM dimensions namely employee involvement, training, recognition, organizational management and communication [77]. This study was conducted to evaluate the degree to which each of the top-ranked dairy companies in Jordan applied both individually and collectively the principles of Total Quality Management (TQM). Additionally, it revealed the general positive association between performance and TQM [334]. Identifying the connections among total quality management practices, organizational performance and competitive advantage in the Fishery industry, results show an optimistic relation between TQM and organizational performance [172]. To determine how TQM practices affect organizational effectiveness, a study was carried out in the textile sector. Findings showed organizational performance positively impacted total quality management [245]. The influence of total quality management on performance in Pakistan's construction zone was investigated by [7] and it showed TQM has a positive impact on the performance of an organization. Another study was directed at agriculture and food safety to inspect the connection between total quality

management and organizational performance [50]. Khan & Malik investigate performance in higher education institutions to find how performance is affected by TQM. Results show a positive relation between performance and quality management [336]. A further study was conducted at an iron and steel company to enhance performance through total quality management practices [52]. To examine the connection between TQM and organizational performance another study was carried out in the hotel sector and he found a positive relationship among them [337]. [337] performed a thorough literature review to identify, comprehend and analyze the results of recent higher calibre TQM implementation in the manufacturing sector. Another study was carried out in Malaysian medical device companies. The findings revealed that leadership, training, continuous improvement and customer orientation have positive and vital impact on organisational performance [126]. A study was conducted in autonomous driving sector to investigate a model and determine the structure and assessment of total quality management key practices [60]. [192] focused on IT enterprises situated in the Federation of Bosnia and Herzegovina. This study offer recommendations on how to use organisational learning and TQM to improve performance of an organisation. Another study was performed in order to investigate how the national cement share company's performance was affected by total quality management. Results shows that organisational performance have a noteworthy impact on TQM [219]. A theoretical framework for implementing TQM critical success practices was developed to improve employee performance in the Iraqi oil sector. Nine total quality management practices were identified by [64]. A study was carried in First Bank Plc, the results show that all the factors of employment involvement, team work and trust on bank are significantly correlated [151]. [338] carried out study in sugar company Ltd and it concluded that implementation of TQM have positive impact on organisational performance.

3.2.5. TQM Implementation

Aspects of a successful TQM implementation can generally be taken from four theoretical areas; descriptive techniques, empirical research, formal award models, and the work of quality gurus [48]. Businesses have to understand how consumers describe quality in terms of the products and services they receive. When a business prioritizes TQM in its manufacturing process, fewer issues will arise [66]. Numerous studies have suggested the implementation of TQM in originations to attain productivity, efficiency and profitability. Studies [72], [231] that support implementation total quality management (TQM) in their business are [6], [9], [176], [219], [8], [339], [54], [55], [337], [58], [75], [217], [49], [69], [71], [188], [48], [340], [59], [186], [73].

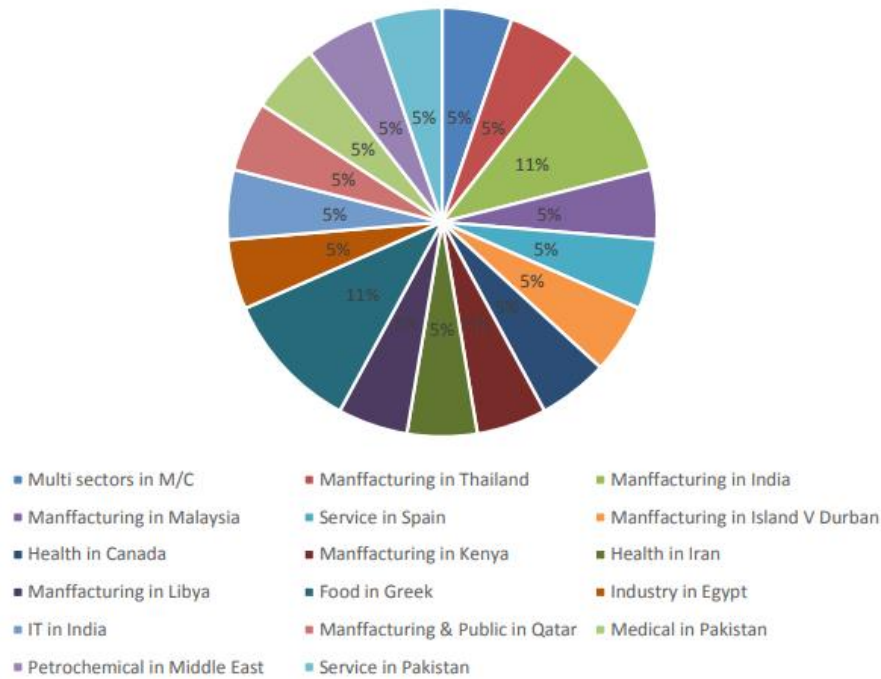


Figure 4. Implementation of TQM suggested in international studies [337]

The implementation of overall quality management in international studies is illustrated in Figure 4. This figure demonstrates the percentage of TQM research conducted across various nations and industries.

3.2.6. Total Quality Management and Organisational Performance in Different Countries

A study was carried out in organizations in Saudi Arabia to examine the influence of TQM and organizational performance. According to the findings, organizational performance and total quality management are positively correlated [12]. [108] Conducted a study to determine quality aspects and business performance in Serbian start-ups. The outcomes demonstrate a robust relationship between TQM and organizational performance. To create a research, model the practice of quality management and its effect in Indonesia was carried out. This model suggested leadership, customer focus, information and process, business culture, supplier relations and continuous improvement are success practices of TQM that impact performance [218]. The impact of TQM practices on organizational performance in large-scale industrialized firms in Sri Lanka is examined by [304]. Leadership, process management, strategic planning, people management and were information analysis critical practices of TQM. In the Lebanese industries, another investigation was carried out. The results show that Lebanese businesses have good correlations and strongly adopt TQM [326]. A conceptual model was suggested by [328] and tested in five manufacturing and three service companies located in North India. Strategic planning, organizational leadership, human resource focus, supplier quality, and customer relationships are all the main practices of TQM. The study was conducted by [50] in Abu Dhabi and the results show a positive impact on performance. Another study was directed at manufacturing organizations in the Republic of Cameroon. The findings indicated that customer focus, quality control, benchmarking and employee empowerment are the significant factors that effect on performance of businesses

[170]. To define the influence of total quality management practices, this study was carried out in Nigerian manufacturing companies. The results show how TQM practices assist manufacturing firms in their success [174]. A suggested research model was developed in US-based companies. The study's outcome was acceptable [86]. Another study was carried out in Pakistan and suggested that organizations implement TQM in their business to improve performance [59]. In Malaysia, a study investigates the relationship between the two TQM dimensions, Soft (ST) and Hard (HT). Thus, the study demonstrated that there is a strong and positive interaction between the two dimensions, and the report offered a theoretical multidimensional integrated framework [341]. Research on the methods of total quality management in Nigerian construction companies has shown inconsistent results due to the limited use of TQM structures and practices [66]. [342] carried out the study in Afghanistan and found a significant impact of customer satisfaction on the organization. According to [54], top management commitment is the most crucial factor in Vietnamese industry organizations. A study in the areas of education sector in the Kingdom of Bahrain was conducted and the results show highly effective total quality management standards [343].

4. METHODOLOGY

To fully understand the effect of Total Quality Management techniques on organizational performance, a narrative literature study was conducted. The first step was outlining the scope of the study and the main TQM concepts that will be investigated. This involved determining the fundamental ideas, models, strategies for performance, and impacts of Total Quality Management on different sectors

and countries. A keyword search was conducted on TQM literature published between 1990 and 2024 to collect empirical and theoretical studies. The use of databases from IEEE Xplore, Google Scholar, JSTOR, PubMed, and Scopus. "Total Quality Management," "TQM frameworks," "organizational performance," "TQM implementation," "sector-specific TQM," "country-specific TQM impact," and "quality improvement" were some of the search terms used.

Out of the 500 study papers that this search generated, 344 of the most relevant research were selected for consideration using specified criteria. The selection criteria included examined papers, English-language studies, case studies, articles, websites and original research on Total Quality Management and its effects on organizational performance. The study's analysis was carried out by using theme analysis of the chosen studies, which revealed specific industry themes and insights about the effectiveness of TQM techniques. Comparing the TQM Frameworks in Practice to Find the author, publication year, TQM framework addressed, important framework components, and comparison metrics were among the important data elements. Comparative research was performed to determine the shared components and distinctive attributes of various TQM systems. This well-structured analysis provides insightful information and beneficial implications for businesses intending to apply efficient quality control methods throughout the world.

5. DISCUSSION

Reviewing the literature on the association between TQM and organizational performance is the main goal of this study. A thorough evaluation of approximately 200 papers was concluded in this study. Both the research object and the paper's outcome are taken into account during an evaluation. Tables 1, 2, and 3 display a comprehensive list of all papers that have been examined in this study published from 1990 to 2024. These papers were categorized into four five groups; impact, relationship, applications, implementation of TQM and performance of an organization. Several articles have discussed the operative implementation of total quality management in various organization sectors and countries. The connection between total quality management and organizational performance has been examined in earlier research [230], [231], [1]. These studies also revealed that TQM practices may help management to improve their businesses. In addition, [47] said that helping organizations perform better and management professionals possess the particular needed to work in the TQM process. It is advised that industrial organizations keep looking for methods to boost employee performance [25], [344]. In the future, as industry 4.0 deployment becomes closer, the TQM framework can be modified to adapt to continuous enhancements. In areas where the organization will benefit, these will enhance the capacity for process optimization and product design.

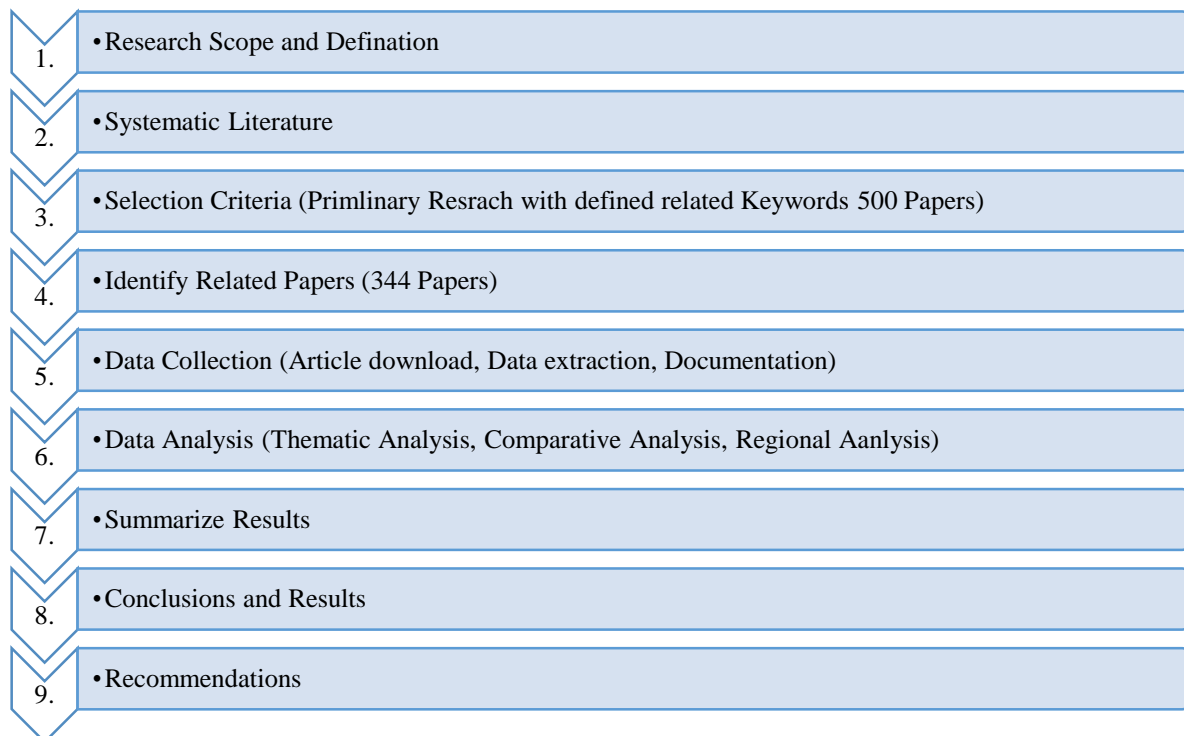


Figure 5. Research Methodology

All the stages and aspects of research methodology are visually represented in a methodology diagram. Figure 5 illustrates the steps that tend to be incorporated in a methodology diagram for this study.

6. CONCLUSION

Total quality management is unquestionably a crucial pillar of the manufacturing industry's transformation strategy, even though several studies have been carried out both nationally and internationally to examine and evaluate various sectors. The systematic review makes it clear that certain research has made an effort to determine which TQM model has been used as well as what obstacles and challenges have arisen during TQM integration and validation. This research has explored the complex relationship between organizational performance and total quality management practices and provides insightful information for both theoretical and real-world applications. The research implications will help companies to implement and improve TQM techniques in their operations. Furthermore, this study brings insight to the academic discussion by recommending areas for future investigation and integrating existing information. Socials further investigate industry-specific applications, novel concepts, and cultural traits within fields of TQM. The results of this study have demonstrated that the organization's performance is positively impacted by total quality management practices. There is no doubt that TQM's beneficial effects will continue to develop in the future. This strategy gives the company a significant competitive edge over its competitors in terms of leadership, productivity and working conditions. This technique is being widely adopted by multinational organizations, in the future, more businesses will be utilizing TQM and its use will become more prevalent. The study revealed that when TQM techniques are applied directly, they yield better problem-solving; enhance customer satisfaction, decrease errors and enhance internal communication. This study also finds that there is a positive and noteworthy association between total quality management and organizational performance. This study also provided a thorough work extended and verified a focus group and explored more literature review findings.

7. FUNDING

No particular grant was given for this research by private, public, or non-profit funding organizations.

8. CONFLICT OF INTEREST

There were no conflicts of interest among the authors of the present research paper.

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